

Noviaristanti, Siska (Ed.)

## Book

Contemporary Research on Management and Business: Proceedings of the International Seminar of Contemporary Research on Business and Management (ISCRBM 2021), 18 December 2021, Jakarta, Indonesia

## Provided in Cooperation with:

Taylor & Francis Group

*Suggested Citation:* Noviaristanti, Siska (Ed.) (2023) : Contemporary Research on Management and Business: Proceedings of the International Seminar of Contemporary Research on Business and Management (ISCRBM 2021), 18 December 2021, Jakarta, Indonesia, ISBN 978-1-000-77784-0, CRC Press, Boca Raton, FL, <https://doi.org/10.1201/9781003295952>

This Version is available at:

<https://hdl.handle.net/10419/281309>

### Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

### Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by-nc-nd/4.0/>



# **CONTEMPORARY RESEARCH ON MANAGEMENT AND BUSINESS**

**PROCEEDINGS OF THE INTERNATIONAL SEMINAR OF  
CONTEMPORARY RESEARCH ON BUSINESS AND  
MANAGEMENT (ISCRBM 2021), 18 DECEMBER 2021,  
JAKARTA, INDONESIA**

Edited by  
Siska Noviaristanti



**CRC Press**  
Taylor & Francis Group

## CONTEMPORARY RESEARCH ON MANAGEMENT AND BUSINESS

This book contains 74 selected papers presented at the 5th International Seminar of Contemporary Research on Business and Management (ISCRBM 2021), which was organized by the Alliance of Indonesian Master of Management Program (APMMI) and held in Jakarta, Indonesia on 18 December 2021. This online conference was hosted by the Master of Management Program of Indonesia University. This year, ISCRBM focused on research related to driving sustainable business through innovation. Business has had to deal with the COVID-19 pandemic, so a new approach towards managing business to survive competition is indispensable. Innovation is the key for all organizations in surviving in the new normal and beyond. The Seminar aimed to provide a forum for leading scholars, academics, researchers, and practitioners in the business and management area to reflect on the issues, challenges and opportunities, and to share the latest innovative research and best practices. This seminar brought together participants to exchange ideas on the future development of management disciplines: human resource, marketing, operation, finance, strategic management and entrepreneurship.



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

PROCEEDINGS OF THE INTERNATIONAL SEMINAR OF CONTEMPORARY RESEARCH  
ON BUSINESS AND MANAGEMENT (ISCRBM 2021), 18 DECEMBER 2021,  
JAKARTA, INDONESIA

# Contemporary Research on Management and Business

*Edited by*

Siska Noviaristanti

*Telkom University, Indonesia*



**CRC Press**

Taylor & Francis Group

Boca Raton London New York Leiden

---

CRC Press is an imprint of the  
Taylor & Francis Group, an **informa** business

A BALKEMA BOOK

*CRC Press/Balkema is an imprint of the Taylor & Francis Group, an informa business*

© 2023 selection and editorial matter, Siska Noviaristanti; individual chapters,  
the contributors

Typeset in Times New Roman by MPS Limited, Chennai, India

The right of Siska Noviaristanti to be identified as the author of the editorial material,  
and of the authors for their individual chapters, has been asserted in accordance with  
sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

The Open Access version of this book, available at [www.taylorfrancis.com](http://www.taylorfrancis.com), has been  
made available under a Creative Commons Attribution-Non Commercial-No  
Derivatives 4.0 license.

Although all care is taken to ensure integrity and the quality of this publication and the  
information herein, no responsibility is assumed by the publishers nor the author for any  
damage to the property or persons as a result of operation or use of this publication and/or  
the information contained herein.

*Library of Congress Cataloging-in-Publication Data*

A catalog record has been requested for this book

First published 2023

Published by: CRC Press / Taylor & Francis Group  
4 Park Square, Milton Park / Abingdon, Oxon OX14 4RN / UK  
e-mail: [enquiries@taylorandfrancis.com](mailto:enquiries@taylorandfrancis.com)  
[www.routledge.com](http://www.routledge.com) – [www.taylorandfrancis.com](http://www.taylorandfrancis.com)

ISBN: 978-1-032-28259-6 (hbk)

ISBN: 978-1-032-28261-9 (pbk)

ISBN: 978-1-003-29595-2 (ebk)

DOI: 10.1201/9781003295952

## Table of contents

<i>Background</i>	xi
<i>Preface from the chair committee of ISCRBM 2021</i>	xiii
<i>Acknowledgements</i>	xv
<i>Advisory board</i>	xvii
<i>Scientific committee</i>	xix
<i>Conference committee</i>	xxi
 Student perception on university brand equity during pandemics <i>A.Y. Puspitasari, M.S. Mahrinasari &amp; D.R.H. Pandjaitan</i>	1
 Determinant of cash holdings from Indonesian public non-financial firms during Coronavirus-19 pandemic <i>A.A. Mujiyanto &amp; R. Prijadi</i>	5
 The influence of DKI Jakarta large scale social restriction (PSBB) policy on the Indonesia sharia stock index (ISSI): An event study <i>A. Wildan &amp; M.B. Prasetyo</i>	9
 Customer satisfaction analysis of PT pupuk Indonesia procurement centralization program using customer satisfaction index (CSI) and importance performance analysis (IPA) method <i>A.A. Akhmad</i>	13
 Investor perception analysis on priority benefits of corporate income tax incentives in Indonesia <i>A.W.B. Seno &amp; D.A. Chalid</i>	17
 Overconfidence of Indonesian millennial investors' behavior during pandemic <i>A.I.P.P. Damayanti &amp; R. Rokhim</i>	21
 The development of fortified salt marketing model as a leading product of Madura Island <i>P. Nugroho, A. Susandini &amp; D. Islam</i>	24
 The effect of overall e-service quality on repurchase intention, word of mouth and site revisit of local fashion brand customers <i>A.D. Precia, Y. Alversia &amp; C.A.D. Nastiti</i>	28
 The influence of creativity and innovation on small and medium enterprises' (SMEs) performance during the COVID-19 pandemic: A systematic review <i>A.A. Gunawan, F.G. Dewi &amp; M. Azhari</i>	32
 Capturing employee voice through social media Instagram during COVID-19 pandemic <i>A. Pradipta &amp; K. Pertiwi</i>	36
 Twitter sentiment analysis for price and transaction volume changes in the cryptocurrency market <i>B.D.P. See &amp; M. Ulpah</i>	40

The role of social presence towards product and restaurant evaluation in online food delivery services <i>B. Ardiansyahmiraja &amp; R. Nadlifatin</i>	44
The impact of beverage vessel and sugar related-knowledge on single-serve beverages purchase intention in convenience stores <i>C.W. Hadi</i>	48
The effect of brand engagement and brand love upon overall brand equity and repurchase intention: Case study on smartphone brands in Indonesian millennials <i>D. Anjani &amp; R.D. Astuti</i>	52
The effect of COVID-19 confirmed cases and deaths, lockdown policies, and vaccinations on stock return and volatility in Indonesia <i>D.F. Nadilah &amp; D. Hanggraeni</i>	56
Post-pandemic tourism resiliency: Lesson from Bali leadership capacities <i>D.W. Irawanto, K.R. Novianti &amp; I.P. Satwika</i>	60
The correlation between spare parts planning systems with the inventory level at PT Petrokimia Gresik <i>E.R. Diyanto</i>	64
The effect of brand personality dimensions on self congruity and functional congruity on brand attitude: A study of Jaklingko users <i>E.S.M. Simanjuntak</i>	68
The role of government support in entrepreneurs' success in the context of micro and small enterprises in Surabaya <i>E. Tandelilin</i>	72
Waste reduction in the production process of Urea 1A plant of PT Petrokimia Gresik with applications of FMEA and root cause analysis <i>F. Wicaksono</i>	76
Procurement quality improvement using Lean Six Sigma and MAFMA at PT Petrokimia Gresik <i>F.W. Al Hafsih</i>	79
Analysis of market shaping framework as a strategy in response to the COVID-19 pandemic in Indonesia <i>F.E. Murtiasari &amp; Y. Nasution</i>	83
Financial performance impact on capital structure: Study on construction companies and transportation infrastructure companies in ASEAN-5 countries 2011–2019 <i>H.S.E. Saragih &amp; E.P. Anas</i>	87
State ownership, soft-budget constraints, and cash holding: Empirical studies on state owned enterprises in Indonesia <i>H. Premono &amp; D.N. Danarsari</i>	91
Implementation study of procurement plan consolidation to increase bargaining power of tenders and availability of long-term contracts: Case study on procurement of fabrication services at PT Petrokimia Gresik <i>H.T.U. Prasetya &amp; Y.N. Pamungkas</i>	95
Probolinggo port performance measurement using balanced scorecard <i>Hariyatin</i>	99



Implications of burnout and work–life balance towards turnover intention mediated by job satisfaction at a startup company <i>J.P. Verdana &amp; A. Satrya</i>	103
Job demands–control and work–family conflict on public servant’s performance <i>J.H.A. Nainggolan &amp; E.S. Pusparini</i>	107
The effects of gendered marketing on brand perception and purchase intention <i>K.F. Subroto &amp; T.E. Balqiah</i>	111
The impact of country-of-origin image and perceived brand prestige on perceived product quality, consumers’ purchase intention of Korean skincare in Indonesia with consumer ethnocentrism as a moderating variable <i>K.M. Lee</i>	115
Reducing the quality deviation in Phosphogypsum pH by creating advance washing system in PT Petrokimia Gresik (Phosphoric acid plant) <i>L.H. Purbawinasta &amp; J. Farisi</i>	119
Work–life balance in the public sector: The effect of work from home and work engagement <i>L.N. Afifah &amp; A. Satrya</i>	123
The role of marketing 4.0 elements, customer satisfaction, loyalty intentions, and religious brand preference among Indonesian Muslim woman customers of local modest fashion brands <i>M.A. Zain &amp; R.D. Astuti</i>	127
“Incorrect pills”: Civil servants’ perspectives on layering and specialization in Indonesian public sector <i>M.C. Nisa &amp; K. Pertiwi</i>	132
The impact of cross-channel integration at mobile operator on customer’s purchase behavior as a path toward Omnichannel strategy: A case study using data analytics in Telkomsel <i>M.C. Utama &amp; T.E. Balqiah</i>	136
Effects of work environment and job characteristics on the turnover intention of millennial generation in Indonesia: The mediating role of work engagement <i>M.R. Trisnursari &amp; P.M. Desiana</i>	140
The impact of COVID-19 on investors’ herding behavior in the ASEAN-5 stock market <i>M.R.D. Resindra &amp; A.W. Lubis</i>	144
Assessing the impact of transformational leadership, overall justice on individual readiness for change through perceived organizational support: Test of moderating role of perceived organizational competence <i>M.N.S. Kuncoro &amp; R. Rachmawati</i>	148
Dimensions of Islamic business coaches’ role: A second order confirmatory factor analysis (CFA) <i>M. Sholahuddin, M.A. Abdullah, M.N. Barom, I.N. Tahir &amp; Wiyadi</i>	152
Transparent communication, transformational leadership, public sector employees’ openness to change, and the role of anxiety as mediator <i>M. Frima &amp; N. Ardiyanti</i>	156

The impact of working capital management on firm performance and corporate investment <i>N.M. Paskalino &amp; V. Diyanty</i>	160
The effect of flow to visit intention moderated by perceived awareness of safe travel campaign <i>N.T. Dewi, Y. Alversia &amp; M. Sekardhani</i>	164
Effects of subjective norms and restaurant's precautionary measures on the intention to revisit full-service restaurants post COVID-19 pandemic <i>N.A.M. Ruskanda &amp; K. Adiwijaya</i>	168
The role of experiential marketing, destination brand image, and halal tourism products on tourists' revisit decision in halal tourism village <i>N. Andriani &amp; N. Kurriwati</i>	172
Liquidity, CEO education, and profitability among consumer goods companies in Indonesia <i>P.O. Sadewa &amp; A.W. Lubis</i>	176
E-prakerin redesign as a solution to short-term internship program during the COVID-19 pandemic <i>P. Heryanti</i>	180
Financial inclusion and its impact on performance of MSMEs with efficiency and financial flexibility as mediation: Empirical evidence from Malang city <i>K. Ratnawati &amp; P. Yuana</i>	184
The effect of workplace ostracism and employee silence on task performance with perceived stress as mediation variable <i>P.N.H. Sembiring &amp; A. Satrya</i>	188
Will the VAT-easing encourage willingness for car loans amid the pandemic? <i>P.S.M. Dewi &amp; Z. Dalimunthe</i>	192
Systemic risk analysis in the banking industry in Indonesia during the COVID-19 pandemic <i>R.Y. Maulana</i>	196
Long-run relationship of prime lending rate toward reference rate of monetary authority in Indonesia <i>R. Khairufi &amp; B. Wibowo</i>	200
Increasing visit intention to a destination using viewers' engagement through film: Moderating effect of various media usage <i>R.P. Manoto &amp; D.T.H. Aruan</i>	204
Improvement of bid project process with digitalization through e-procurement system (case study in PT. Petrokimia Gresik) <i>R.P. Hapsari</i>	208
Volatility spillover in stock market, foreign exchange, and bond market in Asia <i>K. Ratnawati &amp; R. Anggraeni</i>	212
The role of social media marketing and environmental knowledge on green skincare purchase intention <i>R. Shanti &amp; Y. Alversia</i>	216

The effect of the information technology implementation on organizational performance in manufacturing companies <i>T. Osmond, H. Siagian &amp; Z.J.H. Tarigan</i>	220
The influence of product innovation on customer engagement through customer experience and customer value of OVO users <i>G.A. Abet, M. Adiwijaya &amp; H. Subagio</i>	224
Relations between trade volume and frequency of domestic investors with stock volatility: Analysis before and during the COVID-19 pandemic <i>S. Satriantoro &amp; I.A. Ekaputra</i>	228
Intention to use E-wallet during the COVID-19 pandemic in Indonesia <i>S. Rahayu &amp; S. Hariadi</i>	232
Internal branding process on building brand identity at ABD University <i>S.M. Ruza &amp; K. Adiwijaya</i>	236
Online Islamic peer-to-peer lending practices in Indonesia (case study of PT Ammana) <i>S. Hariadi &amp; A. Nurhajayanti</i>	240
Evaluation of determining the coverage value of company assets using risk-based insurance approach (case study: Development project at PT Petrokimia Gresik) <i>S.K. Putra</i>	244
Usage of on-the-job training application to increase the effectiveness of monitoring and control in pandemic era <i>V.E. Kusumawardhani</i>	248
Analysis acceptance and use of CeLOE learning management system (LMS) Telkom University using unified theory of acceptance and use of technology (UTAUT) and Delone-McLean Model <i>V.S. Sukandi &amp; M. Ariyanti</i>	252
Analysis of fertilizer use behavior by organic farmers: A case study in java and bali <i>W.W. Katili</i>	256
The acceptance of digital payment methods across micro, small and medium enterprises in kediri regency <i>W.A. Rengganis</i>	260
The influence of pharmaceutical service quality toward pharmacy customer satisfaction in Ngemplak district <i>W.K. Dwiprasetya, Wiyadi &amp; H. Wujoso</i>	264
Impact of triple-A and supply chain orientation on financial performance <i>Yulianti &amp; Arviansyah</i>	268
The effect of brand experience on consumer-based brand equity development in online transportation applications in Indonesia: Mediation of emotional brand attachment <i>Z.A. Tasya &amp; D.T.H. Aruan</i>	272
Antecedents of intention to visit Riau Island through the role of tourist satisfaction <i>K. Keni, N. Wilson &amp; T. Ai Ping</i>	276
Multigenerational travel: A qualitative study of holiday decision making process of Indonesian family <i>V.A. Hapsari, S. Wijaya &amp; T. Santoso</i>	281

Motivation to work on employee performance (survey at RSUD R. Syamsudin, SH-Sukabumi) <i>Y.S. Saleh &amp; Y.W. Suwandi</i>	286
A phenomenological investigation of career stagnation among Indonesian women <i>M.S. Perdhana, D.R. Sawitri &amp; M.I. Muslim</i>	290
The effect of promotions and consumer trust on customer loyalty through customer satisfaction of the shopee application (study on STIESIA students Surabaya) <i>A.C.M. Sari &amp; M. Lestariningsih</i>	294
Author index	299

## Background

Since 2018, Indonesian Master of Management Program Alliance (APMMI) annually held seminar called International Seminar of Contemporary Research on Business and Management. The first one was in Surabaya hosted by Technology Institute of Surabaya. Secondly, in Marwadewa University, Denpasar Bali. Thirdly, in Indonesia University, Jakarta, and recently due to pandemic situation the conference was held online hosted by Airlangga University in collaboration with Petra University, Surabaya University, STIE Perbanas Surabaya and Trunojoyo University, Madura.

The Association of Indonesian Master of Management Programs (APMMI) is positioning itself as an institution that provides guidance as the best practices of MM education in order to improve the quality of MM education in Indonesia.

APMMI is expected to be an institution that can provide motivation and set operational guidelines to its members to achieve the national quality standard of MM education, capable of producing graduates that are in accordance with the times and meet the needs of business practices and national management.

In the future, APMMI is expected to be able to cooperate with international MBA program accreditation institution (such as AACSB International) to accredit MM program in Indonesia, so as to encourage national MM programs to meet international quality standards in accordance with the purpose and objectives of the establishment of APMMI.



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

## Preface from the chair committee of ISCRBM 2021

Assalamu'alaikum Wr. Wb.

Greetings from MM FEB UI

We thank God Almighty for completing the Proceedings Publication published by the Master of Management Study Program, Faculty of Economics and Business, University of Indonesia (MM FEB UI). This proceeding is a collection of papers presented in the International Seminar Conference of Research on Business and Management (ISCRBM) 2021 from the Indonesian Master in Management Program Alliance (APMMI) with the theme Driving Sustainable Business Through Innovation. APMMI plays a role as an institution to provide guidelines and as the best education provider from Master of Management to improve the education quality of MM in Indonesia. One of the efforts to support the academic contribution in higher education, APMMI is organizing an "International Conference," which can be a forum for the academics to deliver their research and widen networking with other leading universities globally. This year, the Master of Management Faculty of Economics and Business Universitas Indonesia hosts the 5th ISCRBM. The aims of this conference were increasing contribution from Indonesia in developing knowledge at the international level by publishing scientific research with an international standard of peer-reviewed process, delivering their real contribution within a talent management context, both in industry and government levels. And last but not least, to become a forum for knowledge improvement and research capacity for the academics from the material presentation of prominent scholars who are acknowledged for their expertise at the international level. This conference was attended by 130 students from 17 universities from APMMI members spread throughout Indonesia and was held in Jakarta on December 18th, 2021. This event is a forum for educators, researchers, educational and non-educational observers to discuss business studies on procedures and guidelines for writing and publishing scientific articles and increase cooperation among participants. Finally, I wish to express my gratitude to all delegates for their full cooperation and contribution in organizing this conference so that it is carried out well. The appreciation is mainly to the persons in APMMI and MM FEB UI, Head of the Master of Management from APMMI member universities, CRC Press Taylor & Francis, and all committees who have helped organize this seminar. We realize that there are still many shortcomings, inconveniences, and mistakes in organizing this seminar. Therefore, we humbly ask the sincerity of you, Ladies and Gentlemen, the participants, to forgive us. I wish this could be a very fruitful and productive conference. Thank You.

Wassalamu'alaikum Wr Wb  
Chairman of APMMI  
Director of MM-MBA FEB UI  
**Prof. Rofikoh Rokhim, Ph.D.**



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>



## Acknowledgements

We would like to record our thanks to the conference committee for their work, APMMI members who actively contribute at this event, and Master of Management Program Airlangga University in collaboration with Petra University, Surabaya University, STIE Perbanas Surabaya and Trunojoyo University, Madura that nicely hosted this year conference.

We also acknowledge the authors for their contribution. And we would like to address a warm appreciation to the members of the scientific committee for their participation and expertise in the preparation of the conference. We also thank all people who agreed to play the role of moderator and session chair. Without their support, the conference could not have been the success that it was. Hopefully, the success of the conference will continue next year.



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

## Advisory board

**Prof. Drs. Eduardus Tandelilin, MBA, DBA**

*Universitas Gajah Mada*

**Dr. Arni Surwanti, M.Si**

*Universitas Muhammadiyah Yogyakarta*

**Dr. Ahyar Yuniawan, SE, M.Si**

*Universitas Diponegoro*

**Dr. Maria Rio Rita, SE., M.Si**

*Universitas Kristen Satya Wacana*

**Dr. Tetra Hidayati, S.E., M.Si**

*Universitas Mulawarman*



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

## Scientific committee

**AG Ajeng Nariswari, Ph.D.**

*California State University – Monterey Bay*

**Angtyasti Jiwasiddi Ph.D. (cand.)**

*University of New South Wales*

**Arief Wibisono Lubis, Ph.D.**

*Universitas Indonesia*

**Arnold Japutra, Ph.D.**

*University of Western Australia*

**Arviansyah Ph.D.**

*Universitas Indonesia*

**Dr. Ahyar Yuniawan, S.E., M.Si.**

*Universitas Diponegoro*

**Dr. Gancar Premananto, M.Si.**

*Universitas Airlangga*

**Dr. Kusuma Ratnawati, S.E., M.M., CFP.**

*Universitas Brawijaya*

**Dr. Masmira Kurniawati, S.E., M.Si.**

*Universitas Airlangga*

**Dr. Nuryakin, MM.**

*Universitas Muhammadiyah Yogyakarta*

**Dr. Werner R. Murhadi, M.M., CSA.**

*Universitas Surabaya*

**Ida Ayu Agung Faradynawati**

*KTH Royal Institute of Technology Stockholm, Sweden*

**Maria Ulpah, Ph.D.**

*Universitas Indonesia*

**Marlina Widiyanti, S.E., S.H., M.M., M.H. Ph.D.**

*Universitas Sriwijaya*

**Mirwan Surya Perdhana, Ph.D.**

*Universitas Diponegoro*

**Prof. Balakrishnan Parasuraman, Ph.D.**

*University Malaysia Kelantan*

**Prof. Rofikoh Rokhim, Ph.D.**

*Universitas Indonesia*

**Putri Mega Desiani, MM.**

*Universitas Indonesia*

**Riani Rachmawati, Ph.D**

*Universitas Indonesia*

**Ririen Setiati Riyanti, Ph.D.**

*Universitas Indonesia*

**Siska Noviaristanti, S.Si., M.T., Ph.D.**

*Telkom University*

**Yeshika Alversia, M.Sc.**

*Universitas Indonesia*

## Conference committee

*Chairman of APMMI*

**Prof. Rofikoh Rokhim, Ph.D**

*Chair:*

**Yeshika Alversia, MSc**

*Co-Chair*

**Ratna Wardani**

*Members*

**Lyls Endarwati**

**Sapti Kusmaryati**

**Herman Suprianto**

**Rininta Dwi Nofian**

**Esther R. Sianturi**

**Rizaldi Rustam**

**Hari Krismanto**

**Bawuk Yudi K.**

**Ziah Lies Handayani**



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>



# Student perception on university brand equity during pandemics

A.Y. Puspitasari, M.S. Mahrinasari & D.R.H. Pandjaitan

*Master in Management, University of Lampung*

**ABSTRACT:** The COVID-19 pandemic has affected various fields, including higher education institutions. Changes in policies and norms cause universities to adjust to the brand equity-building strategies that have been carried out. The purpose of this study was to investigate student perceptions of the dimensions of university brand equity during the COVID-19 pandemic. This research was conducted at a private university in Lampung. The samples taken were 400 people with the criteria that they had become students during the pre-pandemic, during the pandemic, and post-pandemic. The research results found a significant relationship among the dimensions of university brand equity (brand awareness, perceived quality, brand association, learning environment, emotional environment, brand trust, brand loyalty, and university reputation). Therefore, brand equity dimensions affect the student learning experience in creating a solid university brand equity.

**Keywords:** brand equity, university branding, higher education, marketing.

## 1 INTRODUCTION

Brand equity is getting more attention in the marketing of higher education institutions. In recent years, higher education institutions have realized the importance of branding to gain a competitive advantage. The development of brand equity in higher education institutions is driven by increasingly fierce competition, the need to attract consumers, the need for financial support, and the opening of international markets. The university's brand equity is different from that of the general product. There is a dimension closely related to the student learning experience, which is in accordance with the research conducted by Ng & Forbes (2009) and Palmer et al. (2016), stating that learning experience is a significant factor in branding a university.

This current pandemic provides various limitations on university academic operations by reducing income, reducing employee productivity, and limiting the ability of institutions to cover operational costs (Tamrat 2021). Activity restrictions have forced universities to do distance learning, and even accept all online enrollment. In addition, universities are not responsive to crises, for example distance learning facilities can certainly provide an unpleasant experience for students. Perception of experience helps strengthen the relationship between consumers and brands and influences brand equity (Iglesias et al. 2019; Khan & Fatma 2017). This condition is a challenge for both universities and students. Universities must be able to maintain excellence, while also adapting branding strategies according to the situation. This study aims at helping universities understand what constitutes consumer-based brand equity in dealing with crises such as pandemics.

## 2 LITERATURE REVIEW

### 2.1 *Brand Equity University*

Brand equity is a set of unique attributes attached to a brand. Brand equity is also often considered brand strength (Feldwick 1996). A company or brand with strong brand equity will be superior

to its competitors. Currently brand equity is also considered an indicator of the success of a business (Tasci 2021). The branding strategy to build their excellence is adapted by higher education institutions.

University brand equity initially used the dimensions built by Aaker (1993), namely brand awareness, perceived quality, brand association, and brand loyalty. As academics pay attention to university brand equity, there is a difference between brand equity for products in general, e.g., university brand equity is built up due to the interaction between student consumers and campuses during their education. Previous research related to university brand equity took the basis of the BE concept developed by Aaker (1993) and (Keller 1993). The research results also include several other dimensions specific to university brand equity such as university reputation, learning environment, physical facilities, knowledge assessment, price, brand communication, and reputation of professor (Anwar et al. 2021; Khoshtaria et al. 2020; Moghaddam et al. 2013; Mourad et al. 2020; Pinar et al. 2020; Tran et al. 2020). The measurement of brand equity in this study will refer to several dimensions, namely brand awareness, perceived quality, brand loyalty, brand association, brand trust, learning environment, emotional environment, and university reputation.

### 3 METHODOLOGIES

This study employed a quantitative approach. The data collection used a questionnaire survey with a cluster sampling approach towards undergraduate student respondents at private universities in Lampung Province, Indonesia. The indicators in the questionnaire were adapted from Girard & Pinar (2021). The weighting of the questionnaire using a Likert scale of 1-5 points includes answering choices from 1 (Strongly disagree) to 5 (Strongly agree). The study aims at investigating the relationship between indicators of university brand equity at the time of pandemics. The questionnaire included three main parts: introduction and purpose, demographic information, and measurement items. It took one month to collect the data (October to November 2021).

### 4 RESULTS

#### 4.1 *Demographic information*

Table 1. The number of respondent.

Type	Category	Number	Percentage
Gender	Male	142	35.5%
	Female	258	64.5%
Year	Third	110	27.5%
	Second	136	34%
	First	154	38.5%

#### 4.2 *Measurement model analysis*

Covariance Based Structural Equation Modeling (CB-SEM) was implemented to test the proposed research model using AMOS 26 software. First, we assessed internal consistency reliability and the convergent validity of the constructs. In the validity and reliability tests carried out, all indicators in this study were valid and reliable. Then proceed with the normality test. Initial data from 400 respondents were declared abnormal. Hence, data reduction was carried out by removing outliers and indicators. The feasibility results were obtained based on several predetermined criteria. There are nine criteria used. Seven criteria have values above the threshold value and are declared good. Meanwhile, the probability value is still below the stipulation, and the chi-square value is above df.

Table 2. The number of respondent.

No	Model Fit Indices	Estimated Value	Obtained Value
1	Chi-square	Small	350.88
2	$\chi^2$ significance probability	$\geq 0.05$	0.000
3	Relative $\chi^2$ (CMIN/DF)	$\leq 2,00$	1.671
4	GFI (Goodness of Fit)	$\geq 0.85$	0.930
5	AGFI (Adjust Goodness of Fit Index)	$\geq 0.85$	0.908
6	TLI (Tucker-Lewis Index)	$\geq 0.90$	0.983
7	NFI (Normated Fit Index)	$\geq 0.80$	0.966
8	CFI (Comparative Fit Index)	$\geq 0.90$	0.986
9	RMSEA	$\leq 0.08$	0.041

### 4.3 Hypothesis testing

The results of hypothesis testing using AMOS 26 show that all proposed hypotheses had significant results. Brand awareness, university reputation, brand association, learning environment, perceived quality, brand loyalty, emotional environment, and brand trust were interrelated both directly and indirectly.

## 5 DISCUSSION AND CONCLUSIONS

The COVID-19 pandemic has put universities in an almost similar situation, with different challenges. Private universities that are the research object also carry out temporary closures and restrictions on activities in response to the situation and government policies. Students must conduct distance learning with minimal facilities.

During the pandemic, it still showed that students' perceptions of brand equity were still good and quite high. Male students had a better average perception than female students. First-year students who entered during the pandemic had the highest level of perception, while the lowest were third-year students who entered before the pandemic. This result is different from research from (Aristovnik et al. 2020), which states that first-year students are more susceptible to the pandemic effect.

The results show there is a relationship between the dimensions of university brand equity. Brand awareness is an essential foundation for building university brand equity, which directly and indirectly affects other dimensions of brand equity. Research conducted during this pandemic did not succeed in proving there is a relationship between brand awareness and the learning environment, which could be due to the reduced interaction between students and the campus during the social distancing period. Meanwhile, in this study, a significant factor directly affecting brand loyalty is the university's reputation.

From this research, the learning environment has the most influence on other dimensions of brand equity. This dimension should be of greater concern to universities when building brand equity, along with university reputation, university reputation, brand association, and brand awareness.

## 6 IMPLICATIONS DAN LIMITATION

The university does branding to be superior to its competitors. Several factors that need to be considered during the pandemic include the readiness of the institution to face the crisis and the response and concern for students. These aspects have not been covered in this study and should be considered in formulating a branding strategy for a higher education institution in the future, especially when facing a crisis. This research was conducted at a private university. Future research

can be carried out with broad objects or involving government-owned universities. In addition, it is also necessary to pay attention to involving university consumers more broadly, not only students.

## REFERENCES

- Aaker, D. A. (1993). *Brand Equity & Advertising: Advertising's Role in Building Strong Brands*. Psychology Press. [https://books.google.co.id/books?id=K\\_fsAAAAAAAJ](https://books.google.co.id/books?id=K_fsAAAAAAAJ)
- Anwar, S. A., Sohail, M. S., Ankit, A., & Al-Marri, M. (2021). Determinants of learner-centric brand equity for online universities in Gulf countries. *Journal of Marketing for Higher Education*, 1–20. <https://doi.org/10.1080/08841241.2021.1983689>
- Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N., & Umek, L. (2020). Impacts of the COVID-19 Pandemic on Life of Higher Education Students: A Global Perspective. In *Sustainability* (Vol. 12, Issue 20). <https://doi.org/10.3390/su12208438>
- Feldwick, P. (1996). Do we really need 'Brand Equity'? *Journal of Brand Management*, 4(1), 9–28. <https://doi.org/10.1057/bm.1996.23>
- Girard, T., & Pinar, M. (2021). An empirical study of the dynamic relationships between the core and supporting brand equity dimensions in higher education. *Journal of Applied Research in Higher Education*, 13(3), 710–740. <https://doi.org/10.1108/JARHE-04-2020-0097>
- Iglesias, O., Markovic, S., & Rialp, J. (2019). How does sensory brand experience influence brand equity? Considering the roles of customer satisfaction, customer affective commitment, and employee empathy. *Journal of Business Research*, 96, 343–354. <https://doi.org/10.1016/j.jbusres.2018.05.043>
- Keller, K. L. (1993). Conceptualizing, Measuring, and Managing Customer-Based Brand Equity. *Journal of Marketing*, 57(1), 1–22. <https://doi.org/10.1177/002224299305700101>
- Khan, I., & Fatma, M. (2017). Antecedents and outcomes of brand experience: an empirical study. *Journal of Brand Management*, 24(5), 439–452. <https://doi.org/10.1057/s41262-017-0040-x>
- Khoshtaria, T., Datuashvili, D., & Matin, A. (2020). The impact of brand equity dimensions on university reputation: an empirical study of Georgian higher education. *Journal of Marketing for Higher Education*, 30(2), 239–255. <https://doi.org/10.1080/08841241.2020.1725955>
- Moghaddam, A. H., Asadollah, H., & Garache, M. (2013). Designing and Explaining Brand Equity Model in Higher Education. *European Online Journal of Natural and Social Sciences*, 2(3), 2576–2585.
- Mourad, M., Meshreki, H., & Sarofim, S. (2020). Brand equity in higher education: comparative analysis. *Studies in Higher Education*, 45(1), 209–231. <https://doi.org/10.1080/03075079.2019.1582012>
- Ng, I. C. L., & Forbes, J. (2009). Education as Service: The Understanding of University Experience Through the Service Logic. *Journal of Marketing for Higher Education*, 19(1), 38–64. <https://doi.org/10.1080/08841240902904703>
- Palmer, A., Koenig-Lewis, N., & Asaad, Y. (2016). Brand identification in higher education: A conditional process analysis. *Journal of Business Research*, 69(8), 3033–3040. <https://doi.org/10.1016/j.jbusres.2016.01.018>
- Pinar, M., Girard, T., & Basfirinci, C. (2020). Examining the relationship between brand equity dimensions and university brand equity. *International Journal of Educational Management*, 34(7), 1119–1141. <https://doi.org/10.1108/IJEM-08-2019-0313>
- Tamrat, W. (2021). Enduring the impacts of COVID-19: experiences of the private higher education sector in Ethiopia. *Studies in Higher Education*, 46(1), 59–74. <https://doi.org/10.1080/03075079.2020.1859690>
- Tasci, A. D. A. (2021). A critical review and reconstruction of perceptual brand equity. *International Journal of Contemporary Hospitality Management*, 33(1), 166–198.
- Tran, K. T., Nguyen, P. V., Do, H. T. S., & Nguyen, L. T. (2020). University students' insight on brand equity. *Management Science Letters*, 10(9), 2053–2062. <https://doi.org/10.5267/j.msl.2020.2.006>

# Determinant of cash holdings from Indonesian public non-financial firms during Coronavirus-19 pandemic

A.A. Mujiyanto & R. Prijadi

*Master of Management, Faculty of Economic and Business, University of Indonesia, Indonesia*

**ABSTRACT:** The Coronavirus-19 (COVID-19) pandemic has caused various impacts ranging from public health issues to weakening the world economy. Non-financial companies listed on the Indonesia Stock Exchange (IDX) have also been affected. Therefore, this study was conducted to determine cash holdings of non-financial companies on the Indonesia Stock Exchange during the COVID-19 pandemic. The study uses 548 company data on the IDX in each quarter starting from Q1 2020 to Q2 2021 by using panel data regression method to determine the relationship between the variables studied. Looking at the impact of the pandemic as represented by positive and death cases due to COVID-19 and the implementation of work-from-home policy on cash holdings of non-financial companies on the IDX, it was found that cash holding companies were significantly negatively affected by the positive case of COVID-19. Similarly, the death cases due to COVID-19 and the implementation of work-from-home policy indicated a negative impact on the company's cash holding, although not significantly. Thus, the results of this study can be used as a continuation of previous studies about research on cash holding in Indonesia.

## 1 INTRODUCTION

The global pandemic of the Coronavirus-19 (COVID-19) has spread at the rapid rates. What equally concerning is the various impacts from public health issues to weakening the world economy. This unprecedented pandemic poses a negative shock to the cash holding level of the Indonesian non-financial firms listed on Indonesia Stock Exchange (IDX). Most firms having a decrease in performance due to the pandemic (Fu & Shen 2020). Many public companies experienced a decline in share prices (Phan & Narayan 2020).

The corporate liquidity management is one of the main issues during the COVID-19 pandemic. For the firms, cash is the most liquid asset. The cash availability directly impacts its liquidity and shows its ability to complete all the obligations on time. It can also help increasing firms' sales and profit. In addition, cash holdings are the amount of cash and cash equivalents owned and recorded on the firms' balance sheet readily available to be invested or distributed to investors (Gill & Shah 2011). Cash holdings has important role amid the pandemic since the shock due to COVID-19 increased the liquidity risk and generated an unprecedented increase in the liquidity demand for the affected firms (Almeida 2021).

A previous study conducted by Honda & Uesugi (2021) shows that firms tended to hold more cash during the global financial crisis. Few other studies investigated the relationship between COVID-19 pandemic and cash holding level such as the impact of the pandemic on firm-level cash holding in China (Qin et al. 2020), impact on firm performance (Fu & Shen 2020), and how the pandemic affects the liquidity on over 20 countries (De Vito & Gómez 2020). The necessity for researching this issue is essential, such as in Indonesia, to see the pattern of corporate cash holding during the COVID-19 pandemic, and also to contribute by highlighting the results that could mitigate the adverse effect of COVID-19 pandemic to the Indonesian non-financial firms.

## 2 DATA AND EMPIRICAL DESIGN

### 2.1 Sample selection

The data sample obtained from quarterly data on publicly traded Indonesian non-financial firms from Indonesia Stock Exchange (IDX) and Eikon Refinitiv. The sample included firm observations with fiscal quarters that fall between Q1 2020 and Q2 2021. The the financial firms, inactive firms, and the firms that had incomplete data were excluded. Then, the data for the COVID-19 pandemic parameters proxied by positive and death cases and also data on work-from-home policy implementation from the Indonesian COVID-19 official website were collected. These selection criteria yielded a sample of 3,288 firm-quarter observations.

### 2.2 Variable construction

This study focuses on the impact of the pandemic on firms' cash holding level, in which cash holding was chosen as the dependent variable and was calculated by dividing the current cash and equivalent with the total assets. Then, this study used positive and death COVID-19 cases , and work-from-home policy implementation as the independent variables Firms' specific characteristic variables as the control variables: firm size, leverage, profitability, and liquidity, were also included. The firm size was measured using the natural logarithm of firms' total assets. The leverage was measured using the company's debt-to-equity ratio. For the profitability, it was proxied using the return-on-equity. Lastly, the liquidity was proxied using the firms' current ratio. Table 1 provides the summary of variables and explanation used in this study.

Table 1. Variable definition.

Variables	Description
CH	Cash holding of the firm is measured by cash and cash equivalents per total asset
CASE	Total cumulative positive COVID-19 cases in percentage
DEATH	Total cumulative deaths due to COVID-19 in percentage
DWFH	The dummy variable of work-from-home policy implementation
SIZE	The size of the firm is measured by the natural logarithm of its total assets
LEV	The leverage of the firm is measured by the debt-to-equity ratio
ROE	The firm profitability is measured by the return-on-equity
LIQ	The firm liquidity is measured by the firm's current ratio

### 2.3 Empirical design

Following the previous study by Fu & Shen (2020), this study employs data panel regression approach that considers the COVID-19 as an exogenous shock and integrate the implementation of work-from-home policy towards the cash holding level, as shown by equation 1:

$$CH_{i,t} = \alpha + \beta_1 CASE_{i,t} + \beta_2 DEATH_{i,t} + \beta_3 DWFH_{i,t} + \beta X Control_{i,t} + \varepsilon \quad (1)$$

where i indexes the firm and t indexes the year-quarter. Variable CASE and DEATH are respectively taken value of the cumulative positive and death cases in percentage. Variable DWFH proxied the work-from-home policy implementation, which takes the value of 1 if the implementation is more restricting, 0 if otherwise. The control variables in this study are the firm specific characteristic variables constituted by the firm size, leverage, profitability, and liquidity. This study employs data panel regression using the Eviews 12 to conduct the analyses.

## 3 RESULTS AND DISCUSSIONS

### 3.1 Summary statistics

Table 2 below provides summary statistics of cash holding levels for the observed periods. The average cash holding level is 0.055 indicating that Indonesian non-financial firms' cash holding

amounted to about 5.5% of their total assets. This was under the average cash holding ratio of 0.2 reported by Honda & Uesugi (2021), albeit higher than the value of  $-0.004$  reported by Fu & Shen (2020). The minimum value is 0.001, the maximum value is 0.968, and the standard deviation is 0.087, indicating that the cash holding level of the observed firms is quite similar.

Table 2. Summary statistics.

	Minimum	Maximum	Mean	Std. Deviation
CH	0.001	0.968	0.055	0.087

Table 2 above also shows that how close the standard deviation value demonstrated that the non-financial firms in Indonesia tended to follow the precautionary motive of holding cash during the COVID-19 pandemic. In other words, firms tended to increase the cash holding level to maintain their liquidity level.

### 3.2 Main Empirical Analyses

The following Table 3 shows the results of the data panel regression. The results show the coefficient of determination (adjusted R square) within 0.77–0.78 across all models, which means that there were approximately 22% changes in cash holding level of non-financial firms in Indonesia were are influenced by other factors outside of this study models.

Table 3. Data panel regression results.

Variable	Basic Model CH	CASE Model CH	DEATH Model CH	DWFH Model CH
CASE		−0.0056 (0.0226***)		
DEATH			−0.0004 (0.8448)	
DWFH				−0.0020 (0.1432)
SIZE	0.0001 (0.6554)	0.0001 (0.6511)	0.0002 (0.6542)	0.0002 (0.6584)
LEV	0.0002 (0.0331***)	0.0002 (0.0357***)	0.0003 (0.0339***)	0.0003 (0.0308***)
ROE	0.0055 (0.003***)	0.0055 (0.0045***)	0.0055 (0.0045***)	0.0056 (0.0040***)
LIQ	1.19e−05 (0.0006***)	1.22e−05 (0.0004***)	1.19e−05 (0.0006***)	1.2e−05 (0.0005***)
Obs.	3288	3288	3288	3288
Adj. R Square	0.778	0.780	0.779	0.771

p-value are denoted inside parentheses with significance of: \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

Table 3 also displays the results of testing the impact of COVID-19 pandemic and the effect of work-from-home policy implementation towards the firms' cash holding level. COVID-19 positive cases affected the cash holding level negatively by  $-0.0056$ , which means for every 1% increase in COVID-19 positive cases the firms' cash holding level would decrease by 0.56% of its total assets on significance level within 5%. The death cases due to COVID-19 had negative coefficient, but it fell outside of the significance level and so did the work-from-home policy implementation.

These results show that both death cases due to COVID-19 pandemic and the implementation of work-from-home policy did not putting negative effect on Indonesian non-financial firms' cash holding level, albeit giving an indication. The leverage on all models also had positive coefficient, which would mean that the firms observed tended to follow pecking order theory rather than trade-off theory.

#### 4 CONCLUSION

This study aims at testing the determinants of corporate cash holdings in Indonesian non-financial firms from Q1 2020 to Q2 2021. Based on the analysis result, it can be concluded that positive COVID-19 cases had a significant negative effect on company cash holdings. In contrast, the death cases due to COVID-19 pandemic and the implementation of work-from-home policy were not proven to be variables affecting the cash holdings of the observed firms. Moving on to the firm specific variables, the leverage, profitability, and liquidity had a positive impact on company cash holdings. The result of this study partly confirms that the observed firms tended to follow pecking order theory rather than trade-off theory in cash holding with precautionary motives.

#### REFERENCES

- Almeida, H. (2021). Liquidity Management During the Covid-19 Pandemic\*. *Asia-Pacific Journal of Financial Studies*, 50(1), 7–24. <https://doi.org/10.1111/ajfs.12322>
- De Vito, A., & Gómez, J. P. (2020). Estimating the COVID-19 cash crunch: Global evidence and policy. *Journal of Accounting and Public Policy*, 39(2), 106741. <https://doi.org/10.1016/J.JACCPUBPOL.2020.106741>
- Fu, M., & Shen, H. (2020). COVID-19 and Corporate Performance in the Energy Industry. *Energy RESEARCH LETTERS*, 1, 1–5. <https://doi.org/10.46557/001c.12967>
- Gill, A., & Shah, C. (2011). Determinants of Corporate Cash Holdings: Evidence from Canada. *International Journal of Economics and Finance*, 4(1), 70–79. <https://doi.org/10.5539/ijef.v4n1p70>
- Honda, T., & Uesugi, I. (2021). *COVID-19 and Precautionary Corporate Cash Holdings: Evidence from Japan ab. February*. <http://risk.ier.hit-u.ac.jp/>
- Phan, D. H. B., & Narayan, P. K. (2020). Country Responses and the Reaction of the Stock Market to COVID-19—a Preliminary Exposition. *Emerging Markets Finance and Trade*, 56(10), 2138–2150. <https://doi.org/10.1080/1540496X.2020.1784719>
- Qin, X., Huang, G., Shen, H., & Fu, M. (2020). COVID-19 Pandemic and Firm-level Cash Holding—Moderating Effect of Goodwill and Goodwill Impairment. *Emerging Markets Finance and Trade*, 56(10), 2243–2258. <https://doi.org/10.1080/1540496X.2020.1785864>



## The influence of DKI Jakarta large scale social restriction (PSBB) policy on the Indonesia sharia stock index (ISSI): An event study

A. Wildan & M.B. Prasetyo

*Magister of Management, Universitas Indonesia, Salemba, Jakarta Pusat, Indonesia*

**ABSTRACT:** The emergence of the COVID-19 pandemic has triggered a wide range of responses from the economics and business environment. According to the market data, there is a strong negative correlation between the first positive case and death on the Large-Scale Social Restrictions (PSBB) policy. Therefore, this study aims to determine how the Indonesian Sharia Stock Index (ISSI) reacts to government policies implemented to reduce the virus's spread rate and increase the capital market. It also analyzes the t-test significance of the cumulative abnormal return of all ISSI constituent before and during the pandemic. The findings reveal that every change in PSBB policy impacts stock returns.

### 1 INTRODUCTION

The COVID-19 virus is a global pandemic first discovered in Wuhan, China, on December 1, 2019. Due to the non-availability of vaccine, this virus spread rapidly across the globe, and on March 2, 2020, the first positive case occurred in Indonesia. This led to a significant market decline, with the JCI falling to Rp. 3,937.63 within 18 trading days (Indonesia Stock Exchange 2020). Governments, investors, and issuers had various reactions to the pandemic, which led to a novel interplay between events and capital market returns. In line with the preceding events, the government is also contributing to the economic slowdown by enacting policies to reduce the number of transmissions and positive cases of COVID-19. For instance, the Large-Scale Social Restrictions (PSBB) policy has generated negative sentiments, which have impacted the performance of issuers' shares. This sentiment stems from investors' belief that implementing the PSBB policy, which requires employees to work from home (WFH), will decrease the company's performance.

Hayden and Hayden (2021) investigated the short-term market reaction of US and European stocks at the beginning of the pandemic. They stated that market reaction was based on monetary, fiscal policies, and death rates announced by the government in response to the pandemic. Although the study's findings indicate that fiscal policy announcements have a negative impact on stock returns, monetary policy has the potential to calm the market. Meanwhile, firm-specific characteristics, such as tangible assets, liquidity, and institutional ownership, amplify or dampen this reaction.

This study aims to determine the strategies utilized by the Indonesian Sharia Stock Index (ISSI) to increase the rate in the capital market during the COVID-19 pandemic. The ISSI has limited access to use liabilities as funding based on some special requirements, such as interest-based debt compared to total assets of not more than 45%, the relationship between total interest and other non-halal income as well as revenue and other income of not more than 10%. Therefore, by examining this phenomenon, this study aims to determine the impact of the pandemic on ISSI, beginning with the announcement of the first transmission case and ending with the tightening of the DKI Jakarta PSBB policy.

## 2 LITERATURE REVIEW

### 2.1 *Market efficiency*

Market efficiency is the point at which the market price of an asset traded on an exchange fully reflects its entire information to investors. According to Fama (1970), the market is considered efficient, supposing no one, including individual and institutional investors, is able to obtain abnormal returns using existing trading tactics. It further stated that the efficient market hypothesis is divided into three categories, namely, weak, semi-strong, and strongest forms.

### 2.2 *Event study to test market efficiency*

Event study commonly used for various events such as government policies, economic crises, events that specifically affect securities, namely dividend policies or stock splits. Event studies are commonly used to test the efficient market hypothesis. This is because abnormal returns were discovered during the study period, forming the hypothesis. During the crisis period, these are used specifically to measure associated impact or influence, such as economic conditions and the performance of capital market securities. This is conducted because by using certain statistical methods, this model tends to predict the techniques used by the security in responding to a specific event.

### 2.3 *The COVID-19 pandemic as a study of market efficiency event*

The World Health Organization (WHO) declared the Coronavirus (COVID-19) outbreak a pandemic on March 9, 2020. This virus has forced various countries to enforce regulations to prevent or contain outbreaks, ranging from lockdowns to restrictions on large-scale economic activities to limiting all citizens' mobility. The Indonesian government was no exception as it specifically implemented a Large-Scale Social Restriction (PSBB) policy. According to Minister of Health regulation number PMK No. 9 of 2020 concerning PSBB which is a movement limitation placed on certain activities of residents in an area to prevent the possible spread of the virus.

In January 2021, the Indonesian Central Securities Depository (KSEI) released public statistical data showing a significant increase in the number of capital market investors. The data indicated that from 2018 to 2019, the number of investors increased from 1,619,372 to 2,484,354. However, this 53.41% increase is still less than the figure from 2019 to the beginning of 2020. Even though the outbreak was still ongoing at the end of 2020, the number of investors rose to 3,880,753. This demonstrates that companies in the capital market are more popular than businesses in the real sector, which are harmed by the PSBB policy. A PSBB period lasts for 14 days, and it is usually terminated after it has been extended once or twice. A total of 3 PSBB regulations occurred in 2020, namely 10-23 April 2020, 4 June-2 July 2020, and 14-27 September 2020.

## 3 METHODS

A quantitative approach with the event study method was used to analyze the market reaction to the PSBB policy. According to Mackinlay (1997), it has several stages, namely defining events, analyzing the window, examining the selection criteria, performing abnormal return calculations, determining hypothesis, and presenting empirical results.

Secondary data on the daily closing prices of individual constituent stocks, the ISSI, and Non-ISSI from January 2019 to December 2020 were used to conduct this study. The ISSI constituent individual data was used to calculate daily returns, which later became components of abnormal return calculations. Furthermore, the JCI closing price data was used to calculate the expected return, which is also a component in the calculation of abnormal returns. The dates considered as Events are as follows: First Case (2 March 2020), First Death (11 March 2020), First PSBB (10–23

April 2020), Transition PSBB (4 June–2 July 2020), and PSBB strengthening (14 September–27 September 2020). Based on the date in the table above, the range of 1 day before (t–1) and 10 days after (t+10) was used to determine the event period of 12 days.

The first stage of this study is to examine shareholders' reaction to the PSBB announcement set by the government. This conducted a two-average difference test using a paired-sample t-test by comparing the average abnormal return before and after the PSBB policy announcement. Based on this method, abnormal returns are calculated through the stages in the event study as follows: 1) calculate the actual return, 2) calculate the expected return, 3) calculate the abnormal return, 3) determine the cumulative abnormal return, 4) determine the cross-sectional cumulative average abnormal return, and 5) perform a t-test for the CAAR Hypothesis. In addition, At-test was performed on the CAAR according to Brown and Warner (1985), as follows:

- a. To determine standard deviation:

$$\hat{\sigma} CAAR_{(T_1, T_2)} = \sqrt{\frac{1}{N(N-d)} \sum_{i=1}^N (CAR_i(T_1, T_2) - CAAR(T_1, T_2))^2} \quad (1)$$

where  $\hat{\sigma} CAAR_{(T_1, T_2)e}$  = CAAR standard deviation, N = number of company, d = degree of freedom, CAR<sub>it</sub> = cumulative abnormal return i at time t, and CAAR = cumulative abnormal return at time t.

- b. To calculate standard of error:

$$SE = \frac{\hat{\sigma} CAAR_{(T_1, T_2)}}{\sqrt{N}} \quad (2)$$

Where  $\hat{\sigma} CAAR_{(T_1, T_2)}$  = CAAR standard deviation, N = Number of company

- c. To calculate t-test:

$$T_{Cross} = \frac{CAAR(T_1, T_2)}{SE} \quad (3)$$

Where SE = Standard of Error,  $\hat{\sigma} CAAR_{(T_1, T_2)}$  = CAAR standard deviation, CAAR = cumulative abnormal return at time t

The null hypothesis indicates no abnormal return on the event, as opposed to the alternative hypothesis. The implementation of the First, Transitional or Tightening DKI Jakarta PSBB policy affects stock prices on the ISSI. The formulation of the hypothesis is described as follows: H<sub>0</sub>: CAAR = 0 or H<sub>a</sub> : CAAR ≠ 0.

## 4 RESULT

This result varies from study that uses non-Sharia-specific stock data because it uses policies that contain information directly or indirectly beneficial to the capital market. Table 1 shows the same results as the t-Test calculation on the ISSI CAAR. It also indicates that the ISSI and Non-ISSI have a similar response to the announcement of the implementation of the PSBB policy. In general, this study found a significant cumulative abnormal return in the announcement of the PSBB implementation, both the First PSBB, Transition, and Tightening on the ISSI and Non-ISSI constituent. The first transmission instance and the first death become negative information or news for the financial market. As a result, the market reacts badly. This study establishes that ISSI stocks perform worse than non-ISSI stocks when transmitting negative capital market news.

Additionally, policy announcements containing information that can improve market conditions generate positive abnormal returns, as evidenced by the CAAR chart, which crawls upward from CAAR t-0. This situation demonstrates that the PSBB policy's implementation can be considered when making investment decisions. When viewed in greater detail, the impact of the first PSBB generally reduces systematic risk, which is reflected in a lower expected return than the actual return, resulting in positive abnormal returns on the days surrounding the first PSBB's implementation.

The Transitional PSBB exhibits the same behavior, despite the fact that its CAAR value is the highest. However, because information about the implementation of the PSBB tightening is considered bad news for non-ISSI shares, while it is considered good news for ISSI shares, there are discrepancies in the CAAR calculation results for ISSI and non-ISSI stocks where a positive CAAR is found. On non-ISSI stocks, ISSI and CAAR are negative. There are two possible outcomes, namely positive abnormal returns during the pandemic due to the strong fundamentals of ISSI's constituent stocks or low-risk ISSI's constituent stocks. As a result, the actual return is greater than the expected return. When viewed collectively, however, ISSI stocks are more volatile than non-ISSI stocks. As evidenced by the performance of ISSI shares, when the market is bearish, ISSI shares underperform non-ISSI shares, but when the market is bullish, ISSI shares outperform non-ISSI shares.

## 5 CONCLUSION

In conclusion, the Indonesian capital market in 2020 was inefficient and semi-strong form. This is determined by the calculation of abnormal returns in the observation period with a significant CAAR for each observed event. This is in accordance with the efficient market hypothesis by Fama (1991), namely abnormal returns that occur over a long period partly slow responses in absorbing and interpreting information. Therefore, the market is considered inefficient in the semi-strong form.

## 6 LIMITATIONS AND FUTURE RESEARCH RECOMMENDATION

Based on the research that has been conducted, there are several suggestions for additional research that can be conducted. This study collected limited data on the ISSI Index in order to conduct a cross-sectional analysis on the characteristics associated with the selected index. Then, this research is limited to the announcement of the PSBB's implementation, but it could be expanded to include the implementation of other COVID-19-related policies.

## REFERENCES

- Brown, S. J., & Warner, J. B. 1985. Using daily stock returns: The case of event studies. *Journal of Financial Economics*, 14(1), 3–31.
- Fama, E. F. 1970. Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of Finance*, 25(2), 383–417.
- Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. 1969. The Adjustment of Stock Prices to New Information (SSRN Scholarly Paper ID 321524). Social Science Research Network.
- Heyden, K. J., & Heyden, T. 2021. Market reactions to the arrival and containment of COVID-19: An event study. *Finance Research Letters*, 38, 101745.
- MacKinlay, A. C. 1997. Event Studies in Economics and Finance. *Journal of Economic Literature*, 35(1), 13–39.

# Customer satisfaction analysis of PT pupuk Indonesia procurement centralization program using customer satisfaction index (CSI) and importance performance analysis (IPA) method

A.A. Akhmad

*Master of Management, Faculty of Economic and Business Airlangga University, Indonesia*

**ABSTRACT:** PT Pupuk Indonesia (Persero) has undertaken transformations in order to survive in the business competition by providing services to the subsidiary companies to procure their goods and services. These services provided are improvable by measuring customer's satisfaction. Therefore, the overall customer satisfaction is measured in this study by employing the method of Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA). Furthermore, five broad dimensions of service quality were used as the independent variables, namely tangibles, reliability, responsiveness, assurance, and empathy. The results showed that the Customer Satisfaction Index (CSI) accounted for 72.30% and the Importance Performance Analysis (IPA) showed that management needs more attention on the improvement of speed of the procurement process to be more effective and efficient.

## 1 INTRODUCTION

Every company needs to adapt and transform in this Volatile, Uncertain, Complex, and Ambiguous (VUCA) era, in order to manifest the changes required to move forward (Potsangbam 2017). Consequently, PT Pupuk Indonesia (Persero) has undertaken transformations in the operational and economic fields in a consistent manner, in order to increase the company's profitability and sustainability. Since 2021, the company has formally established the centralization of holding functions within the Pupuk Indonesia Group which is one of its business transformations plans to maintain sustainability. For example, PT Pupuk Indonesia (Persero) provides service to PT Petrokimia Gresik which is one of its subsidiaries to purchase some of its goods and services.

Generally, the measurement of customer satisfaction level is key for service providers or company to identify and reform the subject that needs improvement (Sachdev & Verma 2004). This assessment helps to evaluate the company performance, increase the efficiency process, as well as determine the strategies to gain competitive advantages (Csikosova et al. 2018). Hence, the PT Pupuk Indonesia Group implement the Quality Management System named ISO 9001:2015, in order to increase customer satisfaction.

This study measures the customer satisfaction of PT Pupuk Indonesia (Persero) in providing services to its subsidiaries in order to improve the quality of services. The result will also provide suggestions to the management for continuous improvement by using Importance Performance Analysis (IPA). The graph presentation result of IPA provides data that are used as improvement strategy in business process (Martilla & James 1977).

## 2 LITERATURE REVIEW

Satisfaction is described as customer's feelings of pleasure or disappointment resulting from comparing a product or service's perceived performance to expectations (Kotler & Keller 2016). Aritonang (2005) explained this satisfaction as the result of customer perception after buying and consuming a product. Desiyanti et al. (2018), also explained that it is significantly influenced by service quality. Therefore, customer perception of service quality is an important key in determining satisfaction level, which consists of five quality dimensions, namely tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al. 1988).

The customer satisfaction level is measured by using a method called Customer Satisfaction Index (CSI) (Aritonang 2005). Through CSI, customer expectations and satisfaction are calculated by using a

weighting system for attribute assessment (Staszków 2013). The average value of satisfaction presented by each attribute provides guidance of strengths and deficiencies (Hague & Hague 2021). The interpretation of the CSI table is in accordance with the benchmark in table 1. Subsequently, the company's performance is also evaluated by the management using techniques that are of low cost and easy to understand such as importance-performance analysis (IPA) (Martilla & James 1977).

Table 1. Customer satisfaction benchmark (Hague & Hague 2021).

No	CSI Score	Benchmark
1.	$8 \leq \text{score} \leq 10$	Excellent
2.	$7 \geq \text{score} < 8$	Quite satisfied
3.	$\text{Score} < 7$	Unsatisfied

### 3 METHODOLOGY

In this study, descriptive approach is used in order to determine the value of independent variables, whether it is one or more variables without making comparisons, or connecting variables to one another (Sugiyono 2016). Furthermore, customer satisfaction's value towards the service of procurement from PT Pupuk Indonesia (Persero) to its subsidiaries was described, which also provides input for management strategies.

Based on the observation of the business process in the company, customer satisfaction is categorized as the dependent variable. Meanwhile, the independent variables consist of five quality dimensions, namely tangibility, reliability, responsiveness, assurance, and empathy.

The primary data were obtained through structured questionnaires given to the units at PT Petrokimia Gresik, while the secondary data entails the history of the requested goods and services through centralized procurement. This questionnaire consists of 12 questions related to service quality and 1 open question for recommendation. The answer is based on scale (scale response questions), by using the Likert scale (1–5) technique. Furthermore, the result is used to conduct test validity and reliability, such that when the instruments are valid and reliable, the data are used to calculate CSI and plotting IPA's Graph. This technique is easily carried out because the validity test, reliability, and plotting IPA's Graph are processed in software IBM SPSS Statistic Version 26, 2019.

### 4 RESULTS AND DISCUSSION

The result of questionnaires is customer feedback, which is divided into two, namely the satisfaction which describes customer's acceptance and secondly the customer's expectations. In early December 2021, a questionnaire was issued to 8 units of PT Petrokimia Gresik, who are involved in the procurement of PT Pupuk Indonesia (Persero), and a total of 21 questionnaires were returned. However, one respondent is not involved in the centralized procurement process, which implied that only 20 data samples were processed.

Based on the outcome of SPSS software in table 2, the instruments tested has fulfilled the criteria of validity, namely the value of Pearson Correlation  $> 0.4438$ , the correlation coefficient ( $r$  table) is at a significant level of 5%, and the number of samples were 20 respondents. According to the result of the reliability test, the Cronbach's Alpha value  $= 0.957$ , and since it is above 0.9, it is regarded as excellent (George & Mallery 2003), and indicates strong internal consistency among the 12 items.

Table 2. Pearson Correlation of validity test.

No	Dimension	Attribute	Pearson C.
1.	Reliability	X1.1 The procurement is on time based on schedule	0.705
2.	Reliability	X1.2 Goods and Services are on specification	0.463

(Continued)

Table 2. Continued.

No	Dimension		Attribute	Pearson C.
3.	Reliability	X1.3	Goods and services prices are on Owner Estimate	0.767
4.	Empathy	X2.1	Personal attention to customer	0.906
5.	Empathy	X2.2	Understanding of customer needs	0.947
6.	Responsiveness	X3.1	Speed of response	0.901
7.	Responsiveness	X3.2	Speed of service	0.888
8.	Tangible	X4.1	Communication Facilities and tools	0.772
9.	Tangible	X4.2	Procurement Facilities and tools	0.829
10.	Tangible	X4.3	Procurement standards	0.885
11.	Assurance	X5.1	The process is safe and running well	0.922
12.	Assurance	X5.2	Service to customer is good and polite	0.884

The CSI value obtained is 72.30, which described that customer in the procurement process of PT Pupuk Indonesia (Persero) are quite satisfied with the service performance. Meanwhile, for future development, more attention is needed to improve the overall service quality, as shown in Table 3.

Table 3. The result of the Customer Satisfaction Index.

No	Dimension	Importance	Weight	Satisfaction	Weighted Score
1.	Reliability	4.70	20.26%	3.58	0.7261
2.	Empathy	4.63	19.94%	3.65	0.7278
3.	Responsiveness	4.68	20.15%	3.73	0.7508
4.	Tangible	4.53	19.49%	3.62	0.7048
5.	Assurance	4.68	20.15%	3.50	0.7054
Weighted average					3.6149
Customer Satisfaction Index					72.30%

The outcome of the importance-performance analysis (IPA) is shown in the IPA chart in Figure 1. Meanwhile, the interest-performance graph consists of 4 quadrants that represent the performance value according to the level of importance.

The first quadrant is the top priority, which represents the attributes that are considered as very important by customers but are not implemented according to customer desires. Hence, the attributes categorized under this quadrant include reliability X1.1: the procurement is on time based on schedule, assurance X5.1: The process is safe and running well, tangible X4.3: procurement Standard, and empathy X2.2: Staff understanding customer needs.

The second quadrant implied to keep up with good work which also shows the attributes are considered important by customers, and the performance is rated high and needs to be maintained by the service provider. This quadrant consisted of responsiveness X3.1: Speed of response and X3.2: Speed of services, Assurance X5.2: the service to customer is good and polite, and reliability X1.2: goods and services are on specification.

The third quadrant is low priority, which means the attributes are judged by customers to have less performance and are also considered to have interests below average. The attribute in this quadrant is tangible X4.2: the procurement facilities and tools.

The fourth quadrant is "possible overkill", which indicates good performance but low importance. There are 3 attributes in this quadrant, namely reliability X1.3: the goods and services prices are on Owner Estimate (OE), Empathy X2.1: personal attention to the customer, and tangible X4.1: communication facilities and tools.

Basically, the IPA facilitates the management with helpful guide and focus for developing business strategies specifically in centralization procurement. For example, it helps to achieve speedy procurement process by identifying and eliminating waste. Waste is any activity that takes unnecessary time, hence its elimination promotes more productive process. Based on this, the procurement standard needs to be

efficient and run safely by observing the rules implemented. The management needs to also provide training to its staff to improve knowledge and expertise regarding customer service and procurement.

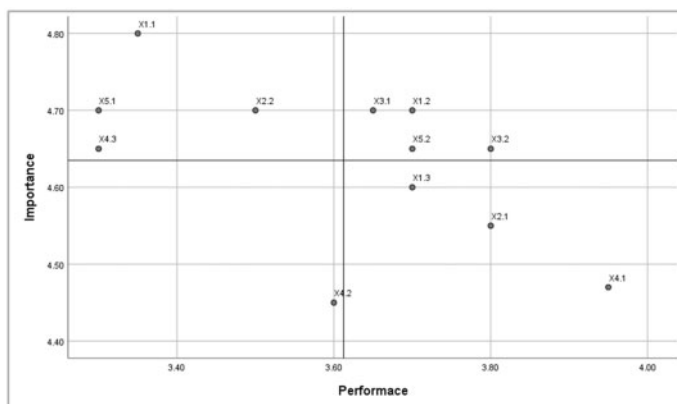


Figure 1. The Importance Performance Graph.

## 5 CONCLUSION AND IMPLICATION

The Customer Satisfaction Index (CSI) value obtained is 72.30, which means the customers are quite satisfied with the overall performance of PT Pupuk Indonesia (Persero). These results showed that some of the measured service attributes have room for improvement of services and business processes. Furthermore, this study highlighted that the most important issue of service quality, which is the speed of procurement, is not on the schedule. Hence, the management needs to improve the overall process speed, the procurement standards which affects the speed of the implementation, ensures the process runs safely, and training of the staffs.

This study provides useful guide for PT Pupuk Indonesia (Persero) in understanding the key for further improvement within the framework of the business transformation programs. The IPA's graphical presentation indicates the subjects that need more attention for improvement, as well as the ones that should be maintained on the current level.

## REFERENCES

- Aritonang, L. 2005 *Kepuasan pelanggan*. Jakarta: PT. Gramedia Pustaka Utama.
- Desiyanti, N., Sudja, I. and Martini, L. 2018 "Effect of Service Quality on Customer Satisfaction, Customer Delight and Customer Loyalty (Study on LPD Desa Adat Sembung and LPD Desa Adat Seseh)," *International Journal of Contemporary Research and Review*, 9, pp. 20660–20668. doi:10.15520/ijcrr/2018/9/03/483.
- George, D. and Mallery, P. 2003 *SPSS for Windows step by step: A simple guide and reference. 11.0 update*. 4th edn. Boston: Allyn & Bacon.
- Hague, N. and Hague, P. 2021 *Customer Satisfaction Surveys & Research: How to Measure CSAT*, <https://www.b2binternational.com/publications/customer-satisfaction-survey/>.
- Kotler, P. and Keller, K.L. 2016 *Marketing Management*. 15th edn. London: Pearson.
- Martilla, J.A. and James, J.C. 1977 "Importance-Performance Analysis," *Journal of Marketing*, 41(1), pp. 77–79. doi:10.1177/002224297704100112.
- Potsangbam, C. 2017 "Adaptive Performance In VUCA Era -Where Is Research Going?," *International Journal of Management (IJM)*, 8, pp. 99–108.
- Staszaków, M. 2013 "Use of Customer Satisfaction Index on the example of office rental services," *Intercathedra*, pp. 95–99. doi:10.13140/2.1.3477.5687.
- Sugiyono 2016 *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: PT Alfabet.



# Investor perception analysis on priority benefits of corporate income tax incentives in Indonesia

A.W.B. Seno & D.A. Chalid

*Faculty of Economics and Business, University of Indonesia, Indonesia*

**ABSTRACT:** This paper seeks to analyze the benefits of incentives that are most desired by investors. This study focuses to find the most attractive incentive benefits and to propose an efficient procedure in applying corporate income tax incentives. First, interviews were conducted with experts to get their views on the benefits of tax incentives in Indonesia. Furthermore, a survey was conducted on potential investors in manufacturing companies. An Analytic Hierarchy Process (AHP) was conducted to determine which fiscal benefit incentives were the most attractive one for investors. It was found out that corporate income tax exemption for a certain period was the most attractive benefit for investors. Extension of tax loss carried forward is attractive to manufacturing companies because it can be fully utilized at the beginning of the company's operations. This study contributes to providing an initial input regarding the formulation of well-targeted incentives.

## 1 INTRODUCTION

Based on 2019 OECD data on the FDI Regulatory Restrictiveness Index, Indonesia is one of the countries that restrict FDI (Foreign Direct Investment). Several sectors such as agriculture, fisheries, oil and gas, electricity, construction, hospitality, distribution, transportation, telecommunications insurance, and other financial services are still closed to domestic investment. Further, based on data from the Coordinating Ministry for Economic Affairs, within 10 years of the implementation of the tax allowance facility from 2007 – 2017, there were 138 recipients of the facility. This shows the low interest of investors in utilizing the tax allowance facility. Since the tax holiday was implemented in 2011 until 2017, there were only five taxpayers who get the facility, with an investment plan value of IDR 38.7 trillion and located in four provinces.

Tax incentive policy is a possible alternative to attract domestic investment (Surrey 1970). The provision of tax incentives broadly has a good impact on the economies of Asian countries, although there is no clear measurement of the contribution of incentives to the country's economic growth (Tanzi & Shome 1992). To compete with neighboring countries such as Vietnam, Thailand, and Malaysia, the government must consider various incentive schemes that can attract investments. In formulating policies, the government is recommended to choose the right scheme so that investment increases with efficient state spending. This study is expected to provide information about the most attractive benefits for investors. Therefore, the Government of Indonesia can choose the most attractive incentive benefits for investors. In addition, the findings in this study can also be used to enhance the existing facility schemes.

## 2 LITERATURE REVIEW

### 2.1 *Tax incentives*

Tax incentives can be defined either in statutory or effective terms. In statutory terms, it would be a special tax provision granted to qualified investment projects that represents a statutorily favorable deviation from a corresponding provision applicable to investment projects in general.

This definition implies that any tax provision that applies to all investment projects does not constitute as a tax incentive. In effective terms, a tax incentive would be a special tax provision granted to qualified investment projects that have the effect of lowering the effective tax burden. Under this definition, all tax incentives are, therefore, necessarily effective (Zee et al. 2002).

## 2.2 Tax incentive policy for investment in developing countries

The main approach is to adapt existing regulations to general taxation policies and international norms supported by good macroeconomic conditions, legal certainty, and existing laws and regulations to attract investment. Although the effectiveness of state spending on tax incentives cannot be measured with certainty, policy arrangements must encourage transparency and reduce discretion from the government in the incentive registration procedure. Tax incentive that provide for faster recovery of investment costs (e.g. investment allowances/tax credits and accelerated depreciation) tend to be more efficient than those that involve reducing CIT rate and CIT holidays (Zee et al. 2002).

## 2.3 Competition between countries to lower their effective average tax rate

Emerging countries in Asia tend to lower their effective average tax rate (EATR), while large countries maintain their EATR at a certain level. Furthermore, countries in Asia provide tax holidays to attract FDI. There has been interaction between countries in Asia related to EATR since 1990. However, the results of the study show differences with the simple tax competition model, where some countries increase their effective tax rates. In contrast, other countries tend to reduce their effective tax rates (Suzuki 2014). In the regional competition to attract investment, the government must be able to choose an effective and efficient incentive policy.

## 3 METHODS

This study employs combined methodologies consisting of AHP. Firstly, a hierarchical structure was constructed using nine criteria identified through the literature review and taking opinions from four experts. Table 1 and Table 2 present the operational definitions of the various criteria for incentives benefit and improvement aspect on the application procedure. Further, AHP was applied to determine the relative weights of criteria and the priority benefits of corporate income tax incentives. Finally, the proposed incentive scheme was discussed with experts to crosscheck the possibility of implementation of the policy.

Table 1. Tax incentives benefit and definition.

Criteria (benefit)	Operational Definition
1. Tax exemption	Reduction of income tax by 100% based on the amount of the investment (tax holiday)
2. Tax allowance	Reduction in net income by 30% (thirty percent) of the amount of the investment in the form of tangible fixed assets
3. Accelerated depreciation	Accelerated depreciation for fixed assets or amortization of intangible assets
4. Duration	Duration of use of corporate income tax incentives
5. Withholding tax	Tax withholding at 10% on dividends paid to foreign taxpayers other than a permanent establishment in Indonesia, or lower rate based on double taxation avoidance agreement (DTA)
6. Tax loss carried forward	Tax loss carried forward for more than 5 (five) years up to a maximum of 10 (ten) years
7. Preferred tax rate	Application of a lower than the normal tax rate
8. Double Deduction	Deduction of net income greater than 100% on expenses for certain activities
9. Coverage of business fields	Coverage of the breadth of business fields that receive income tax incentives

Table 2. Improvement aspect on the application procedure.

Criteria	Operational Definition
1. Application procedure	Submission procedure that starts from the initial consultation stage regarding incentives until the decision on the approval or rejection of incentives
2. Application system	Incentive registration system that refers to the Online Single Submission (OSS)
3. Implementation of incentives	Incentive implementation activities and tax audits regarding the commencement of commercial production
4. Access to incentive information	Easiness for investors to obtain information and consult with the government

In the decision-making process, management is faced with alternatives in solving problems. Management is often faced with problems that are comprehensive and cannot be compared between one option and another. AHP is a flexible and capable method in the decision-making process either for determining priorities, comparing alternatives, and making the best decisions, taking into account qualitative and quantitative aspects under certain conditions (Saaty 1990). The AHP computed the weights of criteria and sub-criteria. The factors were pairwise compared using a predefined scale (Saaty 1990). Further, the same scale was used to assign weights for ranking the alternatives. After pairwise comparison among nine criteria, a (9 x 9) dimension matrix was formed in which each component represented the weight of the criterion given by the respondent. Further, the mathematical computation was carried out to establish the relative weight of the criteria.

#### 4 RESULT AND DISCUSSION

Interviews were conducted with the experts to get comprehensive information related to the formulation of policies related to the provision of corporate income tax incentives. Some of the findings in the interview are: 1) The most attractive facility benefit was a reduction in tax payable up to 100%. This was due to the large tax holiday benefits that were easy to calculate and the ease of application requirements for facilities; 2) The existing corporate income tax incentive benefit scheme in Indonesia was still considered competitive compared to neighboring countries. In addition, the size of the Indonesian market was one of the main attractions for investing in Indonesia; 3) Various corrective steps had been taken by the Government of Indonesia in the policy of providing tax incentives, with a focus on simplification, certainty, and transparency of procedures; 4) The existing tax regulatory structure in Indonesia allowed the addition of a new incentive benefit scheme through Article 35 of the Income Tax Law.

Furthermore, the AHP method was carried out based on data from company respondents who had the potential to receive income tax incentives. There were 12 company respondents consisting of various companies that produced passenger cars, textiles, chemicals, and other products with a workforce of between 100 and 800 workers.

Tax exemption (benefit 1) had the highest weighting of 32.09% indicating that this benefit was the most attractive. This benefit was associated with a tax holiday facility where business actors were exempted from the obligation to pay Corporate Income Tax for a certain period. Direct reduction of tax payable was considered the most attractive because of the certainty of the amount that could be calculated directly. The certainty of these benefits was attractive and made it easier for business actors to conduct a feasibility study on the investment plan to be carried out. The tax allowance benefit (benefit 2) was the next most attractive benefit based on investor perception that had a weight of 20.03%. The calculation of these benefits was based on the assets invested so that this benefit was attractive to the manufacturing industry that invested a lot in fixed assets such as buildings and machinery.

Table 3. Pairwise comparison matrix of aspects of improvement in the application of incentives.

	1	2	3	4	weight
1	1	7.33	7	7.3	58.46%
2	0.136	1	7.33	7.4	25.16%
3	0.131	0.133	1	7.6	12.52%
4	0.125	0.117	0.117	1	3.85%

In relation to the aspect of improvement in the tax incentive filing procedure, investors wanted improvements to the incentive application process with a weight of 58.46%. Investors viewed that improvements to the submission procedure would make incentives more attractive to investors. The certainty of the decision and the number of incentives were the main factors in determining the choice of the corporate income tax incentive benefits. The government periodically evaluated the policy for providing corporate income tax incentives. The use of the OSS (Online Single Submission) also helped to ensure certainty and transparency in filing for investment and facility permits.

## 5 CONCLUSION, IMPLICATION, AND LIMITATION

Tax incentive policy is a possible alternative to attract domestic investment (Surrey 1970). The provision of tax incentives has broadly a good impact on the economies of Asian countries, although there is no clear measurement of the contribution of incentives to the country's economic growth (Tanzi & Shome 1992). This study aims at finding the most attractive incentive benefits and proposing an efficient procedure in applying corporate income tax incentives. The results showed that: 1) The government had provided incentive schemes that investors wanted. Tax exemption benefit was the most attractive benefit with the highest weight of 32.09%; 2) Investors wanted improvements in the incentive application process that could lead to the formulation of regulatory improvements in the tax incentive application procedure; 3) An effective and efficient incentive scheme could be started by improving the most attractive incentive scheme, which was related to the benefits of tax exemption (tax holiday). The government could focus on evaluating and improving policies for providing tax holiday facilities. Improvements could be made to the aspect of the scope of the business sector by taking into account the purpose of the facility to encourage the growth of the pioneer industry.

In this study, some limitations were found. Considering the need for coordination by several divisions within the company to answer the questionnaire, this study was only conducted by involving 12 respondents. Further studies can consider the corporate income tax incentive benefit scheme in the finished goods and semi-finished goods industry. The company's position in the industry tree can influence investors' perceptions of the benefits of certain incentives. Despite its limitations, this study can be useful to provide an initial input regarding the formulation of well-targeted incentives and evaluating policies related to corporate tax incentives.

## REFERENCES

- Saaty, T. L. 1990. How to make a decision: The analytic hierarchy process. *European Journal of Operational Research*, 48, 9–26.
- Surrey, S. S. 1970. Tax Incentives as a Device for Implementing Government Policy: A Comparison with Direct Government Expenditures. *Harvard Law Review*, 83, 705–738.
- Suzuki, M. 2014. Corporate effective tax rates in Asian countries. *Japan and the World Economy*, 29, 1–17.
- Tanzi, V. & SHOME, P. 1992. The Role of Taxation in the Development of East Asian Economies. NBER Chapters.
- Zee, H. H., Stotsky, J. G. & Ley, E. 2002. Tax Incentives for Business Investment: A Primer for Policy Makers in Developing Countries. *World Development*, 30, 1497–1516.

# Overconfidence of Indonesian millennial investors' behavior during pandemic

A.I.P.P. Damayanti & R. Rokhim

*Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** Indonesia is entering the digital financial inclusion era where the public utilizes the internet and digital platforms to have more resources. This condition attracts Indonesian millennials to explore financial instruments, especially in the stock market. During the COVID-19 pandemic, where the stock market price goes down, there is a unique phenomenon where the number of individual investors, dominated by millennials, is increasing. This paper examines whether behavioral bias occurs during the investment decision-making process. The main focus is examining the overconfidence level of millennial investors in the investment decision-making process during the pandemic. A quantitative research method is chosen to investigate the 114 valid respondents' data collected using a Google Form questionnaire and then analyzed using partial least squares structural equation modeling (PLS-SEM). Overconfidence is proved to have a significant effect on the investment decision for millennial investors during the COVID-19 pandemic.

**Keywords:** Overconfidence, investment decision, behavioral bias

## 1 INTRODUCTION

The new era of initiating financial inclusion in Indonesia has become a great bridge for the public to get more information and access to economic and financial conditions. Referring to Aamo (2012) regarding the focus of the Financial Action Task Force (FATF), financial inclusion is essential to be implemented in a global network such as emerging markets, developing countries, and low capacity countries where the unbanked people are still high, including Indonesia. The presence of financial inclusion is supported by the condition where Indonesian people are getting familiar with using technology, as the real form of digitalization. Nevertheless, while building the public interest in investment, with the promising result, the COVID-19 pandemic outbreak happened at the beginning of 2020. The most suffering sector that is most visibly affected by the COVID-19 pandemic is the economic sector. While Indonesia faces the stock prices falling, some Indonesian people take benefits from this condition. KSEI (2021) records the growth of Single Investors Identification (SID) in Indonesia steadily increasing during the COVID-19 pandemic and is dominated by millennials.

Markowitz (1952) explains that optimal portfolio investment consists of two focuses; how to maximize the investment return and how to minimize the risk at a certain level. Referring to prior researches, it is believed that behavioral biases happened and contributed to investment decision-making by individual investors. This research is used to examine the effect given from Overconfidence to Investment Decision.

## 2 LITERATURE STUDY

### 2.1 *Behavioral finance*

Behavioral finance has become one of the most popular subjects to be observed during pandemic situations. According to Bouteska and Regaieg (2020), there are two basic assumptions in financial behavioral theory; the investors are not fully rational in avoiding risk and are influenced by emotional conditions, as well as the limited effective arbitrage carried out by fully rational investors.



Figure 1. Increasing growth of millennial investors in Indonesia during pandemic.

## 2.2 Overconfidence

Bouteska and Regaieg (2020) stated that overconfidence is one of the behavioral biases that describes how very confident the investor is with their knowledge and ability. They tend to obey public information such as news because they think their knowledge is more than enough.

## 3 METHODOLOGY

### 3.1 Data source and sampling

The primary data is collected by using an interview process or questionnaire distribution. Data sampling in this research is based on data gathered from distributing questionnaires to Indonesian millennials by conducting sampling methods using non-probability sampling and purposive sampling. The qualifications to be a respondent in this research are Indonesian millennial of 17-40 years old and has invested in the stock market during the COVID-19 pandemic. Data is collected from 144 respondents, but only 114 respondents fit the sampling requirements.

### 3.2 Research hypothesis

Based on the independent variables and prior researches, the hypothesis of this research is formulated. According to Mouna and Jarbouï (2015), overconfidence occurs when an individual is extending the erroneous sense of control, and believes that they can overestimate his capacities in making the right decision. Thus:

H1: There is a significant positive relationship between overconfidence and investment decision-making.

## 4 DATA COLLECTION AND ANALYSIS

### 4.1 Initial tests

Before conducting the structural equation modeling (SEM) analysis, the collected data has been tested using reliability and validity tests to examine the properness of the data. It is shown that the data from the questionnaire shows reliable and valid values, which means it can proceed to the SEM calculation and analysis.

## 4.2 Data collection

The Google Form questionnaire is distributed to respondents to collect the primary data of the research. The number of respondents who filled the questionnaires is 144 respondents, but only 114 respondents fit the sampling requirements. The data consists of various respondents' demographic backgrounds based on their education, jobs, and experience in investment.

## 4.3 Data analysis

The main focus of this research is to investigate the investment behavioral bias related to overconfidence. The SEM analysis is conducted to the qualified respondents' responses to each observed question. The influence of each independent variable on the dependent variable is also examined.

Table 1. SEM analysis result.

	Original Sample (O)	Sample Mean (M)	Std Deviation (STDEV)	T Stat ( O/STDEV )	P Values
Overconfidence → Investment Decision	0.0183	0.209	0.087	2.107	0.036

The result of the SEM analysis shows that overconfidence has a value less than 0.05. It means overconfidence significantly affects investment decisions. Past studies proved that behavioral biases did occur in the investment decision-making process by the investors, which supports the result of this research. Based on the analysis, it seems that overconfidence influences the psychological condition of investors during the decision-making process.

## 5 CONCLUSION

This research was conducted to observe a condition where behavioral bias may occur during the investment decision-making process conducted by Indonesian millennial investors. The variable tested is overconfidence, which is used to examine the investment decision as a dependent variable. The Google Form questionnaire is utilized to collect data from qualified respondents, who are Indonesian investors of 17-40 years old and have done investment during the COVID-19 pandemic. By conducting the SEM analysis, it is shown that each independent variable has a significant effect on the dependent variable with a value of less than 0.05. This indicates that there are indeed behavioral biases that occur during the investment decision-making process conducted by Indonesian millennial investors. Since this research faced several limitations, future research can add more variables to be tested and extend the distribution area.

## REFERENCES

- Aamo, B. S. (2012). FATF's focus on financial inclusion: protecting the integrity of the global financial system. *Global Partnership for Financial Inclusion Conference on Standard-Setting Bodies and Financial Inclusion: Promoting Financial Inclusion through Proportionate Standards and Guidance*. [fatf-gafi.org/publications/fatfgeneral/documents/fatfsgfocusonfinancialinclusionprotectingtheintegrityoftheglobalfinancialsystem.html](http://fatf-gafi.org/publications/fatfgeneral/documents/fatfsgfocusonfinancialinclusionprotectingtheintegrityoftheglobalfinancialsystem.html)
- Bouteska, A., & Regaieg, B. (2020). Loss aversion, overconfidence of investors and their impact on market performance evidence from the US stock markets. *Journal of Economics, Finance and Administrative Science*, 25(50), 451–478. <https://doi.org/10.1108/JEFAS-07-2017-0081>
- KSEI. 2021. *Statistik Pasar Modal Indonesia Januari – Desember 2021*
- Markowitz, H. (1952). Portfolio selection. *The Journal of Finance*, 7(1), 77. <https://doi.org/10.2307/2975974>
- Mouna, A., & Jarboui, A. (2015). Financial literacy and portfolio diversification: An observation from the Tunisian stock market. *International Journal of Bank Marketing*, 33(6), 808–822. <https://doi.org/10.1108/IJBM-03-2015-0032>

## The development of fortified salt marketing model as a leading product of Madura Island

P. Nugroho, A. Susandini & D. Islam

*Trunojoyo Madura University, Bangkalan, Indonesia*

**ABSTRACT:** Marketing is one of the problems that fortified salt businesses in Madura often face in selling their products. It is known that Madura is one of the salt centers with the most extensive salt production. However, some small businesses process raw salt into iodized salt in Madura. This study aimed to determine the marketing strategies of fortified salt by small businesses in Madura. Next, a marketing strategy for Madura fortified salt would be developed to compete in the market. This study employed a qualitative approach. The results showed that most of the fortified salt businesses in Madura still used direct marketing strategies. Based on the results, it was recommended that salt businesses in Madura need to determine market segmentation, targeting, and positioning of the products produced before deciding the marketing model. In addition, companies are required to cooperate with third parties.

### 1 INTRODUCTION

Indonesia has extensive marine resources, both in terms of quantity and diversity. The marine resources are vast in terms of amount, and one of Indonesia's potential wealth is salt production. Of the total national salt production, Madura is one of the salt centers with the most extensive salt production. Most of the produced salt would be directly sold to intermediaries and then sent to the processing plant. Very few tiny businesses process raw salt into salt for consumption in Madura. Consumption salt is salt used for public consumption or processed into household salt and dietary salt. Adding iodine to salt is called salt fortification. Iodine is a mineral element that is an essential nutrient for the body. Iodine fortification of consumption salt aims to improve the quality of Indonesian human resources.

It is known that marketing is one of the salt problems for the people and salt businesses in Madura. One of the salt businesses in Pamekasan Regency explained that they have difficulty marketing processed salt products (iodized salt) because they cannot compete with iodized salt produced by large companies. Marketing is the overall system of business activities aimed at planning, pricing, promoting, and distributing goods and services that satisfy the needs of existing and potential buyers. Therefore, marketing is one of the most critical fields in a company. Marketing has three functions: the exchange function, physical function, and facility function (Asmarantaka 2012).

From the above review, it was necessary to have a suitable marketing model so that fortified salt in Madura could compete with the large companies' products. The results of this research were expected to provide a reference for salt businesses, especially fortified salt in Madura, to compete in local, national, and even international markets.

### 2 LITERATURE REVIEW

Marketing is the overall system of business activities aimed at planning, pricing, promoting, and stating that it can distinguish between social and managerial definitions of marketing (Dharmmesta & Irawan 1990; Kotler & Keller 2011). The social definition describes the marketing's role in society; social marketing is the process in which individuals and groups obtain what they want by



creating, offering, and freely exchanging products and services of value with others, distributing goods and services that satisfy the needs of existing and potential buyers.

Fortification is an effort to add micronutrients such as vitamins and minerals into food to improve the quality of nutrients beneficial for public health. Food fortification with micronutrients is one of the main strategies that can be used to improve the micronutrient content of food (Allen et al. 2006). Several things must be considered in the food fortification process, including fortified food ingredients that are safe for consumption and there is guarantee against possible side effects.

### 3 RESEARCH METHODS

This study employed a qualitative approach because it showed a detailed and in-depth description of the conditions in the field. This study analyzed the marketing strategies of fortified salt in Madura. Then, a marketing model for fortified salt would be developed. This study examined companies that process raw salt into salt for consumption. The samples were obtained using the snowball sampling technique. Data were collected by interview, observation, documentation, and triangulation.

### 4 RESULT AND DISCUSSION

Nine companies were selected as the object of this study. They were private and state-owned Limited Liability Companies (PT), CV, individual companies (trading businesses), farmer groups, and village-owned enterprises (BUMDes). Traditional and modern methods can be used to process raw salt into salt for consumption (iodized). The traditional method to refine salt is by burning the salt using a stove and wood. Meanwhile, the modern salt processing method used a refining machine and an oven for combustion. The salt production capacity was more significant when using machinery. Companies that traditionally processed salt produced an average of 100–200 kg of salt a day. On the other hand, if they were using machinery, they could produce 20–35 tons per day.

One of the problems companies face in running a business is increasingly fierce competition. The same is true for consumption salt processing companies. Consumption salt (iodized) tastes like regular salt, namely salty. There is no difference in the taste of salt even though it is a different trademark and produced by other companies. It was supported by the results of questionnaires distributed through social media, where 86% of respondents stated that all salt had the same taste. The remaining 14% of respondents said that not all salt had the same taste. Therefore, a company should be positioned to get a special place in the minds of consumers.

A product or item usually has a brand when sold to the market. It was also true for salt because there are so many brands of consumption salt (iodized). A brand is a name, term, symbol, design, or a combination of these aspects, to identify goods and differentiate them from competitors. The brand is one of the factors that can influence consumers when buying goods. Based on the questionnaire distributed through social media, it was known that 63.3% of respondents stated that the brand was not considered when purchasing salt, only 36.7% thought about the brand when buying salt. In addition, consumption salt producers admitted that it was tough to compete with old brands because they were already embedded in the consumers' minds.

The results showed that several companies had more than one trademark, such as CV Media Utama Group, PT Garam (Persero), and PT Garsindo Anugerah Sejahtera. All products were the same; only the company differs in product design (packaging) adapted to the marketing area. Therefore, it was known that product design needed to pay attention to the consumers' character in each region. One of the reasons companies had many trademarks was to reach a broader market adapted to the nature of the consumers and the marketing area.

The company's selling area for the produced salt was still primarily done in Madura. A Limited Liability Company (PT) entered Indonesia's market. There were marketing strategies used to market their products directly or indirectly. Direct marketing is a strategy to promote products or services that are shown to influence consumer actions (Mardiyanti, n.d.). For example, the marketing

strategy for salt products was directly conducted through distributors in each region, personal selling promotions, family assistance promotions, and employees/sales. Target consumers from direct marketing strategies were neighbors, communities, friends, and food processing factories. Indirect marketing is a strategy to promote a product or service that is shown to touch the thoughts and feelings of consumers (Mardiyanti, n.d.). Indirect marketing strategies can be done using social media and marketplaces. Companies with marketing strategies can be seen in Figure 1.

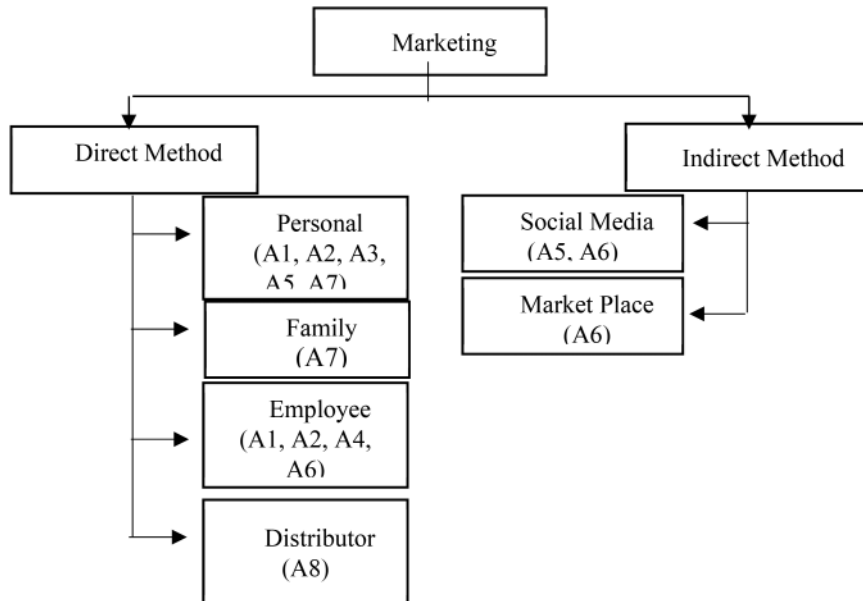


Figure 1. Salt marketing strategy of each company.  
Source: Data processed by researchers.

Description:

- A1 = BUMDES Bunder, Mutiara Saghara
- A2 = PT Garam Sampang
- A3 = UD. Barokah
- A4 = CV Media Utama Groub
- A5 = PT Sumber Rizki Barokah
- A6 = CV ESPE KRISTAL BAHARI
- A7 = UD. Barokah Jaya
- A8 = PT Garsindo Anugerah Sejahtera

#### 4.1 Development model for fortified salt marketing in Madura

The marketing strategy for fortified salt used by small businesses in Madura was direct marketing assisted by families, friends, and employees. This would affect sales because the marketing area was limited to Madura. The direct marketing strategy of large companies in the form of PT was handed over to distributors in each region to sell their products to all areas throughout Indonesia.

Before choosing a marketing model, companies needed to determine market segmentation (based on geography, demographics, behavior, psychographics, hobbies, and interests), assess target consumers, and product positioning. It was also applied to salt marketing; initially, the company should determine what salt would be produced, salt market segmentation, the target consumers, and how the company built an image in the consumers' minds.

Salt market segmentation means that companies categorize heterogeneous markets into groups with similarities in needs, wants, and behavior. Next, the company should divide the market and map consumers according to their characteristics, lifestyle, and interests. This related to the salt to be produced and sold to consumers based on Demographics, namely determining the consumer groups based on age, gender, educational level, income level, occupation, and others; Geographic is defining consumer groups based on their location; Psychographics is to assess consumer groups based on interests and behavior. After selecting the market segment, the company needed to determine its target market, namely what kind of consumers and where the product would be sold, such as in traditional markets, small stalls, minimarkets, supermarkets, et cetera. The next step is to determine the positioning of the salt, namely through what and where the production process would be conducted. Companies can cooperate or collaborate with third parties at the positioning stage, such as restaurants, food companies, and others.

After determining the segmentation, targeting, and positioning, the company can evaluate the marketing strategies. Technological advances are beneficial in the marketing process; companies can use indirect marketing strategies through social media and marketplaces. This method can be used as an option if the produced salt differs from that on the market. In addition, companies can combine direct and indirect marketing strategies to reach a broader market. The Madura fortified salt marketing model can be developed by collaborating with third parties and combining existing marketing strategies.

## 5 CONCLUSION

Salt brands were not considered when buying salt, but consumers tended to choose salt that was commonly used, so businesses should be able to create an image in the consumers' minds. New salt products should conduct specific marketing strategies to enter the market because the existing brand was already attached to the consumers' minds, namely by cooperating with companies to become partners in marketing new salt. If the produced product is high-class salt, social media should do the marketing. However, if the effect is the same as salt in general, it is better to use the direct marketing method.

## REFERENCES

- Allen, L., De Benoist, B., Dary, O., & Hurrell, R. (2006). Guidelines on food fortification with micronutrients. Asmarantaka, R. W. (2012). Pemasaran Agribisnis (Agrimarketing). Departemen Agribisnis, FEM-IPB.
- Dharmmesta, Basu S., & Irawan, S. (1990). Manajemén Pemasaran Modern [Modern Marketing Management]. Liberty.
- Kotler, P., & Keller, K. (2011). Marketing Management. Prentice Hall PTR.
- Mardiyanti, R. (n.d.). Model Pemasaran [Marketing Models]. Scribd. <https://www.scribd.com/document/369100338/Model-Pemasaran>
- Swastha, Basu dan Irawan. 2005. Manajemén Pemasaran Modern, Edisi II Cetakan Kedua belas. Yogyakarta: Liberty Offset

## The effect of overall e-service quality on repurchase intention, word of mouth and site revisit of local fashion brand customers

A.D. Precia & Y. Alversia

*Faculty of Economics and Business, Universitas Indonesia, Indonesia*

C.A.D. Nastiti

*Marketing and Business Analysis Business School, University of Edinburgh, UK*

**ABSTRACT:** The study aims at developing new knowledge to better understand the importance of the utilitarian and hedonic dimensions of e-Service quality affecting consumer satisfaction and trust in a local fashion brand official website, thus the customers will always have the intention to visit, repurchase and recommend it to their relatives. The findings of this study indicate that enjoyment, as the dimension carried, was proven to be valid and significant as a construct of e-service quality. The results also show a significant positive effect of e-service quality on customer satisfaction and customer trust. In addition, there was a significant positive effect of customer satisfaction and customer trust on consumer loyalty. This study also proves a significant positive effect of customer satisfaction and customer trust as a mediating role between e-service quality and repurchase intention.

### 1 INTRODUCTION

The fashion industry in Indonesia continues to grow rapidly, so that it becomes one of the industries that contributes to improving the country's economy. The fashion industry in Indonesia is growing because of the role of e-commerce. According to the Katadata Insight Center and Kredivo, fashion and accessories products are the product category with the biggest number of transactions in e-commerce in 2020. E-commerce also makes it easier for these local fashion brands to market their products so that they are more widely known. This has also led to increasingly fierce competition among fashion business players. Local fashion brands have the freedom to determine the type of e-commerce used to sell their products. Many fashion brands choose a marketplace as a platform to market their products. However, not a few fashion brands have taken steps to create an online platform in the form of a website for doing business because all the design, catalog display, and website features can be made according to the branding that the brand wants to build.

Going online, however, presents fashion brands with the responsibility and challenge of ensuring that customers are as satisfied when shopping online as they are when shopping in a retail store. A company must deliver superior service experiences to its customers so that they will repurchase and be loyal to the company (Rita et al. 2019). To obtain high levels of customer satisfaction, high service quality is needed, which often leads to favorable behavioral intentions. A website with good system quality, information quality, and e-service quality is a key to success in e-commerce (Rita et al. 2019).

Many researchers have studied the concept of e-service quality. However, most e-service quality measures emphasize more towards its utilitarian qualities (Wolfenbarger & Gilly 2003). Bauer et al. (2006) then stated that the construct of e-service quality is not complete without the hedonic aspect, thus implying that ignoring the hedonic aspect of e-sq leads to a biased understanding of the construct. They then, at that point, discovered the eTransQual scale. The discoveries from their examination support the need to measure both aspects of e-service quality, as they found that estimating only one was deficient in catching all parts of e-shopping behavior. To et al. (2007)

found that hedonic motivation has a direct impact on intention to search and indirect impact on intention to purchase. Therefore, the objectives of this study are as follow: (1) to test the hierarchical model of e-service quality in a new specific product category, which is fashion products, and (2) to investigates a mix of utilitarian and hedonic dimensions of electronic service quality (e-SQ) that better predict customers' behavior within Indonesian local fashion brand e-retailers.

## 2 LITERATURE REVIEWS

### 2.1 *E-Service Quality*

According to Wolfinbarger and Gilly (2003) cited in Blut et al. (2015), e-service quality is the quality of service from the beginning to the end of the transaction, including information search, website navigation, customer service interaction, ordering, delivery to customer satisfaction with the ordered product. The quality of e-service quality can be measured by certain dimensions that have been developed by previous studies. Rodríguez et al. (2020) stated that when utilitarian needs have been met by business actors, understanding the hedonic value of customers can be a competitive advantage for these business actors. In addition, it is crucial to understand the emotional impulses of customers as part of their consumption behavior. Companies must pay attention to e-service quality because it can relate to consumer satisfaction, where customer satisfaction can also affect consumer loyalty (Pudjarti et al. 2019). Customer trust in online stores is also one of the factors that determine whether to make a purchase or not (Rita et al. 2019). This is because there is no direct face to face with retailers. Chang et al. (2013) suggested that the level of trust can be an obstacle for people in adopting online shopping trends. Previous research revealed that service quality has a direct positive influence on consumer trust (Rita et al. 2019). Hence, it is assumed that:

- H1. The new mix of utilitarian and hedonic dimension are positively related to e-Service Quality
- H2. Overall e-service quality has a positive association on customer satisfaction
- H3. Overall e-service quality has a positive association on customer trust

### 2.2 *Customer Satisfaction and Customer Trust*

Customer satisfaction is the key to future repurchases (Rita et al. 2019). Customers who feel satisfied with the products purchased and the services provided tend to make repurchases at the same store (Javed & Wu 2020). In addition, repurchasing at the same store is also possible if there is a high level of trust from the customers (Rita et al. 2019). According to Kumar and Ayodeji (2021), a high level of customer satisfaction and trust will be directly proportional to the customer's intention to repurchase. Customers who feel satisfied with the services provided by online stores also tend to make positive comments (Rita et al. 2019). Customers who trust online stores also tend to recommend these stores to their closest relatives (Wu 2003). Therefore, customers must be satisfied with their experience when shopping and trust the information provided by online stores so that they can share their experiences with others. According to Rita et al. (2019), customers tend to use their past experiences in decision-making for repetitive behavior. Customers who are satisfied with their past shopping experiences are more likely to engage in repetitive behaviors such as revisiting websites. Hence, it is assumed that:

- H4a. Customer Satisfaction has a positive association on Repurchase Intention
- H4b. Customer Satisfaction positively mediates the relationship between Overall ESQ and Repurchase Intention
- H5a. Customer trust has a positive association on repurchase intention
- H5b. Customer trust positively mediates the relationship between Overall ESQ and Repurchase Intention
- H6. Customer Satisfaction has a positive association on Word of Mouth
- H7. Customer Trust has a positive association on Word of Mouth
- H8. Customer Satisfaction has a positive association on Site Revisit

### 3 METHODS

The data was collected through the structured questionnaire online survey. The questionnaire includes six constructs with their respective indicators, which were adapted from the items validated in prior studies. Measures for utilitarian and hedonic dimensions of e-service quality were taken from Wolfinbarger and Gilly (2003) and Rodríguez et al. (2020). Measures for customer satisfaction were taken from Fornell (1992) and Rita et al. (2019). Measures for customer trust were taken from Gefen (2002), Lee and Turban (2001), Urban et al. (2009), and Rita et al. (2019). Measures for repurchase intention and word of mouth were taken from Zeithaml et al. (1996) and Rita et al. (2019). Measures for site revisit were taken from Gounaris et al. (2010) and Rita et al. (2019). The criteria for participation in the study were that the respondents had to be a local fashion brand customer and made shopping transactions through the brand's official website at least during the last 6 months. The respondents were asked to complete the main questionnaire for a specific brand official website of their choice. This study employed partial least square (PLS) path modelling as implemented in Smart PLS software to test the hypothesis.

From the total respondents of 201 respondents, 156 were female and 45 were male. The respondents in our sample majorly belonged to the aged group of 21–25 years old. Most respondents were college students (46,3%) and lived around Jabodetabek (62,7%).

### 4 RESULTS

#### 4.1 *Measurement Model Assessment*

This study model employed multidimensional reflective first order and formative second-order construct types. Hair et al. (2014) argued that testing the multidimensional reflective - formative (type II) construct type research model is recommended to use a 2 (two) stage approach (the two-stage approach). In this study, the embedded two-stage approach was employed.

In analyzing the outer model for reflective indicators, the result shows that all Cronbach's Alpha and Composite Reliability exceeded 0.7. Almost all loadings exceeded 0.7 or more, with 3 out of 36 indicators failing to reach the acceptable level. Average variance extracted (AVE) were deemed acceptable, with values being larger than the minimum acceptable value of 0.5. The square root of the AVE for all construct all exceeded the threshold of 0.5, with each being larger than the inter-construct relations. In processing data with a 2 (two) stage approach or a two-stage approach, the second stage began by using the value of the latent variable from each dimension to be used as an indicator for measuring endogenous variables. The measurement model for the second stage was only undergone for formative indicators. The result showed that all Variance Inflation Factor (VIF) scores less than 5. The significance test was conducted by looking at the value of the outer weight. The construct indicator is valid if the significance value is above 1.65 for the one-tailed test with a significance level of 0.1. The results show that all indicators were significant to the construct. The indicators of Customer Service, Enjoyment, Fulfillment, Website Design, and Security produced values according to the desired standard so that they were proven to be constructs that form the Overall E-Service Quality variable.

#### 4.2 *Structural Model Assessment*

The measurement of the inner model was conducted by looking at the R-square value. Based on the results, Customer Trust showed the number 0.751, which indicated the model belonged to the strong criteria. Repurchase Intention, Customer Satisfaction and Word of Mouth are included in the moderate model criteria. The Site Revisit variable was included in the weak model criteria. Hypotheses were tested based on the level of significance in the path coefficient using the bootstrapping technique. The test showed that all nine hypotheses were supported. All hypotheses showed significant values with t-statistics values more than 1.65 with p-values below 0.05.

## 5 CONCLUSION

E-service quality of local fashion brand websites is measured by five dimensions representing utilitarian and hedonic values. Based on the study results, these five dimensions had a significant effect on forming e-service quality constructs. Enjoyment as a proposed dimension to measure e-service quality was also a significant determinant of e-service quality. In addition, e-service quality was proven to affect customer satisfaction and customer trust significantly. Therefore, the better the e-service quality provided by fashion businesses through the website, the higher the level of customer satisfaction and user trust, which impacted customer loyalty.

## REFERENCES

- Bauer, H. H., Falk, T., & Hammerschmidt, M. (2006). eTransQual: A transaction process-based approach for capturing service quality in online shopping. *Journal of Business Research*, 59(7), 866–875. <https://doi.org/10.1016/j.jbusres.2006.01.021>
- Blut, M., Chowdhry, N., Mittal, V., & Brock, C. (2015). E-Service Quality: A Meta-Analytic Review. *Journal of Retailing*, 91(4), 679–700. <https://doi.org/10.1016/j.jretai.2015.05.004>
- Chang, M. K., Cheung, W., & Tang, M. (2013). Building trust online: Interactions among trust building mechanisms. *Information & Management*, 50(7), 439–445. <https://doi.org/10.1016/j.im.2013.06.003>
- Fornell, C. (1992). A National Customer Satisfaction Barometer: The Swedish Experience. *Journal of Marketing*, 56(1), 6–21. <https://doi.org/10.1177/002224299205600103>
- Gefen, D. (2002). Customer Loyalty in e-Commerce. *Journal of the Association for Information Systems*, 3(1), 27–51. <https://pdfs.semanticscholar.org/00f2/f77fe6480f66c2982010a091e8c76c61b7ff.pdf>
- Gounaris, S., Dimitriadis, S., & Stathakopoulos, V. (2010). An examination of the effects of service quality and satisfaction on customers' behavioral intentions in e-shopping. *Journal of Services Marketing*, 24(2), 142–156. <https://doi.org/10.1108/08876041011031118>
- Hair, J. F., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Javed, M. K., & Wu, M. (2020). Effects of online retailer after delivery services on repurchase intention: An empirical analysis of customers' past experience and future confidence with the retailer. *Journal of Retailing and Consumer Services*, 54, 101942. <https://doi.org/10.1016/j.jretconser.2019.101942>
- Kumar, V., & Ayodeji, O. G. (2021). E-retail factors for customer activation and retention: An empirical study from Indian e-commerce customers. *Journal of Retailing and Consumer Services*, 59, 102399. <https://doi.org/10.1016/j.jretconser.2020.102399>
- Lee, M. K. O., & Turban, E. (2001). A Trust Model for Consumer Internet Shopping. *International Journal of Electronic Commerce*, 6(1), 75–91. <https://doi.org/10.1080/10864415.2001.11044227>
- Pudjarti, S., Nurchayati, N., & Dwi Putranti, H. R. (2019). Penguatan Kepuasan Model Hubungan E-Service Quality Dan E-Loyalty Pada Konsumen Go-Jek Dan Grab [Strengthening Satisfaction of the E-Service Quality and E-Loyalty Relationship Model for Go-Jek and Grab Consumers]. *Sosiohumaniora*, 21(3), 237–246. <https://doi.org/10.24198/sosiohumaniora.v21i3.21491>
- Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Heliyon*, 5(10), e02690. <https://doi.org/10.1016/j.heliyon.2019.e02690>
- Rodríguez, P. G., Villarreal, R., Valiño, P. C., & Blozis, S. (2020). A PLS-SEM approach to understanding E-SQ, E-Satisfaction and E-Loyalty for fashion E-Retailers in Spain. *Journal of Retailing and Consumer Services*, 57, 102201. <https://doi.org/10.1016/j.jretconser.2020.102201>
- To, P.-L., Liao, C., & Lin, T.-H. (2007). Shopping motivations on Internet: A study based on utilitarian and hedonic value. *Technovation*, 27(12), 774–787. <https://doi.org/10.1016/j.technovation.2007.01.001>
- Urban, G. L., Amyx, C., & Lorenzon, A. (2009). Online Trust: State of the Art, New Frontiers, and Research Potential. *Journal of Interactive Marketing*, 23(2), 179–190. <https://doi.org/10.1016/j.intmar.2009.03.001>
- Wolfenbarger, M., & Gilly, M. C. (2003). eTailQ: dimensionalizing, measuring and predictingetail quality. *Journal of Retailing*, 79(3), 183–198. [https://doi.org/10.1016/S0022-4359\(03\)00034-4](https://doi.org/10.1016/S0022-4359(03)00034-4)
- Wu, S. (2003). The relationship between consumer characteristics and attitude toward online shopping. *Marketing Intelligence & Planning*, 21(1), 37–44. <https://doi.org/10.1108/02634500310458135>
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The Behavioral Consequences of Service Quality. *Journal of Marketing*, 60(2), 31–46. <https://doi.org/10.1177/002224299606000203>

# The influence of creativity and innovation on small and medium enterprises' (SMEs) performance during the COVID-19 pandemic: A systematic review

A.A. Gunawan, F.G. Dewi & M. Azhari  
*Telkom University*

**ABSTRACT:** Small and medium enterprises (SMEs) are the most affected group of businesses around the world during the COVID-19 pandemic, especially SMEs in developing countries. This study aims to investigate how the current literature discusses creativity and innovation in SMEs' performance, in the specific context of the COVID-19 pandemic. This study considered scientific articles published in the Web of Sciences during 2012–2021 related to SMEs' performance. It is found that the current literature discussed how creativity and innovation influenced SMEs' performance during the COVID-19 pandemic. Besides, external factors such as government support is also an important factor in SMEs' performance. The study contributes to the literature by developing a framework which involves the most current literature and provides a future research agenda.

## 1 INTRODUCTION

Small and medium-sized enterprises (SMEs) play an important role in the economy of many countries, including developing countries. However, business competition is becoming more competitive and unpredictable (Christa dan Kristinae 2021). During the COVID-19 pandemic, it is crucial for SMEs to have quality in their performance to survive and maintain their business. SMEs' performance quality depends on the quality of resources, which are expected to be more innovative and creative (Faizal et al. 2018). Without innovation and creativity, business owners might experience failure in the future (Elfahmi & Jatmika 2017). Moreover, creativity and innovation are the foundation of an organization due to their vital role in sustaining the organization (Acar et al. 2019). However, little is known about how creativity and innovation influence performance. Thus this study aims to investigate how the current literature discusses creativity and innovation in SMEs' performance, in the specific context of the COVID-19 pandemic.

## 2 THEORETICAL BACKGROUNDS

### 2.1 *Creativity, Product Innovation and Business Performance*

Creativity is any continuous human thoughts and physical efforts that are useful for human life (Makmur & Thahier 2015). In another definition, creativity is the ability to develop new ideas and discover new ways to capture problems and seize opportunities (Hery 2017; Suryana 2013). Moreover, creativity can be divided into two categories: the ability to combine and make new relations between existing aspects, data, and variables, and the ability to create new ideas or a relatively new product that differs from the existing ones.

According to Hery (2017), innovation is the ability to apply creative solutions to problems and the opportunity to improve or enrich one's life. In comparison, product innovation is the implementation of creative solutions to a product that can solve consumers' problems. Meanwhile, Myers and Marquis in Kotler (2016) stated that product innovation is a combination of various processes that affect one another. Hanifawati and Listyaningrum (2021) argue that implementing product innovation in business can increase sales trends to be one of the business performance



indicators. Therefore, innovation is not a concept of a new idea, invention, or development of a new market, but innovation itself is manifested in all these processes.

Marwansyah (2016) described performance as achievement or success attained by an individual or organization regarding their responsibilities. Performance is strongly influenced by the individual's ability, motivation, willpower, and expectations towards a person, group, or company (Suhardi 2014). Performance emphasizes the efficient use of current resources to achieve the desired goal. According to Weerasiri et al. (2012), business performance also requires external support. The external support can include the government's role as a policymaker or other related institutions. Lee et al. (2019) stated that generating creativity for new product innovation can be conducted by utilizing internal resources, especially employees' resistance towards change. Business owners also need to create an entrepreneurial culture in the company since it has a positive effect on the innovation performance of a company.

### 3 METHODS

The methodology employed in this study was a literature review. According to Sugiyono (2012), a literature review is the study of theories, references, and other scientific documents in relation to cultures, values, and norms that have developed in the observed social environment. In this study, articles were searched using the keywords "Creativity," "Innovation," "Business Performance," "COVID-19 Pandemic," and "Small Business." Keywords searches were conducted using the Boolean Logic Techniques (such as AND, OR). The articles were searched on the Web of Science database and filtered by document type, specific period of 2012–2021, WoS categories, English language, and the additional keyword of COVID-19 pandemic (see Figure 1).

### 4 RESULTS AND DISCUSSIONS

In the end, the study found 16 articles by using the keywords and filters. From 16 articles, 6 of them are duplicates. The findings were discussed based on descriptive and thematic analysis. The descriptive analysis described the characteristics of the article used, trends in the type of article, countries of research, research models, and research methods applied. Thematic analysis briefly described the previous studies used as the source.

By analyzing from the trend of publication year, since the COVID-19 pandemic in most countries started at the beginning of 2020, it is plausible that the articles were published in 2021. The countries involved in these studies were as follows: Indonesia (three articles), multiple countries, Ghana, Vietnam, Saudi Arabia, South Korea, Israel, and Germany (subsequently, one article each). Moreover, the search results show that a survey method was the most chosen methodology.

Khan et al. (2021) stated that employee diversity and organizational learning culture are essential in bringing innovation to improve organizational performance. The results were in line with the theory suggested by Lee et al. (2019), which stated that internal resources utilization, especially employees' resistance towards change, is vital to generate creativity for new product innovation. In this case, business owners need to create an entrepreneurial culture in a company because it positively affects innovation performance. This result is also supported by the study conducted by Grözinger et al. (2021), which stated that organizational psychology positively affects the innovation and creativity of SMEs in terms of business performance during an economic crisis.

The study conducted by Wibowo et al. (2021) reported that business performance during the COVID-19 pandemic could also be influenced using a big data working system. In his study, big data influences marketing performance and innovation skills. It turned out that these innovation skills also affected marketing performance. Similarly, Hwang and Kim's (2021) study showed that the technical efficiency of SMEs has a significant role in the adoption of technology as one of the innovation strategies. Technical efficiency with technology adoption has an average rate of over 26% compared to non-adoption.

Based on Hanifawati and Listyaningrum's (2021) theory, the implementation of product innovation in SMEs during the COVID-19 pandemic can improve sales trends as one of the business

performance indicators. However, the SMEs still need to increase their promotion intensively to obtain new target markets. In the effort to escalate promotions intensively, SMEs need to pursue marketing performance that can be improved through the innovative and creative use of social media (Amoah et al. 2021). Similarly, a study conducted by Syaifullah et al. (2021) stated that social media marketing had a very positive impact on the performance of SMEs in developing countries during the COVID-19 pandemic, especially in terms of increasing sales, customer relationships, productivity, and creativity. In addition, to affecting sales, innovations conducted by a business can also connect to the entrepreneurial orientation with SMEs' performance (Nofiani et al. 2021).

During the COVID-19 pandemic, the key to long-term economic recovery in Saudi Arabia depended on training, innovation, and adaptability to the new digital environment. Saudi Arabia's government was taking the initiative to cover salaries for small and medium business employers during the COVID-19 pandemic to boost training activities in SMEs and improve their short- and long-term efficiency. The policy would also prevent Saudi entrepreneurs from laying off half of their staff (Raies & Ben Mimoun 2021). In his research, Harel (2021) also showed that policymakers or governments should encourage programs that could help small businesses survive and improve business stability in economic crises during the COVID-19 pandemic. Both studies were in line with Weerasiri et al.'s (2012) theory that said SMEs performance can be improved by Government support and the ability to transform challenges in business into opportunities.

In addition to the government or institutional support, external factors of business also recognize the importance of community and other environmental factors. In the current COVID-19 pandemic crisis, the government should consider business' role in innovating and creating a breakthrough in the new economic settings, especially in developing countries (Le Thanh et al. 2021). From this proposed model, this study developed two relational and two situational propositions. The first proposition (P1a) postulates that creativity directly influences SME performance and that the COVID-19 pandemic moderates the relationship between two variables (P1b). The second proposition (P2a) postulates that innovation directly influences SME performance, and similarly, the COVID-19 pandemic moderates the relationship (P2b).

## 5 CONCLUSIONS

Based on the structured review, it is concluded that only a limited number of studies discussed creativity and innovation in relation to SMEs' performance during the COVID-19 pandemic. However, the studies found that creativity and innovation influenced SMEs' performance during the COVID-19 pandemic. With regards to the shift of consumer behavior, the creativity of SME owners to create innovation to meet the current needs of the consumers is needed. Creativity and innovation have an essential role in protecting SMEs from the impact of the economic crisis. However, internal support is also crucial in creating a positive organizational attitude in adopting innovation and creativity to improve SMEs' performance during the crisis. Besides, external supports such as governmental, institutional, and financial support are the keys to SMEs' performance. This study contributes to the development of knowledge about the influential factors in SMEs' performance during the COVID-19 pandemic. The study employed a structured literature review to propose a relationship model between creativity, innovation, and SMEs' performance, including the mediating role of the COVID-19 pandemic. Moreover, it is recommended that future research should test the proposed model's propositions by providing empirical evidence. Further improvement of the proposed model is highly expected due to the limited number of articles discussing the influence of creativity and innovation on SMEs' performance during the COVID-19 pandemic.

## REFERENCES

- Acar, O. A., Tarakci, M., & van Knippenberg, D. (2019). Creativity and Innovation Under Constraints: A Cross-Disciplinary Integrative Review. *Journal of Management*, 45(1): 96–121. <https://doi.org/10.1177/0149206318805832>

- Amoah, J., Belás, J., Khan, K. A., & Metzker, Z. (2021). Antecedents of Sustainable SMEs in the Social Media Space: A Partial Least Square-Structural Equation Modeling (PLS-SEM) Approach. *Management and Marketing*, 16(1): 26–46. <https://doi.org/10.2478/mmcks-2021-0003>
- Christa, U. R., & Kristinae, V. (2021). The effect of product innovation on business performance during covid 19 pandemic. *Uncertain Supply Chain Management*, 9(1): 151–158. <https://doi.org/10.5267/j.uscm.2020.10.006>
- Elfahmi, S. H., & Jatmika, D. (2017). Pengaruh inovasi terhadap UKM naik kelas melalui daya saing produk (Studi Indo Burger). *Seminar Nasional Sistem Informasi Indonesia, September*, 445–454.
- Faizal, M., Nara, M. L., & Nurdianto, H. (2018). Barriers and challenges af information technology in labour intensive business organization. *International Journal of Engineering and Technology (UAE)*, 7(2.5 Special Issue 5): 104–107. <https://doi.org/10.14419/ijet.v7i2.5.13962>
- Grözinger, A. C., Wolff, S., Ruf, P. J., & Moog, P. (2021). The power of shared positivity: organizational psychological capital and firm performance during exogenous crises. *Small Business Economics*. <https://doi.org/10.1007/s11187-021-00506-4>
- Hanifawati, T., & Listyaningrum, R. S. (2021). Peningkatan Kinerja UMKM Selama Pandemi Covid-19 melalui Penerapan Inovasi Produk dan Pemasaran Online. *Warta LPM*, 24(3): 412–426. <https://doi.org/10.23917/warta.v24i3.12615>
- Harel, R. (2021). The Impact of COVID-19 on Small Businesses' Performance and Innovation. *Global Business Review*. <https://doi.org/10.1177/09721509211039145>
- Hery. (2017). *Kewirausahaan* (1st ed.). GRASINDO.
- Hwang, W. S., & Kim, H. S. (2021). Does the adoption of emerging technologies improve technical efficiency? Evidence from Korean manufacturing SMEs. *Small Business Economics*, 0123456789. <https://doi.org/10.1007/s11187-021-00554-w>
- Khan, M. S., Saengon, P., Charoenpoom, S., Soonthornpipit, H., & Chongcharoen, D. (2021). The impact of organizational learning culture, workforce diversity and knowledge management on innovation and organization performance: A structural equation modeling approach. *Human Systems Management*, 40(1): 103–115. <https://doi.org/10.3233/HSM-200984>
- Kotler, Philip, Armstrong, & Gary. (2016). *Principles of Marketing* (16th ed.). Pearson.
- Le Thanh, T., Ngo, H. Q., & Aureliano-Silva, L. (2021). Contribution of corporate social responsibility on SMEs' performance in an emerging market – the mediating roles of brand trust and brand loyalty. *International Journal of Emerging Markets*. <https://doi.org/10.1108/IJOEM-12-2020-1516>
- Lee, C., Hallak, R., & Sardeshmukh, S. R. (2019). Creativity and innovation in the restaurant sector: Supply-side processes and barriers to implementation. *Tourism Management Perspectives*, 31: 54–62. <https://doi.org/10.1016/j.tmp.2019.03.011>
- Makmur, & Thahier, R. (2015). *Inovasi & Kreativitas Manusia: dalam Administrasi dan Manajemen*. Refika Aditama.
- Nofiani, D., Indarti, N., Lukito-Budi, A. S., & Manik, H. F. G. G. (2021). The dynamics between balanced and combined ambidextrous strategies: a paradoxical affair about the effect of entrepreneurial orientation on SMEs' performance. *Journal of Entrepreneurship in Emerging Economies*, 13(5): 1262–1286. <https://doi.org/10.1108/JEEE-09-2020-0331>
- Raies, A., & Ben Mimoun, M. (2021). Laying Off Versus Training Workers: How Can Saudi Entrepreneurs Manage the COVID-19 Crisis?\*. *Journal of Asian Finance, Economics and Business*, 8(4): 673–685. <https://doi.org/10.13106/jafeb.2021.vol8.no4.0673>
- Suryana. (2013). *Ekonomi Kreatif- Ekonomi Baru: Mengubah Ide dan Menciptakan Peluang*. Salemba Empat.
- Syaifullah, J., Syaifudin, M., Sukendar, M. U., & Junaedi, J. (2021). Social Media Marketing and Business Performance of MSMEs During the COVID-19 Pandemic. *Journal of Asian Finance, Economics and Business*, 8(2): 523–531. <https://doi.org/10.13106/jafeb.2021.vol8.no2.0523>
- Weerasiri, S., Zhengang, Z., & Perera, R. (2012). Innovation and Creativity of Small and Medium Scale Enterprises in Sri Lanka: A Review. *International Forum of Researhers Students and Academician*, 2(1): 9–14.
- Wibowo, S., Suryana, Y., Sari, D., & Kaltum, U. (2021). Marketing Performance and Big Data Use During the COVID-19 Pandemic: A Case Study of SMEs in Indonesia. *Journal of Asian Finance Economics and Business*, 8(7): 571–578. <https://doi.org/10.13106/jafeb.2021.vol8.no7.0571>

# Capturing employee voice through social media Instagram during COVID-19 pandemic

A. Pradipta & K. Pertiwi

*Master of Management, Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** Employee relations was initiated as expansion of Industrial relations to form psychological contract between workers and employers, and employee voice is considered as a form of communication which has potential influence in managerial decisions. However, the tendency of employees to use their voices depends heavily on employee's trust in their environment and this what is not achieved during the COVID-19 pandemic, where communication between leaders and subordinates is not carried out properly. This research aims at examining the social media channels utilized by employees to express their dissatisfaction with their workplace conditions and to deepen the understanding of employees' behavior on social media. This research attempts to contribute an understanding of how and why employees used social media in their personal space and present an overview of employees' voices that were frequently expressed on social media, which might be used by management to overcome problems that might rise in organizations.

## 1 INTRODUCTION

The COVID-19 pandemic has caused many organizations to implement changes in their operations to address their operating and economic challenges. The sudden increase in cases causes organizations to accelerate digitalization changes in organizations, increase the use of temporary and part-time employees compared to full-time employees, change the way they work for their new product development, and change the concept of communication between management and employees (Connley et al. 2020). As it occurs suddenly and unplanned, many events arise and result in an uncertain and overwhelming feeling for employees, which affect their relationship to the organization. The unsuccessful implementation of change in the organization can be caused by this feeling of uncertainty indicated by negative feedback in the form of rejection to change and the absence of employee engagement in the organization (Oreg et al. 2016).

In the business world, change is commonplace in which in the face of fierce market competition, organizational change is the only way to survive and grow, along with uncertainty, challenges, and stress (Daft & Steers 1986; Rafferty & Griffin 2006; Tang & Gao 2012). Resistance to organizational change from employees has been recognized as one of the important areas in change management so that the success of management in directing the reactions of its employees becomes an important HR function and one of the keys needed for organizational leaders in their involvement to facilitate organizational change (Waddell & Sohal 1998). Studies have found that organizational communication is an effective way to manage employee resistance in the change process (Frahm & Brown 2007), even though uncertainty and perceived unfairness by employees can lead employees towards negative emotions, which include fear, anger, and frustration (Fugate et al. 2002) which is unavoidable when the organization has to change due to the COVID-19 pandemic.

## 2 LITERATURE REVIEW

### 2.1 *Implication Work-from-Home on Employee's Wellbeing*

Environmental changes, increased employee emotions, and the delivery of unstructured changes cause the process of translating communication between employees and their superiors to run as expected. In working from home conditions or working conditions in the COVID-19 pandemic, workers have to encounter the main problem, namely the increasingly unclear boundaries between work and personal life (Toniolo-Barrios & Pitt 2021), including the lack of ability to limit working hours, difficulty in collaborating and communicating with co-workers, and lack of motivation. In addition, employees who had small children found it difficult limiting their space in working and taking care of children, especially when the children were also studying from home. Meanwhile, some reported Zoom Fatigue, a phenomenon of emotional and physical exhaustion caused by video conferences/meetings (Fosslien & Duffy 2020; Toniolo-Barrios & Pitt 2021), and working from home can be effectively considered as full-time work if the main obstacles are avoided, namely never separated from a laptop/notebook. The work process famously referred to as work-from-home (WFH) led superiors to assume that employees did not work optimally and work hours became blurry. This is because, in the context of Indonesian, there was minimum workers' protection, such as no restrictions of time an employee could be contacted within 24 hours. On the other hand, the process of working remotely caused employees to not be able to show or discuss the work problems they faced and had several considerations why work was not optimal when done at home, including the splitting of concentration at work by things at home and also limitations, work tools, and coordination in completing tasks.

### 2.2 *Social Media on Employees*

When employees are young and familiar with the internet, yet unfamiliar with conveying their voice through representatives (e.g., in the forms of a trade union), they will view social media as a form of employees' channel to communicate their voices. Through the ability to utilize the internet and the use of their social media, and facilitated by the existence of social media accounts that humorously present their problems, it is considered as a form of escape and diversion from stress for these employees, namely online comics through Instagram accounts considered voice their anxieties in the work environment they face. The presence of social media, especially Instagram presenting accounts that voice employees, what they feel at that time, is a way for employees to express their feelings. With these various social media accounts, many types of voice aspirations are conveyed to the public. In addition to being felt exclusively by themselves or their organization, employees may find the same feelings experienced by other employees in other organizations. This indicates that the pressure or problems that arise can occur in any organization.

## 3 METHOD

Using a qualitative narrative descriptive approach, this research focuses on understanding how employees made sense of their work experience during COVID-19, focusing on two Instagram accounts: The Pentols and HRD Bacot.

Instagram's The Pentols and HRD Bacot accounts had a significant number of followers, which justified their choice as the main material in this research to explore employee voice on Instagram social media. However, there were quite fundamental differences in their posts, where The Pentols expressed the voices from the employee levels whose positions were not specified, while HRD Bacot conveyed the voices from the employees who worked in the Human Resources division of their organization. Both expressed the personal experience and things they heard or received at work. With slightly different points of view, they would enrich the understanding of the employee voice on social media.

With followers more than 10,000 followers, a total of 359 posts, and 470,906 numbers of likes, The Pentols and HRD Bacot Instagram account, as the subject of this research, provided huge unrevealed and unpolished information about employees’ voices that can be extracted, as follows:

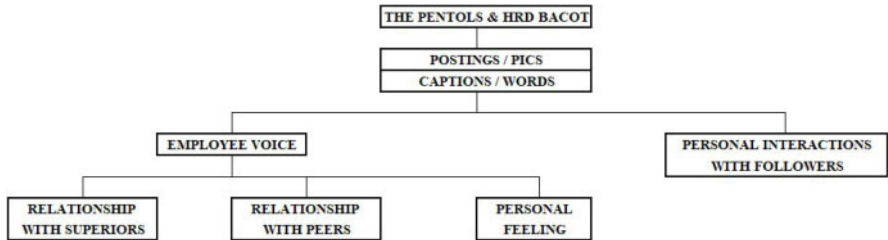


Figure 1. The data distribution method.

#### 4 DISCUSSIONS

This research found fundamental problems raised by these accounts, that described the working condition which received a high level of engagement from their followers. These conditions were also found in previous research involving workers during the COVID-19 pandemic. Conditions such as feelings of burnout for employees, a toxic work environment and co-workers, communication that was considered lacking between employees and their superiors, and the lack of rules and policies that supported workers in working safely and comfortably were the things that were voiced in the account. By understanding these conditions in depth, the employee voice was more meaningful and became the key to improving conditions in the organization and improving employees’ welfare. These conditions are described further in the discussion below.

In the face of a pandemic, employees were prone to experiencing burnout at work, which was exacerbated by toxic conditions at work possibly caused by their superiors, subordinates, and colleagues. In some cases, employees were also confused by this condition especially created by their superiors. This affected new boundaries in getting the job done. It was found that the employee’s superiors asked them to work more than working hours with the assumption that they worked at home and could work in more relaxed manner, or they did not need to spend more time commuting. Online meetings outside of working hours or on holidays were something that they employees complained about as a trigger for burnout conditions within them. They could not avoid this condition or comment on it due to no available channels for complaining.

#### 5 CONCLUSIONS

The use of Instagram social media for the employee voice, which was discussed in this research, attempted to bridge the communication problems that arose in the COVID-19 pandemic, especially when changes occurred and an effective employee relations condition was unavailable in such companies. In addition, it was evident by the management and all levels of the organization’s unpreparedness to anticipate the problem. For example, the availability of employee voice channels for day-to-day operations should be prepared by management. Meanwhile, the pressure felt by employees was also high, so that the existence of accounts such as The Pentols and HRD Bacot became an estuary to vent the work pressures felt at work and as a signal for some companies to provide better employee relations to accommodate the needs of their employees.

#### REFERENCES

Connley, C., Hess, A. J., & Liu, J. (2020). *13 ways the coronavirus pandemic could forever change the way we work*. CNBC. <https://www.cnbc.com/2020/04/29/how-the-coronavirus-pandemic-will-impact-the-future-of-work.html>

- Daft, R. L., & Steers, R. M. (1986). *Organizations: A Micro/macro Approach*. Scott, Foresman.
- Fosslien, L., & Duffy, M. W. (2020). How to Combat Zoom Fatigue. *Harvard Business Review*. <https://hbr.org/2020/04/how-to-combat-zoom-fatigue>
- Frahm, J., & Brown, K. (2007). First steps: linking change communication to change receptivity. *Journal of Organizational Change Management*, 20(3), 370–387. <https://doi.org/10.1108/09534810710740191>
- Fugate, M., Kinicki, A. J., & Scheck, C. L. (2002). Coping with an organizational merger over four stages. *Personnel Psychology*, 55(4), 905–928. <https://doi.org/10.1111/j.1744-6570.2002.tb00134.x>
- HRD Bacot [@hrdBacot]. (n.d.). *Post* [Instagram Profile]. Retrieved October 29, 2021, from <http://www.instagram.com/hrdbacot/>
- Oreg, S., Bartunek, J. M., Lee, G., & Do, B. (2016). An Affect-Based Model of Recipients' Responses to Organizational Change Events. *Academy of Management Review*, 43(1), 65–86. <https://doi.org/10.5465/amr.2014.0335>
- Rafferty, A. E., & Griffin, M. A. (2006). Perceptions of organizational change: A stress and coping perspective. In *Journal of Applied Psychology* (Vol. 91, Issue 5, pp. 1154–1162). American Psychological Association. <https://doi.org/10.1037/0021-9010.91.5.1154>
- Tang, C., & Gao, Y. (2012). Intra-department communication and employees' reaction to organizational change. *Journal of Chinese Human Resources Management*, 3(2), 100–117. <https://doi.org/10.1108/20408001211279210>
- The Pentols [@thepentols]. (n.d.). *Post* [Instagram Profile]. Retrieved October 28, 2021, from <http://www.instagram.com/thepentols/>
- Toniolo-Barrios, M., & Pitt, L. (2021). Mindfulness and the challenges of working from home in times of crisis. *Business Horizons*, 64(2), 189–197. <https://doi.org/https://doi.org/10.1016/j.bushor.2020.09.004>
- Waddell, D., & Sohal, A. S. (1998). Resistance: a constructive tool for change management. *Management Decision*, 36(8), 543–548. <https://doi.org/10.1108/00251749810232628>

# Twitter sentiment analysis for price and transaction volume changes in the cryptocurrency market

B.D.P. See & M. Ulpah

*University of Indonesia, Jakarta, Indonesia*

**ABSTRACT:** Cryptocurrencies are rising in importance as an investment option and alternative currency. Thus, investors are keen on finding timely market movement insights. One such source is Twitter due to its live feed of information on cryptocurrencies and emotional information from investors expressing their sentiments. This article examines the extent to which Twitter sentiments can be used to predict price and transaction volume changes for the nine largest cryptocurrencies for the period of June 2021 to September 2021. This study was conducted using a lexicon-based approach through the VADER algorithm for sentiment analysis, while applying the Granger causality method to analyze the two-way predictive capabilities of each cryptocurrency's sentiments toward their respective price and transaction volume changes. Past studies have shown that sentiment analysis may work for several cryptocurrencies, while this study only found predictive capabilities in transaction volume changes and not in price movement.

## 1 INTRODUCTION

Cryptocurrencies are digital currencies that utilize blockchain technology (Nakamoto 2008). There are numerous coins available in the market with the largest one being Bitcoin (CoinMarketCap 2021). Due to its fairly young age, the cryptocurrency market lacks regulation to govern it (Alexander & Heck 2020). Lack of regulation, news, and information found on social media is considered the main cause of volatility in the cryptocurrency market (Mai et al. 2018).

A social media platform most commonly used by the investors is Twitter due to its rapid nature and emphasis on the microblogs dissemination, or tweets, which can capture investors' fleeting sentiments (Kraaijeveld & De Smedt 2020). Coincidentally, previous research has discussed the usage of Twitter, specifically from sentiments found in users' tweets, to be a method of prediction in the stock market (Bollen et al. 2011; Kraaijeveld & De Smedt 2020; Li et al. 2018).

## 2 LITERATURE REVIEW

Past studies have explored the usage of algorithms to determine sentiments found in texts. Hutto and Gilbert (2014) tested several sentiment analysis algorithms on social media and found that the best algorithm for sentiment analysis in social media is the VADER algorithm. Unlike other similar lexicon-based algorithms, VADER was created specifically with social media in mind.

A similar study investigating Twitter sentiments using VADER and its effect on the cryptocurrency market was conducted by Kraaijeveld and De Smedt (2020), but it used data from 2018. At the time, the cryptocurrency market capitalization was USD 813 Bn, while the market cap in mid-2021 was USD 1,493 Bn (CoinMarketCap 2021). The significant increase in capital flow into the cryptocurrency market can be credited to its rising popularity among retail investors, but more importantly, institutional investors have started adding cryptocurrencies into their balance sheets as early as 2019 (Sun et al. 2021). The entry of institutional investors into the cryptocurrency market and the corresponding increase in market size indicate the market has a vastly different landscape



today than in 2018. Hence, this necessitates an updated study on Twitter sentiment analysis for investors in the cryptocurrency market.

Based on the aforementioned introduction, there are two objectives to this study, i.e., firstly, it is to investigate whether Twitter sentiments can predict price and transaction volume changes. Secondly, to investigate whether price and transaction volume changes can predict Twitter sentiments.

### 3 METHODOLOGY

This study was conducted using daily data from 1st June 2021 until 30th September 30th, 2021. During the study period, up to 1,000 tweets mentioning the nine largest cryptocurrency tokens by market capitalization were collected. Daily prices and the trading volume for each cryptocurrency were collected from CoinMarketCap, a platform for financial information regarding cryptocurrencies. The list of tokens used in this study were Bitcoin (BTC), Ethereum (ETH), Binance Coin (BNB), Cardano (ADA), Dogecoin (DOGE), Ripple (XRP), Polkadot (DOT), Uniswap (UNI), and Chainlink (LINK).

In order to make the tweets suitable for use with the VADER algorithm, each raw tweet data obtained was cleaned to remove retweets, hyperlinks, mentions, hashtags, and other symbols. Tweets with terms such as “giveaways” and “giving” were also removed because a previous study by Kraaijeveld and De Smedt (2020) mentioned that cryptocurrency-related tweets generally have a number of bot-made tweets in them, using those exact terms.

Afterward, the cleaned tweet data was fed into the VADER algorithm to measure their polarity and compound score. The tweet was categorized as positive if the compound score was over 0, negative if the compound score was under 0, or neutral if the compound score was 0. The price and transaction volume changes were calculated using a simple return formula.

Three methods were employed for further analysis. First, the Augmented Dickey-Fuller (ADF) test was used to determine the stationarity of the time-series data used in this research. (Dickey & Fuller 1979). Second, the Johansen Cointegration test was employed to determine if the time-series used in this research were cointegrated, showing whether there exists a long-term connection between them (Johansen 1988). Lastly, the Granger causality was utilized to see a two-way relationship between two variables, showing whether a certain factor was capable of predicting another factor, or vice versa (Engle & Granger 1987).

### 4 ANALYSIS AND DISCUSSION

Table 1 shows the result of the raw data collection and cleaning. “Before” and “After” columns indicate the total number of tweets obtained before and after the data cleaning. The differences are assumed to be due to bot-made tweets, in accordance with the previous study (Kraaijeveld & De Smedt 2020). Overall, 786,819 usable tweets were obtained for further analysis.

Table 1. Descriptive analytics summary.

Token	Before	After	Changes	Changes %
ADA	114,876	104,574	10,302	8.97%
BNB	121,670	97,365	24,305	19.98%
BTC	120,486	108,888	11,598	9.63%
DOGE	121,000	103,973	17,027	14.07%
DOT	51,076	50,605	471	0.92%
ETH	121,450	96,756	24,694	20.33%
LINK	119,854	64,534	55,320	46.16%
UNI	46,754	44,372	2,382	5.09%
XRP	119,130	115,752	3,378	2.84%

Table 2 shows the results of the ADF and the Johansen Cointegration test. If the ADF statistic was lower than the critical value, the conclusion was that the time-series was stationary. As seen in Table 2, all sentiments were stationary. Next, the Johansen Cointegration test was done using the time-series of daily sentiments, price changes, and transaction volume changes. The results suggested that ADA, BNB, DOT, LINK, and UNI might have long-term relationships with one of the other time-series. Meanwhile, the rest of the tokens did not have long-term or short-term relationships with their price and transaction volume changes.

Table 2. ADF and Johansen Cointegration test summary.

Token	ADF Stat	Critical Value (5%)	Hypothesized Number Cointegration Equation	Number of Cointegration
ADA	-7.520970*	-2.885450	None*, At most 1, At most 2	1
BNB	-5.554652*	-2.885654	None*, At most 1, At most 2*	1
BTC	-8.357328*	-2.885450	None*, At most 1*, At most 2*	3
DOGE	-9.243754*	-2.885450	None, At most 1, At most 2*	0
DOT	-4.938653*	-2.885450	None*, At most 1, At most 2	1
ETH	-9.880896*	-2.885450	None*, At most 1*, At most 2*	3
LINK	-7.265064*	-2.885450	None*, At most 1, At most 2*	1
UNI	-5.017657*	-2.885654	None*, At most 1, At most 2*	1
XRP	-9.318135*	-2.885450	None*, At most 1*, At most 2*	3

\*Significant at a 95% confidence interval

Lastly, Table 3 shows the results of the Granger causality method, which investigates the predictive relationship between two variables. The three variables used were sentiment (St), price (Pt), and volume (Vt). Each of them was tested using the Granger causality test at a 1 to 5-period lag. As presented in Table 3, there was not a causal or predictive relationship between price and sentiment or sentiment and price in all cryptocurrencies. Simultaneously, there might be a causal or predictive relationship between sentiment and volume in ADA, BTC, DOGE, DOT, and XRP.

Table 3. Granger causality test summary.

Token	Pt -> St	St -> Pt	Vt -> St	St -> Vt
ADA	No	No	Yes, lag (5)	No
BNB	No	No	No	No
BTC	No	No	No	Yes, lag (5)
DOGE	No	No	Yes, lag (1-5)	Yes, lag (2)
DOT	No	No	No	Yes, lag (4-5)
ETH	No	No	No	No
LINK	No	No	No	No
UNI	No	No	No	No
XRP	No	No	No	Yes, lag (3-4)

## 5 CONCLUSION

In conclusion, the results of the study do not show any significant relationships between Twitter sentiments and price changes. However, a significant result was observed in the predictive capability of sentiment to predict transaction volume changes for BTC, DOGE, DOT, and XRP. Conversely, the results indicate that volume changes have the capabilities of predicting sentiment changes for ADA and DOGE.

These results differ from the previous study on Twitter sentiment analysis and the cryptocurrency market. The discrepancy could be caused by the different market conditions, indicating that retail

investors in Twitter no longer have significant influence over price changes in the cryptocurrency market. Furthermore, this could be due to the significant presence of institutional investors, who can be regarded as more rational than retail investors, as they tend to hold their investment positions despite the price and volume fluctuations (Sun et al. 2021).

The results of this study might benefit traders and institutional investors for research focused on the latest analysis of trading strategies using Twitter sentiment analysis. Future research might benefit from implementing supervised machine learning to enhance predictive capabilities for more advanced trading strategies.

## REFERENCES

- Alexander, C., & Heck, D. F. (2020). Price discovery in Bitcoin: The impact of unregulated markets. *Journal of Financial Stability*, 50, 100776. <https://doi.org/10.1016/j.jfs.2020.100776>
- Bollen, J., Mao, H., & Zeng, X. (2011). Twitter mood predicts the stock market. *Journal of Computational Science*, 2(1), 1–8. <https://doi.org/10.1016/j.jocs.2010.12.007>
- CoinMarketCap. (2021). *Cryptocurrency prices, charts and market capitalizations*. <https://coinmarketcap.com/>
- Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, 74(366), 427. <https://doi.org/10.2307/2286348>
- Engle, R. F., & Granger, C. W. J. (1987). Co-integration and error correction: Representation, estimation, and testing. *Econometrica*, 55(2), 251–276. <https://doi.org/10.2307/1913236>
- Hutto, C., & Gilbert, E. (2014). VADER: A parsimonious rule-based model for sentiment analysis of social media text. *Proceedings of the International AAAI Conference on Web and Social Media*, 216–225. <https://ojs.aaai.org/index.php/ICWSM/article/view/14550>
- Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of Economic Dynamics and Control*, 12(2–3), 231–254. [https://doi.org/10.1016/0165-1889\(88\)90041-3](https://doi.org/10.1016/0165-1889(88)90041-3)
- Kraaijeveld, O., & De Smedt, J. (2020). The predictive power of public Twitter sentiment for forecasting cryptocurrency prices. *Journal of International Financial Markets, Institutions and Money*, 65, 101188. <https://doi.org/10.1016/j.intfin.2020.101188>
- Li, T., Van Dalen, J., & Van Rees, P. J. (2018). More than just noise? Examining the information content of stock microblogs on financial markets. *Journal of Information Technology*, 33(1), 50–69. <https://doi.org/10.1057/s41265-016-0034-2>
- Mai, F., Bai, Q., Shan, Z., Wang, X. (Shane), & Chiang, R. H. L. (2018). How does social media impact bitcoin value? A test of the silent majority hypothesis. *Journal of Management Information Systems*, 35(1), 19–52. <https://doi.org/10.2139/ssrn.2545957>
- Nakamoto, S. (2008). *Bitcoin: A peer-to-peer electronic cash system*. [www.bitcoin.org](http://www.bitcoin.org)
- Sun, W., Dedahanov, A. T., Shin, H. Y., & Li, W. P. (2021). Factors affecting institutional investors to add crypto-currency to asset portfolios. *The North American Journal of Economics and Finance*, 58, 101499. <https://doi.org/10.1016/j.najef.2021.101499>

## The role of social presence towards product and restaurant evaluation in online food delivery services

B. Ardiansyahmiraja

*Sekolah Interdisiplin Manajemen dan Teknologi, Institut Teknologi Sepuluh Nopember, Indonesia  
Fakultas Bisnis dan Ekonomika, Universitas Surabaya, Indonesia*

R. Nadlifatin

*Fakultas Teknologi Elektro dan Informatika Cerdas, Institut Teknologi Sepuluh Nopember, Indonesia*

**ABSTRACT:** Online Food Delivery Services (OFDS) platform is growing rapidly in Indonesia. However, when compared to neighboring countries such as Malaysia, OFDS user penetration in Indonesia is very minimal even though the level of user consumption is high. This shows a great opportunity for restaurants and platform managers to continue to develop OFDS, especially by understanding OFDS users better. Research related to OFDS in Indonesia has begun to emerge, but research focusing on product presentation (i.e., visual presentation or relevant information of products) is still rare. The present study is interested in social presence as a product presentation variable. This study uses both experimental design and Structural Equation Modeling (SEM). Experimental design is used because of the nature of product presentation variables which can be directly observed and manipulated. SEM is used to complement the research model by finding a relationship between product evaluation and purchase intention. A questionnaire was distributed to 240 Indonesian respondents who have used the OFDS application. The result from Analysis of Variance (ANOVA) shows that social presence affects product evaluation negatively ( $p = 0.047$ ). Furthermore, product attitude ( $\beta = 0.94$ ,  $p = 0.002$ ) and restaurant trust ( $\beta = 0.33$ ,  $p = 0.048$ ) variables shows a significant positive effects toward purchase intention. Further discussions and limitations are also discussed.

### 1 INTRODUCTION

In Indonesia, OFDS income reaches 0.077% of the total value of Indonesia's Gross Domestic Product (GDP). When compared to neighboring countries such as Malaysia, this percentage is not too different, the percentage of Malaysia's OFDS income compared to its GDP is 0.085% (The World Bank 2019). Even so, the level of user penetration from the two countries is quite different. Malaysia achieved user penetration of 24.8% while Indonesia was only 6.5% in 2020 (Statista Digital Market Outlook 2020). This indicates that although Indonesians are quite consumptive of food products on OFDS when compared to Malaysia, the coverage of OFDS users in Indonesia is still very small. Therefore, the level of food consumption and the lack of maximum user penetration on OFDS is an opportunity for restaurant partners and the OFDS platform to continue to develop their products and platforms. It has been found previously that social presence is closely related to one's psychological connection, where the connection or warmth one feels towards a medium can come from a sense of contact with other humans, friendliness, and sensitivity (Yoo & Alavi 2001; Steinfield 1986; Rice & Case 1983). On digital platforms such as OFDS, this warmth is difficult to create and creating a social presence can play a role in forming customer connections to products and restaurants. Therefore, the product presentation factors that are the focus of this research is social presence. What's more, attitude and trust will then be seen to influence purchase intention using SEM with the aim of confirming the relationship between latent variables.

## 2 LITERATURE REVIEW

Social presence is defined by various researchers differently for different scientific contexts. These definitions focus on how an individual can feel the presence of another person or human figure when they interact with a communication medium or a digital platform. Of course, related to this study, social presence is also a factor that is often investigated in the world of online shopping. (Lu et al. 2016) found that social presence has a strong and significant direct effect on trust in sellers, where trust in sellers mediates the relationship to purchase intention in the case of an e-commerce in China. In this study, the relationship of social presence with attitude and trust which is a product evaluation factor, especially in the OFDS context, is also the main question in this study. The negative influence of social presence has also been found by several studies (Liew et al. 2017; Gao et al. 2021). Therefore, the following hypotheses are proposed:

H1: There is a significant difference in product attitude between respondents who received high social presence and low social presence experimental treatment.

H2: There is a significant difference in brand trust between respondents who received high social presence experimental treatment and low social presence.

This study is also interested in positioning attitude as an antecedent variable for a consequence variable that is also very important, which has been discussed previously: purchase intention. Referring to the logic of this relationship and supported by various studies that have found a positive relationship between attitude and trust towards purchase intention (Chu & Chen 2019; Delafrooz et al. 2011; Hebbbar et al. 2020; Hong & Cha 2013; Kim & Chung 2011; Ling et al. 2010; Lu et al. 2016; Nguyen et al. 2019; Tandon et al. 2021), the final hypotheses are proposed:

H3: Consumer attitudes towards food products on OFDS have a positive effect on purchase intentions

H4: Consumer trust towards restaurant partners on OFDS has a positive effect on purchase intention.

## 3 METHODOLOGY

The previously proposed hypotheses will then be tested using the Analysis of Variance (ANOVA) and Structural Equation Modeling (SEM) methods. This study examines the effect of, social presence on product presentation in the OFDS application on product attitude, brand trust. In addition, the relationship between product attitude and brand trust on the purchase intention of OFDS application users is also a question in this study, for these two relationships, the SEM approach is used.

## 4 RESULTS

### 4.1 Analysis of variance

Analysis of variance (ANOVA) is a statistical analysis technique of two or more groups of a population in the study. In this study, ANOVA will be used to identify the effect of social presence on product presentation in the OFDS application on product attitude and brand trust.

Table 1. ANOVA.

Hypothesis	Manipulated Variable	Mean <sup>a</sup>	Mean <sup>b</sup>	$\Delta$ Mean	F	Sig.
H1	Social Presence $\rightarrow$ Attitude	4.019	3.832	-0.188	4.048	0.045
H2	Social Presence $\rightarrow$ Trust	3.911	3.810	-0.101	1.081	0.299

a = Similar/Low/Without; b = Different/High/With; \* = Significant relationship/ Hypothesis Accepted

Based on Table 1. it can be concluded the results of hypothesis testing in this study.

Based on the results of the ANOVA test regarding the relationship between the product attitude variable and the experimental social presence variable with low and high levels of treatment, the mean value was 4.019 for the low level of social presence treatment and 3.832 for the high level of social presence treatment. While the calculated F value is 4.048 and significant at 0.045. This means that differences in the level of social presence in product presentation affect user evaluations of products on OFDS. So it can be concluded that first hypothesis is accepted.

Based on the results of the ANOVA test regarding the relationship between the brand trust variable and the experimental variable social presence with low and high levels of treatment, the mean value was 4.911 for the low level of social presence treatment and 3.810 for the high level of social presence treatment. While the calculated F value is 1.081 and is significant at 0.299. This means that differences in the level of social presence in product presentation do not affect user evaluations of restaurant partners in OFDS. So it can be concluded that second hypothesis is rejected.

#### 4.2 Structural equation modeling

In the structural model, a goodness-of-fit test is needed to test the validity by checking the suitability of the data obtained. According to Malhotra, (2006), a model can be said to be fit if it has met at least 1 absolute goodness-of-fit, 1 absolute badness-of-fit, 1 incremental fit indices, and 1 parsimony fit indices. In this study, three indices were found in absolute fit indices that exceeded the cut-off value, namely CMIN of 4.050, GFI of 0.808, and RMSEA of 0.113. In incremental fit indices, all indices (NFI, CLI, TLI) have met the cut-off value of more than 0.80. Meanwhile, in the Parsimonious Normal Fit Index, the two indices, namely PNFI and GNFI, also have values that exceed the cut-off, which is more than 0.60. The results of hypothesis testing are shown in Table 1. In Table 2, the positive correlation between the two relationships can be seen. Product attitude has a positive correlation with purchase intention with an estimate value of 0.733 and brand trust has a positive correlation with purchase intention with an estimate value of 0.338. Therefore, both hypotheses were declared accepted. The value of the Squared Multiple Correlation of purchase intention in this study is 67.5%, which means the model is able to describe 67.5% of the total customer intention to order food through OFDS.

Table 2. SEM.

Hypothesis	Path	Standardized Coefficient	P- Value	Results
H4	Product Attitude → Purchase Intention	0.733	***	Accepted
H5	Brand Trust → Purchase Intention	0.338	***	Accepted

\*\*\* =< 0.001

## 5 CONCLUSION

Based on testing using ANOVA, the test results show a significant difference in product attitude for different levels of treatment from the social presence variable. Thus, hypothesis 1 is accepted. Supported hypothesis 1 means that according to previous studies, product presentation factors such as social presence have an influence on product evaluation or product attitude. However, in contrast to some previous studies, the relationship between social presence on product attitude is a negative relationship. This means that product photos that contain humans will result in a lower product attitude. In contrast to the results of the ANOVA test in the first hypothesis, the second hypothesis is rejected. Social presence does not have a significant influence on the evaluation of partners or brand trust. The squared multiple correlation value of purchase intention also shows a high value, which is 67.5%. This means that the SEM model in this study can describe 67.5% of the

variance of purchase intention, indicating that attitude and trust are two very important variables when they want to increase the purchase intention of OFDS users. However, based on the results of ANOVA analysis for the first and second hypotheses, brand trust is not affected by social presence. Therefore, in this study, only product attitude is the mediator of the relationship between product presentation and purchase.

## REFERENCES

- Chu, S. C. & Chen, H. T. 2019. Impact of consumers' corporate social responsibility-related activities in social media on brand attitude, electronic word-of-mouth intention, and purchase intention: A study of Chinese consumer behavior. *Journal of Consumer Behaviour*, 18, 453–462.
- Delafrooz, N., Paim, L. H. & Khatibi, A. 2011. Understanding consumers internet purchase intention in Malaysia. *African Journal of Business Management*, 5, 2837–2846.
- Gao, J., Rong, Y., Tian, X. & Yao, Y. O. 2021. Save Time or Save Face? The Social Presence Effect and Herding Effect in the Use of Facial Recognition Payment Technology in Retail. *The Social Presence Effect and Herding Effect in the Use of Facial Recognition Payment Technology in Retail (May 1, 2021)*.
- Hebbbar, S., Kamath, G. B., Mathew, A. O. & Kamath, V. 2020. Attitude towards online shopping and its influence on purchase intentions: an urban Indian perspective. *International Journal of Business Innovation and Research*, 22, 326–341.
- Hong, I. B. & Cha, H. S. 2013. The mediating role of consumer trust in an online merchant in predicting purchase intention. *International Journal of Information Management*, 33, 927–939.
- Kim, H. Y. & Chung, J. E. 2011. Consumer purchase intention for organic personal care products. *Journal of consumer Marketing*.
- Liew, T. W., Tan, S.-M. & Ismail, H. 2017. Exploring the effects of a non-interactive talking avatar on social presence, credibility, trust, and patronage intention in an e-commerce website. *Human-centric Computing and Information Sciences*, 7, 1–21.
- Ling, K. C., Chai, L. T. & Piew, T. H. 2010. The effects of shopping orientations, online trust and prior online purchase experience toward customers' online purchase intention. *International business research*, 3, 63.
- Lu, B., Fan, W. & Zhou, M. 2016. Social presence, trust, and social commerce purchase intention: An empirical research. *Computers in Human Behavior*, 56, 225–237.
- Nguyen, T. T. H., Nguyen, N., Nguyen, T. B. L., Phan, T. T. H., Bui, L. P. & Moon, H. C. 2019. Investigating consumer attitude and intention towards online food purchasing in an emerging economy: An extended tam approach. *Foods*, 8, 576.
- Rice, R. E. & Case, D. 1983. Electronic message systems in the university: A description of use and utility. *Journal of communication*.
- Statista Digital Market Outlook 2020. eServices Report 2020 - Online Food Delivery.
- Steinfeld, C. W. 1986. Computer-mediated communication in an organizational setting: Explaining task-related and socioemotional uses. *Annals of the International Communication Association*, 9, 777–804.
- Tandon, A., Kaur, P., Bhatt, Y., Mäntymäki, M. & Dhir, A. 2021. Why do people purchase from food delivery apps? A consumer value perspective. *Journal of Retailing and Consumer Services*, 63, 102667.
- The World Bank 2019. World Bank national accounts data, and OECD National Accounts data files.
- Yoo, Y. & Alavi, M. 2001. Media and group cohesion: Relative influences on social presence, task participation, and group consensus. *MIS quarterly*, 371–390.

# The impact of beverage vessel and sugar related-knowledge on single-serve beverages purchase intention in convenience stores

C.W. Hadi

*Faculty of Economics and Business, Airlangga University, Gubeng, Surabaya City, Indonesia*

**ABSTRACT:** Sugar-sweetened beverages (SSB) in cans and PET bottles are commonly sold in convenience stores. The beverage vessel protects the product while making it easy to use. On another side, the increasing trend of healthy lifestyles made SSB manufacturers adapt the portion size and sugar labeling of their products. Although consumers believe knowing the sugar content of the product is important, only some people believe that attribute on the packaging. The consumer attitude who believes in nutritional information is predicted to have greater purchase intention. This study aims at determining the effect of beverage vessel and sugar-related knowledge that mediated by consumer attitude on purchasing intention of single-serve beverage in convenience stores.

**Keywords:** single-serve beverage, sugar-sweetened beverage, beverage vessel, sugar-related knowledge, portion size, sugar labeling, consumer attitude, PET bottles, cans, purchasing intention

## 1 INTRODUCTION

There are differences in consumer expectations and perceptions of the taste of drinks and the willingness to pay for different packages (Lefebvre & Orlowski 2019). Portability, convenience in carrying, opening, and closing the packaging are important factors in choosing packaging (Delić et al. 2018). Therefore, this study investigates the choice of beverage vessel and its connection to purchase intention.

The increase in packaged food and beverage portion sizes has been identified as a potential factor implicated in the rise of the obesity prevalence (van der Horst et al. 2019). Therefore, substituting it with smaller volume size beverage can be an effective technique for reducing energy intake. This study aims at providing an overview of how consumers interpret volume size and how this affects purchase intention.

Furthermore, obesity and other health concerns such as diabetes and heart disease are closely linked to sugar-sweetened soft drinks and beverages (Agarwal 2020). In light of this current trend in beverage consumption, this study seeks to find out if no sugar or less sugar beverage alternatives placed on the front-of-pack labels would influence customers' purchase intentions more than the regular label or no label at all on sugar-sweetened beverages.

## 2 LITERATURE REVIEW

Consumers use the product packaging as a cognitive shortcut to build inferences about other attributes unrelated to appearance, such as taste or value (van Rompay et al. 2017). The vessel a beverage served has an impact on the consumer experience, and therefore should be taken into account when developing a beverage menu (Lefebvre & Orlowski 2019). This implies that beverage service in venues such as restaurants give experience to the consumer whether the taste was impacted or not for different types of beverage vessel.



Big volume sizes for beverages have been suggested as a possible contributor to the rise in obesity prevalence. Foods with a higher calorie density tend to be displayed with smaller serving sizes (van der Horst et al. 2019). When a caloric beverage is consumed with a meal, food intake is not reduced and energy from the beverage adds to energy from the food, resulting in a significant increase in total energy consumed from a meal (Flood et al. 2006). Consumers have become increasingly health-conscious and aware of labels placed on the front-of-pack of food and beverage products (Pereira 2020). Research confirms that obesity, heart disease, diabetes, and various malignancies have all been linked to the added sugars consumption (Corliss 2014). Consumers' perceptions of healthiness have risen as a result of nutritional labeling in the form of health claims, which leads to an increase in consumer purchase intention (Lähteenmäki 2013). A "no sugar" label on sugary beverages serves as a health warning, which is one of the key reasons for the rise in consumer sales of no sugar beverages.

Although consumers believe it is vital to know a product's sugar amount, just a small percentage of consumers believe the sugar content information on the package. Consumer behavior influences purchasing interest in items with sugar content information; consumers who believe in nutritional information are more likely to purchase such products (Chien et al. 2018). This suggests that consumer behavior toward products containing sugar information mediates the association between sugar knowledge and purchasing interest. Half of the adult population in the United States consumed SSB drinks regularly, regardless of whether they are attempting to lose weight or are already obese (Bleich et al. 2014).

At the point of purchase, packaging is the most apparent point of interest for customers (Kauppinen-Räsänen, 2014). Consumers create views about product qualities based on symbolic interpretations acquired from visual cues derived from packaging, such as size, shape, and color, even when the attribute (e.g. taste) is unrelated to the visual cue (van Rompay et al. 2017). In today's marketplace, extrinsic cues, such as product package labeling and the brand reputation, and perceived equity, can influence the consumers' decision-making (Pereira 2020).

### 3 METHODOLOGY

The relationship of beverage vessel and sugar-related knowledge while mediated by consumer attitude on purchasing intention of single-serve beverage in convenience stores were investigated. This research employs quantitative method by assuming assumes that reality can be defined, concrete, observable, and quantifiable. The sample size for this study is 100 people, including students, professionals, business people, and others, who volunteered to fill out questionnaires.

The hypothesis was tested using Structured Equation Modeling (SEM) in AMOS with  $\alpha = 5\%$ . Visual representation is shown in the path diagram to determine the significance of the tested relationships and the effect of each relationship.

### 4 RESULTS

The results show that all variables have a value of  $CR > 0.7$  and  $AVE > 0.5$ , subsequently, all indicators are used for data collection.

Based on the results, the feasibility test of the SEM model tested using Chi-Square, CMIN/DF, GFI, AGFI, CFI, TLI, IFI, RFI and RMSEA has met the requirements for acceptance, although the AGFI value has a marginal value.

AMOS analysis results show that beverage vessel, sugar-related knowledge, and consumer attitude have a positive direction towards purchase intention. Meanwhile, sugar-related knowledge also has a positive direction towards consumer attitude. H1, H2, H3, and H4 were all supported.

In this study, the Sobel test was used to determine the effect of the Sugar-Related Knowledge variable on the Purchase Intention variable through the Consumer Attitude variable. The measurement

results show that  $t \text{ value} > t \text{ table}$ . This proves that Consumer Attitude can mediate the influence of Sugar-Related Knowledge on Purchase Intention.

## 5 DISCUSSION AND IMPLICATIONS

### 5.1 Discussion

One of the focuses of this study is the influence of beverage vessels on the purchasing intention of single-serve beverages in convenience stores. Researchers found statistically significant evidence of the effect of beverage containers on purchase intention. These results are supported by previous research conducted by Delić et al. (2018) where the results of the study indicate the positive influence of beverage vessels on purchase intention. Out of 100 respondents, 61 people stated that PET bottle is often more available in convenience stores. This result is supported by previous research from Hutchinson (2010) indicating a shift in the choice of beverage packaging to PET bottles. Schifferstein's research (2018) also obtained results indicating consumer preferences for transparent packaging for soft drinks.

This study also indicates that consumer attitude can mediate the effect of sugar-related knowledge (portion size and sugar label) on purchase intention single-serve beverages in convenience stores. If seen from the results of AMOS analysis, in the Sugar-Related Knowledge variable, the highest coefficient value is 1.071. This value (G2) related to the Coca-Cola that shall be purchased has the right size. Further research found that the respondent's choice for portion size was packaging with 250 ml volume size. This result is supported by the research of Mantzari, et al. (2017) reporting a higher level of soft drink consumption for the smallest bottle packaging. The study also found that respondents remembered the sugar content information used on Coca-Cola packaging. The existence of this sugar label indicates a positive influence on consumer buying interest because consumers can choose the sugar content of the Coca-Cola that they want to buy. From two items on the Consumer Attitude variable, the highest coefficient value is 1.024. This value (P2) is related to the need to buy Coca-Cola products. Respondents tend to consume Coca-Cola drinks because these drinks used to be consumed by them and feel it as a necessity. If it is associated with the selection of the smallest volume and the sugar content label, the need for consumption of this drink may perceive to be controlled by consuming the drink with the smallest volume choice and/or the choice of the sugar content of the drink.

### 5.2 Implications

This study denotes some practical contributions. First, there are indications that convenience store consumers in Indonesia tend to choose PET bottles for single-serve beverages. Based on this result, producers or potential producers of single-serve beverages in Indonesia can take this review in developing new products or rejuvenating existing products. Second, research indicates the behavior of convenience store consumers in Indonesia used to or perceived a necessity to consume single-serve beverages. From an economic point of view, this is certainly a favorable condition for single-serve beverage manufacturers. However, from a health perspective, this behavior certainly has potential dangers related to the increasing population of obese and diabetic. The government role in educating the public regarding the importance of controlling the consumption of SSB drinks is certainly necessary. Third, consumers tend to choose the smallest packaging for single-serve beverages. This can be a review for producers or prospective producers in developing the size of the volume of their product packaging. Fourth, research indicates that consumers in Indonesia are aware of the different meanings on the label of sugar content in beverages and adjust it to their consumption behavior.

This study is not without limitations. First, the researcher has not further explored the influence of beverage vessels (PET bottles vs cans) on taste perception. Second, although this study indicates that consumers in Indonesia tend to choose the smallest packaging, it has not been with certainty the

relationship between this choice and the number of SSB drinks consumed in a certain period. This can be investigated further if it is associated with health control. Third, this study has not explored further the presence of more than two choices of sugar content and their effects on consumer behavior. With more than two choices of sugar content (e.g. regular, less sugar, and no sugar), it is necessary to examine consumer interest in this choice or only two variations of choice should be sufficient.

## REFERENCES

- Agarwal, A. 2020. Nutritional Consequences due to Soft Drink and Beverages Intake Causing Obesity among Children with Genetic Diseases. *International Journal of Collaborative Research on Internal Medicine & Public Health*. 12(4):1018. Available: <https://www.iomcworld.org/articles/nutritional-consequences-due-to-soft-drink-and-beverages-intake-causing-obesity-among-children-with-genetic-diseases.pdf>.
- Chien, T.-Y., Chien, Y.-W., Chang, J.-S., & Chen, Y. C. (2018). Influence of Mothers' Nutrition Knowledge and Attitudes on Their Purchase Intention for Infant Cereal with No Added Sugar Claim. *Nutrients*, 10(4), 435. doi:10.3390/nu10040435
- Corliss, J. 2014. *Eating too much added sugar increases the risk of dying with heart disease - Harvard Health*. Available: <https://www.health.harvard.edu/blog/eating-too-much-added-sugar-increases-the-risk-of-dying-with-heart-disease-201402067021> [2021, December 23].
- Delić, G., Vradić, G., Banjanin, B. & Vasić, J. 2018. The influence of the type of beverage on its packaging shape. In *9th International Symposium on Graphic Engineering and Design*. 243–251. DOI: 10.24867/GRID-2018-p30.
- Flood, J. E., Roe, L. S., & Rolls, B. J. 2006. The Effect of Increased Beverage Portion Size on Energy Intake at a Meal. *Journal of the American Dietetic Association*, 106(12), 1984–1990. doi:10.1016/j.jada.2006.09.005
- Hutchinson, Rachel. 2010. Discovering Shifts and Trends in Beverage Packaging. San Luis Obispo, California.
- Kauppinen-Räsänen, H. 2014. Strategic Use of Colour in Brand Packaging. *Packaging Technology and Science*. 27(8):663–676. DOI: 10.1002/PTS.2061.
- Lähteenmäki, L. 2013. Claiming health in food products. *Food Quality and Preference*. 27(2):196–201. DOI: 10.1016/J.FOODQUAL.2012.03.006.
- Lefebvre, S. & Orlowski, M. 2019. Can, cup, or bottle? The influence of beverage vessels on taste and willingness to pay. *International Journal of Hospitality Management*. 76:194–205. DOI: 10.1016/J.IJHM.2018.05.009.
- Mantzari E., Hollands G.J., Pechey R., Jebb S. & Marteau T.M. 2017. Perceived impact of smaller compared with larger-sized bottles of sugar-sweetened beverages on consumption: A qualitative analysis. *Appetite*. doi: 10.1016/j.appet.2017.08.031.
- Pereira, G. 2020. The Impact of Sugar-labelling on Consumer Purchase Intention for Canned Beverages. Available: <https://openrepository.aut.ac.nz/bitstream/handle/10292/13983/PereiraG.pdf?sequence=3&isAllowed=y>.
- van der Horst, K., Bucher, T., Duncanson, K., Murawski, B. & Labbe, D. 2019. Consumer Understanding, Perception and Interpretation of Serving Size Information on Food Labels: A Scoping Review. *Nutrients*. 11(9):2189. DOI: 10.3390/NU11092189.
- van Rompay, T.J.L., Finger, F., Saakes, D. & Fenko, A. 2017. “See me, feel me”: Effects of 3D-printed surface patterns on beverage evaluation. *Food quality and preference*. 62(December):332–339. DOI: 10.1016/J.FOODQUAL.2016.12.002.

# The effect of brand engagement and brand love upon overall brand equity and repurchase intention: Case study on smartphone brands in Indonesian millennials

D. Anjani & R.D. Astuti

*Faculty of Economics and Business, Universitas Indonesia*

**ABSTRACT:** The purpose of this research is to explore the effects of Brand Engagement (BE) and Brand Love (BL) on Overall Brand Equity (OBE) and Repurchase Intention (RI) of Indonesian millennial consumers in the smartphone market. Consumer Brand Engagement (CBE) is tested to determine the cognition, affection, and activation each aspect. This case study was carried out of five top smartphone brands in Indonesia, namely Apple, Samsung, Oppo, Vivo, and Xiaomi. Data were collected through online survey of 468 millennials and analyzed for reliability and validity using SEM CFA. The result showed that BL, affection and activation positively influence OBE and RI without cognition. This research contributes to the ever-growing consumer-brand relationships literature by exploring the role of CBE and BL in the millennial segment.

**Keywords:** Brand Engagement, Brand Love, Brand Equity, Repurchase Intention, Indonesia, Millennials, Smartphone brands, Apple, Samsung, Oppo, Vivo, Xiaomi

## 1 INTRODUCTION

A significant increase in research highlighting consumers' relationships with brands has occurred in the last three decades (Aaker et al. 2004; Fournier 1998; Hollebeek 2014). Research on marketing practices have also been conducted by paying attention to the various ways of building strong relationships between brands and consumers (Shokri & Alavi 2019; Sichtmann et al. 2019; Verma 2021). According to Gomez-Suarez et al. (2017), this relationship is essential because it enables consumers to select brands capable of satisfying their needs. Furthermore, this research analyzed four aspects, including: Brand Engagement (BE), Brand Love (BL), Overall Brand Equity (OBE), and Repurchase Intention (RI). The research by We Are Social and Hootsuite carried out in early 2021, stated that the total time spent by Indonesian smartphones users in 2020 culminated in 127.1 billion hours. However, despite the intense customer engagement processes, very few research examined BE and BL for smartphones (Palusuk et al. 2019). This research investigates the specific relationships within the top brands in Indonesia in July 2021 according to statistics, namely Apple, Oppo, Samsung, Vivo, and Xiaomi. Data were collected from Generation Y/Millennials, defined as those born from 1982 to 2002 (Diniso & Duh 2020; Muskat et al. 2003).

## 2 LITERATURE REVIEW

Hollebeek et al. (2014) defined Consumer Brand Engagement (CBE) as a positively balanced cognitive, emotional, and behavioral brand-related activity. This concept divided CBE into three aspects, namely cognitive processing, affection, and activation. Cognitive processing is defined as a customer's level of brand-related to concentration in particular brand interactions. Affection is

the degree of a customer's positive brand that affects interactions. Lastly, activation is defined as a customer's level of energy, effort, and time spent on a brand.

Wallace et al. (2014) stated that BL is the result of engagement, while Hudson et al. (2016) stated that consumers who engage with their favorite brands using social media have stronger power in an online context. Leckie et al. (2016) reported that affection and activation positively affect brand loyalty in the smartphone market. However, Algharabat et al. (2020) stated that those three aspects do not positively impact brand awareness and perceived quality, which referred to its equity. According to preliminary research, BE positively affects purchase intention (Jimenez-Castillo & Sanchez-Fernandez 2019; Verma 2021). Therefore, the following hypotheses were obtained: H1: All the aspects of BE, including (a) affection, (b) activation, and (c) cognition, positively influence BL. H2: All the aspects of BE, including (a) affection, (b) activation, and (c) cognition, positively influence OBE. H3: All the aspects of BE, including (a) affection, (b) activation, and (c) cognition, positively influence RI.

BL is the degree of passion, emotional attachment a satisfied consumer has for a particular brand (Carroll & Ahuvia 2006). According to Ahuvia (2005), BL includes passion, attachment, positive evaluation, response, and declarations. It positively affects brand loyalty (Carroll & Ahuvia, 2006; Nilay Bıçakcıoğlu et al. 2018), which is an aspect of equity. Md. Hafez (2021) stated that BL affects equity positively in the context of the banking sector in Bangladesh. Rodrigues and Rodrigues (2019) reported that it affects purchase intention in neo-luxury goods. Therefore, the following hypotheses were obtained: H4: BL positively influences OBE. H5: BL positively influences RI.

Yoo and Donthu (2001) defined OBE as the different consumer responses between branded and unbranded products with a similar level of marketing arousal and product attributes. The Brand Equity scale in this research uses the one-dimensional scale of Yoo and Donthu (2001), tested to determine similar results on the multidimensional scale (Bose et al. 2016; Verma 2021; Im et al. 2012).

RI refers to consumers' possibility of buying from the same brand in the future (Chiu et al. 2009; Dodd et al. 1991). This attribute was selected as the outcome due to its broader implications and positive impact on individual actions (Ajzen & Driver 1992; Hung et al. 2011; Pierre et al. 2005; Schlosser et al. 2006). According to Tolba and Hassan (2009), Brand Equity with several aspects consists of awareness, perceived quality, and loyalty affect purchase intentions. In addition to Consumer Engagement, Brand Equity also affects RI (Mia Hsiao-Wen Hoa & Henry F.L. Chung 2020). Therefore, the following hypothesis was obtained: H6: OBE positively influences RI.

### 3 METHOD

Questionnaires were distributed online through various social media. In total, 475 responses comprised of 7 invalids and 468 valid responses were received. Participants were 64% female and 36% male, with 82% in the age range of 19 to 25. Smartphone brands used by the participants consist of 34% Samsung, 29% Apple, 18% Xiaomi, 12% Oppo, and 7% Vivo. Their brand usage was 5.56% less than 3 months, 8.55% 3 to 6 months, 11.54% 6 to 12 months, 47.86% 1 to 2 years, 20.09% 2 to 5 years, and 6.41% more than 5 years. Then the data was tested with SEM CFA in AMOS 24, with the following stages: Overall Model Fit, Measurement Model Fit, and Structural Model Fit.

### 4 RESULT

Confirmatory factor analysis in SEM was used to assess the theoretical structure of the measurement model, while AMOS 24 examined the overall measurement model fit. In general, the model was considered quite fit with the normed chi-square of 2.9. Measurement model fit was also conducted to check the validity and reliability of the constructs and items. The model was proven valid and reliable, with CR and AVE values above 0.7 and 0.5, respectively.

The structural model testing was used subsequently to examine the causal relationship between variables and the indirect effect testing. The hypotheses test was carried out by comparing the t-value and p-value of the relationship. It is important to note that the conceptual framework posited the affection, activation, and cognition aspects of BE as single variables.

## 5 ANALYSIS AND DISCUSSION

This research reveals a positive relationship between all aspects of CBE and BL. It showed that engagement within brands and consumers leads to love. BL also mediates the relationship between cognition, affection, and activation with OBE and RI. The literature suggests that brand loyalty, which is one aspect of Brand Equity, is the outcome of CBE (Aaker 1991, 1996; Keller 1993; Yoo & Donthu 2001). It proves that affection and activation are the aspects of CBE with the biggest causal direct effect on OBE. However cognition was not shown to have a causal effect on OBE and RI despite the positive indirect effects on both variables. This research also presents new insights into the relationship between cognition, OBE and RI. It proves that OBE mediates the relationship between BL and CBE with RI.

There are many factors why cognition's relationship to OBE and RI are different from affection's and activation's. One consideration includes the fact which the object of research is smartphone brands, a high-involvement product. Therefore, determining whether to repurchase takes a long time to first consider all the information. In cognitive decision making, there are several stages, namely: problem recognition, seeking information, evaluating alternative options, product selection, and results (Solomon 2018). The indicators in cognition here may not describe the process so that these results can be obtained.

BL was proven to have both direct and indirect effects to OBE and RI. H4 result is in accordance with previous research from Verma (2021). According to Verma, this has not been proven by other studies. However, H5 result is slightly different to the results of previous research of Verma (2021) which states that BL does not have a direct positive effect on PI. This could be seen from the factor that in this research the variable tested is repurchase intention, with the respondents' smartphone brand usage mostly 1 to 2 years and more. Therefore, the engagement and love to the brand is stronger and different result is achieved.

New insights into CBE were also provided by illustrating that affection affects both the relationship between BL and RI the strongest than the other two dimensions. This result is similar to Hepola (2017) which stated that affection is the most important aspect in determining the overall level of engagement, which highlights the central role of emotion in this context. The relationship between CBE and OBE proved that activation has the most significant effect out of all three aspects. In addition, the relationship between CBE and RI was investigated. It proved that affection and activation have a positive direct impact on RI, which is contrary to Verma (2021). However, this is in line with Hollebeek et al. (2014), which stated that CBE affects Brand Usage Intention, with a scale adapted from the same source as RI in this research. This result is a further specification, where two aspects in CBE, namely affection and activation, have a direct causal effect on RI.

## 6 CONCLUSIONS AND LIMITATIONS

In this research, the CBE aspects used in a smartphone brand including cognition, affection and activation affect BL. It also showed that affection and activation positively affected OBE and RI in causal relationship, instead of cognition. However, all the dimensions of CBE (cognition, affection, and activation) have positive indirect effects towards OBE and RI. The construct of BL has been shown to influence OBE and RI. In addition, OBE is proven to mediate the relationship between CBE aspects in smartphone brands, namely cognition, affection, and activation, as well as BL with RI. In conclusion, activation, affection, cognition, and BL have indirect positive effects on OBE and RI.

This research is limited to the uneven distribution of age range, gender, and domicile respondents. It was based on only specific mobile phone brands, namely Apple, Oppo, Samsung, Vivo, and Xiaomi and only focused on one consumer segment. Although the samples are consistent with the current Indonesian population, they prevent this research from being generalized.

## REFERENCES

- Algharabat, Raed, et al., (2020). Investigating the antecedents of customer brand engagement and consumer-based brand equity in social media. *Journal of Retailing and Consumer Services*, 53, 101767, <https://doi.org/10.1016/j.jretconser.2019.01.016>
- Batra, R., et al., (2012). Brand love. *Journal of Marketing*, 76(2), 1–16. <https://doi.org/10.1509/jm.09.0339>
- Bairrada, Cristela Maia, et al., (2018). Antecedents and outcomes of brand love: utilitarian and symbolic brand qualities. *European Journal of Marketing*, 52(3/4). <https://doi.org/10.1108/EJM-02-2016-0081>
- Beatty, et al., (1988). Alternative Hierarchies of the Attitude-Behavior Relationship: The Impact of Brand Commitment and Habit. *Journal of the Academy of Marketing Science*, 16(2):1–10. <https://doi.org/10.1007/BF02723310>
- Bıçkıcıoğlu, Nilay, İlayda İpek & Gül Bayraktaroğlu (2018) Antecedents and outcomes of brand love: the mediating role of brand loyalty, *Journal of Marketing Communications*, 24(8), 863–877, <https://doi.org/10.1080/13527266.2016.1244108>
- Carroll, B.A. & Ahuvia, A.C. (2006), Some antecedents and outcomes of brand love, *Marketing Letters*, Vol. 17, pp. 79–89. <https://doi.org/10.1007/sl 1002-006-4219-2>
- Diniso, Chuma & Duh, Helen Inseng. (2020). Explaining Generation Y South Africans' Love and Satisfaction with Samsung Phone Brand using Consumption Value Theory, *Journal of African Business*, <https://doi.org/10.1080/15228916.2020.1838832>
- Hollebeek, Linda D. (2011a). Demystifying Customer Brand Engagement: Exploring the Loyalty Nexus. *Journal of Marketing Management*, 27, 7–8, 785–807. <https://doi.org/10.1080/0267257X.2010.500132>
- (2011b). Exploring Customer Brand Engagement: Definition and Themes. *Journal of Strategic Marketing*, 19, 7, 555–73. <https://doi.org/10.1080/0965254X.2011.599493>
- Hollebeek, et al., (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of Interactive Marketing*, 28(2), 149–165. <https://doi.org/10.1016/j.intmar.2013.12.002>
- Hung, et al., (2011). Antecedents of luxury brand purchase intention. *Journal of Product & Brand Management*, 20(6), 457–467. <https://doi.org/10.1108/1061042111116660>
- Kumar, J., & Nayak, J. K. (2019). Brand engagement without brand ownership: A case of non-brand owner community members. *Journal of Product & Brand Management*, 28(2), 216–230. <https://doi.org/10.1108/JPBM-04-2018-1840>
- Muskat, M., et al., (2013). Generation Y: Evaluating services experiences through mobile ethnography. *Tourism Review*, 68(3), 55–71. <https://doi.org/10.1108/TR-02-2013-0007>
- Pendergast, D. 2012. “Getting to know the Y Generation”, in Benckendorff, P., Moscarda, G. and Pendergast, D. (Eds), *Tourism and Generation Y*, CABI International, Wallingford, pp. 1-15
- Rodrigues, C., & Rodrigues, P. (2019). Brand love matters to Millennials: the relevance of mystery, sensuality and intimacy to neo-luxury brands. *Journal of Product & Brand Management*, 28(7), 830–848. <https://doi.org/10.1108/JPBM-04-2018-1842>
- Sarkar, A., & Sreejesh, S. (2014). Examination of the roles played by brand love and jealousy in shaping customer engagement. *Journal of Product & Brand Management*, 23(1), 24–32. <https://doi.org/10.1108/JPBM-05-2013-0315>
- Tolba, A. H., & Hassan, S. S. (2009). Linking customer-based brand equity with brand market performance: A managerial approach. *Journal of Product & Brand Management*, 18(5), 356–366. <https://doi.org/10.1108/10610420910981837>
- Verma, Pranay. (2021). The Effect of Brand Engagement and Brand Love upon Overall Brand Equity and Purchase Intention: A Moderated –Mediated Model. *Journal of Promotion Management*, 27(1), 103–132. <https://doi.org/10.1080/10496491.2020.1809591>
- Wallace, E., et al., (2014). Consumer engagement with self-exposure brands: brand love and WOM outcomes. *Journal of Product & Brand Management*, 23(1), 33–42. <https://doi.org/10.1108/JPBM-06-2013-0326>
- Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research*, 52(1), 1–14. [https://doi.org/10.1016/S0148-2963\(99\)00098-3](https://doi.org/10.1016/S0148-2963(99)00098-3)

# The effect of COVID-19 confirmed cases and deaths, lockdown policies, and vaccinations on stock return and volatility in Indonesia

D.F. Nadilah & D. Hanggraeni

*Faculty of Economics and Business, Universitas Indonesia, DKI Jakarta, Indonesia*

**ABSTRACT:** COVID-19 has infected more people and caused more deaths, trigger the imposition of movement restriction yet affecting the global economy. COVID-19 pandemic has exerted a significant effect on stock market performance worldwide. Indonesia has the highest number of confirmed cases and deaths in Southeast Asia as of September 2021. This study explores the effects of COVID-19 pandemic on stock market performance in Indonesia. The panel-data regression method was used to examine the effect of daily growth of COVID-19 confirmed cases and deaths, lockdown policies, and COVID-19 vaccinations to daily return and volatility of 243 stocks in Indonesia from 2 March 2020 to 30 September 2021. The result reveals that the COVID-19 confirmed cases and deaths affect stock return negatively and increase stock volatility, meanwhile lockdown policies and COVID-19 vaccinations affect stock return positively and decrease stock volatility.

## 1 INTRODUCTION

Currently, the world has entered its second year of being hit by the COVID-19 pandemic. Since it first appeared, the world has experienced a number of the COVID-19 shock waves, which increased the confirmed cases and deaths to a spike. The existence of COVID-19 as a global pandemic has brought various impacts; COVID-19 rigorously affected the economy, negative impact on many industries such as trade, tourism, and transportation (Albulescu 2021), and exerted an extraordinary impact on the financial market (Al-Awadhi et al. 2020; Albulescu 2021; Baek et al. 2020; Bakry et al. 2021; Chan et al. 2021; Rouatbi et al. 2021). Based on the WHO's statistic for the COVID-19 (2021), Indonesia has the highest number of confirmed cases and deaths in Southeast Asia and the fourth in Asia right after India, Turkey, and Iran. The main purpose of this study is to address how the COVID-19 pandemic affects Indonesia's stock market in this second year, after the shock waves and various lockdown policies, and COVID-19 mass vaccinations. The result suggest there are significant effects of COVID-19 confirmed cases and deaths, lockdown policies, and COVID-19 vaccinations to stock performance in Indonesia.

## 2 LITERATURE REVIEW

According to the Efficient Market Hypothesis (EMH) theory, stock prices are a reflection of all available information, as well as insider information (Fama 1970). Therefore, stock price movements can occur when there is new information available in the market (Schwert 1989). Volatility is a standard statistical measure of the sample distribution, where the more volatile the stock price, the farther the distance between open and close price of the stock (Ross et al. 2019). The existence of assymetric information can also result in excessive stock price volatility (Spiegel & Subrahmanyam 2000).

COVID-19 is caused by SARS-COV-2, which has infected more people and caused more deaths than the previous respiratory syndroms (Guarner 2020). In the first quarter of 2020, there were 1.565.294 confirmed cases with 91.912 deaths worldwide (Kang 2020). To prevent the spread of COVID-19, many countries have implemented various restrictive policies, such as lockdown.



Indonesian government has also implemented a number of regional-scale lockdown policies (Utomo & Hanggraeni 2021). The asymptomatic spread of COVID-19 makes vaccination the only solution to achieve herd immunity (Rouatbi et al. 2021). Since the virus was identified and officially announced by WHO in January 2020, many pharmaceutical companies from various countries have developed COVID-19 vaccines, which have subsequently obtained an emergency use permit from WHO to distribute and use for public (Calina et al. 2020; Rouatbi et al. 2021).

Al-Awadhi et al. (2020) found that daily growth in total confirmed cases and death cases caused by COVID-19 have significant negative effects on stock returns across all companies in Hang Seng Index and Shanghai Stock Exchange Composite Index. Bakry et al. (2021) revealed that there is positive and significant relationship between volatility and the stringency of government actions in emerging markets but a negative relationship in developed markets. Chan et al. (2021) discovered that development of COVID-19 vaccines has positive and significant impact on the global stock market's return, by an increase of 15.2 bps or equivalent of USD 87 billion on the first day of phase 1.

### 3 RESEARCH METHOD

This study employed panel data regression in order to examine the effect of COVID-19 confirmed cases (GC) and deaths (GD), lockdown policies, and vaccinations (DV) to daily stock return (RE) and volatility (VOL) of 243 listed firms on the Indonesia Stock Exchange under the mainboard category that operating in the real sector, since the first confirmed case of COVID-19 in Indonesia, 2 March 2020 up to 30 September 2021, which after the second shock wave of COVID-19 in Indonesia subsided, in a total of 383 trading days. For this research purpose, lockdown policies were divided into two categories: primary lockdown policies (DLP) and secondary lockdown policies (DLS). Primary lockdown policies have a higher stringency level than the other, which was implemented during the rapid increase in confirmed cases and deaths. Primary lockdown policies consist of PSBB, PPKM, and emergency PPKM. Meanwhile, secondary lockdown policies have lower stringency levels such as the transition of PSBB, micro PPKM, and stages 4, 3, and 2 of PPKM. Furthermore, stock market capitalization (MCP) and stock market-to-book ratio (MTB) were used as the control variable, as researches conducted by Al-Awadhi et al. (2020); Rouatbi et al. (2021); Utomo and Hanggraeni (2021). To examine each variable of the COVID-19 pandemic deeply, it was divided into three groups: Cases, Lockdown Policies, and Vaccines.

#### Cases

$$RE_{j,t} = \alpha_1 + \alpha_2 GC_{t-1} + \alpha_3 GD_{t-1} + \alpha_4 MCP_{i,t-1} + \alpha_5 MTB_{i,t-1} + \omega_{i,t} \quad (1)$$

$$VOL_{j,t} = \alpha_1 + \alpha_2 GC_{t-1} + \alpha_3 GD_{t-1} + \alpha_4 MCP_{i,t-1} + \alpha_5 MTB_{i,t-1} + \omega_{i,t} \quad (2)$$

#### Lockdown Policies

$$RE_{j,t} = \alpha_1 + \alpha_2 DLP_t + \alpha_3 DLS_t + \alpha_4 MCP_{i,t-1} + \alpha_5 MTB_{i,t-1} + \omega_{i,t} \quad (3)$$

$$VOL_{j,t} = \alpha_1 + \alpha_2 DLP_t + \alpha_3 DLS_t + \alpha_4 MCP_{i,t-1} + \alpha_5 MTB_{i,t-1} + \omega_{i,t} \quad (4)$$

#### COVID-19 Vaccines

$$RE_{j,t} = \alpha_1 + \alpha_2 DV_{t-1} + \alpha_3 MCP_{i,t-1} + \alpha_4 MTB_{i,t-1} + \varepsilon_{i,t} \quad (5)$$

$$VOL_{j,t} = \alpha_1 + \alpha_2 DV_{t-1} + \alpha_3 MCP_{i,t-1} + \alpha_4 MTB_{i,t-1} + \omega_{i,t} \quad (6)$$

### 4 RESULTS AND DISCUSSION

#### 4.1 Research result

The panel data regression was carried out with a total of 93.069 observations for each model. The regression of the six models in this research had significant results, with the coefficient of the

results indicating the direction of its influence on the stock return and volatility. The coefficient results of the regression are presented in Table 1.

Table 1. Regression result.

Dependent Variable	Independent Variables				
	Confirmed COVID-19 cases	Death cases due to COVID-19	Primary lockdown policies	Secondary lockdown policies	COVID-19 vaccination
Return	-0.009122*	-0.01298*	0.007273*	0.008124*	0.001538*
Volatility	0.020703*	0.006165*	-0.020699*	-0.02476*	-0.003555*

\*significant at 5% level of significance based on t-statistics.

Source: Processed by researchers

The result shows that COVID-19 confirmed cases and deaths had a negative impact on stock return and increase stock volatility. These result are in line with Al-Awadhi et al. (2020); Albulescu (2021); Bakry et al. (2021); Harjoto et al. (2021); Rouatbi et al. (2021). Utomo and Hanggraeni (2021). Lockdown policies implemented by Indonesian government had a positive impact on stock return and decreased stock volatility. These results are in line with Bakry et al. (2021) with a sample set of developed countries, Anh and Gan (2020), Narayan et al. (2021); Utomo and Hanggraeni (2021). The result of COVID-19 vaccinations also had a positive impact on stock return and decreased stock volatility, which is in line with Chan et al. (2021) and Rouatbi et al. (2021). For further analysis, we conducted sectoral analysis which shows that consumer cyclical, basic materials, and properties & real estate sectors had better performance to stock return and healthcare sectors had higher volatility than other sectors under COVID-19 pandemic.

#### 4.2 Discussion

COVID-19 confirmed cases and deaths are considered negative or bad news. Negative or bad news tends to bring bigger effects than good news due to negative bias (Baek et al. 2020). According to Al-Qudah and Houcine (2021), negative news gives investors a feeling of fear so that it affects their investment behaviour, which in turn has a bad influence on global stock market performance. This explains why stock return responds to pandemic disease (Al-Awadhi et al. 2020) and the increasing of stock volatility during the COVID-19 pandemic (Baek et al., 2020).

The implementation of lockdown policy is a manifestation of the Government's commitment to inhibit the spread of COVID-19, which can increase market confidence and the stock return (Anh & Gan 2020; Utomo & Hanggraeni 2021). The implementation of lockdown policies also reduce the level of uncertainty of this pandemic and stock volatility. Similar to lockdown policies, the COVID-19 vaccinations reduce the stock volatility by affecting investors' expectation with reducing the future pandemic-related unforeseen disruption (Rouatbi et al. 2021). Other than that, investors also see vaccines as the solution to stop this pandemic (Chan et al. 2021) and affects their investment behaviour, which increase stocks return.

## 5 CONCLUSION AND IMPLICATION

The results reveal that the COVID-19 pandemic has a mixed effect on stock performance in Indonesia from March 2020 to September 2021. The daily growth of confirmed cases and deaths had a negative impact on stock returns, yet increased stock volatility. The lockdown policies implemented by the Indonesian government can affect stock returns positively and decrease stock volatility. Similar to lockdown policies, COVID-19 vaccinations also have positive impacts on stock returns.

Moreover, it decreased stock volatility. One of the implications of this research is that investors must always be updated with the pandemic situation as it can affect the stock return & volatility.

## REFERENCES

- Al-Awadhi, A. M., Alsaifi, K., Al-Awadhi, A., & Alhammadi, S. (2020). Death and contagious infectious diseases: Impact of the COVID-19 virus on stock market returns. *Journal of Behavioral and Experimental Finance*, 27. <https://doi.org/10.1016/j.jbef.2020.100326>
- Al-Qudah, A. A., & Houcine, A. (2021). Stock markets' reaction to COVID-19: evidence from the six WHO regions. *Journal of Economic Studies*. <https://doi.org/10.1108/JES-09-2020-0477>
- Albulescu, C. T. (2021). COVID-19 and the United States financial markets' volatility. *Finance Research Letters*, 38. <https://doi.org/10.1016/j.frl.2020.101699>
- Anh, D. L. T., & Gan, C. (2020). The impact of the COVID-19 lockdown on stock market performance: evidence from Vietnam. *Journal of Economic Studies*, 48(4), 836–851. <https://doi.org/10.1108/JES-06-2020-0312>
- Baek, S., Mohanty, S. K., & Glambosky, M. (2020). COVID-19 and stock market volatility: An industry level analysis. *Finance Research Letters*, 37. <https://doi.org/10.1016/j.frl.2020.101748>
- Bakry, W., Kavalimthara, P. J., Saverimuttu, V., Liu, Y., & Cyril, S. (2021). Response of stock market volatility to COVID-19 announcements and stringency measures: A comparison of developed and emerging markets. *Finance Research Letters*. <https://doi.org/10.1016/j.frl.2021.102350>
- Calina, D., Docea, A. O., Petrakis, D., Egorov, A. M., Ishmukhametov, A. A., Gabibov, A. G., Shilman, M. I., Kostoff, R., Carvalho, F., Vinceti, M., Spandidos, D. A., & Tsatsakis, A. (2020). Towards effective COVID19 vaccines: Updates, perspectives and challenges (Review). *International Journal of Molecular Medicine*, 46(1), 3–16. <https://doi.org/10.3892/ijmm.2020.4596>
- Chan, K. F., Chen, Z., Wen, Y., & Xu, T. (2021). *COVID-19 vaccines: Saving lives and the global stock markets*. <https://ssrn.com/abstract=3785533>
- Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of Finance*, 25(2), 383–417. <https://doi.org/10.2307/2325486>.
- Guarner, J. (2020). Three Emerging Coronaviruses in Two Decades: The Story of SARS, MERS, and Now COVID-19. *American Journal of Clinical Pathology*, 153(4), 420–421. <https://doi.org/10.1093/ajcp/aqaa029>
- Harjoto, M. A., Rossi, F., Lee, R., & Sergi, B. S. (2021). How do equity markets react to COVID-19? Evidence from emerging and developed countries. *Journal of Economics and Business*, 115. <https://doi.org/10.1016/j.jeconbus.2020.105966>
- Kang, G. (2020). *Responding to a Pandemic: The COVID 19 Story*. 1–3. <https://doi.org/10.4103/0028-3886.283761>
- Lee, H. S. (2020). Exploring the initial impact of COVID-19 sentiment on US stock market using big data. *Sustainability (Switzerland)*, 12(16). <https://doi.org/10.3390/su12166648>
- Liu, H., Manzoor, A., Wang, C., Zhang, L., & Manzoor, Z. (2020). The COVID-19 outbreak and affected countries stock markets response. *International Journal of Environmental Research and Public Health*, 17(8). <https://doi.org/10.3390/ijerph17082800>
- Narayan, P. K., Phan, D. H. B., & Liu, G. (2021). COVID-19 lockdowns, stimulus packages, travel bans, and stock returns. *Finance Research Letters*, 38. <https://doi.org/10.1016/j.frl.2020.101732>
- Ross, S. A., Westerfield, R. W., Jaffe, J., & Jordan, B. D. (2019). *Corporate Finance*. In Corporate Finance. McGraw-Hill Education. <https://doi.org/10.12737/24596>
- Rouatbi, W., Demir, E., Kizys, R., & Zaremba, A. (2021). Immunizing markets against the pandemic: COVID-19 vaccinations and stock volatility around the world. *International Review of Financial Analysis*, 77. <https://doi.org/10.1016/j.irfa.2021.101819>
- Schwert, G. W. (1989). Why Does Stock Market Volatility Change Over Time? *The Journal of Finance*, 44(5), 1115–1153
- Spiegel, M., & Subrahmanyam, A. (2000). Asymmetric Information and News Disclosure Rules. *Journal of Financial intermediation*, 9(4), 363–403.
- Utomo, C. D., & Hanggraeni, D. (2021). The Impact of COVID-19 Pandemic on Stock Market Performance in Indonesia. *Journal of Asian Finance*, 8(5), 777–0784. <https://doi.org/10.13106/jafeb.2021.vol8.no5.0777>

## Post-pandemic tourism resiliency: Lesson from Bali leadership capacities

D.W. Irawanto

*Brawijaya University, Malang, Indonesia*

K.R. Novianti

*University of Muhammadiyah Malang, Malang, Indonesia*

I.P. Satwika

*STMIK Primakara, Bali, Indonesia*

**ABSTRACT:** It has been two years since the COVID-19 pandemic hit the world. Tourism practitioners have noted that besides the past incidents like the Bali bombing and Mount Agung eruption that historically impacted the Bali tourism sector, the pandemic also proved to influence the tourism sector. Scholars and policymakers in Indonesia know much less about the importance of resilience in encountering this situation. Therefore, strong leadership should navigate the recovery of this sector. This research investigated a series of FGD (focus group discussions) conducted from mid-2019 to 2021 and analyzed them using a narrative methodology involving five big tourism associations in Bali. The findings reveal that to survive in the uncertain situation, strong leadership in guiding the recovery of tourism business should be navigated by predictive accuracy behavior. Along with a detailed plan, the tourism sector managers should place a higher initiating structure than before the pandemic and act as role models to allow the business to survive. This research also identified several innovative leadership capacities to be considered by the tourism practitioners in enhancing Bali tourism's "bounce back".

**Keywords:** post-pandemics, tourism, Bali, COVID-19, leadership

### 1 INTRODUCTION

The coronavirus (COVID-19) caused an economic and social shock that most certainly changed the way people live and work and the operation of businesses and organizations (Irawanto et al. 2021). The pandemic has created a condition that has never been seen before. In a matter of months, the sector that was previously considered over-tourism became completely devoid of tourism. The global tourism industry has been declining as a result of the COVID-19 outbreak in late 2019. Tourism is one of the major economic sectors that experienced the hardest hit (Harchandani & Shome 2021). The human connection and movement that are essential to tourism's survival are vulnerable to any disease. The tourism sector has been designated as one of President Joko Widodo's major development programs, entitled *Nawa Cita*, and has been proclaimed as the top contributor to GDP, foreign exchange, and employment in Indonesia. The tourist industry in Indonesia provided a significant contribution to the country's economy (Novianti 2021). Bali as a tourism destination relies on tourists and it was heavily impacted by the COVID-19 pandemic outbreak.

One of the significant policy responses to the COVID-19 outbreak was the imposition of international travel restrictions by numerous governments throughout the world that, on the other hand, have been unprecedented and disproportionately harmful to the tourism industry (Gössling 2020; Khalid et al. 2021). The Indonesian government has been monitoring the development of COVID-19 cases thoroughly to anticipate a spike in cases due to the Omicron variant, which has currently been detected in around 90 countries including Indonesia. The government implemented rules to

anticipate the newly found COVID-19 variant Omicron by conducting strict early detection at all Indonesian entry points from abroad, implementing changes to the 10-day quarantine period for those coming from abroad, and accelerating the national vaccination program. The latest COVID-19 outbreak has brought attention to the fact that these concerns with leaders' decision-making have become more serious. As systems become increasingly complicated and interconnected, the potential of failure increases. In this context, leadership becomes an essential commodity and a highly pursued skill. Thus, decision-makers at the top of the corporate ladder scout for leadership all across the world (Forster & Heinzl 2021). Leaders in this sector are facing uncertainty and need to adapt to the fast-changing situations. In any crisis, including the COVID-19 pandemic, they should overcome the rapidly developing and highly uncertain scenario that threatens their society's fundamental principles (Boin & 't Hart 2003). Policymakers in Indonesia know much less about the importance of resilience in encountering the pandemic. Therefore, strong leadership should navigate the recovery of this sector. This research aimed at investigating the main leadership behavior to make the tourism sector resilient.

## 2 LITERATURE REVIEW

### 2.1 *Resilience in tourism sector*

The ability to overcome misfortune and bounce back from adversity is referred to as resilience (Orchiston et al. 2016). Resilience is required at all levels: micro, meso, and macro. Human resilience is related to resilience at the micro-level. Meso resilience refers to an organization's ability to comprehend its processes at several levels. Macro resilience (societal resilience) is concerned with policymaking to create a resilient society. Individuals, families, and communities are the building blocks of a strong society. As a result, instilling in individuals a genuine drive to invest in self-preparation is a fundamental issue for future public leaders (Kristiana et al. 2021). Tourism resilience is mostly discussed in the literature as a way to increase sustainability after experiencing an ecological or environmental disaster and to provide alternatives to sustainable development (Dahles & Susilowati 2015; Lew 2014). In order to survive, tourism sectors need to create "planning and culture" and collaboration and innovation (Khalid et al. 2021). It should engage with strong capacities and entrepreneurial acts to be less dependent on government policy (Khalid et al. 2021). Collaboration is required in all sectors to create innovations in tourism services (Kristiana et al. 2021). Resilience thinking is required when managing tourism as a system that is affected by shocks. This comprises properties like persistence, adaptation, and transformation, which are all dynamics enabling the system to maintain its stability (Folke et al. 2005). In the face of internal shocks such as social inequity and political turbulence, and external factors such as swings in the global economic storm, the combination of flexibility and innovation boosts system capacity (Hahn & Nykvist 2017; Smit & Wandel 2006).

### 2.2 *Leadership as an enabler to resilience*

Leaders' existence encourages positive behavior for resilience (Harland et al. 2005). Leaders need to enable employee resilience in uncertain conditions (Prayag et al. 2020). Leaders should apply many measures in adopting government policy and put forward flexibility and creativity. It is crucial to distinguish between subcultures and the hundreds of ethnic groups in Indonesian society, where collectivism is emphasized (Passakonjaras & Hartijasti 2019). According to a recent report from the GLOBE (Worldwide Leadership and Organizational Behavior Effectiveness) project, a global leadership research (Irawanto et al. 2011), Indonesian leadership is defined by a specific style that differs from both Western-style and Asian-style leadership. Moreover, according to the GLOBE's research, employees in Indonesia expect their leaders to pay special attention to their coworkers and to exhibit this attitude in a charismatic manner. The Indonesian government has set several policies in undertaking COVID-19 cases, specifically Omicron. Visitors should, however, prove that they have been vaccinated by showing their record in the government's "PeduliLindungi"

mobile phone program. Inter-regional travel is only permitted with a valid vaccination certificate or a negative COVID-19 test result. Domestic travel is forbidden. Travelers using public transportation departing or entering the areas with Community Activities Restrictions Enforcement (PPKM, *Pemberlakuan Pembatasan Kegiatan Masyarakat*) levels 3 and 4 status should have a vaccination certificate or a negative RT-PCR Test Result valid for  $2 \times 24$  hours at the time of departure.

### 3 METHODOLOGY

This research employed a qualitative approach as the dynamic of the unit analysis to obtain a better understanding of the leadership resiliency required in the tourism sector. Narrative analysis was used as it was considered to be the most appropriate method for data collection in the FGD setting, specifically within the tourism sector in Bali, where the activities were mostly related to outdoor activity. Narrative research focuses on participants' use of stories to describe their experiences, to understand the phenomenon of the recovery of the tourism sector in Bali in post-pandemic. Research data were obtained from in-depth semi-structured interviews involving 5 Bali tourism-related groups within a focused group discussion setting, namely Bali Villa Association, Transport Provider Association, Indonesian Young Entrepreneurs Association (HIPMI, *Himpunan Pengusaha Muda Indonesia*), Handy Craft Association, and Water Sports Provider Association. Questionnaires were also distributed to complement the main data sources and obtain meaningful information. In narrating the data obtained from the participants, the thematic analysis was conducted by comparing the narrative data of all key participants, highlighting common themes or key factors that emerged, relating to the 12 leadership factors proposed by LBDQ (Leader Behavior Description Questionnaire) XII. Thematic information was essential to draw the lines between what was emerging from the leadership resilience in the Bali tourism sector.

### 4 RESULT AND DISCUSSION

LBDQ-XII was used as the basis for submitting interviews in the FGD, which were divided into 12 main factors, namely representation, demand reconciliation, tolerance of uncertainty, persuasiveness, initial structure, tolerance and freedom, role assumption, consideration, production emphasis, predictive accuracy, integration, and superior orientation. The findings revealed that to survive in an uncertain situation, strong leadership was needed in navigating the recovery of the tourism business. There were three important aspects related to leadership resilience in the tourism sector:

1. Integration. Leaders are expected to be able to create and manage harmony and unify differences that occur both among group members and between individuals in the organization. A leader should be able to create integration from various aspects that exist within the scope of the organization, although creating integration is not an easy thing to do.
2. Representation behavior. The leader is a figure who should be able to speak and represent his organization to other organizations.
3. Predictive accuracy behavior. Leaders should be able to make accurate predictions, particularly the future trends, to prepare the business properly. However, with the uncertain conditions that are currently happening, accurate predictions are unlikely to be carried out, especially in pandemic conditions where anticipatory steps need to be taken appropriately.

Furthermore, as per the narrative gained from the key informants, there is one leadership factor that needs to be avoided which is superior orientation behavior. Superior orientation makes the leaders emphasize that "I'm the boss" and employees should obey all orders without having the authority to make their own decisions.

### 5 CONCLUSION

The findings revealed that the tourism sector leaders in the post-pandemic situation demand "integration" as the common factor needed in navigating business recovery. Along with the

representation behavior, these uncertain conditions require the leaders to show their capabilities in positive communication, where in this context Balinese people are collectivist. This research will benefit the practitioners, especially tourism practitioners allowing them to select correct leadership behavior in encountering crises like the COVID-19 pandemic. Hence, they can manage their business properly.

## REFERENCES

- Boin, A., & 't Hart, P. (2003). Public Leadership in Times of Crisis: Mission Impossible? *Public Administration Review*, 63(5), 544–553. <https://doi.org/10.1111/1540-6210.00318>
- Dahles, H., & Susilowati, T. P. (2015). Business resilience in times of growth and crisis. *Annals of Tourism Research*, 51, 34–50. <https://doi.org/10.1016/j.annals.2015.01.002>
- Folke, C., Hahn, T., Olsson, P., & Norberg, J. (2005). Adaptive governance of social-ecological systems. *Annual Review of Environment and Resources*, 30, 441–473. <https://doi.org/10.1146/annurev.energy.30.050504.144511>
- Forster, T., & Heinzl, M. (2021). Reacting, fast and slow: how world leaders shaped government responses to the COVID-19 pandemic. *Journal of European Public Policy*, 28(8), 1299–1320. <https://doi.org/10.1080/13501763.2021.1942157>
- Gössling, S. (2020). Technology, ICT and tourism: from big data to the big picture. *Journal of Sustainable Tourism*, 29(5), 849–858. <https://doi.org/10.1080/09669582.2020.1865387>
- Hahn, T., & Nykvist, B. (2017). Are adaptations self-organized, autonomous, and harmonious? Assessing the social-ecological resilience literature. *Ecology and Society*, 22(1). <https://doi.org/10.5751/ES-09026-220112>
- Harchandani, P., & Shome, S. (2021). The Effects of Covid-19 on Global Tourism. *ASEAN Journal on Hospitality and Tourism*, 19(1), 63–82. <https://doi.org/10.5614/ajht.2021.19.1.06>
- Harland, L., Harrison, W., Jones, J. R., & Reiter-Palmon, R. (2005). Leadership Behaviors and Subordinate Resilience. *Journal of Leadership & Organizational Studies*, 11(2), 2–14. <https://doi.org/10.1177/107179190501100202>
- Irawanto, D. W., Novianti, K. R., & Roz, K. (2021). Work from home: Measuring satisfaction between work-life balance and work stress during the covid-19 pandemic in Indonesia. *Economies*, 9(3). <https://doi.org/10.3390/economies9030096>
- Irawanto, D. W., Ramsey, P. L., & Ryan, J. C. (2011). Tailoring leadership theory to the Indonesian culture. *Global Business Review*, 12(3), 355–366. <https://doi.org/10.1177/097215091101200301>
- Khalid, U., Okafor, L. E., & Burzynska, K. (2021). Does the size of the tourism sector influence the economic policy response to the COVID-19 pandemic? *Current Issues in Tourism*, 24(19), 2801–2820. <https://doi.org/10.1080/13683500.2021.1874311>
- Kristiana, Y., Pramono, R., & Brian, R. (2021). Adaptation Strategy of Tourism Industry Stakeholders During the COVID-19 Pandemic: A Case Study in Indonesia. *Journal of Asian Finance, Economics and Business*, 8(4), 0213–0223. <https://doi.org/10.13106/jafeb.2021.vol8.no4.0213>
- Lew, A. A. (2014). Scale, change and resilience in community tourism planning. *Tourism Geographies*, 16(1), 14–22. <https://doi.org/10.1080/14616688.2013.864325>
- Novianti, K. R. (2021). Maximizing Bali Village Tourism Potential Using Penta-Helix Model. *International Journal of Social Science and Business*, 5(1), 86–92. <https://doi.org/10.23887/ijssb.v5i1.30650>
- Orchiston, C., Prayag, G., & Brown, C. (2016). Organizational resilience in the tourism sector. *Annals of Tourism Research*, 56, 145–148. <https://doi.org/10.1016/j.annals.2015.11.002>
- Passakonjaras, S., & Hartijasti, Y. (2019). Transactional and transformational leadership: a study of Indonesian managers. *Management Research Review*, 43(6), 645–667. <https://doi.org/10.1108/MRR-07-2019-0318>
- Prayag, G., Spector, S., Orchiston, C., & Chowdhury, M. (2020). Psychological resilience, organizational resilience and life satisfaction in tourism firms: insights from the Canterbury earthquakes. *Current Issues in Tourism*, 23(10), 1216–1233. <https://doi.org/10.1080/13683500.2019.1607832>
- Smit, B., & Wandel, J. (2006). Adaptation, adaptive capacity and vulnerability. *Global Environmental Change*, 16(3), 282–292. <https://doi.org/10.1016/j.gloenvcha.2006.03.008>

# The correlation between spare parts planning systems with the inventory level at PT Petrokimia Gresik

E.R. Diyanto  
 Airlangga University

**ABSTRACT:** PT Petrokimia Gresik, a company that accommodates the increasing farmers/agriculturist fertilizer needs, operates a large number of 31 factory units. The operation of the factories must be supported by a good maintenance plan and spare parts stock system. The spare parts stock system is foremost needed because it affects maintenance activities, the value of the company's inventories, carrying costs, and the warehouses' space availability. This research area aims to analyze the correlation between spare parts planning systems with the level of inventory in the company. The method used in this research is multiple linear regression.

**Keywords:** spare parts, maintenance, warehouse management system, multiple linear regression

## 1 INTRODUCTION

In the manufacturing industry, there are two main problems in managing the inventory of spare parts. First, the problem is overstock. It will cause inefficiency in asset management of the company and also loss of opportunity costs. Spare parts overstock is caused by several factors, such as forecasting and calculation errors, and sporadic demand that affected the establishment of optimum demand. The second problem is stock out. It occurs due to uncertainty of lead-time, especially when purchasing from abroad. If stock out of spare parts occurs, it will disrupt maintenance, repair, and operation (MRO) activities. As a part of the support for good production, MRO will help the production line achieve its target. If spare parts are out of stock, the production target may not be achieved. PT Petrokimia Gresik is a company that operates 31 (thirty-one) factory units faces these problems.

Unlike production materials, which have relatively consistent usage, MRO parts have fluctuated demand. Maintenance activities include preventive, predictive, corrective, and breakdown. MRO activities include routine maintenance or/and replacement of spare parts (turn around). Sometimes, MRO parts are made-to-order parts with long and inconsistent lead times. As a consequence, Manufacturers usually carry substantial buffers of spare parts inventory to protect against downtime due to part unavailability (Chen et al. 2019). This usually results in obsolescence. Moreover, spare parts are expensive and the purchase of individual components is associated with high depreciation and other costs with their obsolescence (Šírová & Rodrigues 2019). Better MRO scheduling means a better spare parts management inventory.

Management of spare part inventory in the manufacturing industry is an essential task to create reliability and efficiency. Besides, to support spare parts availability, the provision of spare parts should be performed selectively. Inventory values and inventory turnovers of PT Petrokimia Gresik are shown in Table 1.

Table 1. Inventory of PT Petrokimia Gresik in 2016 until 2020.

Inventory*	2016	2017	2018	2019	2020
Value in million (IDR)	97,994	102,393	101,782	109,169	111,233
Turnover ratio (times)	2	1	1.28	1.1	1.08

\*Source: ERP-SAP Company



## 2 METHOD

The research uses multiple linear regression to analyze whether the independent variables have a correlation to the dependent variable and if there is a correlation, how strong the relationship is. Regression analysis is a statistical technique for estimating the relationship among variables that have reason and result (Uyanık & Güler 2013). The assumption of multiple linear regression analysis is normal distribution, linearity, freedom from extreme values, and having no multiple ties between independent variables. Multiple linear regression model is formulated as in the following equation:

$$y = \beta_0 + \beta_1 x_1 + \dots + \beta_n x_n + \varepsilon \quad (1)$$

where  $y$  = dependent variable;  $x_i$  = independent variable;  $\beta_i$  = parameter; and  $\varepsilon$  = error

### 2.1 Research model

In this research, a framework was made to describe the relationship and influence of the independent variables on the dependent variable and to determine the relationship between these variables, whether the relationship is positive or negative. The model compiled as shown in Figure 1 assumes that the maintenance strategy has no effect on purchase planning.

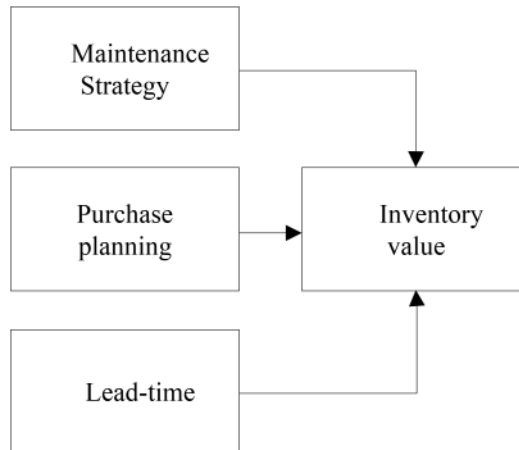


Figure 1. Framework model.

Industries are facing a lot of challenges such as optimization of operation and maintenance function due to environmental and safety requirement issues that are always developing. A maintenance strategy has been developed to support maintenance management implementation in industries. However, maintenance strategy is not well-defined in the literature. A few authors have defined it. Kelly (1997) defined maintenance strategy as a systematic approach to upkeep the facilities and equipment. It involves the identification, researching, and execution of many repairs, replacements, and inspection decisions. There are three types in the maintenance strategy, namely preventive maintenance, predictive maintenance, and corrective maintenance. Corrective maintenance requires the highest buffer stock because the activities are unscheduled and their failures are unpredictable. So, the company must carry out turnaround activities. PT Petrokimia Gresik can carry out turnaround activities about 8–12 times per year.

Planning is not only an operation activity but also a strategic activity. It includes the processes of formulating the goals of the organization, the formation of action plans, timeframes, as well as the sequence of actions and directions of the distribution of all types of resources necessary to achieve the goals (Katsioloudes 2006; Monczka et al. 2009; Van Weele 2010). Purchase planning implies

stock monitoring, purchase order management (order quantity, receipt date, delivery date, delivery means, etc.), demand forecasting, and other activities. It also takes into consideration adherence to financial goals and budget, works with electronic systems such as ERP or other procure-to-pay software optimizing invoicing, payment, and control processes. According to Fritsch (2017), there are two main approaches to purchasing: reactive and proactive. The reactive approach implies the use of the Just in Time method, meaning that the demand completely covers the purchase order and the stock available. A proactive approach to procurement implies having safety (buffer) stock available to meet demand and unplanned enlargement in demand. So, errors in determining quantity orders can make higher inventory and stocks.

Managing lead time can be a competitive advantage. Managing time is the mirror image of managing quality, cost, innovation, and productivity. Time is usually wasted because of serialization of independent activities, non-synchronization of dependent activities, production of parts that are rejected, or inefficient workflows (Tersine & Hummingbird 1995). It implies that lead time can affect inventory level companies.

## 2.2 Hypothesis

A research model was used to describe actual events in the field. The model was made by discussing and brainstorming with workers who were directly involved in the duties and responsibilities of the purchasing, maintenance, and warehouse units. In addition, it involved people who were considered experts in the field. To test the correctness of the model, three hypotheses were formulated as the following:

*Hypothesis 1: Maintenance strategy will positively influence inventory value*

*Hypothesis 2: Purchasing planning will positively influence inventory value*

*Hypothesis 3: Lead-time will negatively influence inventory value*

## 3 RESULTS

SPSS version 22 was chosen to analyze this model. It is well-suited for analyzing the relationship between variables that have more than one independent variable. The classical assumption test was conducted to prove that the independent variables were free from multicollinearity and autocorrelation. The VIF values for the maintenance strategy, purchasing planning, and lead-time were 1.499, 4.175, and 3.670, respectively, which are values less than 10. It means that the model was free from multicollinearity. To prove whether or not autocorrelation existed, it can be identified from the Durbin-Watson (DW) calculation results. The SPSS output results showed that the DW number was 1.889 while the limit criteria were  $d_L = 1.1805$  and  $d_U = 1.6503$  with a significance value of 5%, so the calculated DW was greater than 1.6503 and smaller than 2.3497. It was concluded that the regression model had no autocorrelation. The model made had to be able to explain the proportion of the influence of the independent variable on the dependent variable. The figure obtained from Adjusted R square showed that the proportion of the effect of variable maintenance strategy, purchase planning, and lead time on the inventory value was 48%. While the results of hypothesis testing are presented in Table 2:

Table 2. Hypothesis testing results.

Hypothesis	Path	Coefficient Regression	Results
1	MS-IV (+)	-1,113	Not supported
2	PP-IV (+)	0,73	Supported
3	LT-IV (-)	-0,544	Supported

Table Legend: MS = Maintenance Strategy; PP = Purchase Planning; LT = Lead Time

## 4 CONCLUSION

In this research, there are 3 independent variables affecting inventory values. The relationship between these variables can be concluded that the maintenance strategy had a negative effect on the inventory value. This was because routine repairs were more dominant than turnaround activities. Many consumables were issued from the inventory. So, the inventory level went down.

Purchase planning had a positive effect on inventory value. The responsibility of the purchasing division was to make sure that the spare parts in the warehouse were available on time, in the right quantity, and with the right specifications. With sporadic demand, determining the right quantity was challenging. In determining the forecast and the lot size order, data can be inaccurate.

Lead time had a negative effect on inventory value. The longer the lead time of an item, the smaller number of items available in the warehouse. This was due to the regular consumption of spare parts by end-users, especially for consumable spare parts.

## 5 PERSONAL INFORMATION

Eko Rhoma Diyanto is a student at Airlangga University that is currently studying Master of Management in semester 2. Apart from being a student, He has also worked at PT Petrokimia Gresik since January 2014. The positions he has held are Foreman of Supporting Materials (2015–2018), Receiving Material Staff (2018–2020), Warehouse Supervisor (2020–Present). In terms of the community environment, he is interested in contributing to social development programs.

## REFERENCES

- Chen, J., Gusikhin, O., Finkenstaedt, W., & Liu, Y. N. 2019. Maintenance, Repair, and Operations Parts Inventory Management in the Era of Industry 4.0. *IFAC-PapersOnLine*, 52(13), 171–176. <https://doi.org/10.1016/j.ifacol.2019.11.171>
- Fritsch, D. 2017, March 9. *Purchase Planning: Basics, Considerations, & Best Practices*. Eazystock. <https://www.eazystock.com/blog/purchase-planning-basics-considerations-best-practices/>
- Katsioloudes, M. I. 2006. *Strategic Management: Global Cultural Perspectives for Profit and Non-Profit Organizations*. Butterworth Heinemann.
- Kelly, A. 1997. *Maintenance Strategy*. Elsevier and Butterworth Heinemann .
- Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. 2009. *Purchasing and Supply Chain Management* (Fourth Ed.). South-Western Cengage Learning.
- Šírová, E., & Rodrigues, M. 2019. Spare Parts Management in the Context of Industry 4.0. In P. Madzik (Ed.), *The Poprad Economic and Management Forum 2019* (pp. 141–150). [https://www.researchgate.net/profile/Marcio-Rodrigues-7/publication/339457835\\_Spare\\_Parts\\_Management\\_in\\_the\\_Context\\_of\\_Industry\\_40/links/5e53d7994585158f40e9ddac/Spare-Parts-Management-in-the-Context-of-Industry-40.pdf](https://www.researchgate.net/profile/Marcio-Rodrigues-7/publication/339457835_Spare_Parts_Management_in_the_Context_of_Industry_40/links/5e53d7994585158f40e9ddac/Spare-Parts-Management-in-the-Context-of-Industry-40.pdf)
- Tersine, R. J., & Hummingbird, E. A. 1995. Lead-time reduction: The search for competitive advantage. *International Journal of Operations and Production Management*, 15(2), 8–18. <https://doi.org/10.1108/01443579510080382/FULL/XML>
- Uyanık, G. K., & Güler, N. 2013. A Study on Multiple Linear Regression Analysis. *Procedia - Social and Behavioral Sciences*, 106, 234–240. <https://doi.org/10.1016/j.sbspro.2013.12.027>
- Van Weele, A. J. 2010. *Purchasing & Supply Chain Management: Analysis, Strategy, Planning and Practice* (5th ed.). Eindhoven University of Technology, Cengage Learning EMEA.

# The effect of brand personality dimensions on self congruity and functional congruity on brand attitude: A study of Jaklingko users

E.S.M. Simanjuntak

*Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** Society's need for public transportation continues to grow. Brand personality plays a vital role in brand psychology to form a brand identity. This research seeks to investigate the various roles of brand personality through its dimensions, namely responsibility, activity, aggressiveness, simplicity, and emotionality, in encouraging consumers' choices to evaluate the consistency of functional congruity perceived by consumers. The sample was selected purposively involving 626 active users of Jaklingko in Indonesia. This research employs Structural Equation Modeling-Partial Least Squares (SEM-PLS) to test the hypothesis. The findings revealed that all dimensions of brand personality, except simplicity, had a positive and significant effect on functional congruity and self-congruity. However, traveling purpose did not strengthen the influence of self-congruity or functional congruity to brand attitude.

**Keywords:** dimensions of brand personality, self-congruity, functional congruity, public transportation, brand attitude

## 1 INTRODUCTION

The COVID-19 pandemic has caused a significant decrease in the number of public transportation users compared to the number of passengers in January 2020 (Rahayu 2020). Transjakarta users began to decline as of March 2020 by 34.52%. In April 2020, MRT passengers decreased by 94.11%, KRL passengers decreased by 78.69%, and Jakarta LRT passengers decreased by 93.05%. To provide better services, the Provincial Government of DKI Jakarta had integrated PT Transport Jakarta, PT MRT Jakarta (Perseroda), PT Jakarta Propertindo, and the Ministry of Transportation and the Ministry of SOEs through PT Moda Kemerdekaan Jabodetabek Transportation, and PT Kereta Api Indonesia (Persero) cooperating to become PT Jaklingko Indonesia. The integration of tariffs and electronic payments between modes had been operated by JakLingko Indonesia for MRT Jakarta, Transjakarta, LRT Jakarta, KAI Commuter and Railink Soekarno-Hatta Airport. Based on the analysis of JakLingko users, this research aims at analyzing the effect of each dimension of brand personality (responsibility, activity, aggressiveness, simplicity and emotionality) on functional congruity and self-congruity, analyzing the effect of functional congruity and self-congruity on brand attitude, and investigating the moderating role of travelling purpose on the effect of self-congruity and functional congruity on brand attitude.

## 2 LITERATURE REVIEW

Kotler and Keller (2011) state that marketers should recognize their consumer behavior to gain an advantage and win the competition in the market, as Olya and Al-ansi (2018) believe that consumer decision making is based on the potential value obtained. Customers tend to choose brands that possess a particular brand personality based on the customers' actual self-concept, ideal self-concept, or other self-concepts (Sirgy 1982). Each dimension of brand personality has a different influence (Louis & Lombart 2010), thus, Aaker (1997) proposes brand personality dimensions consisting of sincerity, excitement, competence, sophistication, and ruggedness.

This research employs the dimensional model designed by Geuens et al. (2009) consisting of responsibility, activity, aggressiveness, simplicity, and emotionality dimensions. Brand personality is based on self-congruity theory, which compares external behavior with internal beliefs (Aaker & Fournier 1995). Self-congruity can be defined as the brand's suitability to personality and self-concept (Klipfel et al. 2014) and users' image suitability associated with certain goods, services, or stores (Kang et al. 2012) including the actual self, self-image, ideal self-image, social self-image and ideal social image (Sirgy et al. 2005), which form the motives for conformity with customer's self-congruity and ultimately determine the customer's purchase decision (Malär et al. 2011). According to Sirgy et al. (2000), self-image congruity based on self-concept includes actual self-congruity, social self-congruity, ideal self-congruity and ideal social self-congruity (Schiffman & Kanuk 2001). Self-congruity and functional congruity were essential for understanding decision making. These utilitarian attributes include convenience, customer service, performance or quality and reliability that affect purchase behavior. Kang et al. (2012) stated that functional congruity is the consumers' expectations and experiences towards products/services.

### 3 METHODOLOGY

This descriptive research employs a single cross-sectional design with a quantitative approach. The sample was selected purposively from Indonesian consumers who have made transactions on social commerce Instagram, WhatsApp, Facebook, Twitter, and TikTok within the last six months and aged above 17 years. Data were collected using a questionnaire with a six-level Likert scale distributed using Google Form through online media for ten days from 26 May – 4 June 2021. There were 658 questionnaires filled out but only 626 respondents met the criteria.

Furthermore, the data were computed using SEM-PLS to investigate the effect of each dimension of brand personality on functional congruity and self-congruity. Jamal and Al-Marri (2007) stated that the self-congruity suitability with brand personality is a significant determinant of brand preferences, brand attitudes, purchase intentions, product quality evaluations, overall satisfaction, and consumer's perceived proximity to the brand. However, some studies found that functional congruity has always played a more important role than self-congruity and brand attitude (Su & Reynolds 2017. Recreational travelers focus more on “fun”, “entertainment”, and “passion”, whereas business travelers place greater concern on function (Hightower et al. 2013). Thus, this research investigated the moderating role of traveling purpose (business or leisure) on the effect of self-congruity and functional congruity on brand attitude. Therefore, this research proposed the following hypothesis to be analyzed.

H1: Each dimension of brand personality has a positive effect on perceived functional suitability.

H2: Each dimension of brand personality has its own use in predicting perceived self-worth.

H3 : Functional suitability has a positive effect on brand attitudes.

H4 : Self-conformance has a positive effect on brand attitudes.

H5 : Traveling purpose (business or leisure) moderates the effect of self-fit and functional suitability on brand attitudes.

The following table summarizes the result of structural model evaluation based on the path coefficient value and t-value.

Table 1. Result of structural model evaluation based on the path coefficient value and t-value

	T Statistics	P Values	Result	Conclusion
<i>Responsibility -&gt; Functional Congruity</i>	5.576	0.000	Significant	Hypothesis accepted
<i>Activity -&gt; Functional Congruity</i>	4.864	0.000	Significant	Hypothesis accepted
<i>Aggressiveness -&gt; Functional Congruity</i>	4.285	0.000	Significant	Hypothesis accepted
<i>Simplicity -&gt; Functional Congruity</i>	7.463	0.000	Significant	Hypothesis accepted
<i>Emotionality -&gt; Functional Congruity</i>	3.808	0.000	Significant	Hypothesis accepted
<i>Responsibility -&gt; Self Image Congruity</i>	2.394	0.017	Significant	Hypothesis accepted

Thus, the research conceptual model was a modified version of Su and Reynolds's (2017) model using brand personality dimension model proposed by Geuens et al. (2009) including responsibility, activity, aggressiveness, simplicity, and emotionality. Below is research model used:

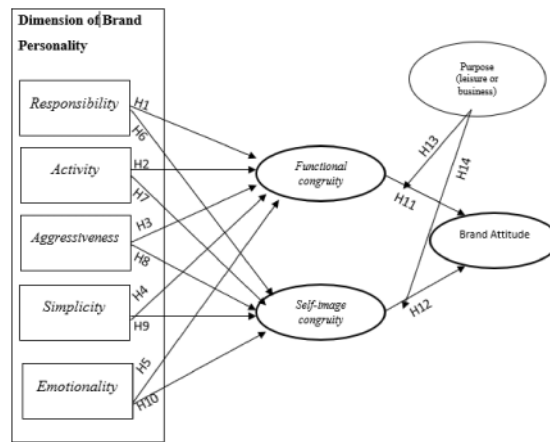


Figure 1. Research conceptual model.

Source: Data processed by the author (2021) adapted from Su and Reynolds (2017) and Geuens (2009).

## 4 DISCUSSION

The results found the positive and significant effect of brand personality on functional congruity by the t-value above 1.645. This indicated that the brand personality dimension of Jaklingko had a contribution in increasing the functional congruity of Jaklingko. Meanwhile, four of the five dimensions of brand personality had a positive and significant effect on self-congruity, except for simplicity by the t-value below 1.645, meaning that the simplicity did not have a positive and significant effect on self-congruity. This indicated that consumers did not experience simplicity when using Jaklingko. Functional congruity and self-congruity had a positive and significant effect on brand attitude by the t-value above 1.645, indicating that increased functional congruity and self-congruity of consumers would improve Jaklingko's brand attitude. It was in line with the research Su and Reynolds (2017). The test results showed that functional congruity was more significant in influencing brand attitude seen, as indicated by the t-value above 1.645. In addition, this research found that the moderating role of traveling purpose on the influence of self-image congruity and functional congruity on brand attitude was not significant, as indicated by the t-value below 1.645, meaning that traveling purpose did not moderate the increasing influence of functional congruity and self-congruity on brand attitude.

## 5 CONCLUSION

The public's needs for public transportation continues to grow. Thus, the government needs to develop a strong brand identity as conducted by the Provincial Government of DKI Jakarta who integrated some transportation companies into PT Jaklingko Indonesia. The findings showed that brand personality dimension had the highest influence on functional congruity of t-value of 7.463. Moreover, it is believed that the functional congruity of using Jaklingko will increase the brand attitude to be more competitive and easily recognized by the consumers. The highest effect on self-congruity was emotionality by the t-value of 5.854, which should be developed to improve

Jaklingko's brand attitude to increase consumer loyalty. It is also revealed that functional congruity played an essential role over self-congruity, which implies that transportation company practitioners should improve customer functional congruity based on the brand personality. However, this research has some limitations. It was conducted during the COVID-19 pandemic in Indonesia and did not conduct research on the pre-pandemic situation, it does not consider the composition of the respondents, and only researched Jaklingko's mode of transportation

## REFERENCES

- Aaker, J. (1997). Dimensions of Brand Personality. *Journal of Marketing Research*, 34(3), 347–356. <https://doi.org/10.1177/002224379703400304>
- Aaker, J., & Fournier, S. (1995). A Brand As a Character, a Partner and a Person: Three Perspectives on the Question of Brand Personality. *NA - Advances in Consumer Research*, 22, 391–395.
- Geuens, M., Weijters, B., & De Wulf, K. (2009). A new measure of brand personality. *International Journal of Research in Marketing*, 26(2), 97–107. <https://doi.org/10.1016/j.ijresmar.2008.12.002>
- Hightower, R., Brady, M., & Baker, T. 2013. Investigating the role of the physical environment in hedonic service consumption: An exploratory study of sporting events. *Journal of Business Research*, 55, 697–707.
- Jamal, A., & Al-Marri, M. 2007. Exploring the effect of self-image congruence and brand preference on satisfaction: the role of expertise. *Journal of Marketing Management*, 23(7–8), 613–629.
- Kang, K. H., Stein, L., Heo, C. Y., & Lee, S. (2012). Consumers' willingness to pay for green initiatives of the hotel industry. *International Journal of Hospitality Management*, 31(2), 564–572. <https://doi.org/10.1016/j.ijhm.2011.08.001>
- Klipfel, J. A. L., Barclay, A. C., & Bockorny, K. M. (2014). Self-Congruity: A Determinant of Brand Personality. *Journal of Marketing Development and Competitiveness*, 8(3), 130–143.
- Kotler, P., & Keller, K. (2011). *Marketing Management*. Prentice Hall PTR.
- Louis, D., & Lombart, C. (2010). Impact of brand personality on three major relational consequences (trust, attachment, and commitment to the brand). *Journal of Product & Brand Management*, 19(2), 114–130. <https://doi.org/10.1108/10610421011033467>
- Malär, L., Krohmer, H., Hoyer, W. D., & Nyffenegger, B. (2011). Emotional Brand Attachment and Brand Personality: The Relative Importance of the Actual and the Ideal Self. *Journal of Marketing*, 75(4), 35–52. <https://doi.org/10.1509/jmkg.75.4.35>
- Olya, H. G. T., & Al-ansi, A. (2018). Risk assessment of halal products and services: Implication for tourism industry. *Tourism Management*, 65, 279–291. <https://doi.org/10.1016/j.tourman.2017.10.015>
- Rahayu, J. T. (2020). *Pengguna angkutan umum Jabodetabek turun selama pandemi COVID-19 [Public transport Usage in Greater Jakarta decreases during the COVID-19 pandemic]*. Antara News. <https://www.antaranews.com/berita/1431680/pengguna-angkutan-umum-jabodetabek-turun-selama-pandemi-covid-19>
- Schiffman, L. G., & Kanuk, L. (2001). *Consumer Behaviour*. Prentice Hall.
- Sirgy, M. J. (1982). Self-Concept in Consumer Behavior: A Critical Review. *Journal of Consumer Research*, 9(3), 287–300. <https://doi.org/10.1086/208924>
- Sirgy, M. J., Grewal, D., & Mangleburg, T. (2000). Retail Environment, Self-Congruity, and Retail Patronage: An Integrative Model and a Research Agenda. *Journal of Business Research*, 49(2), 127–138. [https://doi.org/10.1016/S0148-2963\(99\)00009-0](https://doi.org/10.1016/S0148-2963(99)00009-0)
- Sirgy, M. J., Grzeskowiak, S., & Su, C. (2005). Explaining housing preference and choice: The role of self-congruity and functional congruity. *Journal of Housing and the Built Environment*, 20(4), 329–347. <https://doi.org/10.1007/s10901-005-9020-7>
- Su, N., & Reynolds, D. (2017). Effects of brand personality dimensions on consumers' perceived self-image congruity and functional congruity with hotel brands. *International Journal of Hospitality Management*, 66, 1–12. <https://doi.org/10.1016/j.ijhm.2017.06.006>

# The role of government support in entrepreneurs' success in the context of micro and small enterprises in Surabaya

E. Tandelilin

*University of Surabaya, - Surabaya, - East Java – Indonesia*

**ABSTRACT:** This study aimed to determine the effect of government support on entrepreneurs' success in the context of MSEs in Surabaya. Many factors may encourage the success of entrepreneurs; one of which is government support. This explanatory study used a quantitative approach, and the primary data used in this research were collected using a questionnaire. The population of this study was MSEs registered with the Department of Commerce and Industry of Surabaya City within three industrial categories (culinary, fashion, and craft), comprising 263 MSEs in total. The census method was used to determine the population. The analysis was carried out using SEM (structural equation modeling) with IBM SPSS AMOS 20.0 software. The results show that the support of the Surabaya city government failed to encourage entrepreneurial success in MSEs, despite the implementation of its standard coaching program named "Pahlawan Ekonomi and Pejuang Muda."

**Keywords:** entrepreneur success, government support, micro and small businesses

## 1 INTRODUCTION

Since the early 1990s, entrepreneurship has been promoted by the government and is considered a crucial factor in increasing economic growth. Entrepreneurs are often portrayed as heroic figures who save the economy's life (Olaison & Sørensen 2014). Measuring the success/performance of MSEs is not easy. The indicators for the success of micro, small, and medium enterprises are yet to be standardized. Each researcher used different measurements. Some measured success on the basis of company financial performance (Chowdhury 2013), but Perren (2000) suggested using non-financial measurements. Taormina and Sammi (2007), for example, linked entrepreneurial success to sustainable business operations (a minimum of three years).

Government support is one of the factors that can encourage the success of an entrepreneur. The research by Garg and Phaahla (2018) shows that government policies and support are the main aspects that support the success of MSEs and are positively related to business performance. This research focused on the city regulations/policies as a form of government support. The Surabaya City government in particular has introduced a unique policy for the development of micro, small and medium businesses, named the "Pahlawan Ekonomi dan pejuang Muda" program, hereinafter translated into Economic Heroes and Young Fighters Program's. The unique program belonging exclusively to the Surabaya City government aimed to improve the welfare of micro and small entrepreneurs and alleviate poverty in the city of Surabaya.

The number of micro, small and medium enterprises (MSMEs) in Indonesia increases by 1 million annually. In eight years (2011–2018), MSMEs made up 99% of all businesses, provided 89% of jobs in the private sector, and contributed 60% of the country's GDP. ([www.kemenkopukm.go.id](http://www.kemenkopukm.go.id)). The Indonesian economy is dominated by three sub-sectors in the creative economy, namely the culinary (41.69%), fashion (18.15%) sectors. These three sub-sectors were the largest contributors to the gross domestic product (GDP) of Indonesia ([www.bekraf.go.id](http://www.bekraf.go.id)). The development of MSMEs in East Java also shows an increase. In 2012, the total number of MSMEs in East Java was 6,825,931.



Of that figure, 6,533,694 were micro-scale informal businesses with limited assets, access, and productivity, 261,827 were small-scale businesses, and the remaining 30,410 were medium-scale businesses. Four years later, the number of MSMEs in East Java soared to 9,595,000, up by 46.77%, and in 2018, it further increased to 9,782,262 ([diskopukm.jatimprov.go.id](http://diskopukm.jatimprov.go.id)). Despite the growth of the number of MSMEs in East Java, most MSMEs were still running in the informal sector, with no exactly known number of informal entrepreneurs involved. Surabaya City government's goals are to improve the community welfare through various MSEs policies and programs and to alleviate poverty and famine. As such, in 2010, The Surabaya City government, then led by Surabaya City Mayor Tri Rismaharini, initiated a program named the Economic Heroes and Young Fighters program for these purposes.

In the beginning, there were only 89 MSEs participating in the program, but in the following year this figure increased to 759. In each year from 2012 to November 2019 the number of MSEs joining the program was 861; 1848; 2640; 3,320; 5,000; 8656; 10,680, and 12,464, respectively. The constant increase in the number of MSEs indicates that the Surabaya City government's Economic Heroes and Young Fighters program has met its target. This success of the Surabaya City's government in meeting its target is also indicated by the decrease in the number of poor people in the city of Surabaya (i.e., in 2010, the number of poor people in Surabaya was 195.7 thousand, and this number decreased to 130.55 thousand in 2019) ([www.bps.go.id](http://www.bps.go.id)). Most successful MSEs are under the intensive guidance and monitoring of the Surabaya City government in collaboration with the Department of Commerce and Industry of Surabaya City.

## 2 LITERATURE REVIEW

The definition of MSMEs in Indonesia is clearly stated in Government Regulation No. 7 of - 2021 on the convenience, protection, and empowerment of cooperatives and micro, small, and medium enterprises. Based on the policies, working capital criteria for micro businesses is maximum 1 billion, and for small businesses it is >1 billion to 5 billion. Revenue category per year for micro businesses is maximum 2 billion, and it is 2–15 billion for small businesses ([www.depkop.go.id](http://www.depkop.go.id)).

Robbins and Judge (2017) stated that “entrepreneurship is the process of starting new businesses, generally in response to opportunities.” In support of the definition above, Schermerhorn and Bachrach (2015) described entrepreneurship as “strategic thinking and risk-taking behavior that results in creating new opportunities.” Yukl and Gardner (2020) defined an entrepreneur as “one who creates a new business in the face of risk and uncertainty to achieve profit and growth by identifying opportunities and assembling the necessary resources to capitalize on those opportunities.” Based on the various definitions above, it can be concluded that entrepreneurs can see opportunities to pursue profit by creating a business, managing and utilizing the resources they have, and having the will to take risks. Even the ability to innovate (create products/services) is a new requirement for an entrepreneur.

There is no universal agreement on entrepreneurial success measurement. Every entrepreneur has a different criterion. Entrepreneur success can be measured through (1) tangible criteria (monetary criteria) such as profitability, sustainability, personal wealth creation, revenue or company growth, and turnover (Amit et al. 2003; Perren 1999, 2000) and (2) non-monetary criteria such as consumer satisfaction, personal development, and personal achievement (Ostgaard & Birley 1996). The criteria should be adjusted to the unit of analysis used, whether it be at the organizational level or the MSE level. Using the financial criteria for measuring micro and small business performance comes with various weaknesses, such as non-standardized financial statements and differing calculations for each financial indicator used. Therefore, financial indicators are not appropriate for micro and small business scales because micro and small businesses have minimal/no financial reports. Leković and Marić (2015) suggested using non-financial criteria.

Most governments in the world focus on supporting the development of the MSE sector to create economic stability (Jasra et al. 2011). MSE growth is hampered directly or indirectly by a series of central and local government policies. The research conducted by Ramananda and Rahman

(2012) shows that government support in policies related to MSEs will determine the success of entrepreneurs (Genty et al. 2015). Garg and Phaahla (2018) concluded that government policies and various government supports are the main aspects that support the success of MSEs and are positively related to business performance. This research focused on Surabaya City government's regulations/policies as a form of government support. One of such regulations is the Economic Heroes and Young Fighters program that was intended to empower MSEs through various training programs, mentoring, and information related to licensing and entrepreneurship events. Based on the explanation above, the following hypothesis is proposed: H1: government support positively affects entrepreneur success.

### 3 METHODS

This study used a quantitative approach and an explanatory research design. Primary data were collected using a questionnaire. The population in this study was MSEs registered with the Department of Commerce and Industry of Surabaya City in three industrial categories (culinary, fashion, and crafts). The target population was MSEs that had survived for at least three years. There were 263 MSEs included as the target population, and all of them were used as respondents (census approach). The data analysis was conducted using Structural Equation Model (SEM) with IBM SPSS AMOS 20.0 software.

### 4 RESULTS AND DISCUSSION

Hypothesis testing was carried out to evaluate the relationship between variables as explained through the proposed hypothesis. It means that the hypothesis is not supported. Evaluation of influence was determined by the significance and direction of influence between variables. The hypothesis would be declared supported if it had the same direction of influence as the test results and if it demonstrated a significance as shown by a C.R. greater than 1.96 or a p-value less than 0.05. The test results show that the value ( $p = 0.088$ ) is significant at 5%. The score means that government supports did not affect entrepreneur success. In this research, government support referred to the support from Surabaya City government. The results of this study are not in line with those of several previous studies, including one conducted by (Mazzarol 2003) which concluded that the government's legality-related role played a dominant role in MSEs' survival and growth.

This research's results are not in line with the claims of the Surabaya City government about the success of the MSEs program. The Surabaya City government claimed that the Economic Heroes and Young Fighter programs was able to reduce the poverty line and the number of poor people in Surabaya. The poverty rate in Surabaya per se decreased from 7.07% in 2010 to 4.51% in 2019. The poverty line decreased from Rp. 282,528 in 2010 to Rp. 567,474 in 2019, whereas, the number of poor people decreased from 195.7 thousand in 2010 to 130.55 thousand in 2019 (BPS, Surabaya 2019) (Putra et al. 2020). The results of Itching's (2006) research revealed that government support through regulations has direct and indirect influences on the performance/success of MSEs, either with or without the awareness of the entrepreneurs. All regulations affect the performance/success of MSEs, but it will be up to the MSEs whether they would exploit the regulatory opportunities or not. Regulations have no impact on MSEs unless the MSEs make changes in behavior as a response to those regulations. This study shows that, although the Surabaya City government had implemented various regulations in the form of work programs that supported the development of MSEs, the outcomes had not been able to accelerate and increase the success of MSEs in Surabaya. MSEs awareness to participate in the various work programs initiated by the Surabaya City government needs to be increased. Although the Surabaya City government had implemented various rewards and punishments to the MSEs that it assisted, the awareness of the MSEs to make various changes towards progress was still at a minimum because of the range of constraints faced by the MSEs, such as low HR competence, low motivation, greater focus on material assistance and financial limitations.

## 5 CONCLUSIONS, RECOMMENDATIONS, AND LIMITATIONS

The results show that government support did not affect entrepreneurial success in MSEs in Surabaya, even though various efforts have been made through development programs. Several suggestions thus are offered accordingly: (1) information related to MSEs, MSE development programs, and various MSEs events should be disseminated to entrepreneurs through MSEs community leaders in each sub-district in Surabaya; (2) coaching programs should be based on needs assessments on MSEs to determine the real needs of the MSEs for coaching programs' greater relevance to MSEs' needs; and (3) the Surabaya City government should evaluate the regulations pertaining to MSEs and its coaching programs to know which ones are effective and which are not for future improvements. There are several limitations in this study: (1) this research was conducted during the COVID-19 pandemic, during which business conditions did not run as usual, while all government regulations were issued before the pandemic occurred so that the application in the field was somewhat different; and (2) this study only used data on MSEs that were recorded in the Department of Commerce and Industry of Surabaya City, so many MSEs that met the criteria were not included in the sample.

## REFERENCES

- Amit, R., Zietsma, Kenneth R. MacCrimmon, C., & John M. Oesch. (2003). Does Money Matter? *Journal of Human Resources*, XXXVIII(2), 416–440.
- Chowdhury, M. S. (2013). *Success Factors of Entrepreneurs of Small and Medium-Sized Enterprises: Evidence from Bangladesh*, 3(2), 38–52.
- Eltahir, O. A. B. (2018). Factors Affecting the Performance & Business Success of Small & Medium Enterprises in Sudan (Case Study: Omdurman). *International Journal of Small Business and Entrepreneurship Research*, 6(6), 14–22.
- Garg, A. K., & Phaahla, P. N. (2018). Factors Affecting the Business Performance of Small Businesses in Sekhukhune. *Journal of Economics and Behavioral Studies*, 10(4(J)), 54–67.
- Genty, K., Idris, K., Wahizat, N., Wahat, A., & Kadir, S. A. (2015). *Demographic Factors and Entrepreneurial Success: A Conceptual Review*, 6(8), 366–374.
- Jasra, J. M., Khan, M. A., Hunjra, A. I., Rehman, R. A. U., & Rauf - I – Azam. (2011). DETERMINANTS. *International Journal of Business and Social Science*, 2(20), 274–280.
- Lampadarios, E. (2017). An Insight into Entrepreneurial Success Factors for SMEs: *International Journal of Small Business and Entrepreneurship Research*, 5(2), 1–20.
- Leković, B., & Marić, S. (2015). *Minor business success/performance measures – importance, reliability, and usability*, 43(2), 7–26.
- Mazzarol, T. (2003). A model of small business HR growth management. *International Journal of Entrepreneurial Behaviour & Research*, 9(1), 27–49.
- Olaison, L., & Sørensen, B. M. (2014). The abject of entrepreneurship: Failure, fiasco, fraud. *International Journal of Entrepreneurial Behaviour and Research*, 20(2), 193–211.
- Perren, L. (2000). Factors in the growth of micro-enterprises (Part 2): exploring the implications. *Journal of Small Business and Enterprise Development*, 7(1), 58–68.
- Ramananda, S., & Rahman, H. (2012). Traits of Successful Entrepreneurs. *International Journal of Scientific Research*, 2(11), 292–294.
- Robbins, S. P., & Judge, T. A. (2017). *Organizational Behavior*, Seventeenth Edition, Global Edition. In Pearson Education Limited (Seventh Ed). Pearson Education Limited.
- Schermerhorn & Bachrach. (2015). *Introduction to Management* (13th Edition). John Wiley & Sons.
- Taormina, R. J., & Sammi, K. M. L. (2007). Measuring Chinese entrepreneurial motivation: Personality and environmental influences. *International Journal of Entrepreneurial Behaviour & Research*, 13(4), 200–221.
- Yukl, G., & Gardner, W. (2020). *Leadership in Organizations* (Ninth Edit). Pearson Education, Inc.

## Waste reduction in the production process of Urea 1A plant of PT Petrokimia Gresik with applications of FMEA and root cause analysis

F. Wicaksono

Airlangga University

**ABSTRACT:** Urea 1A plant is one of the fertilizer plants owned by PT Petrokimia Gresik which began operating in 1994. This research discusses efforts to reduce waste in the production process of urea fertilizer by making an identification of waste, conducting root cause analysis, and making FMEA. Through data collection and processing, interviews with expert employees at Urea 1A plant, as well as comparing reference activities and actual activities, it was shown that waste occurs in energy and steam consumption. Reducing its waste means Urea 1A Plant will be able to compete with competitors in the world market of urea.

### 1 PRELIMINARY

Urea 1A plant began operating in 1994. Toyo Engineering Corporation (Toyo) of Japan provided the license process technology for the Urea 1A plant. Urea is one of PT Petrokimia Gresik's primary products, which is made from the reaction of ammonia ( $\text{NH}_3$ ) and carbon dioxide ( $\text{CO}_2$ ). In terms of waste, the Urea 1A plant has an issue. The plant's steam consumption is too high. We may notice the location of waste, the amount of wastes, the solution of the waste, and the recommended activities by performing this research. It can be an excellent solution to the problem of waste reduction, especially for steam consumption, provided numerous recommendations and modifications are made, such as replacing the rotor and installing a simple pipeline.

### 2 LITERATURE REVIEW

#### 2.1 FMEA (Failure Mode and Effect Analysis)

FMEA is a process for systematically mapping the system's failure modes, effects, and causes. In general, FMEA is carried out through a team consisting of several people with different scientific backgrounds (Peeters et al. 2018). The FMEA method starts by identifying each element, assembly, or process and writing down each potential failure, as well as the cause and consequence of each failure. The risk associated with each identification will be determined and assessed using the Risk Priority Number (RPN). The RPN is calculated by multiplying severity, occurrence, and detectability (Thomas Pyzdek & Paul Keller 2010). Severity (SEV) is a metric that indicates the severity of a situation in the event of a failure with the repercussions described in the Failure Effect. Occurrence (OCC) indicates how often the failure's cause is to occur. The Detectability (DET) indicator indicates how probable the existing system is to detect the cause.

Root cause analysis is a problem-solving method that entails looking into the source of a problem or discrepancy. In its most basic form, root cause analysis is a tool for determining what, how, and why an event occurred. One method to find the root cause of the problem is the 5-Whys approach (Perry & Mehlretter 2018). The 5-Whys method is a style of questioning that is used to investigate reasons.

Similar research has been conducted at PT Petrokimia Gresik for the aluminum fluoride plant (Hari Chairul Suhud 2019) and coal utility plant (Rosyid Ridlo 2020). Results showed that FMEA and the Root Cause Analysis method could help to reduce waste by more than IDR 60 million/day at PT Petrokimia Gresik.

### 3 DATA ANALYSIS AND RESULT

The 5-Whys tool was used to compile the cause analysis in this investigation. The researcher conducted direct observations and discussions with users while developing the 5-Whys table:

Table 1. 5-Why's analysis.

Waste	Why 1	Why 2	Why 3	Why 4	Why 5
19.86 kg/hr of condensate is discharged from stripper	Temperature bottom stripper very low	Less reaction in the tube side due to low temperature	Saturated steam in shell side condenses	There are inert gases contamination in steam system	There is syngas contamination from ammonia plant
Steam consumption of Urea 1A plant too high	Steam consumption of GT101 too high	Vacuum pressure in EA104 too high	Load of condensing steam too high	Performance of HP and LP stage GT101 decrease	
0.676 ton/hr of steam loss from steam trap due to leakage	76 of 125 steam traps are not well performed	76 of steam traps need to repair or replace			

After finding the root cause of the problem of waste at the Urea 1A plant, we need to perform failure mode and effect analysis (FMEA). To determine the value of occurrence, severity, and detection, a questionnaire was distributed to three employees with a minimum position of superintendent. The questionnaire was complemented by interviewing and brainstorming. The results are shown in Table 2.

Table 2. Value of SEV, OCC, DET, and RPN.

Waste	Root cause	SEV	OCC	DET	RPN
19.86 kg/hr of condensate is discharged from stripper	There is syngas contamination from ammonia plant	5.3333	8.3333	3.6667	163
Steam consumption of Urea 1A plant too high	Performance of HP and LP stage GT101 decrease	6.3333	9	3	171
0.676 ton/hr of steam loss from steam trap due to leakage	76 of steam traps need to repair or replace	1.6667	6.3333	2.3333	24.63
Total RPN					358.6
Average of RPN					119.5

We may then determine the critical risk based on the value of the risk priority number in Table 2. If the RPN value of a risk exceeds the critical value, it is classified as a critical risk. The average RPN value of all risks is used to get the crucial RPN value. Based on the critical value of the RPN above, two critical risks are obtained. The RPN value of the eight risks is greater than 119.51, which is considered a critical RPN number.

In addition, as shown in Table 3, an FMEA worksheet is created to identify the failure effect and recommended actions that can be implemented to reduce waste in the Urea 1A plant.

Table 3. FMEA worksheet.

Waste	Root Cause	Effect of Root Cause	Recommended Actions
19.86 kg/hr of condensate is discharged from stripper	There is syngas contamination from ammonia plant	Due to syngas composition is inert gas, heat transfer will be decreased and condensation will be occurred	-Repair the source of contamination at ammonia plant -Make a new recovery pipeline from drain stripper into steam drum -Make vent pipe at pipeline to discharge inert gas
Steam consumption of Urea 1A plant too high	Performance of HP and LP stage GT101 decrease	Effectiveness of rotor decrease and steam consumption will be increase	-Prepare new rotor turbine for LP and HP stage at next turn around

#### 4 CONCLUSIONS

From the data analysis above, we can see that

1. There are three activities that produced waste.
  - a. 19.86 kg/hr of condensate is discharged from stripper
  - b. Steam consumption of Urea 1A plant too high
  - c. 0.676 ton/hr of steam loss from steam trap due to leakage
2. Based on the analysis of the root causes of the problem with FMEA/Risk Priority Number assessment, there are two critical risk causal factors that should receive management attention, namely:
  - a. There is syngas contamination from ammonia plant
  - b. Performance of HP and LP stage GT101 decrease
3. There four recommended actions to reduce waste in Urea 1A plant:
  - a. Repair the source of contamination at ammonia plant
  - b. Make a new recovery pipeline from drain stripper into steam drum
  - c. Make vent pipe at pipeline to discharge inert gas
  - d. Prepare new rotor turbine for LP and HP stage at next turn around

#### REFERENCES

- Rosyid Ridlo (2020). Waste Reduction in the Production Process of Electric in Coal Utility Unit PT Petrokimia Gresik with Applications of Value Stream Mapping and FMEA. Surabaya: MMT ITS Surabaya
- Hari Chairul Suhud (2019). Rancangan Pengendalian Kualitas Produk Aluminium Fluorida (AlF<sub>3</sub>) dengan Metode Six Sigma dan Failure Mode Effect Analysis (FMEA) di PT. Petrokimia Gresik. Surabaya. Universitas Airlangga.
- Thomas Pyzdek & Paul Keller (2010). *The Six Sigma Handbook* 3rd Edition.

## Procurement quality improvement using Lean Six Sigma and MAFMA at PT Petrokimia Gresik

F.W. Al Hafiish

*Airlangga University, Surabaya, Indonesia*

**ABSTRACT:** Production and maintenance can run well if the process of planning and controlling spare part inventory is executed correctly. In fulfilling the inventory, the delay in supplying spare parts does not only cause operational and financial risks, but also triggers a legal risk. Based on the Pareto chart data taken from ERP SAP since 2016, the procurement cycle time of goods in PT. Petrokimia Gresik has been below the target and user expectations. The realization of the average cycle time for the procurement process (PR-PO) is 71 days, longer than the agreed standard cycle time of 42 days. Thus, this research was conducted to analyze the dominant causal factors using the Lean Six Sigma and MAFMA methods. The observation adopts the DMAIC stages by using a waste questionnaire distributed to related-function experts and root cause analysis (RCA). The finding of this research is used as a reference for improvement by managers.

### 1 INTRODUCTION

Indonesia is an agricultural country, where most of the population works as farmers amounting 35 million people (Indonesian Ministry of Agriculture 2020a). Central Statistics Agency (BPS) reported that Indonesia has an agricultural land area of 7.4 million hectares, resulting high demands of subsidized fertilizers reaching 13 million tons in 2020. Commodities grown in Indonesia are diverse that consist food, horticulture, and plantations subsectors (Indonesian Ministry of Agriculture 2020b). Thus, the type of fertilizer needed by farmers will also vary.

PT Petrokimia Gresik is the most versatile fertilizer company and a state-owned enterprises (BUMN) in the fertilizer industry in Indonesia, hence, the company is obliged to produce and distribute subsidies. The company's 2019 performance report shows that current sales of PT Petrokimia Gresik consisted of 88% of subsidized fertilizers and 12% of non-subsidized fertilizers. However, since 2019, the government has been reducing the allocation of subsidized fertilizers from 9.55 million tons to 8.87 million tons, and in 2020, it also dropped to 7.94 million tons. This decrease is a warning that the government might revoke fertilizer subsidies completely, so the companies must be ready to compete in the non-subsidized fertilizer market.

PT Petrokimia Gresik has a procurement unit tasked to provide spare parts and non-spare parts to support the production and marketing of subsidized and non-subsidized fertilizers. Thus, the company should prepare all organizational components to meet the demands of the changing business environment and maintain company's performance by analyzing the procurement management ability. Hence, minimizing the risks due to delays in supplying spare parts at PT Petrokimia Gresik is important. Consequently, the reliability, effectiveness, and speed of the procurement cycle time carried out by the planner/buyer team are crucial and highly demanded by the user as an internal customer.

Based on the historical transaction data in SAP ERP, the realization of the average cycle time of the fast-moving spare part procurement process takes 71 days, longer than the agreed standard cycle time of 42 days, which might hamper factory maintenance activities. So, this research seeks (1) to analyze the dominant causal factors affecting the speed and reliability of the procurement cycle time for the issuance of quality purchase orders (PO) and (2) to compile recommendations for improvement without compromising the compliance principle with applicable regulations.

## 2 LITERATURE REVIEW

The Lean Six Sigma method has been widely recognized as one of the systematic methods in solving problems using statistical approach techniques to improve business process performance. It is a combination of lean manufacturing and Six Sigma methods. Lean manufacturing is a method to simplify a system by reducing or eliminating existing waste (Suparno et al. 2021). Eliminating waste is done by grouping value-added activities and non-value-added activities. Additionally, according to Kholil et al. (2021), there are seven waste activities in lean manufacturing, namely: (1) waiting; (2) overproduction; (3) defect; (4) motion; (5) inventory; (6) over-processing; and (7) transportation. The Six Sigma method uses a five-stage problem-solving structure known as Define, Measure, Analyze, Improve, and Control (DMAIC). DMAIC stages can be used for a Lean Six Sigma approach, or by combining the stages in lean manufacturing and Six Sigma as a problem-solving method (Alexander et al. 2019). The use of Six Sigma can help companies to reduce cycle time, lower ordering costs, and produce better quality (Nascimento et al. 2020).

An overall description of the system and the value stream of a business process is needed to make it easier to identify the process to be improved. Value stream mapping (VSM) is known as big picture mapping used to describe a whole system with the value streams in it (Suparno et al. 2021). Procurement process activities can be more visualized using VSM by conducting current stream mapping to identify waste, cycle time, and reduce costs for the organization by reducing non-value-added activities and increasing value-added activities (Kumar et al. 2020). VSM analysis can be done with a value stream analysis tool (VALSAT) to reduce waste in the production process (Kholil et al. 2021). The root cause analysis (RCA) method is used to find the root cause of a problem, the technique is needed to identify, analyze, sort, and categorize the main causes of a problem (Sweis et al. 2019). In addition, measuring the dominant causal factors requires aspects to be considered, including analyzing risks by taking into account the cost of loss, frequency of occurrence, as well as ability to detect risk and severity; meaning that a multi attribute failure mode analysis (MAFMA) approach is required. MAFMA is a combination method of failure mode effect analysis (FMEA) and analytic hierarchy process (AHP) methods (Ekawati et al. 2019). MAFMA was developed from the FMEA method by adding economic factors, such as cost aspects, and analyzing the consequences of failure on costs (Santoso et al. 2018).

## 3 METHODOLOGY

This research employs a quantitative approach as it seeks to systematically identify problems with the phenomenon of the procurement process by collecting data measured using statistical methods. In this research, primary data and secondary data were used. Primary data were obtained from a waste questionnaire where the respondents are experts involved in the process of procuring goods, including buyers, users, planners, material analysts, and representatives from the management and other functions. Meanwhile, secondary data is the existing data available within the company (Sreejesh et al. 2013). Secondary data used in this study is the transaction data for PO issuance from the SAP system, such as the type of commodity goods, procurement value, procurement method, procurement cycle time, delivery time, and other relevant data required for analysis purposes. Based on these characteristics, this research aims to analyze the dominant causal factors and recommendations for improvement to increase the speed and reliability of the procurement cycle time for the issuance of quality PO using the Lean Six Sigma approach.

## 4 RESULT AND DISCUSSION

This research is structured according to the stages of DMAIC (Smętkowska & Mrugalska 2018). Starting with the Define stage, the research is focused on identifying problems using the Pareto chart approach. The Pareto principle proposes an 80/20 rule, which states that 80% of quality problems in a product are 20% caused by production failure (Saputra & Santoso 2021). The mapping of the



procurement business process was carried out with the VSM approach to obtain a clear picture of the information flow and physical flow of the observed company (Kumar et al. 2020). Afterward, the Measure phase begins by collecting initial information through waste questionnaires with the buyer team, users, management representatives, and other stakeholders as the respondents. From the results, the three types of waste that are the most dominant with the largest average score are as follows:

1. Waiting, waste that occurs because several purchase requisitions (PR) must wait to be processed by the buyer. The indication can be seen from the high number of work backlogs (PR-in process).
2. Overproduction, waste occurs due to the longer process steps or require more resources than they should be. The indication can be seen from the relatively low PO value ratio and the same input data is repeated in several types.
3. Defects, waste that occurs due to defects or failure of the procurement process caused by poor quality PR or PO. The indications can be seen from the high number of reworks in the form of PR replacements and PO revisions.

The Analyze phase is to analyze the dominant waste and look for the causes of the waste using VALSAT, RCA, and MAFMA. The VALSAT results showed that process activity mapping has the highest total weight. Process activity mapping will provide an overview of the physical flow and information, as well as the time required for each activity (Ma'ruf et al. 2021). Furthermore, the root of the problems that occur is analyzed using the RCA method. To find the root of this problem, according to Sweis et al. (2019), the Five-Why method is used as listed below:

1. Cause A: there is no standardization of owner estimate preparation form
2. Cause B: making PR for the same item repeatedly
3. Cause C: there is no standardized time for sending PR to buyers
4. Cause D: auction process, bid evaluation, and negotiation takes a long time because of the same and repeated materials
5. Cause E: a limited number of planners and buyer personnel
6. Cause F: material specifications that are still general and lacking in detail

After knowing the cause of the waste, the calculation and analysis were carried out using the MAFMA method by integrating four factors, namely the chance of failure (occurrence), detection, severity, and the expected cost. Incurred costs due to failure were calculated by qualitative pairwise comparison using the AHP approach (Santoso et al. 2018).

The MAFMA analysis results revealed a potential cause of failure (Cause D) with an alternative weight value and the highest cost, thus, it requires more attention. Next, the Improve phase was carried out to produce alternative solutions for the root problems. Prioritizing the solution by determining the future state needed to be achieved. Lastly, the Control phase was carried out through various activities: making control plans, measuring results, and managing changes.

## 5 CONCLUSION

In this study, feedback and solutions were obtained from the Senior Vice President of Procurement, Vice President of Planning and Receipt of Goods/Services, and Vice President of Procurement of Goods. Based on the VALSAT data, there are three highest waste rankings: waiting, overproduction, and defects. According to the results of the analysis and management's direction, recommendations for improvement were obtained to standardize the procedure for making pricelist contracts for fast-moving materials, which is the best-recommended solution and has a positive impact both in terms of cycle time and cost. This is in line with the savings in PR-PO cycle time. The pricelist contract also provides a special route for PT Petrokimia Gresik to provide a contract with the quantity of demanded goods adjusted to the needs and capacity of the warehouse and can be carried out in a faster time and at a fixed price according to the agreed period. After the pricelist contract is given to the supplier of goods, the procurement process will become simpler and standardized without

going through the auction process, bid evaluation, and repeated negotiations for the same material, resulting in the procurement of high-quality goods and time efficiency. A faster procurement process and less administrative work will result in cost savings for both government and goods providers, since cost-savings occur due to lower administrative costs (less time and manpower) and lower procurement costs.

## REFERENCES

- Alexander, P., Antony, J., & Rodgers, B. (2019). Lean Six Sigma for small- and medium-sized manufacturing enterprises: a systematic review. *International Journal of Quality and Reliability Management*, 36(3), 378–397. <https://doi.org/10.1108/IJQRM-03-2018-0074>
- Ekawati, R., Wahyuni, N., & Annisa, R. (2019). Identification the potential causes of stopline in electrolytic tinning line using multi attribute failure mode analysis. *Universal Journal of Electrical and Electronic Engineering*, 6(2), 1–6. <https://doi.org/10.13189/ujeee.2019.061401>
- Indonesian Ministry of Agriculture. (2020a). *Buku statistik ketenagakerjaan sektor pertanian Februari 2020*. <http://epublikasi.setjen.pertanian.go.id/arsip-perstatistikan/164-statistik/statistik-tenaga-kerja-pertanian/718-buku-statistik-ketenagakerjaan-sektor-pertanian-februari-2021>
- Indonesian Ministry of Agriculture. (2020b). *Data terkini [Latest data]*. <https://www.pertanian.go.id/home/?show=page&act=view&id=60>
- Kholil, M., Suparno, A., Hasan, S. B. H., & Rizki, M. (2021). Integration of DMAIC, VSM and Valsat to reduce waste in disk brake cutting process using DMAIC, VSM and Valsat method approach (case study: Company IM). *International Journal Of Scientific Advances*, 2(2). <https://doi.org/10.51542/ijscia.v2i2.19>
- Kumar, D. V., Mohan, G. M., & Mohanasundaram, K. M. (2020). Lean supply chain management in garment industry using value stream mapping. *International Journal of Services and Operations Management*, 37(1), 133–143. <https://doi.org/10.1504/IJSOM.2020.109440>
- Ma'ruf, Z., Marlyana, N., & Sugiono, A. (2021). Analisis penerapan lean manufacturing dengan metode Valsat untuk memaksimalkan produktivitas pada proses operasi crusher (studi kasus di PT Semen Gresik Pabrik Rembang). *Prosiding Seminar Nasional Konstelasi Ilmiah Mahasiswa UNISSULA 5 (KIMU 5)*. <http://jurnal.unissula.ac.id/index.php/kimueng/article/view/17882/6025>
- Nascimento, D. L. de M., Goncalvez Quelhas, O. L., Gusmão Caiado, R. G., Tortorella, G. L., Garza-Reyes, J. A., & Rocha-Lona, L. (2020). A lean six sigma framework for continuous and incremental improvement in the oil and gas sector. *International Journal of Lean Six Sigma*, 11(3), 577–595. <https://doi.org/10.1108/IJLSS-02-2019-0011>
- Santoso, I., Sa'adah, M., Sari, E. N., Prameswari, P. A. I., & Agustina, C. R. (2018). The integration of MAFMA and AHP methods for analysis and risk mitigation of pasteurized milk production. *Journal of Engineering and Technological Sciences*, 50(5), 671–684. <https://doi.org/10.5614/j.eng.technol.sci.2018.50.5.6>
- Saputra, R., & Santoso, D. T. (2021). Analisis kegagalan proses produksi plastik pada mesin cutting di PT. PKF dengan pendekatan failure mode and effect analysis dan diagram Pareto. *Barometer*, 6(1), 322–327. <https://doi.org/10.35261/barometer.v6i1.4516>
- Smętkowska, M., & Mrugalska, B. (2018). Using Six Sigma DMAIC to improve the quality of the production process: a case study. *Procedia – Social and Behavioral Sciences*, 238, 590–596. <https://doi.org/10.1016/j.sbspro.2018.04.039>
- Sreejesh, S., Mohapatra, S., & Anusree, M. R. (2013). *Business research methods: An applied orientation*. Springer.
- Suparno, A., Kholil, M., Sa'diyah, F., & H Hasan, S. Bin. (2021). Implementation of lean manufacturing and waste minimization to overcome delay in metering regulating system fabrication process using value stream mapping and VALSAT method approach (case study: Company YS). *International Journal of Advanced Technology in Mechanical, Mechatronics and Materials*, 2(1), 22–34. <https://doi.org/10.37869/ijatec.v2i1.41>
- Sweis, R., Moarefi, A., Amiri, M. H., Moarefi, S., & Saleh, R. (2019). Causes of delay in Iranian oil and gas projects: a root cause analysis. *International Journal of Energy Sector Management*, 13(3), 630–650. <https://doi.org/10.1108/IJESM-04-2018-0014>

# Analysis of market shaping framework as a strategy in response to the COVID-19 pandemic in Indonesia

F.E. Murtiasari & Y. Nasution

*Magister of Management, Universitas Indonesia, Salemba, Jakarta Pusat, Indonesia*

**ABSTRACT:** The resilience of business entities is tested during crisis since the market's high volatility forces entrepreneurs to implement the right business strategy. Furthermore, it requires adaptability and the application of shaping strategies. Market shaping is considered to be the right strategy in every critical period. Based on this framework, every business entity is required to quickly evaluate the value proposition offered and should be compared with rapidly and significantly changing market conditions. The perspective of the crisis is not tied to the scale of the obstacles or threats but as a turning point in opening up new opportunities. Collectively, each entity should succeed in market-shaping as a strategy designed to and enable growth in the market.

## 1 INTRODUCTION

The COVID-19 pandemic is a turning point for all entrepreneurs since global economic activities are affected. Several business activities stopped instantly, and the economy grew negatively in almost all countries. The “Black Swan” effect immediately causes many business failures for Micro, Small, and Medium Enterprises (MSMEs) and Multinational Companies. The pandemic has widened the gap in economic performance between countries and between sectors, causing long-term damage to jobs and living standards (OECD). It is estimated that more than \$90 trillion of the global economy has been used to treat the COVID-19 pandemic (The Congressional Research Service 2020), and half a million companies are at risk of collapse. The crisis had more impact than any other extraordinary event in this century.

“Never Let a Good Crisis Go To Waste” Niccolò Machiavelli, Winston Churchill.

The statement of Niccolò Machiavelli and Winston Churchill is wisdom that many believe, never to waste a crisis. The positive opinion is that the crisis can be utilized to determine and correct minor weaknesses in the organization or make a dramatic change to the company's business model. The crisis becomes a facilitator to improve the company's performance beyond expectations, especially in terms of the network and the market (Nenonen & Storbacka 2020). This study determines the struggles of businesses to survive in the face of crisis. The activity can inspire other industry players to continue running market mechanisms and realize people's welfare. The sustainability of a business entity depends on creating a competitive advantage over competitors.

The Indonesian MSME Association (Akumindo) stated explicitly that Indonesia Coffee Industry will survive while challenging economic conditions. This is because it relies on raw materials that can be supplied independently. The Global Agricultural Information Network shows that Indonesia's coffee consumption reached 370,000 tons in 2019. Meanwhile, the International Coffee Association (ICA) reported that coffee consumption can still significantly increase. This considered that Indonesia is the fourth largest coffee producing country globally, with total production reaching 742,000 tons per year (Ministry of Industry). Furthermore, Toffin reported in Indonesia Coffee Trend 2020 that there was an increase in the number of shops in Indonesia by 300% in four years from 2016 to 2019.

Therefore, this study focuses on the strategy of the coffee industry in dealing with the COVID-19 pandemic crisis related to the context of market-shaping. The phenomenon can be found in various terminologies of different marketing literature, such as market-driving strategies, proactive market

orientation, and market innovation. However, the ideas related to shaping, molding, or managing market evolution have been around without a systematic process due to limitations in empirical studies related to market-shaping (Nenonen et al. 2020). Therefore, this study provides empirical evidence to contribute widely to the development of the business and academic world.

## 2 LITERATURE REVIEW

### 2.1 *PESTEL & PORTER Analysis*

The industry is part of a larger ecosystem, influenced by various environmental factors that directly or indirectly drive changes in the industry. The industry's external environment includes political, economic, socio-cultural factors, technological developments, ecology, and applicable laws and regulations. Each factor contributes to the industry or company's decision-making process to maintain its business continuity. The PESTEL framework can be used to analyze the external environment of companies and industries that can impact the sustainability of their competitive advantage to mitigate threats and increase opportunities. Rothaermel stated that the PESTEL Model can scan, monitor, and evaluate essential factors from the external environment and trends that impact companies and industries appropriately.

Various factors need to be considered to implement the concerning principle. Therefore, internal analysis is carried out to determine its strength and industry, especially in realizing its profitability potential and knowing its strategic position in business competition. The analysis of the industry's internal factors is based on Porter's Five Forces model, which can assist the analysis process based on competitive advantage for industry sustainability: the threat of entry, power of suppliers, power of buyers, the threat of substitutes, and rivalry among existing firms.

### 2.2 *Market-Shaping*

Crisis gives a huge change on economic activities, hence it is considered the best time to shape the market. Some views suggest that markets are socially constructed arenas that function as complex, adaptive systems endogenously generated through the practices of embedded actors (Nenonen 2019).

Market-shaping involves a series of company activities to increase competitiveness and create new opportunities (Gavetti et al. 2017; Nenonen et al. 2019; Porter 1996). This strategy can increase company competitiveness and performance (Brege & Kindstorm 2020). Furthermore, it is crucial for achieving a competitive advantage (Humphreys & Carpenter 2018; Jaworski et al. 2020; Kindstrom et al. 2018). Therefore, the company should be able to direct change and manage the market as a channel to realize its goals in the formation process (Kjellberg et al. 2015; Kjellberg & Helgesson 2007; Mele et al. 2015).

The shaping of the market goes beyond incremental changes occurring through competition. Instead, it creates new opportunities that connect resources to various stakeholders to increase value creation. Value creation can occur when resources are realized in novel ways, and the key is the ability to create, access, deploy, combine, and exchange them. In conclusion, market-shaping engages companies in finding potential value that connects intra and inter stakeholder resources. Additionally, it changes market characteristics to enable the formation of new resources linkage and mobilizes relevant stakeholders to free up resources for new uses.

The core content as the leading actor of the value proposition of market-shaping is the optimization of integrated resources and their support systems. From these characteristics, it is expected that there will be changes in market elements of products and prices, customers and their consumption patterns, channels, supplier networks, representations, and also applicable norms. Furthermore, it triggers a complete change to the market system in the form of significant economic activity, market system growth, and logical changes in institutions (Nenonen & Storbacka 2019).

Based on an analysis of the implementation objectives of a market-shaping strategy related to competitive advantage, Flaig et al. (2021) described the concept of a two-dimensional framework

and four configurations of the results. Two dimensions refer to the ability of market actors to view and analyze the market and the strategic aims and objectives of the actors, which will influence the direction and methods used. In contrast, the four market configurations resulting from the market-shaping process are divided into two major groups: Offensive Market-Shaping Strategy (Market Widening and Market Disruption) and Defensive Market-Shaping Strategy (Market Maintenance and Market Reduction). Each strategy has a clear outcome and shows how the “plastic” characteristics of the market stand out. Furthermore, the outcomes are a configuration to stabilize the market, the results of the management, efforts to move from a stable condition, and the potential to lead the market to a state of disruption (Fligstein 1996; Kjellberg et al. 2015)

### 3 METHODS

This qualitative research is a case study involving farmers, processors, roasters, and coffee shops, with an experimental research design. The data were collected through literature and field studies, especially in-depth interviews by asking two questions using how and why. (1) How did your company’s industry manage before and during the pandemic, and how did you deal with these conditions? (2) Why did you choose these steps to deal with the pandemic? An atmosphere of interpersonal conversation is needed with an adaptive, open, and accessible process to get accurate results. Therefore, questions are not limited by specific requests for data to obtain the broadest possible data with an in-depth understanding.

### 4 RESULTS

Optimization of integrated resources and their supporting systems is the key to efficiency and effectiveness in running a business. As a result, various changes were conducted without reducing the value of the overall product delivered to the public. Meanwhile, product modification and development is the key to success. The coffee industry distribution chain model is successful because the integration between the two roles of efficiency and flexibility in development and innovation is not limited by the existing cost structure. In addition, the use of digital distribution channels has succeeded in eliminating the boundaries between separate spaces due to the implementation of lockdown policies.

Impressions can be more resonant and paradoxical with various features from the digital world, resulting in a more immersive experience for consumers.

The coffee industry players in the upstream sector implement a defensive market-shaping strategy that produces a market outcome in the form of market resilience which is characterized by: strengthening the quality of the production process, strengthening networks with the downstream sector, strengthening community/farmer groups, and empowering relations with the government.

The coffee industry players in the downstream sector implement offensive market-shaping strategies, which results in market outcomes in the form of market growth which are characterized by: standardization of product quality, creating value in the form of new experiences for consumers, developing digital market structures, and strengthening the role of associations with the transformation.

### 5 CONCLUSIONS

The industry’s sustainability depends on all the actors and the distribution chain, which are influenced by internal and external factors within the industry. Based on the study, it is established that the distribution chain model is the most appropriate model for the condition of the Indonesian coffee industry dominated by MSMEs. Therefore, business actors who carry out roles based on the distribution chain model can survive in the industry, especially during times of crisis. They must be sensitive to changes in the external and internal environment of the industry so that they

can immediately take appropriate steps to prevent potential problems and overcome problems that arise as a result of these changes.

Business actors must identify and understand their business work systems to integrate all of their resources as a support system in achieving competitive advantage. They must be moving forward in rhythm to be able to change the direction and order of the market to give rise to their competitive advantages. Optimization of resources will be amplified twice while the impact of potential risks that will be faced can be minimized because they are divided. Collaboration with other business actors is vital in dealing with the uncertainty of the significance of market fluctuations.

## REFERENCES

- Amankwah, J., Khan, Z., & Wood, G. (2020). COVID-19 and business failures: The paradoxes of experience, scale, and scope for theory and practice. *European Management Journal*.
- Badan Pusat Statistik. (2020). *bps.go.id*. Retrieved from [bps.go.id](https://www.bps.go.id/): <https://www.bps.go.id/>
- Congressional Research Service. (2021). Retrieved from <https://crsreports.congress.gov/resources/covid19/>
- Fabius, V., Kohli, S., Timelin, B., & Moulvad, S. (2020, July 30). *McKinsey*. Retrieved from McKinsey: <https://www.mckinsey.com/industries/retail/our-insights/how-covid-19-is-changing-consumer-behavior-now-and-forever>
- Flaig, A., Kindstorm, D., & Ottosson, M. (2021). Market-shaping strategies: A conceptual framework for generating market outcomes. *Industrial Marketing Management* 96, 254–266.
- Global Agricultural Information Network. (2019). *Coffee Semi-Annual*. GAIN.
- Hawa, J., Baker, J., Plewa, C. (2020). “Composing markets: A framework of intentionality in market-shaping”. *Journal of Business Research*.
- International Coffee Organization. (2020). *Coffee Development Report 2020*. London: ICO.
- Johne, A. (1999). Successful market innovation. *European Journal of Innovation Management*, 2(1), 6–11.
- Katila, R., & Chen, E. L. (2008). Effects of search timing on innovation: The value of not being in sync with rivals. *Administrative Science Quarterly*, 53(4), 593–625.
- Kjellberg, H., Azimont, F., & Reid, E. (2015). Market innovation processes: Balancing stability and change. *Industrial Marketing Management*, 44, 4–12.
- Nenonen, S., Storbacka, K., & Windahl, C. (2019). Capabilities for market-shaping: Triggering and facilitating increased value creation. *Journal of the Academy of Marketing Science*, 47(4), 617–639.
- Nenonen, S., Storbacka, K., Sklyar, A., Frow, P., & Payne, A. (2020). Value propositions as market-shaping devices: A qualitative comparative analysis. *Industrial Marketing Management*, 87, 276–290.
- Nenonen, Storbacka, 2020. Don’t adapt, shape! Use the crisis to shape your minimum viable system – And the wider market. *Industrial Marketing Management*, 88, 265–271.
- Patvardhan, S., & Ramachandran, J. (2020). Shaping the future: Strategy making as artificial evolution. *Organization Science*. <https://doi.org/10.1287/orsc.2019.1321>.
- Peters, L., Nenonen, S., Polese, F., Frow, P., & Payne, A. (2020). Viability mechanisms in market emergence: Prerequisites for market-shaping. *Journal of Business & Industrial Marketing*. <https://doi.org/10.1108/JBIM-04-2019-0139>.
- Storbacka, K. (2019). Actor engagement, value creation and market innovation. *Industrial Marketing Management*, 80, 4–10.
- Storbacka, K., & Nenonen, S. (2015). Learning with the market: Facilitating market innovation. *Industrial Marketing Management*, 44, 73–82.
- Windahl, C., Karpen, I. O., & Wright, M. R. (2020). Strategic design: Orchestrating and leveraging market-shaping capabilities. *Journal of Business & Industrial Marketing*. <https://doi.org/10.1108/JBIM-03-2019-0133>.

# Financial performance impact on capital structure: Study on construction companies and transportation infrastructure companies in ASEAN-5 countries 2011–2019

H.S.E. Saragih & E.P. Anas

*Master of Management, Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** This paper analyzes the capital structure of ASEAN-5 countries' construction and infrastructure transportation firms. The research derived results from a panel data model that allows interaction between the firm's leverage and another firm's characteristics. Our findings unveil that Profitability has a significant effect on leverage in Indonesia, Malaysia, Singapore, and the Philippines. Tangibility has no significant effect on leverage. Size has a significant effect on leverage in Malaysia, Thailand and the Philippines. Liquidity has no significant effect on leverage. Net profit margin has a significant effect on leverage in Malaysia and the Philippines. Total asset turnover has a significant effect on leverage in Indonesia. While for the ASEAN-5 scope in general, Leverage is significantly influenced by Profitability and Total Asset Turnover.

## 1 INTRODUCTION

One of the major challenges faced by ASEAN is that the infrastructures need to sustain the economic growth in the ASEAN region. In terms of infrastructure provision, the intensity of infrastructure development among ASEAN countries is different. The ASEAN Economic Community (AEC) determines the four pillars of the AEC: (i) the ASEAN region as a single market and production base; (ii) competitiveness in ASEAN; (iii) equal development; and (iv) integrated global economy. In order to support the connectivity, each ASEAN country leader in 2010 agreed on the Master Plan for ASEAN Connectivity (MPAC). This reflects that a well-connected ASEAN will contribute towards a stronger and more competitive ASEAN (resilience). Through the developed ASEAN connectivity, the production and distribution network in the ASEAN region will expand and economically integrated.

ASEAN-5 consists of five countries: Indonesia, Singapore, Malaysia, the Philippines, and Thailand. These ASEAN-5 countries help each other in developing the infrastructure in their countries and continue to cooperate in the construction and development of transportation infrastructure. Most construction companies have a high financial leverage in their capital structure. In this research, we identify and compare the capital structure of public listed construction companies and transportation infrastructure. This research analyzes the influence/effect of financial performance factors such as profitability, company size, tangibility, total asset turnover, net profit margin, and liquidity on the capital structure (leverage).

## 2 LITERATURE REVIEW

There are some previous studies discussing topics related to capital structure analysis that have been carried out with different data and results. Oktavianie (2012) showed that growth, profitability, and liquidity have a significant negative effect on DER (debt to equity ratio), while the asset structure and non-debt tax shield do not significantly affect the dependent variable. Febriminant (2012) in his research showed that ROA and size negatively affect the dependent variable, debt to total assets. NPM, sales and asset growth, is positively significant to the leverage in Serghiescu and

Vaidean's (2014) study in Romania. Determinant factors of the firm capital structure, profitability and liquidity, have a significantly negative influence on the debt ratio. Size and asset turnover significantly have a positive influence. Tangibility significantly has a negative influence on the debt ratio variable. Hando, Anshu, and Sharma Kapil (2014) observed determinants of capital structure in India. From the research, they concluded that profitability, growth, tangibility size, tax rate, and debt service ratio significantly influence the dependent variable, which is total debt on the capital structure.

### 3 METHODOLOGY

#### 3.1 Sample design

The research design describes the research problems consisting of the framework, organization, and configuration of the relationships between variables in the study and the investigation plan used to obtain empirical evidence of these relationships. This research used descriptive and exploratory research designs. In the research design, there were two classifications, namely explorative and conclusive. The purpose of exploratory research is to investigate a problem to provide a better understanding. Meanwhile, the descriptive research design is a research that provides a clear statement about the problem being researched, has a specific hypothesis, and provides all the necessary information in details.

This research employed the list of the construction and infrastructure transportation firms in 2011–2019 in Indonesia, Singapore, Thailand, the Philippines, and Malaysia. Leverage or debt to equity ratio were employed as the capital structure indicator. Profitability was measured by profitability to equity; firm size was measured by the natural logarithm of total asset; tangibility was measured by fixed asset to total asset; net profit margin was measured by net income to sales revenue; total asset turnover was measured by sales revenue to total asset. These variables were collected from Eikon Thomson Reuters data stream.

#### 3.2 Research Model

Referring to several reference journals, this research model is as illustrated below:

$$\text{Leverage} = \alpha + \beta_1 \text{Liquidity}_{it-1} + \beta_2 \text{Net Profit Margin}_{it-1} + \beta_3 \text{Tangibility}_{it-1} + \beta_4 \text{Size}_{it-1} + \beta_5 \text{Total Asset Turnover}_{it-1} + \beta_6 \text{Profitability}_{it-1} + \varepsilon_{it}$$

Remarks:

Leverage Ratio <sub>it</sub>	= Total Debt to Total Equity firm X in year t
Profitability <sub>it-1</sub>	= Net Income to Total Equity for firm X in year t – 1
Size <sub>it-1</sub>	= Logarithm of Total Assets for firm X in year t – 1
Tangibility <sub>it-1</sub>	= Non-Current Tangible Assets to Total Assets for firm X in year t – 1
Liquidity <sub>it</sub> –Liquidity <sub>it-1</sub>	= Current Asset to Current Liabilities for firm X in year t – 1
Total Assets Turnover <sub>it-1</sub>	= Total Sales to Total Assets for firm X in year t – 1
Net Profit Margin <sub>it-1</sub>	= Net Income to Sales Revenue for firm X in year t – 1

### 4 RESULTS

#### 4.1 Results

As we have all the secondary data, first we conducted a model selection procedure for all five models (Leverage for Indonesia, Singapore, Malaysia, Thailand and Philippines). The selection process also considered the validity of the regression after facing the autocorrelation and heteroscedasticity issue. As suggested by Schaffer and Stillman (2006), we tested for overidentifying to choose the model with robust-cluster standard error. The research results are provided below.



Table 1. Data panel regression results.

Country	Indonesia		Malaysia		Thailand		Filipina		Singapore		ASEAN-5	
Variable	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.
Liquidity	-3.051	0.516	0.7	0.223	0.525	0.886	0.0224	0.114	0.021	0.615	-0.011	0.651
NPM	0.065	0.887	0.438 **	0.031	2.49	0.634	-3.129 **	0.045	0.191	0.567	-0.0125	0.957
Profitability	-6.654 **	0.024	-1.54 **	0.012	0.153	0.319	3.494 **	0.038	0.724 ***	0	0.25 ***	0
Size	0.569	0.136	0.5141 **	0.027	1.09 **	0.021	1.368 ***	0	0.29	0.11	0.695	0.116
Tangibility	-3.621	0.453	-0.956	0.244	-7.01	0.172	-0.0517	0.658	-1.597	0.135	-1.14	0.215
TATO	3.742 ***	0.003	-0.105	0.658	-0.68	0.564	0.026	0.972	0.107	0.118	0.123 **	0.041
c	-8.007	0.48	-8.464	0.074	-17.01	0.077	-25.154	0	-4.36	0.213	-11.833	0.186
R-squared	42.02%		19.46%		12.64%		54.66%		20.74%	4.72%		
Model	Fixed Effect		Fixed Effect		Pooled Least Square		Fixed Effect		Pooled Least Square		Fixed Effect	

\*, \*\*, and \*\*\* denote Probability (Prob.) significance at 10%, 5%, and 1% levels respectively.

From Table 1, we found Profitability has a significant effect on leverage in Indonesia, Malaysia, Singapore, and the Philippines. The positive correlation indicates that the construction and infrastructure firms in Singapore and Philippines considering to use more external financing. And negative correlation between Profitability and leverage in Indonesia and Malaysia indicates that the firms in those two countries are considering to reduce external financing. Tangibility and Liquidity has no significant effect on leverage. Size has a significant effect on leverage in Malaysia, Thailand and the Philippines. From the size point of view, the positive relationship is the cause of increasing capability to endure more risk as the firm's getting bigger in size. Therefore, a firm with a bigger size tends to increase leverage. Total asset turnover (TATO) has a significant effect on leverage in Indonesia. The positive correlation of TATO indicates that the construction and infrastructure firms in Indonesia tend to generate their income from total assets. Firms with bigger size need bigger funding for their investment or capital expenditures by using external financing as another alternative, beside internal financing. Net profit margin has a significant effect on leverage in Malaysia and the Philippines. While for the ASEAN-5 scope in general, leverage is significantly influenced by Profitability and Total Asset Turnover.

## 5 CONCLUSION

As the conclusion to this paper, we found that in construction companies and transportation infrastructure in ASEAN-5 countries: Profitability has a significant effect on leverage in Indonesia, Malaysia, Singapore, and the Philippines. Tangibility has no significant effect on leverage. Size has a significant effect on leverage in Malaysia, Thailand and the Philippines. Liquidity has no significant effect on leverage. Net profit margin has a significant effect on leverage in Malaysia and the Philippines. Total asset turnover has a significant effect on leverage in Indonesia. While for the ASEAN-5 scope in general, leverage is significantly influenced by Profitability and Total Asset Turnover. The interaction effects indicate that firms are considering external factors and internal factors when deciding financial mix. The different effects may indicate a different managerial approach for both firm types. It may also affect the policymakers on how to regulate the different types of firms as they show a quite similar approach to capital structure decisions. For the further studies, researchers may conduct research on similar companies starting from 2015 (5 years difference), so that it can be used as a comparison to the capital structure. And for further studies researchers may conduct comparative research on the capital structure of construction companies and transportation infrastructure in countries such as the European Union, Asia Pacific, G-20, etc. as comparisons.

## REFERENCES

- Abor, Joshua; dan Nicholas Biekpe, (2008); "Corporate debt policy of small and medium enterprises in Ghana," JEL Classification.
- Beck, T., Demirgüç-Kunt, A. and Maksimovic, V. (2005), Financial and Legal Constraints to Firm Growth: Does Firm Size Matter?, *Journal of Finance* 60: 137–7.
- Belascu, Lucian, Herciu, Mihaela & Ogrea, Claudia (2011). A Du Pont Analysis of the 20 Most Profitable Companies in the World. International Conference on Business & Economics Research, Vol. 1 (2011). IACSIT Press Kuala Lumpur, Malaysia.
- Brealey, R.A., Myers, S.C., & Allen, F. (2011) *Principles of Corporate Finance*. 10th Edition, McGraw-Hill/Irwin, New York.
- Brigham, Eugene F., & dan M. Ehrhardt. (2005). *Financial Management: Theory and Practice*, Eleventh Edition, Mason, OH, Thomson, South-Western College Publishing.
- Cassar, Gavin dan Holmes, Scott, (2003), "Capital Structure and Financing of SMEs: Australian Evidence," *Accounting and Finance*, 43, (2003), 123–147.
- Damodaran, Aswath. (2006). *Damodaran on Valuation: Security Analysis for Investment and Corporate Finance*. New Jersey: Wiley & Johnson, Inc.
- Eldhose, K. V., & Kumar, S. (2019). Determinants of financial leverage: An empirical analysis of manufacturing companies in India. *Indian Journal of Finance*, 13(7), 41–49.
- Fazzari, Steven M., Hubbard, R. Glenn., & Petersen Bruce C. (1988). *Financing Constraint and Corporate Investment*: Brookings Papers on Economic Activity.
- Febrimanto, R.D. (2012). *Analisis Faktor-Faktor Yang Mempengaruhi Struktur Modal Pada Perusahaan yang Terdaftar di Bursa Efek Indonesia Periode 2001–2009*. Jakarta, FEUI.
- Ghozali, I., & Ratmono, D. (2017). *Analisis Multivariat dan Ekonometrika Teori, Konsep, dan Aplikasi dengan Eviews 10* (2nd ed.). Badan Penerbit - Undip.
- Handoo, Anshu, & Sharma, Kapil (2014). A Study on Determinants of Capital Structure in India, *IIMB Management Review*, 26, 170–182.
- Nachrowi, D., & Usman, H. (2006). *Pendekatan Populer & Praktis Ekonometrika untuk Analisis Ekonomi & Keuangan*. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.
- Naes, T., Isaksson, T., Fearn, T., Davies, T. (2002). *A User-Friendly Guide to Multivariate Calibration and Classification*. NIR Publications, Chichester, UK.
- Oktavianie, W. (2012). *Analisis Pengaruh Struktur Aset, Tingkat pertumbuhan Pasar, Tingkat Profitabilitas, Tingkat Likuiditas dan Non-Debt Tax Shield terhadap Struktur Modal*.
- Perusahaan: Studi Empiris Perusahaan Minyak dan Gas Bumi Periode 2007–2010*. Fakultas Ekonomi Universitas Indonesia.
- Regina, M. (2011). *Pendekatan Analisis Pengaruh Karakteristik Perusahaan Terhadap Struktur Modal Perusahaan (Studi Kasus: Perusahaan LQ45 Non-Keluangan Periode 2007–2010)*.
- Ross, S. A., Westerfield, R. W., Jaffe, J., & Jordan, Bradford D. (2016). *Corporate Finance* (11th ed.). McGraw-Hill.
- Sbeti, W.M., & Moosa, I., (2012), Firm-specific factors as determinants of capital structure in the absence of taxes. *Applied Financial Economics*, 22(3), 209–213.
- Schaffer, M., & Stillman, S. (2006). XTOVERID: Stata module to calculate tests of overidentifying restrictions after xtreg, xtvreg, xtvreg2, xthtaylor. *Statistical Software Components*.
- Serghiescu, L. & Vaidean, V.L. (2014). Determinants Factors of the Capital Structure of a Firm: An Empirical Analysis. *Procedia Economics and Finance* 15, 1447–1457.
- Titman, S., & Wessels, R. (1988), The determinants of capital structure choice. *The Journal of Finance*, 43(1), 1–19.
- Sugianto, Hendry. (2013). *Analisis Determinan Struktur Modal Berdasarkan Teori Pecking Order Pada Perusahaan Manufaktur Yang Terdaftar di BEI 2007–2011*. Tesis. Fakultas Ekonomi Universitas Indonesia.
- Thippanyana, P. (2014). Determinants of Capital Structure in Thailand. *Procedia – Social and Behavioral Sciences*, 143, 1074–1077.
- T. Beck, A. Demirguc-Kunt, & V. Maksimovic (2005). Financial and legal constraints to growth: does firm size matter. *J. Finance*, 60(1), 137–177.
- Vo, X. V. (2017). Determinants of capital structure in emerging markets: Evidence from Vietnam. *Research in International Business and Finance*, 40, 105–113.

# State ownership, soft-budget constraints, and cash holding: Empirical studies on state owned enterprises in Indonesia

H. Premono & D.N. Danarsari

*Faculty of Economics and Business, University of Indonesia*

**ABSTRACT:** This paper examines the determinant factor of corporate cash holding level and also focuses on the influence of state ownership and soft budget constraint on the cash holding of Indonesia State Owned Enterprises (SOE) from 2015 to 2019. This study's sample was non-financial firms of SOE and selected with the purposive sampling method. This study applied panel regression by combining data as cross-section and time series. The results show that net working capital, leverage, firm size, and capital expenditure significantly affect Indonesia's SOE cash holding. This paper also examines and quantifies the cash holding level of state ownership on SOE that dramatically decreases in line significantly with the percentage of state ownership. This relation can be attributable to the soft-budget constraints (SBC) inherent in state ownership. As majority shareholders, all SOE assist the government as development agents through various programs run by the government, a condition very conducive for the SBC effect. However, the study shows that the interaction between state ownership and bank loans are non-significantly correlated on cash holding level. Therefore, it shows that SOE were able to maintain their cash level without government intervention.

**Keywords:** Cash Holding; State Ownership; Soft Budget Constraints; Panel Regression.

## 1 INTRODUCTION

A company must be able to maintain the availability of cash to fulfill all operational needs, so it is necessary to consider factors that can affect cash availability, including state ownership, net working capital, leverage, firm size, capital expenditure, dividends, and GDP. These factors will influence the policies to be taken by management to keep the level of cash holding. Cash holding is defined as cash in hand or readily available, not only in the short term but also instrument investment in the long term. In fact, cash holding can also describe the company's financial management motives and support future business planning, including in relation to corporate governance and macroeconomic conditions as external factors (Ye 2018).

Figure 1 illustrates the mean cash holdings and state ownership over our sample in the SOE period 2015–2019. It shows that in general there are positive correlations between state ownership and cash holding. This study finds that the mean of state ownership of SOE dramatically decreased from 90.34% in 2015 to 84.76% in 2019 and was in line with the decline of cash holding from 18.78% in 2015 to 10.75% in 2019. The level of cash holding in China's public companies 2000–2012 showed that a 10% reduction in state ownership would increase the cash holding rate by 55 million RMB (Megginson et al. 2014). Furthermore, companies that are not controlled by the state have larger cash reserves than state-controlled companies in China. State ownership has a negative effect on the level of corporate cash holding on issued privatized non-financial firms in Indonesia 2009–2013.

The purpose of this study is to examine the determinant factor of corporate cash holding levels in Indonesia's SOE and also contributes to the literature on the determinants of corporate cash holding related on state-ownership, either to increase the limited research about the effect of state ownership on corporate cash holding level or validate some of the findings of previous research on

corporate cash holding. The high level of cash holding shows that the company's cash has not been optimized so that it can increase the opportunity cost of investment opportunities that can provide additional benefits. Otherwise, a low level of cash holding can hinder the realization of company goals and lose investment opportunities (Nhan & Ha 2016).

The second objective of this study is to find the interaction of state ownership and soft-budget constraint to cash holding in Indonesia's SOE. This paper examines the correlation between cash holding and soft budget constraint through the interaction of state ownership and bank loans. Kornai et al. (2003) divided the basic elements that can cause the soft budget constraint phenomenon, namely the existence of BC-organizations (budget constraint, in this study SOE) and S-organizations (supporting, in this case the government).



Figure 1. State ownership and cash holdings in Indonesia SOE, 2015–2019. Cash holdings is *cash ratio*, measured as cash and cash equivalents divided by total assets. *State ownership* is the percentage of total shares owned by the state and managed by Ministry of SOE.

## 2 DATA

The data set is constructed from reports of SOE Ministry of Indonesia including privatization and non-privatization SOE; financial data for all SOE in Indonesia consisted of balance sheets, income statement, and cash flow. The financial data of SOE provided for the period 2015–2019 was through using purposive sampling method on 102 companies, except financial and insurance SOE considering the limitation of regulations in its cash management.

Table 1. Descriptive statistics on the determinants of cash holding.

Variables	N	Min	Max	Mean	Std. Deviation
State Ownership	102	50.00%	100.00%	90.34%	0.1697
Cash Holding	510	0.0000	0.7690	0.1521	0.1337
NWC	510	−1.7185	0.7743	0.0575	0.2266
Leverage	510	0.0000	13.4484	0.7261	1.1792
Firm Size	510	0.0000	9.2000	6.2008	1.5261
Capex	510	−0.5842	0.9036	0.0449	0.1417
Dividend	510	0.0000	1.0000	0.4922	0.5004
Bank Loan	510	0.0000	0.9470	0.2549	0.2408
GDP	510	4.9000	5.2000	5.0400	0.1000

The dependent variable is cash holding measured as cash plus cash equivalents over total assets. State ownership is the fraction of shares owned by the state. NWC is current assets less cash and equivalent minus current liabilities. Leverage is the ratio of total debt and total assets. Firm size is

adjusted with log of total assets. Capex is capital expenditure, equal net investment in fixed assets. Dividend is dummy. Bank Loans is net proceeds from bank borrowing, scaled by total assets.

### 3 DETERMINANTS OF CASH HOLDING AND SOFT-BUDGET CONSTRAINTS

#### 3.1 Methodology

The quantitative statistical method used in this research is carried out by looking at the effect of the company's shareholder structure on the level of the company's cash holding. In addition, a regression analysis was conducted to determine the relationship between cash holding as the dependent variable and the independent variables in the form of growth opportunities, leverage, and firm size. Then, the population used in this research is non-finance companies of SOE. The panel regression analysis model used in this study considered independent variables of cash holding as follows:

$$\text{Cash}_{it} = \alpha + \beta_1 \text{NWC}_{it} + \beta_2 \text{LEVERAGE}_{it} + \beta_3 \text{SIZE}_{it} + \beta_4 \text{CAPEX}_{it} + \beta_5 \text{Dividends}_{it} + \beta_6 \text{GDP}_{it} + \varepsilon_{it}$$

The dependent variable,  $\text{Cash}_{it}$ , is cash holdings measured as cash plus cash equivalents and short-term investments in marketable securities (Megginson et al. 2014). However, there is concern that a company's reporting of short-term investments may be recorded outside of reported cash and cash equivalents (Amess et al. 2015). Based on the model,  $t$  is denoted at the end of year, meanwhile  $i$  describes the firm.

In the second part, a deeper analysis of cash holding on state ownership and the occurrence of the soft budget constraint phenomenon was carried out by looking at the interaction between state ownership and bank loans (Megginson et al. 2014) with the following research model:

$$\text{Cash}_{it} = \gamma \text{State}_{it} + \text{Bankloans}_{it} + \text{State}_{it} \times \text{Bankloans}_{it} + \beta_k X_{it} + \alpha_i + \lambda_t + \varepsilon_{it}$$

#### 3.2 Empirical results

The empirical results shows that regression analysis fulfills a few assumptions tests, that is normality, autocorrelation, multicollinearity, and heteroscedasticity. The regression result of variable state ownership shows significantly positive cash holding, which is relevant to Chen et al. (2017). Moreover NWC, leverage, firm size, and capex are negatively related to cash holding, which is relevant to Ozkan and Ozkan (2014), Kim et al. (2011), Das (2015), and Abdioglu (2016).

Table 2. Multiple regression analysis.

Variables	Model (1)		Model (2)	
	Koefisien	Prob.	Koefisien	Prob.
C	-2,573	0,000	-2,5351	0.0001
State	4,401	0,000***	4,3418	0.0000***
Bank Loan	—	—	-0,0605	0,7011
State x Bankloan	—	—	0,0495	0,7787
NWC	-0,057	0,077*	-0,0564	0,0796*
Leverage	-0,022	0,043**	-0,0217	0,0436**
Firm Size	-0,151	0,000***	-0,1483	0,0000***
Capex	-0,078	0,004***	-0,0787	0,0046***
Dividend	-0,020	0,216	-0,0202	0,2149
GDP	-0,053	0,172	-0,0518	0,1811

\*\*\*significant at level 1%; \*\*significant at level 5%; \*significant at level 10%

In addition, analysis of soft budget constraint through the interaction approach between state ownership and bank loans on cash holding show a non-significant positive correlation. This shows

that empirically, the soft budget constraint phenomenon does not occur during the SOE performance for the 2015–2019 period. However, these results are different from the results of research by Megginson et al. (2014), which shows that the soft budget constraint phenomenon occurs in Chinese state companies for the period 2000–2012 which is indicated by a significant positive correlation with the level of cash holding.

#### 4 CONCLUSIONS

The present study investigates the determinant factor of corporate cash holding levels in Indonesia SOE for the period of 2015–2019. The main results of the regression analysis suggest that state ownership has a significant positive association. On the other hand, another variable has a negative correlation to cash holdings. These findings are mostly in line with the *trade-off theory* and are less supported by the *free cash flow theory*. Furthermore, the interaction between state ownership and bank loans on cash holding shows that the soft budget constraint phenomenon does not occur during 2015–2019 so SOE were able to maintain their cash level without government intervention.

#### REFERENCES

- Abdiouglu, N. 2016. Managerial Ownership and Corporate Cash Holdings” Insights from Emerging Market. *Business and Economic Research Journal*, Vol. 7 No. 2, 29–41.
- Amess, K., Banerji, S., and Lampousis, A. 2015. Corporate Cash Holdings: Causes and Consequences. *International Review of Financial Analysis*, Vol. 42, 421–433.
- Borges, A.R.S. 2016. *Corporate Cash Holdings: An Empirical Investigation of Portuguese Companies*. Dissertation. Porto: University of Porto.
- Gill, A and Shah, C. 2012. Determinants of Corporate Cash Holdings: Evidence from Canada. *International Journal of Economics and Finance*, Vol. 4 No.1, 70–79.
- Kim, J., Kim, H., and Woods, D. 2011. Determinants of Corporate Cash-Holding Levels: An Empirical Examination of The Restaurant Industry. *International Journal of Hospitality Management*, Vol. 30, 568–574.
- Kornai, J., E. Maskin, and G. Roland. 2003. Understanding of The Soft Budget Constraint. *Journal of Economic Literature*, Vol. 41, No.4, 1095–136.
- Libby, R., Libby, P.A., and Hodge, F. 2017. *Financial Accounting*, 9th edition. New York: McGraw Hill.
- Megginson, W.L, Ullah, B., and Wei, Z. 2014. State Ownership, Soft-budget Constraints, and Cash Holdings: Evidence from China’s Privatized Firms. *Journal of Banking & Finance*, 48, 276–291, 8 Juli.
- Nhan, D.T.T. and Ha, P. 2016. Cash Holding, State Ownership and Firm Value: The Case of Vietnam. *International Journal of Economics and Financial Issues*, 6 (S6), 110–114, Mei.
- Ozkan, A., and Ozkan, N. 2004. Corporate Cash Holdings: An Empirical Investigation of UK Companies. *Journal of Banking & Finance*, Vol. 28, 2103–2134.
- Ye, Y. 2018. A Literature Review on The Cash Holding Issues. *Modern Economy*, 9, 1054–1064, 5 Juni.

# Implementation study of procurement plan consolidation to increase bargaining power of tenders and availability of long-term contracts: Case study on procurement of fabrication services at PT Petrokimia Gresik

H.T.U. Prasetya  
*Airlangga University*

Y.N. Pamungkas  
*PT Petrokimia Gresik*

**ABSTRACT:** To increase competitive advantage in the commercial market, PT Petrokimia Gresik implements a single-door procurement system. With the existence of the single-door procurement system, every request for procurement of goods and services can be managed and evaluated centrally to ensure that the procurement object is obtained at a reasonable and consistent price. The service procurement mechanism has a more significant impact than the goods procurement mechanism because there is a new work unit, the Service Planning Section, which is in charge of managing and evaluating service procurement plans. One of the service procurement objects with the most dominant value and number of transactions is fabrication services. The Service Planning Section consolidates the plan for fabrication services procurement required by the User to accumulate procurement quantum to increase the bargaining power of tender due to higher demand volumes. In addition, the User, which so far does not have a long-term contract in the field of fabrication services, can also be added as contract user because before the Service Planning Section, the making of a long-term contract was only proposed independently by the User, which in the organization's assignment did not have competency in service procurement strategy. The results of the research show that the price after negotiation decreased by 10.88% from the owner's estimate, there was no deviation in the rate of fabrication services in each user, the availability of fabrication service contracts increased by 75% based on the number of users that could be served and increased by 40% based on the number of vendors that can be provided.

**Keywords:** single-door procurement system, long-term contract.

## 1 INTRODUCTION

PT Petrokimia Gresik is faced with a company's fundamental challenge where PT Pupuk Indonesia as the parent organization directs the shift of the target market: from subsidies to commercial. This is an anticipatory step for the government's plan to transfer fertilizer subsidies from fertilizer producers to farmers directly. Several possibilities related to the method of distributing subsidies directly to farmers are still being discussed, but changing a company with around 2400 employees is not easy. The initial steps taken were to reduce fixed costs through streamlining the organizational structure and implementing procurement efficiency so that variable costs were obtained at a fair price, thus making PT Petrokimia Gresik more agile to enter the commercial market.

These two steps were implemented by creating a single-door procurement system in April 2016 with the process flow as shown in Figure 1. It is said that the single-door procurement system is because the procurement of goods and services at PT Petrokimia Gresik was initially carried out by more than ten work units via their respective operational objects, and then was changed to focus on only two categories of objects: the Goods Procurement Department and the Services

Procurement Department. To support the procurement planning function, the Planning and Receipt of Goods/Services (PPBJ) Department, which initially only had a Goods Planning Section, is currently supported by the Services Planning Section, which holds the function of managing and evaluating service procurement. With this new organizational structure, all requests for procurement of goods and services are only addressed to the PPBJ Department to facilitate the management of all procurement objects, including evaluating the needs and fair prices that must be paid to vendors after the goods arrive or the work is completed.

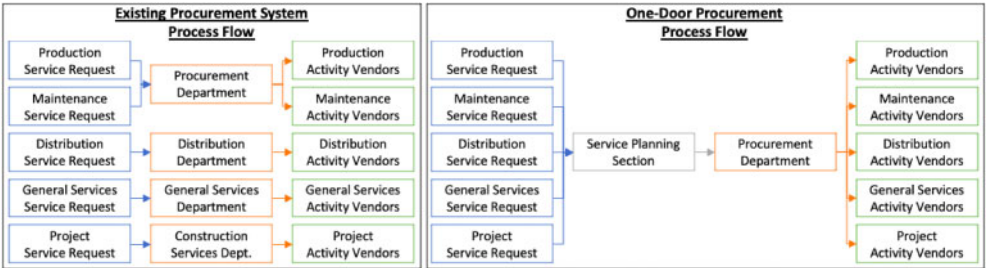


Figure 1. Changes of procurement system process flow at PT Petrokimia Gresik.

Some services are indeed needed by several users, but in the existing procurement system, each user can make its contract, making it possible to obtain a price list that is different from other users even for the same type of work. The existence of the Service Planning Section allows the consolidation of the service procurement plan so that the Services Procurement Department also does not need to make several long-term contracts to meet the needs of several users because they can be replaced with long-term multi-user and multi-winner contracts. Consolidation of procurement plans also makes the procurement quantum increase in one tender to provide higher bargaining power. Tenders that were initially carried out several times due to following service requests from each vendor can also be completed in one tender only.

## 2 EMPIRICAL FRAMEWORKS

### 2.1 Procurement consolidation in the approach of economies of scale of production

Within the framework of strategic cost management (SCM), it is said that managing costs effectively requires a fairly broad focus, called the value chain. PT Petrokimia Gresik has developed a sustainable competitive advantage based on cost and/or differentiation. The main focus of the low-cost strategy is to achieve lower costs than competitors so that if it is returned to its big goal, PT Petrokimia Gresik will have sufficient space to enter the commercial market. Cost leadership can be achieved through several approaches, namely economies of scale of production, experience curve effects, tight cost control, and cost minimization.

The economies of scale of production approach focuses on increasing volume in a procurement process. The existing procurement system carries out the procurement process one-by-one based on the number of users, but a single-door procurement system allows the need for service procurement to be consolidated by the Service Planning Section so that the accumulation of procurement needs is obtained and allows the creation of economies of scale of production from the procurement aspect.

The fabrication service at PT Petrokimia Gresik was chosen in this research because it is the object of service procurement that is quite dominant and its use is spread across several users. With these conditions, it is expected that the impact of the procurement consolidation can be felt significantly, so that the resulting analysis is more representative of the condition of PT Petrokimia Gresik in general.



## 2.2 Long-term contract for price certainty

In general, long-term contracts provide benefits for both the vendor and the end-user. Some of the benefits that can be obtained by PT Petrokimia Gresik from the use of long-term contracts include:

- Price certainty, because the price of services has been agreed during the contract period.
- Supply certainty, because it is binding on vendors in providing services according to the demand mechanism agreed in the contract.
- Administrative costs reduction, because they do not carry out the tender process or procurement administration repeatedly.
- A better relationship with vendors, because a long period gives vendors more opportunities to understand the detailed requirements desired by end-users.

The use of long-term contracts is regulated in the Minister of State-Owned Enterprises Regulation Number 8 of 2019 with a maximum period of 3 years. This is evidence that in general, long-term contracts can provide benefits for PT Petrokimia Gresik. However, the existing time limit indicates that the longer contract period does not necessarily guarantee that the end-user will receive the best price from the vendor. In making a price offer for its goods or services, the vendor calculates the accompanying risk factors. In other words, the longer the term of the contract, the greater the risk that accompanies it, so the greater the cost of risk that is set by the vendor in making the price offer. On this basis, this research tried to apply the creation of a long-term contract for fabrication services at PT Petrokimia Gresik with a period of 2 years as the middle value of the contract period in general (1 year) and the maximum limit permitted by national regulations to obtain a fair bid price from vendors.

## 3 IMPLEMENTATIONS

This fabrication service contract involved seven users, but only four of them had long-term contracts with several obtaining different price lists even for the same work. In addition, the validity period of the long-term contracts of the four users was also different, so it was necessary to consolidate time so that each existing long-term contract can expire at the same time before finally being compiled into one long-term contract that can serve multi-users.

Table 1. The division matrix of users and vendors.

Users X Vendors	Mtc-2	Mtc-3	Port	Fab	Mtc-1	GS	WI
Winner-1	V	V	V	V	–	–	V
Winner-2	V	V	V	–	V	V	–
Winner-3	V	V	V	–	V	–	–
Winner-4	V	V	V	–	–	V	–
Winner-5	V	V	–	V	V	–	–
Winner-6	V	–	V	V	–	–	–
Winner-7	V	v	–	–	–	–	V

On the other hand, with the increase in users, the long-term contracts to be formed must also be multi-winners or binding more than one vendor. This aims to ensure that there is no vendor overload during contract execution which can hamper factory operations. Based on the historical existing contracts, the minimum number of vendors serving one user was three vendors and it was agreed that for every 10 billion multiples, one more vendor would be added. However, users who had just joined the fabrication contract would only be served by two vendors as an anticipatory step for the commitment of service requests during the execution of the contract later. With the agreed conditions, a matrix, presented in Table 1, has been compiled by sorting the number of needs so that winner-1 obtains a procurement quota that is larger than the other winners.

4 RESULTS

4.1 Increasing bargaining power

After the procurement consolidation is carried out, the owner estimate for the procurement of fabrication services can be accumulated to Rp 139,480,899,300 with the following details:

- Mtc-2 (existing user) = Rp 58,500,224,000
- Mtc-3 (existing user) = Rp 38,056,232,000
- Port (existing user) = Rp 29,344,940,400
- Fab (existing user) = Rp 6,449,936,500
- Mtc-1 (new user) = Rp 5,998,732,000
- WI (new user) = Rp 588,679,400
- GS (new user) = Rp 542,155,000.

The large procurement value increased PT Petrokimia Gresik’s bargaining power during the tender so that the bid price after negotiation was obtained at Rp 124.298.956.800 or 10.88% lower than the owner estimate. Based on the key performance indicators of the Services Procurement Department, the target for reducing vendor bid prices after negotiations were 5% of the owner estimate, it can be concluded that procurement consolidation increases bargaining power by two times exceeding the specified target.

4.2 Scale-up availability of long-term contract

With the procurement consolidation, the availability of long-term contracts also increased as shown by the comparison between Table 2 and Table 3. Based on the number of users, the fabrication service contract before procurement consolidation can only serve four users and after that, it can serve seven users. In other words, contract availability increased by 75% based on the number of users that can be served. Meanwhile, based on the number of vendors that can serve, it increased from five vendors to seven vendors or increased by 40%. In addition, procurement consolidation has proven to be able to optimize the procurement process for fabrication services at PT Petrokimia Gresik from what previously had to be done five times to only one process.

Table 2. Long-term contract creation without procurement consolidation.

User	Σ Tender	Σ Contract
Mtc-2	1	5
Mtc-3	1	5
Port	1	5
Fab	2	3

Table 3. Long-term contract creation with procurement consolidation.

User	Σ Tender	Σ Contract
Mtc-1		
Mtc-2		
Mtc-3		
Port	1	7
Fab		
WI		
GS		

REFERENCES

Dubois, P., Lefouili, Y., & Straub, S. 2021. Pooled Procurement of Drugs in Low- and Middle-Income Countries. *European Economic Review*, vol. 132: 103655.

Carril, R. 2020. The Impact of Industry Consolidation on Government Procurement: Evidence from Department of Defense Contracting. *Journal of Public Economics*, vol. 184: 104–141.

Jeon, D.S. & Menicucci, D. 2018. On the Unprofitability of Buyer Group When Sellers Compete. *Games and Economic Behavior*, Elsevier, vol. 115(C): 265–288.

Ashenfelter, O., Hosken, D., & Weinberg, M. 2015. Efficiencies Brewed: Pricing and Consolidation in The US Beer Industry. *The RAND Journal of Economics*, vol 46/2: 328–361.

# Probolinggo port performance measurement using balanced scorecard

Hariyatin

*Department of Management, Faculty of Economics and Business, Airlangga University, Surabaya City, East Java, Indonesia*

**ABSTRACT:** PT Delta Artha Bahari Nusantara, Probolinggo Port operator, seeks to assess the port performance from several perspectives. These perspectives include financial, customer, internal business process, growth, and learning, which is also known as the balanced scorecard method. This study found that the financial perspective (ROE, ROA, TAT, NPM) is considered to be very good. Similarly customer growth from the customer perspective can be considered to be in the very good category. However, customer complaint is considered to be very bad. The SOR to YOR ration of the business perspective was found to be very low in terms of system utilization. On the other hand, learning and growth are found to be very good.

## 1 INTRODUCTION

The Probolinggo Port is one of the collecting ports in East Java Province. As per the Decree of the Minister of Transportation Number KP.432 of 2017 on the National Port Master Plan (2017), this port has been operated by PT Delta Artha Bahari Nusantara. As one of the links in the supply chain of the national system, the port has a crucial role in the operation of the national logistic system. Port performance has a significant impact on the overall performance of a country's logistic system. Thus, a greater focus should be placed on how the port performs in terms of providing excellent service quality.

To examine the performance indicators, financial measurement is not enough to show the actual corporate performance. The balanced scorecard translates the company's vision and mission to communicate and link strategic goals by performing multiple target measurements in line with the company's initiatives and resource allocation to measure the company's performance. PT Delta Artha Bahari Nusantara seeks to employ the balanced scorecard to measure its performance in an integrated manner from a financial, customer, internal business process, growth, and learning perspectives. This study aims at measuring the Probolinggo Port's performance from several integrated perspectives: financial, customer, internal business process, growth, and learning, and to provide suggestions for PT Delta Artha Bahari Nusantara based on the performance analysis results using the balanced scorecard method.

## 2 LITERATURE REVIEW

The balanced scorecard is a performance measurement concept introduced by Robert S. Kaplan and David P. Norton. The balanced scorecard, according to Kaplan and Norton (2007), is a measure complementing past financial measures by measuring it using operational measures such as customer satisfaction, internal business processes, and organizational innovations and achievements. The objectives and measures view the organizational performance from the four aforementioned perspectives, namely finance, internal business customers processes, learning, and growth, described as follows:

1. Financial perspective provides financial goals that an organization must achieve.
2. Customer perspective provides an overview of the target market segments and customers, along with requirements that the organization provides to achieve specific financial goals.

3. Internal business process perspective provides an overview of the required processes to serve customers and achieve specific financial goals.
4. Learning and growth perspectives are the driving force behind the personnel capabilities development, information system infrastructure, and working environment conditions required to achieve financial, customer, and internal business process goals.

According to Mulyadi (2001), the advantage of the balanced scorecard approach is its ability to create comprehensive, consistent, balanced, and measurable strategic plans.

### *2.1 Financial perspective performance measurement*

Performance measurements viewed from a financial perspective are limited to financial analysis using the indicators of return on equity (ROE), return on assets (ROA), total asset turnover (TAT), and net profit margin (NPM).

- a. Return on equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' equity.
- b. Return on assets (ROA) is a measure of profitability that measures a company's ability to generate profits using either the company's resources or assets. The ROA ratio is calculated by dividing net income after tax by the average total assets.
- c. Total asset turnover (TAT) is an activity ratio to measure a company's ability to generate sales from its total assets. The TAT ratio is calculated by dividing sales by total assets.
- d. Net profit margin (NPM) is a profitability measure comparing a company's net profit to sales.

### *2.2 Customer perspective performance measurement*

Performance measurement in terms of customer behavior is indicated by customer loyalty, customer complaints, and customer growth.

### *2.3 Performance measurement perspective of internal business process*

Performance measurement is viewed from the aspect of internal business processes. In this study, internal business process variables are measured based on ship flow, goods flow, and facility utilization (BOR, SOR, and YOR).

- a. Vessel Calls are the total number of cargo-related ship calls processed by the GT unit at each port during a particular period.
- b. Cargo Throughput is the number of goods or cargo (Ton/M3) that is unloaded or loaded through the pier during a specific period.
- c. Facility Utilization.
  - Berth occupancy ratio (BOR) is the ratio of the use of the pier, which is how dense the flow of ships moored and are loading and unloading at the pier. BOR is a comparison of the amount of time available for use with the amount of time ready for operation for each period. BOR is expressed in percent (%).
  - Shed occupancy ratio (SOR) is a comparison between the amount of and the availability of warehouse space.
  - Yard occupancy ratio (YOR) is a comparison between the amount of used storage space and the available stacking space.
- d. Productivity Performances of the port to be can be measured are loading and unloading productivity using T/G/H.

### *2.4 Learning and growth perspective performance measurement*

Learning and growth are measured based on employee productivity and retention rates.

- a. The level of employee productivity is used to determine employee productivity in a certain period. The higher the level of employee productivity, the higher the output produced by each employee.
- b. Employee retention rates are calculated using employee turnover calculations. The higher the employee retention rate, the higher the employee turnover percentage.

### 3 METHODOLOGY

The data used in this study are company operational and financial reports from 2018 to 2020. To achieve the goals, this study employs the following analytical techniques:

- a. Targeting each perspective.
- b. Measuring performance of different perspectives (financial, customer, internal business process, growth, and learning).

### 4 RESULT AND DISCUSSION

The objectives of the financial, customer, learning, and growth are determined by management. On the other hand, the goals of the internal business process on the growth of the ship and goods flow are determined by the company's management, while the operational utilization and productivity are determined by the Head of the Harbormaster Office and the Probolinggo Class Port Authority regarding Standards of Operational Services for the Probolinggo Port (2020). PT Delta Artha Bahari Nusantara performance as the Operator of the Probolinggo Port using the balanced scorecard is:

Perspective	2018	2019	2020	Average	Target	Scorecard
<b>1 Financial Perspective</b>						
ROE	5.3%	8.5%	6.4%	6.7%	4.4%	Very Good
ROA	4.7%	7.6%	4.9%	5.7%	3.5%	Very Good
TAT	22.2%	30.8%	32.3%	28.4%	27.4%	Very Good
NPM	21.1%	24.7%	15.1%	20.3%	12.8%	Very Good
<b>2 Customer Perspective</b>						
Customer Complain	10	9	7	9	5	Very Poor
Customer Growth	117.65%	24.32%	17.39%	53.12%	20.0%	Very Good
<b>3 Internal Business Process Perspective</b>						
Vessel throughput Growth (GT)	15.03%	34.75%	62.83%	37.54%	19.00%	Very Good
Cargo Troughput Growth (T/M3)	23.46%	20.35%	8.02%	17.28%	17.00%	Very Good
Facility Utilization :						
BOR	42.65%	34.98%	54.27%	43.97%	40.00%	Good
SOR	0.00%	0.01%	0.00%	0.00%	20.00%	Very Poor
YOR	0.39%	1.65%	0.41%	0.82%	20.00%	Very Poor
Loading Unloading Productivity (T/G/H) :						
a. General Cargo (GC)	21	37	65	41	15	Very Good
b. Bag Cargo (BC)	-	26	20	23	20	Very Good
c. Dry Bulk (DB)	79	55	38	57	80	Good
<b>4 Learning and Growth Perspective</b>						
Employee Productivity	363,868,758	434,613,536	390,829,418	396,437,237	400,000,000	Very Good
Employee Retention	94.20%	97.67%	97.37%	96.42%	85%	Very Good
Employee Competency Certification	2	2	2	2	2	Very Good

Figure 1. Performance measurement results using balanced scorecard.

PT Delta Artha Bahari Nusantara's proposed performance is measured using the balanced scorecard with the following perspective priority: financial (50%), internal business process (25%), customer (15%), and learning and growth (10%).

## 5 CONCLUSION

The results of PT Delta Artha Bahari Nusantara performance measurement using the balanced scorecard can be seen below:

- a. Financial Perspective: ROE = 6.7% (very good), ROA = 5.7% (very good), TAT = 28.4% (very good), and NPM = 20.3% (very good).
- b. Customer Perspective: customer complaints on average nine times (very poor) and customer growth = 53.12% (very good).
- c. Internal Business Process Perspective: vessel throughput growth = 35.54% (very good), cargo throughput growth = 17.28% (very good) and facility utilization: BOR = 43.97%, (very good), SOR = 0.00% (very poor), and YOR = 0.82% (very poor), productivity: cargo GC = 41 (very good), cargo BC = 23 (good), and cargo DB = 57 (good).
- d. Growth and Learning Perspective: employee productivity = 396.437,237 (very good), employee retention = 96.42% (very good), and employee competency certification = 2 (very good).

Customer complaint was found to be very poor. Thus, it would be necessary to improve the service quality to decrease customer complaints. Facilitation utilization (SOR and YOR) of the internal business process was also found to be very poor. In this case, marketing efforts are required to increase warehouses and stacking yard productivities and to prevent idle assets.

## REFERENCES

- Decision of the Head of the Probolinggo Class IV Port Authority and Harbormaster Office Number KP.004/39/13/KSOP.Pbl/2020 Concerning Probolinggo Port Operational Service Performance Standards, (2020).
- Kaplan, R. S., & Norton, D. P. (2007). Using the Balanced Scorecard. *Harvard Business Review*, 85(7/8).
- Decree of the Minister of Transportation Number KP.432 of 2017 Concerning the National Port Master Plan, (2017).
- Mulyadi. (2001). *Balanced Scorecard: Contemporary Management Tool for Multiplying Corporate Financial Performance*. Salemba Empat.

## Implications of burnout and work–life balance towards turnover intention mediated by job satisfaction at a startup company

J.P. Verdana & A. Satrya  
*Universitas Indonesia, Indonesia*

**ABSTRACT:** For the past few years, startup company growth in Indonesia has moved swiftly, especially for digital startups. A big portion of digital startups in Indonesia operate in the retail, financial, and software industries. However, these industries are also known to have high turnover rates worldwide. The goal of this research is to explore factors that influence turnover intention on the startup employees in Indonesia. This study used burnout, work–life balance, and job satisfaction variables to examine the turnover intention of the employees. This research used a quantitative approach, through a structured questionnaire survey with 5-point Likert scale. The sample consisted of 210 employees from various digital startup companies in Jakarta, Bogor, Tangerang, and Bekasi. The study found that there is negative and significant direct relation between burnout and job satisfaction, and between job satisfaction and turnover intention. The direct relation between work–life balance and job satisfaction was found to be positive and also significant. In addition, job satisfaction as a mediator for burnout and work–life balance toward turnover intention was also proven to have a significant role for the employees to leave their current startup. However, the study did not find a direct and significant relation between burnout and work–life balance toward turnover intention.

### 1 INTRODUCTION

A startup company is a company that is in the early stages of its operations where it is trying to enter existing markets or sometimes opening new markets with innovative products and services (Gurel & Sari, 2015). A company can be called a startup if at the initial stage of its development it has unknown demand and limited resources (Skala, 2019). The growth of startup companies in Indonesia has been increasing rapidly for the past few years. According to MIKTI (Indonesia Digital Creative Industry Community) (2018), before 2013, only 207 startup existed in Indonesia, but by the year of 2018, there were 604 new startups that had been established and almost half of them are digital startups. However, this massive growth also creates another problem, high turnover rates. Indonesian *E-commerce* Association (idEA) states that the turnover rate of digital industry employees reached 19.22% each year (Rahayu, 2018).

The importance of managing turnover intention became even more crucial to sustain business for startups with limited resources during the COVID-19 pandemic. The research of Widiyanto, et al. (2021) found that 21% of startups stopped operating and have declared bankruptcy since the pandemic started, most of them are digital startups. One of the reasons stated by startups' founders was the lack of human resources (Widiyanto, et al., 2021). During the pandemic, the Indonesian government enforced law that forced companies to apply the work-from-home system. High work intensity, workload, and erratic work hours caused by work-from-home led to high burnout rate and work–life imbalance (Xiaomeng, 2020). Burnout will hinder job satisfaction, while work–life balance will facilitate job satisfaction (Kanwar, Singh, & Kodwani (2009). Consequently, burnout, work–life balance, and job satisfaction have a significant role on predicting turnover intention (Federici & Skaalvik, 2012; Rode, Rehg, Near, & Underhill, 2007). Predicting turnover intention should be one of the main concerns for startups, not only during the COVID-19 pandemic, but also for preparing for the future of the company, since turnover intention could predict the real turnover rate (Zhang, et al., 2013).

This study aims to build a prediction model for turnover intention that involves burnout and work–life balance with job satisfaction as a mediator role, and to examine their relations.

## 2 LITERATURE REVIEW

Turnover intention could be defined as the last step before resigning from a job and the desire to find another job (Tett & Meyer, 1993). Harrison and Newman (2013) furthermore defined turnover intention as withdrawal behavior from work.

Burnout was popularized by Maslach, Jackson, and Leiter (1996) as a psychological syndrome from exhaustion, depersonalization, and lack of self-efficacy. Schaufeli and Enzman (1998) also defines burnout as a result of chronic stress from work. Although initially the burnout phenomenon was only studied in humanitarian services, nowadays its study also applies to various fields of work (Bianchi, Boffy, Hingray, Truchot, & Laurent, 2013).

Munn, Rocco, Bowman, and van Loo (2018) defined work–life balance as how an individual prioritizes the responsibility of work, family, and self. The work–life balance affects the mental health of an individual, because a harmony between work and personal life will lead to the capability to fulfil work and personal life commitments (Haar, Russo, Sune, & Ollier-Malaterre, 2014).

Stamps (1997) defines job satisfaction as a measure for a worker to like their job and their behavior toward the work itself, either positive or negative. Job satisfaction is a response of an individual toward work conditions which will affect their working result (Dawiss, Weiss, England, & Lofquist, 1967), which is why it becomes one of the important matters in managing employees.

## 3 METHODOLOGY

The respondents of this study were selected using convenience sampling from various digital startups in Jakarta, Bogor, Depok, Tangerang, and Bekasi area. The primary data were collected through an online self-administrative questionnaire. There are 210 respondents: 66 respondents from e-commerce startups, 58 respondents from fintech startups, 54 respondents from game startups, 11 respondents from media startups, 7 respondents from travel and accommodation startups, 5 respondents from education startups, both agency and agricultural technology startups have 2 respondents each, and health technology, marketing technology, machine learning, and automotive startups have 1 respondent each. The analytical data analysis of this study used Structural Equation Modeling (SEM) through SmartPLS software.

This study used Rode, Rehg, Near, and Underhill's (2007) questionnaire to measure the turnover intention. Burnout was measured through the Maslach Burnout Inventory General Survey (MBI-GS) questionnaire from Maslach, Jackson, and Leiter (1996). Work–life balance was measured through Haar, Russo, Sune, and Ollier-Malaterre (2014). Job satisfaction was measured through the Minnesota Satisfaction Questionnaire-short (MSQ-Short) from Pang and Lu (2018). All of the indicators are using the 5-point Likert scale as measurements.

Based on the literature review, previous research and research measurements, the hypotheses developed in this study are as follows:

- H1: Burnout negatively affects job satisfaction.
- H2: Work–life balance positively affects job satisfaction.
- H3: Burnout positively affects turnover intention.
- H4: Work–life balance negatively affects turnover intention.
- H5: Job satisfaction negatively affects turnover intention.
- H6: Burnout positively affects turnover intention with job satisfaction as mediator.
- H7: Work–life balance negatively affects turnover intention with job satisfaction as mediator.

## 4 RESULT

The result of confirmatory factor analysis shows that every indicator has a value above 0.5, which is the standard loading factor that is used in this study. AVE (*Average Variance Extracted*) of every



indicator also shows the value above 0.5. The result of cross loading validity shows the value between variables diagonally are higher than other variable values. These means all the variables used in this study are valid. The result of composite reliability and Cronbach alpha shows a value above 0.7, which is used as the standard of this study. It means the measurements are reliable.

The result of path coefficient and significance testing can be seen in Table 1.

Table 1. Path coefficient value and P-value.

Path	Original Sample (O)	T-statistics ( O/STDEV )	P-value
Burnout -> Job Satisfaction	-0.617	13.165	0.000
Work-life Balance -> Job Satisfaction	0.176	3.535	0.000
Burnout -> Turnover Intention	0.042	0.360	0.719
Work-life Balance -> Turnover Intention	-0.097	1.105	0.270
Job Satisfaction -> Turnover Intention	-0.325	3.286	0.001
Burnout -> Job Satisfaction -> Turnover Intention	0.201	2.974	0.003
Work-Life Balance -> Job Satisfaction -> Turnover Intention	-0.057	2.408	0.016

Table 1 shows that burnout negatively affects job satisfaction (path coefficient = -0.617), and is significant ( $p\text{-value} = 0.000 < 0.05$ ). Work-life balance positively affects job satisfaction (path coefficient = 0.176), and is significant ( $p\text{-value} = 0.000 < 0.05$ ). Even though burnout positively affects turnover intention (path coefficient = 0.042), it is not significant ( $p\text{-value} = 0.719 > 0.05$ ). The results show that work-life balance negatively affects turnover intention (path coefficient = -0.097), but it also is not significant ( $p\text{-value} = 0.270 > 0.05$ ). Job satisfaction was found to negatively affect turnover intention (path coefficient = -0.325), and is significant ( $p\text{-value} = 0.001 < 0.05$ ). Burnout mediated by job satisfaction positively affects turnover intention (path coefficient = 0.201), and is significant ( $p\text{-value} = 0.003 < 0.05$ ). Work-life balance mediated by job satisfaction negatively affects turnover intention (path coefficient = 0.057), and is significant ( $p\text{-value} = 0.016 < 0.05$ ).

From the explanation above, five hypotheses are accepted and two hypotheses are rejected. The accepted hypotheses are: H1 (Burnout negatively affects job satisfaction), H2 (Work-life balance positively affects job satisfaction), H5 (Job satisfaction negatively affects turnover intention), H6 (Burnout mediated by job satisfaction positively affects turnover intention), and H7 (Work-life balance mediated by job satisfaction negatively affects turnover intention). The rejected hypotheses are H3 (Burnout positively affects turnover intention), and H4 (work-life balance negatively affects turnover intention).

## 5 CONCLUSION

In conclusion, this study still found significant direct relations between burnout with job satisfaction, between work-life balance with job satisfaction, and between job satisfaction with turnover intention. However, this study found no significant direct relations between burnout with turnover intention, and between work-life balance with turnover intention. In spite of that, with job satisfaction as mediator role, the effect between both burnout with turnover intention and work-life balance with turnover intention is significant. This could be explained through the perspective of Indonesian employees.

From this study, it can be inferred that the digital startup employee in Indonesia does not consider burnout and work-life balance as important factors in working. It means, the employees tend to endure high burnout rate and work-life imbalance. On their own, burnout and work-life balance will not become a reason to leave their job, but when they are affiliated with low job satisfaction rate, they become a crucial reason to leave their current job. Therefore, it is suggested that while managing the turnover rates, a startup needs to prioritize their employees' job satisfaction since it

has significant role on reducing the effect of high burnout and work–life imbalance on the intention to quit of the employees.

## REFERENCES

- BEKRAF. (2018). *Mapping and database Startup Indonesia*. Jakarta: MIKTI (Indonesia Digital Creative Industry Community).
- Bianchi, R., Boffy, C., Hingray, C., Truchot, D., & Laurent, E. (2013). Comparative symptomatology of burnout and depression. *Journal of Health Psychology*, 18 (6), 782–787.
- Dawis, R., Weiss, D., England, G., & Lofquist, L. (1967). *Manual for The Minnesota Satisfaction Questionnaire*. Washington DC: Research Grant RD-1613-G from the Vocational Rehabilitation Administration, Department of Health, Education, and Welfare.
- Federici, R., & Skaalvik, E. (2012). Principal self-efficacy: Relations with burnout, job satisfaction and motivation to quit. *Social Psychology of Education*, 15 (3), 295–320.
- Gurel, B., & Sari, I. U. (2015). Strategic Planning for sustainability in a start-up company: a case study on human resources consulting firm. *European Journal of Sustainable Development*, 4 (2), 313–322.
- Haar, J. M., Russo, M., Sune, A., & Ollier-Malaterre, A. (2014). Outcomes of work-life balance on job satisfaction and mental health: a study across seven cultures. *Journal of Vocational Behaviour*, 12 (2), 361–373.
- Harrison, D., & Newman, D. (2013). Absence, lateness, turnover, and retirement: narrow and broad understandings of withdrawal and behavioral engagement. *Handbook of Psychology: Industrial & Organizational Psychology*, 12 (1), 262–291.
- Kanwar, Y. P., Singh, A. K., & Kodwani, A. D. (2009). Work-life balance and burnout as predictors of job satisfaction in the IT-ITES industry. *The Journal of Business Perspective*, 13 (2), 1–12.
- Maslach, C., Jackson, S. E., & Leiter, M. (1996). *Maslach Burnout Inventory*, 3rd Edition. California: University Of California at Berkeley.
- Munn, S. L., Rocco, T. S., Bowman, L., & van Loo, J. (2018). *The critical turn in human resources development*. Miami: The Palgrave International.
- Pang, K., & Lu, C.-H. (2018). Organizational motivation, employee job satisfaction and organizational performance: an empirical study of container shipping companies in Taiwan. *Maritime Business Review*, 3 (1), 36–52.
- Rahayu, I. S. (2018, November 08). *SDM di Industri Digital Doyan Gonta-Ganti Tempat Kerja*. Retrieved from iNews.id Finance: <https://www.inews.id/finance/bisnis/sdm-di-industri-digital-doyan-gonta-ganti-tempat-kerja>.
- Rode, J. C., Rehg, M. T., Near, J. P., & Underhill, J. R. (2007). The effect of work/family conflict on intention to quit: The mediating roles of job and life satisfaction. *Applied Research in Quality of Life*, 2 (2), 65–82.
- Schaufeli, W., & Enzmann, D. (1998). *The burnout companion to study and practice: A critical analysis*. Philadelphia: Taylor & Francis.
- Skala, A. (2019). Digital startups in transition economies: challenges for management, entrepreneurship and education (1st ed.). *Springer International Publishing, Palgrave Pivot*, 1–155.
- Stamps, P. (1997). *Nurse and Work Satisfaction: An Index for Measurement*. Chicago: Health Administration Press.
- Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organizational commitment, turnover intention and turnover: Path analyses based on meta-analytic findings. *Personnel Psychology*, 46 (3), 259–293.
- Widiyanto, A., Supomo, A. D. P., Rahmawati, D. & Prasetyo, D. (2021). Startups business opportunities analysis as an effort to arrange policy design for reducing the impact of Covid-19 pandemic on startups business. *International Conference on Sustainable Management and Innovation*, 1, 1–16.
- Xiaomeng, Z. (2020, July 11). *Psychological Resilience Before and After Work Resumption during COVID-19 Episode #4: Stress Management*. Retrieved from CKGSB.cn: <https://english.ckgsb.edu.cn/new/psychological-resilience-before-and-after-work-resumption-during-covid-19episode-4-stress-management/>
- Zhang, L.-f., You, L.-m., Liu, K., Zheng, J., Fang, J.-b., Lu, M.-m., ...Bu, X.-q. (2013). The association of Chinese hospital work environment with nurse burnout, job satisfaction, and intention to leave. *Nursing Outlook*, 62 (1), 128–133.

## Job demands–control and work–family conflict on public servant’s performance

J.H.A. Nainggolan & E.S. Pusparini

*Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** During pandemic COVID-19, working online distorts the distinction between job and personal life, which leads to conflict and decrease the concentration and performance of the employees. By mediating work–family conflict on employees of the Ministry of Finance Indonesia, this research examines several performance-related factors, such as job demands and control. The majority of previous research related the model of job demands–control and work–family conflict to the likelihood of turnover intention or job satisfaction. This research helps to understand the relationship between job demands–control, work–family conflict, and performance in public officials. 400 public servants from the Indonesia Ministry of Finance (MoF) filled online questionnaires and literature research. The Structural Equation Model was used to collect and test data, respectively. The results showed that work–family conflict was substantially connected with job demands and control. Therefore, the work–family conflict, to some extent, mediates the relationship between job demands and control towards performance.

### 1 INTRODUCTION

Working from home during the COVID-19 pandemic results in a significant change in the employees’ way of living since they need to adapt rapidly to new situations, such as the work environment, coworkers’ relationship, and communication between supervisors and subordinates as well as working methods. However, they have to modify the work rhythm to suit personal lives because of spouses and children at home. These changes influence employees’ mental health, thereby leading to a decrease in performance (Yunita & Saputra 2019). This affects the organization’s targets or goals, therefore, to increase the organization’s value and earn the trust of stakeholders, the management needs to provide means of managing this condition (Chamberlin et al. 2018). In government institutions, employee performance is crucial as they play an essential role in providing public services to the community.

According to Prasad and Vaidya (2020), the distraction from family at home and work problems affect employee performance. For example, daycare and schools were closed during the pandemic, as well as children’s education was redirected to online learning, which required parental involvement. Furthermore, this predicament mainly affects dual-career employees with school-aged children and toddlers. Working from home distorts the distinction between business and personal life as employees with small children encounter tension in their job and family life during the pandemic (Schieman et al. 2021). When this persists for an extended period of time, it might have a detrimental psychological influence on the employee’s personal life and career (Clercq et al. 2020). The other elements that affect employee performance are job demands and control. Job demands are work-related, causing employees stress and leading to role disputes. Meanwhile, Du et al. (2018) discovered a link between work control and performance. Therefore, employees with job control feel valued and recognized since they have the freedom to work.

Research on job demands–control and work–family conflict was primarily conducted in occupations with a high level of work stress, such as health care and hotel workers, as well as frequently linked to the intention to leave job satisfaction. Therefore, this research examined the effects of

work–family conflict and job demands–control on public servants’ performance. Also, the research question is how do job demands and control affect employee performance through work–family conflict. Meanwhile, research on public officials working from home during the COVID-19 pandemic is still limited. This offers our understanding of job demands–control, work–family conflict, and performance in Indonesian government institutions during the pandemic.

## 2 LITERATURE REVIEW

### 2.1 *Job Demands–Control and Work–Family Conflict*

The job demands–control approach is a theoretical framework for analyzing the relationship between job features, well-being, and mental health. Its paradigm, which highlights the significant components in analyzing job characteristics, was first developed by Karasek (1979). Meanwhile, job control refers to the degree of control employees have over their employment. The two aspects of job control are skill discretion and decision authority. In addition, the former refers to the ability to complete work using specific talents, while decision authority is the worker’s level of autonomy in determining how work is accomplished, such as labor methods and working hours (Karasek 1979). High job control reduces work–family conflict (Butler et al. 2005). Greenhaus and Beutell (1985) stated that work–family conflict emerges when a collision between the roles in the work and family domain collide. The higher the job demands, the more labor and working hours are required. Furthermore, the following theory was proposed based on past research results, including *H1*: Job demands have a positive and significant effect on work–family conflict. *H2*: Job control has a negative and significant effect on work–family conflict.

### 2.2 *Job Demands–Control and Performance*

High job demands, such as increased workload and long working hours, generate both physically and psychologically exhaustion, which reduces employees’ concentration at work and affects their health (Bakker & Verbeke 2004), and leading to a decrease in productivity (Veldhuizen et al. 2003). Furthermore, employees who are given the authority to handle their work and have competence in their field will feel motivated and respected. Thus, developing efficient ways of getting work completed with authority can improve their skills and knowledge (Bond & Flaxman 2006), and performance (Nagami et al. 2010). The following theory was proposed based on previous results, including *H3*. Job demands have a negative and significant effect on performance, *H4*: Job control has a positive and significant effect on performance.

### 2.3 *Work–family conflict and performance*

Employees struggling to balance work and family duties were dissatisfied as a result of the accumulation of some part of the work (Bruck et al. 2002). Work–family conflict has been extensively examined, and the results show that it is negatively associated with job satisfaction (Dorio et al. 2008). Job satisfaction influences employee attitudes towards work, affecting performance. The following hypothesis was formulated based on the results, including *H5*: Work–family conflict has a negative and significant effect on performance, *H5a*: Work–family conflict mediates the relationship between job demands and performance, *H5b*: Work–family conflict mediates the relationship between job control and performance.

## 3 RESEARCH METHOD

**Samples and procedures:** This single cross-sectional research was conducted on civil servants of the Ministry of Finance in Indonesia. The respondents’ criteria are employees who already have children under 12 and a minimum working period of 1 year in the current work. Furthermore, data was collected through online self-administered questionnaires using a google form.

All measures were rated on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Job demands and control were measured by 5 items using The Swedish Demand–Control–Support Questionnaire/DCSQ (Sanne et al. 2005). Also, work–family conflict was measured by 5 items from Netemeyer (1996), while the performance was measured by 16 items by Lynch (1999).

The collected data were processed first using SPSS version 26 to obtain descriptive statistics and demographic profiles of the sample. It was processed using Lisrel 8.8 with the stages of testing the validity and reliability through confirmatory factor analysis, the structural model test, and finally, the hypothesis test.

## 4 RESULTS AND DISCUSSION

This research use the  $SFL \geq 0,30$  which is significant when sample  $\geq 350$  (Hair 2019) and Fornell and Larcker (1981) stated that an item is reliable based on CR value  $> 0.7$ . In the validity and reliability test, there are 3 items from the job demands, 4 items from job control, 5 items from work–family conflict, and 13 items from the performance that are valid and reliable. The structural model test showed that the research fulfilled the requirements for a good fit, namely  $RMSEA = 0,060$ ,  $NNFRI = 0,97$ ,  $RFI = 0,94$ ,  $IFI = 0,97$ , and  $CN = 213,4$ . Furthermore, in hypothesis testing, it was discovered that H1, H2, H4, and H5 were supported. However, H3 was unexpectedly not supported, where job demands positively correlate with performance. Both job control and demand have a significant relationship with performance, hence, work–family conflict partially mediates the relationship between job demands and control with performance.

Table 1. Hypothesis test results.

Hypothesis	Path	Standard Estimates	t-Value	Result
1	JD->WFC	0.41	7.18	Support
2	JC->WFC	-0.13	-2.46	Support
3	JD->P	0.47	6.94	Not Supported
4	JC->P	0.23	4.22	Support
5	WFC->P	-0.29	-5.09	Support

Based on the results, it was discovered that job demands and control, as well as work–family conflict, have a significant relationship with employee performance. Job demands have an unexpected positive relationship with performance. This means challenging job demands improve employee performance (Laethem et al. 2019). Lu et al. (2016) discovered that it also has a positive relationship with performance when they are provided with high job security.

## 5 CONCLUSION AND SUGGESTIONS

Civil servants play an essential role in implementing government development programs and community service. Furthermore, the management needs to maintain the excellent performance of civil servants through job characteristics and consider the employee's work–life balance at work and family life, specifically while working from home. Therefore, organizations need to provide an efficient and effective work system for employees, adequate work facilities, and opportunities for employees to develop themselves. Also, since remote working will be applied in various jobs, including civil servants, it is essential for management to prepare policies that support these situations, and the important role of supervisors is needed.

## REFERENCES

- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management*, 43(1), 83–104.
- Bond, F. W., & Flaxman, P. E. (2006). The ability of psychological flexibility and job control to predict learning, job performance, and mental health. *Journal of Organizational Behavior Management*, 26, 113–130.
- Chamberlin, M., Newton, D. W., & LePine, J. A. (2018). A meta-analysis of empowerment and voice as transmitters of high-performance managerial practices to job performance. *Journal of Organizational Behavior*, 39(10), 1296–1313.
- De Clercq, D., Haq, I. U., & Butt, A. A. (2020). Experiencing conflict, feeling satisfied, being engaged: Limiting the detrimental effects of work-family conflict on job performance. *Journal of Management & Organization*, 1–18.
- Dorio, J. M., Bryant, R. H., & Allen, T. D. (2008). Work-related outcomes of the work-family interface: Why organizations should care. In K. Korabik, D. S. Lero, & D. L. Whitehead (Eds.), *Handbook of work-family integration* (pp. 157–176). Amsterdam, Netherlands: Elsevier.
- Du, Y., Zhang, L., & Tekleab, A. G. (2018). Job strains, job control, and POS on employee performance: An interactionist perspective. *Journal of Business Research*, 82, 213–219.
- Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics.
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of management review*, 10(1), 76–88.
- Hair, J.FI, Black, William C., Babin, Barry J., Anderson, Rolph E. (2019) *Multivariate Data Analysis*. UK: Cengage
- Karasek, R.A., 1979. Job demands, job decision latitude, and mental strain: implications for job redesign. *Admin. Sci. Q.* 24, 285–308.
- Lu, C. Q., Du, D. Y., Xu, X. M., & Zhang, R. F. (2017). Revisiting the relationship between job demands and job performance: The effects of job security and traditionality. *Journal of Occupational and Organizational Psychology*, 90(1), 28–50.
- Lynch, P.D., Eisenberger, R. and Armeli, S. (1999), “Perceived organisational support: inferior-versus superior performance by wary employees,” *Journal of Applied Psychology*, Vol. 84 No. 4, pp. 467–483.
- Nagami, M., Tsutsumi, A., Tsuchiya, M., & Morimoto, K. (2010). Job control and coworker support improve employee job performance. *Industrial health*, 1006240012–1006240012.
- Netemeyer, R.G., Boles, J.S., McMurrian, R., 1996. Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology* 81, 400–410.
- Prasad, K., & Vaidya, R. W. (2020). Association among Covid-19 parameters, occupational stress and employee performance: An empirical study with reference to Agricultural Research Sector in Hyderabad Metro. *Sustainable Humansphere*, 16(2), 235–253.
- Sanne, B., Torp, S., Mykletun, A., & Dahl, A. A. (2005). The Swedish Demand—Control—Support Questionnaire (DCSQ): Factor structure, item analyses, and internal consistency in a large population. *Scandinavian journal of public health*, 33(3), 166–174.
- Schieman, Scott., Badawy, Philip J., Milkie, Melissa A., & Bierman, Alex. Work-life conflict during the Covid-19 pandemic. *Socius: Sociological Research for a Dynamic World*. Vol 7:1–19.
- Veldhuizen, I. J. T., Gaillard, A. W. K., & De Vries, J. (2003). The influence of mental fatigue on facial EMG activity during a simulated workday. *Biological Psychology*, 63(1), 59–78.
- Yunita, P. I., and Saputra, I. G. N. W. H. (2019). The millennial generation in accepting mutations: impact on work stress and employee performance. *Int. J. Soc. Sci. Humanity. Stud.* 3, 102–114. doi: 10.29332/ijssh.v3n1.268

# The effects of gendered marketing on brand perception and purchase intention

K.F. Subroto & T.E. Balqiah

*Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** Blue and pink colors are gender cues commonly used as marketing strategies, but there are limited studies on using these cues to drive sales. Therefore, this study aims to determine the effect of using gender cues on consumers' brand perception with the aspect of competence and warmth as well as subsequent purchase intention concerning the stereotyping tendency. An experimental study was conducted to determine the effects of gender cues on consumers' perception and purchase intention. The results showed that gender cues activate different perceptions and affect purchase intention differently depending on the brand's level of competence. In particular, feminine cues increase purchase intention via perceived brand's warmth. Meanwhile, masculine cues increase purchase intention via perceived brand's competence among brands perceived as not yet established and competent.

## 1 INTRODUCTION

Marketing managers commonly use masculine and feminine cues represented by blue and pink to highlight brands' competence and warmth on packaging and logos (Hess & Melnyk 2016). This is because warmth and competence perceptions form the basis of individuals' stereotypical perceptions of males and females (Kervyn et al. 2012). Gender cues can likely serve as warmth and competence to influence brand perception (Hess & Melnyk 2016). This is because consumers perceive companies and brands on warmth (feminine) and competence (masculine) aspects (Aaker et al. 2012) in increasing the likelihood of purchase (Kervyn et al. 2012).

Gender cues are often used in gendered marketing to activate perceptions of warmth and competence (Banaji & Hardin 1996; Eagly & Mladinic 1994; Judd et al. 2005) to influence social judgments and perceptions. Sellers still frequently use gender stereotypes and strengthen social norms and beliefs about gendered roles and behaviors (Zotos & Grau 2016). However, these roles are unobservable from the outside and less effective in predicting consumers' shopping behaviors (Lieven & Hildebrand 2016). This study used consumers' gender stereotyping tendency to address this gap to see whether using gender cues will affect consumers differently.

## 2 LITERATURE REVIEW

### 2.1 *Gender cues on brand perception*

A study on gender stereotypes stated that warmth and competence are the main aspects of gender stereotypes. Warmth is stereotyped as a female characteristic, while competence is as a male characteristic (Fiske et al. 2002; Judd et al. 2005) (Aaker et al. 2010; 2012; Kervyn et al. 2012). Furthermore, positive evaluations of people or organizations are usually perceived as warmth and competence (Cuddy et al. 2008), where warmth is defined as the brand's intention and competence is defined as the ability of the brand (Kervyn et al. 2012).

## 2.2 Interaction between gender and competence cues

Hess and Melnyk (2016) stated that competence cues are important than warmth because product or service quality (related to competence) is considered to have value for everyone (Aaker et al. 2010). Therefore, consumers are more likely to evaluate warmth once the competence level is confirmed.

In low competence conditions, consumers will look for the cues (masculine) from the product. Therefore:

H1: In low competence cues, using masculine cues will increase purchase intention

H2: In low competence cues, the effect of masculine cues on purchase intention is mediated by the perceived competence of the brand

Consumers will look for warmth cues for further assessment in high-competence conditions. Therefore:

H3: In high competence cues, using feminine cues will increase purchase intention

H4: In high competence cues, the effect of feminine cues on purchase intention is mediated by the perceived warmth of the brand

## 2.3 Gender stereotyping tendency

Individuals usually have different opinions about gender stereotypes, and societies tend to accept crossovers in traditional gender roles (Pino et al. 2020). However, negative social feedback may be received by acting outside the gender role (Lee 2008). This reaction can depend on stereotyping, which is the tendency of individuals to form certain expectations about others according to their gender (Brough et al. 2016; Hughes & Seta 2003; Vassakis et al. 2018). Therefore:

H5: The effects of gender cues on brand perception will be more substantial on consumers with high gender stereotyping tendency

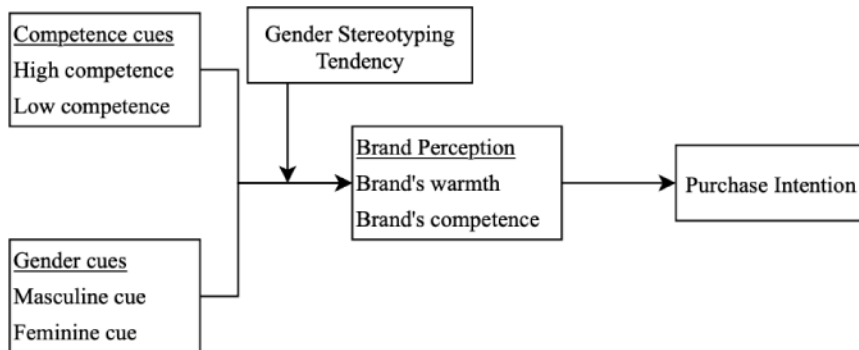


Figure 1. Conceptual framework.

## 3 STUDY METHOD

### 3.1 Study population

This study was conducted among Indonesians with various demographic and geographical backgrounds. Meanwhile, 204 people satisfied the prerequisites after passing the criteria and manipulation check.

### 3.2 Measures

The four measured variables use a 7-point Likert scale ranging from “strongly disagree” to “strongly agree.” The items used to measure warmth and competence of the brand are adapted from Aaker



et al. (2010) with three items each. Furthermore, the purchase intention has three items adapted from Putrevu & Lord (1994), and the gender stereotyping tendency was measured using three items adapted from Mills et al. (2012).

### 3.3 Statistical analysis

The hypotheses were tested using an experimental study that adapted a 2 (gender cues: masculine versus feminine) x 2 (competence cues: high versus low) between-subjects design. The obtained data were processed using two-way ANOVA and GLM, mediation analysis model 4, and moderation analysis model 1 by Hayes (2017).

## 4 RESULTS

Participants were randomly assigned to four different visual stimuli showing a fictitious advertisement for a unisex sweater with brand name and price constant across all conditions. Gender cues are manipulated using shapes (circular versus angular) and colors (pink versus blue). Meanwhile, the competence cues were manipulated using Perceived Brand Globalness (high) and Perceived Brand Localness (low).

The results of GLM showed a significant interaction between gender and competence cues on purchase intention ( $p < .001$ ). In low competence condition, participants assigned to masculine cues rated higher purchase intention compared to those assigned to feminine cues ( $M_{\text{masc\_cue}} = 4.98$ ,  $SE = 0.25$  vs  $M_{\text{fem\_cue}} = 4.43$ ,  $SE = 0.25$ ;  $p = 0.029$ ), thereby supporting H1. In high competence condition, participants assigned to feminine cues rated higher purchase intention compared to those assigned to masculine cues ( $M_{\text{fem\_cue}} = 5.18$ ,  $SE = 0.26$  vs  $M_{\text{masc\_cue}} = 4.54$ ,  $SE = 0.26$ ;  $p = 0.013$ ), thereby supporting H3.

The mediation analysis results showed that there is a positive and significant ( $p = 0.00$ ) effect of perception of competence on purchase intention in the low condition. The indirect effect of the masculine cue on purchase intention through the perception of competence was positive and significant ( $a \times b = 0.3472$ ), with a 95% confidence interval excluding zero (0.1503 – 0.5687), thereby supporting H2. There is a positive and significant ( $p = 0.00$ ) effect of the perception of warmth on purchase intention in high competence. The indirect effect of the feminine cue on purchase intention through the perception of warmth was positive and significant ( $a \times b = 0.1895$ ), with a 95% confidence interval excluding zero (0.0640 – 0.3362), thereby supporting H4.

The results from moderation analysis showed a significant positive effect of gender cues on brand perception ( $b = 0.35$ ,  $p = 0.00$ ) and a significant interaction effect between gender cues and stereotyping tendency ( $b = 0.13$ ,  $p = 0.01$ ). The conditional positive indirect effect of the gender cues on purchase intentions through the perceptions of warmth and competence were stronger for respondents who exhibited a higher stereotyping tendency ( $b = 0.52$ , 95% CI: 0.03, 0.23). Meanwhile, there was no effect of using gender cues on the brand perception of respondents who exhibited a low gender stereotyping tendency ( $p = 0.12$ ; 95% CI: -0.04, 0.36), thereby confirming H5.

## 5 CONCLUSIONS

The study proved that using gender cues may activate consumers' perceptions along the aspect of warmth and competence, specifically with high stereotyping tendencies. Feminine cues can activate warmth perception since this feature is stereotypically associated with women. In contrast, masculine cues can activate competence perception since this feature is stereotypically associated with men. This study also demonstrates the use of gender cues to influence consumers' purchase intention. Therefore, using gender cues is highly important, specifically for people with high stereotyping tendencies.

## REFERENCES

- Aaker, J. L., Garbinsky, E. N., & Vohs, K. D. (2012). Cultivating admiration in brands: Warmth, competence, and landing in the “golden quadrant.” *Journal of Consumer Psychology*, 22(2), 191–194. <https://doi.org/10.1016/j.jcps.2011.11.012>
- Aaker, J., Vohs, K. D., & Mogilner, C. (2010). Nonprofits are seen as warm and for-profits as competent: Firm stereotypes matter. *Journal of Consumer Research*, 37(2), 224–237. <https://doi.org/10.1086/651566>
- Banaji, M. R., & Hardin, C. D. (1996). Automatic stereotyping. *Psychological Science*, 7 (3), 136–141.
- Brough, A. R., Wilkie, J. E. B., Ma, J., Isaac, M. S., & Gal, D. (2016). Is eco-friendly unmanly? The green-feminine stereotype and its effect on sustainable consumption. *Journal of Consumer Research*, 43(4), 567–582.
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2008). Warmth and competence as universal dimensions of social perception: The stereotype content model and the BIAS map. *Advances in Experimental Social Psychology*, 40, 61–149.
- Eagly, A. H., & Mladinic, A. (1994). Are people prejudiced against women? Some answers from research on attitudes, gender stereotypes, and judgments of competence. *European Review of Social Psychology*, 5(1), 1–35.
- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82(6), 878.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.
- Hess, A. C., & Melnyk, V. (2016). Pink or blue? The impact of gender cues on brand perceptions. *European Journal of Marketing*, 50(9–10), 1550–1574. <https://doi.org/10.1108/EJM-11-2014-0723>
- Hughes, F. M., & Seta, C. E. (2003). Gender stereotypes: Children’s perceptions of future compensatory behavior following violations of gender roles. *Sex Roles*, 49(11), 685–691.
- Judd, C. M., James-Hawkins, L., Yzerbyt, V., & Kashima, Y. (2005). Fundamental dimensions of social judgment: understanding the relations between judgments of competence and warmth. *Journal of Personality and Social Psychology*, 89(6), 899.
- Kervyn, N., Fiske, S. T., & Malone, C. (2012). Brands as intentional agents framework: How perceived intentions and ability can map brand perception. *Journal of Consumer Psychology*, 22(2), 166–176. <https://doi.org/10.1016/j.jcps.2011.09.006>
- Lee, E.-J. (2008). Who uses stereotypes against saleswomen? Femininity as self-schema and biases in trust judgment. *ACR North American Advances*.
- Lieven, T., & Hildebrand, C. (2016). The impact of brand gender on brand equity: Findings from a large-scale cross-cultural study in ten countries. *International Marketing Review*, 33(2), 178–195. <https://doi.org/10.1108/IMR-08-2014-0276>
- Mills, M. J., Culbertson, S. S., Huffman, A. H., & Connell, A. R. (2012). Assessing gender biases: Development and initial validation of the gender role stereotypes scale. *Gender in Management*, 27(8), 520–540. <https://doi.org/10.1108/17542411211279715>
- Pino, G., Zhang, C. X., & Wang, Z. (2020). “She so hearty” Gender cues, stereotypes, and expectations of warmth in peer-to-peer accommodation services. *International Journal of Hospitality Management*, 91. <https://doi.org/10.1016/j.ijhm.2020.102650>
- Putrevu, S., & Lord, K. R. (1994). Comparative and noncomparative advertising: Attitudinal effects under cognitive and affective involvement conditions. *Journal of Advertising*, 23(2), 77–91.
- Vassakis, K., Sakka, G., & Lemonakis, C. (2018). Demystification of the glass ceiling phenomenon: Gender stereotyping and successful managers’ personality traits in Greece. *EuroMed Journal of Business*.
- Zotos, Y. C., & Grau, S. L. (2016). Gender stereotypes in advertising: Exploring new directions. In *International Journal of Advertising* (Vol. 35, Issue 5, pp. 759–760). NTC Publications Ltd. <https://doi.org/10.1080/02650487.2016.1203555>

# The impact of country-of-origin image and perceived brand prestige on perceived product quality, consumers' purchase intention of Korean skincare in Indonesia with consumer ethnocentrism as a moderating variable

K.M. Lee

*Magister of Management, Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** This research aims at investigating the impact of country of origin image on consumer's purchase intention and perceived brand prestige. with consumer ethnocentrism as the moderating variable. There were 303 Generation Y consumers who have used Korean facial skin care products in Indonesia involved in this research and participated through Google Form distributed via WhatsApp chat. Data were analyzed quantitatively using PLS-SEM. Results indicated that there was a positive impact of country of origin image on perceived brand prestige, perceived product quality and consumers' purchase intention. In addition, perceived product quality had significant effect on purchase intention, meanwhile perceived brand prestige had no significant effect on purchase intention, meaning that perceived brand prestige will increase when there is an improvement on the country of origin image.

## 1 INTRODUCTION

Indonesia is the world's 4th most populous nation and as the world's 10th largest economy in terms of purchasing power parity. It encourages cosmetic companies to consider Indonesia as a potential future market. The interest on facial skin care products has been increasing (Park & Kim 2021) due to the rising concerns about facial skin problems. Since consumers need more information in purchasing decisions, they are more likely to consider the country-of-origin image (Kim & Park 2010). Recently, Korean culture has gained enormous recognition in East and Southeast Asian countries, including Indonesia (Hong & Kim 2013), which is recognized as the "Korean Wave". Due to the COVID-19 pandemic, the imported cosmetic decreased by 29% compared to the previous year in 2020. However, imports of Korean cosmetic products increased by 18% and the Korean trend has affected Indonesian consumers' perception about beauty products. Therefore, this research aims at (1) investigating the perceptions of Indonesian cosmetics consumers towards Korean cosmetics, (2) examining the role of perceived brand prestige as the mediating variable affecting customers' purchase intention in Indonesian cosmetic market, and (3) investigating the ways that country of origin image affects purchase intention.

## 2 LITERATURE REVIEW

Country-of-origin image (COI) refers to the stereotypic perception that consumers have towards a country's brands (Bluemelhuber et al. 2007), constructed by product representation, national characteristics, economic and political background. Several studies on customer behavior suggested that COI plays a significant role in influencing customer purchasing decisions (Piron 2002). Accordingly, H1 is proposed:

H1 : COI positively and significantly associates with PI.

Perceived brand prestige is a subjective evaluation of the relatively high status of a product related to the brand (Monga & John 2010). Country of origin was found to affect the perceived product value, product quality, and prestige ratings by customers (Pharr 2005). Accordingly, H2 is proposed:

H2 : COI positively and significantly associates with PBP.

Furthermore, Vigneron and Johnson (1999) stated that prestigious brand seekers consider the high status and image as evidence of prestige. In addition, Consumers from emerging markets particularly tend to buy prestigious brands to display their wealth or power (sometimes both) and strengthen the consumers' self-concept (Vuong & Khanh Giao 2020). Accordingly, H3 is proposed:

H3 : PBP positively and significantly associates with PI.

According to Keller (2008), perceived quality refers to the consumer's perception of the overall product/service quality. Consumers demanded the quality, and they are ready to pay more for a better product. Accordingly, H4 is proposed:

H4 : COI positively and significantly associates with PPQ.

Knight and Calantone, (2000) insisted that A favorable COI has a positive influence on consumers' perceptions of product quality and purchasing decision making. Accordingly, H5 is proposed:

H5 : PPQ positively and significantly associates with PI.

Consumer Ethnocentrism (CE) involves unfavorable attitudes on imported products and favorable cognitive, emotional, and normative attitudes of consumers on domestic products. COO is strongly associated with certain cognitive factors such as identity, autobiographical memory, pride, and emotion; and the association tends to exist between the concept of CE and COO as a whole. In relation to perceived brand prestige (PBP) and perceived brand quality (PBQ), ethnocentric consumers are more likely to purchase domestic products even though the quality and prestige are not as good as the imported ones (Vuong & Khanh Giao 2020). Accordingly, the following hypotheses are proposed:

H6a : CE moderates the effect of COI on PI. The positive relationship between COI and PI will be weaker for consumers with high degree of CE values.

H6b : CE moderates the effect of COI on PBP. The positive relationship between COI and PBP will be weaker for consumers with high degree of CE values.

H6c : CE moderates the effect of COI on PBQ. The positive relationship between COI and PBQ will be weaker for consumers with high degree of CE values.

### 3 RESEARCH METHODS

This research employed partial least square-structural equation modeling (PLS-SEM) via the Smart-PLS program to test a model hypothesis. Overall, the evidence of a good model fit, collinearity assessment, reliability, convergent validity, and discriminant validity indicated that the measurement model was appropriate for testing the structural model. The population of this research was Indonesian consumers in the age range of 20–41 years old, in which the samples were selected using nonprobability sampling technique-convenience sampling. The data were collected through questionnaire and distributed to Indonesian consumers via WhatsApp chat in a snowball manner. There were 342 responses obtained but there were only 303 responses qualified for the data analysis process since 39 responses were not eligible due to different age range.

### 4 FINDINGS AND DISCUSSION

#### 4.1 *Hypotheses verification*

For hypothesis 1, the results indicated that country of origin image had a positive effect on purchase intention with a standard coefficient of 0.172 and p value of 0.001, it was concluded that the country of origin image variable had a significant effect on purchase intention; in meaning that H1 is supported. This is in line with Seo et al. (2015) stating that country of origin image had a positive effect on purchase intention.

For hypothesis 2, the results indicated that country of origin image had a positive effect on perceived brand prestige with a standard coefficient of 0.427 and p value of .000, it means that the

variable country of origin image had a significant effect on perceived brand prestige; in meaning that H2 is supported. It is in line with Volles et al. (2016) stating that country of origin image had a positive and significant effect on perceived brand prestige.

For hypothesis 3, the results indicated that perceived brand prestige had a negative effect on purchase intention with a standard coefficient of -0.088 and p value of 0.158, it is concluded that the perceived brand prestige variable did not have a significant effect on purchase intention; in meaning that the H3 is not supported. It is not in accordance with Vuong and Khanh Giao (2020) stating that perceived brand prestige had a positive effect on purchase intention.

For hypothesis 4, the results indicated that country of origin image had a positive effect on perceived product quality with a standard coefficient of 0.422 and a p value of .000, it is concluded that the variable country of origin image had a significant effect on perceived product quality; in meaning that H4 is supported. It is in accordance with Abdelkader (2015) stating that country of origin image had a positive and significant effect on perceived product quality.

For hypothesis 5, the results indicated that perceived product quality had a positive effect on purchase intention with a standard coefficient of 0.393 and a p value of .000, it is concluded that the perceived product quality variable had a significant effect on purchase intentions; in meaning that H5 is supported. It is in line with Seo and Lee (2014) stating that that perceived product quality had a positive and significant effect on purchase intention.

Hypothesis 6a implied that country of origin image and purchase intention relationship is moderated by consumer ethnocentrism, so the positive relationship will be weaker for consumers holding high CE values. The interaction effects country of origin image \* consumer ethnocentrism (moderating effect 1) was not significant on purchase intention with path coefficients of -0.21 and the t-test depicted an insignificant relationship ( $p = 0.192 > 0.05$ ); in meaning H6a is not supported. It is not contrary with Li et al. (2012) stating that consumer ethnocentrism is linked to product assessment and purchase intention of non-local products.

Hypothesis 6b postulated that the relationship between country of origin image and perceived brand prestige is moderated by consumer ethnocentrism so that the positive relationship will be weaker for consumers who hold high CE values. The interaction effects of country of origin image \* consumer ethnocentrism (moderating effect 2) was significant on perceived brand prestige with path coefficients of -0.228 and the t-test depicted a significant relationship ( $p = 0.006 < .05$ ); in meaning that H6b is supported. It is in accordance with Carter (2020) stating that consumer ethnocentrism tends to have a negative effect on consumer perceptions of foreign products, causing a reduction in consumer desire to buy the products.

Hypothesis 6c postulated that the relationship between country of origin image and perceived product quality is moderated by consumer ethnocentrism so that the positive relationship will be weaker for consumers who hold high CE values. The interaction effects of country of origin image \* consumer ethnocentrism (moderating effect 3) was significant on perceived product quality with path coefficients of -0.281 and the t-test depicted a significant relationship ( $p = 0.001 < .05$ ); in meaning H<sub>6c</sub> is supported. It is in consistent with Sharma et al. (1995) stating that consumer ethnocentrism can lead to consumers overestimating the attributes and overall quality of their domestic products, but underestimating the foreign products quality.

#### 4.2 Managerial implication

The findings reveal two major managerial implications. First, this research found that country of origin image has a positive and significant relationship on consumers' purchase intention in Indonesia. It suggests that Korean facial skincare brand companies can increase consumers' perceptions of country of origin image to strengthen their purchase intention using various brand marketing strategies such as sponsorship. Second, the country of origin image has a positive and significant relationship with the perceived production quality of consumers in Indonesia. Hence, marketers should realize that the country of origin image is a signal to strengthen their purchase intention. Thus, brand managers should create a high-quality brand perception by emphasizing Korea's country of origin image and actively promoting Korean-made products.

## 5 CONCLUSION

The findings of the research have found correlations between variables. First, country of origin image positively and significantly associates with purchase intention and perceived brand prestige. Second, perceived brand prestige has no positive and significant relationship with purchase intention. Therefore, the marketers are recommended to enhance customer's perception and of country of origin image to strengthen purchase intention by creating high-quality brand perception. Future studies are recommended to increase the sample size and use simple random sampling, conduct a cross-cultural analysis, and expand the sample to compare results and see whether the same factors will be proved significantly.

## REFERENCES

- Abdelkader, O. A. (2015). Influences of Country-Of-Origin on Perceived Quality & Value According to Saudi Consumers of Vehicles. *International Journal of Marketing Studies*, 7(1), 93–105. <https://doi.org/10.5539/ijms.v7n1p93>
- Bluemelhuber, C., Carter, L. L., & Lambe, C. J. (2007). Extending the view of brand alliance effects: An integrative examination of the role of country of origin. *International Marketing Review*, 24(4), 427–443. <https://doi.org/10.1108/02651330710761008>
- Grunert, K. G., Bredahl, L., & Brunsø, K. (2004). Consumer perception of meat quality and implications for product development in the meat sector - A review. *Meat Science*, 66(2), 259–272. [https://doi.org/10.1016/S0309-1740\(03\)00130-X](https://doi.org/10.1016/S0309-1740(03)00130-X)
- Hong, S., & Kim, C. H. (2013). Surfing the Korean wave: A postcolonial critique of the mythologized middlebrow consumer culture in Asia. *Qualitative Market Research: An International Journal*, 16(1), 53–75. <https://doi.org/10.1108/13522751311289767>
- Kim, S. H., & Park, H. Jung. (2010). Effects of country of manufacture and country of brand on consumers' quality perception and purchase intention. *Korean Marketing Association*, 25(2), 19–44.
- Li, X., Yang, J., Wang, X., & Lei, D. (2012). The impact of country-of-origin image, consumer ethnocentrism and animosity on purchase intention. *Journal of Software*, 7(10), 2263–2268. <https://doi.org/10.4304/jsw.7.10.2263-2268>
- Monga, A. B., & John, D. R. (2010). What makes brands elastic? The influence of brand concept and styles of thinking on brand extension evaluation. *Journal of Marketing*, 74(3), 80–92. <https://doi.org/10.1509/jmkg.74.3.80>
- Park, Y.-M., & Kim, H.-Y. (2021). A study on changes in women's makeup interest and use patterns before and after the outbreak of COVID-19. *Asian Journal of Beauty and Cosmetology*, 19(1), 129–138. <https://doi.org/10.20402/ajbc.2021.0141>
- Seo, K., & Lee, A. J. (2014). The effect of consumer perception and purchasing intention on menu description of country-of-origin in family restaurant. *Journal of Foodservice Management Society of Korea*, 17(6), 97–118.
- Seo, Y. M., Li, S., & Kim, E. K. (2015). The influence of national image, brand image and country-of-origin image on purchase attitude and purchase intention-Focus on the purchase of korean cosmetics. *Journal of Digital Convergence*, 69–79. <https://www.koreascience.or.kr/article/JAKO201521159149152.page>
- Sharma, S., Shimp, T. A., & Jeongshin, S. (1995). Consumer ethnocentrism: A test of antecedents and moderators. *Journal of the Academy of Marketing Science*, 23(1), 26–37. <https://doi.org/10.1177/0092070395231004>
- Vigneron, F., & Johnson, L. W. (1999). A review and a conceptual framework of prestige-seeking consumer behavior. *Academy of Marketing Science Review*, 3(1), 1–17. <http://www.amsreview.org/articles/vigneron01-1999.pdf>
- Volles, B. K., Hoeltgebaum, M., Halissa Odebrecht da Silva, & Ghannad, N. (2016). The COO effect in the international brand positioning strategy. *Future Studies Research Journal*, 200–226. <https://doi.org/10.24023/FutureJournal/2175-5825/2016.v8i3.279>
- Vuong, B. N., & Giao, H. N. K. (2020). The impact of perceived brand globalness on consumers' purchase intention and the moderating role of consumer ethnocentrism: An evidence from Vietnam. *Journal of International Consumer Marketing*, 32(1), 47–68. <https://doi.org/10.1080/08961530.2019.1619115>

## Reducing the quality deviation in Phosphogypsum pH by creating advance washing system in PT Petrokimia Gresik (Phosphoric acid plant)

L.H. Purbawinasta  
*Airlangga University, Indonesia*

J. Farisi  
*PT Petrokimia Gresik, Indonesia*

**ABSTRACT:** Phosphoric acid plant products have quality problems where the most quality deviations are caused by the quality of phosphogypsum not meeting the standards. This results in the high cost of gypsum management and great loss due to the waste or unusable products, thus, the plan-do-check-act (PDCA) method is used in search of a solution. The solution that has been successfully carried out is, firstly, by modifying the phosphogypsum washing system, specifically on its filter by substituting low pH water to a higher pH for washing, which generally functions to dissolve the water-soluble  $P_2O_5$  on phosphogypsum. The second solution is by adding a distribution box to the hydration section, which functions to circulate some of the slurries to lengthen the slurry residence time in hydration so that the pH of phosphogypsum is better. This innovation is effective in reducing the low pH deviation of phosphogypsum products so that the potential of phosphogypsum can be maximized in the future while following government regulations.

### 1 PRELIMINARY

In operational activities, phosphoric acid plant products have quality problems, where quality deviations are the main problem, especially in the amount of phosphogypsum pH value, which is less than 2 (low). Hence, the utilization of gypsum cannot be maximized due to government regulations No. 101 of 2014, concerning hazardous and toxic-waste management. Another problem is the high cost of phosphogypsum management since phosphogypsum cannot be processed in the purification unit or marketed to consumers. With several solutions and modifications, such as improving the phosphogypsum washing system on the second filter and adding a distribution box to the discharge pump, the problem of phosphogypsum quality can be solved so that phosphogypsum can be utilized as optimal as possible (El Afifi et al., 2009).

### 2 CAUSE IDENTIFICATION

Based on the results of the field review, it is found that several causes of deviations in the pH quality of phosphogypsum occurred an average of 31 times. The causes include (1) the low pressure of cleaning sprayer; (2) water washing using a second filter; (3) less slurry residence time in the hydration tank; (4) stirring in the reactor is uneven; and (5) multiple density tests performed by operators at a time. These causes are then classified into several factors.

The first factor is tools. The causes are the low pressure of washing water, clogged washing sprayer, scaling, and the sprayer cleaning intensity. In other words, the presence of scaling clogs the washing sprayer and causes the low pressure of washing water. The second factor is methods.

The cause is the lack of slurry residence time in the hydration tank which results in imperfect crystals in the slurry, causing the cake to break when filtered and leading to uneven washing. In other words, washing water uses a second filtrate so that it has a low pH which causes washing to be less than optimal, uneven washing, the cake cracks when filtered, the formation of crystals in the slurry is imperfect, and the residence time of the slurry solution in the hydration tank is low (D'eon et al. 2009) (Mabury, n.d.).

The third factor is materials. The cause is the very high amount of free acid slurry cake resulting from the first filtration, sulfuric acid does not react perfectly with phosphate rock, and the stirring in the reactor is not evenly distributed (Pérez-López et al. 2007). The fourth factor is humans. Operators are prone to fatigue and maybe less careful in conducting tests. After studying these factors using the total risk analysis, the largest and most dominant total risk is washing water using a second filtrate, with a risk value of 52.08%, followed by the residence time of the slurry solution in the hydration tank, with a risk value of 33.33 %.

### 3 PLANNING AND IMPLEMENTING IMPROVEMENTS

Improvements are planned using the 5W2H (what, why, where, when, who, how, and how much) method. This method aims to find answers that are fitting for each question. “What” is a question to find out the source of the problem, “why” is a question that serves to find out the purpose or reason of the improvement itself, “where” aims to find out where the problem occurs, “when” is used to find out the time to carry out the improvement/repair, “who” is used to find out who is responsible for the repair, “how” is a question aiming to find solutions for the identified problems, and “how much” is to calculate how much is the costs incurred. Below is the action plan issued for the proposed improvement.

Table 1. Plan.

How	Where, When, Who	How Much
<b>Engineering</b>		
Designing the advanced washing system	Candal Office Maintenance III, August 1–5, 2019, Ryan Yanuar	Rp0
Planning/designing the foundation for treated water tank	Candal Office Maintenance III, August 1–5, 2019, Ryan Yanuar	Rp0
Planning/designing the distribution box	Candal Office Maintenance III, August 1–5, 2019, Ryan Yanuar	Rp0
<b>Procurement</b>		
Preparing HDPE materials	Non-Metal Workshop, August 7–12, 2019, Wahyudi	Rp27,728,376
Preparing materials for the treated water tank foundation	Civil Workshop, August 6–9, 2019, Lutfi Kurniawan	Rp52,023,000
Prepare materials for the distribution box (SS904L)	Welding Workshop, August 7–12, 2019, Lutfi Kurniawan	Rp121,739,264
<b>Construction</b>		
Line fabrication	Non-Metal Workshop, August 26–September 2, 2019, Wahyudi	Rp0
Distribution box fabrication	Welding Workshop, August 7–12, 2019, Lutfi Kurniawan	Rp0
Treated water tank fabrication	Phosphate Plant Area, 13–20 September 2019, Rifqi Mahmudi	Rp0
Installation fabrication result and compliance	Phosphate Plant Area, 23–30 September 2019, Rifqi Mahmudi	Rp0



Table 2. Do – Resources planning.

Competencies of Manpower	Material Requirement	Equipment Requirement
Chemical engineer	HDPE pipe	Litmus paper
Mechanical engineer	SS904L plat	Digital pH meter
Process technologies	HDPE stub end	Microscope
Environmental pollution control	Flange carbon steel	
Product knowledge	Bolt stainless steel	
Process control	6-inch block valve	
Engineering design Technician		
How	Where, When, Who	Detailed Activities
<b>Engineering</b>		
Designing the advance washing system	Candal Office Maintenance III, August 1–5, 2019, Ryan Yanuar	Making a new design for the phosphoric acid plant washing system
Planning/designing the foundation for treated water tank	Candal Office Maintenance III, August 1–5, 2019, Ryan Yanuar	Making a design for the treated water tank
Planning/designing the distribution box	Candal Office Maintenance III, August 1–5, 2019, Ryan Yanuar	Making a design for a distribution box
<b>Procurement</b>		
Preparing HDPE materials	Non-Metal Workshop, August 7–12, 2019, Wahyudi	Preparing the equipment for line washing
Preparing materials for the treated water tank foundation	Civil Workshop, August 6–9, 2019, Lutfi Kurniawan	Cleaning area and preparing the equipment for the tank foundation and supporting materials
Preparing materials for the distribution box (SS904L)	Welding Workshop, August 7–12, 2019, Lutfi Kurniawan	Preparing the equipment for the distribution box and the fabrication equipment
<b>Construction</b>		
Line fabrication	Non-Metal Workshop, August 26-September 2, 2019, Wahyudi	Connecting line washing fabrication
Distribution box fabrication	Welding Workshop August 7-12, Lutfi Kurniawan	Assembling SS904L materials for the distribution box
Treated Water Tank Fabrication	Factory Area Phosphate, September 13-20, 2019, Rifqi Mahmudi	Casting the treated water tank area
Installation fabrication result and compliance	Factory Area Phosphate, September 23-30, 2019, Rifqi Mahmudi	Performing the installation of fabricated results and making adjustments so that everything can run according to plan

#### 4 RESULTS

After the improvements, the phosphogypsum products of PT Petrokimia Gresik are free from the alarming hazardous and toxic-waste labels because it has met the requirements for waste management per the government regulation No. 101 of 2014. The utilization of phosphogypsum can be maximized because it is now allowed to be directly sold to the market as basic material.

From several comparisons using a Pareto chart, it is revealed that the hydration and second filtration problem occurrences are decreased from 57 times to 20.67 times or equal to 63.73%, after the repair. Additionally, a comparison of the root causes of the problem before and after the

repairs shows a reduction in terms of number, where the causes of the problem are decreased from a total of 48 to 11 or equal to 77.08%.

A comparison is also made by observing the QCDESMPCR (quality, cost, delivery, environment, safety, morale, productivity, health, and reliability). After improvements are made, the pH quality value of the product is now per safety standards. In terms of cost, there is cost efficiency for the use of heavy equipment and a decrease in transportation costs of phosphogypsum to a temporary stage area from Rp1,038,972,284 to Rp798,831,079. In terms of delivery, the delivery of purified gypsum is not hampered because the purification unit does not experience a shutdown (0) due to the crisis in rainy conditions, so that there is no environmental pollution. In terms of safety, the risk of work accidents in the Intermediate Storage decreases to 1 (very safe), where, previously, it had a risk value of 3 injuries in need of serious handling. From the moral point of view, the level of satisfaction of the Purification Unit Operator increased to level 5 (very satisfied). In addition, in terms of off-spec quantum phosphogypsum, productivity produced to 0 Tons. Also, in terms of health, overtime is no longer available so that the health of employees is more maintained. Lastly, in terms of reliability, the phosphogypsum plant process capability index has increased in number.

## REFERENCES

- D'eon, J. C., Crozier, P. W., Furdui, V. I., Reiner, E. J., Libelo, E. L., & Mabury, S. A. (2009). Observation of a commercial fluorinated material, the polyfluoroalkyl phosphoric acid diesters, in human sera, wastewater treatment plant sludge, and paper fibers. *Environmental Science & Technology*, 43(12), 4589–4594. <https://doi.org/10.1021/es900100d>
- El Afifi, E. M., Hilal, M. A., Attallah, M. F., & EL-Reefy, S. A. (2009). Characterization of phosphogypsum wastes associated with phosphoric acid and fertilizers production. *Journal of Environmental Radioactivity*, 100(5), 407–412. <https://doi.org/10.1016/j.jenvrad.2009.01.005>
- Pérez-López, R., Álvarez-Valero, A. M., & Nieto, J. M. (2007). Changes in mobility of toxic elements during the production of phosphoric acid in the fertilizer industry of Huelva (SW Spain) and environmental impact of phosphogypsum wastes. *Journal of Hazardous Materials*, 148(3), 745–750. <https://doi.org/10.1016/j.jhazmat.2007.06.068>

# Work–life balance in the public sector: The effect of work from home and work engagement

L.N. Afifah & A. Satrya

*Faculty of Economy and Business, University Indonesia, Jakarta, Indonesia*

**ABSTRACT:** Work–life balance is generally influenced by organizational policies. Therefore, this study demonstrated the effect of work from home on work–life balance while considering the mediation of engagement. A total of 502 public sector staff in Jakarta were surveyed, and the obtained data were analyzed with Structural Equation Modelling. Subsequently, this discovered that working from home and being engaged at work favorably and significantly impacted work–life balance. Individuals who remained productive while working from home exhibited an enhancement in their work and life, and dedication at work was shown to help in achieving work–life balance. These results can enable the public sector to properly plan the work from home concept that will improve work–life balance. Although the work from home scheme was initially established without much preparation, it was able to promote work–life balance and can be an innovation when conditions normalize. However, the implementation is still limited, thereby requiring future studies on work–life balance in the public sector to verify the results, which revealed the positive but unverified effect of working from home on work–life balance.

## 1 INTRODUCTION

Indonesia adopted a work from home policy to alleviate the impact of COVID-19. The impact of this concept on work–life balance is uncertain, as Dima et al. (2019) and Chung and Van (2018) discovered a beneficial effect, while Irawanto et al. (2021) and Palumbo (2020) discovered a detrimental influence. Working from home during a pandemic is different than normal times since it is an involuntary decision (Toscano & Zappala 2020), and employees have no prior training (Grensing 2020).

Although understanding the impact of working from home on work–life balance in the public sector is essential, there are limited studies into this relationship (Palumbo 2020) alongside a lack of experience and context of the COVID-19 pandemic. Therefore, this study offers to partially fill the knowledge about the impact of work from home and work engagement on work–life balance by examining the effects on the public sector. The results can also help to define work from home and in improving work–life balance.

## 2 LITERATURE REVIEW AND HYPOTHESES

According to Jones et al. (2006), work–life balance is a balance between the roles inside and outside of the family and work. It consists of several constructs, such as work and non-work conflict, alongside improvement in each role (Grzywacz & Carlson 2007). This phenomenon can also be defined as the existence of individual satisfaction in each of the roles performed (Kelliher et al. 2019). In the study by Znidarsic et al. (2020), work–life balance was revealed to be influenced by individual, organizational, and state factors.

Meanwhile, Rupietta and Beckmann (2016) stated that the work from home concept allows employees to schedule and organize their work. It circumvents the need to come to the workplace and holds several benefits, such as saving travel time from the home to the office (Suarlan 2018), flexibility, and control while working (Wohrmann et al. 2021).

Conversely, Schaufeli et al. (2002) defined work engagement as a quality that is displayed in individuals who can think positively and satisfactorily concerning work and is characterized by vigor, dedication, and absorption. Rothmann and Baumann (2014) stated that working from home will have a positive work engagement effect, as signified by psychological meaningfulness and availability.

- H1: Work from home has a positive impact on work–life balance
- H2: Work from home has a positive impact on work engagement.
- H3a: Work engagement has a positive impact on work–life balance.
- H3b: Work from home has a positive impact on work–life balance with work engagement as a mediator.

### 3 DATA AND METHOD

This quantitative study involved an online survey of the staff of a public sector organization in Jakarta. It was conducted with convenient sampling methods in October 2021, using respondents who had a 2-year minimum working period and had experienced working from home. The study model is displayed in Figure 1.

A pre-existing questionnaire translated into Bahasa was used to measure the indicators in the study. The work–life balance indicator was adapted from Hayman (2005) using 3 dimensions with 15 items, namely WIPL (Work Interference with Personal Life), PLIW (Personal Life Interference with Work), and WPLE (Work-Personal Life Enhancement). Meanwhile, work from home was adapted from Irawanto et al. (2021) with 8 unidimensional items, and measured productivity, alongside the attitudinal and situational factors felt by employees during the implementation of this scheme. The third indicator, work engagement, was adapted from Schaufeli et al. (2006) and employed the UWES-9 (Utrecht Work Engagement Scale), using three dimensions, namely vigor, dedication, and absorption. Then, a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) was utilized, while SPSS 26 and Lisrel 8.8 were used to conduct the descriptive statistics and SEM analysis, respectively.

### 4 RESULTS AND DISCUSSION

A total of 502 employees was used, with men accounting for 58% and women comprising 41%. About 74.30% were married, and only 17.23% of this proportion did not have children. In addition, the majority's highest education level, at 67%, was a diploma/bachelor's degree. The value of all items reached a loading factor of  $>0.5$ , the reliability test obtained a Cronbach alpha level  $>0.7$ , the construct reliability of each variable was  $>0.7$ , and the AVE values were  $>0.5$ . Finally, the respecification results had a good fit model with values of GFI = 0.94; SRMR = 0.051; RMSEA = 0.067.

Table 1 shows the hypotheses testing, where 1 (WFH:  $\beta = 0.21$ ,  $t = 4.09 > 1.96$ ) and 3a- (WE:  $\beta = 0.61$ ,  $t = 8.35 > 1.96$ ) had positive and significant relationships with WLB, and Hypothesis 2 (WFH:  $\beta = 0.30$ ,  $t = 6.18 > 1.96$ ) had similar effects on WE. Also, 3b with a value of  $z = 4.91 > 1.96$  and effect = 0.393  $> 0.30$  was assumed to have a positive significant effect, signifying a partial influence of WE on the relationship between WFH and WLB.

Hence, this study shows that working from home has a positive impact on work–life balance (Chung & Van 2018; Dima et al. 2019). This means that the enhancement between work and personal life and mutual support increases with the benefits felt by employees while working from home. Working from home has various advantages, such as reduced fatigue from travel,

Table 1. Hypothesis Analysis

Hypothesis	Relationship	Loading factor	T-value	Result
H1	WFH → WLB	0.21	4,09	confirmed
H2	WFH → WE	0.30	6,18	confirmed
H3a	WE → WLB	0.61	8.35	confirmed
H3b	WFH → WE → WLB	0,393	4,91	confirmed

Source: Result of statistical data using LISREL

alongside increased productivity, effectiveness, and flexibility, as the job schedule is arranged by the employee. These advantages, which can generate enhancements at work and in personal life, are also significantly influenced by the employees' mood.

Following the ability to work from home, employees feel more engaged in performing their jobs. (Palumbo 2020) and can harbor positive thoughts for their jobs. Their dedication is demonstrated by the inspiration received from work, which the organization can promote by permitting employees to work professionally from home. As a result of the improved benefits of this concept, employees experience a higher enthusiasm level and an increased willingness to work.

Furthermore, work engagement positively affects work–life balance perceived by employees (Ilies et al. 2017; Palumbo 2020) and serves as a partial mediator in its relationship with the work from home concept (Chanana 2020). The development of positive thoughts by employees about their work can reduce the disruption in their professional and personal life, thereby signifying a beneficial relationship between the two roles. At work, the dedication felt can improve employees' moods, which will positively affect other roles.

## 5 CONCLUSION AND SUGGESTION

This study focused on the effect of work from home and work engagement on work–life balance of employees. These factors were shown to exert positive effects on this balance, where working from home was shown to eliminate employee travel time and flexibility. Although this concept was a new experience for the public sector, it positively affected work–life balance. This is related to the adaptations made by employees, considering the scheme was implemented for 1.5 years. In addition, work engagement was revealed to improve the relationship between work from home and work–life balance.

These results imply that organizations can increase the productivity of employees that work from home through training on effective practices related to time management and division of work between the home and office. Additionally, training can be provided on establishing physical and psychological boundaries between work and personal life. Creating a positive work environment at home and the office is important and can be promoted by displays of appreciation from the organization or supervisor to increase employee inspiration. Furthermore, exhibiting trust in employees' abilities to perform well while working from home is also essential.

Finally, the limitation in this study was its focus on work–life balance as a determinant in the work domain. Future studies in diverse circumstances are required to evaluate the work from home implementation, which may differ due to variances in technical capabilities, facilities, and infrastructure.

## REFERENCES

- Chanana, N. (2020). Employee engagement practices during covid-19 lockdown. *Journal of Public Affairs*, 2508.
- Chung, H., & Van der Horst, M. (2018). Women's employment patterns after childbirth and the perceived access to and use of flexitime and teleworking. *Human relations*, 71(1), 47–72.

- Dima, A. M., Tuclea, C. E., Vranceanu, D. M., & Tigu, G. (2019). Sustainable social and individual implications of telework: A new insight into the Romanian labor market. *Sustainability*, 11(13), 3506.
- Grensing-Pophal, L. (2020). Training employees to effectively work from home. <https://hrdailyadvisor.blr.com/2020/04/14/training-employees-to-effectively-work-from-home/>. Diakses 14 Januari 2021.
- Grzywacz, J. G., & Carlson, D. S. (2007). Conceptualizing work-family balance: Implications for practice and research. *Advances in developing human resources*, 9(4), 455–471.
- Hayman, J. (2005). Psychometric assessment of an instrument designed to measure work life balance. *Research and practice in human resource management*, 13(1), 85–91.
- Irawanto, D. W., Novianti, K. R., & Roz, K. (2021). Work from home: measuring satisfaction between work-life balance and work stress during the covid-19 pandemic in indonesia. *Economies*, 9(3), 96.
- Jones, F., Burke, R. J., & Westman, M. (2006). Work-life balance: key issues. *Work-life balance: A psychological perspective*, 1–9.
- Kelliher, C., Richardson, J., & Boiarintseva, G. (2019). All of work? All of life? Reconceptualising work-life balance for the 21st century. *Human Resource Management Journal*, 29(2), 97–112.
- Palumbo, R. (2020). Let me go to the office! and investigation into the side effects of working from home on work-life balance. *International Journal of Public Sector Management*, 33(6/7), 771–790.
- Rothmann, S., & Baumann, C. (2014). Employee engagement: the effects of work-home/home-work interaction and psychological conditions. *South African Journal of Economic and Management Sciences*, 17(4), 515–530.
- Rupietta, K., & Beckmann, M. (2016). Working from home: what is the effect on employees' effort? (No. 2016/07). WWZ Working Paper.
- Schaufeli, W. B., Salanova, M., Gonzalez-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness studies*, 3(1), 71–92.
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and psychological measurement*, 66(4), 701–716.
- Suarlan, S. (2018). Teleworking for indonesian civil servants: problems and actors. *Bisnis & Birokrasi Journal*, 24(2).
- Toscano, F., & Zappala, S. (2020). Social isolation and stress as predictors of productivity perception and remote work satisfaction during the covid-19 pandemic: the role of concern about the virus in a moderated double mediation. *Sustainability*, 12(23), 9804.
- Wohrmann, A. M., Dilchert, N., & Michel, A. (2021). Working time flexibility and work-life balance. *Zeitschrift für Arbeitswissenschaft*, 75(1), 74–85.
- Znidarsic, J., Vukovic, G., & Maric, M. (2020, June). The relationship between work-life balance and job engagement: life satisfaction as a moderator. In *Proceedings of FEB Zagreb International Odyssey Conference on Economics and Business* (Vol. 2, No. 1, pp. 706–719). University of Zagreb, Faculty of Economics and Business.

# The role of marketing 4.0 elements, customer satisfaction, loyalty intentions, and religious brand preference among Indonesian Muslim woman customers of local modest fashion brands

M.A. Zain

*Universitas Indonesia*

R.D. Astuti

*Universitas Indonesia*

**ABSTRACT:** Marketing 4.0 has gained a lot of attention and implementation in studies and practices. However, there is still a lack of research, particularly in its relation to unique groups of customers' advocacy. Therefore, this study aims to empirically examine Marketing 4.0 Elements' impacts on the customer satisfaction and loyalty intention, in order to determine how religious brand preference contributes to the relationship among Indonesian Muslim woman customers of local Modest Fashion Brands. Quantitative analysis with SEM is used to analyze the data, and the results indicated that all the marketing 4.0 elements, namely, brand image, brand identity, brand integrity, and brand interaction, have a significant positive impact on customer satisfaction, while only brand image and interaction have a significant impact on their loyalty intentions. Furthermore, it also showed the significant and positive moderating role of religiosity on the link between the marketing 4.0 elements, except for brand integrity on customer satisfaction and loyalty intentions. Consequently, this study provides new insights into the model theory based on the four elements in an emerging industry. Specifically, the managerial implication is directed to local modest fashion brands entrepreneurs in Indonesia, in order to gain insights and understanding of effective ways in marketing modest fashion brands, especially among Muslim consumers in this digital age.

## 1 INTRODUCTION

Digital innovations have brought various changes to the society (Brey, 2018), including business activities (Saarikko et al., 2020), mediating a brand and its customer into a closer relationship (Kotler et al., 2017; Smith & Zook, 2011; Vial, 2019), in line with the new interaction concept in Kotler et al. (2017). In fact, marketing practices have continued to be transformed (Thaichon & Ratten, 2021) along with the digitalized industry and increased usage of the Internet (Melović et al., 2020). This is also seen in Indonesia with the increasing number of users (APJII, 2020) and the continuing rise of the digital economy (E-conomy SEA 2020, 2020). Generally, the country has the largest Muslim population (Lipka & Hapkett, 2017), such that the current halal industry is becoming more attractive (State of the Global Islamic Economy Report, 2019) including the modest fashion sector as it faces fiercer competition. Hence developing better strategies is crucial in this rapidly changing digital age. However, the Marketing 4.0 is empirically understudied because it is relatively new (Dash et al., 2020), and given the dominant focus of existing studies on Muslim consumers (Abdullah et al., 2020; Al-Hyari et al., 2012; Ashraf et al., 2017; Bachleda et al., 2014; Irani et al., 2016), compared to other product categories (Fernie & Grant, 2019). Based on this, less information is known about the overall marketing perspectives. To address this gap, this study is conducted to better meet the demands and expectations of Muslim consumers from local modest fashion brands in the digital world.

## 2 LITERATURE REVIEW

Studies (Kazemi et al., 2013; Sari, 2014; Shirazi et al., 2013) discovered the significant effect of brand identity on the customer's satisfaction. For example, it increases the attention to manage the brand in creating a superior brand identity (Mullins & Orville C. Walker, 2013). Danish et al. and Hameed and Kanwal (Danish et al., 2018; Hameed & Kanwal, 2018) also explained that brand identity has a significant influence on the customer's loyalty intention.

The second element is Brand image, defined as the representation of the customer's overall perception of a brand (Maurya & Mishra, 2012; Wijaya, 2013). The study conducted by Lahap et al. (2016) described brand image as an important element that contributes to customer satisfaction level. Also, Neupane (2015) and Wai Lai (2019) found that brand image has an effect on the loyalty intentions.

The next element is brand integrity, and how it directly correlates to trust and customers' loyalty. Meanwhile, Aylott (2010) and Djailani and Tan (2015) also explains how brand integrity plays an important role in conveying the marketing strategies of its product to the targeted customers, hence these values are based on their reputation and the ability to generate repeat sales.

Brand interaction is the newly added dimension in the marketing 4.0 model. According to Kaihatu (2020) and Rahmawati and Aji (2015) this interaction has a significant influence on customer satisfaction, while Petzer and van Tonder (2019) stated that facilitating customer engagement often led to stronger loyalty intentions, hence playing an important role.

Customer satisfaction serves as a pioneer in achieving marketing goals because it influences customer loyalty (Ograjenšek & Gal, 2011). Rakhi (2014) and Ui et al. (2020) described the positive effect of customer satisfaction to the loyalty intentions.

The following will explain how the idea of the customer's religious brand preference may moderate the effect of the marketing 4.0 elements on customer satisfaction and loyalty intentions. The moderation effect occurs because religiosity often disrupts or strengthens the relationship that exists among consumers with their outcomes, e.g., Mokhlis (2018) stated that religiosity has an impact on several aspects of a consumer's lifestyle, which in turn has an impact on their consumption behavior and in decision-making, and Shah et al. (2019) noted how it could moderate the customer engagement-satisfaction relationship. Kusumawati et al. (2019) and Suhartanto et al. (2020) found no effects of religiosity on customer satisfaction and loyalty. Hence, Baron and Kenny (1986) suggested the need for a moderator variable when a relationship was found to be inconsistent or weak.

## 3 RESEARCH METHOD

The sample taken included Muslim woman customers of local modest fashion brands in Indonesia. The respondents were required to be a Muslim woman who had purchased from a local modest fashion brand at least once within a period of three months and were domiciled in the country. From the responses collected, 259 were used for the analysis.

The questionnaire was developed with several sections, including the profile of the respondents and screening questions, which are the main ones to be tested by using a 5-point Likert scale. Furthermore, the seven variables of the marketing 4.0 elements tested included brand image, brand identity, brand integrity, brand interaction, customers satisfaction, loyalty intention, adopted from Dash et al. (2020), and religious brand preference from Nguyen et al. (2020).

The respondent characteristics and each item collected were analyzed by using descriptive statistics. Afterward, the hypothesis testing was conducted through SEM analysis, by testing the Goodness-of-fit measures first, followed by the measurement model validation. The final part of hypothesis testing was carried out by using the Path Analysis to test the conceptual framework.



#### 4 RESULTS AND CONCLUSIONS

Goodness-of-fit measures were examined to determine the overall model and then a single-path analysis was used in the hypothetical model, where the statistical results showed that brand image has a significant influence on the customers' satisfaction and loyalty intention. Furthermore, the variable brand interaction was also found to have a significant positive influence on customer satisfaction and loyalty intention. Meanwhile, the variable brand identity also has a significant influence on the customer's satisfaction but not on the loyalty intention. The same goes with brand integrity that has a significant positive influence on customers' satisfaction but not on the loyalty intention. Likewise, the last path explains the impact of customer satisfaction on its loyalty intentions which are found to be significant. The insignificant influence of brand identity and brand integrity on the loyalty intentions are in line with the context of fashion consumers, according to Balchandani et al. (2021) which are now more experimental and are willing to go beyond their favorite brands, which explains how the two elements cannot influence the customers' loyalty directly on these digital platforms, e.g., Brydges and Hrac (2018) explained how the digitalized industry has caused various brands to use the same technology and platforms to connect with their consumers, which may have limited their ability to show their identity and integrity directly to customers to make a repurchase activity. This study also explains the moderating role of religious brand preference, to the relationship of marketing 4.0 elements except for brand integrity on both the dependent variable. The insignificant results in moderating the variable brand integrity to the dependents of this study implies how marketers in the local modest fashion industry have not involved religious values in that aspect, which resulted on the customers not expecting any difference based on their religious brand preference on how the brand integrity is shown, unlike other industries such as halal food, that may have shown more religious marketing activities to strengthen their integrity, that is, in serving halal foods. This study has been able to prove that marketing 4.0 elements' effects on the consumer's behavior are different based on the contextual aspects. In the local modest fashion industry of a Muslim majority country, the customer's satisfaction was influenced by the brand's identity, image, integrity, and interactions, which implies the cruciality of the four elements to be noticed and improved in order to enhance their satisfaction. Meanwhile, the customer's loyalty intentions were influenced by the brand's image and the brand's interaction. According to the moderation analysis, religious brand preference moderates the link among the marketing 4.0 elements except for brand integrity on the customer's satisfaction and loyalty intention. Consequently, brands do not only have to be innovative and dynamic but also have to appeal on a spiritual level, in order to represent faith, ethics, and values, while also taking into consideration the cultural diversity of Muslim customers.

#### REFERENCES

- Abdullah, J. Bin, Abdullah, F., & Bujang, S. Bin. (2020). Muslim Religiosity and Its Impact on Purchase Intention.
- Al-Hyari, K., Alnsour, M., Al-Weshah, G., & Haffar, M. (2012). Religious beliefs and consumer behaviour: From loyalty to boycotts.
- APJII. (2020). *Survei Pengguna Internet APJII (Asosiasi Penyelenggara Jasa Internet Indonesia) 2019-Q2 2020*
- Ashraf, S., Hafeez, M., Yaseen, A., & Naqvi, A. (2017). Do they care what they believe? Exploring the impact of religiosity on intention to purchase luxury products.
- Aylott, R. (2010). Assuring brand integrity. *Brewer and Distiller International*, April, 50–52.
- Bachleda, C., Hamelin, N., & Benachour, O. (2014). Does religiosity impact Moroccan Muslim women's clothing choice?
- Balchandani, A., Beltrami, M., Berg, A., Hedrich, S., Rölkens, F., & Amed, I. (2021). The State of Fashion 2021
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations.
- Brey, P. (2018). The strategic role of technology in a good society.

- Brydges, T., & Hracs, B. J. (2018). Consuming Canada: How fashion firms leverage the landscape to create and communicate brand identities, distinction and values.
- Danish, R. Q., Khan, M. K., Ghafoor, M. M., Ahmad, I., Humayon, A. A., & Aslam, S. (2018). Impact of Brand Loyalty in Assessing Purchase Intentions of a Customer
- Dash, G., Kiefer, K., & Paul, J. (2020). Marketing-to-Millennials: Marketing 4.0, customer satisfaction and purchase intention.
- Djailani, I., & Tan, C. C. (2015). *Studying the Interrelationship Structure between Brand 3i (Brand Identity, Brand Integrity, and Brand Image) and Brand Trust and Attitude in Islamic Marketing Context: A Case with Rumah ZAKAT Indonesia*.
- E-conomy SEA 2020. (2020). *At full velocity: Resilient and racing ahead*. 2(1), 1–18.
- Fernie, J., & Grant, D. B. (2019). *Fashion Logistics: Insights into the Fashion Retail Supply Chain* (second). Kogan Page Limited.
- Hameed, S., & Kanwal, M. (2018). Effect of Brand Loyalty on Purchase Intention in Cosmetics Industry.
- Irani, W., Fauzi, M., Muhammad, N., Sanuri, S., Mokhtar, M., & Yusoff, R. Z. (2016). *What Motivate Muslim Consumer to Patronage Islamic Based – retail Store*.
- Kaihatu, T. S. (2020). Purchase Intention of Fashion Product As an Impact of Digital Marketing , Mediated By Customer Engagement
- Kazemi, A., PaEmami, V. M., Abbaszadeh, A., & Pourzamani, J. (2013). Impact of Brand Identity on Customer Loyalty and Word of Mouth Communications, Considering Mediating Role of Customer Satisfaction and Brand Commitment.
- Kotler, P., Kartajaya, H., & Hooi, D. H. (2017). Marketing 4.0: Moving From Traditional To Digital. In *Asian Competitors* (Issue 1).
- Kusumawati, A., Listyorini, S., Suharyono, & Yulianto, E. (2019). The impact of religiosity on fashion knowledge, consumer-perceived value and patronage intention.
- Lahap, J., Ramli, N. S., Said, N. M., Radzi, S. M., & Zain, R. A. (2016). A Study of Brand Image towards Customer's Satisfaction in the Malaysian Hotel Industry.
- Lipka, M., & Hapkett, C. (2017). *Pew Research Center: Why Muslim Consumers are The Worlds Fastest Growing Religious Group*.
- Maurya, U. K., & Mishra, P. (2012). What is a brand? A Perspective on Brand Meaning.
- Melović, B., Jocović, M., Dabić, M., Vulić, T. B., & Dudic, B. (2020). The impact of digital transformation and digital marketing on the brand promotion, positioning and electronic business in Montenegro.
- Mokhlis, S. (2018). *Relevancy and Measurement of Religiosity in Consumer Behavior Research Relevancy and Measurement of Religiosity*
- Mullins, J. W., & Orville C. Walker, J. (2013). *Marketing Management: A Strategic Decision-Making Approach* (eight). McGraw-Hill.
- Neupane, R. (2015). The Effects of Brand Image on Customer Satisfaction and Loyalty Intention in Retail Super Market Chain UK.
- Nguyen, T. D., Chou, S. Y., Blankson, C., & Wilson, P. (2020). The invisible identity in a visible world: how religiosity mediates consumer culture and the marketplace.
- Ograjenšek, I., & Gal, I. (2011). The concept and assessment of customer satisfaction. *Modern Analysis of Customer Surveys: With Applications Using R*,
- Petzer, D. J., & van Tonder, E. (2019). Loyalty intentions and selected relationship quality constructs: The mediating effect of customer engagement.
- Rahmawati, E., & Aji, S. (2015). Pengaruh Customer Engagement Terhadap Kepuasan Pelanggan Dan Kepercayaan Merek Serta Dampaknya Pada Loyalitas Merek.
- Rakhi, T. (2014). What keeps mobile banking customers loyal?
- Saarikko, T., Westergren, U. H., & Blomquist, T. (2020). Digital transformation: Five recommendations for the digitally conscious firm.
- Sari, S. D. (2014). *Pengaruh Brand Personality Congruence dan Customer-Employee Congruence terhadap Customer Satisfaction melalui Personal Interaction, Relationship Satisfaction dan Loyalty to Employee*.
- Shah, S. A. A., Sukmana, R., Fianto, B. A., Ahmad, M. A., Usman, I. U., & Mallah, W. A. (2019). Effects of Halal social media and customer engagement on brand satisfaction of Muslim customer: Exploring the moderation of religiosity.
- Shirazi, A., Lorestani, H. Z., & Mazidi, A. K. (2013). *Investigating the Effects of Brand Identity on Customer Loyalty from Social Identity Perspective*.
- Smith, P., & Zook, Z. (2011). *Marketing Communications: integrating offline and online with social media* (fifth). KeganPage.

- State of the Global Islamic Economy Report. (2019). State of the global islamic economy report: Driving the Islamic Economy revolution 4.0.
- Suhartanto, D., Gan, C., Sarah, I. S., & Setiawan, S. (2020). Loyalty towards Islamic banking: service quality, emotional or religious driven?
- Thaichon, P., & Ratten, V. (2021). *Developing Digital Marketing: Relationship Perspectives* (1st ed.). Emerald Publishing Limited
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda.
- Wai Lai, I. K. (2019). Hotel image and reputation on building customer loyalty: An empirical study in Macau.
- Wijaya, B. S. (2013). *Dimensions of Brand Image: A Conceptual Review from the Perspective of Brand Communication*.

## “Incorrect pills”: Civil servants’ perspectives on delayering and specialization in Indonesian public sector

M.C. Nisa & K. Pertiwi

*Master of Management Program, Universitas Indonesia, Indonesia*

**ABSTRACT:** The need for bureaucratic agility and professionalism has prompted the Indonesian government to implement a delayering and specialization policies. To attract the interest of civil servants, the government release its official discourse and developed positive narratives on the advantages of these policies. However, not everyone shares the same point of view, given that social reality is plural. Therefore, this study examines the perspectives of Civil Servants which differ from the official discourse. The method used was a qualitative interpretivist approach, and a semi-structured depth interviews involving 28 Civil Servants from Central and Regional Government Agencies. Also, the data was analyzed using thematic analysis. The results showed that, Civil Servants define delayering and specialization as ‘incorrect pills’, ‘premature organizational change’, and ‘a career barrier wall’ caused by misdiagnosed problem, insufficient preparation, limited communication, and a large administrative burden.

### 1 INTRODUCTION

The VUCA World era, defined as a business environment characterized by volatility, change, uncertainty, complexity, and ambiguity, presents a major challenge to management. In order to find their way around the VUCA environment, executives are encouraged to emphasize on agility, dexterity, flexibility and resilience (Millar et al. 2018). One of them is the Indonesian government which appears to be improving the quality of its public services and bureaucracy. In response to the need to simplify an overweight structure as well as the need for additional functional positions, the government has developed the concept of agile transformation by simplifying echelonization (delayering) and shifting Structural Positions (specialization). Moreover, the scope is national, encompassing both central and local government.

The government released an official discourse and developed positive narratives to support its policies, but not everyone has the same point of view, considering plurality social reality. Therefore, an alternative perspective provided by potential parties such as the employees is needed to examine the phenomenon in a more real, comprehensive, and detailed way, specifically for policymakers. For example, Noe (2016) stated that the disadvantage of the delayering decisions is the reduction of promotion opportunities, therefore, the organizations need to consider providing other offers to the employees in exchange. Also, delayering causes a number of unfavorable conditions, such as demotivation and worsening career prospects (Foster et al. 2019). Based on those considerations, this study assists change managers in identifying and understanding how civil servants perceive delayering and specialization policies, both for the organization and themselves. This will fill gaps in the existing literature over the last five years, focusing in the public sector of a south global country such as Indonesia, particularly from employees’ perspective in the post-transfer period (Ramadani & Sofyaningrum 2020).

## 2 LITERATURE REVIEW

There are various approaches to defining organizational change stages. The Kotter acceleration model (2012), for example, divides the stages of successful organizational change into eight important stages: (1) building a sense of urgency, (2) forming a strong coalition, (3) developing a vision as a goal of change and developing strategies to achieve it, (4) communicating the vision, (5) strengthening stakeholders, and (6) planning and developing short-term goals. (8) make new approaches official. During every organizational change stage, some challenges and obstacles lead to failure. Kotter (2012) stated factors such as failing to build a sense of urgency, failing to form a coalition strong enough to serve as a support system and underestimating the power of vision. Any of these errors could prevent an organization from offering desired products or services at affordable prices by slowing down new initiatives, creating frustrating employees, unnecessary resistance, and sometimes completely eliminating the needed change. According to Whelan-Berry and Somerville (2010), two-way communication helps employees understand change, form engagement, respond to questions, properly identify, and overcome obstacles.

Several studies on layering and specialization have been conducted separately or concurrently. In which, layering is known to have a variety of effects, including young employees feeling more responsible (Hassard & Morris 2020), demotivation and worsening career prospects (Foster et al. 2019), and job insecurity (Hassard & Morris 2020) on employees and organization. Meanwhile, the results of previous study showed that the advancement in the employee career is aided by specialization (Ferguson & Hasan 2013). On the other hand, Kliethermes et al. (2021) reported that specialization did not help increase performance and quality of output, particularly in adolescence. The implementation of layering and specialization in Indonesia has been examined with several results, such as the urgency and consequences of layering using the literature review method of (Dahlia 2020) and a communication strategy that requires written guidance to avoid potential resistance from managers (Ramadani & Sofyaningrum 2020). Therefore, this study contributes to the literature by presenting employees' perspectives and filling the gaps identified by Ramadani and Sofyaningrum (2020) regarding the need for study on post-transfer conditions.

## 3 METHOD

### 3.1 *Data collection*

The data were collected through in-depth interviews with 28 participants that provided answers to the submitted questions (Moser & Korstjens 2018) based on their perceptions, experiences, views, and feelings. The participants consisted of civil servants affected by layering and specialization, including Echelon III, IV, and IV Officials, as well as functional and staff who did and did not experience position equalization. Due to limitations during the COVID-19 pandemic, most interviews were conducted online using Google Meet and Zoom to avoid direct contact and the spread of the virus. Furthermore, the interviews were conducted from 18 May–27 October 2021 through online and offline by adjusting participants' time and media preferences.

### 3.2 *Analysis method*

The analysis was conducted using thematic methods, according to Braun and Clarke (2006) that are appropriate and powerful for understanding a collection of experiences, thoughts, or behaviors across data sets. It is the process of identifying patterns or themes in the collected data (Braun & Clarke 2006). According to Braun et al. (2019), the process of thematic analysis is divided into six stages: data understanding, initial code identification, theme search, review, definition and naming, and report preparation. The codes with similarities were grouped based on the results of observations and the pattern of the contained meaning. In the process of searching for a theme, all themes, sub-themes, and supporting data were re-read.

4 RESULTS AND DISCUSSION

The results of data analysis were categorized into three main themes, namely Delayering and Specialization as ‘Incorrect Pills,’ ‘Premature Organizational Change,’ and ‘Career Barrier Wall’. Delayering and specialization as incorrect pills consist of the sub-themes of unscientific policy-making, which are not solutions to bureaucratic problems. Furthermore, four sub-themes rash decision, unprepared employees, unprepared infrastructure and non-fluent communication explains changes as policies that are rushed and forced to run prematurely with conditions of unpreparedness of employees, infrastructure, and communication processes. Meanwhile, the career barrier wall theme consists of sub-themes with more difficult promotion decreases in the amount and value of income, constrained competency development, and status of no more prestige explains employee views on careers that are increasingly difficult to reach.

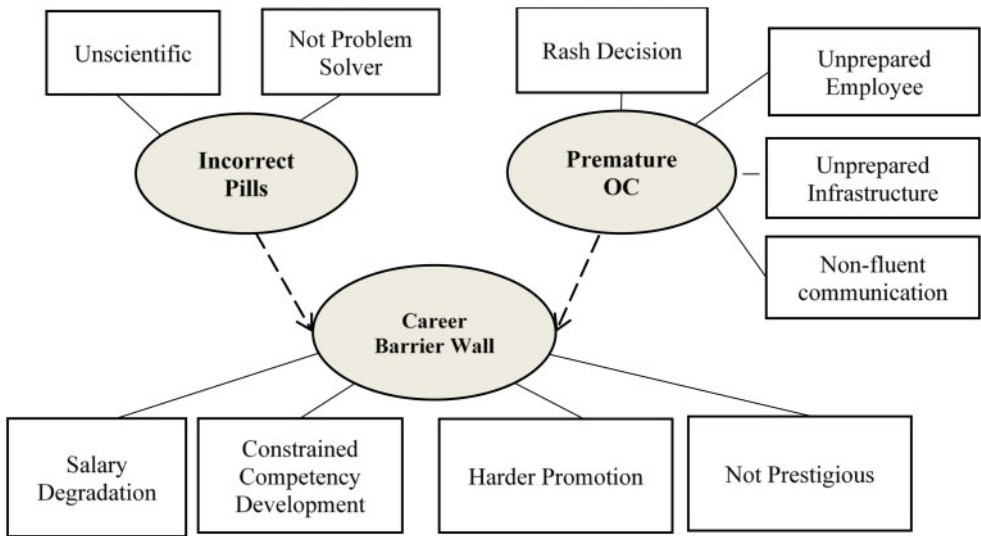


Figure 1. Themes map.

In the theme map as shown in Figure 1, the Incorrect Pills theme and premature organizational change are connected by a dotted line to the career barrier wall theme, which implies that the unscientific policy-making and the implementation process are too quick, resulting in many unprepared rules and staffing system, thereby forming a barrier wall. Meanwhile, the dotted line from premature organizational change to Incorrect Pills describes a premature implementation process hindering the success of organizational change and promoting policies. This study shows that every stage in organizational change has pitfalls, such as preparing a smooth communication process to prevent failure. Furthermore, communication plays an important role by recommending the process of organizational change Kotter (2012), which is performed by utilizing all communication channels owned by the organization. Also, it supports the study of Whelan-Berry dan Somerville (2010), which states that two-way communication occurs not only at the beginning but throughout the change process to address resistance, motivate employees, resolve obstacles and maintain the momentum of change. Therefore, a career management system is needed to retain and motivate successful employees (Noe et al. 2016).

## 5 CONCLUSION

This study presents different meanings of delayering and specialization in contrast to the official discourse, stating it as a solution to the problem of big bureaucracy in Indonesia. It discovered three alternative meanings of delayering and specialization policies from the perspective of civil servants, namely “Incorrect Pills,” “Premature Organizational Change”, and “Career Barrier Wall.” The policy-making process that is considered unscientific and misguided is the essence of the Narrative of Delayering and Specialization as “Incorrect Pills”. Meanwhile, “Premature Organizational Change” is the most appropriate analogy to the rushed implementation process, hence, there is no preparation towards managing the quality and mentality of employees, complete infrastructure, as well as building two-way communication flows that become the guiding light for the actors of change. Furthermore, the third theme, “Career Barrier Wall” represents employees’ disappointment and fading enthusiasm in getting to the top of their career. This study also supports Kotter’s (2012) and Wheelan-(2010) Berry’s on avoiding the eight pitfalls of change and the importance of developing effective two-way communication.

The research’s managerial implications are expected to be used as evaluation material for the government by listening to and understanding the real situation felt by civil servants regarding the influence of policies on the purpose of change to overcome bureaucratic problems in Indonesia. These alternative meanings demonstrate that a decline in the employee’s enthusiasm necessitates prompt and appropriate action. To function properly, these policies must adhere to key success indicators as guidelines and avoid the pitfalls that exist at each stage of change. Furthermore, successful policies necessitate the support of a good administrative system and civil servants at all levels to assist in the resolution of bureaucratic problems.

## REFERENCES

- Braun, V. et al., 2019. Thematic Analysis. In *Handbook Of Research Methods In Health Social Sciences*. Springer Singapore, (pp. 843–860).
- Braun, V., and Clarke, V. 2006. Using Thematic Analysis In Psychology. *Qualitative Research In Psychology*, 3(2), 77–101.
- Dahlia, D. 2020. Flattening Indonesia’s Bureaucratic Structure: A Literature Review On The Urgencies And Consequences. *Jurnal Transformasi Administrasi*, 10(1), 1–17.
- Ferguson, J. P., and Hasan, S. 2013. Specialization And Career Dynamics: Evidence From The Indian Administrative Service. *Administrative Science Quarterly*, 58(2), 233–256.
- Foster, W. M., Hassard, J. S., Morris, J., and Wolfram Cox, J. 2019. The Changing Nature Of Managerial Work: The Effects Of Corporate Restructuring On Management Jobs And Careers. *Human Relations*, 72(3), 473–504.
- Hassard, J. and Morris, J. 2020. Corporate restructuring, work intensification and perceptual politics: exploring the ambiguity of managerial job insecurity. *Economic and Industrial Democracy* 41 (2), pp. 323–350.
- Kliethermes, S.A., et al. 2021. Defining a research agenda for youth sport specialisation in the USA: The AMSSM youth early sport specialization summit. *British Journal Of Sports Medicine*, 55(3), 135–143.
- Kotter, J. P. 2012. *Leading Change*. Massachusetts: Harvard Business Review Press.,
- Millar, C. C. J. M., Groth, O., and Mahon, J. F. 2018. Management innovation in a VUCA world: Challenges and recommendations. *California Management Review*, 61(1), 5–14.
- Noé-Nordberg, T. (2016). *Personal Development Of Employees As A Function Of Human Resource Development In Different Networks*. Tilburg: Tilburg University.
- Ramadani, T., and Sofyaningrum, E. D. 2020. Strategi Komunikasi Kementerian ESDM Dalam Penyetaraan Jabatan Administrasi Ke Jabatan Fungsional. *Jurnal Wacana Kinerja: Kajian Praktis-Akademis Kinerja Dan Administrasi Pelayanan Publik*, 23(2), 239.
- Whelan-Berry, K. S., and Somerville, K. A. 2010. Linking change drivers and the organizational change process: A review and synthesis. *Journal of Change Management*, 10(2), 175–193.

# The impact of cross-channel integration at mobile operator on customer's purchase behavior as a path toward Omnichannel strategy: A case study using data analytics in Telkomsel

M.C. Utama

*Graduate Student, Faculty of Economics and Business, Universitas Indonesia, Indonesia*

T.E. Balqiah

*Lecturer and Researcher, Faculty of Economics and Business, Universitas Indonesia, Indonesia*

**ABSTRACT:** Cross-Channel Integration is a journey toward Omnichannel Implementation. As one of central ideas in Digital Marketing, Omnichannel will enable a unified, seamless and contextual customer experience, irrespective of channel, device and system of engagement. This study aimed to provide an insight into the impact of Cross-Channel Integration (as a milestone toward Omnichannel Implementation) to a customer's purchase behaviors at one of Indonesian mobile operators. The study applied descriptive and predictive analytics on customer purchase data across different sales channels to validate the change on the customer purchase behavior (i.e., channel shifting) due to channel integration, which enables the ease of purchase and unified sales campaign/promotion irrespective of the channel used by the customer. The campaign was based on a predictive model: Next Best Offer recommendation which optimized cross-selling opportunity. Finally, this study provided insight about the change on customer purchase behavior due to Cross-channel Integration and how to stimulate customer spending across channels for further monetization.

## 1 INTRODUCTION

Telkomsel is a leading mobile operator in Indonesia with more than 50% market share and multiple sales channels, including traditional (i.e., Grapari, Reseller) and digital (i.e., MyTelkomsel). These channels were siloed and unintegrated, especially in terms of product and fulfillment. This condition is categorized as multichannel based on multiple channel retailing (Beck & Rygl 2015).

As part of its strategic objectives, Telkomsel embarked on a Digital Transformation that developed/enabled some integrations across different sales channels, such as Integrated Product Information, Integrated Promotion, Integrated Transactions, and Integrated Fulfillment. This allowed Telkomsel to transition from a multichannel environment to a cross-channel environment to an omnichannel environment as the end goal.

This study intended to address the following research queries: (1) what is the impact of cross-channel integration to customer's purchase behavior? And (2) what should be done to stimulate customer spending more after the cross-channel integration?

## 2 LITERATURE REVIEW

### 2.1 Digital marketing

Digital marketing involves achieving marketing objectives through digital technologies and media (Chaffey & Ellis-Chadwick 2016). Herhausen (2020) classified the Digital Marketing capabilities



into four categories: (1) Channels (including multiple channel capability), (2) Social Media, (3) Digital Relationship (include CRM), and (4) Digital Technologies. This study focused on channel capability and customer behavior in different channels.

## 2.2 *Multichannel, cross-channel, and omnichannel*

Multichannel has become popular in recent years, involving activities and processes in selling and distributing products or services through more than one channel. However, it has various weaknesses including its channels running separately and independently (Beck & Rygl 2015). Competition among the different channels for the same product or service is unavoidable since there is no proper alignment across the channels (Mirzabeiki & Saghiri 2020). The multichannel concept evolved into Cross-channel and finally Omnichannel to mitigate these weaknesses. Beck and Rygl (2015) suggested the categorization of multi, cross, and omnichannel concepts based on the degree of inter-channel interaction triggered by a customer and/or retailer's control in channel integration.

Channel integration plays a significant role in the evolution of channel management. When channels operate separately and independently, they create siloed processes and have difficulties delivering a consistent and unified experience to the customers. Channel integration will lead to channel synergies that eventually address these challenges (Verhoef et al. 2015).

## 2.3 *Customer Decision Making in Buying Behavior*

According to Levy (2019), there are five stages in the buying or purchase process of consumer merchandise or service: (1) identify an unsatisfied need; (2) seek information about how to satisfy the need; (3) evaluate the alternatives and visit particular channels where he/she can evaluate the offer; (4) purchase the merchandise or service; and (5) post-purchase evaluation.

This study focused on the Stage 4 of Buying process: Purchase the Merchandise and Service. From the customer segment perspective, it focused on the B2C Prepaid Segment.

# 3 RESEARCH METHODOLOGY

## 3.1 *Research approach*

Though most business research is still dominated with the traditional statistics analysis method that tests causal hypotheses, the use of the analytics method in research is gradually being adopted/used to address interesting business research questions (Delen & Zolbanin 2018). Based on the nature/characteristic and approach used to analyze the data, analytics are categorized into four groups: descriptive, diagnostic, predictive, and prescriptive (Delen & Zolbanin 2018). In this study, we focused on the combination of descriptive and predictive analytics as the selected research approach by leveraging Big Data and Analytics capabilities and resources owned by Telkomsel.

## 3.2 *Data sources and the operationalization of variables*

The data sources in this study consist of transactional, reference, and aggregated/derivative data. For the transactional data, there were two main data sources as follows: (1) Customer Purchase; and (2) Customer Recharge. Through these two transactional data, we could generate insights to address research question 1 by comparing total recharge/purchase transactions per month per channel before and after the channel integration. These data sources were also used to find important features/attributes for the predictive analytic model to address research question 2.

The second type was reference data which consist of two main references: (1) Product Reference; and (2) Channel Reference. The last type was aggregated/derivative data related to customer and time: ARPU, Average Revenue Per User; LOS, Length of Stay.

### 3.3 Methodology

This study employed six steps (Figure 1) for the methodology. The first step was data preparation and preliminary filtering based on the required retention and the filtering rule.

The next step was descriptive analytics on customer purchase. This was to answer research question 1 as to whether there was any impact on Customer Purchase Behavior due to channel integration. The descriptive analytics was done on Recharge (Regular Recharge) and Package Purchase (VAS Recharge) of Prepaid Customer before and after the channel integration.

The third step was segment filtering. This was to prepare the analytical base table that would be used for the cross-channel next best offer analytical model. The fourth step was the development and training of an analytical model. This was to answer research question 2 by developing the cross-channel next best offer (NBO) model/campaign. This model used three algorithms: (1) Package Repurchase Prediction; (2) Product Similarity; and (3) Collaborative Filtering.

The fifth step was model execution and onboarding/integration to sales channels: traditional, digital, self-service and assisted channels. The final step was the result and analysis.

## 4 RESULT AND DISCUSSION

### 4.1 Descriptive analytics on customer purchase/recharge behavior

Following the research methodology, descriptive analytics was performed on the 12-month customer purchase (represented by prepaid recharge/top-up and package purchase) transactions before and after the cut-over of channel integration which happened in the end of May 2020.

Declining trends was identified in Traditional Reseller channel after the cut-over of channel integration (as indicated in Figure 2). The number of transactions kept declining after May 2020 until December 2020. On the other hand, from tabular analysis, increasing/inclining patterns/trends were identified in the Digital Distributor and Digital Direct channels.

These declining and inclining trends indicated that there was customer channel preference shifting from Traditional Reseller to Digital Distributor and Digital Direct channels after the cross-channel integration milestone. The result was consistent when a deep dive analysis was performed using daily average transactions and customer path analysis. There was customer behavior change (channel preference shifting) after the cross-channel integration.

### 4.2 Predictive analytics on cross-channel next best offer model

The cross-channel next best offer (NBO) model aimed to address research question 2 on what should be done to stimulate customer spending after the channel integration.

After applying segmentation filtering using ARPU between IDR 70,000 and IDR 100,000, and also LOS more than 180 days, we proceeded to develop features from the following matrixes: (1) Package matrix; (2) User matrix; and (3) Package vs. User matrix. Using these features, the model was developed and trained through iterations using a data science kit named XGBoost (Extreme Gradient Boosting) until reaching the expected threshold (accuracy: 76% and F1 score: 89%).

After the model was quite stable, the model was then released to production and integrated to various channels. The integration was done to enable the real customer response toward the NBO recommendation. The NBO campaign/promotion was available/accessible through all channels and showed persistent campaign/promotion for individual customer.

The overall take up rate for six months was higher than 2% which is above the average campaign take up rate of a typical BTL (Below The Line) campaign. The performance in May 2021 slightly dropped since during that period there were several ATL (Above The Line) or mass campaigns due to Lebaran festivities, such as a Surprise Deal program. However, the trend was still higher than 2% take up rate, which demonstrated the good accuracy of the predictive model (Next Best Offer).

## 5 CONCLUSION, IMPLICATION, AND FUTURE RESEARCH

Based on the findings in the previous section, there were several conclusion points that can be withdrawn as follows: (1) Based on the descriptive analytics on customer purchase data before and after channel integration, there was significant customer purchase transaction shifting from Traditional Reseller Channel to Digital Channel (both Digital Distributor and Digital Direct) after the enablement of cross-channel integration in May 2020. (2) Having leveraged one of enabled channel integration type: Integrated Market Information, the Next Best Offer (NBO) model/campaign provided an Integrated Promotion across different channels. (3) Based on the actual campaign execution result for several months, the NBO campaign showed higher take up rate (greater than 2%) than typical Below The Line (BTL) campaign (take up rate around 1–2%).

There are management implications that we can consider: (1) Opportunity for management to migrate/shift the customer channel preference from less cost-effective channel (i.e., Traditional Indirect Channel) to more cost effective channel (i.e., Digital Direct Channel). (2) Anticipating the risk of unbalanced channel transactions since the customer channel preference becomes more fluid (i.e., during promotional program in one particular channel).

Considering some limitations of this study, several recommendations can be proposed for the future research: (1) Extending the research focus to cover the antecedence of customer purchase decision making in the environment of Cross-Channel Integration; and (2) Extending the customer segments to cover the postpaid customer segment for more holistic view of Channel Integration.

## REFERENCES

- Beck, N., & Rygl, D. (2015). Categorization of multiple channel retailing in Multi-, Cross-, and Omni-Channel Retailing for retailers and retailing. *Journal of Retailing and Consumer Services*, 27, 170–178. <https://doi.org/10.1016/j.jretconser.2015.08.001>
- Chaffey, D., & Ellis-Chadwick, F. (2016). *Digital Marketing Strategy, Implementation and Practice* (6th ed.). Pearson Education Limited.
- Delen, D., & Zolbanin, H. M. (2018). The analytics paradigm in business research. *Journal of Business Research*, 90(May), 186–195. <https://doi.org/10.1016/j.jbusres.2018.05.013>
- Herhausen, D., Miočević, D., Morgan, R. E., & Kleijnen, M. H. P. (2020). The digital marketing capabilities gap. *Industrial Marketing Management*, 90(August), 276–290. <https://doi.org/10.1016/j.indmarman.2020.07.022>
- Levy, M., Weitz, B. A., & Grewal, D. (2019). *Retailing Management* (10th Edition). McGraw-Hill Education.
- Mirzabeiki, V., & Saghir, S. S. (2020). From ambition to action: How to achieve integration in omni-channel? *Journal of Business Research*, 110 (January), 1–11. <https://doi.org/10.1016/j.jbusres.2019.12.028>
- Verhoef, P. C., Kannan, P. K., & Inman, J. J. (2015). From Multi-Channel Retailing to Omni-Channel Retailing. Introduction to the Special Issue on Multi-Channel Retailing. *Journal of Retailing*, 91(2), 174–181. <https://doi.org/10.1016/j.jretai.2015.02.005>

# Effects of work environment and job characteristics on the turnover intention of millennial generation in Indonesia: The mediating role of work engagement

M.R. Trisnursari & P.M. Desiana

*Faculty of Economics and Business, University of Indonesia, Indonesia*

**ABSTRACT:** This research aims to analyze the influence of work environment (WEV) and job characteristics (JC) on turnover intention (TI) with work engagement (WEG) as a mediating variable to the Indonesian millennial generation in the energy sector. It was motivated by the increasing number of millennial generation in various companies, and the sampling research used SPSS for descriptive and free analyses. In contrast, AMOS software was used for SEM analysis to obtain the hypothesis with: (1) the aspects of the WEG score, WEV, and JC on TI level as a measurement variable and (2) the composite score, as a latent variable.

## 1 INTRODUCTION

In this era of globalization, humans are involved in several advancements, development, and struggles since their needs are insatiable. This makes organizations attract and retain highly skilled personnel to their companies

The current workforce consists of the boomer generation, generation X, and millennial generation (De Meuse et al. 2010). The generation with the largest population is millennial generation, which is 33.75% of the total population of Indonesia (Kementerian Pemberdayaan Perempuan dan Perlindungan Anak & Badan Pusat Statistik Indonesia 2018). However, the increase in the millennial generation is accompanied by a higher turnover rate. For example, Deloitte (2018) conducted a Millennial Survey, which showed an increased turnover rate of 38%–43% from 2017 to 2018. In addition, the millennial generation has the lowest level of loyalty at 70.71%, compared to other generations (Hoole & Bonnema 2015). Also PWC (2012) did Millennial Survey, resulting in 48% actively looking for job opportunities, 42% open to job offers, 18% loyal. Therefore, it is necessary to determine the causes of turnover for the millennial generation. One of the causes of turnover intention (TI) in millennial generation is job characteristics (JC) (Hernaes & Vokic 2014), which positively affect work engagement (WEG) (Bakker & Albrecht 2018). Furthermore, the work environment (WEV) (Park & Guroy 2012) affects employees' WEG (Kwenin 2013). Other causes of TI in millennial generation are low WEG (Twenge 2010). Finally, WEG can be conceptualized as the antecedent of TI (Saks 2006). The research by Wan et al. (2018) analyzed those three causes with similar results. It is adaptation research with the newest object and theory which is carried out with limitations in the scope of the energy sector. The energy sector was selected because it was found that the millennial employee turnover rate was relatively high. In addition, it has decreased interest in work for millennial generation compared to other sectors (Sakernas Indonesia 2015).

## 2 LITERATURE REVIEW

TI is defined by Rogelberg (2007) as the desire of employees to leave the organization. When the alternative or option of work obtained has better prospects than the current job, an intention or desire to leave and move to a new job will automatically arise.

Schaufeli and Bakker (2002) defined WEG as a positive state of mind in which employees work with passion and dedication. The three essential aspects representing WEG are vigor, dedication, and absorption.

In the research conducted by Hackman and Oldham (1980), JC was interpreted as an understanding of the work. It understands the work results, measured by skill variety, task identity and significance, autonomy, and feedback.

According to Briner (2000), WEV is the sum of the relationships between employees and managers as well as the workplace environment. This includes the technical, human, and organizational environment, affecting employees physical and psychological well-being. According to Sirgy et al. (2001), WEV is related to Quality of Work Life (QWL), defined as employee satisfaction with various needs through resources, activities, and results from participation in the workplace.

## 3 RESEARCH METHODS

This is adaptation of the previous research by Wan et al. (2018), entitled Effects of work environment and job characteristics on the turnover intention of experienced nurses: The mediating role of work engagement in *The Journal of Advanced Nursing*. The research focuses on the motivational process and uses of the job demands-resources (JD-R) model by Bakker and Demerouti (2007) as a lens for linking the relationship between WEV, JC, WEG, and TI. The JD-R model and the previous research by Wan et al. (2018) explained that WEV positively affects the level WEG and TI negatively, but they are positively affected by JC. Therefore, WEG mediates the relationship of WEV and JC of TI.

The referenced literature and results showed that this research used seven hypotheses. The variables were tested using a Likert scale of 1-5 which means strongly disagree - strongly agree. Testing of the variable was conducted in an online survey. Meanwhile, purposive sampling was used to obtain the criteria for employees aged 20 to 40 years in energy sector companies, and the minimum target of respondents was 260. The data were processed by SPSS 26.0 (pre-test) and AMOS 26 (preliminary test) software.

Variable for TI as in the previous research by Wan et al. (2018), which is the measurement by Farh's TI scale (Farh et al. 1998) has 0.8 value of Cronbach's alpha. The variables for WEG, from the previous research by Wan et al. (2018), used the measurements by the Utrecht Work Engagement Scale (UWES) according to Schaufeli and Bakker (2003), which has 0.92 value of Cronbach's alpha. In addition, the variable for job characteristics, as in the previous research by Wan et al. (2018), used the Job Diagnostic Survey (JDS) by Hackman and Oldman (1980), which has 0.924 value of Cronbach's alpha on the literature questionnaire of 0.924. For WEV, the variable used was the reference from the research by Sirgy et al. (2001). The research discussed WEV and influenced QWL, which has a 0.78 value of Cronbach's alpha.

## 4 RESEARCH RESULT

The results of the validity test had a KMO value  $>0.5$ , a Barlett's test of sphericity value  $<0.05$ , and a factor loading value  $>0.5$ . The test was conducted based on indicators of the validity test by Hair et al. (2014), therefore, the indicators were declared valid. The reliability test showed that all the indicators have Cronbach's alpha values greater than 0.6 or  $>0.6$  and are declared reliable based on indicators from the reliability test by Hair et al. (2014). On the main test, the analysis results showed that all four variables' indicators are valid because they have SLF  $>0.5$  and are reliable since CR  $>0.7$  and AVE  $>0.5$ . Furthermore, the test analysis structural model (goodness of fit

measurement) had good fit results, therefore, the hypothesis is accepted with a significance level of 0.05. The relationship between variables will be significant when it fulfills the  $p\text{-value} < 0.05$  and  $cr > 1.96$  (Table 1).

Table 1. Hypothesis result.

Hypothesis	SLF	CR.	p-value	Result
H1: work engagement negatively affects turnover intention	-0.684	14.64	0	Accepted
H2: Work environment positively affects the level of work engagement	0.272	5.217	0	Accepted
H3: Job characteristics positively affects the level of work engagement	0.452	8.455	0	Accepted
H4: Work engagement mediates the relationship of work environment and turnover intention		4.885	0.00000103	Accepted
H5: work engagement mediates the relationship of job characteristics and turnover intention		7.307	0	Accepted
H6: Work environment negatively affects the level of turnover intention	-0.184	5.175	0	Accepted
H7: Job characteristics negatively affect the level of turnover intention	-0.196	5.14	0	Accepted

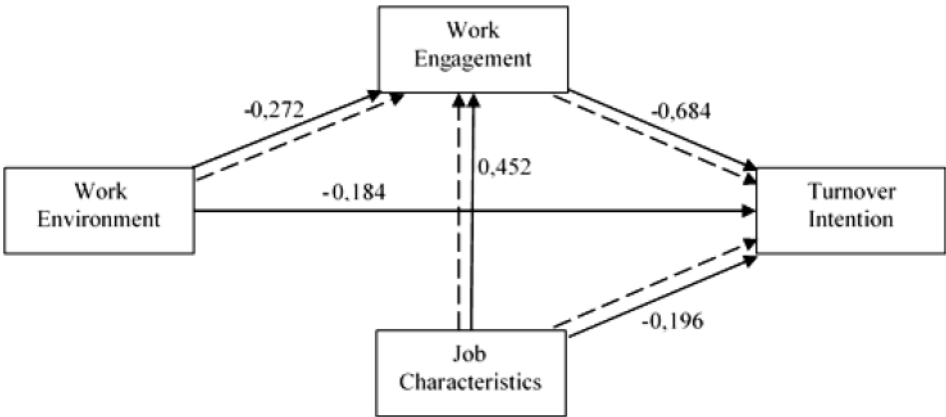


Figure 1. Research model.

### 5 CONCLUSION

In the millennial generation, WEV positively and significantly affects the level of WEG as well as negatively affects the level of TI in the Indonesian energy sector. A good and comfortable WEV will make employees work optimally. Therefore, WEV has an important role for millennial employees to make them more loyal and comfortable with the company.

JC positively and significantly affect WEG and negatively affect TI in the millennial generation. The opportunity to feel valued and the significance of an employee’s jobs influence the momentary perception of desiring to leave the company when they feel recognized.

WEG mediates the relationship of WEV and JC to TI in millennial generation. This research proves that when employees feel comfortable with their WEV and are happy with JC, they will feel more attached to their work. Furthermore, WEG has also been shown to negatively and significantly affect TI in the millennial generation. Therefore, it is proven to be conceptualized as an antecedent of TI because the higher level of employee WEG with the organization will lower TI.

## REFERENCES

- Badan Pusat Statistik. (2015). Survei Angkatan Kerja Nasional 2015. Retrieved 14 Juni, 2020, from <https://mikrodata.bps.go.id/mikrodata/index.php/catalog/SAKERNAS>
- Bakker, A.B, & Albrecht, S.L. (2018). Work engagement: current trends. *Career Development International*, 23(1), 4–11.
- Bakker, AB, & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Management Psychology*, 22, 309–328.
- Briner, RB. (2000). Relationships between work environments, psychological environments and psychological well-being: in-depth review. *Occup. Med.* 50(5), 299–303.
- Deloitte. (2018). Deloitte Millennial Survey. Retrieved July 28, 2020, from <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-2018-millennial-survey-report.pdf>
- De Meuse, Kenneth P, Mlodzik, Kevin J. (2010). A second look at generational differences in the workforce: implication for HR and talent management. *Korn/Ferry Leadership and Talent Consulting* 33(2): 51–58.
- Farh, JL, Tsui, AS, Xin, K., & Cheng, BS. (1998). The influence of relational demography and guanxi: The Chinese case. *Organization Science*, 9, 471–488.
- Hackman, J. R & Oldham, GR (1980). Work redesign and motivation. *Professional Psychology*, 11(3), 445–455.
- Hair, JF, Black, WC, Babin, BJ, & Anderson, RE (Eds.). (2014). *Multivariate data analysis* (7th ed). Harlow: Pearson.
- Hernaus, T., & Vokic, N. P. (2014). Work design for different generational cohorts: Determining common and idiosyncratic job characteristics. *Journal of Organizational Change Management*, 27(4), 615–641.
- Hoole, C. & Bonnema, J. (2015). Work engagement and meaningful work across generation cohorts. *SA Journal of Human Resources Management*. 13(1).
- Kementerian Pemberdayaan Perempuan dan Perlindungan Anak. (2018). Statistik Gender Tematik: Profil Generasi Milenial 2018. Retrieved 14 Juni, 2020, from <https://www.kemenpppa.go.id/lib/uploads/list/9acdebuku-profil-generasi-milenial.pdf>
- Kwenin, Daisy Ofosuhen. (2013). Relationship Between Work Environment, Career Development Opportunities and Employee Retention In Vodafone Ghana Limited. *Journal Of Human Resource Management*, 1 (4), pp: 1–9.
- Park, J., and Gursoy, D. (2012). Generation effects on work engagement among US hotel employees. *International Journal of Hospitality Management*, 31(4), 1195–1202.
- Pricewaterhouse Coopers. (2012): Millennials at work – Reshaping the workplace in financial services. Retrieved July 28 2020, from <https://www.pwc.com/gx/en/financial-services/publications/assets/pwc-millennials-at-work.pdf>
- Rogelberg, S. G. (2007). *Encyclopedia of industrial and organizational psychology*. California: Sage Publications.
- Saks, AM (2006). Antecedents and Consequences of Employee Engagement. *Journal of Managerial Psychology*, 21, 600–619.
- Schaufeli, W., & Bakker, A. (2003). Utrecht work engagement scale: Preliminary manual. Utrecht: Occupational Health Psychology Unit, Utrecht University.
- Sirgy, MJ, Efraty, D., Siegel, P., & Lee, D.-J. (2001). A new measure of quality of work life (QWL) based on need satisfaction and spillover theories. *Social Indicators Research*, 55(3), 241–302.
- Schaufeli, W., Salanova, M., Gonzalez-Roma, V. and Bakker, A. (2002). The Measurement of Engagement and Burnout: A Two Sample Confirmatory Factor Analytic Approach. *Journal of Happiness Studies*, 3, 71–92.
- Twenge, J. M., Campbell, S. M., Hoffman, B. J., & Lance, C. E. (2010). Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing. *Journal of Management*, 36(5), 1117–1142.
- Wan Q, Li Z, Zhou W, Shang S. (2018). Effects of work environment and job characteristics on the turnover intention of experienced nurses: The mediating role of work engagement. *J Adv Nurs*. 74:1332–1341.

# The impact of COVID-19 on investors' herding behavior in the ASEAN-5 stock market

M.R.D. Resindra & A.W. Lubis

*Faculty of Economics and Business, University of Indonesia, Indonesia*

**ABSTRACT:** This study aims to examine the impact of COVID-19 on investors' herding behavior in the ASEAN-5 stock markets. The sample includes organizations listed on the PSEi 30, STI 30, IDX 30, FTSE 30, and SET 50 indexes from March 11, 2020, to 2021. However, the results showed that investors' herding behavior occurs only in the Thailand but not in the Philippines, Singapore, Indonesia, and Malaysia stock markets during the pandemic. The increase in daily COVID-19 cases also affects herding behavior in the Thailand exchanges. Therefore, this study facilitates investors to devise their trading strategies in ASEAN-5 countries during the pandemic.

## 1 INTRODUCTION

On March 11, 2020, WHO officially declared COVID-19 as an outbreak because it trigger a public health emergency around the world (WHO 2020). Therefore, the government implements rules including school and workplace closures, social distancing measures, and travel restrictions with fiscal stimulus packages, aggressive monetary expansion, as well as other financial strategies that affect a country's market volatility (OECD 2021).

According to Maria et al. (2017), the rapid growth of ASEAN enables them to be more powerful than other regional organizations. On March 11, 2020, the GDP forecast showed that each of these 5 countries predicts a decline in response to the WHO announcement regarding the pandemic. Meanwhile, Thailand with the worst decline at  $-5.3\%$  shows that there is a financial crisis in these ASEAN-5 countries due to COVID-19. This crisis leads to a business cycle recession because a particular investor imitates others' decisions. The study of Schmitt and Westerhoff (2017) showed that stakeholders perform herding behavior while facing financial market anxiety to increase uncertainty.

## 2 LITERATURE REVIEW

Espinosa-Méndez and Arias (2021) used the covid-dummy CSAD with the following model to detect herding behavior in the stock market.

$$CSAD_t^{Covid} = \alpha + \gamma_1 D^{Covid} |R_{m,t}| + \gamma_2 (1 - D^{Covid}) |R_{m,t}| + \gamma_3 D^{Covid} (R_{m,t})^2 + \gamma_4 (1 - D^{Covid}) (R_{m,t})^2 + \varepsilon_t \quad (1)$$

Espinosa-Méndez and Arias (2021) showed that the pandemic affects herding behavior in the European and Australian stock markets.

However, the increase of COVID-19 cases and deaths affects investors' herding behavior because the information on it is always updated. Espinosa-Méndez and Arias (2021) develop a covid-dummy



CSAD model because of the daily growth of this pandemic. Also, Al-Awadhi et al. (2020) use the same variables to test COVID-19 impact on the Chinese stock market. The study of Albulescu (2021) examines the pandemic effect on the United States financial market.

H<sub>1A</sub>: Herding behavior occurs while there is a daily increase of COVID-19 cases on the ASEAN-5 stock market.

H<sub>1B</sub>: Herding behavior occurs while there is a daily increase of COVID-19 deaths on the ASEAN-5 stock market.

### 3 DATA AND METHODOLOGY

#### 3.1 Data

During the pandemic, herding behavior was detected using the Cross-Sectional Absolute Deviation method by Chang et al. (2000). This model was used for organization shares in the PSEi 30, STI 30, IDX 30, FTSE 30, and SET 50 indexes. Meanwhile, each index is selected due to large market capitalization and high liquidity. Data were collected using the daily stock and the rate of COVID-19 in ASEAN-5 countries from March 11, 2020, to 2021 (WHO 2020).

#### 3.2 Methodology

In the stock market, herding behavior is detected using the Cross-Sectional Absolute Deviation method by Chang et al. (2000) with the following formula.

$$CSAD_t = \frac{1}{N} \sum_{i=1}^N |R_{i,t} - R_{m,t}| \quad (2)$$

The following equation is used to detect herding behavior that was proposed by Chang et al. (2000).

$$CSAD_t = \alpha + \gamma_1 |R_{m,t}| + \gamma_2 (R_{m,t})^2 + \varepsilon_t \quad (3)$$

This study adopts the covid-dummy CSAD model from Espinosa-Méndez and Arias (2021). The  $D^{CovC}$  and  $D^{CovD}$  variables are used with a value of 1 and 0 for the increase of COVID-19 cases and deaths, respectively.

However, the following model is developed to detect herding behavior that occurs while daily cases and deaths increase.

$$\begin{aligned} CSAD_t^{CovC} = & \alpha + \gamma_1 D^{CovC} |R_{m,t}| + \gamma_2 (1 - D^{CovC}) |R_{m,t}| + \gamma_3 D^{CovC} (R_{m,t})^2 \\ & + \gamma_4 (1 - D^{CovC}) (R_{m,t})^2 + \varepsilon_t \end{aligned} \quad (4)$$

and

$$\begin{aligned} CSAD_t^{CovD} = & \alpha + \gamma_1 D^{CovD} |R_{m,t}| + \gamma_2 (1 - D^{CovD}) |R_{m,t}| + \gamma_3 D^{CovD} (R_{m,t})^2 \\ & + \gamma_4 (1 - D^{CovD}) (R_{m,t})^2 + \varepsilon_t \end{aligned} \quad (5)$$

The results showed that herding behavior is detected if the  $\gamma_3$  and  $\gamma_4$  coefficients are significant and negative. Meanwhile,  $\gamma_3$  indicates herding with a dummy value of 1, while  $\gamma_4$  shows it as 0. The negative and significant  $(R_{m,t})^2$  coefficient indicates that herding behavior occurs in the stock market to decrease the CSAD value.

#### 4 EMPIRICAL ANALYSIS

Table 1. Herding behavior during the COVID-19 pandemic.

Market	$\alpha$	$\gamma 1$	$\gamma 2$	Obs.	<i>R-Squared</i>
Philippines	0.012*** (0.001)	0.421*** (0.140)	0.226 (1.466)	242	0.385
Singapore	0.009*** (0.001)	0.272*** (0.087)	1.483 (1.493)	250	0.486
Indonesia	0.015*** (0.001)	0.298*** (0.072)	-0.614 (0.659)	242	0.225
Malaysia	0.012*** (0.001)	0.429*** (0.157)	2.199 (2.237)	244	0.226
Thailand	0.012*** (0.001)	0.484*** (0.095)	-2.407** (0.946)	242	0.406

Table 1 shows that there is no gathering during the pandemic in the Philippines, Singapore, Indonesia, and Malaysia because the  $\gamma 2$  value is not negative and significant. Meanwhile, there is a herding behavior in the Thailand stock market because it has a negative and significant  $\gamma 2$  value.

Table 2 shows that the  $\gamma 3$  value of COVID-19 cases on the Thailand stock market is negative but it is significant with an alpha of 1%. This means there is herding behavior while there is an

Table 2. Herding behavior during the COVID-19 pandemic.

	Panel: Philippines		Panel: Singapore		Panel: Indonesia	
	Cases	Death	Cases	Death	Cases	Death
$\alpha$	0.013 (0.001)	0.013 (0.001)	0.009 (0.001)	0.009 (0.001)	0.014 (0.001)	0.014 (0.001)
$\gamma 1$	0.280*** (0.105)	0.363** (0.182)	0.284*** (0.089)	0.503 (0.510)	0.382*** (0.118)	0.405** (0.168)
$\gamma 2$	0.407*** (0.122)	0.345*** (0.105)	0.227*** (0.086)	0.274*** (0.088)	0.445*** (0.141)	0.390*** (0.110)
$\gamma 3$	4.226* (2.396)	2.320 (2.582)	0.608 (1.412)	-9.990 (26.138)	-3.423 (2.192)	-1.080 (1.147)
$\gamma 4$	-0.049 (1.178)	0.516 (0.855)	3.394 (2.176)	1.474 (1.513)	-1.328 (0.977)	-3.323 (2.095)
Obs.	242	242	250	250	242	242
R-Squared	0.396	0.394	0.501	0.487	0.270	0.254

	Panel: Malaysia		Panel: Thailand	
	Cases	Death	Cases	Death
$\alpha$	0.013 (0.001)	0.012 (0.001)	0.012 (0.001)	0.012 (0.001)
$\gamma 1$	-0.144 (0.280)	-0.029 (0.296)	0.573 (0.119)	0.462*** (0.145)
$\gamma 2$	0.298* (0.157)	0.421* (0.150)	0.395 (0.086)	0.449 (0.097)
$\gamma 3$	38.206** (15.945)	26.469 (24.095)	-3.501*** (1.046)	0.232 (3.965)
$\gamma 4$	3.500 (2.265)	2.045 (2.215)	-1.243 (0.969)	-2.112** (0.985)
Obs.	244	244	242	242
R-Squared	0.253	0.239	0.422	0.414

Standard Errors in brackets. \*\*\*p < 0.01, \*\* p < 0.05, \* p < 0.1

increment of the pandemic cases. Meanwhile, the  $\gamma_3$  value of COVID-19 deaths on the Thailand stock market is positive and not significant. This means that there is no indication of herding behavior while there is an increment of pandemic deaths. However, herding behavior is detected if COVID-dummy is 0 because the  $\gamma_4$  value is negative and significant.

## 5 CONCLUSION AND MANAGERIAL IMPLICATION

This study shows that there is herding behavior in Thailand but not in the Philippines, Singapore, Indonesia, and Malaysia stock markets during the pandemic. This study shows empirical evidence that herding behavior occur during the increase of COVID-19 daily cases. Meanwhile, this is in line with the CSAD model by Chang et al. (2000) and the covid-dummy by Espinosa-Méndez and Arias (2021). This study examines how the daily increase of COVID-19 cases and deaths affect the ASEAN-5 stock market.

In conclusion, this study facilitates investors to evaluate and design their trading strategies in ASEAN-5 countries during the pandemic. Therefore, stakeholders need to pay attention to information on the daily increase of COVID-19 cases while investing in the Thailand stock market.

## REFERENCES

- Al-Awadhi, A. M., Alsaifi, K., Al-Awadhi, A. & Alhammadi, S. 2020. Death and contagious infectious diseases: Impact of the COVID-19 virus on stock market returns. *Journal of Behavioral and Experimental Finance* 27: 100326. <https://doi.org/10.1016/j.jbef.2020.100326>
- Albulescu, C. T. 2021. COVID-19 and the United States financial markets' volatility. *Finance Research Letters* 38(March): 101699. <https://doi.org/10.1016/j.frl.2020.101699>
- Chang, E. C., Cheng, J. W. & Khorana, A. 2000. An examination of herd behavior in equity markets: An international perspective. *Journal of Banking and Finance*. [https://doi.org/10.1016/S0378-4266\(99\)00096-5](https://doi.org/10.1016/S0378-4266(99)00096-5)
- Christie, W. G. & Huang, R. D. 1995. Following the Pied Piper: Do Individual Returns Herd around the Market? *Financial Analysts Journal*. <https://doi.org/10.2469/faj.v51.n4.1918>
- Espinosa-Méndez, C. & Arias, J. 2020. Herding Behaviour in Australian stock market: Evidence on COVID-19 effect. *Applied Economics Letters* 00(00): 1–4. <https://doi.org/10.1080/13504851.2020.1854659>
- Espinosa-Méndez, C. & Arias, J. 2021. *COVID-19 effect on herding behaviour in European capital markets* 38(August 2020): 1–6. <https://doi.org/10.1016/j.frl.2020.101787>
- Maria, R. S., Urata, S. & Intal Jr, P. S. 2017. The ASEAN Economic Community Into 2025 and Beyond. In *The ASEAN Economic Community Into 2025 and Beyond* (Vol 5). [https://www.eria.org/ASEAN\\_50\\_Vol\\_5\\_Complete\\_Book.pdf](https://www.eria.org/ASEAN_50_Vol_5_Complete_Book.pdf)
- OECD. 2020. COVID-19 crisis response in ASEAN Member states. *Oecd* (May): 1–13. <http://www.oecd.org/coronavirus/policy-responses/covid-19-crisis-response-in-asean-member-states-02f828a2/?fbclid=IwAR0QcY-BKud-JcAQkey2Uo7dMPrVDnxutCgXdwel3TUnvHIK3FOAnVXlg>
- OECD. 2021. *The impact of the coronavirus (COVID-19) crisis on development finance*. [https://read.oecd-ilibrary.org/view/?ref=134\\_134569-xn1go1i113&title=The-impact-of-the-coronavirus-\(COVID-19\)-crisis-on-development-finance&\\_ga=2.135636721.1960889434.1633653942-1959362121.1633513687](https://read.oecd-ilibrary.org/view/?ref=134_134569-xn1go1i113&title=The-impact-of-the-coronavirus-(COVID-19)-crisis-on-development-finance&_ga=2.135636721.1960889434.1633653942-1959362121.1633513687)
- Schmitt, N. & Westerhoff, F. 2017. Herding behaviour and volatility clustering in financial markets. *Quantitative Finance*. <https://doi.org/10.1080/14697688.2016.1267391>
- WHO. 2020. *Coronavirus (COVID-19) events as they happen*. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen>.

# Assessing the impact of transformational leadership, overall justice on individual readiness for change through perceived organizational support: Test of moderating role of perceived organizational competence

M.N.S. Kuncoro & R. Rachmawati

*Master of Management, Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** Readiness for change is one of the success elements for a change. The goal of this study is to see how transformational leadership, overall justice, perceived organizational support and perceived organizational competence affect individual readiness for change. The participants in this study were government employees (N = 542) who are experiencing major organizational restructuring. CFA analysis was utilized to examine the appropriateness of the study model. Hayes (2018) method was used to determine the perceived organizational support mediation impact and the moderating effect of perceived organizational competence. According to the findings, perceived organizational support fully mediates the relationship between transformational leadership and individual readiness for change. Aside from that, perceived organizational support fully mediates the impact of overall justice on individual readiness for change. Another finding was perceived organizational competence operates as a mediated moderation between overall justice and transformational leadership on readiness for change through perceived organizational support.

## 1 INTRODUCTION

Various problems related to change readiness can be seen from the decline in performance or resistance to change (Srivastava & Agrawal 2020). Low employee flexibility in dealing with change can hinder the success of change (Barak 2018). Failure to implement change can also be caused by attitudes/behavior of employees/employees towards change, especially resistance to change (Rafferty et al. 2013). Readiness for change (RFC) is defined as the extent to which individuals cognitively and emotionally accept and adapt to change and actually aim to change the current situation (Holt et al. 2007). If an employee's readiness for change is high, the employee will easily adapt to changes in the organization. Individual/employee readiness is a very decisive factor in changing process. This study aims to determine the impact of transformational leadership, overall justice and perceived organizational support on readiness for change with perceived organizational competence as a mediated moderation variable.

## 2 LITERATURE REVIEW AND HYPOTHESIS

Readiness for change is influenced by overall justice through the mediating role of perceived organizational support (Arneguy et al. 2018).

H1: Overall justice (OJ) has a positive effect on perceived organizational support (POS), the effect is significant.

H3a: Perceived organizational support (POS) fully mediates the relationship between overall justice (OJ) and readiness for change (RFC).

Suifan et al. (2017) found that transformational leadership influences employees creativity through perceived organizational support.

H2: Transformational leadership (TRS) has a positive effect on perceived organizational support (POS), the effect is significant.

H3b: Perceived organizational support (POS) fully mediates the relationship between transformational leadership (TRS) and readiness for change (RFC).

Arneguy et al. (2020) and Kim et al. (2016) found that perceived organizational competence (POC) moderates the relationship between perceived organizational support (POS) and the outcomes (POS-outcomes).

H4a: Perceived organizational competence (POC) moderates the relationship between overall justice (OJ) and readiness for change (RFC) through perceived organizational support (POS).

H4b: Perceived organizational competence (POC) moderates the relationship between transformational leadership (TRS) and readiness for change (RFC) through perceived organizational support (POS).

### 3 RESEARCH METHOD

The data needed in this study were collected through a survey. The survey was conducted using a questionnaire containing structured questions to find out the information needed in research. The surveys distributed used a Likert scale (1 to 7). Employees who can take part in the survey are (1) employees who experience the process of organizational structure change; and (2) employees who have received information related to organizational structure change. In this study, it was assumed that all customs officers (population) have received information about organization change. Therefore, the total population of this study is 16,311. Based on the total population, the required sample/target sample is 377 respondents (Sekaran & Bougie 2016). The total sample that was collected was 542 (quota sampling).

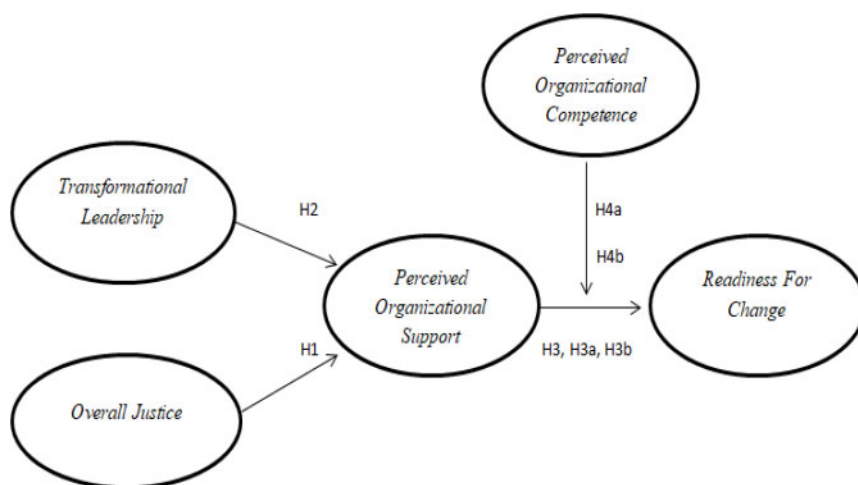


Figure 1. Study model.

The survey consisted of 25 questions to measure RFC (Holt et al. 2007), 12 questions to measure TRS (Kirkbride 2006), six questions to measure OJ (Ambrose & Schminke 2009), 16 questions to measure POS (Eisenberger et al. 1996), and six questions to measure POC (Kim et al. 2016). The structural model was analyzed by lisrel 8.8 while the mediated moderation was analyzed by spss macro command set model 14 (Hayes 2018).

## 4 RESULTS

The results of the validity analysis (SLF and T values) and reliability analysis (CR and AVE) showed that there were 2, 2, and 1 invalid RFC, POS, and OJ indicators. Therefore these five items were not included in the structural model analysis. The final model (5 factors model) is the best with other models (1 to 4 factors model). The goodness of fit of the final model is as follows RMSEA: 0.05, GFI: 0.90, SRMR: 0.04, NFI: 0.98, NNFI: 0.99, CFI: 0.99, IFI: 0.99, RFI: 0.98.

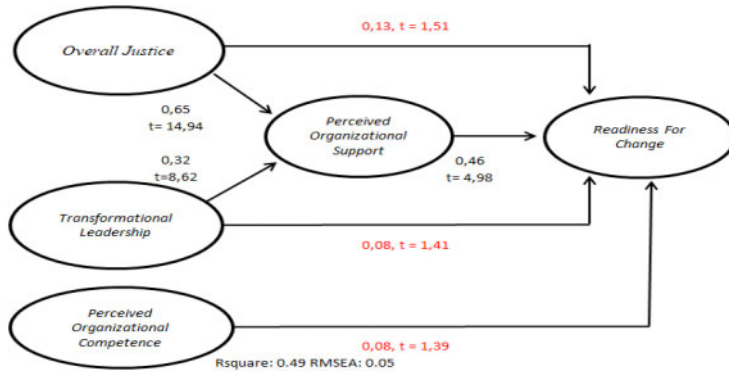


Figure 2. Structural model.

Figure 2 shows that OJ affects POS (SLF: 0.65, T values: 14.94), therefore H1 is accepted. Moreover H2 is accepted due to the TRS influence POS (SLF: 0.32, T values: 8.62). Figure 2 shows that H3 is accepted because POS affects RFC (SLF: 0.46, T values: 4.98).

POS mediation analysis was carried out through the output of lisrel 8.8 as well as the structural model. Three factor model (OJ, TRS, RFC) was carried out (controlling POS), the results showed that TRS affected RFC (SLF: 0.28; T Values: 5.52), OJ affected RFC (SLF: 0.45; T Values: 8.29). The three factor model (Rsquare: 0.42 and RMSEA: 0.064,) was less fit than the five-factor model (Rsquare: 0.49, RMSEA: 0.05). The results of the five factor model analysis (Figure 2) show that by including POS into the model, the effect of TRS on RFC and OJ on RFC becomes insignificant. Mediation analysis using SPSS Macro showed that the mediating effect of POS on the relationship between OJ and RFC was significant (Effect: 0.23, BootSE: 0.03; LLCI: 0.17; ULCI: 0.29) which is supporting H3a. The effect of POS on the relationship between TRS and RFC is also significant (Effect 0.32; BootSE: 0.04; LLCI: 0.25; ULCI: 0.39) which is supporting H3b.

Mediated moderation was carried out using the SPSS macro command set model 14. The results of the analysis showed that POC moderated the POS-outcome (RFC) relationship at each POC level. Mediated moderation effect at low level of POC (-1SD) is: 0.16; SE: 0.04; LLCI: 0.09; ULCI: 0.23, moderate level of POC (mean) is: 0.2; SE: 0.03; LLCI: 0.09; ULCI: 0.14; and at high level of POC (+1SD) is: 0.23; SE: 0.03; LLCI: 0.17; ULCI: 0.3. Therefore H4a and H4b are accepted.

## 5 DISCUSSION, THEORETICAL AND MANAGERIAL IMPLICATION, AND CONCLUSION

We found that leaders who have transformational leadership characters have a positive effect on perceived organizational support, the effect is significant. This finding is in line with Suifan et al. (2017) regarding the effect of transformational leadership on perceived organizational support.

This study is an additional reference regarding the results of research from Arneguy et al. (2020) and Kim et al. (2016) regarding the mediated moderation role of POC on POS-outcome. However,

in this study, the impact of the mediated moderation role of POC was valid and significant in all three value categories (low, moderate, high). Meanwhile, according to research (Arneguy et al. 2020) the effect of moderation is only significant in the category of high POC scores (+1SD).

The role of POS is very central in organizational support theory. Examining the role of POS in mediating OJ and TRS adds to empirical references regarding the role of perceived organizational support.

## REFERENCES

- Ambrose, M. L., & Schminke, M. (2009). The Role of Overall Justice Judgments in Organizational Justice Research: a Test of Mediation. *Journal Applied Psychology*, 94, 491–500.
- Arneguy, E., Ohana, M., & Stinglhamber, F. (2018). Organization Justice and Readiness for Change a Concomitant Examination of the Mediating Role of Perceived Organizational Support and Identification. *Frontiers in Psychology*, 1–13.
- Arneguy, E., Ohana, M., & Stinglhamber, F. (2020). Overall Justice, Perceived Organizational Support and Readiness for Change: The Moderating Role of Perceived Organizational Competence. *Journal of Organizational Change Management*, 33(5), 1–13.
- Eisenberger, R., & Huntington, R. (1986). Perceived Organizational Support. *Journal of Applied Psychology*, 71(3), 500–507.
- Hayes, A. F. (2018). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression Based Approach*. New York: Guilford Press.
- Holt, D. T., Armenakis, A. A., Feild, H. S., & Harris, S. G. (2007). Readiness For Organizational Change: The Systematic Development of a Scale. *Journal Of Applied Behavioral Science*, 232–255.
- Kim, K. Y., Eisenberger, R., & Baik, K. (2016). Perceived organizational support and affective organizational commitment: Moderating influence of perceived organizational competence. *Journal of Organizational Behavior*, 558–583.
- Kirkbride, P. (2006). Developing transformational leaders: the full range leadership model in action. *Industrial and Commercial Training*, 38(1), 23–32.
- Rafferty, A. E., Jimmieson, N. L., & Armenakis, A. A. (2013). Change readiness: a multilevel review. *Journal of Management*, 87(4), 698–714.
- Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill Building Approach*, Seventh Edition. Chichester: John Wiley & Sons.
- Srivastava, S., & Agrawal, S. (2020). Resistance to change and turnover intention: a moderated mediation model of burnout and perceived organizational support. *Journal of Organizational Change*, 1–17.
- Suifan, T. S., Abdallah, A. B., & Janini, M. A. (2017). The impact of transformational leadership on employees creativity The mediating role of perceived organizational support. *Management Research Review*, 113–131.

## Dimensions of Islamic business coaches' role: A second order confirmatory factor analysis (CFA)

M. Sholahuddin

*Management, Faculty of Economics & Business, Universitas Muhammadiyah*

M.A. Abdullah, M.N. Barom & I.N. Tahir

*kulliyah of Economics and Management Sciences, International Islamic University of Malaysia*

Wiyadi

*Magister of Management, Faculty of Economics & Business, Universitas Muhammadiyah*

**ABSTRACT:** Business coaching is believed to be an alternative method of helping entrepreneurs to achieve their goals. Among the keys to successful business coaching is the role of a business coach. Measuring the Islamic business coach's role questionnaire using second order Confirmatory Factor Analysis (CFA) supports the process of coaching small businesses. This paper expounds on this questionnaire as comprising the Islamic business coach's role dimensions using CFA to examine the validity and reliability of the instrument for the success of Islamic business coaching in Indonesia. The data was from a sample of 150 small businesses who engage Islamic business coaching in Central Java, Indonesia. The Islamic business coach's role questionnaire is a 7-point Likert-scale survey consisting of 16 items which each dimensions are 4 items. The validity and reliability of the Islamic business coach's role questionnaire were tested with second order CFA using AMOS version 23. Second order confirmatory factor analysis techniques were used on the hypothesised model with four latent variables of business coaches' role, namely listener, sounding board, adviser, and spiritual motivator. The result reveals that the goodness-of-fit indices are adequate with the hypothesised model using the fit indices criteria. Each indicator was proven valid and reliable. It means that all indicators are accepted to measure business coach's role. In conclusion, business coaches enable Islamic business coaching success. The findings will benefit Islamic business coaches in designing an Islamic business coaching framework.

### 1 INTRODUCTION

There are many important roles for business coaches within a company, for example, advancing workforce, learning and development, responding to changes in entrepreneurial schedules, or improving skills for certain tasks (Pavlič & Heričko 2018). There were eight trainers who took part in training programs using action learning methods organized by government agencies. Sullivan (2012) found that participants could not receive knowledge in the learning process effectively because of work pressure. So, coaches must be flexible in their approach. Business coaches must be empathetic, convey understanding in non-judgmental ways and listen to small business problems. The most important characteristic for a coach is listening to his client well and asking questions in a non-judgmental way, but being a technical expert is not a requirement for a coach (Altopiedi & García 2020). In some cases, business coaches must take an approach that focuses on solutions using structured questions to find themselves and small businesses must have the ability to see their problems as opportunities for learning (Korotov 2021). Some studies claim that religiosity has a positive influence on the performance of small businesses (Wu & Parkvithee 2017). This also applies in the context of Islamic Business Coaching (IBC) because religious values are included



in business performance. Although the IBC has been around for more than a decade in Indonesia, no specific study has been found on Islamic business coaches' role in Islamic business coaching in Indonesia.

## 2 METHODOLOGY OF THE STUDY

### 2.1 *Sample and Data Collection*

In this study there were 150 Islamic business coachees in Indonesia as respondents obtained using purposive sampling techniques, with the following criteria: (1) The supervisors have been involved in IBC; (2) at least 1 (one) year is involved in training; (3) all respondents are small businesses. The technique is used to meet the research objectives in knowing the impact of IBC on the performance of small businesses by considering business owners or small business managers in the cities of Yogyakarta, Solo and Semarang.

The 'drop-off and collect' technique is used where the researcher submits the questionnaire once the respondent completes it. This study uses a measurement scale 1–7. There are some reasons for using this scale. First, it is easier to understand because no special training is needed. Second, the ratings are, for the most part, very good in terms of reliability, consistency and strong validity (Dali et al. 2019).

This analysis was used to test the measurement model and determine whether the indicators were able to explain a construct (Santoso 2018). By performing CFA, an indicator was considered not strongly influential or can explain a construct. Exogenous construct validity test is performed by looking at the value of each loading factor in an exogenous construct. In this test, the indicator is valid if it has a loading factor of  $>0.5$ . The exogenous construct reliability test is performed by calculating the AVE and CR values of the exogenous construct. In this test, the exogenous construct is declared reliable if the AVE model is  $>0.5$  and the CR model is  $>0.7$ . The feasibility test of an exogenous construct measurement model is used to test the feasibility of the model to test the validity and reliability of the exogenous construct.

## 3 FINDING OF THE STUDY

The results should be validated and generalised by using the confirmatory factor analysis method (CFA). This CFA model focuses on the extent to which the underlying latent variables generated these observed variables. The strength of all regression paths of all these factors towards all variables observed directly (regression coefficient/factor loadings) was the focus of the analysis. Figure 1 presents the CFA results of the business coach's role construct, as follows:

Analysis began with the development of structural models. However, it was previously seen that the appropriateness of the suitability of the research model was used to test the level of goodness-of-fit from the research model. The results of the suitability test of the model above showed that the majority of the goodness-of-fit criteria was fit so that the analysis of the model was feasible to be continued in the subsequent analysis. By looking at each factor's loading value, the value of the loading factor was used as a benchmark that the latent extract was a construct that explains or strengthens the indicator. Also, the reliability of each construct would be tested using construct reliability.

The results of testing the CFA model, it was found that the items from the business coach's variable was Islamic business coaches roles consisting of 16 items which obtained the loading factor  $\geq 0.40$ . Thus, it could be interpreted that the 16 items were declared valid and could be used for further analysis based on a composite reliability value of 0.97244 (Islamic-based) and extracted variance (VE) of 0.520 (Islamic-based). From the calculation results, variables had composite reliability values  $>0.7$  and extracted variance values  $>0.5$ . This showed that the items/indicators for Islamic business role coach variables had high-reliability values. It means that the 16 items/indicators that

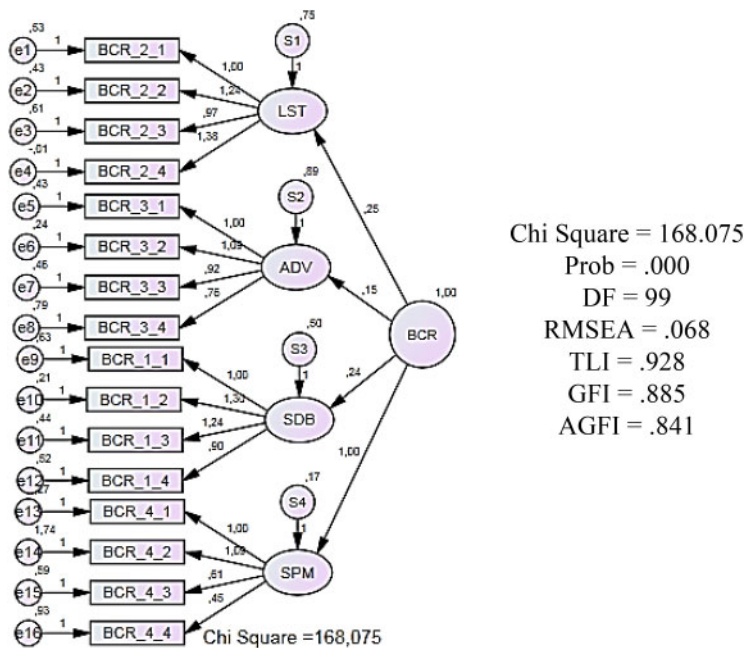


Figure 1. Confirmatory factor analysis for business Coaches' role construct.

formed had a good level of reliability for measuring business coach's role variables. To prove the four constructs/dimensions of the board, listener, adviser and spiritual motivator forming the business coach's role could be seen in the following results:

Based on the results in Table 1, the estimated results in each dimension of the business coach's role were obtained to see how much influence each dimension had on the forming factor of a business coach. The dimensions of the variables were Islamic business coach roles, where each dimension of the CR value obtained > 1.96 with a P-value (P-value) < 0.05. It could be concluded that Islamic business coach's role in all dimensions were a strong forming factor.

Table 1. Estimate variable business Coach's role construct.

Relationship				C.R.	P	Results
Islamic-based	LST	<---	BCR	3.165	0.004	Significant
	SDB	<---	BCR	3.230	0.001	Significant
	ADV	<---	BCR	2.815	0.015	Significant
	SPM	<---	BCR	2.750	0.023	Significant

Note: BCR=Business Coach's Role;  
 LST= Listener  
 SDB=Sounding board

ADV=Adviser;  
 SPM=Spiritual Motivator  
 C.R = Composite Reliability

P=Probability

#### 4 CONCLUSION

This paper supports that business coaches play multiple roles, thereby rendering (BCR) as a multidimensional construct. It concludes BCR to listener, BCR to sounding board, BCR to Advising,

and BCR to spiritual motivator relationships. BCR has positive loadings as determined through rigorous statistical analyses. The results support Crompton's (2012) the integrated conceptualization of business coaches' roles. These results empirically validate the adapted business coaches' role items with a high probability of being applicable to other country settings. The validated constitute measures to evaluate and assess the level to which business coaches perform their roles to listen, advise, and motivate their clients. These roles would support researchers by identifying the factors that influence the success of the business coaches' role from an Islamic business coaching perspective.

The questionnaire could be used to model the relationship between Islamic and conventional business coaching. Studies could cross-validate the items based on a different sample to support their use as factors that influence Islamic business coaching. The use of convergent and discriminant validity in this paper could be expanded. This would help examine the adequacy of the multidimensionality structure of a construct by associating the different item scores moderately with the distribution scores on the item scale.

The paper presented how Islamic business coaching adds value to Muslim businesses in the context of Indonesia. The items it used as measures could be regarded as a second order construct with four variable solutions. The model fit with the data thereby lending support for the theoretical expansion of the model.

## REFERENCES

- Altropiedi, M., & García, A. B. (2020). The role of coaching in the training of principals: Analysis of a specific program. *Educar*, 56(1), 183–199. <https://doi.org/10.5565/REV/EDUCAR.1055>
- Korotov, K. (2021). Executives and career shocks: observations from coaching practice. *Career Development International*, 26(4), 582–595. <https://doi.org/10.1108/CDI-11-2020-0303>
- Mohd Dali, N. R. S., Yousafzai, S., & Abdul Hamid, H. (2019). Religiosity scale development. *Journal of Islamic Marketing*, 10(1), 227–248. <https://doi.org/10.1108/JIMA-11-2016-0087>
- Pavlič, L., & Heričko, M. (2018). Agile coaching: The knowledge management perspective. In *Communications in Computer and Information Science* (Vol. 877, pp. 60–70). [https://doi.org/10.1007/978-3-319-95204-8\\_6](https://doi.org/10.1007/978-3-319-95204-8_6)
- Sullivan, P., Paquette, K. J., Holt, N. L., & Bloom, G. A. (2012). The relation of coaching context and coach education to coaching efficacy and perceived leadership behaviors in youth sport. *Sport Psychologist*, 26(1), 122–134. <https://doi.org/10.1123/tsp.26.1.122>
- Wu, W., & Parkvithee, N. (2017). Promoting International Competitiveness for Small and Mediumsized Enterprises: A Case Study of Chinese Small and Mediumsized Enterprises in Thailand. *International Review of Management and Marketing*, 7(3), 320–330. <https://search.proquest.com/openview/5459fb7cfad1accd3129ed5e5359eabe/1?pq-origsite=gscholar&cbl=816339>

## Transparent communication, transformational leadership, public sector employees' openness to change, and the role of anxiety as mediator

M. Frima & N. Ardiyanti

*Master of Management Program, Universitas Indonesia, Indonesia*

**ABSTRACT:** This study analyzes the impact of transparent communication and transformational leadership on public sector employees' anxiety and openness to change using questionnaires collected from 220 civil servants in 34 ministries across Indonesia. This study was conducted because research that employs anxiety in determining employees' openness to change is scarce. This study found that transparent communication and openness to change have a direct and significant positive relationship. The association between transformational leadership and openness to change also has the same result. Anxiety also has a direct negative significant relationship on openness to change. As a mediator, anxiety has a negative insignificant influence on bridging the gap between openness to change, transformational leadership, and transparent communication. Theoretical and practical ramifications are examined further.

### 1 INTRODUCTION

Since the beginning of 2020, Indonesia's public sector has implemented organizational change, which is the equalization of structural positions to functional positions. This is the most significant organizational change in Indonesia's public sector to date. Organizations also need to consider the response of those affected by the change, whether they welcome or are against it.

Although transparent communication is critical in organizational change, it is still being developed (Johansson & Heide 2008). It is important to understand the upcoming changes and how they will affect the organization (Wanberg & Banas 2000). Information is more valuable than no knowledge even if it highlights the negative elements (Miller & Monge 1985). By minimizing employees' concerns, useful information will encourage them to participate in the change (Miller et al. 1994). It should be noted that organizations cannot give meaningful and relevant information that employees need unless they discuss it with their employees (Yue et al. 2019).

Transformational leadership is required to achieve favorable results in organizational change. Furthermore, transformational leadership is intended to change the mindset from the previous style of working to achieve the goal of equating structural and functional positions.

Organizational change allows a sense of uncertainty to form, both about the motivations for change, the process and execution, and potential outcomes for the organization and individuals (Bordia et al. 2004). Because the change is enormous, uncertainty becomes the major factor in terms of equalizing position. Employees must be able to adjust and remove their old mindsets and habits. These diverse concerns might lead to anxiety that could influence their responses to changes.

### 2 LITERATURE REVIEW

Miller et al. (1994) defines openness to change as the willingness of an employee to support change and positive influence of the repercussions of the possible change. Wanberg and Banas (2000) proposed a new definition of openness to change that focuses on amenability to receive change.

Anxiety is a fundamental component in Miller et al. (1994) theoretical model of factors influencing attitudes toward change. Miller and Monge (1985) found that anxiety can be influenced by information, needs, and job level in organizational change.

Transparent communication is considered an ideal attribute of internal communication (Men & Stacks 2014). Several studies have employed transparent communication to analyze openness to change and have found the importance of transparent communication in the successful implementation of change (Li et al. 2021; Yue et al. 2019).

Transformational leadership is a predictor of employee reactions to change and is important in organizational change. Transformational leadership behavior could reduce employee skepticism about organizational change (Bommer et al. 2005). It also has a favorable connection with a commitment to change, openness to change, and preparedness for change (Peng et al. 2021).

Based on the explanations above, the research model (Figure 1) and hypotheses proposed in this study are as follows:

H1 : Anxiety during organizational change will negatively affect employees' openness to change

H2, H4 : Transparent communication and transformational leadership during organizational change will positively affect employees' openness to change

H3a, H5a : Transparent communication and transformational leadership will negatively affect employees' anxiety

H3b, H5b : Anxiety plays a role as a mediator in connecting both transparent communication and transformational leadership towards employees' openness to change

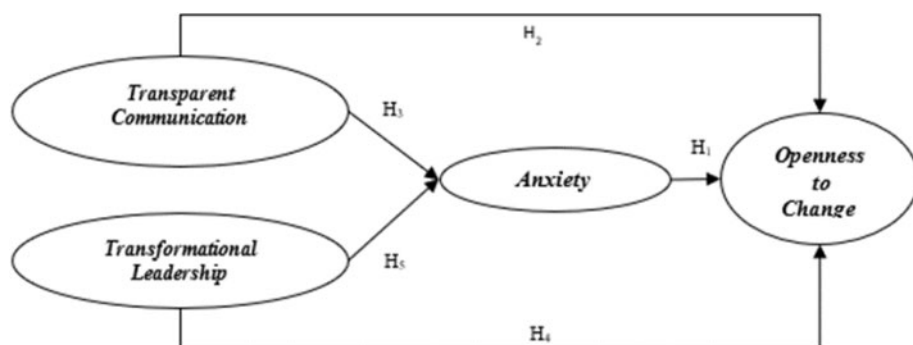


Figure 1. Research model.

### 3 METHODS

This study employs a quantitative technique. Primary data were obtained using Google Forms to collect survey results from participants. Civil servants who work in the public sector are the majority of the population. They work in ministries, state agencies, and local governments. Considering that ministries are the first to undertake organizational reform, this study only used the data collected from civil servants who work in ministries for sampling. The sampling method used in this study is convenience sampling. The Likert scale used for a dependent, mediating, and independent variables is a 6-point scale. As for questionnaire items, Transparent Communication (TC) items are adapted from Yue et al. (2019). TC consists of three dimensions with a total of 10 items (TC1=6 items, TC2=6 items, TC3=4 items). Transformational Leadership (TL) items are taken from Yue et al. (2019), which was also employed by Li et al. (2021). The variable consists of four dimensions (TL1=2 items, TL2=3 items; TL3=3 items, TL4=4 items). Openness to Change (OC) is adapted from Miller et al. (1994). On the other hand, there are four items for OC. Anxiety (ANX) items are adapted from Miller and Monge (1985) that consists of three items. All data were analyzed using structural equation modeling (SEM). SPSS 25 and Lisrel 8.8 were used for data analysis.

#### 4 RESULTS AND DISCUSSION

Based on data gathered from 220 respondents, 70% of them are staff. The majority of respondents' ages are ranged from 27–35 years old (58.18%). Respondents with undergraduate educational backgrounds dominate the data (65.45%). Most of the respondents' tenure is 3–10 years (50.45%). Participants are mostly from the Ministry of Public Works and Housing (33.64%) and followed by the Ministry of Finance (33.18%) among the 34 ministries.

Most indicators, except for TC32 (“The company is forthcoming with information that might be damaging to the organization during the change”) and ANX2 (“I am not concerned about working in a work team”), are valid. TC32 has an SFL lower than 0.5 and that affects the reliability of dimension TC3 (VE=0.465). Therefore, it is excluded from the TC model. As for ANX2, even though its SFL is below 0.5, it still can be considered reliable. Because reliability is a part of convergent validity and also the three-indicator rule (Hair et al. 2010), ANX2 is still included. The final model is shown to be a good fit (RMSEA=0.061, RMR=0.062, GFI=0.93, TLI=0.98, NFI=0.97, AGFI=0.89) and can be used for the hypothesis test. The result of the hypothesis test using Lisrel, including mediating variable analysis using the Sobel test, can be seen in Table 1 and Table 2.

Table 1. Path diagram result of the structural model.

Path	SFL	T-value	Conclusion
ANX – OC	–0.21	–3.20	Supporting H1 (T-value $\geq 1.64$ )
TC – OC	0.45	4.38	Supporting H2 (T-value $\geq 1.64$ )
TC – ANX	–0.02	–0.17	Rejecting H3a (T-value $\leq 1.64$ )
TL – OC	0.23	2.44	Supporting H4 (T-value $\geq 1.64$ )
TL – ANX	–0.05	–0.46	Rejecting H5a (T-value $\leq 1.64$ )

Source: Lisrel output

Table 2. Sobel test result for mediating variable.

Path	z-value	Conclusion
TC – ANX – OC	0.1815	Rejecting H3b (z-value $\leq 1.64$ )
TL – ANX – OC	0.4368	Rejecting H5b (z-value $\leq 1.64$ )

Source: Lisrel output and computation using Sobel test formula

The finding of openness to change is in line with Miller et al. (1994), revealing that employees' willingness to participate in organizational change is influenced by the amount of information they receive in a timely and suitable manner. It was also found that transformational leadership has a positive, direct, and significant impact on openness to change, demonstrating that leaders who use this style of leadership reduce employee resistance to change (Bommer et al. 2005). This finding supports Peng et al. (2021) about a positive relationship between transformational leadership and commitment to change, openness to change, and change readiness. In contrast, Yue et al. (2019) found that both transparent communication and transformational leadership do not directly predict openness to change.

Anxiety has a major detrimental impact on employees' openness to change. Change information could predict anxiety even if the change is minor. In addition, anxiety is negatively influenced by transformational leadership. Although it may be insignificant, it is related to the theory about a leadership style that could minimize employee anxiety during times of change (Nielsen et al. 2019). Unfortunately, anxiety is not a mediator in bridging the gap between transparent communication and openness to change. It is also not a mediator between transformational leadership and openness

to change. This could be due to massive and rapid changes in the organization that is being employed in a short period that employees directly express their openness to change.

## 5 CONCLUSION

The results of this study show that transparent communication, transformational leadership, and anxiety directly influence employees' openness to change. Transparent communication must be a priority if the organization wants to promote employee openness to change. Change managers in organizations must provide accurate and accountable information about change while also including employees in the process. Change managers must provide a mature change infrastructure, such as an organizational structure, clear standard operating procedures, and performance reviews with the new responsibilities that employees assume, to keep employee anxiety at minimum.

It should be noted that this study has several limitations. First, questionnaires were distributed only from the public sector employees in ministries. A similar study on other public sector organizations such as local governments and public institutions may provide different findings. Second, the data collection is categorized as non-probability sampling that is prone to bias compared to probability sampling. It is suggested that future studies adopt the probability sampling method to reduce bias.

## REFERENCES

- Bommer, W. H., Rich, G. A., & Rubin, R. S. (2005). Changing attitudes about change: Longitudinal effects of transformational leader behavior on employee cynicism about organizational change. *Journal of Organizational Behavior*, 26(7). <https://doi.org/10.1002/job.342>
- Bordia, P., Hobman, E., Jones, E., Gallois, C., & Callan, V. J. (2004). Uncertainty during organizational change: Types, consequences, and management strategies. *Journal of Business and Psychology*, 18(4). <https://doi.org/10.1023/B:JOB.0000028449.99127.f7>
- Hair, J. F., Anderson, R. E., Tatham, R. L. and, & Black, W. C. (2010). *Multivariate Data Analysis: A Global Perspective* (7th Edition). In *Pearson Prentice Hall, New Jersey*.
- Johansson, C., & Heide, M. (2008). Speaking of change: Three communication approaches in studies of organizational change. In *Corporate Communications* (Vol. 13, Issue 3). <https://doi.org/10.1108/13563280810893661>
- Li, J. Y., Sun, R., Tao, W., & Lee, Y. (2021). Employee coping with organizational change in the face of a pandemic: The role of transparent internal communication. *Public Relations Review*, 47(1). <https://doi.org/10.1016/j.pubrev.2020.101984>
- Men, L. R., & Stacks, D. (2014). The Effects of Authentic Leadership on Strategic Internal Communication and Employee-Organization Relationships. *Journal of Public Relations Research*, 26(4). <https://doi.org/10.1080/1062726X.2014.908720>
- Miller, K. I., & Monge, P. R. (1985). Social Information and Employee Anxiety About Organizational Change. *Human Communication Research*, 11(3). <https://doi.org/10.1111/j.1468-2958.1985.tb00052.x>
- Miller, V. D., Johnson, J. R., & Grau, J. (1994). Antecedents to willingness to participate in a planned organizational change. *Journal of Applied Communication Research*, 22, 59-80
- Nielsen, M. B., Skogstad, A., Gjerstad, J., & Einarsen, S. V. (2019). Are transformational and laissez-faire leadership related to state anxiety among subordinates? A two-wave prospective study of forward and reverse associations. *Work and Stress*, 33(2). <https://doi.org/10.1080/02678373.2018.1528307>
- Peng, J., Li, M., Wang, Z., & Lin, Y. (2021). Transformational Leadership and Employees' Reactions to Organizational Change: Evidence From a Meta-Analysis. *Journal of Applied Behavioral Science*, 57(3). <https://doi.org/10.1177/0021886320920366>
- Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, 85(1). <https://doi.org/10.1037/0021-9010.85.1.132>
- Yue, C. A., Men, L. R., & Ferguson, M. A. (2019). Bridging transformational leadership, transparent communication, and employee openness to change: The mediating role of trust. *Public Relations Review*, 45(3). <https://doi.org/10.1016/j.pubrev.2019.04.012>

# The impact of working capital management on firm performance and corporate investment

N.M. Paskalino & V. Diyanty

*Department of Management, Faculty of Economics and Business, University of Indonesia, Jakarta, Indonesia*

**ABSTRACT:** The purpose of this study involved investigating the impact of a firm's working capital management on performance and corporate investment using ROA and the amount of investment. The sample size included 205 non-financial firms listed on the Indonesia Stock Exchange market from 2010 to 2019. An asymmetric model was used to account for a non-linear relationship and allow for the positive and negative excess to be observed. The empirical results showed that underinvested (overinvested) firms that manage to increase (decrease) their working capital investment will outperform. Additionally, overinvested companies will conduct capital expenditure in terms of corporate investment even if their working capital is not optimized. The findings provide evidence that non-optimal working capital management impacts firm performance.

## 1 INTRODUCTION

The continuity and prosperity of a firm highly depend on the management team's decisions. For instance, working capital management involves critical decisions in managing short-term assets and liabilities could impact firm's performance and firm value (Afrifa et al. 2014; Kieschnick 2013; Ross et al. 2016). According to Altaf et al. (2020), there is an inverted u-shaped relationship between working capital and performance. Increased working capital funding improves performance, but further increases may be detrimental to the business. The optimal level of investment will achieve a balance between total working capital ownership benefits and costs, thereby improving performance (Aktas et al. 2015). According to Hill et al. (2010), depending on a firm's internal situation, the working capital management strategy can be aggressive or conservative. However, an extreme implementation of either strategy results in underinvestment or overinvestment. This means firms should adjust their strategy depending on their current condition (Nazir & Afza 2009). A company must also certainly consider trade-offs and investment benefits by maintaining a balance between liquidity and profitability (Aktas et al. 2015; Panda 2018). To reach the optimal point, underinvesting (overinvesting) firms must increase (decrease) their working capital investment. Moreover, optimizing working capital by adding and reducing the amount of working capital will correlate with capital expenditures (Aktas et al. 2015).

Indonesia, as a developing country, is an intriguing case study. Due to their small size and limited funding options, firms in developing countries tend to self-finance or use trade credit and short-term bank loans to fund investments in receivables and inventory (Chittenden et al. 1998). Furthermore, studies on working capital management in Indonesia have tended to focus on the linear relationship between working capital and firm performance, leaving nonlinear relationships out. As a result, the purpose of this study is to present empirical evidence using an asymmetric model on the impact of a firm's working capital management on performance and corporate investment of non-financial firms listed on the IDX from 2010 to 2019.

## 2 LITERATURE REVIEW

### 2.1 Working capital management

According to Koewn et al. (2017), increased sales and new projects increase a company's inventory and trade credit. Trade payables can be used to pay for the growing impact of investments on



accounts receivable and inventory. Therefore, accounts payable and receivable, as well as inventory are the three components of working capital monitored to achieve balanced company liquidity and profitability (Brealey et al. 2020; Singh et al. 2017).

## 2.2 *The impact of working capital management on firm performance*

Conservative managers overinvest in working capital to protect the firm against fluctuations and increase sales through trade credit by keeping large inventories and receivables (Schiff & Lieber 1974; Taurigana & Afrifa 2013; Wilner 2000). However, overinvestment leads to increased inventory and higher warehouse rental costs, affecting company performance. An increase in trade credits leads to more financing and opportunity costs (Kieschnick et al. 2013; Kim & Chung 1990). On the other hand, underinvestment leads to reduced inventory and warehouse costs, moreover the company's resources are not tied-up to working capital (Taurigana & Afrifa 2013). However, minimum level of investment in working capital leads to low inventory, jeopardizing sales due to limited credit policies (Wang 2002). According to Panda (2018), conservative and aggressive strategies incur a high and low cost of liquidity, respectively. The disproportional feature of working capital management forms a non-linear relationship between working capital and profitability (Panda 2018). The potential benefits and costs of working capital management indicate an optimum balance point for the costs and benefits obtained (Aktas et al. 2015). The cost of underinvestment (overinvestment) will encourage firms to increase (decrease) their working capital investment to reach the optimal point (Banos-Caballero et al. 2012). As a result, the first hypothesis is proposed as follows:

H1 (a): Underinvestment in working capital (negative excess NWC) positively affects company performance. Therefore, an increase in the amount of working capital will positively impact company performance.

H1 (b): Overinvestment in working capital (positive excess NWC) has a negative relationship with company performance, hence, an increase in the amount of working capital will harm company performance.

## 2.3 *The relationship between working capital management and corporate investment*

Aktas et al. (2015) indicated the influence of a firm's efforts to optimize working capital management on the corporate investment level. Underinvested (overinvested) companies will optimize their working capital by increasing (decreasing) the level of investment. On one side, optimization in an underinvested firm is significant, indicating that managers' efforts to optimize will increase performance and the number of corporate investments. On the other hand, Firms with overinvestment in working capital are negatively associated with corporate investment, meaning they should use the investment to reduce the excessive working capital. This increases financial flexibility, which is directly proportional to increased corporate investments. Considering the previous study by Aktas et al. (2015), the second hypothesis is proposed as follows:

H2 (a): Companies with underinvestment in working capital have a positive relationship with corporate investment, hence, an increase in the amount of working capital will positively impact corporate investment.

H2 (b): Companies with overinvestment in working capital have a negative relationship with corporate investment, hence, an increase in the amount of working capital will harm corporate investment

# 3 RESEARCH METHODOLOGY

## 3.1 *The Data*

The study used the purposive sampling method to ensure only non-financial companies with complete data from 2010 to 2019 were included. A total of 2050 observations were made from a dataset

of 205 firms. The sample data distribution was based on the Jakarta Stock Industrial Classification (JASICA), excluding the financial sector.

### 3.2 Variables and Methodology

The purpose of this study was to assess the relationship between a firm's working capital and performance using NWC and ROA as an independent and dependent variable, respectively. Furthermore, the study investigated its relationship to corporate investment proxied by capital expenditure (CAPEX). All control variables were lagged by one period to mitigate the concern of simultaneously determining working capital and firm performance in the equilibrium. Two models used were based on Aktas et al. (2015)'s modified model.

$$\begin{aligned} ROA_{i,t} = & \alpha_0 + \gamma_1[XNWCx(D)]_{i,t-1} + \gamma_2[XNWCx(1-D)]_{i,t-1} + \gamma_3FS_{i,t-1} + \gamma_4SG_{i,t-1} \\ & + \gamma_5Age_{i,t-1} + \gamma_6CR_{i,t-1} + \gamma_7CF_{i,t-1} + \gamma_8FD_{i,t-1} + \gamma_9FAG_{i,t-1} \\ & + \gamma_{10}IA_{i,t-1} + \varepsilon_{i,t-1} \end{aligned} \quad (1)$$

$$\begin{aligned} CAPEX_{i,t} = & \alpha_0 + \gamma_1[XNWCx(D)]_{i,t-1} + \gamma_2[XNWCx(1-D)]_{i,t-1} + \gamma_3FS_{i,t-1} + \gamma_4SG_{i,t-1} \\ & + \gamma_5Age_{i,t-1} + \gamma_6CR_{i,t-1} + \gamma_7CF_{i,t-1} + \gamma_8FD_{i,t-1} + \gamma_9Tbq_{i,t-1} + \varepsilon_{i,t-1} \end{aligned} \quad (2)$$

XNWC x D and XNWC x (1-D) represent overinvestment and underinvestment, respectively. NWC was measured using account receivable plus inventory minus account payable. To specify each firm-year observation being included as underinvested or overinvested, first, the study estimates the optimal level of NWC by looking at the highest ROA per industry each year. Second, each firm-year NWC was subtracted by the optimal level per corresponding year per industry. The results will then specify with the help of dummy variable (D) equals to 1 if the firm-year observation is positive (overinvested) and (1-D) if negative (underinvested). Furthermore, the control variable are as follows: FS = firm size, SG = Sales Growth, Age, FAG = Fixed Asset Growth, CR = Cash Reserves, CF = Cash Flow, FD = Financial Distress, IA = Intangible Assets, Tbq = Tobin's Q.

## 4 RESULTS

Initially, both models used in the regression were subjected to preliminary testing to determine the best model to use for the research. The first test was the Hausman test, which was used to determine whether the Random Effect Model (REM) or Fixed Effect Model (FEM) was appropriate. The probability of both models is 0.0001 and 0.0000, respectively, according to the Hausman test. This finding suggests that the Fixed Effect Model (FEM) is the best model to use. Furthermore, the Chow Test was performed to determine the most appropriate model among Pooled Least Square (PLS) and Fixed Effect Model (FEM). The probability of cross section F from the regression is 0.0000 and 0.0000, respectively, according to the Chow test, indicating that the Fixed Effect Model is the best model to use.

The regression results for both models are shown in Table 1. The regression results of the first model, which shows the impact of underinvestment and overinvestment on firm performance as proxied by ROA, are shown on the left side. H1(a) hypothesis is answered by the XNWC x (1-D) variable. For underinvested firms, the coefficient discovered is positive and significant. This result implies that for underinvested firms, additional working capital resulting in optimal levels is required for superior firm performance (ROA). Furthermore, the XNWC x D variable represents an overinvested firm and provides an answer to hypothesis H1 (b). The positive and significant coefficient supports our hypothesis, implying that when a company overinvests, it should reduce working capital to improve performance (ROA). The positive and negative relationship between working capital and firm performance during underinvestment (overinvestment) suggests a non-linear relationship (inverted u-shaped). As a result, companies that are underinvested (overinvested) must increase (decrease) their working capital investment. The findings support previous research by Aktas et al. (2015) and Banos-Caballero et al. (2012).

Furthermore, the regression results for the second model, in which the dependent variable is the firm's corporate investment as proxied by capital expenditure, are shown on the right side of the table above (CAPEX). The  $XNWC \times (1-D)$  variable represents underinvestment conditions; it has a positive coefficient, implying that underinvested firms that overcome their working capital deficit will increase their capital expenditure investment. On the one hand, the variable coefficient is also positive and significant in the case of overinvested companies represented by  $XNWC \times D$ . This finding contradicts our H2 (b) hypothesis. Thus, it can be said that overinvested firms do not optimize their working capital by reducing it and redirecting the extra cash to fund capital expenditure. Instead, they add more working capital to an already overinvested amount by funding capital expenditure with funds from another source.

## 5 CONCLUSIONS

Conclusively, optimal working capital balances the investment cost and benefit, maximizing a firm's performance. The results revealed that overinvested or underinvested firms might suffer from poor performance, while the capital expenditure regression indicated that overcoming working capital deficit will conduct capital expenditure. On the other hand, overinvested firms continue to conduct capital expenditure without optimizing their working capital.

## REFERENCES

- Afrifa, G.A, Tauringana, V., & Tingbani, I. 2015. Working capital management and performance of listed SMEs, *Journal of Small Business & Entrepreneurship* 27(6): 557–578
- Aktas, N., E. Croci, & D. Petmezas. 2015. Is working capital management value-enhancing? Evidence from firm performance and investments. *Journal of Corporate Finance* 30: 98–113
- Altaf, N. 2020. WC financing, firm performance, and financial flexibility: Evidence from Indian hospitality firms. *Global Business Review*.
- Baños-Caballero, S., P. García-Teruel, & P. Martínez-Solano. 2012. How does working capital management affect the profitability of Spanish SME's? *Small Business Economics* 39: 517–529.
- Brigham, E. & Besley, S. 2018. *CFIN6*. Boston: Cengage Learning, Inc.
- Chittenden, F., P. Poutziouris, & N. Michaelas. 1998. *Financial Management and Working Capital Practices in UK SMEs*. Manchester: Manchester Business School.
- Hill, M.D., Kelly, G.W. & Highfield, M.J. 2010. Net operating working capital behavior: a first look. *Financial Management* 39(2): 783–805.
- Kieschnick, R., M. LaPlante, & R. Moussawi. 2013. Working capital management and shareholder wealth. *Review Finance* 17: 1827–1852.
- Kim, Y. H., & K. H. Chung. 1990. An integrated evaluation of investment in inventory and credit: A cash flow approach. *Journal of Business Finance and Accounting* 17: 381–390.
- Nazir, M. S. & Afza, T. 2009. Impact of Aggressive Working Capital Management Policy on Firms' Profitability. *The IUP Journal of Applied Finance* 15(8), 19–30.
- Panda, A.K. & Nanda, S. 2018. Working capital financing and corporate profitability of Indian manufacturing firms. *Management Decision* 56(2): 441–457.
- Ross, S. A., Westerfield, R. W., & Jordan, B. D. 2016. *Fundamentals of corporate finance* (11th ed.). McGraw-Hill Professional.
- Schiff, M., & Lieber, Z. 1974. A model for the integration of credit and inventory management. *Journal of Finance* 29: 133–140.
- Singh, H.P., & Kumar, S. & Colombage, S. 2017. Working Capital Management and Firm Profitability: A Meta-Analysis. *Qualitative Research in Financial Markets* 9(1): 34–47
- Tauringana, V. & Adjapong Afrifa, G. 2013. The relative importance of working capital management and its components to SMEs' profitability. *Journal of Small Business and Enterprise Development* 20(3): 453–469.
- Titman, Sheridan, Martin, John D., & Keown, Arthur J. 2018. *Financial Management: Principles and Applications* (13th ed). United Kingdom: Pearson Education Ltd.
- Wilner, B. S. 2000. The exploitation of relationship in financial distress: The case of Trade credit. *Journal of Finance* 55: 153–178.

# The effect of flow to visit intention moderated by perceived awareness of safe travel campaign

N.T. Dewi & Y. Alversia

*Magister Management, Department of Economics and Business, Universitas Indonesia*

M. Sekardhani

*Department of Corporate Management, Korea University, Seoul, Republic of Korea*

**ABSTRACT:** The paralyzed tourism situation during the pandemic has made some entrepreneurs and companies use VR technology to invite consumers to travel. Virtual reality provides consumers with the selected destination experience in a new and unique method. This study employed the safe travel campaign as important travel guidance in the pandemic era to be a moderating factor. This study aims at analyzing the effect of sense and information quality on flow and visit intentions, and moderation from perceived safe travel campaigns. This study was quantitative and included a statement stating that the respondent had done virtual travel and had never visited the place. This study was conducted using the probability sampling method with a total of 223 respondents. The data in this study was processed using AMOS 24 with the SEM method. The results show that sense strongly affected telepresence, and quality information positively affected the flow experience. Satisfaction positively affected visit intentions with a safe travel campaign as moderated. The result of the moderation test proved that there was no effect from the safe travel campaign to influence customer visit intentions.

**Keywords:** virtual travel, flow, sense, quality of information, visit intention, telepresence, Perceived Awareness safe travel campaign.

## 1 INTRODUCTION

Tourism is a sector that plays a significant role in state treasury income, but the COVID-19 outbreak has made the tourism sector powerless. Moreover, tourism is considered the first sector and most affected by the COVID-19 pandemic. Seeing the unpredictable situation of the pandemic, several travel agencies provide virtual services. Previously someone had to visit certain destinations to experience the travel experience. With the development of tourism, technology in tourism has begun to use virtual reality. In the digital era, virtual reality has become a new tool for destination marketing (An et al. 2021). Several studies confirmed that virtual reality is effective in inducing a sense of being in the focal location, and possibly increasing tourist intention to visit a destination (An et al. 2021; Kim et al. 2018). This study also employed the safe travel campaign as important travel guidance in the pandemic era to be a moderating factor.

This study adopted the flow theory and the stimulus-organism-response (SOR) model. Flow is a fundamental concept for capturing users' state of mind and feelings (An et al. 2021). Furthermore, the SOR model is a useful theoretical framework to explain the psychological process through virtual travel attributes. Sense and quality information are important as the stimulus for this study. Telepresence, focused attention and temporal distortion are organism that can affect the rate of satisfaction and visit intentions. There are three purpose of this study: (1) Does virtual travel content significantly affect the flow experience? (2) Can flow experience significantly affect satisfaction? (3) Can the Safe travel campaign significantly moderate the relationship between satisfaction and intention to visit?

## 2 LITERATURE REVIEW

S-O-R represents Stimulus, Organism, and Response. This theory explains that a statement submitted to an individual must meet the needs of the individual, both material and non-material. The materials in previous research are clothing, food, and board. While non-material includes a sense of security, wanting to be cared for and appreciated (Gao & Bai 2014).

Virtual reality (VR) is a technology allowing users to interact with an environment simulated by a computer so that users feel they are in a virtual world (Pamoedji et al. 2017). Sense is an important factor that affects the quality of VR experiences (Riches et al. 2019). Visuals and other stimulus supports are powerful media of information in VR. VR is a technology that has the advantage of practitioners in visualization so that the information provided can be well received. VR travel in destination marketing provides a mediated experience of exploring real-world destinations, not in imaginary or fictional places. Thus, the informational quality of VR travel content is a key determinant of a positive travel experience. Low information quality prevents users from focusing and ultimately undermines the quality of the mediated travel experience (An et al. 2021; Gao & Bai 2014). In this study sense and quality of information is a part of Stimulus on SOR models. H1a) The sense of VR tour content has a positive and significant influence on telepresence. H1b) Sense of VR tour content has a positive and significant influence on focused attention. H1c) The sense of the VR tour content has a positive and significant effect on temporal distortion. H2a) The quality of information from the VR tour content has a positive and significant influence on telepresence. H2b) The quality of information from the VR tour content has a positive and significant influence on focused attention. H2c) The quality of information from the VR tour content has a positive and significant effect on temporal distortion

Telepresence can be defined as the experience of an environment created digitally so that it becomes an unreal experience for its users. Previous research has argued that telepresence is a determining factor for the flow of consumer experience (An et al. 2021; Skadberg et al. 2004). Hoffman and Novak (1996) state that telepresence improves flow by increasing the focus of the user's attention. To support the statement of Hoffman and Novak, Han et al. (2020) stated that telepresence has a high effect on perceived pleasure compared to other flow factors. In this study telepresence is a part of organism on SOR models. H3a) Telepresence has a positive and significant effect on satisfaction in VR travel.

Focused attention is an aspect of attention that brings some information into awareness. Mackay-Brandt (2011). Focused attention can be said as the brain's ability to focus its attention on the target stimulus for a certain period of time. Focused attention is a type of attention that allows to quickly detect relevant stimuli. In this study focused attention is a part of organism on SOR models. H3b) Focused attention has a positive and significant influence on satisfaction in VR travel.

Temporal distortion is a change that is felt by humans about the time when humans will enjoy their environment without remembering the current time. According to S. An et al. (2021) Temporal distortion is one of the prominent factors in a person's experience of doing VR travel. Temporal distortion has a close relationship with the quality of information in VR travel. In this study temporal distortion is a part of organism on SOR models. H3c) Temporal distortion has a positive and significant effect on satisfaction on VR travel.

Satisfaction refers to the overall evaluation of the experience of using a product or service (Kao et al. 2006). High-quality services will produce satisfaction which in turn will lead to consumer behavior (Mason et al. 2012). Hasan et al. (2018) found that when a person is satisfied with the push and pull factor, that person's motivation can be linked to their intention to visit or revisit a destination in the future. In this study satisfaction and visit intention is a part of response on SOR models. H4) Satisfaction in virtual travel has a positive and significant effect on intention to visit

In the context of marketing awareness, Brand awareness is also closely related to the world of traveling. According to Kim et al. (2018), brand awareness and brand royalty are basic components of the structured framework used to conceptualize the customer-based goals of brand equity. The goal of an awareness campaign is to maximize the impact, visibility and key message of the project. In the context of the campaign partners must spread concepts that can survive to be invested. H5)

Perceived awareness Save travel campaign on VR travel has a positive and significant effect on intention to visit.

### 3 RESEARCH METHOD

This study is a quantitative study, the questionnaire was designed to measure the respondent's experience of virtual travel. The quality of virtual travel content was conceptualized as the attributes of sense and information quality. Sense was measured with three items derived by the previous studies (Ong et al. 2018). Three items were used to quantify information quality (Lin & Lee 2006). Three items were used from Choi et al. for telepresence (2018). Three items for focused attention were used from prior investigations (An et al. 2021). The temporal distortion was assessed with three items from Mpinganjira (2016). To evaluate satisfaction, three items from existing research were applied (Gao & Bai 2014). Visit intention was measured with four items from Lee et al. (2018). All measures employed a six-point Likert scale (1 = strongly disagree, 6 = strongly agree). To ensure the items were a valid measurement in the context of virtual travel, a pretest was conducted with 30 respondents who had experienced virtual travel by filling the questionnaire based on their experience.

Data collection was conducted by social media, partners, employees, and many more to spread the questionnaire from 5 October to 1 November. To screen respondents, this study included a statement stating that the respondent had done virtual travel and had never visited the place. This study found 223 respondents, so that the data was used for analysis. Based on the results of the study there were 69 female respondents and 154 male respondents. The age of the most respondents ranged from 50 to 59 years with most being undergraduates, and the most respondents came from outside the island of Java, and had an income of more than 10 million.

### 4 RESEARCH RESULT AND DISCUSSION

In this study, the values of CR, VE, and Standardized loading factors were used to test the consistency of the data and convergence of the validity. Based on the data, all indicators and variables met the discriminant validity test, meaning they can be tested on the structural model and research hypotheses. Before proceeding with the structural test, the measurement model fit test was conducted to determine whether the model in this study was feasible to continue the structural and hypothesis testing. To see the results of the suitability test of the measurement model, this study considered the results of the GoF, and the conclusion from the GoF results was that most of the measurements in this study were in the good fit area.

After ensuring the model was fit for the hypothesis, the main research model was conducted. The Sense to Telepresence value (estimate=0.649, S.E.=0.047) had a positive effect, thus H1a was accepted. Sense to Focused attention value (estimate=0.575, S.E.=0.044) had a positive effect, thus H1b was accepted. Sense to temporal distortion value (estimate=0.575, S.E.=0.054) had a positive effect, thus H1c was accepted. Then, the quality of information to telepresence value (estimate=0.414, S.E.=0.055) had a positive effect, thus H2a was accepted. The quality of information to focused attention value (estimate=0.491, S.E.=0.058) had a positive effect, thus H2b was accepted. The quality of information to temporal distortion value (estimate=0.417, S.E.=0.063) had a positive effect, thus H2c was accepted. In the flow experience to satisfaction, the telepresence to satisfaction value (estimate=0.444, S.E.=0.066) had a positive effect, thus H3a was accepted. Focused attention to satisfaction value (estimate=0.220, S.E.=0.045) had a positive effect, thus H3b was accepted. Temporal distortion to satisfaction value (estimate=0.280, S.E.=0.050) had a positive effect, thus H3c was accepted. The satisfaction to visit intention value (estimate=0.682, S.E.=0.068) had a positive effect, thus H4 was accepted.

In addition, a moderating hypothesis was tested on the difference in the effect of the main research model hypothesis based on the experience of customers who attended virtual travel and had or had never seen safe travel campaigns in VR travel content. The result was significant that H5 was accepted, in which the results are that the fact that the consumers did not see the campaign

to travel safely to the destinations displayed by VR travel did not reduce consumers' intentions to visit these destinations.

## 5 CONCLUSION

The results revealed that the SOR component had a relationship in every aspect of the theory. Sense and quality information is a stimulus that could improve the flow experience of consumers. When consumers received good quality information and could also feel the content provided well, the flow experience could be felt well by consumers who took part in virtual travel. Telepresence is a variable that had a significant influence on satisfaction. The safe travel campaign had a significant moderating effect. There were two influences from the safe travel campaign category, i.e., consumers who recognize a safe travel campaign on the destinations in virtual travel and consumers who recognize no safe travel campaign on the destinations in the virtual travel. The results show that consumers were not affected by the absence of a safe travel campaign on the destinations in virtual travel, and continued to visit those destinations.

## 6 LIMITATIONS AND RECOMMENDATION FOR FUTURE RESEARCH

It is acknowledged that the convenience sampling used in this study may introduce potential bias. Therefore, it would be desirable to obtain a larger sample and used random sampling to overcome this problem. This study employed Indonesian consumers so the result could be different in other countries. Indonesian consumers who had participated in VR travel were mostly employees and aged 30 years and over, this shows that the target of destination marketing with virtual travel was office workers, so the results could be different when applied to certain ages or groups of workers. Furthermore, this study employed different tools from previous studies, so it can be considered as a tool for future studies.

## REFERENCES

- An, S., Choi, Y., & Lee, C. K. (2021). Virtual travel experience and destination marketing: Effects of sense and information quality on flow and visit intention. *Journal of Destination Marketing & Management*.
- Choi, Y., Hickerson, B., & Lee, J. (2018). Investigation of the technology effects of online travel media on virtual travel experience and behavioral intention. *Journal of Travel & Tourism Marketing*, 320–335.
- Gao, L., & Bai, X. (2014). Online consumer behaviour and its relationship to website atmospheric induced flow: Insights into online travel agencies in China. *Journal of Retailing and Consumer Services*, 653–665.
- Hasan, M., Ismail, A., & Islam, M. (2017). Tourist risk perception and revisit intention: a critical review of literature. *Cogent Business & Management*, 1–21.
- Hunziker, W., & Krapf, K. (1942). *Grundriss der allgemeinen Fremdenverkehrslehre. the outline of general tourism science*.
- Kao, Y. F., Huang, L. S., & Yang, M. (2006). Effect of experimental elements on experiential satisfaction and loyalty intentions: A case study of the super basketball league in taiwan. *International Journal of Revenue Management*, 79–96.
- Kotler, P. (2005). *Manajemen Pemasaran Jilid 1 dan 2*. Jakarta: PT Indeks Kelompok Gramedia.
- Lee, S., Song, H., Lee, C. K., & Petrick, J. F. (2018b). An integrated model of pop culture fans' travel decision-making processes. *Journal of Travel Research*, 687–701.
- Lin, H. F., & Lee, G. G. (2006). Determinants of success for online communities: An empirical study. *Behaviour & Information Technology*, 479–488.
- Mason, M., & Paggiaro, A. (2012). Investigating the role of festivalscape in culinary tourism: The case of food and wine events. *Tourism Management*, 1329–1336.
- Mpinganjira, M. (2016). Environmental stimuli and user experience in online customer communities: A focus on flow and behavioural response. Management dynamics. *Journal of the Southern African Institute for Management Scientists*, 2–16.
- Ong, C., H. L., & Ramayah, T. (2018). Impact of brand experience on loyalty. *Journal of Hospitality Marketing & Management*, 755–774.

## Effects of subjective norms and restaurant's precautionary measures on the intention to revisit full-service restaurants post COVID-19 pandemic

N.A.M. Ruskanda & K. Adiwijaya

*Master of Management, Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** This study aimed at verifying factors driving consumers' intention to revisit restaurants post lockdown in Indonesia. The study utilized the Theory of Planned Behavior (Ajzen 1991) to understand the influence of subjective norms, the restaurant's preventive measures, and perceived physical and psychological risk on customers' intention to revisit a restaurant. The study was based on 210 respondents who had dined in a restaurant for a full-service post 'PPKM darurat.' The PLS-SEM technique through SmartPLS software was used to test and validate the model. The results revealed that subjective norms positively affect perceived psychological and physical risk while restaurant precautions affect customers' repurchase intention. Also, although enjoyment is negatively affected by perceived psychological risk, it positively affects intentions to eat out. This study provides a further understanding of food consumption patterns to help improve and sustain businesses in a future outbreak.

### 1 INTRODUCTION

The COVID-19 pandemic has led to the loss of interest by people to dine in restaurants due to fears of contracting the virus. Currently, over 70% of Indonesian customers prefer ordering food online, bringing a challenge to businesses that rely on physical services. This has resulted in a decline in restaurant food demand, leading to their unprecedented closure. (Kemenparekraf 2021). Consequently, over 1,033 hotels and restaurants have permanently closed business since October 2020 (Newswire 2021).

Currently, the consumers who dine in full-service restaurants mostly due to hedonic aspects (Lee et al. 2020). However, the increased physical and psychological risk reduces the possibility of finding pleasure in dining out. Also, consumers are increasingly concerned about restaurants' preventive measures against COVID-19, such as surface sanitation and the availability of hand sanitizers. Furthermore, food consumption relies on cultural and social factors and the information available concerning the food (Xie et al. 2020). Consumers with collectivist cultures, such as the Indonesians, are significantly impacted by social norms and obligations. In this context, subjective norms are essential in shaping consumers' intentions to dine in restaurants.

### 2 LITERATURE REVIEW

The TPB proposes that behavior is determined by attitudes, subjective norms (perceived social influence/pressure) and perceived behavioral control (the degree to which behavior is perceived to be under the individual's control) (Ajzen 1991). This study uses a slightly different approach to the Theory of Planned Behavior, where the authors try to use constructs that are more relevant and effective to predict consumer decisions to eat at restaurants in the context of COVID-19.

People's risk perceptions are heavily reliant on a variety of sources for information, which might range from official sources to personal experiences of others around them (Morrow et al. 2004). As a result, subjective norms based on the judgments of a reference group, such as family, friends, and experts, can have an impact on consumers' risk perceptions. Moreover, Nguyen et al. (2020) found that norms shaped by reference groups and the opinions of closest people have a positive



effect on consumers' intention to purchase food. People may have more favourable opinions of dining out if a reference group considers it safe. Therefore, the constructed hypotheses for H1-H3 are as follows:

H1: Subjective norms negatively affect the psychological risk perceived by consumers.

H2: Subjective norms negatively affect the physical risk perceived by consumers.

H3: Subjective norms positively affect repurchase intention.

Personal and physical worries about safety, according to Novelli et al. (2018), can play a significant impact in consumer decision-making. Consumer demand for dining out would be reduced if the physical risks of contracting COVID-19 were perceived to be high. Consumers may feel safer and perceive fewer physical and psychological hazards if a restaurant provides specific preventive measures such as hand sanitizer, contactless payment, divided dining spaces, and so on (Zhong et al. 2021). This might lead to intentions to revisit restaurants. Therefore, the constructed hypotheses for H4-H6 are as follows:

H4: Restaurants Precautionary Measures negatively affect the psychological risk perceived by consumers.

H5: Restaurants Precautionary Measures negatively affect the physical risk perceived by consumers.

H6: Restaurants Precautionary Measures positively affect repurchase intention.

Perceived risk can exacerbate anxiety and have a detrimental impact on behavioral intention (Matiza 2020). Consumers' perceptions of physical dangers or health risks are equated to their beliefs that consuming a food will harm their bodies (Mitchel & Boustani 1992). Consumers' behavioral intentions were found to be heavily influenced by their enjoyment (Chiu et al. 2009; So et al. 2021). Previous study by Zhong et al. (2021) found people perceive a high risk of infection when they eat out, this can comparatively reduce their enjoyment while dining. Thus, the constructed hypotheses for H7-H10 are as follows:

H7: Psychological risk perceived by consumers negatively affect the enjoyment

H8: Psychological risk perceived by consumers negatively affects repurchase intention.

H9: The physical risk perceived by consumers negatively affect the enjoyment

H10: The physical risk perceived by consumers negatively affects repurchase intention.

H11: The enjoyment felt by consumers positively affects repurchase intention

### 3 METHODOLOGY

This study used a quantitative descriptive approach to survey 210 respondents who dined in a full-service restaurant after PPKM darurat, a policy by the Indonesian government to reduce the number of COVID-19 transmission by reducing gatherings and mobilizations, which ended on August 9th 2021. The data collection was conducted through online questionnaires spread across social media platforms. Furthermore, the study questionnaires were adapted from a previous study on the intention to dine out during the pandemic (Zhong et al. 2021). The preliminary data results were processed using Structural Equation Modeling (SEM).

### 4 RESULTS

#### 4.1 *Measurement model results*

Measurement model results showed that all latent variables had Composite Reliability values above 0.7 and Average Variance Extracted greater than 0.5. The results confirmed that the conceptual model had proper construct reliability and good discriminant validity.

## 4.2 Structural model results

Table 1. Hypotheses test.

Hypotheses	Original Sample	Standard Deviation	P Values	T Statistics ( O/STDEV )	
H1 Subjective Norms -> Psychological Risk	-0,418	0,068	0,000	6,123	Supported
H2 Subjective Norms -> Physical Risk	-0,322	0,068	0,000	4,702	Supported
H3 Subjective Norms -> Repurchase Intention	0,348	0,065	0,000	5,367	Supported
H4 Restaurants Precautionary Measures -> Psychological Risk	0,097	0,07	0,149	1,380	Not Supported
H5 Restaurants Precautionary Measures -> Physical Risk	0,132	0,076	0,070	1,725	Not Supported
H6 Restaurants Precautionary Measures -> Repurchase Intention	0,150	0,056	0,008	2,701	Supported
H7 Psychological Risk -> Enjoyment	-0,278	0,095	0,002	2,928	Supported
H8 Psychological Risk -> Repurchase Intention	-0,057	0,063	0,490	0,900	Not Supported
H9 Physical Risk -> Enjoyment	-0,014	0,096	0,891	0,145	Not Supported
H10 Physical Risk -> Repurchase Intention	0,019	0,066	0,822	0,292	Not Supported
H11 Enjoyment -> Repurchase Intention	0,355	0,074	0,000	4,807	Supported

The structural model results supported five out of eleven hypotheses. The study found that consumers' perceptions of the psychological and health risks when eating at restaurants were directly affected by subjective norms. In addition, subjective norms also positively influence repurchase intention. This implies that the more positive the opinion, the greater the consumer's intention to revisit the restaurant. Also, the study found that Restaurants Precautionary Measures do not affect perceived psychological or physical risks. However, it has a significant effect on consumers' repurchasing intention. Enjoyment is affected by psychological and not physical risks, showing that consumers' repurchase intentions are not affected by risks but can be encouraged by enjoyment.

## 4.3 Discussion

The results established that family, friends, neighbors, and experts influence consumers' views on restaurants' psychological and physical risks. It was found that the opinions of the closest people, colleagues, and trusted sources also influence the consumer's decision to revisit a restaurant. The health protocol applied by the restaurant does not affect the perceived psychological and physical risks. However, the preventive measures increase consumers' intention to visit a restaurant. Therefore, adverse psychological conditions such as anxiety, worry, and stress affect consumers' pleasure when eating out but not their intention to visit restaurants. The possibility of consumers getting health problems from eating at restaurants does not affect the sense of enjoyment they experience when eating out. Equally, health risk does not affect their intention to visit restaurants, while consumers' enjoyment positively affects the intention to revisit the restaurants. This indicates that the better the dining experience, the greater the intention to dine in restaurants.

## 5 CONCLUSIONS

The opinions of close relatives, colleagues, and experts are essential factors that provide a sense of security for consumers and promote their intentions to visit restaurants. Although the preventive measures put by restaurants have little effect on consumers' perceived risk, they are still one of the factors that affects their decision in visiting restaurants. Lastly, consumers' enjoyment experience when eating at restaurants remains a significant consideration after PPKM darurat.

### 5.1 *Managerial implications*

First, every consumer visiting a restaurant can influence the intentions of their family and relatives. Therefore, maintaining positive opinion and experience by improving restaurant services' quality is crucial for sustainability. Second, as part of restaurant operational procedures, health protocols must be applied in the post-PPKM darurat context. Finally, the experience of consumers when eating at restaurants is an important factor that influences consumers' intentions to visit restaurants. Therefore, restaurants must pay attention to producing consumer enjoyment by improving elements of service marketing.

## REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)
- Chiu, C., Chang, C., Cheng, H., & Fang, Y. (2009). Determinants of customer repurchase intention in online shopping. *Online Information Review*, 33(4), 761–784. <https://doi.org/10.1108/14684520910985710>
- Kemenparekraf RI. (2021). *Tren Pariwisata Indonesia di Tengah Pandemi*. Kemenparekraf. Retrieved October 28, 2021, from <https://kemenparekraf.go.id/ragam-pariwisata/Tren-Pariwisata-Indonesia-di-Tengah-Pandemi>
- Lee, S., Chua, B. L., & Han, H. (2020). Variety-seeking motivations and customer behaviors for new restaurants: An empirical comparison among full-service, quick-casual, and quick-service restaurants. *Journal of Hospitality and Tourism Management*, 43, 220–231. <https://doi.org/10.1016/j.jhtm.2020.04.004>
- Matiza, T. (2020). Post-COVID-19 crisis travel behaviour: towards mitigating the effects of perceived risk. *Journal of Tourism Futures*, ahead-of(ahead-of-print). <https://doi.org/10.1108/jtf-04-2020-0063>
- Mitchell, V., & Boustani, P. (1992). Consumer Risk Perceptions in the Breakfast Cereal Market. *British Food Journal*, 94(4), 17–26. <https://doi.org/10.1108/00070709210011534>
- Morrow, J.L., Hansen, M.H., & Pearson, A.W. (2004). The Cognitive and Affective Antecedents of General Trust within Cooperative Organizations. *Journal of Managerial Issues*, 16, 48.
- NewsWire. (2021, February 5). Ribuan Hotel dan Restoran Tutup Permanen Akibat Pandemi Covid-19. *Bisnis.com*. Retrieved October 28, 2021, from <https://ekonomi.bisnis.com/read/20210205/12/1352941/ribuan-hotel-dan-restoran-tutup-permanen-akibat-pandemi-covid-19>
- Nguyen, N., Nguyen, H. V., Nguyen, P. T., Tran, V. T., Nguyen, H. N., Nguyen, T. M. N., Cao, T. K., & Nguyen, T. H. (2019). Some Key Factors Affecting Consumers' Intentions to Purchase Functional Foods: A Case Study of Functional Yogurts in Vietnam. *Foods*, 9(1), 24. <https://doi.org/10.3390/foods9010024>
- Novelli, M., Gussing Burgess, L., Jones, A., & Ritchie, B. W. (2018). 'No Ebola. . . still doomed' – The Ebola-induced tourism crisis. *Annals of Tourism Research*, 70, 76–87. <https://doi.org/10.1016/j.annals.2018.03.006>
- So, K. K. F., Kim, H., & Oh, H. (2020). What Makes Airbnb Experiences Enjoyable? The Effects of Environmental Stimuli on Perceived Enjoyment and Repurchase Intention. *Journal of Travel Research*, 004728752092124. <https://doi.org/10.1177/0047287520921241>
- Xie, X., Huang, L., Li, J. J., & Zhu, H. (2020). Generational Differences in Perceptions of Food Health/Risk and Attitudes toward Organic Food and Game Meat: The Case of the COVID-19 Crisis in China. *International Journal of Environmental Research and Public Health*, 17(9), 3148. <https://doi.org/10.3390/ijerph17093148>
- Zhong, Y., Oh, S., & Moon, H. C. (2021). What Can Drive Consumers' Dining-Out Behavior in China and Korea during the COVID-19 Pandemic? *Sustainability*, 13(4), 1724. <https://doi.org/10.3390/su13041724>

# The role of experiential marketing, destination brand image, and halal tourism products on tourists' revisit decision in halal tourism village

N. Andriani & N. Kurriwati

*Faculty of Economics, Trunojoyo University, Madura*

**ABSTRACT:** This study aims at determining the role of experiential marketing, destination brand image, and halal tourism products on the decision of tourists to revisit Pantai Sembilan Halal Tourism Village, Kabupaten Sumenep, East Java, Indonesia. The population of this study was all tourists who visited this destination. Meanwhile, the sample of this research was tourists who have visited the Pantai Sembilan Gili Genting Tourism Village, Kabupaten Sumenep, with certain criteria. The sampling technique employed was purposive sampling, with the criteria of tourists aged more than 17 years old and visiting more than once. The analytical tool used was multiple linear regression analysis. The results showed that experiential marketing (with the dimensions of sense, feel, think, act and relate), destination brand image (with the dimensions of cognitive imagery, effective imagery, and uniqueness imagery), and halal tourism products (with the dimensions of halal attractions, halal amenities, and halal accessibility) influenced the tourists' revisit decision to Pantai Sembilan Halal Tourism Village.

**Keywords:** experiential marketing, destination brand image, halal tourism products, tourists' decision to revisit.

## 1 INTRODUCTION

The trend of halal tourism is increasing along with the development of the tourism industry worldwide. The Muslim population was 28% in Indonesia of the total world population, and this is considered a potential market for developing halal tourism. Unfortunately, Indonesia is still far behind Malaysia, which ranks first in halal tourism (GMTI 2019). Based on the Global Muslim Travel Index (GMTI 2019), there are several criteria for halal tourism: ease of access, communication, environment, and services. Although the halal concept has become the lifestyle of most Indonesians, halal tourism is still underdeveloped in Indonesia due to inadequate facilities, difficulty to ensure halal food, a challenge in getting halal certification, and lack of promotion. Likewise, in Madura, where the Muslims are the majority, they are very concerned about the halal status of almost everything. In this context, tourism that has shifted to halal tourism. The experience and perspective of tourists in seeing tourism destinations cannot be separated from tourism since it helps shape tourism destinations in their development (Tan et al. 2015).

The existence of the concept of halal tourism which has become a trend and lifestyle, has become a separate competition for the world of tourism. The competition has led to the implementation of a marketing strategy that tries to analyze customers' behavior by using psychological models, which is called experiential marketing (Andreani 2007). Research conducted by Jannah et al. (2014) suggested that experiential marketing affected satisfaction of visiting the Sepuluh November Museum in Surabaya. Experiential marketing according to Schmitt (2011) is the effort used by companies or marketers to package products so that they are able to offer emotional experiences to touch the hearts and feelings of consumers. Schmitt (2009) provides experiential marketing has five elements: sense, feel, think, act, and relate.

In addition, the image of a destination is a perception formed from various information received by tourists. Each tourism destination has a particular image that contains beliefs, impressions, and perceptions about a destination (Destari 2017: 48). Handawan (2015:24) suggests that is, the image development of a tourist destination is based on the rationality and emotionality of consumers, which includes *cognitive destination image* dan *affective destination image*. Simarmata (2020) suggests that brand image has a significant positive effect on tourist visits to Lake Toba, Samosir Regency.

Meanwhile, halal tourism products are all products intended for or consumed by a person undergoing tourism activities following halal standards (Damanick & Weber 2016). The indicators of halal tourism product variables in this study include a) Halal attractions or interesting sharia-based art performances; b) Halal amenities (some facilities that make it easy to do worship and guaranteed availability of halal food and beverages); c) Halal accessibility or the availability of public transportation facilities to halal tourism objects.

This study aims at determining the role of experiential marketing, destination brand image, and tourism products on the tourists' revisit decision in Halal Tourism Village of Kabupaten Sumenep

## 2 RESEARCH MODEL AND HYPOTHESIS

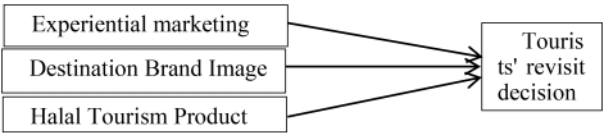


Figure 1. Research model.

Based on the relationship between the variables and the research model. The research model that links experiential marketing, destination brand image, and halal tourism products can be stated through the following hypotheses:

- H1: Experiential marketing has an effect on tourists' revisit decisions to the Halal Tourism Village of Pantai Sembilan Kabupaten Sumenep
- H2: Destination Brand Image has an effect on tourists' revisit decisions to the Halal Tourism Village of Pantai Sembilan Kabupaten Sumenep
- H3: Halal tourism products have an effect on tourists' revisit decisions to the Halal Tourism Village of Pantai Sembilan Kabupaten Sumenep

## 3 RESEARCH METHODOLOGY

This research is quantitative. The population of this study was all tourists who visited the Pantai Sembilan Gili Genteng Tourism Village, Kabupaten Sumenep, while the sample of this research were tourists who have visited the destination more than once. The sampling technique used was purposive sampling, with the criteria of tourists aged more than 17 years old and visiting more than once. The Cochran formula in Suliyanto (2018: 198) was used to decide the minimum sample number, the number of samples was 96 respondents, and the primary data collection technique was done through a questionnaire using a Likert scale of 1-5 (1: strongly disagree, 2: disagree, 3: quite agree, 4: agree, and 5: strongly agree).

The multiple linear regression analysis was used as the data analysis technique (Priyatno 2015). According to Sugiyono (2013:277), the multiple regression equation formula is as follows:  $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$

## 4 RESULTS AND DISCUSSIONS

### 4.1 *The descriptive analysis results of the variables*

Table 1. The descriptive analysis of the variables.

No	Variable	Average Respondents' Answers
1	Experiential Marketing	4.23
2	Destination Brand Image	4.01
3	Halal Tourism Products	3.76
4	Tourists' Revisit Decision	4.08

From Table 1, the average respondent's answer to the experiential marketing variable was 4.23. It showed that the respondents agreed to the statement of creating an experience through the five five elements: sense, feel, think, act, and relate. In addition, the descriptive analysis result of the average respondent's answer on the destination brand image variable was 4.01. It can be inferred that the respondents agreed with the dimensions of cognitive, effective, and unique imagery. Moreover, the descriptive analysis result of the average respondents' answers on the halal tourism products variable was 3.76. This implied that the respondents stated that they quite agreed with the statement of halal attractions; and halal accessibility.

### 4.2 *Hypothesis testing results*

Table 2. uji multiple linear regression test.

Model		Unstandardized Coefficient		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.124	2.62		.428	.670
1	X1	.527	.061	.665	8.610	.000
	X2	.151	.071	.164	2.124	.036
	X3	.325	.063	.546	4.672	.006

a. Dependent Variable: Tourist' Revisit Decision

From the results of the multiple regression analysis, the following equation was obtained:  $Y = 1.124 + 0.527 X_1 + 0.151 X_2 + 0.325 X_3 + e$

The t-test results showed that experiential marketing, destination brand image, and halal tourism products variables had a greater t-count value than the t-table with a significant level less than  $\alpha = 0.05$ . This meant that partially experiential marketing, destination brand images, and halal tourism products significantly affected the tourists' revisit decision.

## 5 DISCUSSION

The results showed that experiential marketing affected the tourists' revisit decision to Pantai Sembilan halal tourism spot. In other words, the products or services provided in the Pantai Sembilan halal tourism village suited the customers' tastes were significant for consumers in making decisions to revisit. When act marketing was able to influence the behavior and lifestyle of Pantai Sembilan

tourists, it would positively impact the tourist's decision to revisit because they feel that the product or service suits their lifestyle.

Furthermore the results showed that the brand image of the destination affected tourists' decision to revisit. The thing that must be considered is how to give tourists interesting personal experiences and reasonable beliefs about the halal tourism branding by fulfilling all their needs and desires according to Islamic standards, thus, it could be shared with others such as friends, family/relatives, and others. This showed that a safe and comfortable environment, something pleasant in the Pantai Sembilan, and unique imagery given by the unique scenery of the beach influenced tourists to recommend to friends and say positive things about the destination and decide to visit again.

In addition, the results showed that halal tourism products affected tourists' decision to revisit Pantai Sembilan. This proved that interesting sharia-based art attractions, amenities to facilitate the prayers, guaranteed availability of halal food and beverages, and the availability of public transportation to halal tourism destinations influenced customers to tell their experiences of using the products or services to others. Halal tourism products included halal tourist attractions, halal amenities, and halal accessibility.

## 6 CONCLUSION

1. Experiential marketing significantly affected the tourists' revisit decision to Pantai Sembilan tourist village in Kabupaten Sumenep.
2. The destination brand image had a significant positive effect on tourists' revisit decision to Pantai Sembilan tourist village in Kabupaten Sumenep.
3. Halal tourism products had a significant positive effect on the tourists' revisit decision to Pantai Sembilan tourist village in Kabupaten Sumenep.

## REFERENCES

- Andreani, Fransisca, 2007. Experiential Marketing (Sebuah Pendekatan Pemasaran). *Jurnal Manajemen Pemasaran*, Vol. 2:1–8.
- Battour M, dan Ismail, MN. 216. Halal Tourism: Concepts, Practises, Challenges, and Future. *Tourism Management Perspective* 19: 150154.
- Coban, S. 2012. The effects of the Image of Destination on Tourist Satisfaction and Loyalty: The Case of Cappadocia. *European Journal of Social Sciences*. 29(2), 222–232.
- Damanick dan Weber, 2016. Prinsip-prinsip pariwisata halal Indonesia
- Destari., Fajar. 2017. Meningkatkan Intention To Revisit Melalui Keunikan Jasa Pariwisata & Destination Image: Studi Kasus Pada Big Event JFC. *Jurnal Manajem en dan Kearifan Lokal Indonesia*, Vol. 1, No. 1, 2017, pp. 44–58.
- Global Muslim Travel Index Report. 2019. Singapore: CrescentRating.
- Jannah, DAM, Andriani, N, Arief, M. 2014. Pengaruh Strategi Experiential Marketing terhadap kepuasan pengunjung Museum Sepuluh Nopember Surabaya. *Jurnal Studi Manajemen dan Bisnis* 1 (1), 53–64.
- Priyatno, Duwi. 2015. *SPSS 22 Pengolahan Data Terpraktis*. Yogyakarta: CV. Andi Offset
- Rini, Endang Sulistya, 2009. Menciptakan Pengalaman Konsumen dengan Experiential Marketing. *Jurnal Manajemen Bisnis*, Vol. 2:15–20.
- Schmitt, B., 1999. Experiential Marketing-How to Get Customer to Sense, Feel, Think, Act, Relate to Your Company and Brands. New York: The Free Press.
- Schmitt, B., 2011. Experience Marketing: Concepts, Frameworks and Consumer Insights. *Foundations and Trends R in Marketing*. Vol. 5, No. 2 (2010) 55–112.
- Simarmata, Hengki Saragih, Roy, 2020. Brand image sebagai Strategi Peningkatan Jumlah Wisatawan Danau Toba "Monaco of Asia" di Kabupaten Samosir. *Journal of Education, Humaniora and Social Sciences (JEHSS)*. Vol. 3, 533–537.
- Suliyanto 2018. *Metode Penelitian Bisnis*. Yogyakarta: CV. Andi Offset
- Sugiyono. 2013. *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta
- Tan, Siow Kian & Tan, Siow-hooi & Luh, Ding-Bang & Kung, Shiann-Far. 2015. *Understanding tourist perspectives in creative tourism*. Current Issues in Tourism. 19. 1–7.

## Liquidity, CEO education, and profitability among consumer goods companies in Indonesia

P.O. Sadewa & A.W. Lubis

*Universitas Indonesia, Jakarta Pusat, DKI Jakarta, Indonesia*

**ABSTRACT:** The nature of the liquidity and profitability correlation has been extensively studied in the scientific literature due to its inconclusive nature. Although it has been found that there is a trade-off between liquidity and profitability, there are studies that show a positive relationship. This study attempts to explain the differences by using CEO education to examine the moderation effects of these variables on the correlation between liquidity and profitability. The data used are secondary data from Thompson Reuters using the panel data regression technique. The sample in this study consisted of 60 companies in Indonesia consistently listed on the IDX for five years, 2015–2019, with purposive sampling as the sampling method, focusing on consumer goods companies. The results of this research revealed that there was a significant correlation between liquidity and profitability among consumer goods companies, but cannot confirm the moderating effect of CEO education level.

**Keywords:** Profitability, Liquidity, CEO Education Level

### 1 INTRODUCTION

Liquidity is a measure that can describe how a company can fulfill its term obligations (Alarussi & Alhaderi 2018). Despite its importance, excessive liquidity will hinder the company in using cash, which should be a company investment tool to increase profitability. Meanwhile, profitability is the efficiency measure of a company's success or failure. Previous studies have shown that several factors can affect profitability, for example, company size, company growth, company efficiency, and leverage. Companies are able to pay for their expenses, their operations and are calmer in setting strategies to achieve profits (Saleem & Rehman 2011; Samo & Murad 2019). It has been argued that high liquidity will reduce profitability because the use of company cash is not optimal for venture capital, new development efforts, and company investment (Eljelly 2004; Raheman & Nasr 2007). Based on these studies, there were different results obtained for various reasons, one of which was the company's strategic decisions. Strategies to increase profitability come from the abilities or characteristics of the CEO (Saidu 2019).

A consumer goods company is a company that produces finished goods that everyone uses every day. The challenges for business actors in the consumer goods sector are getting bigger, with more and more competitors, even the competition between organized and unorganized segments with low operating costs. The reality that occurs in consumer goods companies is not in line with research by Saleem and Rehman (2011) and Samo and Murad (2019), in which, in 2018, the company's liquidity increased but was not followed by a decrease in profitability compared to the previous year.

The objectives of this study are to: examine the nexus between liquidity and profitability; investigate the moderating effect of CEO education level in the relationship between liquidity and profitability. This research is divided into five sections as follows: Section 2 provides a brief overview of the previous researches and the research hypotheses. Section 3 describes the source of data and the research model. Data analyses and results are presented in the fourth section. Finally, section 5 provides an overall conclusion of this research.



## 2 LITERATURE REVIEW

Liquidity indicates how much the company can settle short-term liabilities from current assets. A high level of liquidity for the company avoids the risk of failure to pay off their short-term debt. High liquidity will affect the profitability of companies. A high level of liquidity will increase the possibility of distributing company dividends in cash, attracting investors to invest their capital (Alarussi & Alhaderi 2018). A high level of capital will suppress the number of debts owed by the company until the interest expense that must be paid by the company will be smaller, which will lead to greater profits obtained even though the taxes to be paid are also large (Madushanka & Jathurika 2018). This argument is strengthened with findings from previous research.

Liquidity is one of the factors determining the success or failure of a company in terms of profitability. The need for cash and other sources to meet these needs also determines how the company takes the risk of paying off its short-term obligations. Madushanka and Jathurika (2018) reveal that high liquidity indicates low company risk. This means that the company is safe from the possibility of failure to pay various current obligations. Eljelly (2004) states that the better and the greater the level of liquidity of current assets owned by the company, the lower the profitability number received by the company. Based on the explanation above, the hypothesis formulated is H1: Liquidity has an effect on profitability.

Madushanka and Jathurika (2018) and Eljelly (2004) have different results regarding the relationship between liquidity and profitability. The different results may be based on the decision of the CEO. The chief executive officer is the top level executive in a company. In general, the principal responsibilities of the chief executive officer consist of making major company decisions, as well as managing the company's overall operations and resources. As the upper echelons theory suggests, the outcome of an entity, such as the chosen strategy and performance level, is influenced by the leader's characteristics. These leadership characteristics include age, work experience, educational background, socioeconomic background, and others (Hambrick & Mason 1984).

Education makes a person able to develop his or her potential until he or she can possess the personality, intelligence, and skills needed. The higher the education level, the more complex their knowledge and skills, and experience he or she has (Hambrick & Mason 1984). The difference in the level of education of these leaders leads to the different strategies they apply. Thus, this study establishes the following hypothesis: H2: CEO education level has a moderating effect on the relationship between liquidity and profitability.

## 3 RESEARCH METHODOLOGY

This study uses secondary data gathered from the annual reports of consumer goods firms listed on the Indonesian Stock Exchange ([www.idx.com](http://www.idx.com)). There square measure presently 60 listed firms, and therefore the information covers the 2015-2019 amount (5 years). This study uses necessary factors that affect company profitability, indicators that square measure typically mentioned and employed in prior literature as previously described. The variables and indicators used in this research are listed in Table 1. We employ OLS regression technique in analyzing the data to answer the research questions.

Three models are estimated with several proxies of liquidity:

*Model 1:*

$$ROA = \alpha + \beta_1 CR_{it} + \beta_2 IECR_{it} + \beta_3 SIZE_{it} + \beta_4 LEVERAGE_{it} + \varepsilon$$

*Model 2:*

$$ROA = \alpha + \beta_1 QR_{it} + \beta_2 IEQR_{it} + \beta_3 SIZE_{it} + \beta_4 LEVERAGE_{it} + \varepsilon$$

*Model 3:*

$$ROA = \alpha + \beta_1 CASHR_{it} + \beta_2 IECASHR_{it} + \beta_3 SIZE_{it} + \beta_4 LEVERAGE_{it} + \varepsilon$$

Here,  $\beta_1$ – $\beta_6$  is the coefficient, CR is current ratio, IECR is the interaction of education with liquidity ratio, SIZE represents firm size, LEVERAGE is leverage, and  $\varepsilon$  is the error term.

Table 1. Variable measurement (proxy).

No	Variable	Measurement	References
1	Profitability	ROA	(Alarussi & Alhaderi 2018)
2	Liquidity	Current ratio	(Alarussi & Alhaderi 2018)
		Quick ratio	(Saleem & Rehman 2011)
		Cash Ratio	(Eljelley 2004)
3	Level Education CEO	Interaction between education and current ratio	(Saidu 2019)
		Interaction between education and quick ratio	
		Interaction between education and cash ratio	
4	Firm size	Total assets	(Raheman & Nasr 2007)
5	Leverage	Debt to assets ratio	(Samo & Murad 2019)

#### 4 RESULTS

Table 2 reveals the descriptive statistics of the data used in this study. There are 300 observations for each variable. The median absolute value was a ROA of 0.047 while the minimum value was negative, indicating a loss. Meanwhile, the liquidity ratio had mean values of 2.341, 0.263, and 0.264, respectively. In terms of the interaction of liquidity with profitability, the mean value was 0.724 for the interaction of education with the current ratio, 0.431 for the interaction of education with the quick ratio, and 0.084 for the interaction of education with the cash ratio. Company size, ln of total assets mean is 28.945 with a minimum value of 24.276. Meanwhile, leverage has a mean value of 0.288.

Table 2. Descriptive statistics.

Variable	Minimum	Maximum	Mean	Std. Deviation
ROA	-0.440	0.526	0.044	0.119
CR	0.113	41.324	2.341	3.028
QR	0.054	13.044	0.263	0.545
CASHR	0.002	6.656	0.263	0.545
IECR	0	15.8223	0.724	1.729
IEQR	0	13.044	0.431	1.222
IECASHR	0	6.656	0.084	0.435
LTA	24.476	32.200	28.945	1.529
DAR	0.001	1.426	0.288	0.186
n = 300				

Table 3. Regression results.

Variable	Model1		Model2		Model3	
	Coefficient	Prob	Coefficient	Prob	Coefficient	Prob
CR	0.018	0.090*				
QR			0.011	0.065*		
CASHR					0.018	0.090*
IECR	0.006	0.651				
IEQR			-0.0126	0.160		
IECASHR					0.006	0.651
SIZE	0.058	0.0147**	0.062	0.009***	0.058	0.014***
DAR	-0.020	0.620	-0.0136	0.756	-0.020	0.620
F	0.000		0.000		0.000	
R <sup>2</sup>	0.766		0.766		0.766	

\*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% level, respectively

Table 3 consists of three models: the first one examines the relationship between the current ratio and ROA. This model shows that all liquidity ratios had a positive and significant correlation to ROA (the coefficient of CR was 0.018, QR was 0.011, and CASHR was 0.018 and was significant at 10%). The results indicate the importance for companies to regulate the liquidity procedures of the company. Furthermore, the results in this research show a positive correlation and significant results on firm size (coefficient values of all models were 0.058, 0.062, and 0.058, respectively, and 5% significant in model 1 and 1% in model 2 and model 3).

The findings of this research reveal a positive relationship between liquidity and profitability. If the company's current assets are sufficient, the company can set a strategy to increase the company's profitability (Madushanka & Jathurika 2018). Meanwhile, several CEOs can manage good liquidity because CEOs with higher education determine the chosen strategy for liquidity (Gottesman & Morey 2011). CEOs with high education in this study have a negative correlation with liquidity and profitability. Company size describes the effectiveness of the company through working capital derived from company assets to maximize company value. By having large resources, companies can expand the market, thereby increasing company profits (Alarussi & Alhaderi 2018).

## 5 CONCLUSION

This research aims at determining the correlation between liquidity and profitability with the moderating level of CEO education in consumer goods firms listed on the Indonesian Stock Exchange. Firm size (measured with total assets) and leverage (measured by DAR ratio). Data on 60 firms listed on the Indonesian Stock Exchange, covering the 2015–2019 period, was taken from Thompson Reuters, and panel data regression technique was used to analyze the data. The results emphasize that liquidity has a strong correlation with profitability. The results also find that firm size is positively correlated to profitability. Meanwhile, leverage shows a negative but not significant correlation with profitability. The research concludes that companies with abundant liquidity will increase the company's income.

## REFERENCES

- Alarussi, A. S., & Alhaderi, S. M. (2018). Factors affecting profitability in Malaysia. *Journal of Economic Studies*, 45(3), 442–458. <https://doi.org/10.1108/JES-05-2017-0124>
- Eljeljy, A. M. A. (2004). Liquidity - profitability tradeoff: An empirical investigation in an emerging market. *International Journal of Commerce and Management*, 14(2), 48–61. <https://doi.org/10.1108/10569210480000179>
- Gottesman, A. A., & Morey, M. R. (2011). Does a Better Education Make For Better Managers? An Empirical Examination of CEO Educational Quality and Firm Performance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.564443>
- Hambrick, D. C., & Mason, P. A. (1984). Upper Echelons: The Organization as a Reflection of Its Top Managers. *Academy of Management Review*, 9, 193–206.
- Madushanka, K. H. I., & Jathurika, M. (2018). The Impact of Liquidity Ratios on Profitability (With special reference to Listed Manufacturing Companies in Sri Lanka). *International Research Journal of Advanced Engineering and Science*, 3(4), 157–161. <https://www.researchgate.net/publication/331035336>
- Raheman, A., & Nasr, M. (2007). Working Capital Management and Profitability-case of Pakistani Firms. *International Review of Business Research Papers*, 3(1), 279–300.
- Saidu, S. (2019). CEO characteristics and firm performance: focus on origin, education and ownership. *Journal of Global Entrepreneurship Research*, 9(1). <https://doi.org/10.1186/s40497-019-0153-7>
- Saleem, Q., & Rehman, R. U. (2011). Impacts of liquidity ratios on profitability (Case of oil and gas companies of Pakistan). *Interdisciplinary Journal of Research in Business*, 1(July), 95–98.
- Samo, A. H., & Murad, H. (2019). Impact of liquidity and financial leverage on firm's profitability – an empirical analysis of the textile industry of Pakistan. *Research Journal of Textile and Apparel*, 23(4), 291–305. <https://doi.org/10.1108/RJTA-09-2018-0055>

## E-prakerin redesign as a solution to short-term internship program during the COVID-19 pandemic

P. Heryanti

*Universitas Airlangga, Surabaya*

**ABSTRACT:** Short-Term Internship Program is one form of Corporate Social Responsibility (CSR) Program held by PT Petrokimia Gresik (PG). In a year, at least 1500 undergraduate students, vocational and high school students participate in this program. This program helps student understand better the required knowledge, skills and attitudes in the industry by being directly involved in the line of work. When the COVID-19 pandemic hit in early 2020, most of the workers worked from home, while some of the others had to limit their mobilization, and thus organizations enforced visitor restriction, including students. This study aims to create an integrated digital platform to allow students to experience “work” from home utilizing PG digital learning website, adding reporting, authorization and logbook features to the existing platform.

### 1 INTRODUCTION

PT Petrokimia Gresik is one of the subsidiaries of PT Pupuk Indonesia that produces various kinds of fertilizer and other chemical products for agroindustry solutions. One of its roles is to manage the Human Resource Department, especially the Training & Development Program, which has four program focuses, comprising Man days of Training Program, Number of training participants, Study Assignment, and Social Responsibility Program. The social responsibility program is divided into four main programs, namely Internship, Research, Vocational Internship, and Short-Term Internship Program.

The Internship program is a program in which its participants are undergraduate and postgraduate students. The duration of this program is about six months. The Research program is a program organized to accommodate students' need to obtain relevant data from the company required for their research study. Vocational internship is a program intended to be followed by vocational students, where its duration ranges from three to six months. The Short-Term Internship Program is a program involving undergraduate students, vocational dan high school students. This program's duration is one month. By joining this program, students are expected to gain a better understanding about knowledge, skills, attitude and other characteristics required in the industry, and eventually they are expected to gain knowledge and skills as qualification to be involved in the industry.

In a year, at least 1500 students participate in this program. But due to the COVID-19 pandemic that made the employees work remotely from home and made the students learn from home, the execution of Training and Development programs was affected. The realization of some of these programs could not meet the target set at the beginning of the year.

### 2 LITERATURE REVIEW

#### 2.1 *Internship*

An internship is a program held by an organization which offers work experience for a certain period of time (Gupta et al., 2020). Academic internships are a bridge to link the theory taught in the classroom and practice in the real work life by participating in a scheduled work under supervision (Gault et al., 2010). Through internship, it is expected that the educational curriculum

can be updated to the more current and updated list of knowledge required in the industry. According to Hergert (2009), internship has a critical contribution in helping students to connect and associate their conventional coursework and the workplace, and they even value internship experience greatly.

### 3 METHODOLOGY

#### 3.1 Problem Definition

The first steps taken in this study were defining the problem and analyzing the root cause of the problem. Based on the monthly report of Training & Development Program, the realization of Social Responsibility Program did not achieve the target set at the beginning of the year. From further examination into the data, we found that the number of Short-Term Internship Program's participants had the highest gap between target and its realization, which was 20.5%. In addition, by using pareto diagram analysis, we found that the Short-Term Internship Program made the most significant contribution to the low achievement of Social Responsibility Program.

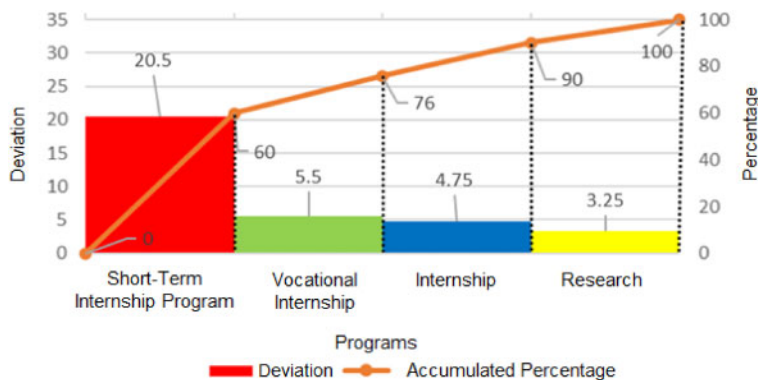


Figure 1. Pareto Diagram of Contribution of each Social Responsibility Program.

After identifying the main problem, the root cause of the problem was analyzed. By means of a fish bone diagram, it was revealed that there were several things causing this problem, including the COVID-19 pandemic that made students who were the participants of this program had to learn from home online, and also employees who served as the supervisor and the mentor had to work remotely from home. More importantly, in the existing platform, there were not enough features to support online internship. Finally, the target for this study was set, which was to minimize the deviation of Short-Term Internship Program's participants from 20.5 to 6 using the e-prakerin redesign to accommodate the program online.

#### 3.2 Development

In this step of the methodology, firstly, we formulated some alternative solutions on how the online internship should be implemented, and what kind of platform should be used to support the online internship program. From several alternative solutions, the one solution that was considered to be the most effective was integrating and synchronizing the current website with the company's digital learning platform while adding some features to the current website.

Once the solution that would be implemented was decided, the flowchart of Short-Term Internship Program was redesigned to illustrate the new step-by-step process on how this program would work online. When the most effective and feasible flowchart was created, a mock-up for every new feature for the platform to accommodate online internship was created. The proposed new feature to facilitate online internship involved administration for recording attendance, logbook, report

approval, and the addition of an online statement letter. Subsequently, the mock-up was used as a guidance to develop the platform, especially for its interface.

Next, in this development phase, a platform was created based on the flowchart and the mock-up, together with the Apps Developer Team. Every progress of the development was monitored and evaluated. When the development phase was done, the next step was User Acceptance Test. This step was taken to understand how well the website performs and how users perceive the website. After passing the User Acceptance Test, the website development was finally deployed to the company’s server by coordinating with the IT team.

4 RESULTS AND DISCUSSION

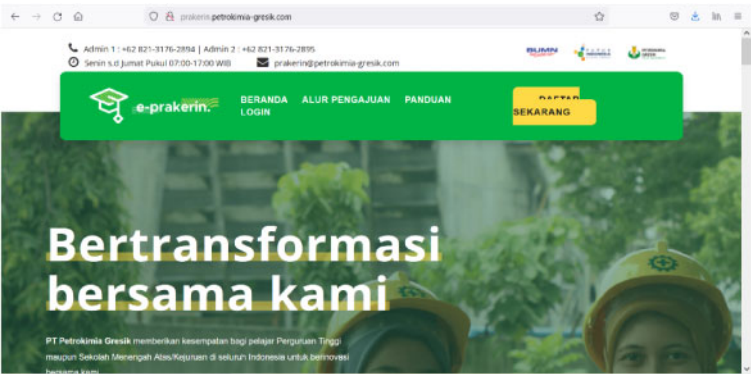


Figure 2. Dashboard of the E-Prakerin Website.

After the implementation of the program using e-prakerin website that had been redesigned by adding new features, it was found that the deviation of the number of participants joining Short-Term Internship Program significantly decreased, from 20.5 to 0. No deviation meant that there was no gap between the target and the realization of number of students participating in the program. It was far beyond the expectation we set at the beginning of this study, in which we targeted a decrease from 20.5 to 6.

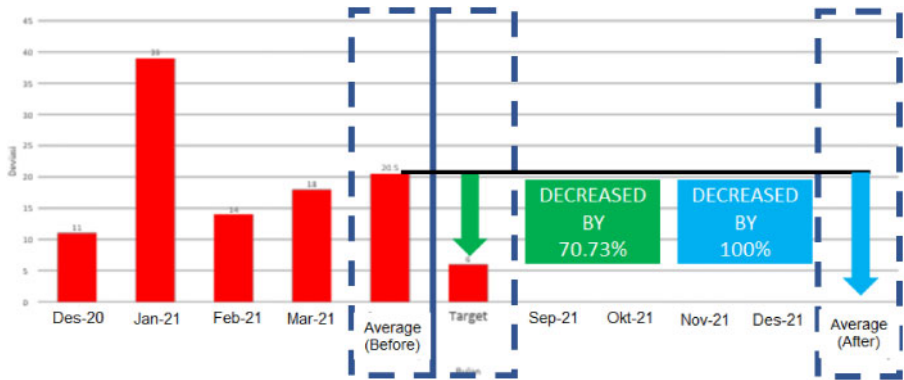


Figure 3. Deviation of Number of Participants of Short-Term Internship Program.

Other than minimizing the deviation of the program’s participants, the implementation of the e-prakerin website also brought several positive impacts to the company.

Table 1. Positive Impacts of E-Prakerin Redesign.

	Before development	Target	After Development
Q (Quality)	Short-Term Internship program could not be held due to the COVID-19 pandemic. Deviation: 20,5	Program held through online internship Deviation: 6	Program could be held online, using e-prakerin website. Deviation: 0
C (Cost)	The estimated cost needed for Personal Protective Equipment, Work Permit, Medical Equipment and cost should there be COVID transmission is about Rp 3.150.000/person	The estimated cost needed for Personal Protective Equipment, Work Permit, Medical Equipment and cost should there be COVID transmission : Rp 0	The estimated cost needed for Personal Protective Equipment, Work Permit, Medical Equipment and cost should there be COVID transmission : Rp 0 Website development fee: Rp 5.000.000,-
D (Delivery)	Estimated time for report approval is 1-2 weeks, because the administration process takes a long time, starting from asking for the approval from the mentor, the department where program takes place, and VP of HRD.	Estimated time for report approval is 1 day, due to the superiors' workload.	Estimated time for report approval is 1 day, due to the superiors' workload.
H (Health)	There is a high possibility of COVID transmission due to the physical interaction between students and mentors. Health Level 2	Possibility of COVID transmission is lower, because internship is held online. Health Level 4	Health Level 4
M (Moral)	Participants' satisfaction level: Dissatisfied (Level 2)	Participants' satisfaction level: Very Satisfied (Level 5)	Participants' satisfaction level: Very Satisfied (Level 5)

## 5 CONCLUSION

This study found that redesigning the e-prakerin website increased the number of participants of the Short-Term Internship Program. Redesigning the e-prakerin website was done by integrating and synchronizing the current website with the digital learning platform and adding some features to accommodate the online internship.

## REFERENCES

- Gault, J., Leach, E., & Duey, M. (2010). Effects of business internships on job marketability: The employers' perspective. *Education + Training*, 52. <https://doi.org/10.1108/00400911011017690>
- Gupta, A., Gopiani, M., & Sabhani, J. (2020). A Study on Impact of Internship on Regular Studies of Undergraduate Students. *International Journal of Advance and Innovative Research*, Vol. 7 Issue 1: 92–99.
- Hergert, M. (2009). Student Perceptions Of The Value Of Internships In Business Education. *American Journal of Business Education-November*, 2.

# Financial inclusion and its impact on performance of MSMEs with efficiency and financial flexibility as mediation: Empirical evidence from Malang city

K. Ratnawati & P. Yuana

*Department of Management, Faculty of Economics and Business, Universitas Brawijaya, Malang, Indonesia*

**ABSTRACT:** This research analyzes the effect of financial inclusion in the performance of MSMEs and examines the role of efficiency and financial flexibility as a mediation. The Simple Random Sampling technique was used with a total of 100 respondents and analyzed using the Partial Least Square (PLS) method. The results showed that financial inclusion affected the performance of MSMEs, either directly or through mediation, namely efficiency and financial flexibility. Both of them had a positive effect on the relationship between financial inclusion and the performance of MSMEs. Moreover, the increase in financial inclusion had a major impact on improving the performance of MSMEs through efficiency rather than financial flexibility. Therefore, increasing access to financial services for MSMEs will enhance the performance of MSMEs through improving efficiency in the form of a financial services approach for MSME.

## 1 INTRODUCTION

MSMEs are a vital part of the Indonesian economy (Zain 2010). MSMEs in the city of Malang have a high potential and have shown very rapid development over the last three years. In 2016, the number of MSMEs in Malang City was only 1970 business units, then increased to 3292 units in 2017 and reached 3711 units in 2018. Therefore, this research makes MSMEs in Malang the object of research.

The impact of financial inclusion on MSME growth across developed and developing countries demonstrates that financial inclusion has a positive and significant impact on the performance and growth of the business (Abdmoulah & Jelili 2013; Chauvet & Jacolin 2017; Lee et al. 2019). Financial inclusion reduces liquidity constraints and encourages investment, resulting in higher output and employment (Khan 2011; Morgan & Pontines 2014). Properly implemented financial inclusion has the potential to increase the economic activities of MSMEs (Egbetunde 2012; Mbuotor & Uba 2013; Okafor 2012; Onaolapo 2015; Yaron et al. 2013). However, the latest research conducted by Ejiofor et al. (2020) firmly concluded that financial inclusion had no effect on the growth of MSMEs. This shows the inconsistency of findings related to the effect of financial inclusion on the performance of MSMEs.

Researchers concluded that the successful implementation of financial inclusion had the potential to increase economic activity, including by enhancing the performance of MSMEs (Onaolapo 2015; Yaron et al. 2013). According to Mardiasmo (2009), efficiency is closely related to the concept of productivity. Efficiency indicators describe the relationship between resource inputs by an organizational unit (e.g., staff, wages, administrative costs) and the resulting output. The greater the output compared to the input, the higher the level of efficiency of an organization (Mardiasmo 2009). The relationship between financial inclusion and efficiency in developing countries has been tested by Grohman et al. (2017). Based on the results of previous research described above, it can be assumed that financial inclusion can increase efficiency.



The survey conducted by Graham and Harvey (2001) obtained results where 392 Chief Financial Officers (CFO) from various companies in America said that financial flexibility is the most important determining factor in determining the composition of the capital structure. Financial flexibility is the level of capacity and speed of a company to be able to mobilize its financial resources or to take preventive, reactive, and exploitative actions to maximize firm value (Byoun 2008).

MSME credit support can improve economic growth by increasing business capitalization, employment opportunities, and long-term income growth (Kevane & Wydick 2001). Moreover, access to external credit will significantly increase sales and enterprise growth (Banarjee 2014). Credit constraints, whether due to bad credit or a recession, may encourage firms to experience lower sales growth rates (Dimitrov & Tice 2006).

## 2 RESEARCH METHODS

The population in this study were all MSME actors in Malang City. The research sample was selected using Roscoe's theory and 100 samples were obtained from all of Malang City's MSMEs. The data collection method used was the Simple Random Sampling method. The data analysis method used in this research was multivariate analysis with the Partial Least Square (PLS) model.

## 3 RESULT AND DISCUSSION

Test results showed that the hypothesis (H1) was accepted and showed a significant positive effect. This finding is consistent with research conducted by Khan (2011), Egbetunde (2012), Okafor (2012), Mbutor and Uba (2013), Yaron et al. (2013), and Onaolapo (2015). All efforts to increase the access and use of financial services can improve the performance of MSMEs. Furthermore, financial inclusion will provide MSMEs with access to more financial services at affordable costs to improve the performance of MSMEs with adequate funding. In general, good financial inclusion has great potential for financial return.

The effect of financial inclusion on efficiency for the hypothesis (H2) was accepted and this indicates that direct financial inclusion can increase the efficiency of MSMEs in Malang, meaning that all efforts to minimize losses or waste of resources in products/services can increase market penetration and service quality of financial institutions. This finding is in line with García and José (2016) who argued that increased financial inclusion due to intensive participation in the financial system by low-income clients can lead to high transaction and information costs. This increases the information asymmetry that characterizes the financial system as a fundamental source of inefficiencies that are difficult to resolve (for example, due to a lack of collateral or credit history). In general, good financial inclusion has a high potential to create high efficiency as well. This is evidenced by the results of the statistical distribution of financial inclusion variables on MSMEs in Malang, followed by a high level of efficiency.

Hypothesis (H3) testing showed that financial inclusion had a significant positive effect on financial flexibility and was in line with several previous studies conducted by Agha and Faff (2014) and Bergant (2015). In general, good financial inclusion has a high potential to create high financial flexibility. This is evidenced by the results of the statistical distribution of financial inclusion variables, followed by a high level of financial flexibility. Bergant (2015) defined financial flexibility as the ability (capacity and speed) of a business system to fund the development of business opportunities without disrupting its financial stability. When faced with financing constraints, companies should prioritize debt financing at lower costs when obtaining external financing and use short-term investment to maintain financial flexibility (Yang & Zhang 2020).

Based on the testing results, hypothesis (H4) was accepted and showed a significant positive effect. Efficiency can directly improve the performance of MSMEs in the city of Malang, which means that a process that provides a relationship between lenders and borrowers is able to improve the results of work functions or individual or group activities in an MSME to achieve a common goal within a certain period. This shows that the efforts of banks to improve their services to increase the satisfaction and loyalty of MSME customers can improve MSME performance through increased

market share growth, workforce growth, sales growth, and MSME profit growth. The results showed that efficiency had a significant positive effect on the performance of MSMEs in Malang City, which is in line with previous research conducted by Ahmad and Arif (2015). In general, good efficiency has a high potential to create high MSME performance as well. This is evidenced by the results of the distribution of the efficiency variable statistics which are also followed by the high level of performance of MSMEs.

The hypothesis (H5) was accepted and showed a significant positive effect. Direct access to capital was able to improve the performance of MSMEs in the city of Malang, meaning that there were no obstacles related to administrative costs or procedures for capital provider institutions that are felt by them so that they were able to improve the results of work functions or individual or group activities in an MSME certain period. This shows that their companies had received a loan from a bank in the full amount proposed which could fulfill their credit need. They found it easy to access credit and loan from a bank. The results showed that financial flexibility had a significant positive effect on the performance of MSMEs in Malang in line with previous research conducted by Ahmad and Arif (2015). In general, good financial flexibility has a high potential to create a high performance for MSMEs. This is evidenced by the results of the statistical distribution of the variable financial flexibility which is also followed by a high level of performance of MSMEs.

The hypothesis (H6) was accepted and the results showed a significant positive effect. Efficiency was proven to be able to mediate the effect of financial inclusion on the performance of MSMEs in Malang. This implies that all efforts to increase access, availability, and benefits of the formal financial system for all economic actors caused no constraints related to administrative costs or procedures for institutions providing capital that were felt by the MSMEs so that they could improve the results of work functions or individual and group activities to achieve a common goal within a certain period. Financial inclusion caused companies owned by MSMEs in Malang to receive loans from banks/cooperatives, to receive the full amount of loan facilities proposed, and to receive the loan amounts that meet the company's credit needs. Their companies found it easy to access credit from banks/cooperatives and could get them more often. The interest rates charged by banks/cooperatives were usually lower than other financial institutions. MSME actors in Malang thought that the interest rates charged by banks/cooperatives were reasonable and very attractive. This caused an increase in the performance of MSMEs in Malang city.

The hypothesis (H7) was accepted because the analysis results showed a significant positive effect. Financial flexibility was able to mediate the effect of financial inclusion on the performance of MSMEs in Malang. It can be interpreted that all efforts to increase access, availability, and benefits of the formal financial system for all economic actors led to a process that provided a relationship between lenders and borrowers to improve the results of work functions or individual or group activities in an MSME to achieve a common goal in a certain period. The performance of MSMEs in Malang city was considered quite good because the financial service support offered by banks/cooperatives improved the nutrition of economic actors in Malang, increased access to health services in their households, and allowed MSME actors to pay school fees. The savings products provided by banks/cooperatives were suitable, safe, and suited their needs.

#### 4 CONCLUSIONS

The government's policy to increase access to financial services, especially for small and medium-sized enterprises, has been able to improve the performance of MSMEs as measured by increasing market share, increasing employment, increasing sales, and increasing profits. Increasing financial inclusion also had an effect on improving efficiency by simplifying formal credit procedures and reducing bank credit costs. Increasing efforts to build customer satisfaction and loyalty as an indicator of financial flexibility will have an effect on improving the performance of MSMEs. The efficiency improvements made by MSME actors with the ease of loan procedures and lowering borrowing costs will increase the ability of MSMEs to improve performance. The strongest influence was efforts to increase financial flexibility on improving the performance of MSMEs through financial intermediation by opening banking branches to improve lender and borrower

relations. Efforts to increase efficiency had a less strong effect on improving the performance of MSMEs through efficiency than through financial flexibility. Increasing financial inclusion will improve the performance of MSMEs through financial flexibility and access to finance, but the impact was not as strong as through financial flexibility alone.

## REFERENCES

- Abdmoulah, W., & Jelili, R. Ben. 2013. Access to Finance Thresholds and the Finance-Growth Nexus. *Economic Papers: A Journal of Applied Economics and Policy*, 32(4), 522–534.
- Agha, M., & Faff, R. 2014. An investigation of the asymmetric link between credit re-ratings and corporate financial decisions: “Flicking the switch” with financial flexibility. *Journal of Corporate Finance*, 29, 37–57.
- Ahmad, S. Z., & Arif, A. M. M. 2015. Strengthening access to finance for women-owned SMEs in developing countries. *Equality, Diversity and Inclusion: An International Journal*.
- Banaerjee, R. 2014. SMEs, Financial Constraints and Growth. *BIS Working Papers*, No series 475.
- Bergant, Ž. (2015). Finančna prožnost in naložbena sposobnost. *Poslovodno računovodstvo*, 38–61.
- Byoun, S. 2008. How and When do Firms Adjust their Capital Structures Toward Targets? *Journal of Finance*, 63(6): 3069–3096.
- Chauvet, L., & Jacolin, L. 2017. Financial Inclusion, Bank Concentration, and Firm Performance. *World Development*, 97, 1–13.
- Dimitrov, V., & Tice, S. 2006. Corporate diversification and credit constraints: Real effects across the business cycle. *The Review of Financial Studies*, Vol. 19 No. 4, pp. 1465–1498.
- Egbetunde, T. 2012. Bank credits and rural development in Nigeria (1982–2009). *International Journal of Finance and Accounting*, 1(3), 45–52.
- Ejiofor, E., Camillus, Ok. N., & Ubogu, F. E. 2020. Effects Of Financial Inclusion On The Growth Of Cottage Firms In Nigeria. *American Research Journal of Humanities & Social Science (ARJHSS)*, 3(1), 06–14.
- García, M. J.R. & José, M. 2016. Can financial inclusion and financial stability go hand in hand? *Economic Issues*, 21 (2), pp. 81–103.
- Graham, J., Harvey, C. 2001. The Theory and Practice of Corporate Finance: Evidence from The Field. *Journal of Financial Economics*, 60(2), 187–243.
- Grohmann, A., Kluhs, T., & Menkhoff, L. 2017. Does Financial Literacy Improve Financial Inclusion? Cross Country Evidence. *DIW Discussion Paper*, DIW, Berlin.
- Kevane, M., & Wydick, B. 2001. Microenterprise Lending to Female Entrepreneurs: Sacrificing Economic growth for Poverty Alleviation. *World Development*, Vol.29, No. 7, pp. 1225–1236.
- Khan, S. H. R. 2011. Financial inclusion and financial stability: are they two sides of the same coin? *Indian Bankers Association & Indian Overseas Bank, Chennai*, (November), 1–12.
- Lee C.C., Wang C.W., & Ho S.J. 2019. Financial Inclusion, Financial Innovation, and Firms’ Sales Growth. *International Review of Economics and Finance*.
- Mardiasmo. 2009. Efisiensi dan Efektifitas. Penerbit: Andy Jakarta
- Mbutor, O. M., & Uba, I. A. 2013. The impact of financial inclusion on monetary policy in Nigeria. *Journal of Economics and International Finance*, Vol. 5 No. 8, pp. 318–326.
- Morgan, P. J., & Pontines, V. 2014. Financial Stability and Financial Inclusion. *ADB Working Paper Series* (No. 488). Tokyo: East Asian Bureau of Economic Research.
- Nurjannah, L. 2017. *Peran Inklusi Keuangan Terhadap Perkembangan UMKM di Yogyakarta*. UIN Sunan Kalijaga Yogyakarta.
- Okafor, F. O. 2012. Financial Inclusion: An Instrument for Economic Growth and Balanced Development in Rural Areas. *Journal of the Chartered Institute of Bankers of Nigeria*, 6(8), 38–45.
- Onaolapo, A. R. 2015. Effects of financial inclusion on the economic growth of Nigeria. *International Journal of Business and Management Review*, 3(8), 11–28.
- Yang, L., & Zhang, Y. 2020. Digital Financial Inclusion and Sustainable Growth of Small and Micro Enterprises—Evidence Based on China’s New Third Board Market Listed Companies. *Sustainability Journal*, 12, 3733; doi:10.3390/su12093733.
- Yaron, J., Benjamin, M. P., & Pipprek, G. L. 2013. *Rural Finance: Issue, Design, and Best Practices*. Washington, DC.
- Zain, N. H. 2010. Keterkaitan Perbankan Syariah dengan Usaha Mikro Kecil Menengah (UMKM) di Indonesia. *Dikta Ekonomi*, 7(2), 146–158.

# The effect of workplace ostracism and employee silence on task performance with perceived stress as mediation variable

P.N.H. Sembiring & A. Satrya

*Master of Management, Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** The employee outsourcing process has snowballed in different parts of the world, specifically in Indonesia. For instance, employees face many challenges concerning agreement, recruitment, and implementation during outsourcing. They also encounter workplace ostracism, which leads to work dissatisfaction, psychological and overall health problems, often resulting in resignation. However, exposing outsourced employees to an overly demanding experience can exceed their adaptability, affecting productivity. Therefore, this study aimed to investigate the effect of workplace ostracism and employee silence on task performance with perceived stress as a mediation variable. A quantitative method was used to collect data from 200 outsourced employees through online questionnaires. The responses were processed through the PLS-SEM technique by LISREL software. From the results, most outsourced employees were aged between 21 and 30 years with work experience of between 1-2 years. According to the study, perceived stress mediates the relationship between workplace ostracism and employee silence on task performance. Additionally, it was concluded that ostracism results from a lack of workplace actualization.

## 1 INTRODUCTION

Currently, many businesses use outsourced employees to run their operations effectively. However, the increased competition requires the current businesses to improve logistics and operations management systems (Zhu 2016). According to Asatiani et al. (2019), most companies outsource their personnel to reduce costs and focus on their competencies. Apart from cost saving, other benefits include reduced time for marketing, improved work quality, and value creation (Zhu 2016). In addition, outsourcing human resources help companies to access a specialized workforce. This growing outsourcing industry in Indonesia faces various problems ranging from agreements, recruitment, and implementation (Triyono 2011). Although the outsourced employees benefit the organizations, they are often subjected to workplace ostracism or exclusion (Steinbauer et al. 2018), leading to poor psychological wellbeing and job dissatisfaction (Robinson et al. 2013). Furthermore, most outsourced employees keep their ideas and feelings, maintaining their struggles with environmental demands secret.

## 2 LITERATURE REVIEW

Workplace ostracism is a negative experience (Ferris et al. 2008) which leads to negative emotional states such as sadness, depression, loneliness, jealousy, guilt, shame, and social anxiety (Williams et al. 2002). Studies indicate that workplace ostracism affects an individual's ability to conform to social norms in their environment (Baumeister et al. 2005). In addition, ostracism leads to low self-awareness and stress, which reduces an individual's desire for long-term goals (Twenge et al. 2003).

According to cognitive dissonance theory, contradictory thoughts and behaviors ruin an individual's psychological state (Festinger 1962). Employee silence increases psychological discomfort for example, stress caused by cognitive dissonance. Kirrane et al. (2017) support this theory by

demonstrating that employee silence causes stress. Furthermore, the study revealed that employees who do not argue with their managers are more likely to experience stress (Dedahow et al. 2016). Previous studies found that employees purposefully remain silent because they are conflicted about their workplace roles. Tasks ambiguity and high work complexity can suppress individual feelings, causing stress (Wu et al. 2018). Stress leads to unfavorable conditions, such as information overload, making people perform poorly on tasks requiring frustration tolerance, accuracy, and concentration (Motowidlo et al. 1986). When people are stressed at the workplace, their productivity diminishes. This indicates people need to avoid stressful situations and develop a stress-relieving strategy to increase their job performance. On a general level, stress has a negative effect on one's productivity, effectiveness, and quality of work (Savery & Luk 2001). Individuals who have high stress levels will experience cognitive weakness which results in the depletion of individual energy needed to perform task performance. Stress also provides unfavorable conditions, such as information overload which has an impact on the need to get more attention. Consequently, when individuals are stressed, they tend to perform poorly on tasks that require tolerance for frustration, accuracy, and the ability to avoid distraction (Dong & Chung 2020).

Previous literature has explained that there is indeed a relationship between stressors and strain relationships. Stressor is a stimulus that indicates the presence of stress characterized by increased anxiety, tension, and fatigue (Jex 1998). One example is workplace ostracism. Exclusion that occurs in the workplace will cause strain. Strain is the result of a stress process that can be psychological (job dissatisfaction and turnover intention), physical (headaches, increased blood pressure, and long-term illness), or behavioral (smoking and withdrawal from work). Unwanted strain or tension will activate negative emotions and cognitions that result in a person withdrawing from work. As a result, when individuals experience stress they will tend to perform poorly on the tasks and responsibilities they are doing (Chung 2018). Therefore, the hypotheses are as follows:

- H1: Workplace Ostracism has a significant positive effect on perceived stress
- H2: Employee silence has a significant positive effect on perceived stress
- H3: Perceived stress has a negative effect on task performance
- H4: Workplace ostracism has a significant effect on task performance
- H5: Employee silence has a significant effect on task performance

### 3 METHODOLOGY

The primary data was obtained by distributing questionnaires to 195 outsourced workers from Jakarta, Bogor, Depok, Tangerang, and Bekasi, Indonesia. The questionnaires' validity and reliability were evaluated using 32 respondents. Additionally, the study model was analyzed through confirmatory factor analysis and structural model.

### 4 RESULTS AND DISCUSSION

The study used a sample of 195 respondents consisting of 64.7% female and 35.3% male. Additionally, 85% of the sample comprised people aged 20 and 30 years, while 86.5% comprised bachelor's degree holders with work experience of 1-2 years. The confirmatory factor analysis results show that each indicator has a standardized loadings value greater than 0.5 and an AVE value greater than 0.5. The indicators comprising accurate measurements with each variable containing a construct reliability value greater than 0.6. Therefore, the indicators and the measurement model are valid and reliable.

After testing, five hypotheses were accepted, while one failed to fulfill the significance criteria through the Sobel test (t-value 1.96 and p-value 0.05) (Hair et al. 2014). Similar to mediation testing, the study found that workplace ostracism and employee silence indirectly affect task performance.

Table 1. Hypothesis test results.

H	Path	T-value	Evaluation
1	WPO → PSS	4,43	Supported
2	ES → PSS	3,08	Supported
3	PSS → TP	-3,45	Supported
4	WPO → TP	-2,19	Supported
5	ES → TP	4,43	Not Supported

Source: Result of statistical data using LISREL

Previous studies show a link between workplace ostracism, employee silence, and task performance (perceived stress). Furthermore, social and organizational contexts significantly impact employees' psychological wellbeing. According to Ferris et al. (2008), workplace exclusion is positively related to anxiety and depression from continuing stress. On the other hand, workplace exclusion results in negative self-perceptions and emotions, making individuals lose self-control and decreasing their work quality. When an individual is ostracized, their stress comes from a lack of social support in the organization (Hobfoll 1989). Their stress originates from their negative experiences. According to this study, workplace ostracism or exclusion can be a source of stress. This finding agrees with Williams et al. (2002), which explained how workplace exclusion harms an individual's sense of belonging and behavior towards achieving workplace goals. Ostracized individuals are unlikely to believe their unsuitability to serve, and this shows why they cannot embrace positive behaviors while at work. The relationship between workplace exclusion and performance extends the previous study on how exclusion reduces positive work behaviors, such as pro-social behavior, and triggers negative behaviors (Twenge et al. 2003). When an employee feels excluded from other members, their energy may drain, reducing the effort to complete their tasks (Ng & Feldman 2012).

Employees' confidence in completing their tasks reduces the chances of failing to fulfill targets. Finding ways to fulfill performance standards in the face of social exclusion necessitates a belief in one's ability to find creative solutions to the knowledge deficits that come with isolation. In addition, self-motivation reduces stress caused by feelings of being excluded or ignored (Wu et al. 2011) and the chances of failing to fulfill performance targets. Most employees who are unable to use personal resources cannot cope with workplace exclusion leading to decreased performance (Hobfoll 2001).

## 5 CONCLUSIONS

Ostracism occurs in the workplace social context due to stress among outsourced employees. From the results, perceived stress determines employees' task performance. Furthermore, silence and voice are complex and multidimensional constructs; therefore, it is critical to understand employees' motivations for silence. Organizations and managers should foster positive interpersonal relationships by increasing cohesion, trust, and communication. Both organizations and managers should avoid member bias in work teams to avoid the feeling of exclusion and dissimilarity among employees (Bauer 1996).

## REFERENCES

- Asiatiani, A., Penttinen, E., & Kumar, A. (2019). Uncovering the nature of the relationship between outsourcing motivations and the degree of outsourcing: An empirical study on Finnish small and medium-sized enterprises. *Journal of Information Technology*, 34(1), 39–58.
- Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Twenge, J. M. (2005). Social exclusion impairs self-regulation. *Journal of Personality and Social Psychology*, 88(4), 589–604.

- Bauer, T. N., & Green, S. G. (1996). Development of leader–member exchange: A longitudinal test. *Academy of Management Journal*, 39(6), 1538–1567.
- Chung, Y. W. (2018). Workplace ostracism and workplace behaviors: A moderated mediation model of perceived stress and psychological empowerment. *Anxiety, Stress, and Coping*, 31(3), 304–317.
- Chung Y. W. (2020). The relationship between workplace ostracism, TMX, task interdependence, and task performance: A moderated mediation model. *International Journal of Environmental Research and Public Health*, 17(12), 4432.
- Dedahanov, A. T., Lee, D. H., & Rhee, J. (2016). Silence as a mediator between organizational factors and stress. *Journal of Managerial Psychology*, 31(8), 1251–1264.
- Dong, X.T., & Chung, Y.W. (2020). The mediating effect of perceived stress and moderating effect of trust for the relationship between employee silence and behavioral outcomes. *Psychological Reports*, 0(0), 1–23.
- Ferris, D. L., Brown, D. J., Berry, J. W., & Lian, H. (2008). The development and validation of the Workplace Ostracism Scale. *Journal of Applied Psychology*, 93(6), 1348–1366.
- Festinger, L. (1962). Cognitive dissonance. *Scientific American*, 207(4), 93–107.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Exploratory factor analysis. Multivariate data analysis*. London : Pearson Education Limited.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44, 513–524.
- Jex, S. M. (1998). *Stress and job performance: Theory, research, and implications for managerial practice*. United States: Sage Publications Ltd.
- Kirrane, M., O’Shea, D., Buckley, F., Grazi, A., & Prout, J. (2017). Investigating the role of discrete emotions in silence versus speaking up. *Journal of Occupational and Organizational Psychology*, 90(3), 354–378.
- Motowidlo, S. J., Packard, J. S., & Manning, M. R. (1986). Occupational stress: Its causes and consequences for job performance. *Journal of Applied Psychology*, 71(4), 618–629.
- O’Reilly, J., Robinson, S. L., and Wang, W. (2013). Invisible at work: an integrated model of workplace ostracism. *Journal of Management*, 39, 203–231.
- Savery, L. K., & Luk, J. A. (2001). The relationship between empowerment, job satisfaction and reported stress levels: Some Australian evidence. *Leadership & Organization Development Journal*, 22, 97–104.
- Steinbauer, R., Renn, R. W., Chen, H.S., & Rhew, N. (2018). Workplace ostracism, self-regulation, and job performance: Moderating role of intrinsic work motivation. *Journal of Social Psychology*, 158(6), 767–783.
- Triyono. (2011). Outsourcing Dalam Perspektif Pekerja dan Pengusaha. *Jurnal Kependudukan Indonesia (LIPI)*, 6(1), 45–62.
- Twenge, J. M., Catanese, K. R., & Baumeister, R. F. (2003). Social Exclusion and the Deconstructed State: Time Perception, Meaninglessness, Lethargy, Lack of Emotion, and Self-Awareness. *Journal of Personality and Social Psychology*, 85(3), 409–423.
- Williams, K. D., Govan, C. L., Croker, V., Tynan, D., Cruickshank, M. & Lam, A. (2002). Investigations into differences between social and cyberostracism. *Group Dynamics: Theory, Research, and Practice*, 6, 65–77.
- Wu, M., Peng, Z., & Estay, C. (2018). How role stress mediates the relationship between destructive leadership and employee silence: The moderating role of job complexity. *Journal of Pacific Rim Psychology*, 12, Article e19.
- Wu, L., Wei, L. and Hui, C. (2011). Dispositional antecedents and consequences of workplace ostracism: An empirical examination. *Frontiers of Business Research in China*, 5, 23–44.
- Zhu, X. (2016). Managing the risks of outsourcing: Time, quality and correlated costs. *Transportation Research Part E: Logistics and Transportation Review*, 90, 121.

# Will the VAT-easing encourage willingness for car loans amid the pandemic?

P.S.M. Dewi & Z. Dalimunthe

*Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** This study aims at analyzing whether VAT-easing in Indonesia during the pandemic encourages consumers to buy cars on credit or propensity toward indebtedness. Specifically, this study evaluates whether emotional factors, materialism, and financial literacy affect the intention to buy a car on credit when the Indonesian government implements a VAT-easing policy on new cars with specific criteria. A survey has been conducted involving consumers who bought a car during the VAT-easing period in 2021 or intended to buy a new car with the VAT-easing facility. Data was collected using a structured questionnaire. The analysis was performed using the regression method using SPSS. It was revealed that financial planning behavior, materialism, and emotional variables significantly affect propensity toward indebtedness. This research contributes to research on personal finance because there is limited research regarding the tendency to buy cars on credit or indebtedness in Indonesia. This research is regarded as necessary because the regular repayment for the loan accounts is significant to monthly household spending among the Indonesian middle-class group.

## 1 INTRODUCTION

### 1.1 Background

The COVID-19 outbreak in Indonesia has been impacting negatively on the Indonesian economy. In the first quarter of 2020, the economy grew only 2.97%, lower than the first quarter in 2019, which is 5.07%. In the second quarter, it worsened that the economic growth rate was minus 5.32%. The dire economic conditions since the outbreak have directly impacted the automotive industry. According to the Association of Indonesian Automotive Industries (GAIKINDO), the industry recorded only 532,027 units of new car sales during 2020, accounting for a 48.37% decrease compared to 2019 new car sales, which are 1,026,921 units (Anwar 2021; GAIKINDO 2020; Jayani 2021).

The Indonesian government implemented a luxury VAT-easing policy on new car purchases with specific criteria to encourage economic recovery in this industry. In Indonesia, there are two types of value-added tax (VAT) imposed on car sales transactions, i.e., a general VAT imposed on all new car sales at 10%, and a VAT on luxury goods, which is only imposed on the luxury cars category. This government policy is reducing or eliminating the luxury VAT policy on new cars sales transactions. This policy is part of the national economic recovery program during the pandemic. This tax relaxation is effective from March 2021 (Santoso 2021) and has succeeded in restoring the new car industry in Indonesia. In the January–October 2021 period, the industry recorded 703,184 new car sales. This figure almost equals the car sales number in the pre-pandemic period, amounting to 849,609 units for the January–October 2019 period (Karunia 2021).

This condition is interesting to investigate because new car sales transactions in Indonesia are primarily made on credit. The loan repayment process involves significant monthly expenses for the middle class in Indonesia. The recovery of the new car sales record is quite surprising knowing that there was a second wave of the pandemic in Indonesia in 2021. However, the economy has



not fully recovered yet. Thus, this study aims to evaluate the factors that influence the decision or intention to apply for a loan to buy a new car amid the COVID-19 pandemic, with the luxury VAT-easing policy situation. This research contributes to research in the field of personal finance in Indonesia.

## 2 THEORETICAL BASIS

### 2.1 *Emotion and propensity toward indebtedness*

Based on Calvo-Porral and Otero-Prada (2021), emotions affect differently to people. Following their emotions will have a different impact on customers' complaint behavior and satisfaction depending on the hedonic or utilitarian nature of the service. People might show positive or negative emotions regarding their propensity toward indebtedness (Azma et al. 2019). Emotions that apply to individuals' propensity to indebtedness include indignation, dread, envy, humiliation, pride, disgrace, apprehension, and so forth. Hence, this study proposes:

H1: Emotions have a significant relationship with a propensity towards indebtedness.

### 2.2 *Materialism and propensity toward indebtedness*

Materialism believes that having money and possessions is the most critical thing in life (Cambridge Dictionary 2021). Flores and Vieira (2014) stated that more materialistic people have a more elevated propensity toward indebtedness. Highly materialistic people accept that obtaining material products is a central goal of life (Mette et al. 2019). They additionally believe that ownership of something is a pointer to success and societal status and, subsequently, the way to satisfaction (Mette et al. 2019). The different findings of researchers recommend that materialism is not related to a singular's pay. As such, a person with low pay might have materialistic attributes (Mette et al. 2019). Thus, this study proposes:

H2: Materialism has a significant relationship with a propensity towards indebtedness.

### 2.3 *Financial planning behavior and propensity toward indebtedness*

French and McKillop (2016) characterized financial planning behavior in their paper as a mix of mindfulness, knowledge, skill, demeanor, and behavior necessary to settle on strong monetary choices and eventually accomplish individual financial prosperity. Potrich and Vieira (2018) further evaluated the connection between financial planning behavior and consumer credit. Thus, this study proposes:

H3: Financial planning behavior has a significant relationship with a propensity towards indebtedness.

## 3 METHODS

The research surveyed individuals using a closed questionnaire. Thus, primary data were used to analyze. Respondents were selected using the purposive or judgment sampling technique—the selection was limited to those who understand the implementation of the Indonesian luxury VAT-easing policy applied in 2021. The questionnaire was constructed using the 5- point Likert scale. As previously explained in the literature review, the variables consisted of emotion, financial planning behavior, materialism, and propensity toward indebtedness. The range of choices for the questionnaire is from 1 to 5, indicating strongly disagree to strongly agree, respectively.

The target respondents selected in this research are Indonesians who bought a new car and intend to apply for a car loan in the near future during the implementation of the luxury VAT-easing policy. 123 filled out the questionnaire. Data was collected during the second half of 2021 by November 30. The questionnaire was filled out by 68 males, or 55.3%, and 55 females or 44.7%. SPSS is

used to determine the descriptive analysis and Multiple Linear Regression (MLR). Through SPSS, the writer can obtain Cronbach's alpha for reliability test, F-value and p-value to conclude the relationship between variables.

After testing the validity and reliability of the constructs used for each variable, the next step is to analyze the data. The analysis was carried out using multiple regression using the following model:

$$PI_i = \alpha + \beta_1 E_i + \beta_2 M_i + \beta_3 FPB_i + e$$

Where  $PI_i$  = Propensity towards Indebtedness;  $M_i$  = Materialism; and  $FPB_i$  = Financial Planning Behavior.

#### 4 RESULTS AND DISCUSSION

This study conducted a pilot test using 50 data to test the validity and reliability of the questionnaire. The validity test was carried out using factor analysis, while the reliability test was conducted using Cronbach's alpha. The factor analysis results revealed that the risk perception construct is not valid. Thus, the risk perception construct is excluded from the model. Furthermore, the reliability test using Cronbach's alpha found the value of emotion (0.930), materialism (0.738), financial planning behavior (0.863), and propensity toward indebtedness (0.673). Accordingly, the variables are valid and reliable for further analysis. The analysis of variance (ANOVA) obtained an F-Value of 2.6783 with a p-value of 0.000. This result means that all variables (emotion, materialism, and financial planning behavior) simultaneously affected one's propensity toward indebtedness. Thus, a t-test in regression analysis was conducted to test the hypotheses of the study.

The emotion variable had a coefficient of  $-0.128$  with a p-value of 0.032. This finding indicates a significant relationship between emotion and propensity toward indebtedness. This result supported the previous study by Flores and Vieira (2014) in Brazil, who found a significant negative relationship. However, this finding is contrary to that of Azma et al. (2019), who found a positive relationship between the emotion variable and propensity towards indebtedness.

The second variable is materialism. The regression result shows a coefficient of 0.303 with p-values of 0.000. This result means that there is a positive relationship between materialism and propensity toward indebtedness. This aligns with the findings of Flores and Vieira (2014) and Azma et al. (2019), who found a positive relationship. The third variable is financial planning behavior. This study finds a coefficient of 0.261 with a p-value of 0.007. This result indicates a positive relationship between financial planning behavior and propensity toward indebtedness. The overall finding of this study is shown in Figure 1.

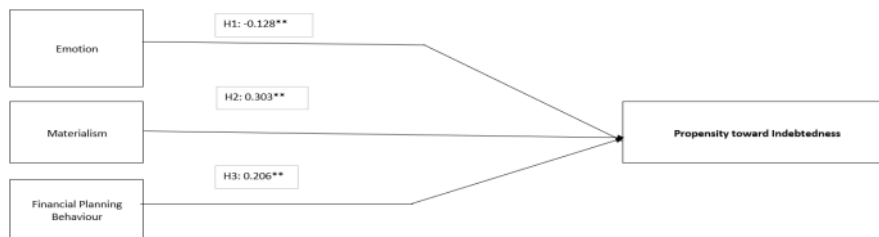


Figure 1. The result of regression.

#### 5 CONCLUSION

The purpose of this study was to evaluate factors that determine one's willingness to apply for a car loan (propensity toward indebtedness) due to the implementation of the luxury VAT-easing policy.

Specifically, this study aims to explore further the effect of the individual's emotion, materialistic feeling, and financial planning behavior on their propensity toward indebtedness. It is observed that the emotion variable has a significant negative relationship with a propensity towards indebtedness. On the other side, materialism is found to have a significant positive relationship with a propensity toward indebtedness. Interestingly, financial planning behavior was also proved to have a significant positive relationship with a propensity toward indebtedness. This means that those who carefully plan their financing activities tend to utilize the benefit from the luxury VAT-easing policy. These findings also indicate that those who apply for a car loan would carefully count the interest cost and their spending regarding car loan repayment. However, this research has limitations because the data does not differentiate between the social class of respondents. Further research is needed to generate a more general conclusion.

## REFERENCES

- Anwar, M. C. (2021). *Efek PPnBM gratis: Orang beli mobil melonjak 72 persen, produksi naik 121 persen*. Kompas.com. <https://money.kompas.com/read/2021/04/24/034046426/efek-ppnbm-gratis-orang-beli-mobil-melonjak-72-persen-produksi-naik-121-persen?page=all>
- Azma, N., Rahman, M., Adeyemi, A. A., & Rahman, M. K. (2019). Propensity toward indebtedness: evidence from Malaysia. *Review of Behavioral Finance*, 11(2), 188–200. <https://doi.org/10.1108/RBF-05-2017-0046>
- Calvo-Porrá, C., & Otero-Prada, L. M. (2021). The emotional influence on satisfaction and complaint behavior in hedonic and utilitarian services. *International Journal of Quality and Service Sciences*, 13(3), 471–488. <https://doi.org/10.1108/IJQSS-02-2020-0019>
- Cambridge Dictionary. (2021). *Meaning of materialism in English*. Cambridge University Press. <https://dictionary.cambridge.org/dictionary/english/materialism>
- Flores, S. A. M., & Vieira, K. M. (2014). Propensity toward indebtedness: An analysis using behavioral factors. *Journal of Behavioral and Experimental Finance*, 3, 1–10. <https://doi.org/10.1016/j.jbef.2014.05.001>
- French, D., & McKillop, D. (2016). Financial literacy and over-indebtedness in low-income households. *International Review of Financial Analysis*, 48, 1–11. <https://doi.org/10.1016/j.irfa.2016.08.004>
- GAIKINDO. (2020). *Tahun 2020: Wabah, resesi ekonomi, dan turunnya penjualan mobil 48 persen*. GAIKINDO. <https://www.gaikindo.or.id/indonesian-automobile-industry-data/>
- Jayani, D. H. (2021). *Meski ada PPnBM, penjualan mobil domestik anjlok 30,5% pada Mei 2021*. Databoks. <https://databoks.katadata.co.id/datapublish/2021/06/16/meski-ada-ppnbm-penjualan-mobil-domestik-anjlok-305-pada-mei-2021>
- Karunia, A. M. (2021). *Ada relaksasi PPnBM, penjualan mobil meningkat signifikan pada Maret 2021*. Kompas.com. <https://money.kompas.com/read/2021/03/31/193005026/ada-relaksasi-ppnbm-penjualan-mobil-meningkat-signifikan-pada-maret-2021?page=all>
- Mette, F. M. B., de Matos, C. A., Rohden, S. F., & Ponchio, M. C. (2019). Explanatory mechanisms of the decision to buy on credit: The role of materialism, impulsivity and financial knowledge. *Journal of Behavioral and Experimental Finance*, 21, 15–21. <https://doi.org/10.1016/j.jbef.2018.10.002>
- Potrich, A. C. G., & Vieira, K. M. (2018). Demystifying financial literacy: a behavioral perspective analysis. *Management Research Review*, 41(9), 1047–1068. <https://doi.org/10.1108/MRR-08-2017-0263>
- Santoso, Y. I. (2021). *Mulai Maret 2021, pemerintah akan bebaskan PPnBM kendaraan bermotor, berlaku 3 bulan*. Kontan.co.id. <https://nasional.kontan.co.id/news/mulai-maret-2021-pemerintah-akan-bebaskan-ppnbm-kendaraan-bermotor-berlaku-3-bulan>

# Systemic risk analysis in the banking industry in Indonesia during the COVID-19 pandemic

R.Y. Maulana

*Magister of Management, Universitas Indonesia, Salemba, Jakarta Pusat, Indonesia*

**ABSTRACT:** The objective of this research was to analyze the systemic risk of banking in Indonesia based on the Pearson correlation of stock returns. The analysis used weekly stock price data for banking companies from October 2019 to June 2021. Additionally, the research applied the Fama-French Three-Factor Model (FF3F) to confirm whether the correlation was caused by systematic or idiosyncratic risk. The results showed that the average and median Pearson correlation increased, specifically in 2021. Furthermore, the FF3F regression results indicated that the increase in correlation was caused by an increase in the systematic risk (beta coefficient).

## 1 INTRODUCTION

The COVID-19 pandemic, which started in Wuhan, China, back in December 2019, continues to ravage the world to date. Statistics indicate that more than 260 million people have tested positive for COVID-19, while the death toll resulting from the pandemic is over 5 million people across the globe. It has also resulted in many losses across all economic sectors. For instance, Singapore reported a decrease of its gross domestic product (GDP) by 41.2% in 2020, while South Korea's economic growth decreased by 2.9%. Furthermore, data obtained from the World Economic Forum in June 2020 stated that overall global economic growth decreased by 4.9%.

The pandemic has forced many companies to close businesses because of operating at less than normal capacity. Furthermore, bank customers could not pay loans, or credit advanced to them, thereby increasing the ratio of bad loans or Non-Performing Loans. Consequently, the liquidity and profitability of banking companies are expected to reduce significantly due to declining demand for banking services, with the effects spreading to other banking institutions, causing systemic risk. This research aimed to evaluate the systemic risk of banking in Indonesia using stock return correlation. In addition, it determined whether the correlation is caused by systematic risk or idiosyncratic risk through the Fama-French Three Factors.

## 2 LITERATURE REVIEW

### 2.1 *Systemic Risk*

Based on Bank Indonesia Regulation Number 16/11/PBI/2014, systemic risk is a process of instability as a result of contagion in part or all financial systems due to the interaction of size factors, business complexity (complexity), and linkages between institutions and/or financial markets (interconnectedness), as well as excessive behavioral tendencies of financial institutions to follow the economic cycle (procyclicality). According to Caruana (2010), systemic risk involves disruption to financial services caused by a decline in all or part of the financial system with the potential to harm the real economy. Meanwhile, de Bandt and Hartmann (2000) divides the definition of systemic risk into two systemic events, namely in a narrow sense and abroad sense.

A systemic event in a narrow sense is an event where a financial institution or financial market fails which will trigger adverse side effects on one or more institutions or financial markets. Meanwhile, in a broad sense it also includes the simultaneous impact on a large number of institutions and financial markets as a result of shock a wide and severe.

## 2.2 Fama-french three-factor model

Fama-French Three-Factor (FF3F) Model is a modification of the capital asset pricing model (CAPM) by adding a risk measure (size risk) and a value risk factor. According to Fama and French (1992), stock beta is a market risk indicator that does not explain the actual stock return, while the size and book-to-market ratio explains it more broadly. The formula for the Fama-French Model is as follows:

$$R_{it} - R_{ft} = \alpha_{it} + \beta_1 (R_{Mt} - R_{ft}) + \beta_2 SMB_t + \beta_3 HML_t \quad (1)$$

Where  $R_{it}$  is the total return of stock or portfolio  $i$  at time  $t$ .  $R_{ft}$  is the *risk-free rate* of return at time  $t$  while  $R_{Mt}$  is the total market portfolio return at time  $t$ . Additionally, SMB (Small Minus Big) is *Size Premium* at time  $t$ , and HML (High Minus Low) is *Value Premium* at time  $t$ . Finally, 1,2,3 is a coefficient factor.

## 2.3 Previous Research

Patro et al. (2013) examined the relevance and effectiveness of correlating stock returns among financial institutions as an indicator of systemic risk. Analysis was conducted regarding trends and fluctuations in the daily stock returns correlation among the 22 largest holding companies and investment banks from 1998 to 2008. The results revealed that the daily stock return correlation is a simple, strong, forward-looking, and precise indicator of systemic risk. The results concluded that idiosyncratic risk in the banking sector is more correlated, thus a higher probability of failure.

Siagian (2013) explained the correlation of banking stock returns as an indicator of systemic risk. This research used the stock return value of ten banks with the largest asset value base in 2012 financial statements. The Pearson correlation analysis results showed that the daily stock return correlation of the 10 banking companies had increased along with the increasing systemic risk in the financial system.

## 3 METHODS

This research used weekly data from Thomson Reuters from October 2019 to June 2021. Additionally, weekly stock data obtained from 41 commercial banks listed on the Indonesia Stock Exchange was used.

Furthermore, correlation analysis, which involves studying the relationship between variables, was applied. Notably, the strength of the relationship between research variables is measured by the correlation coefficient, ranging from values of -1 and 1. According to Lind et al. (2011), if the correlation coefficient is close to 0, then the relationship between the variables is weak, and vice versa. Additionally, a correlation coefficient close to -1.00 or 1.00 indicates that the relationship between variables is very strong. However, the direction of the Pearson correlation coefficient does not affect the correlation strength.

The subsequent analysis used the Fama-French Three-Factor Model to test the correlation caused by systematic or idiosyncratic risk increase. This model has three factors, including the Excess Return from the market index, the Small minus Big factor (size factor), and the High Minus Low factor based on the book-to-market ratio.

4 RESULTS

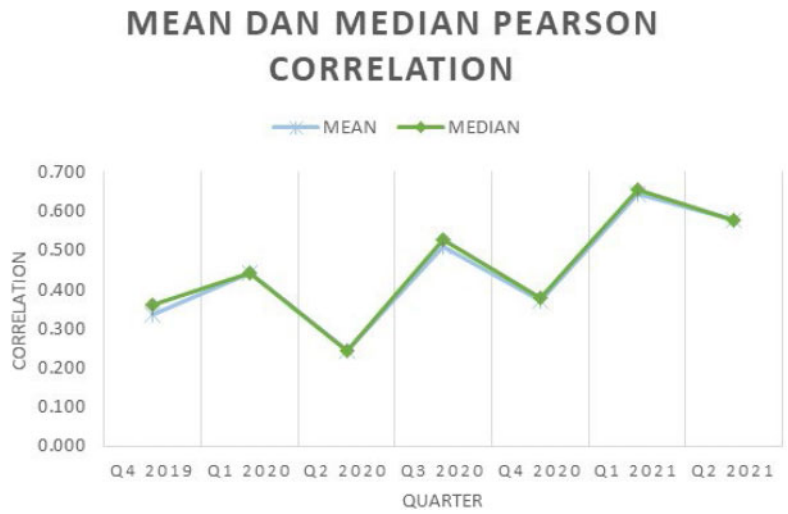


Figure 1. Graph of the average value and median correlation coefficient.

Based on the average value of the Pearson correlation coefficient for each period, only 3 periods, including Q3 2020, Q1 2021, and Q2 2021, had a high correlation value, while Q4 2019, Q1 2020, Q2 2020, Q4 2020 correlations had low values. In other words, the 3 periods with a high correlation value indicated a close relationship between banking companies. The four periods with low correlation values showed a low linkage between banking companies. According to Patro et al. (2013), an increase in stock return correlation can be interpreted as a tendency to experience systemic failure in several triggering events. Therefore, the Q3 2020, Q1 2021, and Q2 2021 periods have a high tendency for systemic failure. Also, the Q4 2019, Q1 2020, Q2 2020, and Q4 2020 periods showed a fairly low correlation value, indicating a low systemic failure. And based on research from Siagian (2013), it can be said that in this study, banking companies have a relationship with one another with a relatively strong level of linkage. Therefore, in this study, the

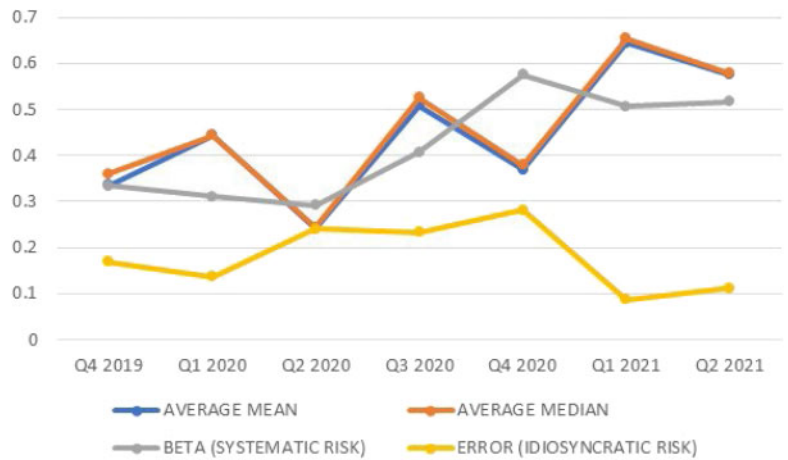


Figure 2. Graph of mean and median of Pearson correlation and beta and error of fama-french three-factor model regression.

relationship between banking companies has a strong relationship in a certain period which was in Q3 2021, Q1 2021 and Q2 2021.

The results show that each period's beta and error value have different movements compared to the average and median Pearson correlation. Furthermore, the error value representing idiosyncratic risk fluctuates but decreases towards the end. Similar results were witnessed using the beta value. Additionally, when the correlation value between banking companies increased, the beta value (an indicator of systematic risk) also increased. This contravenes the findings of Patro et al. (2013), which show an increase in the correlation between banking companies due to an increase in the idiosyncratic risk correlation.

In the research of de Bandt and Hartmann (2000), idiosyncratic shocks are “insurable” which means that an investor can protect his investment by diversifying so that it can be said that shocks idiosyncratic if within a certain strength, can still be saved by diversification. Meanwhile, systematic shocks are often “uninsurable” which means that if there is a severe recession, when it reaches a certain strength, it will adversely affect various financial institutions and markets so that the consequences have been included in the broad concept of systemic risk. Based on this research, in this study, the increase in the correlation of returns stock between banking companies is caused by systematic risk so that in a certain strength it will have a bad impact on all financial institutions.

## 5 CONCLUSIONS

The results indicated that High stock return correlation values occurred during the Q3 2020, Q1 2021, and Q2 2021 periods, thus the conclusion that a strong relationship between banking companies can lead to a high tendency for systemic failure. Furthermore, the low correlation value of stock returns was observed during Q4 2019, Q1 2020, Q2 2020, and Q4 2020, showing a weak inter-bank association. The calculation of the FF3F Model from each period revealed that the increase in the beta value led to a high correlation value of stock returns. Future research is expected to use data with a longer period during the COVID-19 pandemic besides applying the FF3F Model to confirm what causes the correlation of stock returns.

## REFERENCES

- Caruana, J. (2010). Sistemic risk: how to deal with it? Bank for International Settlement. <https://www.bis.org/publ/othp08.htm>
- de Bandt, O., & Hartmann, P. (2000). Systemic Risk: A Survey. CEPR Discussion Paper, 2634.
- Fama, E. F., & French, K. R. (1992). The Cross-Section of Expected Stock Returns. *The Journal of Finance*, 47(2), 427–465. <https://doi.org/10.1111/j.1540-6261.1992.tb04398.x>
- Lind, D. A., Marchal, W. G., & Wathen, S. A. (2011). *Teknik-Teknik Statistika dalam Bisnis dan Ekonomi* (thirteenth). Penerbit Salemba Empat.
- Patro, D. K., Qi, M., & Sun, X. (2013). A simple indicator of sistemic risk. *Journal of Financial Stability*, 9(1), 105–116. <https://doi.org/10.1016/j.jfs.2012.03.002>
- Siagian, M. B. F. (2013). *Pengujian Korelasi Return Saham Perbankan Sebagai Indikator Risiko Sistemik di Indonesia*. Universitas Indonesia.

## Long-run relationship of prime lending rate toward reference rate of monetary authority in Indonesia

R. Khairufi & B. Wibowo

*University of Indonesia, Jakarta, Indonesia*

**ABSTRACT:** This research investigates the relationship between the Prime Lending Rate in the banking sector and the reference interest rate of the Bank of Indonesia (BI) as the monetary authority. The period selected for this research is based on monthly historical data of two different reference rate applied in Indonesia, which are the BI rate for the period of January 2014 to September 2016, and the BI 7 Days Repo Rate (BI7DRR) for the period of October 2016 to December 2020, which replaced the previous period. It is expected that the new tools provided by the central bank should have a relationship with the prime lending rate in order to penetrate the market optimally. The Phillips-Peron unit root test and Johansen Cointegration test were conducted to estimate the relationship. The results show that the BI rate is a valid long-term determinant of the banking prime lending rate, while the BI7DRR was not effective.

### 1 INTRODUCTION

An excellent monetary policy and a robust economy are factors that every country strives to achieve daily. In several countries, reference rates or official interest rates are important and widely known to penetrate the market because it functions as a tool used by the central bank to implement monetary policy and influence the economy. Furthermore, for reference rates to be effectively transmitted into the market, it has to be completed quickly, and the changes impacting expenditure have to be accurate (Lim & Social 2010). Reference rates also affect other interest rates by bringing stability to the economy.

Banks in Indonesia utilize the prime rate as a basis for deciding what the final interest rate is to the lender. This research investigates the significance of reference rate on bank's prime lending rate in Indonesia. The Prime Rate (PR) is selected since it comes closest to the reference rate, and Indonesian banks remain one of the most accessible and reliable sources of funds that is accessed by society. Setiawan (2020) conducted a research of the Indonesian banking sector for both conventional and Sharia banks; the findings indicated that the banking sector generally affects the economy in the long term. It should be emphasized that the banking sector, which is one of the main objectives of monetary policy, also contributes to economic growth.

Financing or lending activities positively impact the economy (Setiawan 2020) because it paves the way for people to put new money into productive investments and activities. Changes in monetary policies are expected to alter societal preferences as well. The rise or fall of the reference rate can drive those preferences into savings or investment; this is seen in banks' balance sheet according to Third Party Funds (DPK) accounts. Furthermore, Ningsih (2020) conducted research that attempted to examine the effect of the DPK on conventional and sharia banks. The results show that the DPK of conventional banks contributes significantly to Gross Domestic Product (GDP) but is not comparable to Sharia banks. Nevertheless, the DPK of the conventional and Sharia banks impacts the GDP simultaneously. The research shows also proves that banks contribute to a better economy by acting as an intermediary between monetary authorities and the society.



## 2 REFERENCE RATE AND PRIME LENDING RATE IN INDONESIA

The prime lending rate is the reference rate used to manage demand and supply in society with a more specific purpose. Indonesia has a preferential rate category that includes corporate, retail, micro, housing, and non-housing. Each of these categories has a function to influence their relative target market.

The Indonesian reference rate was created by the Bank of Indonesia (BI) in order to enforce its Inflation Targeting Framework (ITF) policy into every corner of the society. Furthermore, the reference rate, formerly known as BI rate, and then changed to BI 7 Days Repo Rate (BI7DRR) hopefully increases the transmission efficiency through banks and money markets (Indonesia 2021). On the other side, decision of bank toward its prime rate could also determine how central bank adjust reference rate as banks considering other factors affecting its real condition so that BI needs to consider the matters that banks facing.

In practice, banks, which are financial institutions strongly related to interest rate, follow the reference rate periodically set by the Bank of Indonesia since they can use it as the base for the prime lending rate and also determine the margin that becomes the final rate for customers. Therefore, the reference rate is expected to affect the prime lending rate positively. Any increase in reference rate also increases the prime rate by a certain amount and vice versa.

## 3 LITERATURE REVIEW

Lim and Social (2010) research on banks and official interest rates in Australia and USA between 1982 until 2009 revealed that both countries are related to the examined variables, but their banking systems have different pass-through and intermediation margins. It also indicates that the bank rate and official rate influence each other.

A research by Ford (2003) examined the impact of monetary policy on the banking sector in Japan within the 1985 and 1999 time horizon; and it is found that there was no effective monetary policy channel. Another research by Peersman (2002) in Germany discovered that there are negative correlations between short-term and long-term interest rates after monetary policy shocks. Furthermore, a similar research conducted in the USA by Atesoglu (2004), examined prime rate and federal funds rate, and the result proves that there exists a long term relationship between the federal funds rate and prime rate; there was also a two-way causality between the variables.

## 4 DATA COLLECTION

The data used in this research is the secondary and time series within monthly periods from January 2014 till March 2021. Subsequently, the variables are BI rate, BI7DRR, and the prime lending rate. The prime lending rate is divided into five categories which are: Corporate, Retail, Micro, Housing, and Non-housing. The data horizon consists of two parts in which the reference rate changes; the first part spans from January 2014 to September 2016, with BI rate as a dependent variable. While the second part extends from October 2016 to March 2021 with BI7DRR as the dependent variable. The data collected was retrieved from the official website of the Bank Indonesia and the Financial Services Authority of Indonesia (OJK).

## 5 MODEL SPECIFICATION

Several steps were taken before initiating the cointegration test in conducting this research. Those steps are as follows:

Philips Perron Test (PP)

This test is used for the stationarity or the so-called unit root test. The purpose of this test is to address the unsystematic movement of data, since cointegration tests are used to examine long term

relationships between non-stationary data. Only the PP test result for the data is non-stationary that the following step is considered.

#### Lag Selection Criteria

This step uses the Vector Autoregressive (VAR) Lag-Order Selection Criteria to find the optimum lag that meets the specifications of the cointegration. The sequentially modified test statistic (LR), the Final Prediction Error (FPE), the Akaike Information Criterion (AIC), the Hannan-Quinn Information Criterion (HQ), and the Schwarz Information Criterion (SC) are used as criteria.

#### Johansen Cointegration Test

The Johansen test is used to determine whether or not the variables in being tested have a long term relationship. This test was developed by Johansen (1992), and the model mimics the one used by Liu et al. (2011) as follow:

$$\Delta y_t = \Pi y_{t-1} + \sum_{j=1}^k \Gamma_j \Delta y_{t-j} + \mu + \varepsilon_t$$

#### Pairwise Granger Causality Test

The Granger test was used to see if the variables have a causal relationship. This test, which served as a benchmark and support for the Johansen cointegration test, is result-dependent.

## 6 RESEARCH FINDINGS

The Johansen Cointegration Test result with all available assumptions. The result shows cointegration between each prime lending rate category, which is marked with green cells. The green cells are only available for the BI Rate period and not that of BI7DRR. It is definitive that there is a long-term relationship between every category of the prime lending rate toward the BI rate. However, the same condition does not occur for BI7DRR.

The newly applied monetary instruments have no long-term impact. Therefore, it is safe to conclude that banks' decisions on their prime rate components do not take the BI7DRR into account. Another possibility to this issue is that the repo instruments are not of interest to the banking sector because other market instruments have more promising returns, or that the credibility of BI7DRR has not yet been proven as the BI Rate. This in line with the findings of Ford (2003), which indicated the possibility that monetary policy could be ineffective.

To strengthen opinion to the Cointegration test results, along with the unexpected discovery that BI7DRR has no long-term relationship with the prime lending rate, the Pairwise Granger Causality Test was also conducted, and the results are summarized in Tables 1 and 2. The cells highlighted in green indicate that there is causality between the variables such as one variable is useful in forecasting the other. As seen in most of the category marked with green, the reference rate is affected by the prime rate except for the micro prime rate, where it has a bidirectional relationship with the BI Rate. The Johansen Cointegration and Pairwise Granger Causality Test results show different conditions.

## 7 POLICY IMPLICATIONS

Regarding the model, the Bank of Indonesia should consider conducting more in-depth research of the components that determine the prime lending rate as the reference rate that consumers will acquire. This research finding shows that BI7DRR does not consider the long-term determinant. There is a lingering fear that if this trend continues in the future, interest rates fluctuation will become uncontrollable and even weaken the credibility of the central bank, thereby making the inflation targeting framework much more challenging to achieve.

## REFERENCES

- Atesoglu, H. S. (2004). Monetary transmission-federal funds rate and prime rate. *JOURNAL OF POST KEYNESIAN ECONOMICS*, 26, 357–362.
- Ford, J. L. A. J. A. S. S. B. (2003). Bank behaviour and the channel of monetary policy in Japan, 1965-1999. *Japanese economic review (Oxford)*, 54(3), 2003.
- Johansen, S. (1992). Cointegration in partial systems and the efficiency of single-equation analysis. *Journal of Econometrics Journal of Econometrics*, 52(3), 389–402.
- Lim, G. C. T. S. C. C. L. M. I. o. A. E., & Social, R. (2010). Bank and official interest rates (1) : how do they interact over time? Retrieved from <http://www.melbourneinstitute.com/wp/wp2010n04.pdf>
- Liu, M.-H., Margaritis, D., & Tourani-Rad, A. (2011). Asymmetric information and price competition in small business lending. *JBFI Journal of Banking and Finance*, 35(9), 2189–2196.
- Peersman, G. (2002). Monetary policy and long term interest rates in Germany. *Economics letters*, 77(2), 271–277.
- Setiawan, I. (2020). Analisis Peran Perbankan terhadap Pertumbuhan Ekonomi di Indonesia: Bank Syariah Versus Bank Konvensional. *JAEMB JURNAL AKUNTANSI, EKONOMI dan MANAJEMEN BISNIS*, 8(1), 52–60.

## Increasing visit intention to a destination using viewers' engagement through film: Moderating effect of various media usage

R.P. Manoto & D.T.H. Aruan

*University of Indonesia, Depok, West Java, Indonesia*

**ABSTRACT:** This study investigates the difference in the impact of destination image created from a film on audiences' visit intention with their engagement towards the film when watched on the big screen or small screen. The study was held by surveying over 400 respondents who have watched the chosen film on the big or small screen. They are questioned what image they perceive of the destination after watching the film, how high their engagement level is to the film, and their intention to visit the destination. The results are analyzed with PLS-SEM by using multigroup analysis (MGA) to compare the effect between the two kinds of media used. This study will help marketers and academicians' decision-making process when they're using film on the big and small screen as a tool to promote their destination.

**Keywords:** film-induced tourism, film-induced tourism, big and small screen, visit intention, destination image, viewers' engagement

### 1 INTRODUCTION

Film-induced tourism is a visit done by an audience who watched a film on the big (cinema or theater) or small screen (TV, DVD, VoD, and home cinema) to a location or studio where the film took shot (Beeton 2016). Based on this concept, films are considered to be a strong media to promote a destination due to the exoticism portrayed from the moving image by creating, changing, and strengthening the destination image, which can ultimately increase visit intention (Beeton 2016). This is evidence proven by the number of tourist visits to several tourist destinations after a film featuring that destination is released.

Nonetheless, as time goes by, technology development and the COVID-19 pandemic have changed people's way of watching movies. There are many media options to be used as a substitution for cinema, such as home cinema, DVD, video-on-demand (VOD), and HDTV (Silver & McDonnell 2007). The COVID-19 pandemic also obliges even more people to stay at home, since they are unable to go to the cinemas. This causes more people to watch on small screens and less on big screens. According to ([filmindonesia.or.id](http://filmindonesia.or.id) 2021), the number of films high number of viewers were moderately stable from 2017 to 2019. After the pandemic hit, the number decreased drastically in 2020.

Compared to small screens, big screens can give a better viewing experience from their high quality of screen and sound and low level of disruption. Even though people can set up their own home cinema, it hardly reaches the quality public cinemas provide, for example, IMAX (Silver & McDonnell 2007). Cinemas have been arranged in such a way thus they can provide the most suitable atmosphere to watch movies (Kim et al. 2016). This experience of watching movies in cinemas is not easily recreated at home.

The better the ability of media to provide a pleasant experience to consumers, the more likely for consumers to make a consumption (Schmitt 1999). Big screens give a better watching experience than small screens, but does it mean it can influence its audience to make a consumption by visiting the destination shown in the movie and doing tourism activities? If that is the case, the decrease

in big-screen viewers might arise a new challenge for marketers in promoting their destination through films.

## 2 THEORETICAL FRAMEWORK

The research began with viewers' engagement to the film they watched because it discusses their watching experience that could be affected by the viewing conditions obtained based on screen quality, sound, lighting, situation, and interruption level while they're using a big screen or small screen. Audiences who have a high engagement to a film tend to have a better image of the destination that appears in the film compared to those with low engagement (Spears et al. 2013). Destination image is already widely known as the main motivating factor in decision making in traveling for the holidays (Beeton 2016). This destination image is shaped, altered, and amplified by the film to attract the attention of those who see it (Beeton 2016).

Many studies have proven a positive relationship between engagement and intention in different contexts such as online retail (Algharabat 2018), music-induced tourism (Oh et al. 2015), and various other research contexts. This suggests that there is also a possibility of engagement might be able to affect intention positively in the context of film-induced tourism. Spears et al. (2013) saw a positive relationship between the level of viewers' engagement to the film and movie-motivated tourism, which is the desire of the audience to visit destinations that appear in the film and conduct tourism consumption activities such as shopping, eating at restaurants typical of the region, or other tourism activities.

Finally, all destination promotions through movies are done to attract the attention of the audience to visit the destination. Several studies that have been conducted also prove a positive relationship between destination image and visit intention (Afshardoost & Eshaghi 2020; Ahmad et al. 2021; Pratt & Chan 2016). According to Kim & Richardson (2003), films can build and influence the audience's perception of the destinations shown in the film, both in a positive and negative direction. Spears et al. (2013) said that building a positive image can be very profitable to increase the number of visitors to destinations. Shani et al. (2009) argued that destination images with negative connotations also turned out to be beneficial for the destination for controversial themed films, noting that there should also be another interesting elements that can counter the negative elements.

## 3 METHODOLOGY

This study observes the correlation between viewers' engagement, destination image, and visit intention, and compares how the relationship of these three variables work when the movie is watched on the big screen and the small screen. Therefore, six hypotheses are tested: (H1a) viewers' engagement positively affects destination image; (H2a) viewers' engagement positively affects visit intention; and (H3a) destination image positively affects visit intention. On the other hand, H1b, H2b, and H3b compare the difference between respondents who watched the movie on the big and small screen.

This study limits the sample data based on the people who have watched *Susah Sinyal* (2017). In addition, other characteristics are that they are above 18 years old with the destination focus being Sumba, which is a tourist destination featured in the movie. The questionnaires are distributed to people who fit such characteristics. The questionnaire includes screening questions (whether the respondent is 18 years old and have watched *Susah Sinyal* (2017)) and main questions (the respondent's level of agreement in statements using 5-point Likert Scale regarding destination image of Sumba that they perceived from the film *Susah Sinyal* (2017), the engagement level to that film, and the respondent's intention level to visit Sumba after seeing the destination from that film).

With the final survey results, the outer and inner model is analyzed with SmartPLS. The outer model is analyzed by looking at the correlation between each construct and its indicators. The internal consistency reliability of the model is investigated to see if it can give a consistent result and convergent validity, to see if the instruments can be used to measure what this research wants to measure (Cooper & Schindler 2014).

The inner model is analyzed to see the correlation between constructs to test the hypothesis of the study. All samples are tested with Partial Least Square (PLS) bootstrapping to test H1a, H2a, and H3a. By using a 5% significance level and one-tailed test, the variables are considered to have a significant correlation if the p-value is less than 0.05 and a positive correlation if the t-stat is more than 1.645. After that, the samples are divided into two groups (based on respondents who watched the film on the big screen and the small screen) and tested with Partial Least Square multigroup analysis (PLS-MGA). Still, using a 5% significance level and one-tailed test, if the path coefficients-diff is positive, the correlation of the variables in the group of samples using the big screen is bigger than the ones using the small screen. However, if the p-value is more than 0.05, it indicates that the difference between the two groups is not significant.

#### 4 RESULTS AND DISCUSSION

A total of 432 questionnaires were successfully filled out by the respondents. Additionally, as stated beforehand, this study divided its sample into two groups, accounting for 52% of respondents who watched *Susah Sinyal* (2017) on the big screen, while 48% watched it on the small screen.

Several tests were conducted to determine if the inner model result in the model being valid and reliable. The internal consistency reliability test had proven the model to be reliable with the Cronbach's alpha values being more than 0.6 and composite reliability values being more than 0.7 for all three variables used. The convergent validity test has further proven the model to be valid, with the outer loadings of each indicator used being more than 0.7, and the average variance extracted (AVE) for each variable is more than 0.5.

To analyze the outer model, PLS bootstrapping was employed to examine the correlation between the three variables with all of the samples, while PLS-MGA was completed to investigate the difference between the two groups of samples. The result shows that H1a was accepted, meaning that viewers' engagement positively affects destination image. However, there was not a significant difference between the two groups of samples, hence, H1b was rejected. H2a was also accepted, indicating a positive correlation between viewers' engagement and visit intention. Again, there was not a significant difference between the two groups of samples, so H2b was rejected. Lastly, destination image also showed a positive correlation to visit intention, but there was not a significant difference between the two groups of samples.

#### 5 CONCLUSION

Films are effective media to increase the audience's desire to visit a destination featured in a film. This visit was not only for enjoyment but also to experience at least a part of what the film characters have gone through (Tooke & Baker 1996). Increasing the audience's visit intention to a destination featured in a film can be done by creating an image that is beneficial to that destination and choosing films that attract high viewers' engagement.

A high level of viewers' engagement helps to form the desired destination image. If a film succeeds in making the audience emotionally attached, it will change the audience's perception of various things, including the destination shown in the film. Thus, the more the audience gets interested in the movie, the more likely they will get the same image as what the film is trying to deliver. Therefore, Destination Management Organization (DMO) is advised to choose films that attract a lot of public attention, even before the films are shown so that the desired destination image can be formed more effectively.

Destination image has a greater influence on visit intention than viewers' engagement, indicating that it is important for DMO to understand how to improve the image shown in the film rather than choosing films that attract high viewers' engagement. If DMO is faced with two choices of films, for example, (1) film A has good cinematography quality and highlights the quality of the destination to its maximum; (2) film B has a great storyline and can easily touch the hearts of the audience. Film A is more profitable for DMO because destination image triggers greater visit intention than viewers' engagement. However, if DMO has an option of a film that can offer both of these aspects at once, it would be much more profitable.

There is not a significant difference between the two types of media to watch movies in attracting audiences to visit a destination. Even if the big screen provides a better watching experience than a small screen, it does not mean that it generates a higher audience's visit intention. Both results have relatively same amount of visit intention, whether the audience watches a movie on the big or small screen.

## REFERENCES

- Afshardoost, M., & Eshaghi, M. S. (2020). Destination image and tourist behavioural intentions: A meta-analysis. *Tourism Management*, 81(104154). <https://doi.org/10.1016/j.tourman.2020.104154>
- Ahmad, A., Jamaludin, A., Zuraimi, N. S. M., & Valeri, M. (2021). Visit intention and destination image in post-Covid-19 crisis recovery. In *Current Issues in Tourism* (Vol. 24, Issue 17, pp. 2392–2397). Routledge. <https://doi.org/10.1080/13683500.2020.1842342>
- Algharabat, R. S. (2018). The Role of Telepresence and User Engagement in Co-Creation Value and Purchase Intention: Online Retail Context. *Journal of Internet Commerce*, 17(1), 1–25. <https://doi.org/10.1080/15332861.2017.1422667>
- Beeton, S. (2016). *Film-induced Tourism* (2nd ed.). Channel View Publications.
- Cooper, D., & Schindler, P. (2014). *Business research methods* (C. Kouvelis & J. Ducham, Eds.; 12th ed.). The McGraw-Hill Companies, Inc.
- filmindonesia.or.id. (2021). *Pemandangan umum industri film Indonesia 2020*. Film Indonesia. <http://filmindonesia.or.id/article/pemandangan-umum-industri-film-indonesia-2020#.YVX8c5pBzIU>
- Kim, H., & Richardson, S. L. (2003). Motion picture impacts on destination images. *Annals of Tourism Research*, 30(1), 216–237. [https://doi.org/10.1016/S0160-7383\(02\)00062-2](https://doi.org/10.1016/S0160-7383(02)00062-2)
- Kim, K., Cheong, Y., & Kim, H. (2016). The influences of sports viewing conditions on enjoyment from watching televised sports: An analysis of the FIFA World Cup audiences in theater vs. home. *Journal of Broadcasting and Electronic Media*, 60(3), 389–409. <https://doi.org/10.1080/08838151.2016.1203320>
- Oh, S., Ahn, J., & Baek, H. (2015). The Effects of Social Media on Music-induced Tourism: A Case of Korean Pop Music and Inbound Tourism to Korea\*. *Asia Pacific Journal of Information Systems*, 25(1). <https://doi.org/10.14329/apjis.2015.25.1.119>
- Pratt, S., & Chan, W. S. (Amy). (2016). Destination Image and Intention to Visit the Tokyo 2020 Olympics among Hong Kong Generation Y. *Journal of China Tourism Research*, 12(3–4), 355–373. <https://doi.org/10.1080/19388160.2016.1246272>
- Schmitt, B. (1999). Experiential marketing. *Journal of Marketing Management*, 15(1–3), 53–67. <https://doi.org/10.1362/026725799784870496>
- Shani, A., Wang, Y., Hudson, S., & Gil, S. M. (2009). Impacts of a historical film on the destination image of South America. *Journal of Vacation Marketing*, 15(3), 229–242. <https://doi.org/10.1177/1356766709104269>
- Silver, J., & McDonnell, J. (2007). Are movie theaters doomed? Do exhibitors see the big picture as theaters lose their competitive advantage? *Business Horizons*, 50(6), 491–501. <https://doi.org/10.1016/j.bushor.2007.07.004>
- Spears, D. L., Josiam, B. M., Kinley, T., & Pookulangara, S. (2013). Tourist See Tourist Do: The Influence of Hollywood Movies and Television on Tourism Motivation and Activity Behavior. *Hospitality Review*, 30(1), 53–74.
- Tooke, N., & Baker, M. (1996). Seeing is believing: The effect of film on visitor numbers to screened locations. *Tourism Management*, 17(2), 87–94. [https://doi.org/10.1016/0261-5177\(95\)00111-5](https://doi.org/10.1016/0261-5177(95)00111-5)

## Improvement of bid project process with digitalization through e-procurement system (case study in PT. Petrokimia Gresik)

R.P. Hapsari

*Magister of Management, Faculty of Economic and Business Airlangga University, Indonesia*

**ABSTRACT:** As Indonesia's most comprehensive manufacturers of chemicals and fertilizers, Petrokimia Gresik is constantly evolving to increase its competitive edge over rivals and serve the diverse needs of consumers. Building a sustainable factory is inseparable from the process of selecting partners who will be responsible for carrying out EPCC (Engineering, Procurement, Construction, and Commissioning) activities until the factory is ready for commercial operations, which is carried out through a tender system, where all activities are manually carried out through a SAP-based administrative system. But in 2020, when the COVID-19 pandemic hit the world, the large-scale social restrictions instituted to mitigate the spread of this disease brought about a new method of conducting tenders without any physical meeting. Therefore, this study compares the effectiveness of conducting tender processes through the offline tender method and the e-Procurement and Zoom system. The results reveal that digitalization using the e-Proc system and online meetings increases the company's performance by 47%, accelerates the tender process time by 76%, reduces implementation costs by 99%, and reduces the potential health risks caused by large-scale human contact.

**Keywords:** bid, project, digitalization, administration, system, health, protocol, cost, time

### 1 INTRODUCTION

PT. Petrokimia Gresik is one of the most prominent manufacturers of chemicals and fertilizers in Indonesia. It has innovated and strengthened its position in supporting the government's food security programs and product diversification based on the changing market conditions and future potential market developments. This innovation is achieved by increasing production capacity by constructing more infrastructural facilities.

An offline tender process is usually carried out to obtain a contractor to execute the Engineering, Procurement, Construction, and commissioning (EPC) processes, such as constructing new factory projects or expanding existing infrastructure. All stages of this process are carried out physically (i.e., face-to-face) with an integrated tender SAP-based administrative system. However, due to the COVID-19 pandemic in 2020, there were demands for a transformation in the company's business processes, including the tender process for procuring goods and services. Therefore, Pupuk Indonesia (Persero), the parent company of Petrokimia Gresik (PG), took the initiative to automate the manual tender process by creating the e-Proc and Zoom system. Furthermore, a media website was set up (<https://eproc.pupuk-indonesia.com/>) to serve as tender support for procuring the necessary services required for project development in 2020.

The data available on tender processes carried out at PT. Petrokimia Gresik for the Jetty Petrokimia project tender (SAP) and the Urea Export Warehouse tender (e-Proc) shown in Tables 1 and 2 were examined. The results are illustrated using a Pareto chart in figures 1, 2, and 3. Based on figure 1, the time required for tender administration using SAP is relatively high and is therefore, the main target needs to be reduced.



The digitalization of the tender process is expected to reduce the processing time by 29% and achieve cost savings of 98%. Furthermore, offline tenders are often prone to several errors because the administrative processes are still being carried out manually. The use of an integrated online system is expected to improve the quality of the tender administration process by 44%.

This study aims to analyze the digital transformation of the tender process for the development project at PT. Petrokimia Gresik through e-Proc and Zoom system, in order to increase the effectiveness and efficiency of project tenders in terms of quality, time, and cost. The impact of the analysis of the digitalization and transformation of the tender process is expected to be used as a foundation to boost the effectiveness and efficiency of tendering in the future because it provides innovation and encourages healthy competition between companies.

## 2 LITERATURE REVIEW

A project (Jacobs & Robert 2018) is defined as a series of interrelated works aimed at achieving the desired outcome, which usually takes a relatively significant amount of time to complete. While determining the winner that will carry out the execution of a project in a company, a tender process is carried out in accordance with the applicable laws in Indonesia as outlined in the company's procedures. A tender is a formal offer to either carry out a job, procure goods, or provide services (Pasal 22 UU No.5 Tahun 1999). Tenders are advertised through a job auction system by inviting several companies willing to execute the project based on the desired specifications of the issuing organization, and a contract is awarded based on some predetermined criteria (Latif 2015).

To achieve the goal of transforming the company's business processes, the level of productivity has to be measured. Productivity can be increased through the digitalization of conventional processes involved in constructing complex structures since it gives room for modification, creativity, and imagination of the endless possibilities (Borja García de Sotoa 2018). Furthermore, manufacturers know that their success depends on lower costs, shorter cycle times, and maximum production throughput. (Turban 2015).

Integrated IT systems are generally used in the tender process. In this system, the tender request of a client (individual or organization) is published through tender portals. Interested contractors submit bid proposals designed to address the client's requirements. These proposals are examined, and a contract award is given to a contractor based on specific criteria such as price, quality, value for money, and execution time. One of the most commonly used integrated IT systems is e-Proc, which utilizes information technology in facilitating business-to-business (B2B) purchases of goods and services (Wu et al. 2007).

## 3 METHODOLOGY

This study analyzes the problems related to the effectiveness of executing tenders for development projects at PT. Petrokimia Gresik in terms of time, cost, quality of work, as well as the administrative processes involved in each stage of the tender. The descriptive exploratory design is used in this study to collect data from the respondents. Furthermore, observations were made by measuring time, cost, and quality before and after implementing the digitalization of the tender process through the e-Proc and Zoom system. The survey was conducted by distributing online questionnaires related to the tender for the development project through Google Form to 25 employees.

The data obtained were analyzed in order to achieve the study objectives and also increase the effectiveness and efficiency of project tenders. Furthermore, at the end of the questionnaire, the respondents were given an opportunity to provide constructive criticism and recommendations on the digitalization of the tender process in the execution of future development projects.

## 4 ANALYSIS AND RESULTS

PT. Petrokimia Gresik transforms the service procurement tender process for development projects by utilizing an integrated system based on the e-Proc website and meetings using Zoom.

The process required to initiate a tender is the preparation of tender administration through the SAP system, which is passed on to the e-Proc system. The SAP and e-Proc systems require employees to first log into the system, after which other users can access transactions on the system based on the user's needs and level of authorization.

The complete operational guidelines for the SAP and e-Proc systems were compiled in order to accelerate the process of operating the e-Proc system, which can be used in implementing the tender process of other development projects. The results obtained from measuring time, cost, and quality of work revealed a 76% reduction in the processing time (17 hours to 4 hours) required for tender administration. In terms of cost-effectiveness, the internet subscription required for Zoom meetings is the only cost associated with the e-Proc system that brought about a 99% reduction in total costs (Rp. 12,000,000.00 to Rp. 100,000.00), which usually arises from printing several copies of tender documents and accommodation expenses. There was also a 47% increase in the quality of work; this is because the tender administration process, such as preparing minutes of meetings and scheduling tender, is automatically performed by the e-Proc system.

Based on the survey results through a questionnaire to 25 respondents (involved in the tender process for the procurement of Development Project services), the data obtained are presented in the following figures. The result of the survey revealed that all the respondents (100%) believed that digitalizing the tender process was more cost-effective than offline tenders, and 88% of them viewed the e-Proc and Zoom system as more flexible and effective because it can be accessed anytime and anywhere compared to offline tendering. In addition, about 95.7% of the respondents believed that using the e-proc website saved more time than the manual process. The digitalization of the tender process was considered safer by 92% of respondents compared to offline tenders.

## 5 CONCLUSIONS

The transformation of the tender processes involved with development projects through digitalization at PT. Petrokimia Gresik using the e-Proc and Zoom system has a significant impact on increasing effectiveness and efficiency. The digitalization of the tender process has the following effect:

- 1) Improvement in quality of work by minimizing human errors in the tender administration process as every step was managed through the e-Proc system.
- 2) Saving time and cost when compared to the offline tender processes.
- 3) Well monitored and scheduled execution of tenders.
- 4) Improvement in employee competence in the transition from SAP to the e-Proc system.
- 5) Creating ease and convenience for external parties (bidders) in participating in tenders because the submission of documents at the administrative, technical and commercial stages are automatically conducted through an e-Proc system, which saves the costs of accommodation and printing.
- 6) Reduction of physical contacts between internal and external parties, which increases the safety of the parties involved and prevents the spread of the COVID-19 virus in the company.

## REFERENCES

De Soto,B. García, I. Agustí-Juan, J. Hunhevicz, S. Joss, K. Graser, G. Habert and B.T. Adey. (2018). Productivity of Digital Fabrication in Construction: Cost and Time Analysis of a Robotically Built Wall. *Journal of Automation in Construction*.

- Indonesian Law.(1999). *Undang-Undang Republik Indonesia Nomor 5 Tahun 1999 tentang Larangan Praktek Monopoli dan Persaingan Usaha Tidak Sehat*. Tambahan Lembaran Negara RI Tahun No. 3817. Jakarta: Indonesian Government.
- Indonesian Procurement.(2013).*Pengadaan secara Elektronik*. <http://www.lkpp.go.id/>. Jakarta: Indonesian Government.
- Jacobs,F.Robert and Richard B.Chase. (2018). *Operations and Supply Chain Management 15th ed*. New York: Mc Graw Hill Education.
- Latif and Khaerani, A.N. (2015). *Optimalisasi Waktu pada Prosedur Pelelangan dan Penjadwalan Proyek dengan Menggunakan Metode Pert pada PT. Pelabuhan Indonesia (PERSERO) IV Cabang Makassar*.(Thesis Magister, Universitas Hasanuddin, Makassar). Accessed from /
- PT. Petrokimia Gresik.(2020).*Pedoman Pelaksanaan Pengadaan Barang/Jasa PT. Petrokimia Gresik*. Gresik
- Turban, Efraim; L. Volonino and G.R.Wood.(2015). *Information Technology for Management 10th ed*. USA: Aptara inc.

# Volatility spillover in stock market, foreign exchange, and bond market in Asia

K. Ratnawati & R. Anggraeni

*Management Department, Faculty of Economics and Business, Universitas Brawijaya, Malang, East Java, Indonesia*

**ABSTRACT:** This research aims to analyze volatility spillover in stock market, foreign exchange, and bond market in ten Asian developing countries, i.e. Indonesia, Singapore, Taiwan, Malaysia, the Philippines, China, South Korea, Hong Kong, Thailand, and India, within the period of January 1, 2009 until December 31, 2016. Trivariate GARCH Model and the Cholesky Decomposition were used for analysis, performed in EViews 8. The research variables are stock market (X1), foreign exchange (X2), and bond market (X3). This study finds that volatility spillovers were present in the financial markets of the aforementioned countries, particularly in their stock market, foreign exchange, and bond market, indicating that the trends of those areas in each country are influential to the trends of the same areas in other countries.

**Keywords:** Volatility Spillover, Stock Market, Foreign Exchange, Bond Market

## 1 INTRODUCTION

Financial integration benefits a country through a more efficient capital allocation, lower diversification level, probability of smaller asymmetrical disruption, and more robust market framework (Arif-Ur-Rahman & Inaba 2020; Umutlu et al. 2010). Meanwhile, the intensity of global financial connection increases capital mobility and enables across-barrier financial risk transmission (Beine et al. 2010). In other words, such intensity allows faster transmissions of economic financial instability across countries.

The increasing integration, inter-relation, and interdependence of world's financial market (Balli et al. 2015; Berben & Jansen 2005; Wongswan 2006) have often attracted the attention of researchers to analyze and study the mechanism of the transmission of risk or volatility spillover of financial markets across countries (Hung 2020). Analyzing and identifying the inter-relation between financial markets could help shed a light over how the process of spillover in financial systems takes place and how the process of risk transfer occurs when financial markets are unstable (IMF 2009).

Volatility spillover comes from financial market interdependency across countries, which is defined as financial market movements in a country impacting other countries' financial market, known as market integration. The transferring effect, i.e. the volatility spillover, refers to the spreading of disruption in a country's financial market to other countries' market; a process that can be viewed from share price, foreign exchange, or other capital flows (Dornbusch et al. 2000).

Chiang and Yang (2003) concluded that volatility spillover moves from stock market to foreign exchange market. However, Abid et al. (2003) and Andreou et al. (2013) pointed out that the spillover in developed countries is bidirectional. Flavin et al. (2008) and Chkili and Nguyen (2014) further reported that the spillover in stock market or in foreign exchange market takes place during market 'instability'. Such spillover between stock market and bond market has also been studied by Stivers and Sun (2002), Scruggs and Gabaianidis (2003), Christiansen (2004), and Fangfang and Ping (2021). In a nutshell, they concluded that volatility spillover occurs from bond market to stock market, but not the other way around. Ehrmann et al. (2011) found that there was a significant

spillover among stock market, bond market, and foreign exchange market across international markets. However, the conclusions of those empirical studies are inconsistent as the results rely on the choices of country and sample, data frequency (either daily, monthly, or weekly basis), and/or method (either estimation or model specification).

Financial market in Asia is the biggest in the world. Since the financial crisis back in 1998, stock market in this continent has received special attention in the literature of financial economy, especially that regarding financial liberalization, financial market integration, and transmission/volatility spillover. Mishkin (2010) suggested that stock market, foreign exchange, and bond market are the three that deserve attention, but studies on simultaneous volatility spillover in the three markets have not been conducted. International Monetary Fund have reported that the highest growth in stock market in the world was shown in equity market of developing countries in Asia, whose index was accounted for 165 in September 2016.

## 2 RESEARCH METHODS

The objects of this research are stock market, foreign exchange and bond market in ten Asian developing countries: China, Hong Kong, India, Indonesia, South Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. They were picked for their massive development globally from 2010 to September 2016. This research is limited to the 2008 post-crisis condition since it was quite impossible to analyze occurrences in both crisis and non-crisis period simultaneously. Thus, the research was conducted from January 2009 to December 2016.

The variables analyzed in this research are stock market (X1), foreign exchange (X2), and bond market (X3). As stock market played as the proxy for daily closing price in share price index in each country, foreign exchange was presented as the proxy for daily closing price of foreign exchange in each country against USD, and bond market was used as the proxy for daily closing price of government bonds within a ten-year period in each country in comparison to the previous closing price.

This research uses secondary panel data, combination between time-series and cross-section data, of the daily closing prices of share price index, foreign exchange, and ten-year government bonds. From 2,087 data per country for each market, a number of 62,610 observation data were analyzed.

The analysis was performed in EViews 8 using Multivariate Generalized Autoregressive Conditional Heteroscedasticity BEKK (MGARCH BEKK), and since the variables to be studied are stock market, foreign exchange, and bond market, the Trivariate GARCH type was used.

The representation, known as the representation of BEKK, is generally written in the following equation:

$$H_t = C_0^{*'} C_0^{*'} + \sum_{k=1}^K C_{1k}^{*'} x_t x_t' + \sum_{k=1}^K \sum_{i=1}^q A_{1k}^{*'} \varepsilon_{t-1} \varepsilon_{t-1}' A_{1k}^{*'} + \sum_{k=1}^K \sum_{i=1}^q G_{1k}^{*'} H_{t-1} G_{1k}^{*'}$$

where  $C_0^{*}, A_{1k}^{*}, G_{1k}^{*}$  = matrix parameter  $n \times n$  dimension with  $C_0^{*}$  triangular,  $C_{1k}^{*'} =$  matrix parameter with  $j \times n$  dimension; and  $j$  = the variables observed consist of j1 for stock market, j2 for foreign exchange and j3 for bond market.

## 3 RESULTS

The result of the analysis shows that China had the highest average volatility in stock market while Malaysia had the lowest volatility. As Thailand was accounted for the highest maximum volatility in stock market, the lowest maximum and minimum volatility was found in Malaysia's stock market. This study also finds that bond market in the Philippines had the highest average volatility, while the lowest volatility was found in Malaysia. Further, bond market in the Philippines had the highest maximum volatility, while the minimum volatility of stock market was found in India. The descriptive statistical data of volatility for foreign exchange reveals that South Korea had the highest average volatility and that Hongkong had the lowest average volatility. The highest

maximum value of volatility in foreign exchange was found in Indonesia, while Hong Kong was accounted for the lowest minimum volatility in foreign exchange.

Another finding is that Hong Kong's stock market had a significant spillover effect on the same market in the other nine countries and that Thailand's stock market did not have any major spillover effect on the others. As Taiwan's stock market received the most spillover impact of all other stock markets being studied, China's received the least. Furthermore, while stock market in Hong Kong tended to pose spillover effect to the other stock markets, India received more spillover effect from the other stock markets, instead of giving spillover effect to the others.

Furthermore, Chinese foreign exchange market had significant spillover effects on the other stock markets. In contrast, Hong Kong foreign exchange market did not have any major spillover effect on the others. Foreign exchange markets in Thailand and Taiwan received major spillover effects from the other countries' foreign exchange markets, while China and Hong Kong were the two countries in Asia whose stock markets were not significantly affected by the spillovers from the other countries' stock markets. Moreover, Chinese foreign exchange market tended to give more spillover effect to the other countries' foreign exchange markets, while Taiwan foreign exchange tended to receive more spillover effect from the other countries' foreign exchange markets instead of giving spillover effect to the other countries' foreign exchange markets.

In addition, South Korean bond market tended to give major spillover effects bond markets in the other countries, while Indian bond market did not give any major spillover effect to the others. As Hong Kong's bond market received the biggest spillover effect from the other bond markets, India was the country whose bond market only received the smallest spillover effects. The bond market of South Korea tended to give more spillover effect to the others, while the bond market of Malaysia received more spillover effect from the others instead of giving spillover effect to the others. Compared to the other two markets, i.e. stock market and foreign exchange, the spillover effect of bond market was far smaller than the other two. In other words, bond market is more closed than the other two types of market.

The high volatility spillover among the ten countries indicates that the interdependency and integration of financial market in China are quite huge. Countries with high spillovers are influenced by the correlation between trade and Foreign Direct Investment in the form of financial market securities. The tendency is that the stronger the correlation between trade and money invested by investors to the countries is, the higher the dependency of those countries will be. Bad news from one of the countries will soon be heard by other countries involved in trade and investment. This study is relevant to the expected highlight that financial market with settled system has bigger volatility spillover into countries with less established financial system.

The difference in coefficient values among the countries represents the level of market openness to foreign investment. The more open a market is, the bigger the potential for a market will be to get an impact from other markets, which is related to the capital flow from investors. It can be simply said that when shock strikes foreign market with high degree of market openness, the bad news will affect the capital market of the country from which the news comes. The difference in spillover could also be triggered by trade and investment link as well as geographical proximity; all of which are influential to trade. Nevertheless, the volatility and return of the two equity markets are possibly related since trade, investment, financial market integration growth, ICAPM model, and market contagion are in close proximity.

#### 4 CONCLUSION

The findings have essential implications for portfolio and risk management. The research results can also serve as a reference for practitioners to cope with matters regarding risk in share price, exchange rate, and bond movement. It is expected that the risk faced can be better measured and that better alternative strategies can be derived.

The understanding of the sources and intensity of volatility spillover across the markets is deemed important for financial decision making (Kumar 2013) in areas including optimal asset allocation,

global hedging construction, and financial regulation that involves capital requirement or capital control. Besides, information regarding interaction behaviors of variables among the three financial markets is useful to predict any causes emerging due to daily changes in asset price in regards to international portfolio management to reduce financial risk.

The correlation of the three markets has affected on how governments establish varied financial markets and their capacity to issue bonds/loans. When bond market is directly related to stock market and foreign exchange, government bonds will also be affected, meaning that the capability to implement fiscal policy and bring welfare to the state will also be impacted.

## REFERENCES

- Abid, F., Aoua, N., & Mikhail, A. D. 2003. Linkages between, and contagion in, Asian stock and foreign exchange markets (September 1989–October 1999). *Applied Economics*. 17. 1311–43.
- Andreou, Elena., Matsi, M., & Savvides, A. 2013. Stock and Foreign Exchange Market Linkages in Emerging Economies. *Journal of International Financial Markets, Institutions and Money*. 27. 248–268.
- Arif-Ur-Rahman, M. & Inaba, K. 2020. Financial integration and total factor productivity: in consideration of different capital controls and foreign direct investment. *Economic Structures*. 9(25). <https://doi.org/10.1186/s40008-020-00201-9>
- Balli, F., Hajhoj, H.R., Basher, S.A. & Ghassan, H.B. 2015. An analysis of returns and volatility spillovers and their determinants in emerging Asian and Middle Eastern countries, *International Review of Economics and Finance*. 39, 311–325.
- Beine, M., Cosma, A., Vermeulen, R. 2010. The dark side of global integration: Increasing tail dependence. *Journal of Banking and Finance*. 34(1). 184–192.
- Berben, R., & Jansen, W.J. 2005. Co-Movement in International Equity Markets: A Sectoral View. *Journal of International Money and Finance*. 24(5), 832–857.
- Chiang, T. C. & Yang, S. Y. 2003. Foreign exchange risk premiums and time-varying equity market risks. *International Journal of Risk Assessment and Management*. 4, 310–31.
- Chkili, W., & Nguyen, D. K. 2014. Exchange Rate Movement and Stock Market Returns in a Regime-Switching Environment: Evidence from for BRICS Countries. *Research in International Business and Finance*. 3, 46–56.
- Christiansen, C. 2004. *Decomposing European bond and equity volatility*. Working Paper Series No. 180. Center for Analytical Finance, University of Aarhus.
- Dornbusch, R, Park, Y.C., & Claessens, S. 2000. *Contagion: How It Spreads and How It Can Be Stopped*. Forthcoming World Bank Research Observer.
- Ehrmann, M., Fratzscher, M., and Rigobon, R. 2011. Stocks, bonds, money markets and exchange rates: measuring international financial transmission. *Journal of Applied Econometrics*. 26(6), 948–974.
- Fangfang, L. I., & Ping, L. I. 2021. Dynamic correlations and spillover effects between CoCo bonds and other financial assets: Evidence from European banking. *Finance Research Letters*, 38, <https://doi.org/10.1016/j.frl.2020.101486>.
- Flavin, T. J., Panopoulou, E., & Unalmis, D. 2008. On the Stability of Domestic Financial Market Linkages in the presence of time-varying Volatility. *Emerging Markets Review*. 9, 280–310.
- Hung, N.T. 2020. An analysis of CEE equity market integration and their volatility spillover effects, *European Journal of Management and Business Economics*, 29(1), 23–40. <https://doi.org/10.1108/EJMBE-01-2019-0007>
- International Monetary Fund. 2009. *Global Financial Stability Report: navigating the financial challenges ahead*. International Monetary Fund, Washington, D.C.
- Kumar, M. 2013. Returns and volatility spillover between stock prices and exchange rates: empirical evidence from IBSA countries, *International Journal of Emerging Markets*, 8(2), 108–128.
- Mishkin, F.S. 2010. *The Economics of Money, Banking, and Financial Markets*. 8th edition. New Jersey: Person Education, Inc.
- Scruggs, J. T. & Glabadanidis, P. 2003. Risk Premia and the Dynamic Covariance Between Stock and Bond Returns. *Journal of Financial and Quantitative Analysis*, 38, 295–316.
- Stivers, C. & Sun, L. 2002. *Stock market uncertainty and the relation between stock and bond returns*, Working Paper 2002-3, Federal Reserve Bank of Atlanta.
- Umutlu, M., Akdeniz, L., & Altag-Salih, A. 2010. The degree of financial liberalization and aggregated stock-return volatility in emerging markets. *Journal of Banking and Finance*. 34(3), 485–696.
- Wongswan, J. 2006. Transmission of Information Across International Equity Markets. *Review of Financial Studies*. 19(4), 1157–1189.

# The role of social media marketing and environmental knowledge on green skincare purchase intention

R. Shanti & Y. Alversia

*Department of Management, Faculty of Economic and Business, Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** This study examined the effect of social media marketing (SMM), attitude, subjective norm, perceived behavioral control, product knowledge, perceived consumer effectiveness (PCE), and price consciousness on the intention to purchase green skincare products and the effect of environmental knowledge as a moderating variable. The study outcomes revealed that SMM and perceived behavioral control displayed a significant direct effect on the intention to purchase green skincare products. Furthermore, SMM showed a significant relationship towards PCE, product knowledge, and subjective norm, and showed no significant effect towards price consciousness. Product knowledge positively affected purchase intention, while PCE and price consciousness showed no significant effect. PCE positively affected attitude towards purchase intention, while product knowledge showed no significant effect. Moreover, attitude showed a significant effect towards intention to purchase green skincare products, while subjective norm showed no significant effect. More importantly, environmental knowledge positively moderates the relationship between latent variables and purchase intention. The findings are relevant for marketers to implement better communication strategies on social media to increase consumers' purchase intention toward green skincare products.

**Keywords:** Product knowledge, Price consciousness, Green products, Social media marketing, Perceived consumer effectiveness, Environmental Knowledge.

## 1 INTRODUCTION

Along with rapid economic progress and accompanied by an increase in consumption worldwide, environmental damage has increased in recent decades (Wang et al. 2019). In the last few decades, consumers' awareness of the environment has increased significantly and they are aware that what they consume has consequences on the environment, thereby encouraging purchasing behavior for green products (Amberg & Fogarassy 2019). As a part of daily life, consumers in Southeast Asia are starting to switch to green skincare products to reduce the negative effects on the environment (Karl et al. 2020). The Indonesian organic cosmetic product market has been growing exponentially with a projection to above US\$285 million by 2025 (Statista 2021). This increase in market size and consumer interest in green skincare products makes the exploration of this consumer segment worthwhile.

To promote green skincare products, enterprises have increased their investments in social media (Yusuf 2019). Social media plays a critical role in shaping consumer opinions, influencing attitudes, and purchasing decisions (Mangold 2009). According to Statista 2021, the total number of users of social media in Indonesia are projected to be 237 million users by 2026. It will be an opportunity for enterprises to expand the market share of green skincare products and actively promote them on social media. Therefore, it is crucial to understand the importance of SMM in promoting green skincare products and to examine how SMM affects consumers' green skincare products purchase intention.



Since green behavior is a relatively new concept, additional variables are needed in order to describe more properly the impact of SMM on green skincare purchase intention. Therefore, product knowledge, PCE, and price consciousness were used to examine the influence toward purchase intention. In addition, this study used environmental knowledge as a moderating variable to influence green skincare products purchase intention. Previous research conducted by Hsu et al. (2017) and Mamun et al. (2018) only examined the influence of TPB on green skincare products purchase intention. Furthermore, based on a literature review conducted by Wijekoon & Sabri (2021), none of the up-to-date references specifically analyzed the role of SMM and the environmental knowledge that influence green skincare product purchase intention. Thus, the originality of the study stands in the exploring how SMM and environmental knowledge influence the green purchase intention through product knowledge, PCE, price consciousness, attitude, subjective norm, and perceived behavioral control.

## 2 THEORETICAL FRAMEWORK

Attitude is referred to as a learned tendency for individuals to engage and respond constantly towards favorable or unfavorable attitudes (Tan et al. 2019). Mamun et al. (2020) explained that attitudes towards green skincare products significantly affect the intention to buy green skincare products. Subjective norm refers to people's behavior due to social pressure from the people around them (Ajzen 1991). Based on previous research, subjective norms significantly influence the purchase intention of green products (Wu & Chen 2014). The perception of an individual's capacity or ability to execute the target behavior easily is called perceived behavioral control (Yadav & Pathak 2017). Consumers will tend to be more involved in purchasing green products when they can control these external factors (Wang et al. 2018). Price consciousness is a term to describe the extent to which consumers focus on paying low prices (Steenkamp & Olivares 2015). Green skincare tends to have premium prices, thus price consciousness negatively affects the purchase of green products (Doorn & Verhoef 2015). Meanwhile, if consumers have sufficient resources and capabilities to buy green products or a high level of PBC, then price consciousness may be reduced (Wang et al. 2018). Product knowledge is a collection of information about products in consumer memory (Philippe & Ngobo 1999). Sufficient knowledge about green products can shape consumers' green attitudes towards the intention to carry out sustainable consumption. PCE is the degree to which consumers trust or believe that their efforts can make a difference (Ellen et al. 2018). The high level of PCE can encourage consumers to show a positive attitude and purchase intention of green products (Webb et al. 2008).

To make purchasing decisions, consumers usually seek information in advance regarding a product or service through social media (Froehlich 2009). Marketing through social media can encourage prosocial behavior using the influence of social comparisons to influence an individual's subjective norms (Allcott 2011). In addition, marketers through social media emphasize that prices can provide information to consumers regarding the quality and value of products, and can increase individual price consciousness (Schuitema & Groot 2015). Consumers can also gain knowledge about green products through social media and the internet, so they will gain more knowledge about green products (Froehlich 2009). Furthermore, Marketing through social media broadly influences PCE and purchasing decision processes (Laroche et al. 2013).

Environmental knowledge is knowledge and awareness of environmental problems and possible solutions to these problems (Taufique et al. 2016). If consumers know environmental issues, it will encourage consumers to have a positive attitude towards green products (Indriani et al. 2019). Subjective knowledge can influence consumer choices because they are inspired to act on the knowledge they have (Moorman et al. 2004). In addition, environmental knowledge will also increase the belief that an individual has control over the situation, thereby increasing perceived behavioral control (Kim et al. 2014). Purchase intention is an activity that involves the considerations, behavior, attitudes, and perceptions of consumers in buying an item or service (Hermanda et al. 2019).

### 3 METHODS

The present study used a non-probability sampling technique using a purposive method. Data were collected by an online questionnaire to 372 respondents in Indonesia and 356 usable questionnaires were obtained after removal of the outliers. Only social media active users and consumers who had never bought green skincare were allowed to complete the questionnaire. All measurement items on questionnaires were obtained from previous research and measured using a five-point Likert scale (1=Strongly Disagree, 5=Strongly Agree). The collected data were analyzed using structural equation modeling (SEM) with Amos 26.0 software package. Firstly, the outliers were removed to obtain clean data before further analysis and a normality test was performed using SPSS 25 to achieve a normal distribution result for SEM analysis. In SEM analysis, the researchers conducted measurement model testing to perform CFA and structural model testing to analyze the relationship between variables. In this study, the researchers examined the direct and indirect effect of variables to better understand which variables showed a significant effect toward green skincare products purchase intention.

### 4 DATA ANALYSIS RESULTS AND DISCUSSION

CFA was performed to evaluate structural reliability, validity, and *goodness-of-fit*. The model fit indices of the measurement model were as follows:  $\chi^2/df = 2.22$ , RMSEA = 0.05, GFI = 0.86, RMR = 0.04, AGFI = 0.833. Validity was tested by standard loading factor (SLF) and values were greater than the ideal value 0.05, indicating that all indicators were valid. Meanwhile reliability tested by AVE and reliability values ranged from 0.517–0.707 which means greater than ideal value 0.05.

The model fit indices of the measurement model were as follows:  $\chi^2/df = 3.16$ , RMSEA = 0.07, GFI = 0.82, RMR = 0.16, AGFI = 0.78. The results showed that 11 hypotheses were accepted and six hypotheses were rejected. Attitude and perceived behavioral control showed significant effects toward purchase intention ( $t = 2.25, p = 0.024$  and  $t = 2.52, p = 0.01$ , respectively). However, subjective norm showed no significant effect toward purchase intention ( $t = -1.15, p = 0.25$ ). Price consciousness showed no significant effect on purchase intention ( $t = 0.38, p = 0.70$ ). Product knowledge showed no significant effect on attitude ( $t = -1.94, \beta = 0.05$ ), but positively affected purchase intention ( $t = 1.67, p = 0.09$ ). PCE positively affected attitude ( $t = 6.32, p = 0.00$ ), but showed no significant effect on purchase intention ( $t = 0.96, p = 0.33$ ). SMM positively affects subjective norm ( $t = 12.76, p = 0.00$ ), PCE ( $t = 10.95, \beta = 0.00$ ), product knowledge ( $t = 13.38, p = 0.00$ ), and purchase intention ( $t = 2.64, p = 0.00$ ). However, SMM showed a positive effect on price consciousness ( $t = 1.28, p = 0.05$ ). Furthermore, SMM has an indirect effect through PCE and attitude towards purchase intention with SLF value of 0.07 and through product knowledge toward purchase intention with SLF value of 0.09. Lastly, environmental knowledge positively moderated the relationship between attitude, subjective norm, and perceived behavioral control with purchase intention.

### 5 CONCLUSIONS

Based on these findings, SMM plays a role as the most significant factor that influences green skincare products purchase intention, followed by perceived behavioral control. The direct effect of SMM is higher than indirect effect, indicating that SMM is more likely to influence green skincare purchase intention with the direct effect. It can be concluded that current Indonesian consumers are heavy users of social media and are strongly influenced by information from social media marketing activities in their buying process (Aji et al. 2020). Enterprises and business people must understand the importance of social media as an effective tool for marketing products and incorporating activities on social media in their marketing strategies. This research focuses on the purchase intention of green skincare products rather than purchase behavior so that it did not analyze

purchase behavior at the specific time and conditions. Moreover, this research did not examine certain brands of green skincare products, so that respondents became less focused and specific in answering the statements on the questionnaire. Thus, future research can use the same research model to analyze the buying behavior of green skincare products and with more specific brands.

## REFERENCES

- Amberg, N., & Fogarassy, C. (2019). Green consumer behavior in the cosmetics market. *Resources*, 8(3).
- Aji, P. M., Nadhila, V., & Sanny, L. (2020). Effect of social media marketing on instagram towards purchase intention: Evidence from Indonesia's ready-to-drink tea industry. *International Journal of Data and Network Science*, 4(2), 91–104.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Allcott, H. (2011). Social norms and energy conservation. *Journal of Public Economics*, 95(9–10), 1082–1095.
- Al Mamun, A., Mohamad, M. R., Yaacob, M. R. Bin, & Mohiuddin, M. (2018). Intention and behavior towards green consumption among low-income households. *Journal of Environmental Management*, 227, 73–86.
- Debora Indriani, I. A., Rahayu, M., & Hadiwidjojo, D. (2019b). The Influence of Environmental Knowledge on Green Purchase Intention the Role of Attitude as Mediating Variable. *International Journal of Multicultural and Multireligious Understanding*, 6(2), 627.
- Ellen, P. S., Wiener, J. L., & Cobb-Walgren, C. (2018). The Role of Perceived Consumer Effectiveness in Motivating Environmentally Conscious Behaviors.
- Froehlich, J. (2009). Promoting Energy Efficient Behaviors in the Home through Feedback: The Role of Human-Computer Interaction. *Undefined*.
- Haller Karl, Lee Jim, & Cheung Jane. (2020). Meet the 2020 Consumers Driving Change. *Ibm*, 1–16.
- Hermenda, A., Sumarwan, U., & Tinaprillia, N. (2019). The Effect Of Social Media Influencer On Brand Image, Self-Concept, And Purchase Intention. *Journal Of Consumer Sciences*.
- Hsu, C. L., Chang, C. Y., & Yansritakul, C. (2017). Exploring purchase intention of green skincare products using the theory of planned behavior: Testing the moderating effects of country of origin and price sensitivity. *Journal of Retailing and Consumer Services*, 34(September 2016), 145–152.
- Kim, Y., Yun, S., & Lee, J. (2014). Can Companies Induce Sustainable Consumption? The Impact of Knowledge and Social Embeddedness on Airline Sustainability Programs in the U.S. *Sustainability 2014*, Vol. 6, Pages 3338–3356, 6(6), 3338–3356.
- Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*, 18(6), 503–520.
- Moorman, C., Diehl, K., Brinberg, D., & Kidwell, B. (2004). Subjective Knowledge, Search Locations, and Consumer Choice. *Journal of Consumer Research*, 31(3), 673–680.
- Philippe, A., & Ngobo, P.-V. (1999). Assessment of Consumer Knowledge and Its Consequences: a Multi-Component Approach. *ACR North American Advances*, NA-26.
- Schuitema, G., & Groot, J. I. M. de. (2015). Green consumerism: The influence of product attributes and values on purchasing intentions. *Journal of Consumer Behaviour*, 14(1), 57–69.
- Statista. (2021a). Outlook Cosmetics Indonesia. In *Statista Research Department*.
- Steenkamp, J. B. E. M., & Maydeu-Olivares, A. (2015). Stability and Change in Consumer Traits: Evidence from a 12-Year Longitudinal Study, 2002–2013.
- Tan, C. N. L., Ojo, A. O., & Thurasamy, R. (2019). Determinants of green product buying decision among young consumers in Malaysia. *Young Consumers*, 20(2).
- Wang, H., Ma, B., & Bai, R. (2019). How Does Green Product Knowledge Effectively Promote Green Purchase Intention? *Sustainability*, 11(4), 1193.
- Wang, Y., Wang, S., Wang, J., Wei, J., & Wang, C. (2018). An empirical study of consumers' intention to use ride-sharing services: using an extended technology acceptance model. *Transportation 2018 47:1*, 47(1), 397–415.
- Webb, D. J., Mohr, L. A., & Harris, K. E. (2008). A re-examination of socially responsible consumption and its measurement. *Journal of Business Research*, 61(2), 91–98.
- Wijekoon, R., & Sabri, M. F. (2021a). *Determinants That Influence Green Product Purchase Intention and Behavior: A Literature Review and Guiding Framework*. 1–40.
- Wu, S.-I., & Chen, Y.-J. (2014). The Impact of Green Marketing and Perceived Innovation on Purchase Intention for Green Products. *International Journal of Marketing Studies*.
- Yadav, R., & Pathak, G. S. (2017). Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior. *Ecological Economics*, 134, 114–122.
- Van Doorn, J., & Verhoef, P. C. (2015). Drivers of and Barriers to Organic Purchase Behavior. *Journal of Retailing*, 91(3), 436–450.

# The effect of the information technology implementation on organizational performance in manufacturing companies

T. Osmond, H. Siagian & Z.J.H. Tarigan

*Faculty of Business and Economics, Petra Christian University, Surabaya, Indonesia*

**ABSTRACT:** Information technology is essential and critical for companies when collaborating with external partners. This study examines the effect of information technology (IT) implementation on organizational performance through information sharing and inventory management. The study involved a distribution of questionnaires to 500 manufacturing companies that was followed by a data screening, resulting in 93 valid questionnaires. Partial Least Square (PLS) technique was employed for data processing. The results show that IT implementation affects information sharing, inventory management, and organizational performance. Meanwhile, information sharing has an influence on inventory management and organizational performance. In addition, inventory management affects organizational performance. This study also reveals that information sharing and inventory management mediate the relationship between IT implementation and organizational performance. IT implementation can improve organizational performance, particularly in punctual product delivery. Information sharing with partners will improve inventory, especially in maintaining safety stock while improving the company's performance. This result paves the way for practitioners to improve organizational performance in the context of supply chain management.

**Keywords:** IT implementation, organizational performance, information sharing, inventory

## 1 INTRODUCTION

The condition of companies in Indonesia, especially in the manufacturing sector, is intensively developing. This development is accomplished in response to the government's program, namely "Making Indonesia 4.0". According to Hartanto (2018), the national industrial sector is in need of a significant improvement, especially in the mastery of technology, which is a crucial factor of competitiveness in the industrial revolution 4.0. However, the corona (COVID-19) pandemic has caused a disruption, especially in the supply chain network, with the rapid change and uncertainty that needs to be mitigated. In terms of supply and demand streams, the uncertainties have also affected the resources' productivity and utilization. Many studies have been conducted to determine if information technology (IT) implementation improves organizational performance and how IT improves it. The role of IT in the supply chain is critical in improving the company's performance that can be assessed from financial and non-financial perspectives. According to Yuen and Van Thai (2017), operational performance is divided into quality, flexibility, cost, and delivery. In addition, Omar et al. (2010) suggest that IT in the supply chain can improve delivery time, reduce costs, and make companies more responsive.

The company's performance is also influenced by information sharing between partners in the supply chain, making it more effective and efficient in responding to changes in the market related to reducing the bullwhip effect (Wu et al. 2014). Moreover, Wang et al. (2010) found that Radio Frequency Identification (RFID) can improve service levels, turnover inventory, and reduce overall inventory costs. Thus, IT is useful for managing inventory, making it more accurate and responsive to uncertainty, that leads to cost efficiency in storing goods. Regarding managing inventory, manufacturing companies also need to implement lean manufacturing, for it can increase company

efficiency; especially if it is supported by technology, it will result in excellent efficiency, productivity, and performance. Furthermore, IT-supported corporate activities in managing inventory will reduce excess inventory, reduce the time from order to delivery, provide more transparent tracking of goods, and reduce transaction costs (Alam et al. 2014). Using useful IT in managing company inventory will significantly reduce operational costs so that manufacturing companies can survive the current situation. Suppliers who receive information related to buyers' needs can manage the buyers' inventory more accurately and efficiently, particularly in storing goods (Zepeda et al. 2016). A solid inventory management can have a positive impact on the performance of the company, primarily on the operational performance, not to mention that inventory management is essential in aligning supply and demand.

Manufacturing companies generate inventory, so the impact is significant in reducing inventory costs, increasing warehouse flexibility, and being more responsive to customers (Musau et al. 2017). Based on the aforementioned phenomena and related research findings, it can be concluded that IT implementation, information sharing, and inventory management could improve the organizational performance respectively and directly (Alam et al. 2014). This study examines the relationship between the four variables simultaneously to improve organizational performance in the current pandemic situation. This study has three objectives; 1) to understand the impact of information technology implementation on information sharing, inventory management, and organizational performance in manufacturing companies simultaneously; 2) to find out the magnitude of the impact of information sharing and organizational performance on inventory management in a manufacturing company; 3) to find out the magnitude of the impact of inventory management on organizational performance in manufacturing companies.

## 2 RESEARCH METHOD

This study is a causal research, using primary data to examine the relationship between variables following the developed hypothesis. The population of this study is manufacturing companies that have implemented supply chain management covering four constructs, i.e., IT implementation, information sharing, inventory management, and organization performance. The respondents were from management level of supervisor or higher, as they are considered knowledgeable regarding the company's operational activities and are involved in the operational and related departments. The IT implementation adopted three indicators for measurement, as Yu (2015) suggested, namely, hardware, software, and employee capabilities. Information sharing is the type of information shared both from within the manufacturing company to its partners and vice versa.

According to Ye and Wang (2013), the indicators used to measure information sharing are order processing, inventory data sharing between partners, sharing capacity planning, sharing production planning, and sharing order forecasting. While in inventory management, the indicators used were those proposed by Orobia et al. (2020), namely: plan the level of inventory, record the details of goods when purchasing, monitor the level of inventory, maintain storage facilities, monitor the physical condition of the inventory, and maintain the level of safety stock. Organizational performance, specifically the operational performance of a manufacturing company, was assessed using four indicators adopted from Yuen and Van Thai (2017): flexibility, capability to meet the quality of customer demand, reduced company production costs, and reduced lead time needed by manufacturing companies. Meanwhile, the data analysis was done using Partial Least Square (PLS) technique.

## 3 RESEARCH ANALYSIS AND DISCUSSION

The results of descriptive analysis show that the respondents' profiles in terms of position are as follows: Supervisory (60.2%), Managers (24.4 %), Senior Managers, General Managers, Owners (5.4%), and Chief Executive Officer (CEO) (3.2%). From the perspective of company size, the

result shows that 72 out of 93 (77.4%) companies are large-size companies. The following stage was the assessment of the validity and reliability of the construct indicators. Table 1 illustrates the validity and reliability test.

The validity test assesses the indicators' validity and reliability. An indicator is considered valid when the factor loading has a value higher than 0.50. Similarly, each construct's block of indicators is considered reliable when the reliability value is higher than 0.70. As shown in Table 1, all values of factor loadings were higher than 0.50, and the reliability of each variable was higher than 0.70. IT has an average value of 3.98, which indicates that IT in the company has been generally implemented. Overall statements related to the types of information sharing between manufacturing companies and their partners are high, with an average of 3.92. This finding shows that most companies have a reasonably good relationship with their partners so that companies are willing to share information with their partners regarding the daily activities or operations in managing its supplies.

The IT implementation affects information sharing with a coefficient of 0.722 and a T-value of  $15.301 > 1.96$ . This result suggests that the first hypothesis, IT implementation has a significant effect on information sharing, is accepted. The result of this study is in line with a previous study, which also suggests that the use of IT in companies can improve information sharing (Ye & Wang 2013). Moreover, IT implementation and inventory management have a coefficient of 0.503 and a T-value of  $4.977 > 1.96$ .

The path coefficient value of 0.503 also indicates a positive relationship; the more IT is implemented, the better the inventory management gets. Monitoring the inventory level requires IT support so that activities can be carried out more quickly and accurately, such as using a barcode (Wang et al. 2010). The IT implementation and organizational performance relationship shows a T-value of  $2.873 > 1.96$ .

This result indicates a significant influence of IT on organizational performance with the path coefficient value of 0.279. Excellent implementation of IT will institute a more efficient and faster company in response to changes caused by uncertainty. The effect of information sharing on inventory management has a T-value of  $2.234 > 1.96$ .

This indicates a significant influence of information sharing on inventory management with the path coefficient value of 0.248. The more information sharing is implemented, the greater the improvement of inventory management. In addition, information sharing affects organizational performance with a T-value of  $3.231 > 1.96$  and the path coefficient value of 0.326.

This means, the higher the information sharing is adopted, the greater the organization's performance is enhanced. This finding is in line with a study conducted by Wu et al. (2014), stating that information sharing improved organizational performance. Lastly, inventory management improved organizational performance with a T-value of  $3.719 > 1.96$  and the path coefficient of 0.333. This result reflects a positive relationship and a significant influence of inventory management on organizational performance.

#### 4 CONCLUSION

The results suggest that IT implementation affects information sharing and inventory management in medium and large-scale manufacturing companies in Indonesia. IT implementation also affects organizational performance in medium and large-scale manufacturing companies, whereas information sharing affects inventory management. Moreover, inventory management significantly affects organizational performance whereas information sharing improves organizational performance. An interesting finding from this study is that information sharing and inventory management mediate IT implementation's influence on organizational performance. IT implementation improves organizational performance directly and indirectly through the implementation of information sharing and inventory management adoption. The results of this study may provide useful insight for the professionals on how to improve the organizational performance. This study also contributes to enriching the current studies in the field of supply chain management.

## REFERENCES

- Alam, A., Bagchi, P. K., Kim, B., Mitra, S., & Seabra, F. (2014). The mediating effect of logistics integration on supply chain performance: a multi-country study. *Int. J. of Logistics Management*, 25(3), 553–580.
- Hartanto, A. (2018). Ministry of Industry: Making Indonesia 4.0: RI's Strategy to Enter the 4th Industrial Revolution. Retrieved December 4, 2019, from <https://kemenperin.go.id/artikel/18967/Making-Indonesia-4.0:-Strategi-RI-Masuki-Revolusi-Industri-Ke-4>
- Musau, E. G., Namusonge, G., Makokha, E. N., & Ngeno, J. (2017). The Effect of Inventory Management on Organizational Performance Among Textile Manufacturing Firms in Kenya. *International Journal of Academic Research in Business and Social Sciences*, 7(11), 1032–1046.
- Omar, R., Ramayah, T., Lo, M., Sang, T. Y., & Siron, R. (2010). Information sharing, information quality and usage of information technology (IT) tools in Malaysian organizations. *African Journal of Business Management*, 4(12), 2486–2499.
- Orobia, L. A., Nakibuuka, J., Bananuka, J., & Akisimire, R. (2020). Inventory management, managerial competence and financial performance of small businesses. *Journal of Accounting in Emerging Economies*, 10(3), 379–398.
- Tarigan, Z.J.H., Siagian, H. and Bua, R.R. (2019). The Impact of Information System Implementation to the Integrated System for Increasing the Supply Chain Performance of Manufacturing Companies, *IOP Conference Seri: Material Science and Engineering*, 473, 012050, doi:10.1088/1757-899X/473/1/012050
- Tarigan, Z.J.H., Siagian, H., and Jie, F. (2020). The role of top management commitment to enhancing the competitive advantage through ERP integration and purchasing strategy. *Int. J. of Enterprise Information Systems*, 16(1), 53–68.
- Wang, S. J., Huang, C. T., Wang, W. L., & Chen, Y. H. (2010). Incorporating ARIMA forecasting and service-level based replenishment in RFID-enabled supply chain. *Int. J. of Production Research*, 48(9), 2655–2677.
- Wu, I. L., Chuang, C. H., & Hsu, C. H. (2014). Information sharing and collaborative behaviors in enabling supply chain performance: A social exchange perspective. *Int. J. of Production Economics*, 148, 122–132.
- Ye, F., & Wang, Z. (2013). Effects of information technology alignment and information sharing on supply chain operational performance. *Computers and Industrial Engineering*, 65(3), 370–377.
- Yuen, K. F., & Van Thai, V. (2017). The influence of supply chain integration on operational performance: A comparison between product and service supply chains. *Int. J. of Logistics Management*, 28(2), 444–463.
- Zepeda, E.D., Nyaga, G.N., & Young, G.J., (2016). Supply chain risk management and hospital inventory: Effects of system affiliation. *Journal of Operations Management* 44, 30–47.

# The influence of product innovation on customer engagement through customer experience and customer value of OVO users

G.A. Abet, M. Adiwijaya & H. Subagio

*Faculty of Business and Economics, Petra Christian University, Surabaya, Indonesia*

**ABSTRACT:** This study aims to find out the influence of product innovation on customer engagement through customer experience and customer value. It employs a quantitative research method by distributing online questionnaires on social media. In total, 210 respondents participated through purposive sampling technique. The findings show that: 1) product innovation has a significant effect on customer value, customer experience, and customer engagement; 2) customer value has a significant effect on customer engagement, and 3) customer experience has no significant effect on customer engagement.

**Keywords:** customer engagement, customer value, customer experience, product innovation

## 1 INTRODUCTION

Due to the persistent development of technology, the internet functions beyond just a means for sharing and receiving information, it also has become a need that involves humans emotionally and intellectually. *Customer Engagement, Customer Experience, Product Innovation, Customer Value* become the variables to be investigated in cashless phenomenon using OVO. This study aims to determine how customer engagement is created through customer experience and customer value when making cashless transactions, and to identify and clarify the role of mediation given by customer experience and customer value that result from product innovation to establish an enduring relationship between customers and OVO.

## 2 LITERATURE REVIEW

A research conducted by Su (2011) brought about positive results, suggesting that product innovation can affect customer experience if the service providers focus more on the experience consumers will receive when they introduce their products. In addition, Rodríguez-Salvador et al. (2016) propose that customer experience can be achieved with the help of product innovation; it helps companies to find out more about consumers' expectations and identify the next strategy to be implemented as an attempt to attract more customers. Edvardsson and Witel (2010) argue that the consumer participation in an innovation process can produce its own value for consumers, which is resulted from the knowledge and expertise of a consumer. Meanwhile, a study conducted by Moon et al. (2013) indicates that a company that is already advanced must always innovate while providing modern designs.

Customers can interact and create value in various ways. A study conducted by Kumar et al. (2010) finds that customers can give value to the company not only through their purchase behavior, but also through the internet which is able to contact customers and WOM. The relationship between customer value and customer engagement was also studied by Higgins (2006) which resulted that the value itself is a strong experience and provides great motivation for customers, and furthermore can be achieved adjusting to the customers' needs and goals. This value is also obtained not only



from the hedonic experience but also from a strong motivation to have and want something appealing to happen.

There are six hypotheses formulated as follows:

- H1: Product innovation has an effect on customer experience
- H2: Product innovation has an influence on customer value
- H3: Product innovation has an influence on customer engagement
- H4: Customer experience has an influence on customer value
- H5: Customer experience has an influence on customer engagement
- H6: Customer value has an influence on customer engagement

### 3 METHODS

This study employed a quantitative research method. Google Form was used for the sampling method in order to obtain online coverage and involve national participation. Purposive/judgmental sampling used were respondents who had been using OVO for the past one year. The link of Google Form questionnaire was shared via two social media, namely WhatsApp and LINE, in 5 cities (Manado, Padang, Banjarmasin, Makassar, and Surabaya) with a total of 217 respondents. This distribution stage took two months and three weeks. Subsequently, a screening process was carried out and 210 questionnaires met the requirements. The respondents who had filled in the questionnaires were identified based on gender, age, occupation, and monthly income.

### 4 RESULTS AND DISCUSSIONS

The respondents consisted of 114 men and 96 women. In the age range, most respondents were from the age group of 17–34 years old, with the total of 120 respondents, followed by the age range of 35–51 as many as 54 respondents, and age range >51 as many as 36 respondents. In terms of occupation, 95 respondents were employees, 64 respondents were entrepreneurs, 19 respondents were students, and 32 had other jobs. In terms of income, respondents who have income below IDR 2 to above 10 million/month also used OVO mobile payment.

Table 1. Hypotheses testing

Hypothesis	Influence between variables	Original Sample (O)	S. Mean(M)	S. Dev (STDEV)	T Stats
H1	PI (X1) → C Ex (X2)	0.676	0.679	0.042	16,022
H2	PI (X1) → CV (Y1)	0.261	0.257	0.069	3,776
H3	PI (X1) → C En (Y2)	0.254	0.255	0.067	3,776
H4	C Ex (X2) → CV (Y1)	0.612	0.619	0.066	9,269
H5	C Ex (X2) → C En (Y2)	0.094	0.106	0.103	0.909
H6	CV (Y1) → C En (Y2)	0.502	0.489	0.109	4,583

Table 1 shows that the *t* value of the effect of product innovation on customer experience (H1) as much as 16,022, greater than 1.96. This implies that product innovation has a significant effect on the customer experience of OVO users. From these results, the first hypothesis of the study is that H1 is accepted. This is in accordance with Rodríguez-Salvador et al. (2016) who suggest that customer experience can be obtained through product innovation that facilitates an efficient shopping process. Product innovation has a significant influence on the customer value of OVO users. Consequently, H2 is accepted. This result supports the previous research by Kim et al. (2015) that suggests the innovation of a product with various advantages can affect consumer value when the product is used. In H3 test, product innovation has a significant effect on customer engagement of OVO users. As a result, H3 is accepted, in accordance with research by Piller et al. (2004) that suggests product innovation has the potential to make consumers feel satisfied and helped.

Moreover, customer experience has a significant effect on customer value of OVO users. Thus, H4 is accepted, in line with Gentile et al. (2007) who propose that customer value can rise at different levels depending on customer experience, such as sensorial components so as to generate values for its users.

Regarding the fifth hypothesis test, the effect of customer experience on customer engagement (H5) is rejected. The indicator of customer experience that has the highest value is the QR Code provided by OVO while the indicator with the highest value in customer engagement indicator providing experience sharing using the OVO mobile payment. With the QR Code provided by merchants, it makes payment process faster, but this does not have a direct impact on consumers to share their experiences using the QR Code. This is solely to make payment easier, but not to make consumers interested in using OVO mobile payments, as in line with a research by Dovalienė et al. (2016), which states that customer engagement can be encouraged if there is consumerism and satisfaction emerged from it. Addressing the sixth hypothesis, customer value has a significant influence on customer engagement of OVO users. Therefore, H6 is accepted, as it is in line with a research from Higgins (2006) which suggests that the value earned from outside factors will have a big impact on customer engagement.

Table 2. Direct and indirect effects.

Variables	Direct Effect	Indirect Effect	Total
$PI(X) \rightarrow C\ Ex\ (X2)$	0.676	–	0.676
$C\ Ex\ (X2) \rightarrow CV\ (Y1)$	0.612	–	0.612
$PI\ (X1) \rightarrow CV\ (Y1)$	0.261	–	0.675
$PI\ (X1) \rightarrow C\ Ex\ (X2) \rightarrow CV\ (Y1)$	–	0.414	0.675
$C\ Ex\ (X2) \rightarrow C\ En\ (Y2)$	0.094	–	0.094
$CV\ (Y1) \rightarrow C\ En\ (Y2)$	0.502	–	0.809
$C\ Ex\ (X2) \rightarrow CV\ (Y1) \rightarrow C\ En\ (Y2)$	–	0.307	0.809
$PI\ (X1) \rightarrow C\ En\ (Y2)$	0.254	–	0.487
$PI\ (X1) \rightarrow CV\ (Y1) \rightarrow C\ En\ (Y2)$	–	0.131	0.487
$PI\ (X1) \rightarrow C\ Ex\ (X2) \rightarrow C\ En\ (Y2)$	–	0.064	0.487
$PI\ (X1) \rightarrow C\ Ex\ (X2) \rightarrow CV\ (Y1) \rightarrow C\ En\ (Y2)$	–	0.039	0.487

The relationship between the influence of the two variables, namely customer experience and customer value, are partial mediation, meaning the two variables affect the value, but not greater than the direct effect. This study illustrates the influence of product innovation on customer engagement through customer value and customer experience. In this study, the samples were Indonesian who use OVO as a digital payment service for less than one year. It is found that product innovation has an influence on customer engagement through customer experience and customer value. Based on this finding, the H5 which suggests that customer experience influences customer engagement was rejected. This was because the QR Code used as an indicator was just a means to ease payment when making transactions at merchants who are in cooperation with OVO mobile payment.

## 5 CONCLUSION

This study provides insights about more up to date features for OVO customers to pay attention to. When more attention given from the customers, a long-lasting relationship between customers and the firm can be established and they can benefit from it. The earned benefits can be distributed through mobile payment, which stimulates customer engagement. Future researchers should consider using another indicator for customer experience to see if there is an influence on customer engagement. Regardless, the result of this study encourages the firm to explain further about features they released for customers. This study was limited in the Republic of Indonesia, however this study can be expanded to other countries using digital mobile payment as a payment method.

## REFERENCES

- Brodie, R. J., Ilic, A., Juric, B., & Hollebeek, L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, 66(1), 105–114.
- Butz, H. E., Goodstein, L. D., & Edsel, F. (2001). Gaining the Strategic Advantage. 1197, 321–337.
- Danneels, E. (2002). THE DYNAMICS OF PRODUCT INNOVATION AND FIRM COMPETENCES, 1121(January 2000), 1095–1121.
- Dovalienė, A., Piligrimienė, Ž., & Masiulytė, A. (2016). Factors influencing customer engagement in mobile applications. *Engineering Economics*, 27(2), 205–212.
- Edvardsson, B. A. G. P. K., & Lars Witell. (2010). Handbook of Service Science.
- Freeman, C., & Soete, L. (1997). The Economics of Industrial Innovation | The MIT Press. Retrieved from <https://mitpress.mit.edu/books/economics-industrial-innovation>
- Gentile, C., Spiller, N., & Noci, G. (2007a). How to Sustain the Customer Experience: An Overview of Experience Components that Co-create Value With the Customer. *European Management Journal*, 25(5), 395–410. <https://doi.org/10.1016/j.emj.2007.08.005>
- Gentile, C., Spiller, N., & Noci, G. (2007b). How to Sustain the Customer Experience: An Overview of Experience Components that Co-create Value With the Customer. *European Management Journal*, 25(5), 395–410. <https://doi.org/10.1016/j.emj.2007.08.005>
- Higgins, E. T. (2006). Value from hedonic experience and engagement. *Psychological Review*, 113(3), 439–460.
- Kim, J., Kim, K. H., Garrett, T. C., & Jung, H. (2015). The contributions of firm innovativeness to customer value in purchasing behavior. *Journal of Product Innovation Management*, 32(2), 201–
- Kotler, P., & Keller, K. L. (2009). *Marketing Management. Organization* (Vol. 22).
- Kotler, P., & Keller, K. L. (2012). *Marketing Management*.
- Kumar, V., Aksoy, L., Donkers, B., Venkatesan, R., Wiesel, T., & Tillmanns, S. (2010). Undervalued or overvalued customers: Capturing total customer engagement value. *Journal of Service Research*, 13(3), 297–310.
- Kumar, V., & Pansari, A. (2016). Competitive advantage through engagement. *Journal of Marketing Research*. <https://doi.org/10.1509/jmr.15.0044>
- McCarthy, J., & Wright, P. (2004). *Technology as experience. Interactions* (Vol. 11).
- Mohd-ramly, S. (2017). Exploring the influence of store attributes on customer experience and customer engagement.
- Mollen, A., Wilson, H., Oxon, M., & DipcompSci, C. (2010). Engagement, Telepresence and Interactivity in Online Consumer Experience: Reconciling Scholastic and Managerial Perspectives. *Journal of Business Research, Special Issue on Internet Customer Behavior*, 63(910), 919–925.
- Moon, H., Miller, D. R., & Kim, S. H. (2013). Product design innovation and customer value: Cross-cultural research in the United States and Korea. *Journal of Product Innovation Management*, 30(1), 31–43.
- Nagasawa, S. (2008). Customer experience management Influencing on human Kansei to management. *Customer Experience Management*, 20(4), 312–323. <https://doi.org/10.1108/17542730810881302>
- Nasution, H. N., & A, F. T. M. (2008). Customer value in the hotel industry: What managers believe they deliver and what customer experience, 27, 204–213. <https://doi.org/10.1016/j.ijhm.2007.02.003>
- Piller, F., Ihl, C., Füller, J., Stotko, C., & Ag, C. E. O. H. (2004). Toolkits for Open Innovation - The Case of Mobile Phone Games, 00(C), 1–10.
- Rodríguez-Salvador, M., Paredes, F., & Yi, G. (2016). Towards future customer experience: Trends and innovation in retail. *Foresight and STI Governance*, 10(3), 18–28.
- Sawhney, M., Verona, G., & Prandelli, E. (2005, January). Collaborating to create: The internet as a platform for customer engagement in product innovation. *Journal of Interactive Marketing*. <https://doi.org/10.1002/dir.20046>
- Solomon, M. R., Marshall, G. W., & Stuart, E. W. (2011). *Marketing: real people, real choices*.
- van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer engagement behavior: Theoretical foundations and research directions. *Journal of Service Research*, 13(3), 253–266.
- Vivek, S. D., Beatty, S. E., & Morgan, R. M. (2012). Customer Engagement: Exploring Customer Relationships Beyond Purchase. *The Journal of Marketing Theory and Practice*, 20(2), 122–146.
- Woodruff, R. B. (1997). Customer value: The next source for competitive advantage. *Journal of the Academy of Marketing Science*, 25, 139–153.

# Relations between trade volume and frequency of domestic investors with stock volatility: Analysis before and during the COVID-19 pandemic

S. Satriantoro & I.A. Ekaputra

*Department of Management, Faculty of Economics and Business, Universitas Indonesia*

**ABSTRACT:** This study aimed to examine the effect of the trade volume and frequency conducted by domestic individual retailers and domestic institutional investors on volatility before and after the announcement of COVID-19 as a pandemic by the WHO. The data was obtained from stock prices, trade volume and frequency of buying and selling positions for investors from September 2, 2019, to September 29, 2020 from IDX. The results showed that the buying frequency of individual investors' significantly affected volatility before the announcement. However, institutional investors' buying frequency had a more significant effect on volatility after the announcement.

## 1 INTRODUCTION

From the end of 2019, nations worldwide, including Indonesia, were shocked by the emergence of a new virus called COVID-19. It was followed by the sudden worldwide decline in the stock market index, including the IDX. Andersen et al. (2005) defined volatility as a price fluctuation over a certain period and variability of the random time series data component. Clark (1973) suggested the mixture of distribution hypothesis theory to describe the relationship between the trade volume and price volatility. Changes in price and volume are related to the incoming information, causing a relationship between volume and price movements as the mixing variable. Shiller (1990) explained uncontrolled investor actions or behavior that causes many changes in the market are motivated by psychological factors such as greed, fear, and madness. This study aimed to examine the effect of the trade volume and frequency on volatility for the 2019-2020 period. This paper attempts to enrich existing literature from the perspective of buying and selling positions conducted by each type of investor.

## 2 LITERATURE REVIEW

Fama (1970) introduced the concept that combines information and stock prices known as the Efficient Market Hypothesis (EMH) theory. Shefrin (2005) explained how human psychology affects financial behavior through behavioral finance theory. Nevertheless, investors are not free from psychological biases that cause inefficient markets. The difference between EMH theory and behavioral finance resulted in combining the two concepts. Therefore, Lo (2004) introduced the Adaptive Market Hypothesis (AMH) concept to reconcile EMH and behavioral finance.

Jones et al. (1994) and Chan and Fong (2006) found that trade frequency is the most appropriate measure of the information flow received by investors, while the volume has no significant effect on the stock price volatility. In Indonesia, Sutrisno (2017) found evidence of a positive association between volatility and trading frequency, as well as between volatility and trading volume. This study showed that trading frequency significantly affects stock volatility.

Indonesia Central Depository (ICSD) divides investors into Individuals and Institutions comprising Securities Companies, Mutual Funds, Pension Funds, Corporations, Banks, Insurance, Foundations, and Others. In this study, the nine types of investors are grouped into Individual Investors (ID), Financial Institution Investors (FIN), and Non-Financial Institution Investors (Non-FIN). Bian et al. (2020) investigated the participation role of investors in the relationship between volatility and volume. The study found that volatility has a positive relationship with retail traders and institutional investors. This study proved that an increase in the investors trading on a stock increases the stock's volatility.

### 3 RESEARCH METHODOLOGY

This study used a non-probability sampling technique to collect several company stock data representing JCI through the LQ45 index for the 2019-2020 period. The independent variables were the Average Trade Volume and Frequency of each investor type in the buying and selling positions, and the dependent variable was Volatility.

This study modified the model developed by Jones et al. (1994), Chan and Fong (2006), and Bian et al. (2020), which examined the effect of average trade volume, trade frequency, and the type of investors as independent variables. Volatility as the dependent variable is affected by several independent variables.

$$y_t = c_{i,t} + \beta 1_{i,t}x1_{i,t} + \beta 2_{i,t}x2_{i,t} + \beta 3_{i,t}x3_{i,t} + \beta 4_{i,t}x4_{i,t} + \beta 5_{i,t}x5_{i,t} + \beta 6_{i,t}x6_{i,t} + \beta 7_{i,t}x7_{i,t} + \beta 8_{i,t}x8_{i,t} + \beta 9_{i,t}x9_{i,t} + \beta 10_{i,t}x10_{i,t} + \beta 11_{i,t}x11_{i,t} + \beta 12_{i,t}x12_{i,t} + e_{i,t} \quad (1)$$

where  $y$  is volatility,  $c$  is a constant,  $\beta$  is the coefficients for each variable,  $x1$  is Average Buying Volume of Individual Investors,  $x2$  is Average Buying Volume of Financial Institution Investors,  $x3$  is Average Buying Volume of Non-Financial Institution Investors,  $x4$  is Average Selling Volume of Individual Investors,  $x5$  is Average Selling Volume of Financial Institution Investors,  $x6$  is Average Selling Volume of Non-Financial Institution Investors,  $x7$  is Buying Frequency of Individual Investors,  $x8$  is Buying Frequency of Financial Institution Investors,  $x9$  is Buying Frequency of Non-Financial Institution Investor,  $x10$  is Selling Frequency of Individual Investors,  $x11$  is Selling Frequency of Financial Institution Investors,  $x12$  is Selling Frequency of Non-Financial Institution Investors, and  $e$  is Standard error.

The non-probability sampling technique was used to collect data on the movement of High Low Open Close prices of LQ45 stocks from September 2019 to September 2020. Only stocks that are always included in the LQ45 index can be included in the sample and excluded stock-split. The result of these selection criteria is that only 38 stocks can be included in the research sample. The LQ45 stocks are traded by nine types of investors according to the classification from ICSD. Transaction activities for each type of investor comprise buying and selling frequency and buying and selling volume.

The Fixed Effect Model was used to estimate the regression model with panel data of this study. This study used Parkinson's (1980) and Garman Klas's (1980) method to calculate volatility.

$$\sigma_p^2 = \frac{1}{4 \ln 2} (\ln H_t - \ln L_t)^2 \quad (2)$$

where  $\sigma^2$  is Standard Deviation (Parkinson's Volatility),  $H_t$  is the highest stock price in period  $t$ , and  $L_t$  is the lowest price in period  $t$ . Meanwhile, Garman's volatility method is as follows:

$$\sigma_{GK}^2 = 0.5[(\ln H_t - \ln L_t)^2] - [2 \ln 2 - 1][(\ln C_t - \ln O_t)^2] \quad (3)$$

where  $\sigma^2$  = Standard Deviation (Garman Klas Volatility),  $H_t$  is Highest price period  $t$ ,  $L_t$  is Lowest price period  $t$ ,  $O_t$  is Opening price period  $t$ , and  $C_t$  is Closing price period  $t$ .

The regression coefficient of each stock is used to find the t-statistical value of each variable using the Fama–MacBeth Standard Error. In this case, the T-statistic is the division of the Standard Error with the coefficient value.

$$SE_{Fama-MacBeth} = \frac{Std.Dev(\beta)}{\sqrt{T}} \left( \frac{1 + \rho(1)}{1 - \rho(1)} \right) \quad (4)$$

where SE Fama–MacBeth is standard error Fama–MacBeth, Std.Dev( $\beta$ ) is the standard deviation of relevant coefficients across time,  $\rho(1)$  is the first-order autocorrelation of the coefficients, and T is the number of samples.

#### 4 RESULT

The hypothesis testing was performed using a t-test to determine the significance of the regression coefficient obtained. The regression results of each stock using the Fama–MacBeth method obtained the average coefficient and t-statistical value for each variable as follows:

Table 1. Coefficient values and T-statistics for each variable using Fama–MacBeth

Variable		AV Buy Investor ID	AV Buy Investor FIN	AV Buy Investor Non-FIN	AV Sell Investor ID	AV Sell Investor FIN	AV Sell Investor Non-FIN
Coef (t-stat)		$\beta$ (t)	$\beta$ (t)	$\beta$ (t)	$\beta$ (t)	$\beta$ (t)	$\beta$ (t)
Parkinson	Before	0,054 (0,315)	−0,017 (−0,405)	0,056 (1,311)	−0,169 (−0,925)	−0,049 (−0,795)	−0,033 (−0,23)
	After	−0,103 (−0,839)	0,018 (1,163)	−0,007 (−0,501)	−0,017 (−0,827)	0,0002 (0,254)	0,004 (0,981)
Garman	Before	−0,043 (−0,241)	−0,022 (−0,298)	0,106 (1,577)	−0,216 (−0,725)	−0,118 (−1,327)	0,099 (0,609)
	After	−0,095 (−0,765)	0,017 (1,073)	−0,013 (−0,917)	0,004 (0,137)	−0,002 (−0,323)	0,001 (0,267)
Variable		Freq Buy Investor ID	Freq Buy Investor FIN	Freq Buy Investor Non-FIN	Freq Sell Investor ID	Freq Sell Investor FIN	Freq Sell Investor Non-FIN
Coef (t-stat)		$\beta$ (t)	$\beta$ (t)	$\beta$ (t)	$\beta$ (t)	$\beta$ (t)	$\beta$ (t)
Parkinson		3,208 <b>(4,705)*</b>	0,04 (0,178)	0,582 (0,649)	1,900 <b>(2,205)*</b>	0,916 (0,752)	0,432 (1,094)
		0,035 (0,630)*	0,604 <b>(3,692)*</b>	0,471 <b>(4,088)*</b>	0,258 <b>(3,569)*</b>	0,133 <b>(1,983)*</b>	0,245 (1,18)
Garman		3,983 <b>(3,728)*</b>	−0,394 (−1,693)	1,006 (1,207)	2,073 <b>(3,108)</b>	−0,288 (−0,317)	−0,215 (−0,437)
		0,086 (1,185)	0,726 <b>(2,976)*</b>	0,419 <b>(3,330)*</b>	0,156 <b>(2,561)*</b>	0,409 <b>(1,973)*</b>	0,081 (0,532)

\* significantly affected volatility

The test showed that the variable of buying and selling volumes of each sub-category of investors did not significantly affect stock volatility on the IDX during the study period. In contrast, the frequency variable significantly affects stock volatility.

## 5 DISCUSSION

The buying frequency variable and its effect on volatility showed a shift from individual to institutional investors. Before the announcement of the pandemic, the buying frequency of individual investors significantly affected volatility, but there was no effect after the announcement. After the announcement, the stock volatility on the IDX was more affected by the buying frequency of non-financial institutional investors followed by financial institutions.

This study found that individual investors from the sell-side significantly affected volatility during the COVID-19 pandemic. With the bearish market conditions during the pandemic, individual investors are not rational in line with the assumption of the EMH theory. Conversely, they are more adaptive from information and psychology in making selling transactions. It indicates that panic selling from individual investors occurred after the announcement of the COVID-19 pandemic. This is in line with the behavioral finance theory and the adaptive market hypothesis, where individual investors act irrationally based on information during a market crash. However, they act psychologically to secure their assets by releasing or selling shares to be stored as safer assets, consistent with previous studies such as (Lo 2004; Shiller 1990).

## 6 CONCLUSION

Consistent with previous studies such as Chan and Fong (2006), the buying and selling volumes of each sub-category of investors did not significantly affect the IDX stock volatility during the study period. In contrast, the frequency variable had a significant effect on stock volatility. There is a difference in the effect of buying frequency on individual and institutional investors. Before the announcement of the pandemic, the frequency of individual buying significantly affected the volatility of stock, but there was no effect after the announcement. After the announcement, stock volatility on the IDX was more affected by the frequency of buying by non-financial institutional investors followed by financial institution investors.

## REFERENCES

- Andersen, T. G., Bollerslev, T., Christoffersen, P. F., & Diebold, F. X. (2005). Volatility forecasting (2005/08).  
Bian, J., Kalok Chan., & Wai-Ming Fong. (2020). Investor participation and the volatility-volume relation. *Emerging Markets Review*, 45 (2020).  
Chan, C. C., & Fong, W. M. (2006). Realized volatility and transactions. *Journal of Banking and Finance*, 30(7), 2063–2085.  
Clark, P. (1973). A subordinated stochastic process model with finite variance for speculative prices, *Econometrica*, 41, 135–155.  
Fama, Eugene F. (1970). Efficient Market: A Review of Theory and Empirical Work. *Journal of Finance*, 25(2), 383–417.  
Garman, M. B., & Klass, M. J. (1980). On the Estimation of security price volatilities from historical data. *The Journal of Business*, 53(1), 67–78.  
Jones, C. M., Kaul, G., & Lipson, M. L. (1994). Transactions, volume, and volatility. *The Review of Financial Studies*, 7(4), 631–651.  
Lo, A.W. (2004). The Adaptive Market Hypothesis: Market Efficiency from an Evolutionary Perspective. *The Journal of Portfolio Management*, Vol. 30 No. 5. New York: Institutional Investor.  
Parkinson, M. (1980). The Extreme value method for estimating the variance of the rate of return. *The Journal of Business*, 53(1), 61–65.  
Shiller, R. J. (1990). Market volatility and investor behavior. *The American Economic Review*, 80(2), 58–62.  
Shefrin, Hersh (2005). *A Behavioral Approach to Asset Pricing*; Elsevier Academic Press.  
Sutrisno, B. (2017). Hubungan volatilitas dan volume perdagangan di Bursa Efek Indonesia. *Esensi: Jurnal Bisnis Dan Manajemen*, 7(1), 15–26.

# Intention to use E-wallet during the COVID-19 pandemic in Indonesia

S. Rahayu & S. Hariadi

*Management Department, University of Surabaya, Indonesia*

**ABSTRACT:** The physical distancing policy initiated by the World Health Organization has prompted the Indonesian government to promote contactless payments throughout the pandemic. COVID-19 can be transmitted through the physical movement of money, and thus consumers are encouraged to make non-cash payment transactions via e-wallet. This causal study using the Structural Equation Model aims to determine the effect of perceived risk, government support, and perceived usefulness on the intention to use e-wallet during a pandemic. Research on 256 respondents using e-wallet shows that six hypotheses are supported.

## 1 INTRODUCTION

Several recent studies have revealed that the COVID-19 pandemic has significantly exaggerated social and economic aspects, finance, and supply chains. The pandemic also has distressed business in general (Swift 2009). However, research on the impact of the pandemic on the way consumers make payments is still scarce. Physical money may be a medium for the spread of the virus, so WHO recommends the use of digital money (Aji et al. 2020).

Bank Indonesia stated that during the period of January–July 2020, the value of monthly electronic money transactions reached IDR 16.7 trillion. This figure increased by 59% compared to the average transaction in the same period of the previous year, which was IDR 9.9 trillion. The highest transaction value, amounting to IDR 17.5 trillion, was recorded in April when large-scale social restrictions (PSBB) were implemented in Jakarta (Annur 2020).

E-wallet plays an important role in dealing with the pandemic. Some restaurants accept cashless payments via e-wallet or bank transfer. The government supports the role of e-wallet in handling the pandemic by setting uniform transaction rates in Indonesia (Setyowati 2021).

Digital services, from fintech, electronic money, to digital wallets, are part of people's lifestyles. This is in line with online shopping that is increasingly popular and, offers easy and safer payment transactions during the pandemic (<https://rm.id>).

In 2019, electronic money transactions reached US\$ 10 billion, and e-wallets from fintech accounted for around 72% of electronic money transactions. Fintech has surpassed banks as the main payment provider in Indonesia (Burhan 2021).

Aji et al. (2020) examined the intention to use e-wallet during a pandemic with respondents from two countries, i.e., Indonesia and Malaysia. The results show that the effects of government support on the intention to use e-wallets differ between countries. In addition, perceived usefulness is fully mediated by the relationship between government support and intention to use e-wallet, and partially mediated by the effect of perceived risk on intention to use e-wallet.

Kustono et al. (2020) observed the factors that influence the behavioral intentions of 180 respondents in using electronic wallets in Jember Regency, Indonesia. Six hypotheses were tested and four hypotheses, namely, application quality, perceived usefulness, ease of use, and attitudes towards use, were accepted.

The purpose of this study was to investigate the intention to use e-wallets throughout a pandemic in Indonesia. In contrast to Aji et al. (2020), this research emphasizes the use of the top five e-wallets in Indonesia, i.e., ShopeePay, Dana, OVO, Gopay and LinkAja.



## 2 LITERATURE REVIEW AND HYPOTHESES

The impact of the COVID-19 pandemic on business and consumer behavior was explained by Sheth (2020). The number of people who chose physical stores or malls as their shopping locations decreased from 73% before the pandemic to 24% during the pandemic (Ekarina 2020).

Intention to use is a person's attitude in using certain products in the future (Rantung et al. 2020). E-wallet is an effective method for various types of payments during physical restrictions or self-quarantine periods. The higher the risk of COVID-19 transmission during transactions with cash is, the stronger the intention to use e-wallet for payment transactions becomes.

The intention to use e-wallet can be influenced by several factors. The first factor is perceived risk, which is defined as the perception of uncertainty in the buying situation and is the main determinant of a person's behavior to adopt technology (Cox & Rich 1964; Im et al. 2008). The risk perceived by consumers is an obstacle for consumers in considering purchasing decisions (Forsythe & Shi 2003; Kim et al. 2008; Phonthanukitithaworn & Sellitto 2016). The second factor is government, which is a person, body, or apparatus that gives orders (Pradjaja 2003). The government as a regulator has an obligation to prevent the potential negative effects on e-wallet users (Aji et al. 2020; Brown 2020; Huang 2020; Sheikh et al. 2020). The third factor is, perceived usefulness, which is a person's level of trust in a particular subject that provides benefits for people who use it (Adams et al. 1992; Davis 1989; Thompson et al. 1991).

The government continues to strive to reduce the spread of COVID-19 and overcome the impact of the pandemic on the safety and economic resilience of the community (www.kominfo.go.id). The government should encourage people to get involved in e-wallet payments (Kaur 2020).

*H1: Perceived risk positively affects government support for e-wallets*

Consumers are used to using cash, but various electronic media payments can be adopted as a new alternative when consumers feel the benefits. Perceived risk has also been added to the Technology Acceptance Model (TAM) in several studies, and has a significant effect on perceived usefulness (Aji et al. 2020).

*H2: Perceived risk positively affects perceived usefulness of e-wallets*

People are currently uncomfortable with and worried about paying using cash, for fear that cash contains the virus. The government guarantees e-wallet server facilities, and encourages people to innovate in payments, and there is no need to worry because the government oversees these transactions (Haderi 2014; Sugiyarti 2020).

*H3: Government support for e-wallets positively affects the perceived usefulness of e-wallets*

In this study, the higher the COVID-19 risk in cash perceived by the individual is, the stronger the intention to use e-wallet for payment transactions becomes. It is important to consider that an individual's decision to adopt an application system is determined by its perceived usefulness (Aji et al. 2020).

*H4: Perceived risk positively affects intention to use e-wallets*

When consumers feel government support, the intention to use e-wallet will be stronger. Perceived usefulness is also considered a fundamental factor for using a technology system or application. The effect of government support on intentions to use e-wallet can be better explained by perceived usefulness (Aji et al. 2020).

*H5: Government support positively affects intention to use e-wallets*

Several previous studies have found that perceived use is a strong predictor of intention to use e-money (Aji & Dharmesta 2019). There is research that supports a positive relationship between perceived usefulness and the actual use of systems related to certain technologies (Park et al. 2014; Perdigoto & Picoto 2014; Purwitasari & Pratomo 2015).

*H6: Perceived usefulness positively affects intention to use e-wallets*

## 3 RESEARCH METHOD

This causal research examined the effect of the independent variable on the dependent variable. The data used in this study are primary data obtained by distributing questionnaires via google form.

The respondents of this research were the users of the five largest e-wallet platforms in Indonesia, i.e., ShopeePay, Dana, OVO, Gopay and LinkAja.

The data obtained were processed using SPSS 25.0. In order to see the contribution of each indicator in the model (Figure 1), measurements were made using Confirmatory Factor Analysis (Hair et al. 2010:19). The suitability of the measurement model with empirical data was measured by the goodness of fit index (Wijanto 2008). Structural Equation Model analysis was performed with AMOS 22.0. Finally, a hypothesis test was conducted.

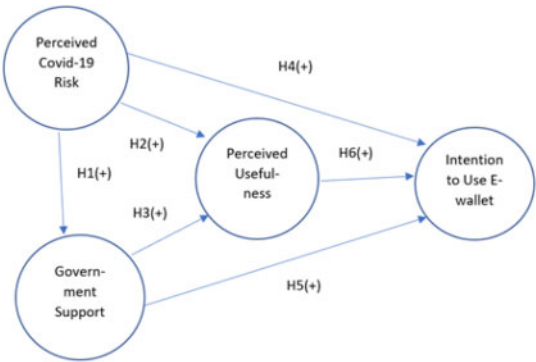


Figure 1. Research model.

4 RESULT, DISCUSSION AND CONCLUSION

The results of the test showed that all indicators, namely, perceived risk, government support, perceived usefulness, and intention to use variables were declared valid and reliable. The number of respondents, was 256, consisting of 47.3% male respondents and 52.7% female respondents, and were dominated by respondents aged 17–25 years at 88.3%. The majority of respondents’ educational attainment is high school graduate (61.7%).

The measurement model found that the CIMN/DF value, was 2.243 or marginal fit. RMSEA value was 0.07 or good fit. Tucker Lewis Index was 0.945 > 0.95 or marginal fit. The CFI value was 0.955 or good fit. The Average Variance Extracted value for each indicator was above 0.5 and the Construct Reliability value was above 0.6. Thus, all variables in this indicator were valid for further testing.

SEM structural model calculation results produced the CMIN/DF value, which was 2,243 or marginal fit. The RMSEA good fit value was 0.070. Goodness of fit index was 0.907 or marginal fit. The Tucker Lewis Index was 0.945 or good fit. The CFI value was 0.955 or good fit.

Table 1 shows the results of hypothesis testing, which are explained as follows: (1) perceived risk affects government support for e-wallet. The path coefficient was positive (0.389) with a CR value

Table 1. Summary of hypothesis testing results.

Hypothesis	Relationships between constructs	Estimate	CR	P value	Description
H1	PR → GS	0.389	6366	***	Supported
H2	PR → PU	0.232	3997	0.004	Supported
H3	GS → PU	0.647	8168	0.956	Supported
H4	PR → INT	0.152	3611	0.003	Supported
H5	GS → INT	0.237	3686	0.003	Supported
H6	PU → INT	0.448	6453	***	Supported

of 6366, which means that the first hypothesis is supported. (2) Perceived risk affects the perceived usefulness of e-wallet. The path coefficient was positive (0.232) with a CR value of 3.997, meaning that the second hypothesis is supported. (3) Government support affects the perceived usefulness of e-wallet. The path coefficient was positive (0.647) with a CR value of 8.168, meaning that the third hypothesis is supported. (4) Perceived risk has an effect on intention to use. The path coefficient was positive (0.152) with a CR value of 3.611, meaning that the fourth hypothesis is supported. (5) Government support has an effect on intention to use. The path coefficient was positive (0.237) with a CR value of 3.686, meaning that the fifth hypothesis is supported. (6) Perceived usefulness affects the intention to use e-wallet. The path coefficient was positive (0.448) with a CR value of 6.453, meaning that the sixth hypothesis is supported.

The results of this study show that five hypotheses fit and one hypothesis (hypothesis 5) is not in accordance with the results of the study Aji et al. (2020). The results of this study could be different when carried out on different respondents. The respondents in this study are the five largest e-wallet users in Indonesia.

## REFERENCES

- Adams, D., Nelson, R., Todd, PA, & Nelson, RR. 1992. Perceived Usefulness, Ease of Use, and Usage of Information Technology. *MIS Quarterly* 16(2), 227–247.
- Aji, HM, Berakon, I & Husin MM. 2020. COVID-19 and e-wallet usage intention: A multigroup analysis between Indonesia and Malaysia. *Cogent Business & Management*, 7(1).
- Aji, HM, & Dharmmesta, BS. 2019. Subjective norm vs dogmatism: Christian consumer attitude towards Islamic TV advertising. *Journal of Islamic Marketing*, 10(3), 961–980.
- Annur, C M. 2020. What is the Value of Electronic Money Transactions in Indonesia during the Pandemic? Electronic Money Transaction Value (August 2019–July 2020) downloaded from <https://databoks.katadata.co.id/> on December 20, 2020.
- Burhan, FA. 2021. Fintech Overtakes Banks, Becomes the Main Payment Option in Indonesia. Downloaded from <https://katadata.co.id/desysetyowati/> on January 29, 2021. 19:12.
- Cox, DF & Rich, SU. 1964. Perceived Risk and Consumer Decision-Making—The Case of Telephone Shopping. *Journal of Marketing research*. DOI: 10.1177/002224376400100405
- Davis, FD. 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *IT Usefulness and Ease of Us*. 320.
- Forsythe, SM, & Shi, B. 2003. Consumer patronage and risk perceptions in internet shopping. *Journal of Business Research*, 56(11), 867–875. DOI: 10.1016/S0148-2963(01)00273-9.
- Haderi, SM. 2014. The influences of government support in accepting the information technology in public organization culture. *Int Journal of Business & Social Science*, 5(5): 118–124.
- Kaur, H. 2020. Forget ‘social distancing.’ Downloaded from <https://edition.cnn.com/2020/04/15/> on December 11, 2020.
- Kim, DJ, Ferrin, DL, & Rao, HR. 2008. A trust-based consumer decision-making model in electronic commerce. *Decision Support Systems*, 44(2): 544–564.
- Kustono, AS, Nanggala AYA, Mas’ud, I. 2020. Determinants of the Use of E-Wallet for Transaction Payment among College Students. *Jou of Ec, Bus, & Acc Ventures*, 23(1): 85–95.
- Phonthanukitithaworn, C & Sellitto, C. 2016. An investigation of mobile payment (m-payment) services in Thailand. *Asia-Pacific Journal of Business Administration*, 8(1): 37–54.
- Rantung, HM, Willem, JFA, & Gunawan, M. 2020. The Determinants Influencing Behavioral Intention to Use E-Wallet during Covid-19 Pandemic in Manado. *EMBA Journal*, 8(4): 352.
- Setyowati, D. 2021. Number of Digital Wallet Consumers Soared. Downloaded from <https://rm.id/baca-berita/nasional/80885/> on 25 June 2021 05:20 WIB.
- Sheth, J. 2020. Impact of Covid-19 on consumer behavior: Will the old habits return or die? *Journal of Business Research*, 117: 280–283. DOI:10.1016/j.jbusres.2020.05.059.
- Sheikh, K, Sriram, V, Soucat, A, & Bigdeli, M. 2020. Governance roles and capacities of ministries of health. *Int Journal of Health Policy Management*. DOI: 10.34172/ijhpm.2020.39
- Sugiyarti, L. 2020. During the COVID-19 pandemic, e-wallet was a form of cashless increase. Downloaded from <http://lppm.unpam.ac.id/2020/03/11/> on January 13, 2021.
- [www.kominfo.go.id/content/detail/35503/kesafean-dan-ketahanan-Ekonomi-Masya-rakat-prioritas-utama-government-dalam-tangani-pandemi-covid-19/0/news](http://www.kominfo.go.id/content/detail/35503/kesafean-dan-ketahanan-Ekonomi-Masya-rakat-prioritas-utama-government-dalam-tangani-pandemi-covid-19/0/news).

## Internal branding process on building brand identity at ABD University

S.M. Ruza & K. Adiwijaya

*Magister of Management Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** Internal branding plays an essential role in implementing brand strategies that strengthen a university's brand identity. Internal branding can help private universities with limited resources build effective branding strategies in a competitive environment. This study aims to explore the role of internal branding and the interaction process between its internal stakeholders in building brand identity at private universities. A phenomenological approach is then applied by incorporating in-depth interviews using video conferences with employees who often interact with students. This study was conducted at ABD University, one of the private universities in Indonesia. Based on the results obtained, managers play a crucial role in imparting this understanding to employees, hence their message is accurately conveyed to students. Also, an objective evaluation process of the brand needs is carried out to ensure the brand image accurately depicts the brand identity.

### 1 INTRODUCTION

University is a human resource-based organization where students and employees regularly communicate with each other throughout the year. Its employees are central factors in conveying brand values to students because of the long-term partnership between academic and non-academic employees. Internal branding can help universities with complex characteristics implement a brand development strategy (Whisman 2009). Therefore, the inside-out approach of an organization is an effective way of developing a university's brand strategy that involves academic and non-academic staff, alumni, students, and others in the process of brand building.

A solid internal branding strategy increases employee adoption of the brand, which signifies the symbolic relationship between internal branding and brand identity. Moreover, an organization's successful internal branding strategy paves the way for internalizing its brand identity (Iglesias et al. 2020). Internal branding helps employees understand the brand value and promote the quality and ability to communicate the brand message (Nirmali 2017). Consequently, internal branding is considered a technique that guarantees employees' awareness of the brand's identity. A clear understanding of the brand meaning is needed in building a brand identity (Dean 2016). Therefore, social interactions and employee experiences are one of the internal branding processes implemented to better understand the brand. Furthermore, managers or founders of universities have significant influence in making sense of the meaning of a brand; however, other stakeholders, such as employees, may have varying interpretations of that meaning (Iglesias 2020).

Although brand identity plays a vital role in university branding in Indonesia, nevertheless, research on this topic focuses on how external parties interpret institutional brand messages. This study attempts to fill this gap by examining how the academic and non-academic staff of a university embrace and appreciate brand messages, as well as the process taken by internal stakeholders, who work together to form its brand identity. The role of internal branding in building brand identity and analysis of the interaction between internal stakeholders in this building process that contributes to the theoretical development of this emerging perspective is examined in this study.

## 2 LITERATURE REVIEW

### 2.1 *Internal branding*

Internal branding is a branch of internal marketing that focuses on developing, strengthening, and managing a brand (Nirmali 2017). According to Asha and Jyothi (2016), the internal branding of an organization plays a crucial role in ensuring that employees convey brand messages to external parties such as consumers and other stakeholders. Also, internal branding facilitates strategic brand management and orientation, which positively impacts brand performance. Apart from management's strategic plan in anchoring the brand's vision, the employees also play a significant role in the process.

### 2.2 *Brand identity*

The business owner forms the brand identity, which reflects the owner's values and strategic decisions. When developing a brand identity, employees, who are one of the stakeholders, will go through a process of understanding and implementing the brand through the brand's definition (Dean 2016). Furthermore, the brand identity describes the internal perspective of the brand and its components which are vision, culture, positioning, personality, relationship, and presentation (Srivastava 2011). The brand identity describes the internal perspective of the brand, while the brand image conveys the idea of the brand to external parties (Dean 2016). Hence, a strong brand identity invariably increases student and alumni satisfaction as consumers (Dennis 2016).

### 2.3 *Relations between internal branding and brand identity*

To better understand the importance of internal branding in integrating ideologies and branding knowledge, universities, as one of the human resource-based organizations, use internal branding as an effective marketing strategy that conveys appropriate brand messages to external parties (Clark 2019; Saleem et al. 2016). Furthermore, internal branding is an attempt at internalizing the branding of a product within the university, and the result is the brand identity. Internal branding strategies focus on developing a brand understanding through various training, seminars, and communication on brand management to ensure that the brand's strategic direction and goals are achieved so that the brand identity is built through effective branding activities, especially for employees. In other words, internal branding serves as a driving force in ensuring that employees correctly understand the brand identity.

## 3 METHODS

This study will use a qualitative method alongside a phenomenological approach to investigate employees' subjective experience and individual perceptions in understanding brand identity through the internal branding process. The data was collected through semi-structured interviews conducted among university employees. Furthermore, the purposive sampling technique was used to select the respondents who understood the phenomena. The selection criteria used are employees who frequently interact with customers, selected come from different departments involving marketing, senior management, academics and admissions, positions, and tenure with a minimum of one (1) year work experience.

The interview questions were adapted from previous research (Balmer & Wang 2016; Dean et al. 2016; Iglesias 2020; Nirmali 2017; Whisman 2009) and reformed into a CSP (Case Study Protocol) as a reliability check; which served as a foundation for the process and general guidelines to be followed while using this study instrument. Two interview questions were used to determine whether the senior management's brand strategy and physical implementation were aligned. The first form of the question is for senior management, while the second is tailored for other subjects.

The fieldwork of this study is comprised of several stages of inquiry, as detailed below:

Stage 1: This stage involves the identification of a private university in Indonesia where this study would be carried out. ABD University was selected as a study location because of its unique value anchored within its vision and mission and the current internal branding being developed.

Stage 2: A pilot study was first conducted to ensure that the respondents understood the tools and that the validity of the content was fulfilled. Due to several impediments brought by the COVID-19 pandemic, only four interviews based on each selection criterion were conducted online via Zoom in Bahasa.

Stage 3: After the result of interviews from the pilot study was analyzed, some questions were modified based on responses and recommendations of the participants. Only a total of 14 semi-structured interviews was conducted before the process was halted; this was because of data saturation. There were 7 senior managers and 7 employees interviewed.

Stage 4: The data analysis process began with data assembly, data reduction, data display, and data verification. Each interview was recorded, and a 96-page interview transcript was produced in the data assembly process. The next procedure, which is data reduction, was conducted with three coding steps: Open coding, axial coding, and selective coding. Finally, all the generated data in this study was verified and examined using content analysis and pattern matching methods.

#### 4 RESULT

This study extends the theory of branding identity formation in ABD university by deepening the implementation of the internal branding process and identifying the role of each stakeholder in carrying out the internal branding process at the university.

As seen from figure 1, six (6) components support each other in building brand identity in ABD university. This framework describes the internal branding process spanning from creating brand value to evaluating the current internal branding process. The framework also describes how all stakeholders from the managerial level to the lower cadre employees contribute to building the brand identity. In the early stages of creating a brand identity, the university will design an internal branding process based on the brand's strategic orientation and goals, which are influenced by the founder's identity. The goal here is to make employees incorporate these values into their daily activities. Furthermore, ABD University has developed internal branding strategies such as seminars, training, building a supportive environment inside the campus and others, to convey brand ideologies, hence their values are understood and implemented by employees.

Furthermore, Internal branding management cannot function effectively without good leadership. This study found that learning through interaction amongst employees only occurred when the internal branding process led by the manager was in full effect. Subsequently, employees will share and behave consistently with the brand when they understand the brand conveyed through an effective internal branding.

A collaboration between internal and external stakeholders also plays an essential role. External stakeholders serve as a benchmark, allowing managers and staff to identify the gap between expectations and reality after implementing internal branding. Through engagements, the university understands the extent to which its brand value is acknowledged by external parties and the parties that could help improve its quality. Another essential thing that supports the brand identity-building process is evaluation. This evaluation process helps by providing feedback on the ongoing internal branding process, which will further increase the effectiveness of its implementation. ABD University does not have any written guidelines or standardization regarding the implementation of brand value; this created confusion among employees and caused brand value to become biased. However, this study also found that internal branding is still considered abstract and biased in the university context. The standardization processes and guidelines regarding the implementation of internal branding have not been adequately carried out, hence its performance cannot be accurately measured.

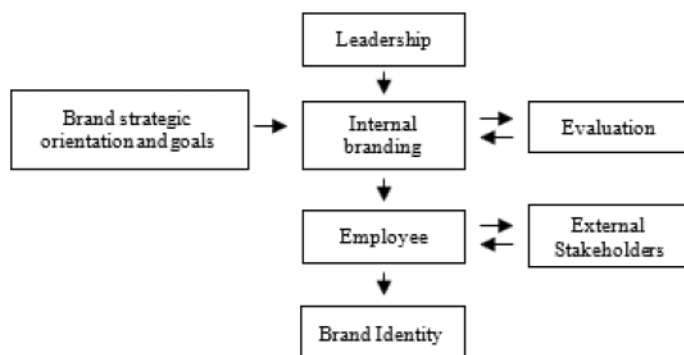


Figure 1. Internal branding implementation framework at ABD university.

## 5 CONCLUSION

This study has demonstrated that internal branding plays a crucial role in building brand identity. This study goes on to explain how the manager-agreed-upon brand value is conveyed through various approaches, with the goal of transforming employees into agents who convey brand messages to third parties. Furthermore, the process of objectively evaluating and standardizing the internal brand is necessary for realizing a clearer and more measurable internal brand.

## 6 LIMITATIONS AND FUTURE RESEARCH RECOMMENDATIONS

The fact that the study is based on one case university in one country may be viewed as a limitation. The benefit of a single-case design is that it allows for a thorough and intensive evaluation, so it has potential applicability to other private universities where similar foundations of brand management and related challenges can be found. Additional research on several universities can be conducted to obtain comparisons between one university and another. Additionally, this study only explores employees who interact with students on a regular basis. Further research on internal branding can be conducted by adding several participants who can participate in interviews, allowing for broader research results. Furthermore, this study does not explore the role of external stakeholders, especially students in the application of internal branding. Further research can involve students to develop theories regarding the role of external stakeholders in internal branding and the success of internal branding strategies.

## REFERENCES

- Asha, C. & Jyothi, P. 2013. Internal branding: a determining element of organizational citizenship behaviour. *Journal of Contemporary Management Research*, 7(1).
- Balmer, J & Wang, W. 2016. The corporate brand and strategic direction: senior business school managers' cognitions of corporate brand building and management. *Journal of Brand Management*, 23(1), 8–21.
- Clark, P., Chapleo C., & Suomi, K. 2019. Branding higher education: an exploration of the role of internal branding on middle management in a university rebrand. *Tertiary Education and Management*, 26, 131–149.
- Dean, D., et al. 2016. Internal brand co-creation: The experiential brand meaning cycle in higher education. *Journal of Business Research*, 69(8), 3041–3048.
- Iglesias, O., Landgraf, P., Ind, N., et al. 2020. Corporate brand identity co-creation in business-to-business contexts. *Industrial Marketing Management*, 85, 32–43.
- Nirmali, A., et al. 2017. Internal branding-a conceptual review of related concepts. *International Journal of Scientific and Research Publications*, 7(8), 116–125.
- Whisman, R. 2009. Internal branding: a university's most valuable intangible asset. *Journal of Product & Brand management*, 12(5).

## Online Islamic peer-to-peer lending practices in Indonesia (case study of PT Ammana)

S. Hariadi & A. Nurhajayanti

*Economics Department, University of Surabaya, Indonesia*

**ABSTRACT:** Online peer-to-peer (P2P) lending with sharia principles was approved by the fatwa of the Indonesian Ulema Council in 2018. However, the implementation of the profit-sharing principle still leaves misgivings for consumers. This study aims to analyze the practice of *mudharabah* contracts in P2P lending at PT Ammana Fintech Indonesia. Triangulation qualitative research was conducted by interviewing PT Ammana, partners, and several MSMEs that had been financed. The results of the analysis of numerous informants and the analysis of documents show that overall, the practices carried out by PT Ammana are not all in compliance with sharia principles.

### 1 INTRODUCTION

Digitalization has penetrated various sectors, including the financial sector (Cai et al. 2016). Many startup business models have been established, one of which is financial technology (fintech). Currently, there are many fintech companies, both legal companies and illegal companies. Indonesian people are very interested in the emergence of this fintech product. With this easy and fast system, fintech can not only be used for payments, but it also provides peer-to-peer lending (P2PL), digital insurance, virtual money and crowdfunding (Stern et al. 2017).

Fintech companies serve the needs of the community and micro business actors with a P2PL system. They bring together people who need funding (borrowers) and people who are willing to lend funds (lenders). This of course makes it easier for people to invest or get funding for businesses. There is no need to meet face to face and can allow transactions even over long distances. Another benefit obtained by lenders is that they directly get profit sharing paid by the borrower without any costs (Walker & Lester 2006).

The number of MSMEs in Indonesia reached 64 million units in 2017–2018 (Ministry of Cooperatives and SMEs 2018). They really need the presence of this P2PL fintech. The process of borrowing capital through banks is not easy for MSMEs. However, it turns out that many P2PL platforms apply high interest. Therefore, there is an alternative P2PL financing business model that prioritizes sharia principles.

P2PL online companies in Indonesia began to exist and operate legally in 2017. The number of registered fintech companies as of June 2020 was 158, which are licensed by 33 companies with details of 146 companies operating conventionally and 12 companies operating based on sharia principles (OJK 2020).

Islamic P2PL is still small, even though the opportunities and potential in this Muslim-majority country are very large. According to OJK, this is because people do not understand Islamic financial products. The difference between peer-to-peer lending based on sharia principles and conventional financing is that Islamic peer-to-peer lending does not contain elements of *gharar* and *maysir*, and does not use interest (usury), but uses a profit-sharing system.

Several empirical studies related to fintech show that there are Islamic P2PL practices that are appropriate and there are also practices that are not in accordance with the MUI fatwa and OJK regulations (Apriyani 2019; Züstika 2019).



This study aims to determine the practices that occur in the application of online P2PL financing services. This study has several objectives, including knowing the practice of the *mudharabah* contract in financing at PT Ammana and analyzing its compliance with the sharia system.

## 2 LITERATURE REVIEW

P2PL, also known as person-to-person lending, is a technology-based service that connects businesses directly with investors, through a web-based platform for a fee. P2PL is crowdfunding in the form of lending practices where borrowers and lenders (investors) are brought together through a platform (Darmawansyah & Aguspriyani 2019; OJK 2020).

Islamic P2PL is a financial industry that innovates using technology to improve financial activities by offering products and services in accordance with sharia (Hudaefi 2020). The Islamic P2PL business model is very different from conventional ones.

In the P2PL digital platform, lenders can manage their own capital and risk and borrowers can request loans on demand with special profit sharing. Because it is based on a digital platform, the loan process can be completed via a mobile application or website without having to go to a bank (Piskin & Kus 2019).

Fintech P2PL, according to the Fatwa of the Indonesian Ulema Council Number 117/DSN-MUI/II/2018, is allowed on conditions that it is in accordance with sharia principles, including avoiding usury, *gharar* (uncertainty), *maysir* (speculation), *tadlis* (hiding defects), *dharar* (harming others), and *haram*.

There are three legal subjects in P2PL fintech, namely, the organizer, the recipient of the financing, and the financier. Islamic P2PL is financing that is carried out by bringing together capital owners and recipients of capital through online applications/sites in accordance with Islamic law. The sharia principle in question is to carry out with the rules of an agreement based on Islamic law between financial institutions and other parties that deposit funds or finance business activities, or other activities that must comply with sharia.

## 3 RESEARCH METHODS

This field research used qualitative methods with a case study approach (Etna Widodo & Mukhtar 2000; Sekaran & Bougie 2017; Sugiyono 2017). The object of this research is the *mudharabah* contract and the profit-sharing system at PT Ammana through analysis of the suitability of the practice of the *mudharabah* contract and the profit-sharing system with sharia principles. The population is a collection of all possible people, objects, and other sizes that are the object of attention or a collection of all objects of concern (Purwanto 2004). While the sample is a part of a particular population that is of concern, the target population is non-probability samples because the population is unknown.

This study used triangulation data collection techniques, namely observation, deep interview and documentation. The informants selected and interviewed based on non-probability sampling were the manager of PT Ammana, partners of PT Ammana (Pasuruan CMD Cooperative and BMT Digital Berkah Financial), and MSMEs (Ahmadi 2017). The Guttman scale (1944) was used to obtain respondents' firm answers about the compliance of PT Ammana with sharia practices. Furthermore, an in-depth study was conducted to describe and compare the practice and the rule of law from the data that has been taken and obtained.

## 4 RESULTS, DISCUSSION, AND CONCLUSION

All informants answered questions about the compliance of PT Ammana's online financing with sharia principles, explicitly with the answer "Yes" on the Guttman scale. That is, according to several informants (partners and SMEs) Ammana has done financing in accordance with sharia

principles. In terms of business activities carried out by Ammana partners and financing customers, they are also in accordance with sharia principles. The provisions related to losses in Ammana are also in accordance with the fatwa of the National Sharia Board of the Indonesian Ulama Council (DSN MUI).

Table 1. Summary of research analysis.

Practice at PT Ammana	Sharia Principles (Fatwa/POJK)	Conclusion
The contract between PT Ammana and the funder was not clearly explained and there was no written ujah withdrawal. The contract used is the wakalah contract, which should be wakalah bil ujah. In addition, Ammana charged ujah of 1% of the financing ceiling.	DSN MUI Fatwa No. 113/2017 states that the taking of ujah must be clearly agreed both in terms of quantity and quality at the beginning of the contract/agreement. OJK Regulation No. 10/2019 explains that the wakalah contract is the granting of power from the principal to the agent and so on. Wakalah bil ujah is a wakalah contract with a fee for services.	The practice at PT Ammana is not in accordance with sharia principles. It must change the wakalah contract to wakalah bil ujah contract and write in the contract document that there is ujah imposed by Ammana of 1% of the financing limit.
In the mudharabah and wakalah contracts it is written that the financing funds are sent via transfer to the Ammana partner to be handed over to the recipient of the financing. In practice, financing funds are sent directly to the loan recipient.	In view of the DSN MUI Fatwa No. 115/2017 and No. 113/2017 regarding the provisions of sighat, ijab-qabul must be carried out firmly and, clearly, and easily understood by all parties. According to POJK No. 10/2019 The implementation of Islamic financing activities must comply with the principles of ADI, and so on.	PT Ammana's practice is not in accordance with the existing and applicable sharia principles. In the contract, PT Ammana should have changed the distribution of funds to be in accordance with sharia principles.
In the contract, the form of profit-sharing is stated in the form of a projection as the nominal is directly stated, for example, lenders receive IDR 70,000 and partners of Ammana receive IDR 30,000.	Fatwa of DSN MUI No. 115/2017 explains and decides that the profit-sharing ratio is in the form of a ratio or comparison of percentage figures for business profit sharing. The Book on Mudharabah Product Standards launched by OJK explains that in a contract, Islamic banks and customers may only agree on profit sharing, but may not agree on the nominal form of profit sharing.	This is contrary to the applicable and regulated sharia principles. The form of profit sharing in the contract made by PT Ammana should be in the form of a percentage or comparison for example, Funder: Partner = 70 : 30. Profit sharing is not allowed to be expressed in the form of nominal value of currency form as rupiah.

However, PT Ammana needs to improve and reposition the function of the documents from the wakalah and mudarabah contracts in order to improve the implementation of sharia principles in financing business cooperation between the lenders and partners of PT Ammana. The practice of profit-sharing ratio system and the mudarabah contract at PT Ammana cannot yet be classified as sharia compliant. By conducting an in-depth analysis of the contract documents and applications, there are three things that are not in accordance with the applicable sharia rules, either based on fatwas or OJK regulations (Table 1).

First, the contract between PT Ammana and the funder was not clearly explained and did not mention written ujah charges. Second, in the mudarabah and wakalah contracts, it is written that the financing funds are sent via transfer to PT Ammana's partner to be handed over to the recipient of the financing. However, in practice, financing funds are sent directly to the loan recipient. Third,

in the contract, the provisions for the form of profit sharing are stated in the form of a projection as stated directly in a nominal value.

## REFERENCES

- Ahmadi, R. 2017. *Qualitative Research Methods*. Jakarta: AR-Ruzz Media.
- Apriyani. 2019. Penerapan layanan pembiayaan teknologi informasi berbasis syariah berdasarkan Fatwa DSN-MUI. *Repository.uinjkt.ac.id*.
- Cai, S., Lin, X., Xu, D., & Fu, X. 2016. Judging Online Peer-to-Peer Lending Behavior. *Information and Management*, 53(7): 857–867.
- Darmawansyah, TT, & Aguspriyani, Y. 2019. Implementation of Sharia Fintech at PT Investree is reviewed based on DSN-MUI FATWA NO: 117/DSN-MUI/II/2018. *Journal of Islamic Economics and Business*, 3(2): 218.
- DSN-MUI Fatwa NO. 117/DSN MUI/II/118 Regarding -Based Financing Services *Technology Information Based on Principle Sharia*.
- DSN MUI Fatwa No. 115 of 2017 concerning the Mudharabah Agreement.
- DSN MUI Fatwa No. 113 of 2019 Regarding the Mudharabah Agreement.
- Firdaus, R., & Hendratmi, A. 2019. MSME Financing Solution with Sharia Peer to Peer Lending. *Journal of Theoretical and Applied Islamic Economics*, 6(8), 1664.
- Hudaefi, FA 2020. How Does Islamic Fintech Promote The SDGs? Qualitative Evidence From Indonesia. *Qualitative Research in Financial Markets*, 3.
- Ministry of cooperatives and SMEs. 2017 About Cooperatives and SMEs
- OJK. 2020. OJK. Retrieved September 30, 2020, from <https://www.ojk.go.id/id/regulation/otoritas-jasa-keuangan>.
- POJK No. 10 of 2019 Implementation of Sharia Financing Activities
- Piskin, M., & Kus, MC. 2019. Islamic Online P2P Lending Platform. *ScienceDirect*, 416.
- Purwanto, S. 2004. Statistics for Modern Economy and Finance. Jakarta: Four Salemba
- PT Ammana Fintek Syariah Official Site, <https://ammana.id/financing>
- Sekaran, U., & Bougie, R. 2017. *Research Methods For Business* (6th ed.). Jakarta.
- Stern, C., Makinen, M., & Qian, Z. 2017. Fintechs In China With A Special Focus On Peer To Peer Lending. *Journal of Chinese Economics and Foreign Trade Studies*, 10(3): 215–228.
- Sugiyono. 2017. *Quantitative, Qualitative and R&D Research Methods*. Bandung: Alfabeta.
- Walker, RH, & Lester, JW 2006. Journal of Service Marketing. Why Consumer Use and Do Not Use Technology Enabled., Vol. 20, No. 2, h. 125–135.
- Zustika, AF 2019. Financial Technology (Fintech) Berbasis Sistem Peer ToPeer Lending (P2pl) Dalam Perspektif Hifdzu Mal. Retrieved from <http://digilib.uinsby.ac.id/38637/2/>.

# Evaluation of determining the coverage value of company assets using risk-based insurance approach (case study: Development project at PT Petrokimia Gresik)

S.K. Putra

*Magister of Management Program, Faculty of Economics and Business, Airlangga University*

**ABSTRACT:** PT Petrokimia Gresik is a company working to address the increasing demand for agricultural land productivity by expanding the production capacity of NPK and urea fertilizers through several development initiatives. One of which is the Jetty C Project which has an investment value of IDR 300 billion as well as a loading and unloading capacity of 1.5 million tons per year, mainly gypsum and phosphoric acid products. Meanwhile, this company continues to provide and distribute products to support the National Food Security Program. Also, PT Petrokimia Gresik conducted an asset insurance process using the Industrial All Risk (IAR) approach to safeguard the long-term viability of the Jetty C Project. The coverage value of Jetty C is IDR 257.48 billion using this method, hence, the premium to be paid is IDR 357.90 million. Furthermore, the determination of the coverage value was evaluated using the Risk-Based Insurance (RBI) approach. The results showed that the coverage value was lower by Rp. 58.2 billion, thereby decreasing the premiums to Rp. 80.9 million. Therefore, it was concluded that PT Petrokimia Gresik saved Rp. 276 million by implementing the Risk-Based Insurance method.

**Keywords:** Project, Asset, Insurance, Coverage Value, Premium, Risk-Based Insurance

## 1 INTRODUCTION

PT Petrokimia Gresik is a fertilizer company in Indonesia that produces various fertilizers to meet the national need. Furthermore, the company helps the government realize food security and respond to market needs for non-subsidized products. To support this, PT Petrokimia Gresik has set the following vision: “Being a producer of fertilizers and other chemical products which are highly competitive and most wanted by consumers.”

To achieve the vision and mission that has been set, the company prepares and establishes the long-term plan for 2020–2024. Furthermore, the achievement depends on the success of various functions in the company, such as the Development Project. One of them is the Jetty C Project having an investment value of IDR 300 billion as well as a loading and unloading capacity of 1.5 million tons per year, mainly gypsum products and phosphoric acid products. Its existence is a strategic step for the company's business in providing and distributing products to support the National Food Security program.

PT Petrokimia Gresik used the Industrial All Risk (IAR) method to assure Jetty C's long-term viability. However, the impact of using this IAR is that the coverage value of Jetty C becomes high at IDR 257 billion. Therefore, in this study, the determination of the insurance value was evaluated using the Risk-Based Insurance (RBI) approach.

## 2 THEORETICAL BASE

Based on ISO 31000:2018, the definition of risk is the impact of uncertainty on organizational objectives. Meanwhile, the impact is a deviation from the expected, which is positive or negative.

Targets cover various aspects, such as finance, health, environment, and are applied at various organizational levels. Risk management is an activity that aims to increase the likelihood of success in the complex, multidisciplinary and challenging activity of managing projects and developing products. As a result, it is essential in any corporate environment since risk impacts the outcomes of operations and is necessary to ensure the achievement of strategic objectives.

It should be highlighted that risk management is not meant to totally eliminate an organization's business hazards (Gabriel 2019). Instead, the method focuses on identifying, measuring, and controlling risks to minimize potential consequences. This means risk management is essential tool managers use to make the most appropriate decisions. In this situation, risk management should be seen as a practical approach, inserted in a strategic plan executed by managers, taking into account the specificities of the internal and external organizational environment and remaining vigilant in monitoring.

### 3 METHODOLOGY

The first step in this study is the process of finding problem through the use of Focus Group Discussion (FGD). The following step is a literature study conducted to understand the problem and find the right method and theoretical basis for tackling it. This is based on various sources, including international standards, e-books, and training materials. Next, is the determination of objects and source person. After that, data was collected and analyzed before conclusion and recommendation.

### 4 RESULT

#### 4.1 Risk identification

The risk identification process is carried out through FGD between risk owners, the Ministry of Finance, and the Department of Corporate Governance and Risk Management. The results obtained are as follows:

Table 1. The result of risk identification.

Risk	Cause
Jetty Damage	Clashes with barges, trucks, and other conveyances.
Jetty Fire	Low awareness of crew ship and employees
	Lack of supervision
	Nature/weather conditions
Trestle Protector Damage	Collision with barge and tugboat

#### 4.2 Determining risk criteria

Determining risk criteria is carried out through FGD between risk owners, the Ministry of Finance, and the Department of Corporate Governance and Risk Management.

#### 4.3 Determining the value and weighting of inherent risk

Determine the impact and likelihood of risk before the mitigation is carried out based on criteria and expert judgment of owners. While the weighting of the risk value is based on a proportional percentage range from a scale of 1–5, then the most significant value is taken.

#### 4.4 Determining baseline cost

In determining the Baseline Cost the weight of inherent risk level is multiplied with the value of the affected asset to meet the coverage value. Determining *Implement Cost* Implement Cost estimates the premium value based on the coverage value calculated from the total Baseline Cost.

$$\begin{aligned}\text{Premium} &= \text{Tariff} \times \text{Coverage} \\ &= 0,139\% \times \text{Rp.}58.228.214.900 \\ &= \text{Rp.}80.937.218\end{aligned}$$

## 5 CONCLUSION AND RECOMMENDATION

### 5.1 Conclusion

Table 2. The comparison of using the different method.

Number	Method	Coverage	Annual Premium Rate	Estimated Annual Premium Cost
1	Industrial All Risk (IAR)	Rp. 257.485.060.650	0,139%	Rp. 357.904.234
2	Risk Based Insurance (RBI)	Rp. 58.228.214.900	0,139%	Rp. 80.937.218
Reduction		Rp 199.256.845.750		Rp. 276.967.015

The table concluded that using the RBI approach, and the company gets a potential savings of IDR 276.967.015 per year. In addition, this can support the company's efficiency program.

### 5.2 Based on this study, the following recommendations are made

The company can use the RBI approach in asset insurance activities, specifically prioritized for assets with high value. However, according to Gabriel et al. (2019), the decision-making process involves risk, which may appear as a threat to planning or unexpected opportunity. Therefore, there is a need to perform risk management to all business processes, specifically in insurance activities.

According to Ririn et al. (2020), risk management became an integral part of the company's business process and the management decision processes. Therefore, in the context of knowledge sustainability, the RBI approach can be included in the company's internal procedures.

According to Ananto (2020), risk management is interpreted as a systematic way to identify any risk, analyze and minimize risks to prevent losses to achieve company target. Furthermore, benefits from implementing risk management in the company are to facilitate cost estimation and make decisions in dealing with problems. Therefore, the company needs to conduct periodic evaluations to determine the effectiveness of using the RBI approach.

According to Eling et al. (2017), insurance managers need to specialize in value creation. Therefore, they can consider the RBI approach as a tool.

## REFERENCES

Gabriel Henrique, et al, "Critical Success Factors of Risk Management with The Advent of ISO 31000:2018, *Procedia Manufacturing*, 2019.

Ririn Safitri, et al, "Balance Scorecard and ISO 31000 : Risk Management Integration to Improve Performance", *International Journal of Multicultural and Multireligious Understanding*, 2020.

Ananto Yusuf, "Applying ISO 31000:2018 as Risk Management Strategy on Heavy Machinery Vehicle Division, *International Journal Science, Engineering and Information Technology*, 2020.

Eling, et al, "The Impact of Digitalization on The Insurance Value Chain and The Insurability of Risks, *The Geneva Papers*, 2017.

ISO 31000:2018 – Risk Management Guidelines

# Usage of on-the-job training application to increase the effectiveness of monitoring and control in pandemic era

V.E. Kusumawardhani

*Airlangga University*

**ABSTRACT:** In the COVID-19 pandemic era, Human Resource (HR) Department in PT Petrokimia Gresik encounters decreasing quality of On-the-job Training (OJT) due to Work From Home regulation. OJT is a mandatory induction training activity for prospective new employees and internship students. Also, competency management has a vital role in a company's performance and productivity. During pandemics, it is hard to monitor the mastery of OJT participants' competencies. Therefore, HR Department in PT Petrokimia Gresik designed OJT applications to facilitate work plans creation, monitoring of participants' daily activities by supervisors, and evaluation of periodic competencies achievement. The applications' development tends to accelerate work plan creation by 98.7% and increase the accuracy of work plan filling and monitoring, as well as user satisfaction from 47% to 94.7 %. Based on the results, until November 2021, 410 users have benefited from this program.

## 1 INTRODUCTION

Competency management has a vital role in companies, hence, organizations with superior human resource competency are capable of improving performance and productivity, which influence their goals and profitability (Kolibacova 2014).

The Education and Training Division under the Department of Human Resources and Development is responsible for managing On-the-job Training (OJT) for New Employee Candidates. OJT is one of the induction training activities for prospective employees. Furthermore, its implementation is the entry point for mastering and improving prospective employees' competency at PT Petrokimia Gresik before retainment.

## 2 LITERATURE REVIEW

Competency is an ability based on skills and knowledge supported by work attitudes and their application in carrying out tasks in the workplace that refers to the work requirements set (Sutrisno 2016). This is also defined as something that underlies the characteristics of an individual associated with the results obtained in a job. According to the Petrokimia Gresik Talent Management Guidelines (PD-02-0034), competency is the workability of each person which includes aspects of knowledge, skills, and work attitudes following established standards to produce effective and/or superior performance in the execution of duties or during certain situations.

Training has a universal tremendous effect on task-related behaviors or overall performance and even causes more innovation and tacit competencies. This also improves technical abilities, strategic knowledge, and facilitates the maintenance of consistency in overall performance (Cascio 2018). Along with the increase in employee skills, the training concept is expected to be more flexible, easy to understand, feasible anywhere, and consisted of several difficulty levels. A modular training approach guided by microlearning increases training regularity and makes it easier for employees to follow (Kuhn et al. 2021). Staff training orientation focuses on intellectualization, professional training shifts towards multiple abilities, while innovation skills are the key to continuous learning (Liu & Liu 2020).



OJT is one of the various training methods aiming to increase employees' competency in specific jobs by providing necessary experience in the actual environment. It is generated based on the essential idea that employees work effectively once they are equipped with how to use tools, machines, documents, and equipment, as well as the knowledge needed daily (Noe & Kodwani 2018). The recent study by Hadziroh et al. (2020) stated that managers' support has a stronger influence on OJT effectiveness.

In PT Petrokimia Gresik, more than 10 OJT mentors complained about the lack of competency mastery from its participants and decreasing quality of the program. The COVID-19 pandemic, along with the implementation of Work From Home regulation for all employees in early 2020, increased mentors' hurdle to carry out routine work monitoring and guidance of employees.

### 3 METHOD

#### 3.1 Data collection

Every OJT participant was offered a Learning/Work Plan that had been previously prepared by their respective mentor (Field Supervisors) in Microsoft Excel format. To obtain initial data, questionnaires about the management of OJT implementation at Petrokimia Gresik were provided to the participants. The survey of all the 58 subjects in 2019 concluded that up to 47% were dissatisfied with the management. Furthermore, almost half did not receive a work plan from their supervisor and were not monitored during the training. They did not obtain periodic evaluations or recognition for performing extracurricular jobs.

Target is defined according to SMART (Specific, Measurable, Achievable, Realistic, and Time-Bound) rules, consequently, supervisors aim to increase OJT participants' satisfaction from 53% to 90% with the Mobile Apps-Based OJT Management System.

#### 3.2 Problem identification

Using Fishbone Diagram, the following three root causes of problems were found:

1. There is no periodic evaluation of OJT participants, therefore, the gap in competency achievement that arises during OJT implementation cannot be known.
2. Mentors do not know what participants have performed daily because of there is no daily monitoring system.
3. Due to the absence of a digital Work Plan system, the previously created work plan is not conveyed to participants.

#### 3.3 Solution

Considering the root cause and literature review, Digital-based OJT management applications were designed with 3 main features, namely lesson plan, daily activities monitoring system, and periodic competency achievement evaluation. The applications were developed as follow:

##### 1. Pre Developing Apps

First, supervisors created a Lesson Plan template by Ms. Excel, which includes competency schemes, competency units, learning activities, outputs, and schedules. Afterward, User Roles i.e. admin, mentor, and participants were defined for OJT Apps. A flow chart of OJT applications concept was prepared, followed by an evaluation of the expected menus, such as employee scheduling, lesson plan, daily report, placement, quiz, employee assessment and activity, as well as stories. Then, a mockup of the display was conducted through the Mockplus application.

##### 2. Developing applications

To develop applications, the supervisors coordinated with its developers. Afterwards, they monitored and evaluated the application development as well as coordinated Progress Reports regularly. Since these applications were to be used for all employees, synchronization with the Human resource database and IT team was performed.

### 3. Application Soft Launch

Before launch, internal evaluation and socialization between the application developers as well as the training and development team were carried out. Afterward, the User Acceptance Test was conducted for all the field mentors and current OJT Participants. The application developers then fixed bugs and added priority features based on the previous UAT implementation.

### 4. Application Go-Live

First, the Admin inputted data into the applications which included mentors and participants' names, plus OJT timeline. Second, End User Training was implemented for Field Mentors and OJT Participants. OJT applications went live on June 19th, 2020 for 58 Prospective New Employees.

## 4 RESULT

After implementation, a survey was conducted on all 58 OJT participants who used the application. User satisfaction increased by 47.7% and mentors appreciated these applications with zero complaints.

Table 1. Questionnaires answer after the implementation of OJT applications.

No	Question	YES Answer		
		Before	After	Increase
1	Before using OJT applications, have you seen the Work Plan prepared by Supervisor?	51.7%	100%	48.3%
2	Before using OJT applications, did your supervisor ever explain your Work Plan before?	70%	91.7%	21.7%
3	Before using OJT applications, was your Work plan monitored by OJT Supervisor and PIC in the Training and Education?	43.3%	93.3%	50%
4	Before using OJT applications, did your PIC of Training conduct periodic evaluations concerning the realization of Work Plan?	43.3%	88.3%	45%
5	Before using OJT applications, is there a place to accommodate your activities, both inside and outside the company?	26.7%	100%	73.3%
	AVERAGE	47%	94.66%	47.66%

Impacts were also measured by QCDSEM, leading to a conclusion that the applications implementation significantly increases OJT programs quality, reduces administration time, and increases user satisfaction by both employees and mentors.

Table 2. Impacts measured by QCDSEM (Quality, Cost, Delivery, Safety, Environment, and Moral Aspect).

ASPECT	BEFORE	AFTER
Quality	47% of prospective employees feel they do not know Work Plan, and there is an absence of its explanation, monitoring of activities, periodic evaluation, and forum for activity.	94.66% of prospective employees are satisfied with their OJT activities. In October 2020, a Competency Test was conducted for OJT participants, and 100% was declared competent
Delivery	A long time is required to compile and recapitulate Work Plan: a. 2 weeks to develop a Work plan b. 2 weeks for work plan recapitulation and correction	Quicker build time by 98.7%: a. 2 hours to prepare Work Plan b. 1 hour for Work Plan recapitulation and correction
Safety	OJT needs to be performed offline in the field for effectiveness.	OJT can be performed online in the pandemic era and still be effective.
Moral	56.7% of OJT participants feel they are not being monitored optimally	Only 11.7% feel not being monitored optimally

Because OJT applications can fulfill the expected target, they are also applied to other training programs that involved both internal and external stakeholders.

Table 3. Number of Users in November 2021.

PROGRAM	No. of User
On-the-job Training	171
Stakeholder: Internal Vice President	
PMMB Internship (certified student internship program)	101
Stakeholder: Ministry of Industry	
MBKM Internship (independent student internship program)	98
Stakeholder: Ministry of Education	
Industrial Vocational Internship (Diploma 1)	40
Stakeholder: Partner Universities	
TOTAL	410

## 5 CONCLUSIONS

The pandemic era causes difficulty to plan, implement, and monitor training in companies. On the other hand, it has forced companies to digitalize in managing their human resources. In PT Petrokimia Gresik, training programs digitalization using applications is proven to increase user satisfaction from 47% to 94.5%, accelerate Work Plan creation by 98.7%, and augment the accuracy of OJT Work Plan filling and monitoring. The applications' effectiveness is also proven because 100% of participants were declared competent after assessment. This means the usage is not limited to OJT only, but can be carried out in general training. Therefore, since November 2021, 410 PT Petrokimia Gresik users have benefited from this program.

## REFERENCES

- Cascio, W., 2019. *Managing Human Resources: 11th Edition*. New York: McGraw-Hill.
- Hadziroh, et al. The Influence of Individual Characteristics, Training Content and Manager Support on On-the-Job Training Effectiveness. 2020. *Journal of Asian Finance, Economics and Business* Vol 7 No 11 (2020) 499–506.
- Kavanagh, M. and Johnson, R.D., 2018. *Human Resource Information Systems: Basics, Applications, and Future Directions*. New York: Sage Publishing.
- Kolibacova, G. 2014. The Relationship between Competency and Performance. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 62(6): 1315–1327.
- Kuhn, C. and Lucke, D. 2018. Supporting the Digital Transformation: A Low-Threshold Approach for Manufacturing Related Higher Education and Employee Training. *54th CIRP Conference on Manufacturing Systems*, pg 647–652.
- Liu, C. and Liu, X. 2020. Employee Training System of Manufacturing Enterprises for Implementing Industry 4.0. *Journal of Physics: Conference Series*.
- Noe, R.A., & Kodwani, A. D. 2018. *Employee Training and Development* (7th ed.). Boston, MA: McGraw-Hill Education.
- Petrokimia Gresik. 2020. *Pedoman Manajemen Talenta Petrokimia Gresik* (PD-02-0034).
- Sutrisno, E. (2015). *Budaya Organisasi*. Jakarta: Prenadamedia Group.

## Analysis acceptance and use of CeLOE learning management system (LMS) Telkom University using unified theory of acceptance and use of technology (UTAUT) and Delone-McLean Model

V.S. Sukandi & M. Ariyanti

*School of Economics and Business, Telkom University, Bandung, Indonesia*

**ABSTRACT:** Telkom University plans to become a university that plays an active role in the industrial revolution 4.0 in the field of education by creating the CeLOE e-Learning program. Learning Management System (LMS) is one of the e-Learning platforms developed by CeLOE. LMS was applied to the entire academic community starting the 2020/2021 academic year and was accelerated due to the COVID-19 pandemic. This study aims to analyze the factors that influence the LMS of Telkom University in the learning media platform. This study uses the TAM, UTAUT and Delone-McLean model. Based on literature review, TAM and UTAUT can predict intention to use. Variable Perceived Usefulness (PU) developed by TAM and variables Performance Expectancy (PE), Effort Expectancy (EE), and Social Influence (SI) by UTAUT model that significantly predict intention to use. Delone-McLean is mode for assessing Information System Success. Based on the conceptual models developed by Delone-McLean using three variables, which are Information Quality, System Quality, and Service Quality. The variables of TAM and UTAUT model are integrated into Delone-McLean model. The data collection method that will be used in this study is quantitative method with respondents of LMS users as lecturers, student and CeLOE system managers at Telkom University.

**Keywords:** Delone-McLean, e-learning, Learning Management System, UTAUT.

### 1 INTRODUCTION

The combination of direct learning and online learning has become a viral thing in today's college institutions, one of which is at Telkom University. One of the applications of information and communication technology is CeLOE (Center for e-Learning and Open Education) which is a web-based e-Learning service platform used by students and teachers to obtain information about e-Learning at Telkom University. The Learning Management System (LMS) is a subsystem of CeLOE, an online learning platform for regular study programs and distance education study programs (PJJ) at Telkom University.

Information and three points become CeLOE core programs, namely Learner Excellence, Teacher Excellence, and International Excellence. Learner Excellence is done through learning changes following the needs of students, Teacher Excellence is done through changes in learning delivery, and Institutional Excellence is done through changes in education planning and management. Telkom University e-learning was originally named i-Caring (IT Telkom Collaborating i-Gracias and e-Learning) in 2013, changed to e-Learning IDEA in 2015, and changed back to CeLOE Learning Management System (LMS) in December 2019 with a development period of two years, namely in February 2018 - December 2019. LMS itself was initially only ready for use in early 2020 for the PJJ program for Graduate students with initial help in early 2020 and targeted as many as 300 users for testing. The development of e-Learning itself experienced some obstacles in developing content contained in LMS.

This research was made to find out the factors that influence the continued interest of LMS users in using CeLOE learning management system (LMS) at Telkom University using TAM, UTAUT

theory and Delone and McLean models. TAM theory is used to analyze the users confidence, UTAUT theory is used to analyze how designs are received in technology in an organization, while the Delone and McLean models are used to analyze systems.

## 2 LITERATURE REVIEW

### 2.1 *E-Learning Platform*

According to Piotrowski (2010: 21), “E-learning platform features typically include access to course content and ratings, communication and collaboration tools for students, and course management and rating capabilities for teachers. IGI Global has several features in its e-learning platform, including B. A learning management system “LMS” facilitates systems learning on specific topics. Schools, colleges, and universities use e-learning platforms to consider their benefits for delivering electronic content, personalized learning planning, communication tools, and management tools, including progress trackers, scheduling, attendance, and several other administrations (Desfiana et al. 2018).

### 2.2 *Unified Theory of Acceptance and Use of Technology (UTAUT)*

UTAUT is a concept of the reputation of the state-of-the-art generation first advanced via way of means of Venkatesh et al. (2003) as a model developed from several theories that combine eight models into one. The UTAUT version advanced with four middle constructs: performance expectancy, efforts expectancy, social influence, and supportive conditions (Facilitating conditions). In addition to the four constructs, there are four moderators, specifically gender, age, experience, and person volunteers. This concept is defined via way of means of the tendency to behave (behavioral intention) and person behavior (Venkatesh et al. 2003 in Indrawati 2017: 32). According to Venkatesh et al. (2003) in Indrawati (2017: 33), the ensuing UTAUT version formulated four elements that gave device reputation and utilization with four significant moderators that affect every other.

### 2.3 *Delone-McLean Model*

In 2003, Delone and McLean again used and improved the previous D&M IS Success. In the D&M IS Success Model, there are several changes: Service Quality, Intention to Use, and the merger of Individual Impact with Organizational Impact into Net Benefit. Here is an independent variable according to Delone and McLean (2003): Information quality is the quality of information that measures the quality of the output of an information system, i.e., the quality produced by information systems, especially in the form of reports. System quality is the quality of the system of information system itself and the quality of the desired information characteristics of the product. Indicators are necessary because system quality is a latent variable that cannot be measured directly. Service quality is a response reaction obtained from information system developers in the form of personnel support to fulfill expectations and solution providers to user constraints. According to Delone and McLean, Service Quality has three indicators: responsiveness, assurance, and Empathy.

## 3 RESEARCH FRAMEWORK

The framework used in this study refers to research conducted by the Delone and McLean models (2003), i.e., the D&M IS Success research model. In this study, the researchers selected the variables Information Quality (IQ), System Quality (SQ), and Service Quality (SQ). References from these two research frameworks refer to research conducted by Dafis (1989) and researchers selecting PU variables, Venkatesh et al. (2003) and the researchers selecting variables PE, EE, and SI based on mardiana et al. 2015 research to measure the success of Delone and McLean information systems on technology acceptance.

## 4 RESEARCH METHODOLOGY

Not all TAM and UTAUT are included in this framework because not all variables are good predictors. The results of this framework are a result of previous research, Mardiana et al. (2015). Perceived Usefulness is used because it refers to how one can trust an LMS application. Performance Expectancy is the level of user confidence in using LMS applications. Effort Expectancy is used to measure the level of convenience provided in applications. Social Influence is used to determine how much users should use LMS applications and whether they are influenced by people around them who they think are essential. Information quality is used to measure the level of trust given in the use of LMS, which shows that user satisfaction can be achieved. System quality is used to see how quality the system refers to the performance of the system during the process. So that it can achieve user goals and cause user satisfaction with LMS applications. Service Quality is used to see the size of service support in information system development if LMS users experience constraints in their use.

## 5 RESULT AND CONCLUSION

To test the study hypothesis, researchers collected respondents using probability sampling because the number of populations is known to be proportionally stratified random sampling for the proportion of respondents. There were a total of 400 respondents to complete the survey.

Table 1. Assesment of convergent validity.

Construct	Composite Reliability	Cronbach Alpha	AVE	EE	IQ	IU	NB	PE	PU	SI	SQ	SV	US
EE	.94	.92	.82	.90									
IQ	.94	.92	.72	.66	.85								
IU	.92	.87	.80	.57	.68	.89							
NB	.95	.93	.79	.55	.75	.73	.89						
PE	.89	.84	.68	.61	.75	.64	.73	.82					
PU	.92	.89	.69	.56	.70	.63	.72	.85	.83				
SI	.88	.81	.88	.52	.66	.58	.60	.64	.59	.84			
SQ	.89	.85	.89	.72	.80	.71	.75	.69	.69	.61	.76		
SV	.92	.89	.92	.57	.69	.65	.71	.65	.65	.55	.76	.84	
US	.94	.91	.94	.60	.73	.70	.84	.70	.72	.52	.78	.73	.92

In Table 1 results, the reliability of the composite is about 88 to 95, Cronbach is about 81 to 93, and AVE 68 to 94. All items exceed latent 0.7 and AVE 0.5. These results show that who achieved reliability and validity.

Table 2. Summary tests.

Relationships	Path Coefficients	T-Values	Decision
EE→IU	0.055	1.026	Not Accepted
IQ→IU	0.074	1.037	Not Accepted
IQ→US	0.024	0.402	Not Accepted
NB→IU	0.256	3.071	Accepted
NB→US	0.524	8.767	Accepted
PE→IU	-0.020	0.259	Not Accepted
PU→IU	0.067	1.010	Not Accepted
SI→IU	0.111	2.475	Accepted

(Continued)

Table 2. Continued.

Relationships	Path Coefficients	T-Values	Decision
SQ→IU	0,160	1.916	Accepted
SQ→US	0,268	3.897	Accepted
SV→IU	0,081	1.368	Accepted
SV→US	0,128	1.663	Accepted

In Table 2, not all variables affect Intention to Use and User Satisfaction. The results showed that the System Quality and Net Benefit variables greatly affected User Satisfaction at a significant value  $p < 0.001$ .

## REFERENCES

- Dafis, F.D. (1989). Perceived Usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Delone, W.H. and E.R. McLean. (1992). Information System Success : The Quest for the Dependent Variable”. *Information System Research*.
- Desfiana et al. (2018). Measuring Tools for Analyzing Factors Influencing Users Continuance Intention Toward a Learning Platform in Bandung Indonesia. *International Journal of Science and Research*.  
<https://celoe.telkomuniversity.ac.id>  
<https://lms.telkomuniversity.ac.id/>  
[https://pddikti.kemdikbud.go.id/data\\_pt/ODYxRDIBNjQtOTQ5NS00Njg4LUE1MjgtODk5RkNDQT FDMUU4](https://pddikti.kemdikbud.go.id/data_pt/ODYxRDIBNjQtOTQ5NS00Njg4LUE1MjgtODk5RkNDQT FDMUU4)  
<https://telkomuniversity.ac.id/en/hadapi-revolusi-industri-4-0-telkom-university-kukuhkan-program-bernama-celoe/>  
<https://telkomuniversity.ac.id/wp-content/uploads/2019/01/v.36-Draft-Renstra-2019–2023.pdf>
- Indrawati et al. (2017). *Perilaku Konsumen Individu: dalam Mengadopsi Layanan Berbasis Teknologi dan Informasi*. Bandung: Refika Aditama.
- Indrawati. (2015). *Metode Penelitian Manajemen dan Bisnis: Konvergensi Teknologi Komunikasi dan Informasi*. Bandung: Refika Aditama
- Lai and Shi. (2015). The impact of privacy concerns on the intention for continued use of an integrated mobile instant messaging and social network platform. *Int. J. Mobile Communication*, 13(6).
- Lee, M. C. (2010). Explaining and predicting users’ continuance intention toward elearning: An extension of the expectation-confirmation model. *Computers & Education*, 54(2), 506–516.
- Mardiana, Siti., Tjakraatmadja, Jann, H., Aprianingsih, Atik. (2015). Delone-McLean Infotmation System Success Model Revisited: The Separation of Intention to Use-Use and. The Integration of Technology Acceptance Model. *International Journal of Economics and Financial Issues* 5(1):172–182.
- Martin, H. S. and Herrero, A. (2011). Influence of the user’s psychological faktors on the online purchase intention in rural tourism: Integrating innovativeness to the UTAUT framework. *Elsevier, Tourism Management* 33, 341–350.
- Venkatesh, V., Morris, M.G., Davis, G.B., & Davis, F.D. (2003). USER ACCEPTANCE OF INFORMATION TECHNOLOGY: TOWARD A UNIFIED VIEW. *Journal of Information Technology*, 27(3), 425–478.
- Venkatesh, V., Thong, J.Y.L., & Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and use of Technology. *MIS Quarterly*, 36(1), 157–178.

# Analysis of fertilizer use behavior by organic farmers: A case study in java and bali

W.W. Katili

*Master of Management, Faculty of Economics and Business Airlangga University, Indonesia*

**ABSTRACT:** Agriculture has made a significant contribution to the economy of Indonesia. One of the developed agriculture segments is organic farming. Based on the 2016 Indonesian organic agriculture data issued by the Indonesian Organic Alliance (AOI), the certified organic agricultural area in Indonesia in 2015 was 79,833 ha (30.57% of the total organic area of 261,147 ha). For this reason, this study is aimed at determining the behavior of organic fertilizer use. The study samples are 216 organic farmers in West Java, Central Java, East Java, and Bali. This is a descriptive study and the data were collected using questionnaires. Based on the results, most organic farmers use homemade organic fertilizer (59%) and some of them use manure (37%). In addition, the majority of organic farmers cultivate food and horticulture commodities (44%). Based on the results, it can be concluded that the majority of organic farmers still rely on homemade organic fertilizers. Therefore, the government and industry are required to improve the fertilizer technology for organic agriculture.

**Keywords:** agriculture, behavior, fertilizer, manure, organic

## 1 INTRODUCTION

Agriculture has made a significant contribution to the structure of the economy in Indonesia during the pandemic. Based on the data from the Central Statistics Agency (BPS, *Badan Pusat Statistik*), GDP growth in the agricultural sector in 2020 was 1.75%, while other sectors were declining. The growth was influenced by the increase in the agricultural production index in 2020 by 5.12 compared to 2019, which was 162.43, and 167.55 in 2020. The production index increase was influenced by the increase in horticulture, plantations, and farms. In addition to conventional agricultural cultivation systems, organic farming systems are also implemented in Indonesian agriculture. An organic farming system is holistic agricultural production management to improve and develop the health of agroecosystems, including biodiversity, biological cycles, and soil biological activities. Organic farming emphasizes the application of management practices that prioritize the use of waste inputs of cultivation activities on the land, taking into account the adaptability to local conditions. Compared to other countries, Indonesia is ranked 21st as a nation with an area of 0.05 million hectares of organic farming land. Based on the 2016 Indonesian organic agriculture data issued by the Indonesian Organic Alliance (AOI), the certified organic agricultural area in Indonesia in 2015 was 79,833 ha (30.57% of the total organic area of 261,147 ha).

The area of certified organic land is divided into four types. It is divided into a land that has been managed organically (69,009 ha), land under conversion (236 ha), land for harvesting wild products (9,268 ha), and aquaculture (1,320 ha). The largest organic agricultural land area is coffee plantations with an area of 46,200 ha. Meanwhile, the land area for rice plants using an organic farming system is 1,753 ha. East Java has an area of organic rice farming spread across several regencies, such as Jombang (70 ha), Banyuwangi (56 ha), Mojokerto (49 ha), Tulung Agung (20 ha), Sidoarjo (10 ha), Pasuruan (5 ha), and Trenggalek (3 ha). Taking these examples into account, it can be seen that the organic farming system in Indonesia is well developed. This finding also represents public awareness of agriculture that supports a healthy, sustainable life and environment. However,



the organic farming system in Indonesia does not receive fertilizer subsidies from the government. The current subsidized organic fertilizers are prohibited to be used in organic farming. As a result, organic farmers have to find other sources of nutrients to replace inorganic fertilizers such as manure, compost, and permitted materials. The impact of the limited soil fertilizing materials that can be used by organic farmers is fertilization habits that are different from conventional farmers. Thus, this study is aimed at determining the fertilizer use behavior by organic farmers, especially in Java and Bali.

## 2 LITERATURE REVIEW

According to Kotler and Keller (2016), consumer behavior is the study of how individuals, groups, and organizations choose, buy, use, and how goods, services, ideas, or experiences satisfy their needs and wants. Consumer buying behavior is influenced by cultural, social, and personal factors. Cultural factors give the broadest and deepest influence. In this aspect, consumer behavior is influenced by cultural class, subculture, and also social. In social factors, consumer behavior is influenced by reference groups, family, and social roles and status. For the personal factors, consumer behavior is influenced by age and stage in the buyer's life cycle, occupation, economic circumstances, personality, self-concept, lifestyle, and values.

Before buying, consumers need to decide which product to buy. The customer's decision-making process is one of the important aspects of marketing because it will influence whether they are going to make a purchase or not. According to Purnomohadi et al. (2012), consumer decisions are related to information and various factors influenced by their knowledge about the product. The consumer's decision process is influenced by three main factors, which are marketing activities, individual differences, and environmental factors.

Consumer purchasing decisions are categorized based on their level of involvement (high or low) and decision-making complexity. According to Assael (1995), consumer involvement in making purchasing decisions will be high when it comes to products related to image, high prices, high risk, emotional involvement, or social norms.

## 3 METHODOLOGY

The study employs a descriptive method in which the data was collected through questionnaires given to farmers as samples. Therefore, the obtained data is considered to be primary data. The samples used in this study were 216 organic farmers who were selected through data collection from various media and organic certification bodies located in West Java, Central Java, East Java, and Bali. The first stage is questionnaire preparation that has several questions about the study parameters, especially regarding the fertilizer use behavior by organic farmers. The second stage is determining the location that represents the area of the organic agricultural production center. After determining the locations and respondents, the survey was conducted using face-to-face interviews to obtain measurements of farmer behavior. After the survey, the data were analyzed. The third stage, which is the data analysis process, includes data entry and the tabulation process and content analysis using qualitative exploratory methods.

## 4 RESULTS

The survey covered 44 sub-districts from 4 provinces (Bali, East Java, Central Java, and West Java). The respondents are 216 organic farmers. Of the total 216 respondents, 14.8% (32) respondents are from Bali, 33.3% (72) respondents are from Central Java, 33.3% (72) respondents are from West Java, and 18.5% (40) respondents are from East Java. The majority of the respondents are male (87%) aged 46 – 55 years (38%) with a high school degree (48%).

It was found that most of the respondents are organic farmers with food (44%) and horticulture (44%) commodities. Only a small proportion of them are organic farmers with plantation

commodities (12%). Organic farmers are more likely to plant food and horticultural commodities because the land requirement is relatively small, easier to maintain, and faster to harvest compared to others.

Based on the results, the majority of organic farmers use homemade organic fertilizers (59%). Most of the organic fertilizers are homemade, produced from manure (37%). In terms of regulation, the majority of organic farmers already know the fertilizers that are prohibited to use organic farming (59%). The difficulty of obtaining usable fertilizers has caused them to make fertilizers on their own. Strict organic farming regulations prohibited chemical fertilizers such as NPK, Urea, SP-36, and KCl to be used. Composts have been chosen as the main ingredient to replace chemical fertilizers because they are environmentally friendly, abundant, relatively cheap, and easier to process.

It is also interesting to find that few organic farmers are still using chemical fertilizers (2%). Their action is in contrast with the principle and regulations of organic farming. The fertilizer use behavior is strongly influenced by the farmer's habits. However, the developed culture or habit is most likely to be dependent on the existing regulations. Therefore, a number of organic farmers will neglect the regulations and possess a different habit.

## 5 CONCLUSION

It can be concluded that most organic farmers are making fertilizer on their own and some of them choose to buy it. They can make fertilizers because of the availability of raw materials such as manure. The study also found that fertilizer use behavior is varied in which most of them are using manure and some of them are using chemical fertilizers.

Most organic farmers are aware of regulations of organic farming, especially concerning the type of fertilizers prohibited in organic farming. This aspect seems to influence farmers' fertilizer use behavior. It is important to note that farmers' knowledge about the governing regulations and the availability of raw materials for making fertilizers are important in developing farmers' fertilizer use behavior. In addition, high school education level seems to influence organic farmers' ability to search and understand the technical information about fertilization. Thus, the farmers tend to succumb to the culture or the behavior of their group.

This study also found several managerial implications that can be used by companies. First, companies can employ this study as a basis for developing special fertilizer products for organic farming. Second, companies can estimate the fertilizer requirement for organic farmers. Third, companies can determine the segmentation, target, and positioning of the product to be developed for organic farming. Fourth, companies can determine the selling price of the product to be developed based on the purchasing power of organic farmers and their behavior. Fifth, companies can determine the potential areas for the sale of special fertilizer products for organic farming. Sixth, companies can calculate the competitor products in the organic farming segment.

## 6 LIMITATIONS AND RECOMMENDATIONS FOR FUTURE STUDY

The convenience sampling method used in this study may potentially have a bias. Therefore, it would be desirable to have a larger sample and use a random sampling method to reduce bias. A statistical approach is also recommended for future studies to find relationships between existing variables. For example, making a relationship between variables such as culture, regulation, and information on purchasing decisions by organic farmers. In addition, the cross-sectional survey in the data collection of this study can also be considered as a limitation because it does not capture the changes in farmer behavior over time. After all, human behavior is dynamic. To address this issue, panel data for future study is suggested to be able to comprehensively explore organic farmer behavior more further. In addition, this study also only focuses on consumer behavior that does not change the current agricultural practices. Thus, it will be more interesting for future studies to explore the process of adopting advanced technologies in organic farming.

## REFERENCES

- Assael, H. (1995). *Consumer Behavior and Marketing Action*. 5-th ed. *South-Western College Publishing*.
- Kotler, P., & Keller, K. L. (2016). *Marketing Management*. In *Global Edition* (Vol. 15E, Issue 4). <https://doi.org/10.1080/08911760903022556>
- Purnomohadi, E., Sumarwan, U., Saefuddin, A., & Yusuf, E. Z. (2012). *Perception Analysis, Consumer Behavior and Traditional Food Preferences*. Bogor Agricultural Institute.

# The acceptance of digital payment methods across micro, small and medium enterprises in kediri regency

W.A. Rengganis

*Airlangga University, East Java, Indonesia*

**ABSTRACT:** This study aimed to obtain information regarding the community's acceptance and preferences for digital payments across Micro, Small and Medium Enterprises (MSMEs) in Kediri through the comparison of individual preferences in the fashion and food sector. A qualitative approach was used, which was based on direct interviews with MSME actors who had implemented digital payments in their transactions. Additionally, this provided a broad overview of the benefits and challenges associated with the implementation of digital payments, from the perspectives of both sellers and buyers, while focusing on buyers' preferences for digital payments. Lastly, the implementation of digital payments was expected to grow significantly and provide solutions for MSMEs to improve their performance and productivity, specifically during the pandemic.

**Keywords:** digital payment, customer preference, buyer preference, MSME business

## 1 INTRODUCTION

There has been a cultural transformation in recent times, which has impacted changes in all aspects of people's lives. The community's way of life and culture has been significantly influenced by the widespread use of technology. The adoption of modern payment systems is one aspect that is rapidly expanding, considering that people are gradually shifting from cash to non-cash transactions (digital payments).

Indonesia is one of several countries that have been promoting the Cashless Society by initiating a National Non-Cash Movement program (*Gerakan Nasional Non-Tunai - GNNT*) in 2014 to ensure safety, ease, and efficiency of financial transactions. Furthermore, the Central Bank intends for this movement to account for at least 25% of Indonesia's population by 2024.

The use of non-cash transactions has been prevalent worldwide. However, its growth in Indonesia is significantly lower than other Asian countries. According to *Grab for Good's Social Impact Report 2018-2019*, cashless transactions in Indonesia accounted for only 4% of total transactions, following behind Vietnam and Singapore (source: *katadata*).

The factors associated with the limited use of digital payments in Indonesia include education, cultural issues, low financial literacy index, and poor access to financial institutions. The financial illiteracy of the majority of the public has also proved to be a major obstacle in the efforts to promote the implementation of non-cash transactions in the community. Additionally, the COVID-19 pandemic, which was first noticed in Indonesia in mid-March 2020, has significantly affected the way people interact and make transactions. The rapid development of digitalization creates opportunities and the potential for the financial services industry to develop innovations in the payment system sector.

Bank Indonesia is in charge of the payment system and it promotes digital transformation by expanding QR Code Indonesian Standard (QRIS) which was launched on August 17, 2019. It aimed to acquire 12 million merchants by 2021, with the primary goal of promoting MSME merchants to support the National Economic Recovery Program (PEN). However, the implementation of non-cash transactions with QRIS was still relatively small. Consequently, a more detailed analysis was

required to understand the community's behavior, acceptance, and preferences in adopting digital payments, particularly QRIS, and the impact of QRIS on the performance of MSMEs during the pandemic.

## 2 LITERATURE REVIEW

### 2.1 *Customer behavior*

According to Schiffman and Kanuk, consumer behavior is the study of how consumers search for, purchase, use, evaluate, and dispose of products and services that they expect to satisfy their needs. Gerald Zaltman and Melanie Wallendorf stated that consumer behavior refers to the actions, processes, and social relations carried out by individuals, groups, and organizations to obtain and use a product based on experience and reviews of these products from other sources. Meanwhile, Kotler proposed that consumer behavior is the study of consumers and their emotional, mental, and behavioral responses to how they select, consume and dispose of products and services.

### 2.2 *Digital Payment*

Digital payment is the transfer of money or other forms of currency from one account to another using technological methods, such as mobile wallets or mobile payment apps. Furthermore, it can also be referred to as electronic payment, which consists of bank transfers, debit cards, credit cards, and e-wallets, such as GoPay, Dana, ShopeePay, and LinkAja.

The adoption of QR codes is one of the latest digital payment innovations currently and concerned as one of the most popular payment methods used worldwide, including in Indonesia. QRIS stands for Indonesian Quick Response Code Standard, a National QR code standard, which was launched on August 17, 2019, by Bank Indonesia and the Indonesian Payment System Association (ASPI) to facilitate QR code payments in Indonesia. It is the integration of various QR types from different Payment System Service Providers, and was developed by the payment system industry along with Bank Indonesia to ease, hasten, and secure digital transactions with QR codes. Consequently, all Payment System Service Providers which adopt the QR Code Payment system are required to implement QRIS.

## 3 METHODOLOGY

This study aimed to determine the trend of digital payment development in Indonesia, specifically during the COVID-19 pandemic. This focused on the implementation of digital payments for MSMEs, the challenges associated, and consumer behavior, specifically in Kediri.

Subsequently, both explanatory and descriptive analyses were conducted to obtain primary and secondary data, respectively. The secondary data described the development of digital payment implementation in Indonesia, including QRIS transaction volume, QRIS nominal transactions, number of QRIS merchants, number of debit cards, and e-money. The data used in this study was qualitative, which was obtained from Bank Indonesia through in-depth interviews with 6 MSMEs in the fashion and food industry and analysed using descriptive analysis.

## 4 RESULT AND DISCUSSION

The analysis of this study shows that the growth of digital payment transactions in Indonesia is on the rise. However, the use of debit cards continues to dominate, particularly with intra-bank and inter-bank transfers, as well as nominal transactions, accounting for 51% and 92% of total digital payment transactions, respectively. The majority of the public have a strong preference for the transfer service product because they are quite familiar with this method of payment.

The volume of transactions using QRIS digital payment increased significantly during the pandemic, even though the nominal transaction remained low. Also, QRIS was mostly used for payment transactions with small nominal amounts or payment purposes to MSMEs at an average of IDR 62,677.00 per transaction. Following the launch of QRIS as an alternative payment method on August 17, 2019, the number of merchants who presented QRIS to the public was 13.2 million, with MSME merchants accounting for 94% of the total merchants. This was consistent with the primary goal of accelerating the use of QRIS, which was to promote the growth of MSME performance during the pandemic through the use of safe, easy, and cheap digital payments.

The growth in the number of QRIS merchants was not proportional to the growth in the number of nominal payment transactions in that year, with the merchant and transaction growth reaching 180% and 166%, respectively. This indicated that the public's preference for using QRIS digital payment products still needed to be strengthened. The highest level QRIS use was recorded in Jakarta, at 6.80 transactions per merchant, while East Java, the second-largest city in Java, only recorded an average of 3.79 transactions per merchant. Furthermore, the five cities with the highest number of merchants in East Java were Surabaya, Malang, Sidoarjo, Jember, and Kediri. The highest average number of transactions per merchant in Surabaya, while the lowest was observed in Kediri at 5.27 and 1.94 transactions per merchant, respectively. Therefore, it was concluded that Kediri had the lowest preference for using QRIS digital payment when compared to the other four major cities.

According to the results of qualitative data collection through in-depth interviews with MSMEs actors in the fashion and food sub-sector in Kediri, the use of digital payments for MSME varies depending on the industrial sub-sector. The consumer preferences for using digital payments are already very high in the fashion industry sub-sector, accounting for more than 50% of total transactions. The majority of individuals in the fashion industry commonly use online payment service products such as the transfer method for large nominal payments and online transactions. However, small nominal transactions under 2 million, are made by depositing cash, and only a small number of consumers select to use QRIS. Lastly, the consumer preferences for selecting QRIS in transactions have begun to increase, but are still very limited.

Business actors in the food sub-sector stated that the majority of consumers preferred to pay cash because the nominal transaction is relatively small. As stated earlier, the preference for digital payments in the food sub-sector is not as high as the fashion sub-sector. Additionally, the preference for digital payments through debit cards and transfers remains the favorite, while the use of QRIS remains low. The barriers encountered when sellers offer alternative QRIS payments include:

The low level of consumer understanding concerning QRIS. The customers have already developed a mindset towards e-wallet products, that transactions can only be made for the same type of e-wallet.

The lack of incentives for MSME actors to promote QRIS. There is small or no support from sellers to educate consumers on the benefits of digital payments with e-wallet, specifically QRIS.

Payments of settlement or funds to sellers take a considerable amount of time before they enter their accounts. This disrupts the main capital liquidity for micro and small business actors and becomes a disincentive for MSME actors to support QRIS.

## 5 CONCLUSION

According to the results of this study, the preferences of MSME actors and consumers for the use of digital payments have increased significantly and have had a positive effect on the productivity of MSMEs since the pandemic. The use of a debit card, combined with bank transfers, is the most widely used digital payment method among consumers. The use of QRIS remains less appealing to consumers due to a severe lack of public understanding of the conveniences and benefits of QRIS. Furthermore, several policy enhancements and program innovations are required to ensure that payments are received instantly, and incentives are provided to business actors to make them marketing agents for the expansion of digital payment instruments.

## REFERENCES

- Kartikasari, Didin. 2013. Pengaruh Perilaku Konsumen Terhadap Keputusan Pembelian, Universitas Brawijaya.
- Roy S. and Sinha I. Determinants of Customers' Acceptance of Electronic Payment System in Indian Banking Sector-A Study. *International Journal of Scientific & Engineering Research* 5(1) (2014), 177–187.
- Vally, Suma and Divya, Hema. 2018. A Study on Digital Payments in India with Perspective of Consumer's Adoption. *International Journal of Pure and Applied Mathematics*. Volume 119 No. 15 2018. 1259–1267.

## The influence of pharmaceutical service quality toward pharmacy customer satisfaction in Ngemplak district

W.K. Dwiprasetya, Wiyadi & H. Wujoso

*Master of Management, Universitas Muhammadiyah Surakarta, Jawa Tengah, Indonesia*

**ABSTRACT:** The purpose of this study is to analyze the quality influence of pharmaceutical service toward customer satisfaction at several pharmacies in Ngemplak District using 5 aspects, namely pharmacy staff's attitude, speed of service, provision of drug information and education, drugs/pharmaceutical products availability, and pharmacy facilities. This is a descriptive quantitative study with the purposive sampling method used to obtain data from 223 pharmacy customers. The data collected were analyzed using the Multiple Linear Regression method with IBM-SPSS version 20 software. The results showed that pharmacy staff's attitude, speed of service, drugs/pharmaceutical products availability, and pharmacy facilities positively and significantly affect customer satisfaction. Meanwhile, the provision of drug information and education has no significant effect on pharmacy customer satisfaction, which was validated qualitatively by the triangulation method.

### 1 INTRODUCTION

Customer satisfaction is essential to keep a company operating and existing in a highly competitive global market. One factor influencing customer satisfaction is service quality [1]. Ngemplak District, Boyolali Regency, experienced a significant rise in pharmacies by 25% from the end of 2020 (12) to October 2021(16) [2]. According to [3], the quality of pharmaceutical services consists of 5 aspects, namely pharmacy staff's attitude, speed of service, provision of drug information and education, drugs/pharmaceutical products availability, and pharmacy facilities. [4] stated that staff's willingness to answer questions and provide solutions to customer complaints regarding treatment in a friendly and agile manner is essential in every pharmaceutical company. Speed of service is the rapid rate at which pharmacy staff prepares drugs/pharmaceutical products and concoction/non-concoction recipes until they are given to customers. The standard rate of service speed as contained in PMK number 73 of 2016 for concoction and non-concoction recipes is 15–30 minutes.

[5] and [3] reported that the provision of drug information and education plays a role in creating customer safety and comfort in their treatment. According to [6], drugs/pharmaceutical products with complete available variants make it easier for pharmacy staff to offer products and customers to make decisions. [7] and [8] reported that well-designed and comfortable pharmacies with easy access to services quickly attract customers. Of the 8 customers used to conduct a preliminary survey, only 3 agreed that all pharmacies offered mini lab facilities. Secondly, all respondents agreed that they would be happy assuming pharmacy staff was friendly, provided prompt service, and communicative to their needs regarding varied medicines/pharmaceutical products. These results are reinforced by [9] which showed that pharmacy staffs' attitudes and speed of service have a significant effect on customer satisfaction. Meanwhile, drugs availability in pharmacies has no significant effect. According to [8], pharmacy facilities significantly influence customer satisfaction. [3] also stated that from 5 aspects of pharmaceutical service quality, only pharmacy staff attitude has an insignificant effect on customer satisfaction. Meanwhile, studies by [10] and



[11] reported that drug information and education do not affect customer satisfaction. Therefore, the above description can be made a study framework with the following 5 hypotheses:

H<sub>1</sub>: Pharmacy staff's attitude has a positive and significant effect on customers satisfaction.

H<sub>2</sub>: Service speed has a positive and significant effect on customer satisfaction.

H<sub>3</sub>: Drug information and education providers positively and significantly affect customer satisfaction.

H<sub>4</sub>: Drugs/pharmaceutical products availability has a positive and significant effect on customer satisfaction.

H<sub>5</sub>: Pharmacy facilities have a positive and significant effect on customer satisfaction.



Figure 1. Study framework.

## 2 METHOD

This is a quantitative descriptive study with the purposive sampling method used to collect data from 250 respondents in all pharmacies in Ngemplak District. A total of 223 respondents were included in the inclusion criteria and 27 in the exclusion. Pharmacy service quality and customer satisfaction were measured using a Likert scale of 1-4, with all data collection instruments valid and reliable. Data were processed using the SPSS IMB version 20 software for windows to determine each variable's descriptive and multiple linear regression tests. The feasibility test was conducted using a coefficient of determination, model accuracy, and hypothesis tests.

## 3 RESULT AND DISCUSSION

Respondent profiles were grouped by gender, education level, and monthly income. The pharmacy market segment is dominated by female customers (54.7%), those with income less than Rp. 2.000.000 (70%), and high school education graduates (35.4%). Descriptively, pharmacy customer satisfaction is high even though all aspects of the pharmaceutical service quality variable are still moderate. This shows that respondents' answers to the quality of pharmaceutical services as a whole are already high. Table 1 shows the results of multiple linear regressions with the coefficient of determination value of 0.441, which means 44.1% of variations change in customer satisfaction variables can be explained by 5 aspects. Meanwhile, 55% of the service quality variable is explained by variables outside the model.

This study applied an accurate model with a probability value of 0.000. The variable quality of pharmaceutical services on aspects of pharmacy staff's attitudes, speed of service, drugs/pharmaceutical products availability and pharmacy facilities are positive and partially significant on customer satisfaction, as shown in Table 1. Pharmacy staff's attitude, such as friendliness [12] and ability to answer questions are used by customers for assessment [6]. In addition, good

service is where customers do not have to waste significant time to get drugs. [13] stated that complete drugs/pharmaceutical availability products can minimize the risk of prescription rejection.

Table 1. Multiple regression linear analysis results.

Description	Coefisien	t Value	Sig.
$\alpha$	5,551	5.446	0,000
Pharmacy Staff Attitude	0,119	2,022	0,044
Speed of Service	0,942	8,855	0,000
Provision Drug Information and Education	0,006	0,152	0,879
Drugs/Pharmaceutical Products Availability	0,249	3,363	0,001
Pharmacy Facilities	0,076	2,076	0,039
Adjusted R <sup>2</sup>	0,441		
F	36,057	Sig.	0,000

\* Sourced from 2021 primary data, processed

The unavailability of drugs in pharmacies due to poor planning is one of the obstacles faced by pharmacies, which decreases customer satisfaction and loyalty. [14] and [15] stated that the convenience of customers in accessing pharmacy facilities, such as (1) cleanliness of parking areas and waiting rooms, (2) close distance of counters from the waiting room, (3) tidiness of retail storefronts and pharmacy room, and (4) operating hour facilities, pharmaceutical services, and mini lab offerings increases customer satisfaction. The conveniences of a closed pharmacist room make patients more flexible in consulting treatment. Therefore, the importance of completeness pharmacy facilities is to facilitate customers to support the needs of pharmaceutical services. In this study, partially provision drug information and education had a positive and insignificant effect on pharmacy customer satisfaction (sig. 0.879).

A triangulation test was used to qualitatively confirm the results conducted by interviewing 5 pharmacy staff and 5 customers, which showed that staff rarely had information and drug education because it depended on customers' requests. A total of 3 customers agreed that they did not need drugs information and education as opposed to 2 others. It can be concluded that although pharmacy staff rarely conveyed drug information and education, customers' response was quite good. [10] defined the phenomenon as a form of the limited pharmacy staff providing drug information and education services.

#### 4 CONCLUSION

In conclusion, pharmacy staff's attitude, speed of service, drugs/pharmaceutical products availability, and pharmacy facilities significantly affect customer satisfaction in Ngemplak District, Boyolali Regency. However, this is opposed in providing information and education on drugs. Therefore, to improve the quality of pharmaceutical services at pharmacies, pharmacy staffs need to always be proactive in various training about communication skills and knowledge. Further study needs to be conducted on another aspect influencing quality pharmaceutical service, such as location and drug prices for customer satisfaction.

#### REFERENCES

- [1] Kotler & Keller. 2009. *Manajemen Pemasaran*, Edisi 13. Erlangga: Jakarta.
- [2] Astuti, P. 2021. Workshop BIMTEK Kefarmasian 27 Oktober 2021. Dinas Kesehatan Bo-yolali; Indonesia.

- [3] Siahaan, S. M., Hakim, L., & Hariyanti, T. 2018. The Effect of the Quality of Pharmaceutical Service on Outpatient Satisfaction of Amelia Hospital. *Jurnal Aplikasi Manajemen*, 16(1): 115–124.
- [4] Adriani, R. M., Wahyuni, K. I., & Anindita, P. R. 2020. Pengaruh Pelayanan Kefarmasian Terhadap Kepuasan Pasien Hipertensi Rawat Jalan di rumah Sakit Anwar Medika. *Journal Of Pharmacy Science And Technology*, 2(1): 80–87.
- [5] Putri, L. E., Dachriyanus, D., & Putri, N. T. 2018. Pengaruh Kualitas Pelayanan Kefarmasian terhadap Kepuasan Pasien Rawat Inap RSUP Dr. M. Djamil Padang. *Jurnal Optimasi Sistem Industri*, 17(2): 152–157.
- [6] Pratiwi, P., Muhtadi, A., & Surahman, E. 2016. Pengaruh Kualitas Pelayanan dan Kepuasan Pelanggan Terhadap Niat Beli Obat di Depo Farmasi Anggrek RSUP Dr. Hasan Sadikin, Bandung. *Jurnal Farmasi Klinik Indonesia*, 5(1): 47–55.
- [7] Ahmad, A. M. K., Alghamdi, M. A. S., Alghamdi, S. A. S., Alsharqi, O. Z., & Al-Borie, H. M. 2016. Factors Influencing Patient Satisfaction with Pharmacy Services: An Empirical Investigation at King Fahd Armed Forces Hospital, Saudi Arabia. *International Journal of Business and Management*, 11(9): 272–280.
- [8] Sa'adah, E., Hariyanto, T., & Rohman, F. 2015. Pengaruh Mutu Pelayanan Farmasi Terhadap Kepuasan dan Loyalitas Pasien Rawat Jalan dengan Cara Bayar Tunai. *Jurnal Aplikasi Manajemen (JAM)*, 13(1): 65–76.
- [9] Khudair, I. F., & Raza, S. A. 2013. Measuring Patients' Satisfaction with Pharmaceutical Services at a Public Hospital in Qatar. *International Journal of Health Care Quality Assurance*, 26(5): 398–419.
- [10] Megawati, Hariyanto, T., & Rachmi, A. T. 2016. Hubungan Dimensi Mutu Pelayanan Farmasi Rawat Jalan dengan Kepuasan Pasien di RS Baptis Batu: Peran Kepesertaan Asuransi. *Jurnal Aplikasi Manajemen*, 14(1): 147–160.
- [11] Utari, R., & Chan, A. 2018. Pengaruh Mutu Pelayanan Instalasi Farmasi Rumah Sakit Terhadap Tingkat Kepuasan Pasien di Rumah Sakit Umum Daerah Dr. RM Djoelham Binjai. *Journal of the Pharmasceutical World*, 2(2): 93–100.
- [12] Pradipta, F. R., Nurhidayati, R., & Wening, N. 2019. Pengaruh Kualitas Pelayanan Terhadap Kepuasan Konsumen Menggunakan Jasa Apotek Fitri Temanggung. *Jurnal Manajemen*, 9(2): 283–290.
- [13] Utari, W. 2014. Pengaruh Kualitas Layanan, Harga, Varian Obat dan Fasilitas terhadap Kepuasan Pelanggan Apotek Yakersuda Bangkalan. *Jurnal NeO-Bis*, 8(1): 112–125.
- [14] Sulistyawati, N. L. M., Perdana, N., Maidin, A., Syafar, M., Amiruddin, R., & Jafar, N. 2011. Hubungan Kualitas Pelayanan Farmasi Pasien Rawat Jalan Terhadap Kepuasan dan Keputusan Beli Ulang Obat IFRS Jala Ammari Makassar. *Fakultas Kesehatan Masyarakat UNHAS, Makassar, Indonesia*.
- [15] Arimbawa, E., Suarjana, K., & Wijaya, I. P. G. 2014. Hubungan Pelayanan Kefarmasian dengan Kepuasan Konsumen Menggunakan Jasa Apotik di Kota Denpasar. *Public Health and Preventive Medicine Archive*, 2(2): 153–15.

# Impact of triple-A and supply chain orientation on financial performance

Yulianti & Arviansyah

Universitas Indonesia, Jakarta, Indonesia

**ABSTRACT:** Lee (2004) proposed agility, adaptability, and alignment, constituting the triple-A, as the concurrent vital elements of supply chains to achieve sustainable competitive advantage. This study examines the impacts of triple-A and supply chain orientation on firms' financial performance. The model was tested with surveyed data from 116 supply chain specialists and managers in Indonesia. Structural equation modeling using the partial least squares approach in SmartPLS was utilized to conduct the analysis. The results reveal that only supply chain alignment has a significant positive impact on financial performance; on the contrary, agility, adaptability, and supply chain orientation do not significantly impact financial performance. The findings indicate that firms need to focus on selected capabilities for improving their performance.

## 1 INTRODUCTION

Lee (2004) proposed that the best supply chain must be agile, adaptable, and aligned. Revisiting the triple-A concept fifteen years later, Lee (2021) claimed that this AAA concept is still applicable; however, the executives need a new focus considering the changes in the environments and natural forces.

In the world of volatility, uncertainty, complexity, and ambiguity (VUCA), supply chains are not only embedded in VUCA environments, but supply chains themselves are also increasingly exhibiting VUCA features (Gao et al. 2021). Thus, they suggested that the triple-A framework needs to be extended to help supply chains respond to the increasing shocks. A stream of research has also begun empirically investigating the triple-A and their association with various types of firm performance (Feizabadi et al. 2019a, b, 2021; Gligor et al. 2020; Whitten et al. 2012).

## 2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### 2.1 *Triple-A supply chain*

Studied from the inside of leading firms, Lee (2004) concluded that the best supply chains are not just fast and cost-effective but also agile, adaptable, and firms' interests stay aligned concurrently. Lee (2021) updated that the triple-A is still applicable but needs a new focus on super-agility, architectural adaptability, and ecosystem alignment as environments and nature forces change.

A study by Whitten et al. (2012) revealed that triple-A positively impacts supply chain performance; in turn, supply chain performance positively impacts both marketing and financial performance. Feizabadi et al. (2019a) also showed that the triple-A has a direct and positive impact on financial and market performance and agreed with Lee (2004) on the importance of developing all three capabilities concurrently. In another perspective, rather than examining the relationship, Gligor et al. (2020) adopted triple-A and firm's strategic orientation (i.e. market orientation and supply chain orientation) to examine what combinations of these five capabilities lead to the same firm performance. They revealed four "recipes" that lead to the same superior firm performance, which are: (1) agility, adaptability, alignment, and market orientation; (2) agility, alignment, market orientation, and supply chain orientation; (3) alignment; and (4) supply chain orientation. These

results indicated that firms do not necessarily have to develop capabilities across all triple-A components concomitantly. More spotlighted, the third and fourth recipes contain only one component to lead to the same outcome, i.e. the high level of firm performance.

Supply chain agility is the ability to quickly respond to short-term changes in demand or supply (Lee 2004). Flexibility, visibility, demand management, information integration, process integration, speed, and supply management are seven antecedents of agility summarized from earlier studies; then financial performance, operational performance, and relationship are three consequences of agility (Feizabadi et al. 2019b). Inman et al. (2011) empirically linked agility to financial performance, operational performance, and marketing performance. All three links have a positive and significant impact. Furthermore, their alternative research model revealed that agility has a significant impact on operational performance; operational performance does not directly impact financial performance but is mediated by marketing performance.

Supply chain adaptability is the ability to adjust supply chain design to accommodate market changes (Lee 2004). Flexibility, process integration, relationships, and visibility are four antecedents of adaptability summarized from earlier studies; then, consumer value, innovation, financial performance, and operational performance are four consequences of adaptability (Feizabadi et al. 2019b). Three of four antecedents of adaptability are also the antecedents of agility.

Supply chain alignment is the ability to establish incentives for supply chain partners to improve the performance of the entire chain (Lee 2004). Conflict management, environment uncertainty, information integration, interdependence, power, process integration, quality and process management, relationships, socialization, strategy and goal integration, and supply management are eleven antecedents of alignment summarized from earlier studies; then agility, customer value, information integration, innovation, aggregate performance, financial performance, operational performance, process integration, quality and process improvement, relationships, shareholder value, and sustainability are twelve consequences of alignment (Feizabadi et al. 2019b).

Refer above, financial and operational performance are consequences of all AAA; while aggregate performance is a consequence of only alignment. Inconsistent with measurement, many papers used an aggregate measure, intermingling financial, operational, and market performance (Feizabadi et al. 2019b). As a result, Mackelprang et al. (2014, as cited in Feizabadi et al. 2019b) indicated that the ultimate performance impacts remain unclear. Concerning it, this study used financial performance directly in the examination. Thus, the following hypotheses are proposed:

H<sub>1</sub>: Supply chain agility significantly has a positive impact on financial performance.

H<sub>2</sub>: Supply chain adaptability significantly has a positive impact on financial performance.

H<sub>3</sub>: Supply chain alignment significantly has a positive impact on financial performance.

## 2.2 Supply chain orientation (SCO)

Min and Mentzer (2004) proposed that a supply chain-oriented firm should possess the following elements of relations with supply chain partners: trust (i.e. credibility and benevolence), commitment, cooperative norms, organizational compatibility, and top management support. Refer to the finding of Gligor et al. (2020), as discussed at point 2.1, the fourth recipe, SCO alone can also lead to the same superior firm performance combined with all other five components examined in their study: agility, adaptability, alignment, market orientation, and supply chain orientation. Thus, the following hypothesis is proposed:

H<sub>4</sub>: Supply chain alignment significantly has a positive impact on financial performance.

## 3 RESEARCH METHODOLOGY

### 3.1 Data collection

Data were collected using an Internet survey from supply chain specialists and managers of Indonesian firms from October to November 2021. Final 116 samples were used from 342 responses after removing 190 incomplete and 36 invalid position or repeated firms responses.

The questionnaire consisted of respondent information and main research questions. Items of agility were adopted from Gligor et al. (2013, as cited in Gligor et al. 2020); adaptability and alignment were adopted from Feizabadi et al. (2019, as cited in Gligor et al. 2020); items of supply chain orientation were adopted from Patel et al. (2013, as cited in Gligor et al. 2020); and items of financial performance were adopted from Green & Inman (2005, as cited in Whitten et al. 2012). These indicators used a seven-point Likert-type scale.

### 3.2 Data analysis strategy

Structural equation modeling with partial least squares (PLS-SEM) in SmartPLS was used for data analysis. The outer model or measurement for reflective model assessment has four steps: indicator reliability, internal consistency reliability, convergent validity, and discriminant validity (Hair et al. 2022). The inner or structural model analysis includes assessing collinearity issues, the structural model’s significance and relevance, and model explanatory power.

## 4 RESULT

For the first measurement model assessment, indicator reliability is shown by the adequate values of outer loading, i.e.  $\geq 0.708$ . There was an alignment item (the second indicator) with outer loading below the standard, i.e. 0.668. The item can be retained for outer loadings between 0.40 and 0.70 as without removing it, the internal consistency, reliability, and convergent validity has already been above the suggested threshold value (Hair et al. 2022). Another issue at the second step was internal consistency reliability. The  $\rho_A$  of agility was 0.968, and financial performance was 0.977. These values are  $>0.950$  and not desirable because they are typically the result of semantically redundant items. However, according to Becker (2018), one of the SmartPLS developers, high reliability is generally desirable; and ensuring that questionnaire was clear and online survey minimizes surveyor intervene, as conclusion these high  $\rho_A$  values were acceptable. The third step refers to the average variance extracted (AVE) should be  $\geq 0.50$ ; the results are acceptable. For the discriminant validity as the fourth step, Hair et al. (2022) recommended using the heterotrait-monotrait ratio (HTMT) rather than the Fornell-Larcker criterion. Checked directly in SmartPLS, the HTMT was also accepted since the values were  $<0.85$ .

Table 1. Statistical analysis of the measurement model.

Variable	Cronbach’s Alpha	$\rho_A$	Composite Reliability	AVE
Agility	0.938	0.968	0.950	0.761
Adaptability	0.923	0.929	0.940	0.722
Alignment	0.844	0.855	0.882	0.557
Supply chain orientation	0.906	0.920	0.927	0.680
Financial performance	0.973	0.977	0.980	0.926

At the first step of the structural model, there was no collinearity issue (VIF were  $<5$ ). In the next step, assessing the path coefficient shows the direction of the relationship. The t-value shows the significance with standard  $>1.65$  at significance level 10%,  $>1.96$  at significance level 5%, and  $>2.57$  at significance level 1% for the two-tailed test. Path coefficient for agility was negative but close to zero, i.e.  $-0.007$ ; another, using significance level 5%, the t-value for agility was 0.059 (not  $>1.96$ ) which means agility does not has a significant impact on financial performance; thus,  $H_1$  is rejected, other detail shown in Table 2. Adaptability and SCO have a positive impact on financial performance but are not significant (t-values are not  $>1.96$ ); thus,  $H_2$  and  $H_4$  are rejected. Only alignment positively impacts financial performance and is significant; thus,  $H_3$  is supported.

Refer the  $R^2$ , the financial performance is 25.7% impacted by AAA and SCO. For comparison, the  $R^2$  shows the financial performance is 23.7% impacted by combined triple-A (all indicators of AAA combined to 1 variable) and SCO, which lower impact or explanatory power.

Table 2. Statistical analysis of the structural model.

	Path	VIF	Path Coefficient	t-statistics	p-values	Significant	Hypothesis
H <sub>1</sub>	AG→FP	2.359	-0.007	0.059	0.953	No	Rejected
H <sub>2</sub>	AD→FP	3.074	0.217	1.307	0.191	No	Rejected
H <sub>3</sub>	AL→FP	1.914	0.299	2.795	0.005	Yes	Supported
H <sub>4</sub>	SCO→FP	1.913	0.063	0.537	0.591	No	Rejected

## 5 CONCLUSION

Only alignment significantly impacts financial performance; however, agility and adaptability do not. These findings conflict with the concurrency of triple-A by Lee (2004, 2021); but support findings that firms do not need to develop all triple-A concomitantly and better focus on selected capabilities, e.g. considering limited resources (Feizabadi 2020; Gligor 2020). Another, SCO does not significantly impact financial performance; this contradicts section 2.2, that SCO contributes to competitive advantage even when triple-A capabilities are low (Gligor et al. 2020).

As a limitation of this study, future research can explore the research question in the context of more specific markets/industries. The control variable is recommended for more effective examination, such as firms' size, age, and stage. As an additional opportunity, Mackelprang et al. (2014, as cited in Feizabadi et al. 2019b) denoted that the consequences of alignment are not consistent, noting the strong presence of unknown moderators; more profound future research is needed.

## REFERENCES

- Becker, J.-M. 2018. Re: Composite reliability. Forum.Smartpls.Com. <https://forum.smartpls.com/viewtopic.php?f=5&t=3805#top>
- Feizabadi, J., Gligor, D. M., & Motlagh, S. A. 2019a. The triple-As supply chain competitive advantage. *Benchmarking*, 26(7), 2286–2317. <https://doi.org/10.1108/BIJ-10-2018-0317>
- Feizabadi, J., Gligor, D. M., & Motlagh, S. A. 2021. Examining the synergistic effect of supply chain agility, adaptability and alignment: A complementarity perspective. *Supply Chain Management: An International Journal*, 26(4), 514–531. <https://doi.org/10.1108/SCM-08-2020-0424>
- Feizabadi, J., Maloni, M. J., & Gligor, D. M. 2019b. Benchmarking the triple-A supply chain: orchestrating agility, adaptability, and alignment. *Benchmarking*, 26(1), 271–295. <https://doi.org/10.1108/BIJ-03-2018-0059>
- Gao, Y., Feng, Z., & Zhang, S. 2021. Managing supply chain resilience in the era of VUCA. *Frontiers of Engineering Management*, 8, 465–470. <https://doi.org/10.1007/s42524-021-0164-2>
- Gligor, D. M., Feizabadi, J., Russo, I., Maloni, M. J., & Goldsby, T. J. 2020. The triple-a supply chain and strategic resources: developing competitive advantage. *International Journal of Physical Distribution & Logistics Management*, 50(2), 159–190. <https://doi.org/10.1108/IJPDLM-08-2019-0258>
- Hair, J. F., Jr., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. 2022. A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.). Los Angeles: SAGE Publications, Inc.
- Inman, R. A., Sale, R. S., Green, K. W., Jr., & Whitten, G. D. 2011. Agile manufacturing: Relation to JIT, operational performance and firm performance. *Journal of Operations Management*, 29(4), 343–355. <https://doi.org/10.1016/j.jom.2010.06.001>
- Lee, H. L. 2004. The triple-A supply chain. *Harvard Business Review*. <https://hbr.org/2004/10/the-triple-a-supply-chain>
- Lee, H. L. 2021. The new AAA supply chain. *Management and Business Review*. <https://mbrjournal.com/2021/01/26/the-new-aaa-supply-chain/>
- Min, S., & Mentzer, J. T. 2004. Developing and measuring supply chain management concepts. *Journal of Business Logistics*, 25(1), 63–99. <https://doi.org/10.1002/j.2158-1592.2004.tb00170.x>
- Whitten, G. D., Green, K. W., Jr., & Zelbst, P. J. 2012. Triple-A supply chain performance. *International Journal of Operations & Production Management*, 32(1), 28–48. <https://doi.org/10.1108/01443571211195727>

# The effect of brand experience on consumer-based brand equity development in online transportation applications in Indonesia: Mediation of emotional brand attachment

Z.A. Tasya & D.T.H. Aruan

*Universitas Indonesia, Jakarta, Indonesia*

**ABSTRACT:** The ever-growing popularity of online transportation platforms proves that consumers have personal experiences, which are the starting point for building brand equity in online transportation brands. Given the prominence of online transportation platforms in society, this study aims at analyzing the effect of brand experience on consumer-based brand equity (CBBE) development. An online survey of 300 users of online transportation application services in Indonesia provided data of empirical testing. The results showed an indirect effect of brand experience on consumer-based brand equity. In other words, the brand experience gave a fully mediated effect of emotional brand attachment to build consumer-based brand equity. This study enriches the existing literature on the factors that build brand equity and is expected to provide an overview of online transportation companies to increase their brand equity and obtain information on developing relationships between consumers and brands.

**Keywords:** Brand Experience, Consumer-based Brand Equity, Emotional Brand Attachment

## 1 INTRODUCTION

The ease of transportation services that we currently feel is one of the roles of rapid technological advances. The emergence of online transportation services seems to be closing the distance from one place to another more effectively and efficiently. The rapid development of technology indicated by the widespread use of the internet and smartphones underlies the idea of creating online transportation. This is because only by using a smartphone connected to the internet network, the users can fulfill their wishes. The data compiled by Internet World Stats (2021) stated that active internet users in Indonesia reach 77% of the total population of around 212.35 million users. This condition also supports the emergence of online applications/platforms providing convenience in mobility and daily activities, such as a ride-sourcing platform used by Transportation Network Companies (TNC). The services offered by this platform are actively being used and attached to some of the people's daily activities. They can rely on online motorcycle taxi services, order food, buy daily necessities, and send goods through an application on their smartphones. It is not surprising that this convenience changes people behavior using this service.

In business competition, the brand is the attribute most viewed by consumers. A brand is the identity of a product or service whose purpose is to differentiate it from other products or services (Ramadayanti 2019). In addition to obtaining functional benefits, consumers also begin to choose product brands based on the experience offered (Zarantonello & Schmitt 2010). In Indonesia, online transportation consumers who have experience with particular brands encourage the formation of emotional attachments to these online transportation brands. When emotional attachment level attachment is higher, it can create a difference between the preferred brand and the alternative, thereby increasing CBBE (Romaniuk & Sharp 2004). Thus, brand experience and consumers' emotional attachment to a brand are considered important to measure consumer-based brand equity. Therefore, researchers are interested in further exploring the relationship of brand experience



in developing consumer-based brand equity in online transportation service brands in Indonesia mediated by consumers' emotional attachment variables.

## 2 LITERATUR REVIEW

According to (Kotler & Keller 2011), a brand refers to a name, term, sign, symbol, design, or a combination thereof to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors. From the company side, the brand serves as a focus for consumer loyalty and because loyalty develops as an asset that guarantees future demand and increased cash flow in the future (Loken et al. 2010).

Consumers are increasingly choosing brands based on the experience offered in addition to the functional benefits of the product itself (Zarantonello & Schmitt 2010). Consumers' brand experiences are created by their awareness, emotions, and behavior during interactions with marketing elements, such as goods, services, and brand space. Brakus et al. (2009) define brand experience as the subjective and internal behavioral response of consumers evoked by the brand. Consuming a brand is not just a matter of using products and services, but it is the starting point for consumers to form brand loyalty, the highest concept in brand equity. It is the fruit of all the experiences associated with buying a brand.

In consumer behavior, consumers develop emotional attachments to marketable entities. Another theory suggests that emotional attachment to an object is a natural relationship between the individual and the object (Slater 2001). There is a three-dimensional conceptualization, including affection, connection and passion (Thomson et al. 2005).

In developing a CBBE, a brand must be able to satisfy and fulfill the needs and desires of consumers and provide the experience that consumers have expected because this can sustain the relationship (Sweeney & Swait 2008). Yoo and Donthu (2001) empirically proposed CBBE in three dimensions – brand awareness, perceived quality and brand loyalty. Credibility is related to the quality of brand signals (unobserved) to consumers, thereby increasing consumers' subjective judgments or perceptions of quality. Thus, brands that are considered credible tend to be perceived as having higher quality. Therefore, brand credibility is essential to create long-term relationships with consumers because loyalty is often built on trust and continuously meets consumer expectations (Baek et al. 2010; Erdem & Swait 2004).

## 3 METHOD

This study employs quantitative research with a survey method, with descriptive research purposes. The characteristics of the respondents were Indonesian citizens with an age range of 17 to 50 years and have used online transportation services, both ride-hailing service and orders for food and other goods and services. Questionnaires were distributed to 300 respondents who have used online transportation services in Indonesia. The data analysis technique used descriptive analysis, which is used to interpret the data obtained from the respondents by collecting, compiling and classifying the data in order to know the relationship between the variables raised. Primary data processing in this study used the Structural Equation Modeling method. (SEM) based on Partial Least Square (PLS), through two tests, namely the measurement model (outer model) and structural model (inner model).

## 4 RESULT AND ANALYSIS

Data collection with questionnaires was carried out for 21 days starting from 13 October 2021 to 3 November 2021. Through this data collection, there were 300 respondents who participated in filling out the research questionnaire, dominated by female respondents with an age range of 20-30 years, majority of them worked as employees and students with the number of transactions on online transportation applications as much as 15-20 times in one month.

#### 4.1 *Measurement model (Outer Model)*

The measurement model consists of convergent validity, discriminant validity, composite reliability, and Cronbach's Alpha. The results on the outer model indicated that all indicators had the values of outer loading 0.7, meaning that in general, all items were in accordance with their groups in the EFA test on the AVE value and composite reliability, so that these items were used for testing the main test. For the AVE calculation in this study, all latent variables had an AVE value  $> 0.5$  so that they fulfilled convergent validity. To test construct validity, discriminant validity testing also needed to be done in addition to AVE to see that the attachment between indicators or dimensions in the construct is higher than other constructs. The discriminant validity test can be seen from the square root value of AVE. According to Hair et al. (2019), the evaluation of discriminant validity was used to measure the extent to which a construct is different from other constructs in empirical standards. The criterion of Fornell-Larcker compared the square root of the AVE value with the correlation of the latent variables in this study. Based on the test results, it is known that the AVE root value is higher than the correlation between constructs, so it concluded that the construct had good discriminant validity. In addition to the validity test, a construct reliability test was also carried out by measuring two criteria, namely composite reliability and Cronbach's Alpha. A latent variable must have a Cronbach's Alpha value above 0.7 or composite reliability greater than 0.7 to meet reliability. From the tests conducted, all constructs had Cronbach's Alpha and Composite Reliability values above 0.7, meaning that all constructs are reliable.

#### 4.2 *Structural model (Inner Model)*

After testing the measurement model, this study then analyzed the structural model (inner model). The measurement parameters used to measure the structural model consisted of p-value, t-value, and coefficient of determination ( $R^2$ ). The test of the model's feasibility analysis or goodness of fit was carried out to see whether the model used in this study was feasible or not to be studied by looking at the results of  $R^2$  with guidelines of 0.75 (substantial), 0.50 (moderate), and 0.25 (weak). The test results show that the highest  $R^2$  value of the Consumer-Based Brand Equity variable was moderate because it had a value of 0.715. Furthermore, the  $R^2$  value in other variables was weak because it had a value of below 0.5. Hypothesis testing was done by looking at the value of the t-value on each path coefficient in order to determine the value of the direct effect given in this study. Subsequently it was carried out with the resampling bootstrapping technique. A hypothesis was accepted if the t-value was above 1.65 at a significance level of 0.05. Based on direct testing, all dimensional variables were directly significant to the latent variable

#### 4.3 *Analysis*

This study shows that all hypotheses had a positive and significant effect where the t-value of each variable was above 1.654. Thus, it indicated that brand experience is able to develop Source-Based Brand Equity through the mediation of the Emotional Brand Attachment variable. Although there is no direct test between Brand Experience and CBBE, Emotional Brand Attachment has a mediating effect on all variables from t values  $\pm 3$  to 5, or above t values of 1.645. These results indicate that a general decision can be made that the variable is eligible to be a variable that mediates all variables in Consumer-Based Brand Equity. These results are in line with previous studies that identified the mediating role of brand personality (Brakus et al. 2009; Shamim et al. 2016; Zarantonello & Schmitt 2010). The findings suggest that both concepts related to brands and customers have a role in the contribution of brand experience to the formation of loyalty in building CBBE.

### 5 CONCLUSION

From all the tests, the results show the positive and significant effect of the variables of brand experience, emotional brand attachment, brand credibility, and customer satisfaction on developing

consumer-based brand equity. Notably, the mediating effect of emotional brand attachment shows that it can develop consumer-based brand equity directly and directly on online transportation applications in Indonesia. Based on research findings, both brand-related concepts and customers have a role in non-brand contributions to the formation of loyalty in developing CBBE.

## REFERENCES

- Baek, T. H., Kim, J., & Yu, J. H. (2010). The differential roles of brand credibility and brand prestige in consumer brand choice. *Psychology & Marketing*, 27(7), 662–678. <https://doi.org/10.1002/mar.20350>
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand Experience: What is It? How is it Measured? Does it Affect Loyalty? *Journal of Marketing*, 73(3), 52–68. <https://doi.org/10.1509/jmkg.73.3.052>
- Erdem, T., & Swait, J. (2004). Brand Credibility, Brand Consideration, and Choice. *Journal of Consumer Research*, 31(1), 191–198. <https://doi.org/10.1086/383434>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Internet World Stats. (2021). *Asia Internet Stats by Country and 2021 Population Statistics*. Internet World Stats. <https://www.internetworldstats.com/asia.htm>
- Kotler, P., & Keller, K. (2011). *Marketing Management*. Prentice Hall PTR.
- Loken, B., Houston, M. J., & Ahluwalia, R. (2010). *Brands and Brand Management: Contemporary Research Perspectives*. Routledge.
- Romaniuk, J., & Sharp, B. (2004). Conceptualizing and measuring brand salience. *Marketing Theory*, 4(4), 327–342. <https://doi.org/10.1177/1470593104047643>
- Shamim, A., Ghazali, Z., & Albinsson, P. A. (2016). An integrated model of corporate brand experience and customer value co-creation behaviour. *International Journal of Retail & Distribution Management*, 44(2), 139–158. <https://doi.org/10.1108/IJRDM-06-2015-0079>
- Slater, J. S. (2001). Collecting Brand Loyalty: a Comparative Analysis of How Coca-Cola and Hallmark Use Collecting Behavior to Enhance Brand Loyalty. *Advances in Consumer Research*, 28, 362–369.
- Sweeney, J., & Swait, J. (2008). The effects of brand credibility on customer loyalty. *Journal of Retailing and Consumer Services*, 15(3), 179–193. <https://doi.org/https://doi.org/10.1016/j.jretconser.2007.04.001>
- Thomson, M., MacInnis, D. J., & Whan Park, C. (2005). The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands. *Journal of Consumer Psychology*, 15(1), 77–91. [https://doi.org/10.1207/s15327663jcp1501\\_10](https://doi.org/10.1207/s15327663jcp1501_10)
- Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research*, 52(1), 1–14. [https://doi.org/10.1016/S0148-2963\(99\)00098-3](https://doi.org/10.1016/S0148-2963(99)00098-3)
- Zarantonello, L., & Schmitt, B. H. (2010). Using the brand experience scale to profile consumers and predict consumer behaviour. *Journal of Brand Management*, 17(7), 532–540. <https://doi.org/10.1057/bm.2010.4>

## Antecedents of intention to visit Riau Island through the role of tourist satisfaction

K. Keni

*Universitas Tarumanagara, West Jakarta, DKI Jakarta, Indonesia*

N. Wilson

*Universitas Bunda Mulia, North Jakarta, DKI Jakarta, Indonesia*

T. Ai Ping

*Universiti Sains Malaysia, Penang, Malaysia*

**ABSTRACT:** As an industry which has been severely affected by the current pandemic, the declining number of people who were infected by this so-called coronavirus has prompted the Indonesian government to ease travel restrictions for travelers, thus enabling the Indonesian tourism sector to recover. Therefore, this study was conducted with the purpose of understanding factors which will eventually influence tourists' intention to visit one of the most popular tourist destinations in Indonesia, which is Riau Island. Using closed questionnaires with a 7-point Likert scale as the measurement scale, these questionnaires were filled in by 400 respondents, of which 342 of them were usable and valid for analysis. Implementing the PLS method using SmartPLS 3.3.3 software, the authors find that perceived financial risk and destination image serve as significant factors that could influence or determine people's intention to visit Riau Island both directly and indirectly through the existence of tourist satisfaction.

### 1 INTRODUCTION

Intention is one of the most significant variables in the concept of marketing, since it is the one which drives individuals' behavior. For example, when intention is strong enough to convince the individual that a behavior must be performed, the intention would transform into the actual behavior. The concept of visit intention serves as an important antecedent which could strongly determine the fate of tourism companies. Therefore, it is no wonder that the concept has been intensively studied to determine how intention could have an integral effect in the development of tourism businesses.

This study has identified three main factors which could affect an individual's intention to visit a destination: perceived financial risk, destination image, and tourist satisfaction. Perceived financial risk is consumers' perception concerning whether or not visiting certain places will cause disadvantages to them. Therefore, every tourism company should understand the importance of financial risk and that various strategies are required to minimize it. Furthermore, destination image is the visitors' assessment concerning some tourist destination places based on the experiences that the tourists had with regard to the places. Consumers tend to only visit places with a positive image. Meanwhile, tourist satisfaction could also influence tourists' intention to visit certain destinations, since tourists will only visit places which could fulfil all of the expectations that they have. Therefore, companies' abilities to offer any kinds of experiences could affect how visitors think about the place compared to other similar destination places, and more importantly, affect their intention to visit (and ultimately revisit) the place.

While previous studies have underlined the importance of perceived financial risks (Dash 2020) and destination image in affecting tourists' intention to visit (Carballo et al. 2021), none of these

studies attempted to assess the role of satisfaction which has been studied numerous times as an important factor with regard to intention. Therefore, this study was conducted to fill this gap by adding tourist satisfaction as the mediating variable and to assess the impact of tourist satisfaction toward tourists' intention to visit a destination in Indonesia.

## 2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### 2.1 *Perceived financial risk*

Perceived financial risk is individuals' perception concerning whether or not they could suffer from any financial-related loss when visiting certain places due to the failures of these places to perform as expected (Khandelwal et al. 2021).

### 2.2 *Destination image*

Destination image could be understood as tourists' assessment about the overall quality and state of a place based on their perceptions and other information regarding the place (Wilson 2018).

### 2.3 *Tourist satisfaction*

Tourist satisfaction is how companies are able to fulfil the expectations that visitors have; it is so important in ensuring that visitors will visit certain destinations within the realm of tourism because dissatisfied tourists will be most likely to choose other locations (Al-Msallam 2020).

### 2.4 *Visit intention*

Visit intention can be defined as tourists' willingness to visit a certain place (Wilson 2020). In terms of understanding the concept of visit intention, researchers have underlined that intention serves as an important antecedent of an individual's behavior (Wang et al. 2018).

### 2.5 *The impact of perceived financial risk toward tourist satisfaction and visit intention*

Widyastuti et al. (2021) underlined the significant and negative impact that perceived financial risk had toward individual's intention in purchasing certain products. Similarly, Dash (2020) also found that consumers' intention to visit certain places will increase when they perceive that there won't be any kinds of risks which might cause them financial loss from the transactions. Based on all of these previous findings, this study would like to propose the following hypotheses:

H1: Perceived financial risk had a significant impact on tourist satisfaction

H2: Perceived financial risk had a significant impact on visit intention

H3: Perceived financial risk had an indirect significant impact on visit intention through tourist satisfaction

### 2.6 *The impact of destination image toward tourist satisfaction and visit intention*

A previous study by Carballo et al. (2021) showed that a tourist destination place which was viewed positively by the public will attract stronger intention to visit the place compared to places which were perceived negatively. Meanwhile, other studies by Cham et al. (2021) found the positive and significant correlation between destination image and tourists' satisfaction. Based on all of these previous findings, this study would like to propose the following hypotheses:

H4: Destination image had a significant impact on tourist satisfaction

H5: Destination image had a significant impact on visit intention

H6: Destination image had an indirect significant impact on visit intention through tourist satisfaction

### 2.7 *The impact of tourist satisfaction toward visit intention*

Numerous studies found that an individual's intention to visit tends to increase if consumers' satisfaction toward the place is high (Chen & Wang 2019). Another study found the significant impact of satisfaction toward intention to visit, in which, tourists tend to only visit certain destinations if they felt that they'll receive some satisfying experiences (Rasoolimanesh et al. 2021).

Based on all of these previous findings, this study would like to propose the following hypotheses:

H7: Destination image had a significant impact on tourist satisfaction

## 3 METHODOLOGY

This study was conducted by using a quantitative-survey method. The data was gathered by using closed questionnaires which were virtually distributed to a total of 400 tourists who visited Riau Island at least once in the past 3 years. The purposive sampling method was chosen to ensure that the respondents satisfied the criteria. 58 surveys were omitted since they contained invalid responses. A 7-point Likert scale was implemented to measure every response given by the respondents toward a total of 18 indicators.

## 4 RESULTS AND ANALYSIS

A total of 342 surveys were analyzed by using PLS-SEM method with the help of SmartPLS 3.3.3. When using PLS-SEM method, the outer model and the inner model assessment are required to be performed in order to determine the validity and the reliability of all data.

### 4.1 *Outer model assessment*

Outer model assessment was conducted to ensure that the validity and reliability of the data were achieved. There are several criteria for validity and reliability, which are the loadings of each indicator and the AVE of each variable should be greater than 0.5, the composite reliability and HTMT value of every variable should be greater than 0.7 and 0.85, and using the Fornell-Larcker criterion, the correlation value between the same variable should exceed the correlation value between a variable and the other variables. Based on the results of the assessment, all of the criteria had been achieved. Hence, all of the data are considered valid and reliable.

### 4.2 *Inner model assessment*

The inner model assessment was conducted to determine whether each hypothesis was supported or rejected. In accordance with the results of the path coefficient assessment presented on Table 1, it could be concluded that the relationships between all variables were significant, since the p-values are lower than 0.05. Hence, it could be concluded that all hypotheses have been supported.

### 4.3 *Discussions*

This study was conducted to assess the effect of perceived financial risk and destination image toward tourists' intention to visit Riau Island through the role of tourist satisfaction. This study found that both variables significantly affect intention to visit Riau Island through the role of satisfaction. Hence, it could be understood that the role of companies who are managing tourist destination places in Riau Island play a crucial role in ensuring that tourists' perception concerning financial risks will be low. Furthermore, the companies' ability to maintain the positive image can also serve as a crucial aspect which could boost tourists' confidence that all of these destination places in Riau Island were good and enjoyable places to visit. In the end, the companies' ability to reduce any financially induced risks associated with visiting Riau Island and to maintain the image of these tourist destination places in Riau Island will also enhance people's satisfaction toward the island, and thus the visitors' satisfaction can form their intention to visit the island.

Table 1. Hypotheses testing results.

Hypotheses	p-value	Conclusion
H1: Perceived financial risk had a significant impact on tourist satisfaction	0.000	H1 Supported
H2: Perceived financial risk had a significant impact on visit intention	0.000	H2 Supported
H3: Perceived financial risk had an indirect significant impact on visit intention through tourist satisfaction	0.014	H3 Supported
H4: Destination image had a significant impact on tourist satisfaction	0.000	H4 Supported
H5: Destination image had a significant impact on visit intention	0.002	H5 Supported
H6: Destination image had an indirect significant impact on visit intention through tourist satisfaction	0.030	H6 Supported
H7: Tourist satisfaction had a significant impact on visit intention	0.000	H7 Supported

## 5 CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS

### 5.1 Conclusions

This study concluded that perceived financial risk and destination image significantly affect satisfaction and intention to visit destination places in Riau Island. Furthermore, tourist satisfaction partially mediated the effects of perceived financial risk and destination image on visit intention.

### 5.2 Managerial implications

This study could be used as the basis for tourism companies in Riau Island to implement strategies to reduce financial risks, such as ensuring the right amount of price for products offered. The companies' ability to run their business in a positive way could help the company in enhancing their positive image; visitors prefer tourist destination places which perceived positively by the public. Therefore, ensuring that the companies won't do any negative things could boost people's positive perception toward the place, and such perception could further enhance their level of satisfaction and further increase their intention to visit the island during their next vacation.

### 5.3 Limitations and directions for future research

Despite being conducted in a rigorous manner, several limitations still exist in this study. First of all, since this study was conducted in Riau Island, the results may be difficult to generalize to other destination places. Therefore, this study suggests other authors choose other destinations to increase the variability of the results. Moreover, this study suggests future studies could utilize other variables which could also significantly affect visitors' intention to visit certain destination place. Meanwhile, since most of the respondents in this study were Indonesians, authors would like to suggest that future researchers expand the boundaries of the respondents by including respondents from other nations to increase the variability of the respondents.

## REFERENCES

- Al-Msallam, S. 2020. The impact of tourists' emotions on satisfaction and destination loyalty – an integrative moderated mediation model: tourists' experience in Switzerland. *Journal of Hospitality and Tourism Insights*, Vol. 3 No. 5, pp. 509–528.
- Carballo, R.R., León, C.J. and Carballo, M.M. 2021. Gender as moderator of the influence of tourists' risk perception on destination image and visit intentions. *Tourism Review*, Vol. ahead-of-print.
- Cham, T.-H., Cheah, J.-H., Ting, H. and Memon, M.A. 2021. Will destination image drive the intention to revisit and recommend? Empirical evidence from golf tourism. *International Journal of Sports Marketing and Sponsorship*, Vol. ahead-of-print No. ahead-of-print.

- Chen, H.-T. and Wang, C.-H. 2019. Incivility, satisfaction and turnover intention of tourist hotel chefs: Moderating effects of emotional intelligence. *International Journal of Contemporary Hospitality Management*, Vol. 31 No. 5, pp. 2034–2053.
- Dash, A. 2021. Exploring visit intention to India for medical tourism using an extended theory of planned behaviour. *Journal of Hospitality and Tourism Insights*, Vol. 4 No. 4, pp. 418–436.
- Khandelwal, C., Kumar, S. and Verma, D. 2021. Exploring financial risks disclosure: evidence from Indian listed companies. *Qualitative Research in Financial Markets*, Vol. 13 No. 5, pp. 549–579.
- Rasoolimanesh, S.M., Seyfi, S., Rather, R.A. and Hall, C.M. 2021. Investigating the mediating role of visitor satisfaction in the relationship between memorable tourism experiences and behavioral intentions in heritage tourism context. *Tourism Review*, Vol. ahead-of-print No. ahead-of-print.
- Widyastuti, U., Febrian, E., Sutisna, S. and Fitrijanti, T. 2021. Market discipline in the behavioral finance perspective: a case of Sharia mutual funds in Indonesia. *Journal of Islamic Accounting and Business Research*, Vol. ahead-of-print No. ahead-of-print.
- Wilson, N. 2018. The Impact of Service Quality and Brand Image toward Customer Loyalty in the Indonesian Airlines Industry. *Jurnal Manajemen Indonesia*, Vol. 18 No. 3, pp. 222–234.
- Wilson, N. 2020. The Impact of Perceived Usefulness and Perceived Ease-of-Use Toward Repurchase Intention in the Indonesian E-Commerce Industry. *Jurnal Manajemen Indonesia*, Vol. 19 No. 3, pp. 241–249.



# Multigenerational travel: A qualitative study of holiday decision making process of Indonesian family

V.A. Hapsari, S. Wijaya & T. Santoso

*Faculty of Business and Economics, Petra Christian University, Surabaya, Indonesia*

**ABSTRACT:** Multigenerational travel is an increasing trend of family tourism across three age groups, including grandparents, parents and children. This study examines the decision-making process for multigenerational family travel to increase marketers' understanding of the tourism sector. A qualitative research method was used to conduct interviews with four Indonesian families that enjoyed family travel in the last five years. The results showed that there were several considerations to make in regard to the first and third generation. Furthermore, it is essential to consider mutual comfort for all the age groups involved when planning multigenerational travel. Women were relatively more involved than men in planning travels with dominance at all stages. Therefore, marketing strategies and messages need to be tailored to women.

**Keywords:** family travel; multigenerational travel; travel decision-making; family decision making; consumer behavior.

## 1 INTRODUCTION

Vacations help families interact and socialize either at home or by traveling to tourist attractions. Family travel refers to activities that involve getting away from one's residence for more than a day with children or parents (Schänzel et al. 2012). This has many benefits, including improving communication and harmony among family members (Hallman & Benbow 2007; Larsen 2005). Multigenerational travel is a popular family trip that involves three age groups, including grandparents, parents, and children (Lowry 2017; Yang et al. 2020). According to OECD (2008), large families living geographically apart have stronger multigenerational bonding developed through trips with lasting memories. The baby boomers are recently becoming healthier and agile grandparents, interested in spending quality time with their grandchildren (Schänzel & Yeoman 2015).

To evaluate and develop marketing strategies, stakeholders need to research and understand how customers make visitation decisions (Swarbrooke & Horner 2007). Married couples and children in family decision-making have attracted considerable interest from marketing and tourism research (Decrop 2005). Previous research on family decision-making has focused heavily on the nuclear family travels consisting of father, mother, and children (Schänzel & Yeoman 2015). Lowry (2017) stated that multigenerational travel had continued to increase over the last few years. However, research that explores multigenerational decision-making during family travel is limited (Yang et al. 2020). Therefore, this study examines the multigenerational travel decision-making process in Indonesian families. The results will also show the primary considerations when planning a multigenerational trip and each member's role in influencing the process.

## 2 LITERATURE REVIEW

### 2.1 *Multigenerational travel*

According to Schänzel et al. (2012), family travel refers to any activity that involves going away from one's residence with other members for more than a day. It provides an opportunity to increase

bonding, fun, and togetherness (Hilbrecht et al. 2008). Travels conducted by non-traditional family groups include grandparents/parents with grandchildren/children and extended family members such as aunts and uncles (Schänzel et al. 2005). Multigenerational travel refers to a family trip conducted across three different age groups such as grandparents, parents, and children. These trips have attracted service providers' attention due to changes in socio-demographics and travel patterns, diverse family compositions with the scattered member.

## 2.2 Family travel decision-making

Tourist behavior model contains five comprehensive stages: need recognition, information seeking, alternative evaluation, buying decisions, and post-buying behavior (Rosca 2017). Family decision-making is a complex dynamic process influenced by joint and different roles (Ekasasi 2005). Family members interact and influence each other such that one person can play a certain role or conduct the entire decision-making process. The roles developed by Nanda et al. (2007); Schiffman et al. (2012); Solomon (2018) are as follows: *Initiator*, the family member(s) who propose ideas or identifying needs; *Information Seekers*, those who research the destinations, accommodations and transport; *Gatekeeper*, individuals who become the main information seeker and control data flow about a product or service to the family; *Influencer*, who influences the decision outcome; *Decision-maker*, the family member who has formal or informal power to make the final buying decision; *Buyer*, who purchases a particular product or service; an *Assistant* who prepares products for consumption; and last is the *User*, who consumes or directly experiences the products or services. According to Solomon (2018), there are two basic types of buying decisions in the family, including consensual and accommodative. Family members agree on the desired item in the consensual decision, but there may be discussions or minor differences about the buying process. In the accommodative buying decision, family members have different preferences or priorities unless individuals bargain, coerce, compromise, or use power to win.

## 3 METHODS

This study used a qualitative approach to develop an understanding of the multigenerational travel decision-making process. A purposive sampling technique was used to determine the study informants, who were four Indonesian families that have conducted multigenerational travels consisting of grandparents, parents, and children. The selected families must have traveled in the last five years without involving non-nuclear members such as uncles and aunts. The required travel was a non-business or family visitation for more than 3 days, where the family used commercial lodging facilities. Interviews were conducted with one key informant dominantly involved in planning multigenerational travels in each family, specifically the second generation. The first and third generations were also represented by one member from the whole group, making the total number of participants to be six. Semi-structured interviews were conducted from August to September 2020, with each informant taking 30 minutes to 1.5 hours. Face-to-face interviews could only be conducted with two informants due to the COVID-19 pandemic. The rest of the informants were interviewed through video calls, while first-generation subjects used telephones. Each recording was transcribed with the informant's consent and attached to pseudonyms to protect identities. Data was analyzed using qualitative content techniques, which reduces and summarizes obtained information to conclude (Miles et al. 2014).

## 4 RESULTS AND DISCUSSIONS

Three themes emerged in relation to the considerations in planning multigenerational travel. First, considerations that focused on the presence of the third generation or the grandchildren. The destination choice was made in consideration of the baby's age and the familiarity with the public facilities of the visited destination. In addition, travel time also needed to be adjusted to their children's school holidays. Second, considerations that focused on the presence of the first generation

or the grandparents. This includes the selection of destination, type of accommodation in which they stayed, and activities during the trip by considering the grandparents' health condition. One informant stated that her family intentionally skipped many activities and made sure the schedule was not too busy to avoid getting her parents extremely tired. The third theme was considerations that focused on shared comfort between. This is more relevant when the informants traveled overseas, one needs to consider direct planes with full service to ensure all family members are comfortable.

Table 1. Coding-category-themes.

Informants	Generated Codings	Categories	Emerging Themes
Family #1	baby-friendly destination; destination familiarity;	children-friendly destination; children-friendly transportation selection;	The presence of the third generation
	road trip preference	holiday length to adjust with children's age;	
Family #2	night flight preference; length of stay is subject to change	holiday time to adjust with children's free time.	
Family #4	travel time during children school holiday		
Family #4	find a safe destination for a grandmother with a health restriction.	visited destination to adjust with grandparents' health condition;	The presence of the first generation
Family #2	time and destination's crowdedness	travel schedule to adjust with grandparent age.	
Family #3	flexible trip schedule		
Family #2	less tight itinerary		
Family #2	accommodation that caters all family members	comfort is the top priority when searching for the accommodation for grandparents' needs.	
Family #3	connecting room availability quiet hotel location hotel prices adjust with grandmother's budget		
Family #2	direct flight without transit	Comfortable transportation	Mutual comfort
Family #4	travel was arranged by tour operator	travel method depends on the family size	

The results also showed that the first stage of the multigenerational travel decision-making process comes from women in the first and second generations. The desire to travel is related to a wish to spend time with family and make grandparents happy. Eid and school holidays are often chosen for vacations, and planning is conducted one to three months before the trip. Generally, mothers conduct the second stage or seek information and evaluations, while online agencies book accommodations and flights. Children have a role in the information-seeking process, but their influence is limited in the final decision. Furthermore, every family has a different way of deciding on a travel plan, but the overall decision cannot be separated from the mother. Grandparents who still have an income are involved in funding and booking of various products. Lastly, travel satisfaction evaluation shows that travelers are happy and could take another trip or recommend their friends' services.

## 5 CONCLUSION

Multigenerational travel is a trend of family tourism that has increased globally in the last decade. This study examines the decision-making process for multigenerational family travel to increase marketers' understanding of the tourism sector. The results showed that the first and third generations in multigenerational travel influence several considerations such as destination, accommodation, transportation selection, schedule arrangement, vacation time, and length. Since every family has different issues, the considerations made are not similar. Generally, each family will focus on the first or third generation and mutual comfort.

This study's results provide several implications to be followed by tourism industry managers. For instance, lodgings play an important role in multigenerational tourism travel. Therefore, family-oriented lodgings could be good strategies for promotions in the industry. Such lodging places include hotels, resorts, apartments, and villas that place for family gatherings. There are no lodging places in Indonesia that conduct special promotions for the multigenerational family segments. Promotions conducted by lodging places only focus on the appearance of rooms or buildings intended for general audiences. Since the multigenerational travel trend is increasing every year, companies could use this opportunity for accommodation establishments to target this segment.

The results also show that women were more involved in planning multigenerational trips. This implies that marketing strategies and messages should be tailored to women. The best marketing strategy to attract female consumers is to provide discounts. Furthermore, since the desire for multigenerational travel is linked to quality time and making grandparents happy, marketing messages can focus on family togetherness. For instance, adding grandparents in promotional materials to show togetherness and happy moments with second and third generations could attract more customers. Promotion can be conducted through several mediums such as social media, Facebook, Instagram, or billboards. Lodging places should also be registered with online travel agencies (OTAs) to make travel bookings easier and more convenient.

## REFERENCES

- Decrop, A. 2005. Group processes in vacation decision-making. *Journal of Travel and Tourism Marketing*, 18(3): 23–36.
- Ekasasi, S.R. 2005. The role of children in family decisions making: a theoretical review. *Journal Siasat Bisnis*, 3, 25–41.
- Hallman, B. C., & Benbow, S. M. P. 2007. Family leisure, family photography and zoos: Exploring the emotional geographies of families. *Social & Cultural Geography*, 8: 871–918.
- Larsen, J. 2005. Families seen sightseeing: performativity of tourist photography. *Space and Culture*, 8(4): 416–34.
- Lowry, L. L. 2017. *The SAGE international encyclopedia of travel and tourism*. Thousand Oaks: SAGE Publications, Inc.
- Miles, M.B., Huberman, A.M., & Saldana, J. 2014. *Qualitative data analysis: A methods sourcebook*, edition 3. Sage Publications.
- Nanda, D., Hu, C., & Bai, B. 2007. Exploring family roles in purchasing decisions during vacation planning. *Journal of Travel & Tourism Marketing*, 20(3–4): 107–125.
- OECD. 2008. The future of the family to 2030-A scoping report. OECD International Futures Programme.
- Rosca, I. 2017. Consumer's behavioural patterns: the Romanian tourists. [Doctoral dissertation, University of Girona]. Tesis Doctorals en Xarxa. <http://hdl.handle.net/10803/482205>
- Schänzel, H. A., Smith, K. A., & Weaver, A. 2005. Family holidays: A research review and application to New Zealand. *Annals of Leisure Research*, 8(2–3): 105–123.
- Schänzel, H. A., Yeoman, I., & Backer, E. 2012. *Family tourism: Multidisciplinary perspectives*. Great Britain: Short Run Press Ltd.
- Schänzel, H. A., & Yeoman, I. 2015. Trends in family tourism. *Journal of Tourism Futures*, 1(2): 141–147.
- Schiffman, L. G., Kanuk, L. L., & Hansen, H. 2012. *Consumer behavior: A European outlook*, second edition. New Jersey: Pearson Education.

- Solomon, M. 2018. *Consumer behavior*. New Jersey: Pearson Education.
- Swarbrooke, J., & Horner, S. 2007. *Consumer behavior in tourism*, second edition. Elsevier Ltd.
- Therkelsen, A. 2010. Deciding on family holidays: Role distribution and strategies in use. *Journal of Travel & Tourism Marketing*, 27(8): 765–779.
- Yang, M. J. H., Khoo-Lattimore, C., & Yang, E. C. L. 2020. Three generations on a holiday: Exploring the influence of Neo-Confucian values on Korean Multigenerational Family vacation decision making. *Tourism Management*, 78: 104076.

## Motivation to work on employee performance (survey at RSUD R. Syamsudin, SH-Sukabumi)

Y.S. Saleh & Y.W. Suwandi  
*Magister Management STIE EKUITAS*

**ABSTRACT:** This research comes from the existing phenomenon, that employee performance has not been optimal due to the optimal motivation of research work carried out at R Syamsudin Hospital, S.H. Sukabumi City. This is a hospital owned by the Sukabumi City Government that has been established as a regional referral hospital in West Java, a hospital that serves health referrals from various regions. The research uses a quantitative method with descriptive and verification analysis, with the goal to find out the condition of work motivation and employee performance and to find out the influence of work motivation on employee performance. The sample used 195 respondents, with a simple linear regression method. Results from quantitative methods, using descriptive analysis, showed that the average work motivation of 3.81 showed good criteria, employee performance with an average of 3.75 showed good criteria. The results of the verification analysis show that there is a positive and significant influence between the work motivation variable on employee performance with a determination coefficient value ( $R^2$ ) of 0.775 or 77.5%, and other variables outside the model of 0.225 or 22.5%.

**Keywords:** Work Motivation, Employee Performance, RSUD R. Syamsudin, SH.

### 1 INTRODUCTION

Human resources as the main factor in making changes and developments with the support of facilities and infrastructure from various sectors, one of which is in the field of health services. RSUD R Syamsudin, S.H. Sukabumi City hospital is owned by the Sukabumi City Government and has been established as a regional referral hospital in West Java to provide referral health services from Sukabumi City, Sukabumi Regency, Cianjur Regency, Bogor Regency and Lebak Regency. This determination brings its own consequences for the development of the hospital.

Along with the current development, the hospital can not only be managed by the local government alone. In carrying out its services the hospital requires a very large cost to pay for the operation of its services, thus it requires a strategy so that the Hospital can compete and survive the current competition. In this case the Hospital is not only managed solely for social purposes only, but is oriented to profit marking as well, because if it only relied on the budget of the local government alone it would be difficult for hospitals to progress and develop. Along with the development of the world of health that adapts to the current needs, every hospital is required to provide complete services in accordance with patient expectations so that it needs to always improve the quality of its services, including professional health and human resources facilities.

In improving the quality of service, the hospital needs to encourage its employees to work better. Employee work motivation as a determining factor in improving employee performance. The results showed that the motivation of the employees of RSUD R. Syamsudin SH is still low, as can be seen from the results of performance evaluations obtained over the last five years as follows:

Table 1. Evaluation of the Performance of RSUD R. Syamsudin, SH. Sukabumi City Period 2014–2018.

NO	Year	Number	Predicate	Information
1	2014	89.80	AA	Healthy
2	2015	90.15	AA	Healthy
3	2016	90.80	AA	Healthy
4	2017	86.35	AA	Healthy
5	2018	79.80	A	Healthy

Source: RSUD R. Syamsudin, SH. Sukabumi City

Based on the data above from the results of the performance evaluation of Syamsudin Hospital, SH. Sukabumi City, from 2014 to 2016, there was an increase with the predicate AA, while from 2016 to 2018, there was a significant decrease from 90.80 to 79.80. The factor that becomes a decrease in performance is caused by decreased employee performance. This can be because work motivation is still below average, with many employee delays in work hours and also other causative factors. Mangkunegara (2017) performance is the performance of work or work results (output) both the quality and quantity achieved by human resources unity period of time in carrying out their work duties in accordance with the responsibilities given to him. Sherman Bohlander and Chruden (Emron, Yohny, and Imas, 2016:167). The study of motivation is an attempt to determine answers to statements, such as why some employees seek higher levels of responsibility and some don't, and why some wage incentives stimulate some employees but others don't. These statements continue to be appointed by those in charge of human resource management. The process of motivation is complex and always changing, it is impossible for the answer to these statements to be clear. Many variables must be identified and considered to understand the motivational process.

## 2 RESEARCH METHODOLOGY

The method used in this study is a descriptive and verification method using a descriptive survey method and explanatory survey. The data collection method was a questionnaire to employees of RSUD R. Syamsudin, SH –Sukabumi. There were 195 respondents.

### 2.1 *Instrument test results*

Validity test results showed that 14 statement items for motivation and 15 statement items for employee performance showed valid, reliable test results of employee motivation and performance. The variables were declared reliable, and normality test results using Kolmogorov–Smirnov tests were said to be the norm because alpha values  $>0.05$  for work motivation values (X)= 0.090 and Employee Performance values (Y) = 0.060.

## 3 RESULTS AND DISCUSSIONS

### 3.1 *Descriptive analysis results*

The descriptive research on work motivation formed with four dimensions, namely needs, encouragement, actions and overall satisfaction resulted in an average of 3.81 with good criteria. For employee performance variables formed with three dimensions namely knowledge, skills and competence resulted as a whole in an average score of 3.78 with good criteria.

### 3.2 *Verification analysis*

The calculation of the coefficient of determination (r squared) expressed in percentages illustrates the amount of contribution of all free variables, i.e., Work Motivation (X) in determining variations

in Employee Performance (Y) is 0.775 or 75.5%. While other factors that are not studied and also affect employee performance are indicated by the value of  $\rho_{Y\varepsilon}$  = or by 0.225 or 22.5% (see Figure 1).

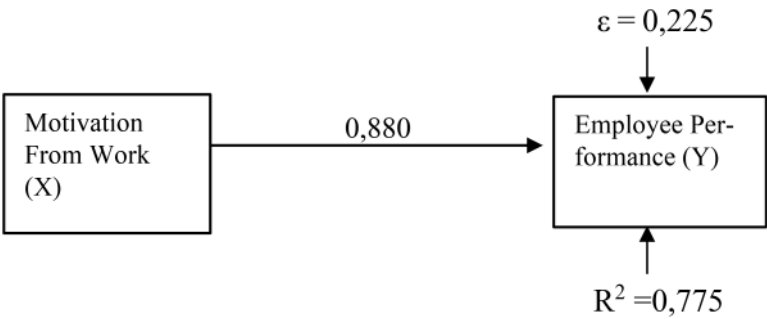


Figure 1. The effect of work motivation on employee performance.

#### 4 CONCLUSIONS AND SUGGESTIONS

The results of research on work motivation and employee performance in RSUD. R. Shamsudin, SH, can be summed up as follows:

##### 4.1 *Work motivation and employee performance*

###### a. Work Motivation.

The results of data in the field of Employment Motivation measured by four dimensions of Needs, Encouragement, Action and Satisfaction show that the average value of the Work Motivation variable (X) is 3.81 with a good range of criteria.

###### b. Employee Performance.

Based on the analysis of each employee performance statement item measured by two dimensions: Knowledge, Skills, and Competence, the average value of employee performance variable (Y) is 3.78, thus the criteria of employee performance, is in the good criteria.

##### 4.2 *The effect of work motivation on employee performance*

The results of the test statistically showed that the effect of Work Motivation on Employee Performance was significant. These results are supported by statistical testing showing that the effect is significant, which is based on the magnitude of the t-count value (25,797) > t-table (1.66). The meaning of the statistical test states that Work Motivation has a direct influence on Employee Performance by 77.5%, meaning that if Work Motivation increases then Employee Performance will increase as well.

#### 5 SUGGESTION

Work motivation needs to be improved at R. Syamsudin Hospital, SH, namely by providing adequate compensation both directly and indirectly, clear work procedures, and future guarantees for employees, so that employees feel motivated in work.

Employee performance needs to be improved through the skill dimension, meaning that in improving employee performance, employees are given training, workshops, etc. that can support the skills of the employees themselves. Employees whose education is still low can be brought to a



higher level, by being given awards for outstanding employees, given scholarships and time if the employee is studying, and employees can be given guarantees for their future so that employees will commit to their place of work.

## REFERENCES

- Anwar Prabu Mangkunegara. 2017. Manajemen Sumber Daya Manusia. Perusahaan. Bandung: Rosda Edison, Emron, Anwar, Yohny dan Komariyah, Imas. 2016. Manajemen Sumber. Daya Manusia. cetakan ke-1. Bandung: Alfabeta.
- Permendagri No. 61 tahun 2007 “Rumah Sakit RSUD R. Syamsudin, SH. Kota Sukabumi. Merupakan Rumah Sakit Tipe B+ (Rumah Sakit Pendidikan).
- Undang-Undang Nomor 44 Tahun 2009, Undang-undang yang mengatur tentang Rumah Sakit.

# A phenomenological investigation of career stagnation among Indonesian women

M.S. Perdhana

*Faculty of Economics and Business, Diponegoro University, Indonesia*

D.R. Sawitri

*Faculty of Psychology, Diponegoro University, Indonesia*

M.I. Muslim

*Faculty of Economics and Business, Diponegoro University, Indonesia*

**ABSTRACT:** This qualitative study investigates the antecedents of career stagnation among female senior staff in an Indonesian non-profit, religious-based organization. Following the rise of women leadership in Indonesian organizations, knowledge about the condition of women leadership in Indonesia is lacking. Using a phenomenological approach, this study interviewed eight senior female staff working in two Indonesian zakat foundations to gain insight about their leadership capability and career advancement opportunities. The findings of this study revealed the influence of individual, social and preference factors towards career advancement and promotion to leadership position. Implications for human resource practice were discussed.

## 1 INTRODUCTION

Women's involvement in Indonesia's labor market has increased over the years. Based on the data released by the International Labour Organization, 38% out of 127 million workers in Indonesia are women (International Labour Organization 2016). This is in line with the data released by Statistics Indonesia (2016), which demonstrated that women's workforce has increased from 42,668,611 in 2015 to 45,468,346 in 2016. Despite an increase in the number of women within the workforce, it seems that the opportunity for women to rise to managerial positions in Indonesia is still limited. The lack of appropriate qualifications was argued to be the main barrier for women to rise to managerial positions (Bjerk 2008), along with the discrimination within the performance evaluation system among men and women (Jogulu & Wood 2008).

## 2 LITERATURE REVIEW

The glass ceiling phenomenon refers to any barrier hindering the career advancement of women (U.S. Glass Ceiling Commission 1995). Laksanti et al. (2017) investigated the glass ceiling phenomenon in Indonesian private and public organizations, and their findings demonstrated that the glass ceiling was considered absent. The participants could not recall any kind of action or policy that hindered their career advancement in the past. Yet, all of them were still 8 to 9 levels below the CEO within the organization's career path despite the fact that they would retire within 5 to 7 years. Laksanti et al.'s (2017) findings might be caused by the ability of Indonesian women to cope with the glass ceiling, which made them feel that they have never experienced it.

Research findings from other South-East Asian countries have also revealed that there were specific factors contributing to the women's career advancement. According to Li and Leung (2001),

Singaporean women faced stereotyping problems from the society, as well as organizational factors such as promotion policies from the companies. More than a decade afterwards, many Singaporean women still have to leave their work permanently due to the responsibilities of motherhood (Yoon 2015). In Malaysia, the antecedent of the glass ceiling was the perception that women's leadership was considered less effective compared to men's (Jogulu & Wood 2008). The glass ceiling phenomenon in Thailand is more complex since women have to face individual, interpersonal, organizational, and society problems to advance in managerial positions (Napasri & Yukongdi 2015).

The glass ceiling is also present in South Asia and Arab countries. In Sri Lanka, the main factors contributing to glass ceiling are individual factors, such as the lack of confidence and negative perceptions towards working women in which they were considered manipulative and emotional (Bombuwela & De Alwis 2013). Furthermore, there was a traditional belief that women would not be able to replace men as the bread winner. Thus, Sri Lankan women would always face difficulties from the society when they want to pursue their career (Bombuwela & De Alwis 2013). In Bahrain, the lack of education, skills and inability to cope with work–family conflicts caused women to experience the glass ceiling (Pillai et al. 2011). Nevertheless, based on Al-Manasra's (2013) study in Jordan, the glass ceiling effect toward women could be minimized with support given by the family and society.

Despite the vast literatures on the glass ceiling in Asia, there was a gap where previous research has tended to focus on the glass ceiling investigation in for-profit organizations. We decided to do the opposite—investigate the glass ceiling in the non-profit sector. According to The White House Project, 73% of the nonprofit organizations' employees are women, women comprise only 11% of leadership in the nonprofit sector (The White House Project 2009).

Among nonprofit organizations in Indonesia, we focus our attention to investigate the glass ceiling in Indonesian zakat foundations. The importance of zakat foundations in Indonesia is vital, since almost 90% of the country's total population is Muslim. In Islam, "zakat" is the terminology referring to individual obligation to donate some of an individual's wealth for charitable purposes. In many cases, zakat is donated through a zakat foundation where it will be distributed to those in need. According to a 2016 report, the zakat potential in Indonesia was equal to almost USD 21 billion (Republika 2017). Additionally, our preliminary interviews of 10 women working in the three largest Indonesia zakat foundations revealed the fact that the amount of salary received by zakat foundations' employee were lower compared to those working in the private sector or government institution. Interestingly, our participants' career was stagnant for years, yet they chose to remain working in the organization. Thus this study raised several questions: (1) does the glass ceiling phenomenon happen in Indonesian zakat foundations? and (2) what is the antecedent of women's career stagnation in Indonesian zakat foundations?

### 3 RESEARCH METHOD

The participants in this study were eight senior female staffs working in two zakat foundations. All participants were currently in the managerial position, ranging from line to middle manager. The names of the participants and the zakat foundation were made into pseudonyms to ensure confidentiality and encourage participants to provide truthful information about their experience and their organization. All participants have experienced career stagnation for more than five years in their current organization. Snowball sampling technique was used to get access to the participants who fulfilled the established criteria and were willing to allocate time for the interview. The first participant who agreed to participate was Helen, who referred us to her co-workers from her current and past organizations. The interview processes were conducted after working hours, at a place according to the participants' preference. In total, each interview lasted for 60–80 minutes and was documented using voice recorders. The interview data were transcribed and analyzed to construct the themes and unveil the barrier toward career advancement as experienced by each participant. For the interview, we developed 34 questions based on the previous research on the glass ceiling (e.g., Al-Manasra 2013; Bombuwela & De Alwis 2013; Napasri & Yukongdi 2015). Each interview

was opened by explaining to respondents the definition of the glass ceiling. Afterwards, we asked each interviewee questions and continued based on the answer of the participants toward the first question which asked about their self-reflection of their career stagnation.

#### 4 FINDINGS

Based on the interview results, one of the antecedents of the women's career stagnation in the Indonesian zakat foundations was caused by their role. Participants admit that as women, it was easy for them to express their emotion and feelings. The job responsibilities in zakat foundations require the participants to be able to establish a good relationship with clients, either the donator or the zakat recipients. The job sometimes could be very stressful, which made them annoyed, especially during their period.

There were another two participants who believed that the nature of women could hinder their career advancement. They believed that their superiors would prioritize men over women, since men were considered more rational and emotionally stable. Such an opinion was supported by Bombuwela and De Alwis (2013), who argued that the characteristics of women could lead to the superior's unwillingness to give more responsibilities to the female employees. However, some participants reminded us that women who are able to cope with such a problem could still get the promotion.

Another antecedent of the career stagnation among women in the zakat foundation was due to their unwillingness to be transferred to another organization's subsidiary for promotion. There were differences in the promotion policy among profit and non-profit organizations. In profit organizations, staff must not repudiate the promotion, even though they have to leave their hometown and family. In the zakat foundations, such a policy was non-existent. Five participants in this study were offered a position as a branch manager in another city within the same province. Nevertheless, their husband did not give permission and asked them to reconsider the promotion. There were consequences when accepting the promotion, mainly because they have to be away from their family for a long time.

Our participants feel that they have the responsibilities to raise and educate their children. The remaining participants who have never been offered promotion during their career admitted that they have felt comfortable with their current position so they do not have any intention to be promoted. The increased age and the responsibilities as a mother have made them reluctant to accept larger responsibilities, or to learn something new.

The third finding of this study was related to the patriarchal culture of the Indonesian society. In a patriarchal society, the men's role is considered more important than women. This is interesting, since according to the Indonesia's national culture assessment (Hofstede et al. 2010); Indonesia was considered as a feminine society where the difference in roles among men and women could be minimized. Our participants, however, showed their preference for a male leader. When asked about the appropriateness to select women as their superior, six out of eight participants disagreed. They felt that a male superior could lead better and more rationally in terms of the superior-subordinate relationship. It was interesting to note that all participants were feeling uneasy when having women as their leader, since they were afraid that women could be emotional and give too much interference on their privacy. Although no participants mentioned the obligation to select a male leader based on religious teaching, they did mention that as long as there were still male candidates for promotion, they would choose not to take leadership responsibility.

The last finding was related to the participants' ability to cope with work-family conflict and family-work conflict. When asked whether their career stagnation was caused by their inability to cope with the work-family or family-work conflict, no participants stated their agreement. They said that they have been able to balance between career and family, although in the past such conflict did happen. Humaira, a front office staff working at Izzatul Ummat, stated that after marriage, there was a period in which she could not maintain her usual work rhythm and once was reprimanded by her boss.

## 5 CONCLUSION

In summary, we conclude our findings as follows: (1) the organizational barrier for women's career advancement in the zakat foundations was not present. The barriers were mainly caused by individual and social roles, and preference factors. (2) The antecedents of women's career stagnation from individual factors were emotion, sensitivity, lack of motivation, ambition and unwillingness to take the leadership position. For social factors, a patriarchal culture affects women's perception to prioritize males for leadership positions. A preference factor was identified since women in this study give priority to their family over their work, refusing promotion due to their role as mother and wife. (3) Participants' unwillingness to lead was not due to religious value, as none of the participants mentioned the role of men and women in Islam.

Our findings could be used as the basis for the recruitment and selection decision. Organizations must prepare a tailored career path for women once they get married and have children. Furthermore, it would be better if working women could be placed in the same location where their family live. They should also be prepared to take leadership positions only in the particular office where they work, to minimize the concern and conflict from themselves and their family. Obviously, the career path and the amount of compensation must be made clear during the selection interview. Future research could investigate the glass ceiling and women's career stagnation in other Indonesian provinces, considering the cultural diversity of the country which comprises more than 30 large ethnic groups (Statistics Indonesia 2011).

## REFERENCES

- Al-Manasra, E. A. 2013. What are the "Glass Ceiling" barriers effects on women career progress in Jordan? *International Journal of Business and Management*, 8(6): 40–47.
- Bjerk, D. 2008. Glass ceilings or sticky floors? Statistical discrimination in a dynamic model of hiring and promotion. *Economic Journal*, 118(530): 961–982.
- Bombuwela, P. M., & De Alwis, A. C. 2013. Effects of glass ceiling on women career development in private sector organizations – case of Sri Lanka. *Journal of Competitiveness*, 5(2): 3–19.
- Hofstede, G., Hofstede, G. J., & Minkov, M. 2010. *Cultures and Organizations: Software of the Mind* (3rd ed.). USA: McGraw-Hill.
- International Labour Organization. 2016. *Indonesia Labour Market Outlook*.
- Jogulu, U. D., & Wood, G. J. 2008. A cross cultural study into peer evaluations of women's leadership effectiveness. *Leadership & Organization Development Journal*, 29(7), 600–616.
- Laksanti, S. C., Suharnomo, & Perdhana, M. S. 2017. Menginvestigasi Fenomena Glass Ceiling: Mitos atau Fakta? (Investigating Glass Ceiling Phenomenon: Myth or Fact?) Paper presented at the annual *Forum Manajemen Indonesia IX* conference, Semarang.
- Li, L., & Leung, R. W. 2001. Female managers in Asian hotels: profile and career challenges. *International Journal of Contemporary Hospitality Management*, 13: 189–196.
- Napasri, T., & Yukongdi, V. 2015. A Study of Thai female executives: Perceived barriers to career advancement. *Review of Integrative Business and Economics Research*, 4(3): 108–120.
- Pillai, K. R., Prasad, S., & Thomas, J. 2011. Why do women still experience downward gravitation in the corporate ladder? A close look at glass ceiling in Bahrain. *Research and Practice in Human Resource Management*, 19(1): 1–10.
- Republika. 2017. *Zakat dan potensinya untuk Indonesia di 2017*.
- Statistics Indonesia. 2011. *Kewarganegaraan, Suku Bangsa, Agama, dan Bahasa Sehari-hari Penduduk Indonesia: Hasil Sensus Penduduk 2010*.
- Statistics Indonesia. 2016. *Keadaan Angkatan Kerja di Indonesia Agustus 2016*.
- The White House Project. 2009. *The White House Project: Benchmarking Women's Leadership*.
- U.S. Glass Ceiling Commission. 1995. *Good for business: making full use of the nation's human capital: a fact-finding report of the Federal Glass Ceiling Commission. Fact-finding report of the Federal Glass Ceiling Commission*.
- Yoon, J. 2015. Labor market outcomes for women in East Asia. *Asian Journal of Women's Studies*, 21(4): 384–408.

## The effect of promotions and consumer trust on customer loyalty through customer satisfaction of the shopee application (study on STIESIA students Surabaya)

A.C.M. Sari & M. Lestariningsih

*Indonesian College of Economics (STIESIA) Surabaya*

**ABSTRACT:** The research examines the effect of promotion and consumers' trust on customers' loyalty through customers' satisfaction of Shopee users. The research was quantitative, and the data collection technique used simple random sampling. The population is 100 students of STIESIA Surabaya. Additionally, the data analysis technique used the Partial Least Squares model. The research result concluded that both promotion and consumers' trust had a positive and significant effect on customers' satisfaction. Likewise, promotion as well as consumers' trust had a positive and significant effect on customers' satisfaction. On the other hand, customers' satisfaction had a positive but insignificant effect. Furthermore, promotion through customers' satisfaction had a positive but insignificant on customers' loyalty. Similarly, consumers' trust through customers' satisfaction had a positive but insignificant effect on customers' loyalty.

**Keywords:** promotion, consumers' trust, customers' satisfaction, customers' loyalty, Shopee.

### 1 INTRODUCTION

The increasingly fierce competition requires e-commerce companies to maintain market share and they must also be able to meet the needs and desires of their consumers. One of the e-commerce companies that will be discussed in this research is Shopee. Shopee is a very popular online shopping site in Indonesia. The current highest number of monthly visitors in Q1 2020 is still held by the Shopee company, which in Q4 2019 to Q1 2020 managed to snatch it from Tokopedia. The number of monthly visits in Q1 2020 reached an average of 71.5 million visitors. Tokopedia narrowly lost with an average record of 69.8 million visitors. The rise and fall of the number of application users also determines the popularity of e-commerce applications. Setiawan et al. (2016) prove that promotion has a significant positive effect on customer satisfaction. Meanwhile, the results of research conducted by Novianti et al. (2018) proves that promotion has an insignificant effect in a positive direction on customer satisfaction. Setiawan and Sayuti (2017) stated that consumer trust has a significant effect in a positive direction on customer satisfaction. Rimawan et al. (2017) stated that consumer trust has no significant effect in a positive direction on customer satisfaction. Nasrul and Zulkifli (2019) stated that it is proven that promotion has a significant effect in a positive direction on customer loyalty. Novianti et al. (2018) stated that promotion has no significant effect in a positive direction on customer loyalty. Lie et al. (2019) states that customer satisfaction has a significant positive effect on customer loyalty. Customer satisfaction has no significant effect in a positive direction on customer loyalty. Rochim (2020) Customer satisfaction mediates the relationship between promotions and customer loyalty (Suastini & Mandala (2019). Hidayah (2019) proved that promotion has no significant effect in a positive direction on customer loyalty through customer satisfaction. Based on the previous research conducted by Hidayah (2019), customer satisfaction mediates the relationship between consumer trust and customer loyalty. Marlinda (2018) states that consumer trust has no significant effect in a positive direction on customer loyalty through customer satisfaction. The questions in this study are as follows: (1) does promotion affect Shopee

customer satisfaction? (2) does consumer trust affect Shopee customer satisfaction? (3) does promotion affect Shopee customer loyalty? (4) does consumer trust affect Shopee customer loyalty? (5) does customer satisfaction affect Shopee customer loyalty? (6) does promotion affect customer loyalty through Shopee customer satisfaction? and (7) does consumer trust affect customer loyalty through Shopee customer satisfaction?.

## 2 THEORETICAL REVIEW, HYPOTHESES DEVELOPMENT, AND RESEARCH METHODS

Madiawati (2020) states that promotion is one of the variables in the marketing mix that is very important to be implemented by companies in marketing products and services. Kotler and Keller (2016: 272) state that the dimensions of promotion include: (1) promotional messages, (2) promotional media, (3) promotional time, and (4) promotion frequency. Robbins in Marlinda (2018) states that consumer trust is defined as positive expectations not only through words, actions, or decisions. Trust can occur at any time, choosing to let individuals depend on others, influencing those with whom future behavior can affect individual well-being. Kotler and Keller in Rahmatika and Madiawati (2020) state that customer satisfaction is a person's feeling of pleasure or disappointment that arises after comparing the performance (outcome) of the product thought to the expected performance (or result). If performance is below expectations, consumers are dissatisfied. According to Irawan in Hidayah (2019), the factors that can affect consumer satisfaction are as follows: (1) product quality, (2) product price, (3) emotional factors, (4) cost and convenience. Tjiptono in Putri and Santoso (2018) states that customer loyalty is a customer's commitment to a brand, company, or supplier based with a positive nature in long-term purchases.

Based on the theoretical and empirical review, hypotheses can be formulated as follows: (H1) Promotion has a significant effect on Customer Satisfaction on Shopee Application Users; (H2) Consumer Trust has a significant effect on Customer Satisfaction on Shopee Application Users; (H3) Promotion has a significant effect on Customer Loyalty on Shopee Application Users; (H4) Consumer Trust has a significant effect on Customer Loyalty to Shopee Application Users; (H5) Customer Satisfaction has a significant effect on Customer Loyalty; (H6) Promotion has a significant effect on Customer Loyalty through Customer Satisfaction on Shopee Application Users; and (H7) Consumer Trust has a significant effect on Customer Loyalty through Customer Satisfaction on Shopee Application Users.

The research uses a quantitative method, and the sampling technique used is simple random sampling. The type of data used is quantitative data received from distributing online questionnaires to respondents. The respondent are active students of the Indonesian School of Economics (STIESIA) Surabaya who have used and are currently using the Shopee application. Measurements will be made on the value of the questionnaire using a Likert scale.

## 3 ANALYSIS AND DISCUSSION

All classical assumption tests are valid. Hypothesis testing shows the following: H1 testing indicates a p-value  $<0.05$  so that the first hypothesis is accepted. This proves that Promotion has a significant effect in a positive direction on Customer Satisfaction. H2 testing indicates that the second hypothesis is accepted. This proves that consumer trust has a significant effect on customer satisfaction in a positive direction. H3 testing indicates that the third hypothesis is accepted. Promotion is proven to have a significant effect in a positive direction on Customer Loyalty. H4 testing shows that the fourth hypothesis is accepted. Consumer Trust has a significant positive effect on Customer Loyalty. H5 testing shows that the fifth hypothesis is rejected. This proves that customer satisfaction has no significant effect in a positive direction on customer loyalty. H6 testing shows that the sixth hypothesis is rejected. This proves that Promotion has no significant effect in a positive direction on Customer Loyalty through Customer Satisfaction. Lastly, H7 testing indicates that the seventh hypothesis is rejected. This proves that Consumer Trust has no significant effect in a positive direction on Customer Loyalty through Customer Satisfaction.

Promotion has a significant effect in a positive direction on Customer Satisfaction on Shopee Application users. Consumers are interested in using the Shopee application because of Shopee pay which makes it easy to make payment transactions and Shopee coin games for discounted prices that make consumers more interested. Promotional activities are not only a means of communication between companies and consumers but also a tool to influence consumers in purchasing activities according to their needs and desires (Novianti et al. 2018; Nasrul & Zulkifli 2019; Rahmatika & Madiawati 2020).

Consumer Trust shows that it has a significant effect in a positive direction on Customer Satisfaction on Shopee Application users. The Shopee application will foster a feeling of trust and confidence to make transactions with the Shopee application because of the transparency of transactions and Shopee also has a good ability to handle the buying and selling process. Consumer trust has a positive and significant effect on customer satisfaction (Rofiq's research in Priansa 2017; Lie et al. 2019).

Promotion has a significant effect in a positive direction on Customer Loyalty to Shopee Application users. Promotions carried out by the Shopee company are the efforts of the Shopee company to promote using well-known brand ambassadors, creating opportunities for consumers to make purchases of products offered in the Shopee application. Promotion is one of the priority components of marketing activities that inform consumers that the company is launching a new product that tempt consumers to make a purchase (Hermawan 2012; Nasrul & Zulkifli 2019).

Consumer Trust shows that it has a significant effect in a positive direction on Customer Loyalty to Shopee Application users. Consumer trust in the Shopee application is formed by an assessment from consumers of the products and services provided by the Shopee application which will be able to foster a sense of trust and confidence. This sense of trust arises due to transparency in transactions between buyers and sellers, and also the display of reviews about products that have been purchased by these consumers so that new consumers will be sure to use the Shopee application. Consumer trust has a positive and significant effect on customer loyalty (Priansa 2017; Setiawan & Sayuti 2017).

Customer Satisfaction shows that it has no significant effect with a positive direction on Customer Loyalty to Shopee Application users. Creating satisfaction for customers is also very important and necessary for the company. Customer satisfaction is not in line with expectations, which causes no significant relationship with customer loyalty. Even though customers are not very satisfied with Shopee, customers are still loyal. Loyalty occurs if the customer shows repeated buying behavior or provides good recommendations to others not because of satisfaction but by recommending that promotions carried out by the company are very attractive to customers and the belief in the security and ease of getting products and services at the company (Nafisa & Sukresna 2018).

Promotion through Customer Satisfaction shows that it has no significant effect in a positive direction on Customer Loyalty to Shopee Application users. Customer satisfaction is very important and needed by companies; when combined with other constructs, customer satisfaction does not indirectly affect too much of the promotion relationship to customer loyalty on Shopee Application users. Promotion is one of the variables in the marketing mix that is very important for companies to offer products (Rahmatika & Madiawati 2020).

Consumer Trust through Customer Satisfaction shows that it has no significant effect in a positive direction on Customer Loyalty to Shopee Application users. Customers become loyal not because of a sense of satisfaction; one of the factors is because customers feel trust and believe in using the Shopee application because of the transparency in transactions and good ability to handle the buying and selling process with their customers, as stated by Marlinda (2018). Consumer Trust has a positive and insignificant effect on Customer Loyalty through Customer Satisfaction.

#### 4 CONCLUSION AND SUGGESTIONS

Conclusion: (1) Promotion and customer trust have a significant effect in a positive direction on customer satisfaction of Shopee users. (2) Promotion and customer trust have a significant



effect in a positive direction on customer loyalty of Shopee users. (3) Customer satisfaction has no significant effect in a positive direction on customer loyalty of Shopee users. (4) Promotions through customer satisfaction have no significant effect on customer loyalty of Shopee users (5) Consumer trust through customer satisfaction has no significant effect in a positive direction on customer loyalty of Shopee users. Suggestion: (1) Shopee companies are expected to pay more attention to and improve promotional strategies that are useful for attracting new consumers and retaining loyal Shopee application users. (2) Shopee companies are expected to pay more attention to and increase consumer confidence in the Shopee application.

## REFERENCES

- Bella, A. 2018. Shopee Susul Dominasi Dua E-Commerce Unicorn di Indonesia. <https://www.marketeers.com/shopee-susul-dominasi-dua-e-commerce-unicorn-di-indonesia/>. 23 November 2020 (00:54).
- Hidayah, S. N. 2019. Pengaruh Promosi, Kualitas Produk, Kepercayaan, dan Kualitas Pelayanan terhadap Loyalitas Nasabah dengan Kepuasan Nasabah sebagai Variabel Intervening. *Skripsi*. Institut Agama Islam Negeri (IAIN). Salatiga.
- Irwani, dan K. Adam. 2015. Metode Partial Least Square (PLS) Terapannya: Studi Kasus Analisis Kepuasan Pelanggan terhadap Layanan PDAM Unit Camming Kab Bone. *Jurnal Teknosains* 9(1): 53–68.
- Kaharu, D. dan A. Budiarti. 2016. Pengaruh Gaya Hidup, Promosi, dan Kualitas Produk terhadap Keputusan Pembelian Pada Cosmic. *Jurnal Ilmu dan Riset Manajemen* 5(3): 1–24.
- Larasati, F. dan S. Suryoko. 2020. Pengaruh Kualitas Pelayanan dan Citra Merek terhadap Loyalitas Pelanggan melalui Kepuasan Pelanggan: Studi pada Pengguna Jasa Pengiriman Surat Kilat khusus PT. Pos Indonesia di Kota Semarang. *Jurnal Administrasi Bisnis* 9(4): 530–538.
- Lie, D., A. Sudirman, Efendi, dan M. Butarbutar. 2019. Analysis of Mediation Effect of Customer Satisfaction on the Effect of Service Quality, Price and Consumer Trust on Consumer Loyalty. *International Journal of Scientific & Technology Research* 8(8): 421–428.
- Marlinda. 2018. Pengaruh Customer Relation Management dan Kepercayaan terhadap Loyalitas melalui Kepuasan Pelanggan Pada PT. Pos Indonesia (Persero) Medan. *Skripsi*. Universitas Muhammadiyah. Sumatera Utara.
- Mowen, J. C. dan M. Minor. 2017. *Perilaku Konsumen Jilid 1*. Edisi Kelima. Erlangga. Jakarta.
- Nafisa, J. dan I. M. Sukresna. 2018. Analisis Pengaruh Kualitas Layanan, Harapan Kinerja dan Citra Perusahaan terhadap Loyalitas Pelanggan melalui Kepuasan Pelanggan sebagai Variabel Intervening: Studi pada Rumah Sakit Islam Sultan Agung Semarang. *Diponegoro Journal of Management* 7(3): 1–26.
- Nasruli, H. W. dan Zulkifli. 2019. Efek Harga, Promosi dan Kualitas Layanan terhadap Loyalitas Pelanggan melalui Kepuasan Pelanggan. *Jurnal Dimensi* 8(2): 307–316.
- Novianti, Endri, dan Darlius. 2018. Kepuasan Pelanggan Memediasi Pengaruh Kualitas Pelayanan dan Promosi terhadap Loyalitas Pelanggan. *Jurnal Ilmiah Manajemen* 8(1): 90–108.
- Priansa, D. J. 2017. Perilaku Konsumen dalam Persaingan Bisnis Kontemporer. Alfabeta. Bandung.
- Putri, D. G. D. dan S. B. Santoso. 2018. Analisis Pengaruh Kualitas Jasa, Nilai yang Dirasakan, Citra Merek melalui Kepuasan Pelanggan terhadap Loyalitas Pelanggan: Studi pada PT. Pos Indonesia (Persero). *Diponegoro Journal of Management* 7(1): 1–13.
- Rahmatika, S. dan P. N. Madiawati. 2020. The Effect of E-Service Quality and Promotion on Customer Loyalty through Customer Satisfaction as Intervening Variables of PLN Mobile. *E-Proceeding of Management* 7(1): 1289–1303.
- Rimawan, E., A. Mustofa, dan A. D. Mulyanto. 2017. The Influence of Product Quality, Service Quality and Trust on Customer Satisfaction and Its Impact on Customer Loyalty: Case Study PT ABC Tbk. *International Journal of Scientific & Engineering Research* 8(7): 2330–2336.
- Salim, E., Andri, dan M. Neldi. 2019. Membangun Loyalitas Pelanggan melalui Harga dan Kepercayaan dengan Kepuasan Pelanggan sebagai Variabel Mediasi pada Bisnis Smartphone. *Jurnal Ekonomi dan Kewirausahaan* 13(2): 73–83.
- Sangadji, E. M. dan Sopiah. 2014. Perilaku Konsumen Pendekatan Praktis Disertai: Himpunan Jurnal Penelitian. Andi. Yogyakarta.
- Setiawan, N. dan A. J. Sayuti. 2017. Effect of Service Quality, Customer Trust and Corporate Image on Customer Satisfaction and Loyalty: An Assessment of Travel Agencies Customer in South Sumatra Indonesia. *IOSR Journal of Business and Management* 19(5): 31–40.
- Suastini, I. A. K. S. dan K. Mandala. 2019. Pengaruh Persepsi Harga, Promosi Penjualan, dan Citra Merek terhadap Kepuasan meningkatkan Loyalitas Pelanggan. *E-Jurnal Manajemen* 8(1): 7044–7072.
- Tjiptono, F. dan A. Diana. 2019. Kepuasan Pelanggan-Konsep, Pengukuran, dan Strategi. Edisi Pertama. Andi. Yogyakarta.



# Taylor & Francis

Taylor & Francis Group

<http://taylorandfrancis.com>

## Author index

- Abdullah, M.A. 152  
 Abet, G.A. 224  
 Adiwijaya, K. 168, 236  
 Adiwijaya, M. 224  
 Afifah, L.N. 123  
 Ai Ping, T. 276  
 Akhmad, A.A. 13  
 Al Hafiish, F.W. 79  
 Alversia, Y. 28, 164, 216  
 Anas, E.P. 87  
 Andriani, N. 172  
 Anggraeni, R. 212  
 Anjani, D. 52  
 Ardiansyahmiraja, B. 44  
 Ardiyanti, N. 156  
 Ariyanti, M. 252  
 Aruan, D.T.H. 204, 272  
 Arviansyah 268  
 Astuti, R.D. 52, 127  
 Azhari, M. 32  
  
 Balqiah, T.E. 111, 136  
 Barom, M.N. 152  
  
 Chalid, D.A. 17  
  
 Dalimunthe, Z. 192  
 Damayanti, A.I.P.P. 21  
 Danarsari, D.N. 91  
 Desiana, P.M. 140  
 Dewi, F.G. 32  
 Dewi, N.T. 164  
 Dewi, P.S.M. 192  
 Diyanto, E.R. 64  
 Diyanty, V. 160  
 Dwiprasetya, W.K. 264  
  
 Ekaputra, I.A. 228  
  
 Farisi, J. 119  
 Frima, M. 156  
  
 Gunawan, A.A. 32  
  
 Hadi, C.W. 48  
 Hanggraeni, D. 56  
 Hapsari, R.P. 208  
 Hapsari, V.A. 281  
 Hariadi, S. 232, 240  
 Hariyatin 99  
 Heryanti, P. 180  
  
 Irawanto, D.W. 60  
 Islam, D. 24  
  
 Katili, W.W. 256  
 Keni, K. 276  
 Khairufi, R. 200  
 Kuncoro, M.N.S. 148  
 Kurriwati, N. 172  
 Kusumawardhani, V.E. 248  
  
 Lee, K.M. 115  
 Lestariningsih, M. 294  
 Lubis, A.W. 144, 176  
  
 Mahrinasari, M.S. 1  
 Manoto, R.P. 204  
 Maulana, R.Y. 196  
 Mujiyanto, A.A. 5  
 Murtiasari, F.E. 83  
 Muslim, M.I. 290  
  
 Nadilah, D.F. 56  
 Nadlifatin, R. 44  
 Nainggolan, J.H.A. 107  
 Nastiti, C.A.D. 28  
 Nasution, Y. 83  
 Nisa, M.C. 132  
 Novianti, K.R. 60  
 Nugroho, P. 24  
 Nurhajayanti, A. 240  
  
 Osmond, T. 220  
  
 Pamungkas, Y.N. 95  
 Pandjaitan, D.R.H. 1  
 Paskalino, N.M. 160  
  
 Perdhana, M.S. 290  
 Pertiwi, K. 36, 132  
 Pradipta, A. 36  
 Prasetya, H.T.U. 95  
 Prasetyo, M.B. 9  
 Precia, A.D. 28  
 Premono, H. 91  
 Prijadi, R. 5  
 Purbawinasta, L.H. 119  
 Pusparini, E.S. 107  
 Puspitasari, A.Y. 1  
 Putra, S.K. 244  
  
 Rachmawati, R. 148  
 Rahayu, S. 232  
 Ratnawati, K. 184, 212  
 Rengganis, W.A. 260  
 Resindra, M.R.D. 144  
 Rokhim, R. 21  
 Ruskanda, N.A.M. 168  
 Ruza, S.M. 236  
  
 Sadewa, P.O. 176  
 Saleh, Y.S. 286  
 Santoso, T. 281  
 Saragih, H.S.E. 87  
 Sari, A.C.M. 294  
 Satriantoro, S. 228  
 Satrya, A. 103, 123, 188  
 Satwika, I.P. 60  
 Sawitri, D.R. 290  
 See, B.D.P. 40  
 Sekardhani, M. 164  
 Sembiring, P.N.H. 188  
 Seno, A.W.B. 17  
 Shanti, R. 216  
 Sholahuddin, M. 152  
 Siagian, H. 220  
 Simanjuntak, E.S.M. 68  
 Subagio, H. 224  
 Subroto, K.F. 111  
 Sukandi, V.S. 252  
 Susandini, A. 24  
 Suwandi, Y.W. 286

Tahir, I.N. 152	Verdana, J.P. 103	Wiyadi 152, 264
Tandelilin, E. 72		Wujoso, H. 264
Tarigan, Z.J.H. 220	Wibowo, B. 200	
Tasya, Z.A. 272	Wicaksono, F. 76	Yuana, P. 184
Trisnursari, M.R. 140	Wijaya, S. 281	Yulianti 268
Ulpah, M. 40	Wildan, A. 9	
Utama, M.C. 136	Wilson, N. 276	Zain, M.A. 127