

Afkar, Elvia; Hamsal, Mohammad

Article

Innovation ambidexterity in Indonesian professional services industry: the role of customer trust and co-creation

Cogent Business & Management

Provided in Cooperation with:

Taylor & Francis Group

Suggested Citation: Afkar, Elvia; Hamsal, Mohammad (2024) : Innovation ambidexterity in Indonesian professional services industry: the role of customer trust and co-creation, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 11, Iss. 1, pp. 1-18, <https://doi.org/10.1080/23311975.2024.2431186>

This Version is available at:

<https://hdl.handle.net/10419/326704>

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/4.0/>

Innovation ambidexterity in Indonesian professional services industry: the role of customer trust and co-creation

Elvia Afkar & Mohammad Hamsal

To cite this article: Elvia Afkar & Mohammad Hamsal (2024) Innovation ambidexterity in Indonesian professional services industry: the role of customer trust and co-creation, Cogent Business & Management, 11:1, 2431186, DOI: [10.1080/23311975.2024.2431186](https://doi.org/10.1080/23311975.2024.2431186)

To link to this article: <https://doi.org/10.1080/23311975.2024.2431186>



© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 27 Nov 2024.



[Submit your article to this journal](#)



Article views: 662




[View related articles](#)



[View Crossmark data](#)

Innovation ambidexterity in Indonesian professional services industry: the role of customer trust and co-creation

Elvia Afkar and Mohammad Hamsal 

Department of Management, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, Indonesia

ABSTRACT

Professional services firms play a vital role in driving innovation and facilitating growth in various industries. Despite their potential, the professional services industry faces challenges in maintaining innovation maturity. While the innovation concept is widely researched, studies on the factors influencing innovation ambidexterity in the professional services industry are still lacking. This research aims to provide an empirical study on the factors influencing the innovation ambidexterity in these firms, especially on the role of customer trust and co-creation. This quantitative research was carried out through a structured survey instrument and used a convenience sampling technique. Data collected from 104 Indonesian professional industry employees were analysed using a structural equation model (SEM) with SmartPLS4 software version 4.1.0.0. This study concludes that customer trust is a key resource for conducting co-creation. Both customer trust and co-creation have direct impacts towards innovation ambidexterity, which in turn influences business performance. This study advances Dynamic Capabilities Theory with its insights, while managerial implications for companies, and suggestions for future research are also described.

ARTICLE HISTORY

Received 6 June 2024
Revised 18 September 2024
Accepted 13 November 2024

KEYWORDS

Customer trust;
co-creation; innovation
ambidexterity;
professional services
industry; dynamic
capabilities theory

SUBJECTS



Business, Management
and Accounting; Industry
& Industrial Studies;
Service Industries

1. Introduction

The professional services industry is known for high client interactions in delivering services and has a high level of internal knowledge intensity due to its professionalized workforce, which forces them to innovate (Williams & van Triest, 2021). Characterized by its intangible nature, expertise-driven delivery, and high levels of customer interaction, the professional services industry is constantly evolving, and innovation plays a crucial role in staying ahead of competitors (Mason, 1992). Business-to-business professional services have witnessed remarkable growth over the years, driven by increasing complexity and the incorporation of advanced technologies (Brentani & Ragot, 1996). Professional service firms play a vital role in driving innovation and facilitating growth in various industries (Fischer, 2011). As the business landscape becomes more complex and technology-driven, the demand for specialized expertise and tailored solutions offered by professional service firms has grown significantly (Hertog, 2000).

In addition to offering expertise, professional service firms contribute to innovation through co-creation with their clients (Hertog, 2000). By working closely with their clients, these firms can gain valuable insights into industry dynamics, challenges, and opportunities, enabling them to develop innovative and tailored solutions. This collaborative approach fosters trust and transparency, leading to the creation of more impactful and sustainable solutions (Schwetschke & Durugbo, 2018).

Innovation ambidexterity is crucial for professional service firms, as it allows them to balance the exploration of new opportunities and the exploitation of existing capabilities simultaneously so that firms can effectively adapt to changing market dynamics, identify and capitalize on new opportunities, and improve existing processes and services to maintain a competitive edge (Kauppila, 2010). This

CONTACT Elvia Afkar  elvia.afkar@binus.ac.id  Department of Management, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, Indonesia

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

capability is essential in staying agile and responsive to the evolving needs of clients and the broader industrial landscape (Dutta-Koehler, 2012). Moreover, innovation ambidexterity fosters a culture of continuous improvement and adaptability, promoting long-term sustainability and resilience in turbulent market conditions (Zeng et al., 2017). Therefore, embracing innovation ambidexterity empowers professional service firms to drive growth, enhance client value, and maintain their positions as industry leaders (Sijabat et al., 2020).

Customer trust is of paramount importance in the professional services industry (Grayson et al., 2008). Clients rely on service providers to deliver expert advice and tailored solutions that meet their unique needs. Without trust, clients may be hesitant to share sensitive information or collaborate closely with service providers, hindering the co-creation process and limiting the potential for innovation (Glückler & Armbrüster, 2003). Additionally, trust is a key factor in maintaining long-term sustainable relationships with clients (Coulter & Coulter, 2003). Fostering a culture of transparency, reliability, and integrity strengthens the foundation of trust, enabling professional service firms to consistently deliver value and drive innovation in partnerships with their clients (Nguyen et al., 2017).

The topic of innovation ambidexterity has been widely researched, especially on the factors influencing it, such as internal networking and knowledge management (Cabeza-Pullés et al., 2020), open innovation (Röd, 2019), performance benefits (Suzuki, 2015), network diversity (Zhang et al., 2020), absorptive capacity (Pangarso et al., 2020), market orientation (Zhao et al., 2021), capabilities (De Silva et al., 2022), knowledge redundancy (Duan et al., 2022), and intellectual capital and innovation orientation (Farzaneh et al., 2022). However, the factors of customer trust and co-creation have not yet been investigated and become the novelty of this study. Further, the topic of innovation ambidexterity was studied in industries such as small and medium enterprises (Chang et al., 2011; Chang & Hughes, 2012; Kowalik & Pleśniak, 2022), family firms (Röd, 2019), pharmaceutical industry (Suzuki, 2015), higher education sector (Pangarso et al., 2020), and technology-based firms (Hughes et al., 2021). The study of innovation ambidexterity in professional services firms is limited and becomes another novelty of this research.

As previously mentioned, research on the factors influencing innovation ambidexterity in the professional services industry is lacking (Jouny-Rivier et al., 2017). In a recent study conducted by Batt-Rawden et al. (2019), it was found that there is a significant correlation between team learning capability and innovation ambidexterity (Batt-Rawden et al., 2019). Other previous research highlights an inconsistency that the nature of high client interaction in the industry impacts the lack of innovations instead (Williams & van Triest, 2021). In contrast, the professional services industry is experiencing a decrease in innovative maturity, with less than 10% achieving the status of Digital Pioneers, which refers to professionals that effectively combine digitized service delivery with insights (Drane & Kent, 2020). Based on the review above, there is a gap in understanding what drives the innovation ambidexterity in professional service firms. To address this gap, this study focuses on exploring the specific factor, in this case, the role of customer trust and co-creation, which may contribute to successful innovation ambidexterity in the professional services industry.

The primary objective of this study is to identify the key factors that influence innovation ambidexterity in the professional services industry, with a specific focus on the role of customer trust and co-creation. Professional service firms can develop strategic interventions and initiatives that promote a collaborative approach with clients, foster trust, and drive innovation by gaining a deeper understanding of the underlying drivers and enablers of innovation ambidexterity. Further, this study aims to contribute to the existing literature by examining the relationship between customer trust, co-creation, and innovation ambidexterity in the professional services industry.

2. Literature review

2.1. Professional services industry

The professional services industry is characterized by knowledge-based services and provides a wide range of assistance and expertise, including consulting, legal, accounting, and marketing, to cater to the diverse needs of businesses (Mason, 1992). These services are typically provided by highly skilled professionals who have expertise in specific domains (Nguyen et al., 2017). In recent years, the professional

services industry has experienced significant growth and global importance. Amid increasing complexity and technological advancements across various industries, the demand for specialized expertise and tailored solutions offered by professional service firms has surged. According to a report by Cognitive Market Research, the global professional services market size was valued at \$6103.2 billion in 2022 and it is projected to grow at a compound annual growth rate of 5.17% from 2023 to 2030 (Dharmadhikari, 2023).

Growth within the industry has been particularly notable in sectors such as consulting, legal services, accounting, and marketing, where firms play a pivotal role in driving innovation and facilitating growth across various business domains (Empson et al., 2015). Despite this growth, firms in the professional services industry have encountered challenges in maintaining consistent performance (Greenwood et al., 2005). These challenges can be attributed to factors such as market competition, regulatory changes, and the need to adapt continuously to evolving client demands (Nienaber et al., 2014; Weerawardena & O'Cass, 2004). The innovation maturity of professional services firms globally also faces challenges, as shown in Figure 1, where more than 50% of firms become trend-followers and fewer than 10% become Digital Pioneers (Drane & Kent, 2020).

In the face of these challenges, professional service firms have been striving to achieve innovation ambidexterity by balancing the exploration of new opportunities with the exploitation of existing capabilities to remain competitive and sustain growth (Bello et al., 2016).

2.2. Customer trust

According to Moorman et al. (2013), customer trust is defined as 'the willingness to rely on an exchange partner in whom one has confidence.' This definition emphasizes the reliance and confidence aspects of trust, indicating that clients count on their service providers to act in their best interests and fulfil their obligations effectively (Moorman et al., 2013). Morgan and Hunt (1994) emphasized the role of trust in shaping long-term relationships and promoting cooperation between service providers and clients (Morgan & Hunt, 1994). Similarly, Paparoidamis et al. (2019) argue that trust is the extent to which a customer is confident in the credibility of their supply partner (Paparoidamis et al., 2019), while Sirdeshmukh et al. (2002) emphasize the role of customer trust in driving innovation. They define customer trust as 'a psychological state comprising the intention to accept

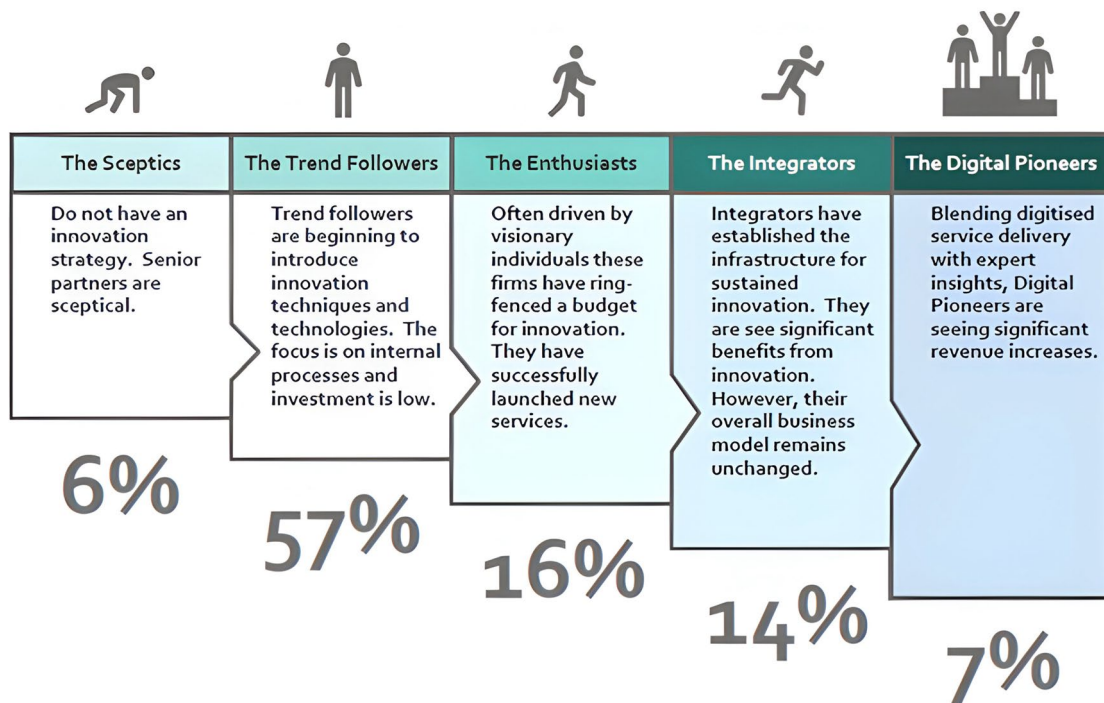


Figure 1. Innovation maturity of professional services firms.
Source: Drane and Kent (2020).

vulnerability based on positive expectations of the intentions or behavior of the trustor.' This definition highlights the vulnerability and positive expectations associated with trust, indicating that clients are willing to make themselves vulnerable by sharing sensitive information and insights with their service providers based on positive expectations of the service provider's intentions and behavior (Sirdeshmukh et al., 2002).

Customer trust plays a crucial role in the professional services industry, as it is the cornerstone of the client-service provider relationship. Trust is essential for fostering collaboration, co-creation, and driving innovation, ultimately influencing professional service firms' long-term success and sustainability. Research has shown that customer trust is fundamental in shaping interdependence and partnerships between clients and service providers (Coulter & Coulter, 2002; Lu, 2009). It also plays a pivotal role in mitigating the risks and uncertainties inherent in the service industry (Coulter & Coulter, 2003).

However, while customer trust is undoubtedly important in the professional services industry, there are valid arguments against placing too much emphasis on trust alone (Lu, 2009). Some critics argue that overreliance on trust can lead to complacency and a lack of critical evaluation of the services being provided (Grayson et al., 2008). Moreover, excessive trust can create a barrier to seeking alternative perspectives and innovative solutions from different service providers. Clients who place complete trust in a single service provider may miss valuable insights and new approaches that could be offered by other industry experts (Bidault & Castello, 2010). Furthermore, some argue that an overemphasis on trust may obscure accountability and deter service providers from being held to high standards of performance (Gounaris & Venetis, 2002). Without a healthy dose of scrutiny and skepticism, service providers may become complacent in their delivery and fail to push the boundaries of their expertise, hindering the potential for true innovation and growth (Kantsperger & Kunz, 2010).

This study shares the definition of customer trust as 'the willingness to rely on an exchange partner in whom one has confidence' (Moorman et al., 2013) and examines this in relation to co-creation and innovation ambidexterity in professional services firms.

2.3. Co-creation

Co-creation in the context of professional services involves leveraging the unique insights, expertise, and resources of both parties to create value that meets the specific needs and expectations of clients. One of the key definitions of co-creation is proposed by Prahalad and Ramaswamy (2004), who describe it as 'the joint creation of value by the company and the customer; allowing the customer to co-construct the service experience to suit their context.' This definition emphasizes the active involvement of customers in shaping the service experience to align with their individual requirements, highlighting the personalized and customized nature of co-created solutions (Prahalad & Ramaswamy, 2004). Another perspective on co-creation is provided by Vargo et al. (2004), who define it as 'the engagement of multiple stakeholders in the co-creation of unique value, through interconnected relationships, service ecosystems, and service systems.' This definition broadens the scope of co-creation to encompass the involvement of various stakeholders beyond the direct client-service provider relationship, emphasizing the interconnected and collaborative nature of value creation (Vargo et al., 2004).

Co-creation can also be understood as a process that transcends traditional boundaries, whereby different parties come together to ideate, innovate, and co-create solutions that address complex challenges and opportunities (Le Meunier-FitzHugh et al., 2016). This collaborative approach fosters a sense of ownership and buy-in from all parties involved, leading to a more holistic and sustainable outcome that caters to diverse perspectives and needs (Sharma, 2021).

While co-creation is often portrayed as a collaborative and innovative approach to generating value in the professional services industry, critics argue that co-creation may lead to inefficiencies and complications in decision-making processes, especially when multiple stakeholders are involved (Bischhoffshausen et al., 2015). This can hinder service providers' efficiency and agility in addressing clients' needs promptly, particularly in rapidly changing business environments (Hakanen & Jaakkola, 2012). Co-creation can also potentially lead to diluted expertise and accountability, where multiple parties are involved in shaping solutions, the distinct expertise and accountability of individual service providers may become less clear (Möller et al., 2008). Furthermore, co-creation might also lead to over-reliance on client input, potentially

compromising the service provider's ability to offer unique and expert-driven solutions (Bettencourt et al., 2002).

In this study, co-creation is defined as 'the joint creation of value by the company and the customer, allowing the customer to co-construct the service experience to suit their context' (Prahalad & Ramaswamy, 2004) and examines this as a potential positive impact of customer trust and its relationship towards innovation ambidexterity in professional service firms.

2.4. Innovation ambidexterity

Ambidexterity in firms is described as the ability to exploit the available firm's resources while at the same time having the ability to explore new opportunities beyond their limitations (Açıkgöz et al., 2021). The exploitation part is aimed at enabling incremental innovation, whereas the exploration part is intended to drive radical innovation (Soto-Acosta et al., 2018). Incremental innovation refers to minor adaptations of existing products or business processes, whereas radical innovation refers to fundamental changes toward completely new business models. Exploitation in innovation refers to the utilization of existing skills, competencies, and technologies, while exploration in innovation refers to activities related to discovery and experimentation (Akram et al., 2021). Innovation ambidexterity (IA) then is defined as a firm's ability to balance exploitative innovation and exploratory innovation (De Silva et al., 2022).

Previous studies have confirmed that it is important for firms to possess innovation ambidexterity: a balance between exploratory and exploitative innovation to achieve firm performance (Farzaneh et al., 2022). Innovation ambidexterity also refers to a firm's ability to drive incremental innovation through exploitative activities and achieve radical innovation through exploratory activities (Lin et al., 2013). Exploratory innovation refers to acquiring new knowledge, comprehension, or skills, while exploitative innovation refers to reusing existing resources and building upon current knowledge (Farzaneh et al., 2022).

Both exploitative and exploratory activities were noted by March (1991) as conflicting activities, which resulted in firms favoring one activity over the other. Because both activities have different objectives, the challenge for companies is to be able to deliver both simultaneously (March, 1991). Further, some previous studies argue that pursuing both exploratory and exploitative activities simultaneously can lead to a lack of clear focus and direction within an organization, increase coordination costs, and develop conflict (Chen et al., 2018). By dividing resources and attention between incremental improvements and disruptive innovations, companies can result in diluted efforts and suboptimal outcomes in both areas, requiring a specific leadership type for these organizations (Fu et al., 2018).

This study uses the definition of innovation ambidexterity as the firm's ability to balance exploitative innovation and exploratory innovation (De Silva et al., 2022) and examines the relationship between the impact of customer trust and co-creation and its relationship to firm performance.

2.5. Theoretical framework, hypotheses development, and research model

2.5.1. Theoretical framework

Dynamic capabilities theory is used in this study to understand all the factors and their relationships. Dynamic Capabilities Theory focuses on an organization's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece, 2007). Dynamic capabilities emphasize an organization's capacity to adapt and be flexible. Innovation ambidexterity involves the ability to simultaneously explore new opportunities (in this case, innovation) and exploit existing capabilities. Organizations with dynamic capabilities are adept at reconfiguring their resources to balance exploratory and exploitative activities. Resource flexibility is crucial for sustaining innovation ambidexterity over time.

Dynamic capabilities involve sensing and responding to changes in an external environment (Teece, 2007). To build customer trust, organizations must adapt dynamically to meet customers' needs and expectations. This includes the ability to respond quickly to feedback, address concerns, and innovate based on evolving customer preferences (Amin et al., 2019; Jantunen et al., 2018). It supports the co-creation of value with customers, aligning with the Service-Dominant Logic Theory (Vargo et al.,

2004). An organization's ability to dynamically engage with customers in value co-creation processes contributes to building and maintaining trust.

2.5.2. Hypotheses development and research model

2.5.2.1. Customer trust and co-creation. Previous research has shown that customer trust plays a crucial role in the successful implementation of co-creation because, without customer trust, customers may not be motivated to participate in co-creation activities or share valuable insights and ideas (Arica et al., 2023), or there may not be any willingness to contribute (Salampasis et al., 2015). Furthermore, a study by Shulga et al. (2021) in the hospitality industry argues that the relationship between customer trust and co-creation is reciprocal in nature, which means that trust is a necessary condition for successful co-creation (Shulga et al., 2021). Another study in the e-commerce industry highlights that online sales and customer value co-creation are influenced by e-trust, and consumers with higher online sales are far more committed to increasing customer value by enhancing e-trust (Al Daabseh & Aljarah, 2021).

However, the investigation of the relationship between customer trust and co-creation in the professional services industry is lacking; therefore, the first hypothesis in this study is as follows:

H1: Customer trust significantly influences co-creation.

2.5.2.2. Customer trust and innovation ambidexterity. Salampasis et al. (2015) examine the relationship between trust and open innovation and argue that trust is part of social-support behavior that expresses the need for an environment that encourages employees to engage in dynamic interaction and collaboration; therefore, it can build up innovation ambidexterity in an organization (Salampasis et al., 2015). In the education industry, Dederling and Pietsch (2023) validated that leaders' trust in teachers has a significant direct impact on teachers' collective innovativeness. In the e-commerce industry, Shao et al. (2019) investigated the antecedents of trust and its relationship to continuance intention in mobile payment platforms and concluded that customer trust is positively associated with continuance intention.

However, studies on customer trust and its relationship with innovation ambidexterity in the professional services industry are lacking; therefore, the second hypothesis in this study is as follows:

H2: Customer trust significantly influences innovation ambidexterity.

2.5.2.3. Customer trust and business performance. Many studies have been conducted on customer trust and business performance, especially in the financial industry. Al-Dmour et al. (2019) validate that customer trust positively influences customer retention, which further impacts bank business performance. In information technology, the investigation of customer trust and business performance is widely researched, with similar results showing that customer trust directly impacts business performance, especially in the adoption of technology such as digital applications (Octavius & Antonio, 2021; Panniello et al., 2016). In the marketing topics, Paparoidamis et al. (2019) examine customer trust in building supplier performance and conclude that trust enhances customer loyalty which further impacts an increase in business performance (Paparoidamis et al., 2019).

However, studies on customer trust and its relationship with business performance in the professional services industry are lacking, leading to the third hypothesis in this study:

H3: Customer trust significantly influences business performance.

2.5.2.4. Co-creation and innovation ambidexterity. Since Prahalad and Ramaswamy (2004) introduced the co-creation concept, the role of customer collaboration in innovation has been widely studied. In a small-medium enterprise (SME) industry, value co-creation has a significant impact on marketing innovation (Widjojo et al., 2020). In the ICT field, the results are similar, client-provider value creation contributes to service innovation (Möller et al., 2008). It is argued that customer involvement affects open innovation in product development (Efsthathiades & Papageorgiou, 2019).

However, few studies examine the relationship between co-creation and innovation ambidexterity. One study in the business-to-business (B2B) enterprise industry found that the knowledge co-creation

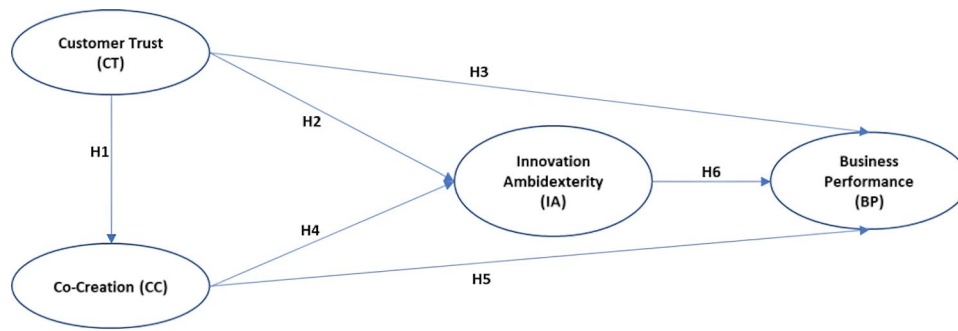


Figure 2. Research model.

process has a direct impact on information technology teams' exploration and exploitation innovation (Sheng & Saide, 2024). This leads to the fifth hypothesis as below:

H5: Co-creation significantly influences innovation ambidexterity.

2.5.2.5. Co-creation and business performance. Much research has been conducted on co-creation and business performance. In the manufacturing field, it has been confirmed that manufacturing service value co-creation improves business performance (Chao et al., 2019). In the SME industry, the results are similar, where co-creation improves company performance (Hamdani et al., 2019; Mulyana et al., 2022). Zaborek and Mazur (2019) examine co-creation towards business performance from a dual perspective, that is, manufacturing and service SMEs, and find that, overall, co-creation has a stronger impact on service SMEs than manufacturing SMEs in terms of both operational benefits and financial performance.

Since there are still some inconsistencies, this study examines the following hypothesis:

H5: Co-creation significantly influences business performance.

2.5.2.6. Innovation ambidexterity and business performance. Some studies further prove that innovation ambidexterity positively influences business performance (Dunlap et al., 2016). The results are similar for the SME (Wiratmadja et al., 2021) and pharmaceutical industries (Suzuki, 2015). However, a study by Kahn and Candi found inconsistencies, where only exploratory innovation has direct benefits on service firms, regardless of firm size, compared to exploitation innovation. This leads to the sixth hypothesis as below:

H6: Innovation ambidexterity significantly influences business performance.

The research model is described in Figure 2.

3. Research methodology

This study used a quantitative method to investigate the influence of customer trust and co-creation on innovation ambidexterity and business performance. The research was conducted from January to April 2024 and the ethics approval from the Board of Binus Business School was obtained with reference no: 070/HoP.DRM/VI/2024. Data were collected using an online survey with questions derived from variable operationalization (Table 1) and utilized the Likert scale with five response items, from 1=strongly disagree and 5=strongly agree. The convenience sampling technique was used to obtain quick information and to understand the phenomenon. The questionnaire was then distributed to employees of professional service firms in Indonesia, who were within the author's network. Informed consent for participation in this study was obtained in writing from all the participants through the questionnaire.

Data analysis was carried out using structural equation modelling (SEM) to determine the causal relationship between the latent and dependent variables. Partial least squares (PLS) SEM was used in this study to explore patterns as defined in the research model and SmartPLS4 v4.1.0.0 software was utilized.

Table 1. Variable operationalization.

Variable	Indicator	Source
Customer trust	Extent to which customer is confident with ability of the consultants.	(Nienaber et al., 2014; Paparoidamis et al., 2019)
	Extent to which customer is confident with credibility of the consultants.	
	Extent to which customer is confident that consultants are genuinely put interest in them.	
Co-creation	Extent to which customer is confident with consultants' benevolence.	(Mihardjo et al., 2020)
	Collaboration activities with co-creators, in this case customer, in designing the solution.	
	The solution design is user centered.	
Innovation ambidexterity	Collaboration activities with co-creators, in this case customer, in implementing the solution.	(Farzaneh et al., 2022)
	Participation in new concepts or experience.	
	Actively seek for new skills.	
Business performance	Obligated to learn new knowledge.	(Al-Dmour et al., 2019; Chiu et al., 2011)
	Leveraging existing skills.	
	Relying to existing experience.	
	Relying to existing knowledge base.	
	Performance in terms of an increase of new clients.	
	Performance in terms of an increase in overall revenue.	
	Performance in client's satisfaction.	
	Performance in employee engagement.	

Two stages of testing were conducted for data analysis: first, reliability and validity testing using the outer model, and second, structural model testing.

4. Results and discussions

4.1. Respondents profile

From the survey that was distributed online through social media, social communication groups, and the author's network, 107 data points were collected. Three data points were invalid and therefore excluded. A total of 104 valid data points were further analyzed, with the profiles described in Table 2.

4.2. Measurement model testing

The outer model is used as part of reliability and validity testing, which examines the characteristics of the construct and its manifest indicators.

4.2.1. Outer loadings

The outer loading was conducted to test the validity of a construct, with a value that must be greater than 0.7 to be considered valid. The results are shown in Figure 3. All indicators of Customer Trust, Co-Creation, Innovation Ambidexterity, and Business Performance have a loading factor greater than 0.7, meaning that they meet the requirements for good convergent validity. The T-statistics and P values for the outer loadings are shown in Table 3.

4.2.2. Construct reliability and validity

The construct reliability test was used to test the reliability of all indicators used in the model. This includes Cronbach's alpha, which measures the lower limit of the reliability value of a construct with a value greater than 0.7; composite reliability, which measures the actual value of the reliability of a construct with a value greater than 0.7; and the Average Variance Extracted (AVE) which determines the achievement of discriminant validity requirement with a value greater than 0.5. The results shown in Table 4 indicate that the latent variables have good reliability.

4.2.3. Discriminant validity

Discriminant validity is conducted to test if one latent construct is different from other constructs. In this study, the Fornell-Larcker methodology is used, with the results shown in Table 5.

4.3. Structural model testing

4.3.1. Path coefficient

The path coefficient results are shown in Figure 4 and Table 6 indicating that the P values are all less than 0.05. Therefore, it can be concluded that there are significant relationships between variables, and the hypotheses can be accepted (Wijanto, 2015).

- Customer trust and co-creation have $T = 6.248$ and $p=0.000$, which means Customer Trust has a significant influence on Co-Creation; therefore, Hypothesis 1 is accepted.
- Customer trust and innovation ambidexterity have $T = 3.860$, and $p=0.000$, which means Customer Trust has a significant influence on Innovation Ambidexterity; therefore, Hypothesis 2 is accepted.

Table 2. Respondents profile.

Demographic	Attribute	Percentage
Gender	Male	52%
	Female	48%
Age	Less than 24 years old	6%
	Between 25 – 40 years old	88%
	41 years old and above	6%
Area of professional service	Management	33%
	Information technology	22%
	Finance	14%
	Human capital	9%
	Law	6%
	Market research	16%

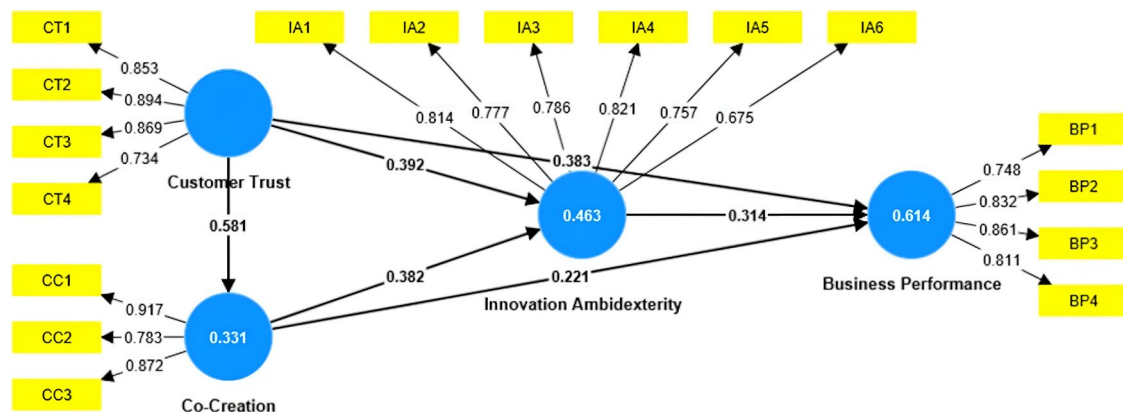


Figure 3. Outer loadings result.

Table 3. Outer loadings result.

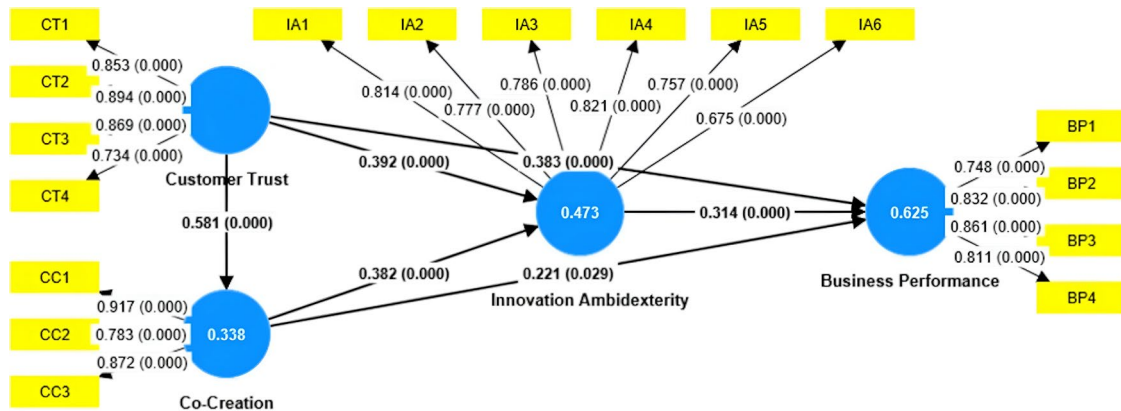
	Original sample	Sample mean	Standard deviation	T statistics	p values
BP1 <- Business performance	0.748	0.747	0.044	16,931	0.000
BP2 <- Business performance	0.832	0.828	0.038	22,048	0.000
BP3 <- Business performance	0.861	0.858	0.029	30,052	0.000
BP4 <- Business performance	0.811	0.804	0.047	17,224	0.000
CC1 <- Co-creation	0.917	0.915	0.018	49,649	0.000
CC2 <- Co-creation	0.783	0.786	0.049	15,854	0.000
CC3 <- Co-creation	0.872	0.869	0.032	27,465	0.000
CT1 <- Customer trust	0.853	0.850	0.042	20,247	0.000
CT2 <- Customer trust	0.894	0.889	0.033	27,358	0.000
CT3 <- Customer trust	0.869	0.864	0.041	21,406	0.000
CT4 <- Customer Trust	0.734	0.724	0.072	10,163	0.000
IA1 <- Innovation Ambidexterity	0.814	0.813	0.039	20,746	0.000
IA2 <- Innovation Ambidexterity	0.777	0.776	0.082	9467	0.000
IA3 <- Innovation Ambidexterity	0.786	0.785	0.043	18,183	0.000
IA4 <- Innovation Ambidexterity	0.821	0.823	0.031	26,509	0.000
IA5 <- Innovation Ambidexterity	0.757	0.755	0.052	14,502	0.000
IA6 <- Innovation Ambidexterity	0.675	0.670	0.070	9594	0.000

Table 4. Construct reliability and validity result.

	Cronbach's alpha	Composite reliability	Average variance extracted
Business performance	0.830	0.887	0.662
Co-creation	0.820	0.894	0.738
Customer trust	0.859	0.905	0.706
Innovation ambidexterity	0.865	0.899	0.597

Table 5. Discriminant validity result.

	Business performance	Co-creation	Customer trust	Innovation ambidexterity
Business performance	0.814			
Co-creation	0.635	0.859		
Customer trust	0.705	0.581	0.840	
Innovation ambidexterity	0.684	0.610	0.614	0.773

**Figure 4.** Structural model testing result.**Table 6.** Path coefficient result.

Relationship	Original sample	Sample mean	Standard deviation	T statistics	p values
Customer trust → Co-creation	0.581	0.579	0.093	6.248	0.000
Customer trust → Innovation ambidexterity	0.392	0.387	0.101	3.860	0.000
Customer trust → Business performance	0.383	0.369	0.086	4.452	0.000
Co-creation → Innovation ambidexterity	0.382	0.391	0.098	3.903	0.000
Co-creation → Business performance	0.221	0.222	0.101	2.181	0.029
Innovation ambidexterity → Business performance	0.314	0.323	0.085	3.703	0.000

- Customer trust and business performance have $T = 4.452$, and $p = 0.000$, which means that Customer Trust has a significant influence on Business Performance; therefore, Hypothesis 3 is accepted.
- Co-creation and innovation ambidexterity have $T = 3.903$, and $p = 0.000$, which means Co-Creation has a significant influence on Innovation Ambidexterity; therefore, Hypothesis 4 is accepted.
- Co-creation and business performance have $T = 2.181$, and $p = 0.029$, which means co-creation has a significant influence on Business Performance; therefore, Hypothesis 5 is accepted.
- Innovation ambidexterity and business performance have $T = 3.703$ and $p = 0.009$, respectively, which means that Innovation Ambidexterity has a significant influence on Business Performance; therefore, Hypothesis 6 is accepted.

4.3.2. R square

The R-squared value indicates the magnitude of a combination of independent variables that affect the dependent variable. The results presented in Table 7 show that the R Square result for Business Performance is 0.467, which means that all its independent variables simultaneously have an effect of 46.7% on Business Performance. The same applies to Co-Creation, in which Customer Trust as its independent variable has an effect of 34% on Co-Creation, whereas Customer Trust and Co-Creation have an effect of 47.2% on Innovation Ambidexterity.

4.3.3. Q square

The calculation of Q Square provides a measure of the predictive significance of endogenous components, specifically Business Performance and Innovation Ambidexterity in this context. According to Hair et al. (2014), Q Square values greater than zero represent well-constructed values and imply that the model has predictive relevance. A value of 0.02 signifies poor predictive relevance, 0.15 signifies medium predictive relevance, and 0.35 signifies strong predictive relevance. The findings, as presented in Table 8, indicate that the Q Square values are above zero, confirming the establishment of predictive relevance.

4.3.4. Model fit

The fitness of the model can be validated using the value of the Standardized Root Mean Square Residual (SRMR). The result of SRMR is 0.076, as shown in Table 9, which is in the range of 0.05 – 0.08, indicating that the model is fit (Hair et al., 2014).

4.3.5. Mediating effect

The mediating effects are analyzed based on the Variance Accounted For (VAF), which is calculated from (Indirect Effect)/(Total Effect) for each mediation relationship, and if the VAFs are between 20%-80% the relationship is said to be partial mediation (Hair et al., 2021). Table 10 presents the results of this study.

- Customer Trust → Co-Creation → Business Performance has Direct Effect of 0.383, Indirect Effect of 0.129, Total Effect of 0.512, and VAF of 25.2%. This implies that Customer Trust influences Business Performance through Co-Creation (partial mediation).
- Customer Trust → Co-Creation → Innovation Ambidexterity → Business Performance has Direct Effect of 0.383, Indirect Effect of 0.070, Total Effect of 0.453, and VAF of 15.5%. Since the VAF is less than 20%, this relationship has no mediation.
- Customer Trust → Co-creation → Innovation ambidexterity has a direct effect of 0.392, Indirect Effect of 0.222, Total Effect of 0.614, and VAF of 36.2%. Thus, Customer Trust influences Innovation Ambidexterity through Co-Creation (partial mediation).

Table 7. R square result.

	R square	R square adjusted
Business performance	0.467	0.462
Co-creation	0.340	0.333
Innovation ambidexterity	0.472	0.462

Table 8. Q square result.

	Q Square
Business performance	0.500
Innovation ambidexterity	0.365
Co-creation	0.323

Table 9. Model fit results.

	Saturated model	Estimated model
SRMR	0.076	0.076

Table 10. Mediation Result.

Relationship	Direct effect	Indirect effect	Total effect	Variance accounted for (VAF)
Customer trust → Co-creation → Business performance	0.383	0.129	0.512	25.2%
Customer trust → Co-creation → Innovation ambidexterity → Business performance	0.383	0.070	0.453	15.5%
Customer trust → Co-creation → Innovation ambidexterity	0.392	0.222	0.614	36.2%

4.4. Discussions

The results demonstrate the relationship between customer trust, co-creation, innovation ambidexterity, and business performance. The following discussion explores the analysis and findings in detail to contribute to the theory as well as facilitate changes in the implications and operations of professional service firms.

4.4.1. Theoretical contribution

These results indicate that customer trust has a significant influence on co-creation. This result strengthens previous research on these relationships, with the addition of this empirical result for the professional service industry. Co-creation in the context of professional services involves leveraging the unique insights, expertise, and resources of both parties, that is, professional services firms and clients, to create value that meets the specific needs and expectations of the clients (Prahalad & Ramaswamy, 2004). This study confirms that without trust from clients, co-creation may not occur.

The path coefficient result of the direct relationship between customer trust and co-creation (0.581) is the highest among other direct relationships, such as customer trust and innovation ambidexterity (0.392) or customer trust and business performance (0.383), which shows that customer trust is the key ingredient for conducting co-creation. However, the role of customer trust is less important, but it still has a direct relationship with the business performance of firms. This aligns with previous research, which validates that customer trust has a direct influence on a firm's performance (Octavius & Antonio, 2021; Panniello et al., 2016).

Interestingly, from the perspective of innovation ambidexterity, the weight of the relationship between customer trust and innovation ambidexterity (0.392) is slightly higher than the weight of the relationship between co-creation and innovation ambidexterity (0.382). This shows that customer trust has a slightly more significant influence on innovation ambidexterity compared to the influence of co-creation towards innovation ambidexterity. Additionally, customer trust plays a crucial role in facilitating knowledge transfer and learning in professional service firms. By establishing trust with customers, firms can create an atmosphere in which knowledge-sharing and learning are encouraged. Individuals are more likely to share their expertise and insights when they trust that their contributions are valued and respected. This exchange between customers and professionals fosters a reciprocal learning process through which both parties can expand their knowledge and capabilities.

Lastly, looking at the mediation effects, customer trust influences innovation ambidexterity through co-creation with a stronger mediation effect than customer trust influences business performance through co-creation. This validates the previous finding that customer trust has a stronger influence on innovation ambidexterity than on business performance. This suggests that, while customer trust plays a crucial role in enabling the co-creation process and driving innovation within professional service firms, its direct impact on business performance may be more indirect or mediated by other factors. One possible explanation for this finding is that customer trust acts as a catalyst for effective co-creation. When customers trust a firm, they are more likely to actively engage in the co-creation process, provide valuable insights and suggestions, and collaborate closely with the firm to co-create innovative solutions. This level of customer involvement and collaboration is essential for achieving innovation ambidexterity because it allows firms to simultaneously explore new ideas and exploit existing capabilities.

4.4.2. Practical implications

The results show that customer trust significantly influences innovation ambidexterity. Customer trust enables professional service firms to overcome barriers and challenges associated with innovation ambidexterity. By fostering trust, firms can create a safe and supportive environment for employees to engage in exploration and exploitation activities without fear of failure or negative consequences. This trust allows employees to take risks, share ideas, and collaborate effectively, leading to the generation of both incremental and radical innovation.

The results also show that co-creation significantly influences innovation ambidexterity. Collaboration with customers in the co-creation process allows professional service firms to leverage their expertise and insights, leading to the development of innovative solutions that are better aligned with customer needs and preferences. By involving customers in the innovation process, firms can tap into their unique perspectives, experiences, and requirements, leading to the development of solutions that resonate with the market. Co-creation not only enhances the understanding of customer needs but also fosters a sense of ownership and engagement among clients, resulting in more impactful and relevant innovations.

While customer trust has a stronger influence on innovation ambidexterity than on direct business performance, its indirect impact on business success should not be underestimated. Customer trust acts as a catalyst for effective co-creation, which in turn fosters innovation ambidexterity within professional service firms. This dynamic relationship implies that customer trust indirectly impacts business performance by enabling the creation of innovative solutions and enhancing a firm's ability to balance exploration and exploitation.

5. Conclusions

This study aims to understand the role of customer trust and co-creation activities in professional service firms' innovation ambidexterity. To achieve this objective, a structural equation modelling (SEM) model was constructed to examine the correlations between variables. The dynamic capabilities theory is used to provide perspective, analysis, and insight.

First, it validates that customer trust has a significant influence on co-creation. Customer trust also has a significant influence on innovation ambidexterity and business performance but with a lesser effect. This result indicates that customer trust is a key factor for co-creation.

Second, this study confirms that co-creation significantly influences innovation ambidexterity capability. Co-creation also has a significant impact on business performance with a lesser effect.

Third, innovation ambidexterity is confirmed to have a significant impact on the business performance of professional service firms.

Fourth, customer trust influences innovation ambidexterity through co-creation with a stronger mediation effect than customer trust influences business performance through co-creation, which means that customer trust has a stronger influence on innovation ambidexterity than on business performance.

These findings enrich the dynamic capabilities theory in the professional services industry by highlighting that customer trust is a key resource to be built by professional service firms to conduct co-creation with clients, which will result in innovation ambidexterity capabilities within the firms and eventually influence business performance.

As practical implications, professional services firms need to focus on gaining and maintaining trust from their clients, as this becomes the source of developing co-creation activities, which, together with customer trust, can develop innovation ambidexterity capabilities in the firm and increase the chances of achieving high business performance.

6. Limitations and future research

Despite the important insights gained from this study, it has some limitations. The sampling method used in this study is convenient sampling because the purpose was to obtain quick results to understand the phenomenon. Future research could extend this study by using larger samples to support generalization. Furthermore, a similar study can be performed in multiple countries to understand the variances in customer trust and co-creation practices and their impacts.

Further studies on customer trust as a key variable are suggested to enhance the understanding of factors influencing customer trust in the professional services industry, specifically its relationship to firms' corporate culture or strategic directions. The relationships between customer trust and the leadership style of the professional service firms' top management are another research suggestion, as leadership style varies among leaders but, at the same time, leaders would potentially dictate the way of working of the team, which leads to the team's capability development.

The comparison of innovation ambidexterity's factors in local versus multinational or global professional service firms would be another dimension to investigate further, including different complexities and dynamic aspects. Also, comparing small and medium size of professional service firms versus large ones would offer a more comprehensive perspective on the industry.

7. Research implications

Professional service firms must pay attention to customer trust in driving the success of co-creation activities as well as innovation ambidexterity capabilities. By maintaining a high level of trust with customers, firms can foster long-term relationships and establish innovative ambidexterity capability, which is essential for long-term success in the professional services industry. By fostering a culture of trust, organizations can empower their employees to engage in both exploratory and exploitative activities, paving the way for sustained innovation and competitiveness. This balance between exploration and exploitation is critical for adapting to market changes, staying ahead of competitors, and meeting clients' evolving needs.

In addition to its impact on internal operations, customer trust also extends to a firm's external relationships. Trusted professional service firms are more likely to attract and retain clients, as well as establish partnerships with other organizations and experts in the field. These collaborations can further enhance a firm's capabilities in both exploration and exploitation, leading to more comprehensive and effective solutions for clients.

As professional service firms continue to navigate the complexities of a dynamic and competitive market, customer trust's role in enabling co-creation and innovation ambidexterity remains a crucial factor in driving organizational performance and achieving sustainable success.

Authors' contributions

Writing—original draft, E.A.; Methods—data collection, E.A., and M.H.; Analysis, E.A., and M.H., Review and final approval, M.H.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was self-funded.

About the authors

Elvia Afkar is a PhD candidate at Doctor of Research in Management Program, Bina Nusantara University, Indonesia. Her research interest is in the area of sustainability and project management.

Mohammad Hamsal is a full professor at Doctor of Research in Management Program, Bina Nusantara University, Indonesia. His research is focused on strategic agility, competitive advantage, corporate and business strategy, digital ecosystem, and operations and supply chain management.

ORCID

Mohammad Hamsal  <http://orcid.org/0000-0003-4472-2964>

Data availability statement

The data that support the findings of this study are available from the corresponding author, E.A., upon reasonable request.

References

- Açıkgöz, A., Demirkan, I., Latham, G. P., & Kuzey, C. (2021). The relationship between unlearning and innovation ambidexterity with the performance of new product development teams. *Group Decision and Negotiation*, 30(4), 945–982. <https://doi.org/10.1007/s10726-021-09743-0>
- Akram, K., Ul Haq, M. A., & Akram, F. (2021). A nexus between Exploration, Exploitation, Quality Ambidexterity, and Innovation Ambidexterity in Covid-19 pandemic: Exploring the moderating role of IT Ambidexterity [Paper presentation]. 2021 International Conference on Sustainable Islamic Business and Finance, Sakheer, Bahrain. IEEE, SIBF 2021, 163–167. <https://doi.org/10.1109/IEEECONF53626.2021.9686350>
- Al Daabseh, T. K. I., & Aljarah, A. (2021). The relationship between online sale and customer value co-creation: The mediating role of e-satisfaction and e-trust. *International Journal of Data and Network Science*, 5(2), 97–106. <https://doi.org/10.5267/j.ijdns.2021.2.005>
- Al-Dmour, H. H., Algharabat, R. S., Khawaja, R., & Al-Dmour, R. H. (2019). Investigating the impact of ECRM success factors on business performance: Jordanian commercial banks. *Asia Pacific Journal of Marketing and Logistics*, 31(1), 105–127. <https://doi.org/10.1108/APJML-10-2017-0270>
- Amin, T. M. Z., Budiastuti, D., So, G., & Arief, M. (2019). The role of strategic entrepreneurship, dynamic capabilities, and government policy to improve Pdam's performance In Indonesia. *International Journal of Scientific & Technology Research*, 8, 8. www.ijstr.org
- Arica, R., Kodas, B., Cobanoglu, C., Parvez, M. O., Ongsakul, V., & Della Corte, V. (2023). The role of trust in tourists' motivation to participate in co-creation. *Tourism Review*, 78(4), 1182–1202. <https://doi.org/10.1108/TR-08-2021-0399>
- Batt-Rawden, V. H., Lien, G., & Slåtten, T. (2019). Team learning capability – an instrument for innovation ambidexterity? *International Journal of Quality and Service Sciences*, 11(4), 473–486. <https://doi.org/10.1108/IJQSS-02-2019-0026>
- Bello, D. C., Radulovich, L. P., Javalgi, R. G., Scherer, R. F., & Taylor, J. (2016). • Performance of professional service firms from emerging markets: Role of innovative services and firm capabilities. *Journal of World Business*, 51(3), 413–424. <https://doi.org/10.1016/j.jwb.2015.11.004>
- Bettencourt, L. A., Ostrom, A. L., Brown, S. W., & Roundtree, R. I. (2002). Client co-production in knowledge-intensive business services. *California Management Review*, 44(4), 100–128. https://doi.org/10.2307/41166145/ASSET/41166145.FP.PNG_V03
- Bidault, F., & Castello, A. (2010). Why too much trust is death to innovation. *MIT Sloan Management Review*. <https://sloanreview.mit.edu/article/why-too-much-trust-is-death-to-innovation/>
- Bischhoffshausen, J. K., von Hottum, P., & Straub, T. (2015). Service co-creation. In: Cardoso, J., Fromm, H., Nickel, S., Satzger, G., Studer, R., Weinhardt, C. (eds) *Fundamentals of service systems. Service science: Research and innovations in the service economy* (pp.261–296). Springer. https://doi.org/10.1007/978-3-319-23195-2_8
- Brentani, U. D., & Ragot, E. (1996). Developing new business-to-business professional services: what factors impact performance? *Industrial Marketing Management*, 25(6), 517–530. <https://www.sciencedirect.com/science/article/pii/S0019850196000661> [https://doi.org/10.1016/S0019-8501\(96\)00066-1](https://doi.org/10.1016/S0019-8501(96)00066-1)
- Cabeza-Pullés, D., Fernández-Pérez, V., & Roldán-Bravo, M. I. (2020). Internal networking and innovation ambidexterity: The mediating role of knowledge management processes in university research. *European Management Journal*, 38(3), 450–461. <https://doi.org/10.1016/j.emj.2019.12.008>
- Chang, Y. Y., & Hughes, M. (2012). Drivers of innovation ambidexterity in small- to medium-sized firms. *European Management Journal*, 30(1), 1–17. <https://doi.org/10.1016/j.emj.2011.08.003>
- Chang, Y. Y., Hughes, M., & Hotho, S. (2011). Internal and external antecedents of SMEs' innovation ambidexterity outcomes. *Management Decision*, 49(10), 1658–1676. <https://doi.org/10.1108/00251741111183816>
- Chao, Z., Weidong, Z., Yong, W., Danli, W., Hangbing, Z., & Xiaoya, D. (2019). Can manufacturing service value co-creation improve business performance in the internet era? *IEEE Access*, 7, 120360–120374. <https://doi.org/10.1109/ACCESS.2019.2937879>
- Chen, M., Yang, Z., Dou, W., & Wang, F. (2018). Flying or dying? Organizational change, customer participation, and innovation ambidexterity in emerging economies. *Asia Pacific Journal of Management*, 35(1), 97–119. <https://doi.org/10.1007/s10490-017-9520-5>
- Chiu, W. H., Chi, H. R., Chang, Y. C., & Chang, H. T. (2011). *Innovation ambidexterity and firm performance: An empirical study of high-tech firms in Taiwan. Proceedings - 2011 4th* [Paper presentation]. International Conference on Information Management, Innovation Management and Industrial Engineering, ICIII 2011, Shenzhen, China. IEEE, 3, 475–478. <https://doi.org/10.1109/ICIII.2011.395>
- Coulter, K., & Coulter, R. (2003). The effects of industry knowledge on the development of trust in service relationships. *Elsevier*. <https://www.sciencedirect.com/science/article/pii/S0167811602001209>
- Coulter, K. S., & Coulter, R. A. (2002). Determinants of trust in a service provider: The moderating role of length of relationship. *Journal of Services Marketing*, 16(1), 35–50. <https://doi.org/10.1108/08876040210419406/FULL/HTML>
- De Silva, M., Howells, J., Khan, Z., & Meyer, M. (2022). Innovation ambidexterity and public innovation Intermediaries: The mediating role of capabilities. *Journal of Business Research*, 149, 14–29. <https://doi.org/10.1016/j.jbusres.2022.05.013>

- Dederering, K., & Pietsch, M. (2023). School leader trust and collective teacher innovativeness: on individual and organisational ambidexterity's mediating role. *Educational Review*. Advance online publication. <https://doi.org/10.1080/00131911.2023.2195593>
- Dharmadhikari, S. (2023). *Professional Services Market Report 2024*.
- Drane, S., & Kent, B. (2020). *The State of Innovation in Professional Services Firms*.
- Duan, Y., Liu, W., Wang, S., Yang, M., & Mu, C. (2022). Innovation ambidexterity and knowledge redundancy: The moderating effects of transactional leadership. *Frontiers in Psychology*, 13, 1003601. <https://doi.org/10.3389/fpsyg.2022.1003601>
- Dunlap, D., Parente, R., Geleilate, J. M., & Marion, T. J. (2016). Organizing for innovation ambidexterity in emerging markets: Taking advantage of supplier involvement and foreignness. *Journal of Leadership & Organizational Studies*, 23(2), 175–190. <https://doi.org/10.1177/1548051816636621>
- Dutta-Koehler, M. C. (2012). Climate adaptation in the face of resource constraints: Lessons from a coastal south Asian mega-city. *Research in Urban Sociology*, 12, 171–195. [https://doi.org/10.1108/S1047-0042\(2012\)0000012010](https://doi.org/10.1108/S1047-0042(2012)0000012010)
- Efstathiades, A., & Papageorgiou, G. (2019). A quantitative model for open innovation and customer involvement. *International Journal of Economics and Business Research*, 17 (2), 168–188.
- Empson, L., Muzio, D., Broschak, J., & Hinings, B. (2015). *Researching Professional Service Firms: An Introduction and Overview*. www.cass.ac.uk/cpsf
- Farzaneh, M., Wilden, R., Afshari, L., & Mehralian, G. (2022). Dynamic capabilities and innovation ambidexterity: The roles of intellectual capital and innovation orientation. *Journal of Business Research*, 148, 47–59. <https://doi.org/10.1016/j.jbusres.2022.04.030>
- Fischer, A. (2011). Recognizing opportunities: initiating service innovation in PSFs. *Journal of Knowledge Management*, 15(6), 915–927. <https://doi.org/10.1108/1367327111179280>
- Fu, L., Liu, Z., & Liao, S. (2018). Is distributed leadership a driving factor of innovation ambidexterity? An empirical study with mediating and moderating effects. *Leadership & Organization Development Journal*, 39(3), 388–405. <https://doi.org/10.1108/LODJ-05-2017-0134>
- Glückler, J., & Armbrüster, T. (2003). Bridging uncertainty in management consulting: The mechanisms of trust and networked reputation. *Organization Studies*, 24(2), 269–297. <https://doi.org/10.1177/0170840603024002346>
- Gounaris, S. P., & Venetis, K. (2002). Trust in industrial service relationships: Behavioral consequences, antecedents and the moderating effect of the duration of the relationship. *Journal of Services Marketing*, 16(7), 636–655. <https://doi.org/10.1108/08876040210447351>
- Grayson, K., Johnson, D., & Chen, D. F. R. (2008). *Is Firm Trust Essential in a Trusted Environment? How Trust in the Business Context Influences Customers*. <https://digitalcommons.montclair.edu/marketing-facpubs/212>
- Greenwood, R., Li, S. X., Prakash, R., & Deephouse, D. L. (2005). Reputation, diversification, and organizational explanations of performance in professional service firms. *Organization Science*, 16(6), 661–673. <https://doi.org/10.1287/orsc.1050.0159>
- Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, 26 (2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Hair, J., Hult, T., Ringle, C., Sarstedt, M., Danks, N., & Ray, S. (2021). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R*. <http://www>
- Hakanen, T., & Jaakkola, E. (2012). Co-creating customer-focused solutions within business networks: A service perspective. *Journal of Service Management*, 23(4), 593–611. <https://doi.org/10.1108/09564231211260431/FULL/XML>
- Hamdani, N. A., Solihat, A., & Maulani, G. A. F. (2019). The influence of information technology and co-creation on handicraft SME business performance. *International Journal of Recent Technology and Engineering*, 8(1), 151–154.
- Hertog, P. (2000). Knowledge-intensive business services as co-producers of innovation. *International Journal of Innovation Management*, 04(04), 491–528. <https://www.worldscientific.com/doi/abs/10.1142/S136391960000024X> <https://doi.org/10.1142/S136391960000024X>
- Hughes, M., Hughes, P., Morgan, R. E., Hodgkinson, I. R., & Lee, Y. (2021). Strategic entrepreneurship behaviour and the innovation ambidexterity of young technology-based firms in incubators. *International Small Business Journal: Researching Entrepreneurship*, 39(3), 202–227. <https://doi.org/10.1177/0266242620943776>
- Jantunen, A., Tarkiainen, A., Chari, S., & Oghazi, P. (2018). Dynamic capabilities, operational changes, and performance outcomes in the media industry. *Journal of Business Research*, 89, 251–257. <https://doi.org/10.1016/j.jbusres.2018.01.037>
- Jouny-Rivier, E., Reynoso, J., & Edvardsson, B. (2017). Determinants of services co-creation with business customers. *Journal of Services Marketing*, 31(2), 85–103. <https://doi.org/10.1108/JSM-01-2016-0001/FULL/HTML>
- Kantsperger, R., & Kunz, W. H. (2010). Consumer trust in service companies: a multiple mediating analysis. *Managing Service Quality: An International Journal*, 20(1), 4–25. <https://doi.org/10.1108/09604521011011603>
- Kauppila, O. P. (2010). Creating ambidexterity by integrating and balancing structurally separate interorganizational partnerships. *Strategic Organization*, 8(4), 283–312. <https://doi.org/10.1177/1476127010387409>
- Kowalik, I., & Pleśniak, A. (2022). Marketing determinants of innovation ambidexterity in small and medium-sized manufacturers. *Entrepreneurial Business and Economics Review*, 10(2), 163–185. <https://doi.org/10.15678/EBER.2022.100210>

- Le Meunier-FitzHugh, K., Le Meunier-FitzHugh, L., Palmer, R., Clark, M., & Hair, N. (2016). Service Dominant Logic – An example of competitive advantage. In: Campbell, C., Ma, J. (eds) Looking Forward, Looking Back: Drawing on the Past to Shape the Future of Marketing. *Developments in Marketing Science: Proceedings of the Academy of Marketing Science*, 165. Springer. https://doi.org/10.1007/978-3-319-24184-5_41
- Lin, H. E., McDonough, E. F., Lin, S. J., & Lin, C. Y. Y. (2013). Managing the exploitation/exploration paradox: The role of a learning capability and innovation ambidexterity. *Journal of Product Innovation Management*, 30(2), 262–278. <https://doi.org/10.1111/j.1540-5885.2012.00998.x>
- Lu, V. (2009). Organizational drivers of relationship trust: An investigation of service exporters. *Journal of Relationship Marketing*, 8(4), 330–355. <https://doi.org/10.1080/15332660903344677>
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71–87. <https://doi.org/10.1287/orsc.2.1.71>
- Mason, J. (1992). Innovation in professional services: Potential productivity. *And Trade Improvement. Technological Forecasting and Social Change*, 42(1), 31–45. <https://www.sciencedirect.com/science/article/pii/004016259290071Z> [https://doi.org/10.1016/0040-1625\(92\)90071-Z](https://doi.org/10.1016/0040-1625(92)90071-Z)
- Mihardjo, Leonardus WW, Alamsjah, Firdaus, Sasmoko, Elidjen, (2020). Role of green information system in developing corporate reputation and co-creation-innovation to attain sustainable performance. *IOP Conference Series: Earth and Environmental Science*, 426(1), 012120. <https://doi.org/10.1088/1755-1315/426/1/012120>
- Möller, K., Rajala, R., & Westerlund, M. (2008). Service innovation myopia? A new recipe for client-provider value creation. *California Management Review*, 50(3), 31–48. https://doi.org/10.2307/41166444/ASSET/41166444.FP.PNG_V03
- Moorman, C., Deshpande, R., & Zaltman, G. (2013). *Factors Affecting Trust in Market Research Relationships*. American Marketing Association.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20–38. <https://doi.org/10.2307/1252308>
- Mulyana, M., Nurhayati, T., & Nurkholis, L. (2022). Cultural and system relational capabilities on business performance: Role of value co-creation activities. *Journal of Asia-Pacific Business*, 23(1), 5–23. <https://doi.org/10.1080/10599231.2022.2025642>
- Nguyen, T., Wu, R., & Evans, R. (2017). *An investigation into value co-creation in service supply chains* [Paper presentation]. IEEE Technology & Engineering Management Conference (TEMSCON), Santa Clara, CA, USA. IEEE. <https://ieeexplore.ieee.org/abstract/document/7998411/>
- Nienaber, A. M., Hofeditz, M., & Searle, R. H. (2014). Do we bank on regulation or reputation? A meta-analysis and meta-regression of organizational trust in the financial services sector. *International Journal of Bank Marketing*, 32(5), 367–407. <https://doi.org/10.1108/IJBM-12-2013-0146>
- Octavius, G. S., & Antonio, F. (2021). Antecedents of intention to adopt mobile health (mHealth) application and its impact on intention to recommend: An evidence from Indonesian customers. *International Journal of Telemedicine and Applications*, 2021, 6698627–6698624. <https://doi.org/10.1155/2021/6698627>
- Pangarso, A., Astuti, E. S., Raharjo, K., & Afrianty, T. W. (2020). The impact of absorptive capacity and innovation ambidexterity on sustainable competitive advantage: The case of Indonesian higher education. *Entrepreneurship and Sustainability Issues*, 7(3), 2436–2455. [https://doi.org/10.9770/jesi.2020.7.3\(65\)](https://doi.org/10.9770/jesi.2020.7.3(65))
- Panniello, U., Gorgoglione, M., & Tuzhilin, A. (2016). In CARs we trust: How context-aware recommendations affect customers' trust and other business performance measures of recommender systems. *Information Systems Research*, 27(1), 182–196. <https://doi.org/10.1287/isre.2015.0610>
- Paparoidamis, N. G., Katsikeas, C. S., & Chumpitaz, R. (2019). The role of supplier performance in building customer trust and loyalty: A cross-country examination. *Industrial Marketing Management*, 78, 183–197. <https://doi.org/10.1016/j.indmarman.2017.02.005>
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, 18(3), 5–14. <https://doi.org/10.1002/dir.20015>
- Röd, I. (2019). TMT diversity and innovation ambidexterity in family firms: The mediating role of open innovation breadth. *Journal of Family Business Management*, 9(4), 377–392. <https://doi.org/10.1108/JFBM-09-2018-0031>
- Salampasis, D. G., Mention, A.-L., & Torkkeli, M. (2015). Trust embeddedness within an open innovation mindset. *International Journal of Business and Globalisation*, 14(1), 32–57.
- Schwetschke, S., & Durugbo, C. (2018). How firms synergise: understanding motives and management of co-creation for business-to-business services. *International Journal of Technology Management*, 76, 258–284
- Shao, Z., Zhang, L., Li, X., & Guo, Y. (2019). Antecedents of trust and continuance intention in mobile payment platforms: The moderating effect of gender. *Electronic Commerce Research and Applications*, 33, 100823. <https://doi.org/10.1016/j.eelerap.2018.100823>
- Sharma, P. (2021). Customer co-creation, COVID-19 and sustainable service outcomes. *Benchmarking: An International Journal*, 28(7), 2232–2258. <https://doi.org/10.1108/BIJ-10-2020-0541>
- Sheng, M. L., & Saide, S. (2024). A servant perspective of leadership and knowledge co-creation process for IT/IS exploration-exploitation innovation in the B2B enterprise context. *Journal of Enterprise Information Management*, 37(1), 1–23. <https://doi.org/10.1108/JEIM-03-2023-0110/FULL/HTML>

- Shulga, L. V., Busser, J. A., Bai, B., & Kim, H. (2021). The reciprocal role of trust in customer value co-creation. *Journal of Hospitality & Tourism Research*, 45(4), 672–696. <https://doi.org/10.1177/1096348020967068>
- Sijabat, E. A. S., Nimran, U., Utami, H. N., & Prasetya, A. (2020). Ambidextrous innovation in mediating entrepreneurial creativity on firm performance and competitive advantage. *The Journal of Asian Finance, Economics and Business*, 7(11), 737–746. <https://doi.org/10.13106/jafeb.2020.vol7.no11.737>
- Sirdeshmukh, D., Singh, J., & Sabol, B. (2002). Consumer trust, value, and loyalty in relational exchanges. *Journal of Marketing*, 66(1), 15–37. <https://doi.org/10.1509/jmkg.66.1.15.18449>
- Soto-Acosta, P., Popa, S., & Martinez-Conesa, I. (2018). Information technology, knowledge management and environmental dynamism as drivers of innovation ambidexterity: a study in SMEs. *Journal of Knowledge Management*, 22(4), 824–849. <https://doi.org/10.1108/JKM-10-2017-0448>
- Suzuki, O. (2015). Unpacking performance benefits of innovation ambidexterity: Evidence from the pharmaceutical industry. *Management Revu*, 26(4), 328–348. <https://doi.org/10.5771/0935-9915-2015-4-328>
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Vargo, S. L., Lusch, R. F., Vargo Is Visiting Professor Of Marketing, S. L., Smith, R. H., Hunt, S., Laczniak, G., Malter, A., Morgan, F., & O'brien, M. (2004). A new dominant logic/1 evolving to a new dominant logic for marketing. *Journal of Marketing (Vol. 68)*, 68(1), 1–17. <https://doi.org/10.1509/jmkg.68.1.1.24036>
- Weerawardena, J., & O'Cass, A. (2004). Exploring the characteristics of the market-driven firms and antecedents to sustained competitive advantage. *Industrial Marketing Management*, 33(5), 419–428. <https://doi.org/10.1016/j.ind-marman.2003.07.002>
- Widjojo, H., Fontana, A., Gayatri, G., & Soehadi, A. W. (2020). value co-creation for marketing innovation: Comparative study in the SME community. *International Journal of Innovation Management*, 24(03), 2050030. <https://doi.org/10.1142/S1363919620500309>
- Wijanto, S. H. (2015). *Metode Penelitian menggunakan Structural Equation Modeling dengan LISREL 9*.
- Williams, C., & van Triest, S. (2021). Innovativeness in the professional services industry: A practice level analysis. *European Management Review*, 18(3), 263–276. <https://doi.org/10.1111/emre.12450>
- Wiratmadja, I. I., Profityo, W. B., & Rumanti, A. A. (2021). Drivers of innovation ambidexterity on small medium enterprises (SMEs) performance. *IEEE Access*, 9, 4423–4434. <https://doi.org/10.1109/ACCESS.2020.3048139>
- Zaborek, P., & Mazur, J. (2019). Enabling value co-creation with consumers as a driver of business performance: A dual perspective of Polish manufacturing and service SMEs. *Journal of Business Research*, 104, 541–551. <https://doi.org/10.1016/j.jbusres.2018.12.067>
- Zeng, D., Hu, J., & Ouyang, T. (2017). Managing innovation paradox in the sustainable innovation ecosystem: A case study of ambidextrous capability in a focal firm. *Sustainability*, 9(11), 2091. <https://www.mdpi.com/2071-1050/9/11/2091> <https://doi.org/10.3390/su9112091>
- Zhang, G., Tang, C., & Qi, Y. (2020). Alliance network diversity and innovation ambidexterity: The differential roles of industrial diversity, geographical diversity, and functional diversity. *Sustainability*, 12(3), 1041. <https://doi.org/10.3390/su12031041>
- Zhao, A., Bi, X., & Han, L. (2021). Re-examining the new product paradox: How innovation ambidexterity mediates the market orientation and new product development performance relationship. *Frontiers in Psychology*, 12, 611293. <https://doi.org/10.3389/fpsyg.2021.611293>