

Permada, Dewi Nari Ratih; Hussein, Ananda Sabil; Risna Wijayanti; Ratnawati, Kusuma

Article

The mediating role of market value to company dynamic performance

Global Business & Finance Review (GBFR)

Provided in Cooperation with:

People & Global Business Association (P&GBA), Seoul

Suggested Citation: Permada, Dewi Nari Ratih; Hussein, Ananda Sabil; Risna Wijayanti; Ratnawati, Kusuma (2024) : The mediating role of market value to company dynamic performance, Global Business & Finance Review (GBFR), ISSN 2384-1648, People & Global Business Association (P&GBA), Seoul, Vol. 29, Iss. 6, pp. 187-200,
<https://doi.org/10.17549/gbfr.2024.29.6.187>

This Version is available at:

<https://hdl.handle.net/10419/306022>

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/4.0/>



The Mediating Role of Market Value to Company Dynamic Performance

Dewi Nari Ratih Permada[†], Ananda Sabil Hussein, Risna Wijayanti, Kusuma Ratnawati

Brawijaya University, Indonesia

ABSTRACT

Purpose: This study examines the performance of 35 Indonesian Consumer Non-Cyclical Companies through fixed asset, cost of goods sold, and operating expenses as independent variables and market value as mediating variable to company dynamic performance.

Design/methodology/approach: Dynamic performance describes how much the company's ability to comprehensively processing their business (fixed assets (FA), operational expense (OE) and cost of goods sold(COGS)) to produce value which signalled the market as market value or capitalization. Data envelopment analysis (DEA) used to produce numerical data for FA, OE, and COGS. The data collected through company's annual report for 14 years.

Findings: Our data suggest that all of company inputs such as fixed assets, operational expenses and cost of goods sold have a negative path coefficient to Dynamic Performance. Data suggest that the more productive a company, the smaller its dynamic performance. Moreover, the higher the market value of a company, the smaller the company dynamic performance. Simultaneously, mediating role of more likely it is to has the effect of reducing company dynamic performance.

Research limitations/implications: The mediating variable in this study is market value which is not related to the input variables in this study. For further research, it can use moderating variables related to investment risk, profit projections, economic growth, and public policy because macro things are more visible in the company's operations in the eyes of stakeholders.

Originality/value: This research provides a new understanding related to efficiency, where efficiency is not necessarily generated from a series of production processes, but it needs to be observed that certain values of each input variable can produce a negative relationship to the achievement of dynamic performance.

Keywords: Consumer Non-Cyclical Companies; dynamic performance; market value; production capabilities

I. Introduction

In the past two years, Indonesia faced economic downturns due to the COVID-19 pandemic, resulting in instability and a significant drop in purchasing

power (Qolbi, 2021). Assessing a company's comprehensive performance amid these changing economic conditions is crucial. There are several problems from previous study which became the backbone of this research and became the background for us carrying out this research. Market value seems to be the problem that underlies several companies' performance as research subjects which has decreased. The problem with market value indirectly

Received: Mar. 13, 2024; Revised: Apr. 11, 2024; Accepted: May. 1, 2024

[†] Corresponding author: Dewi Nari Ratih Permada

E-mail: devinaubjkt@student.ub.ac.id

changes the stock market patterns of certain manufacturing companies (cosmetics and beauty, household consumers, textiles and apparel as well as the consumer electronics industry) pre and post COVID-19 (Jan, 2022), decreasing company performance in Saudi Arabia from 2009 to 2019 due to COVID-19 became detrimental effect which harmed the company market value by reducing both their total investment, let down the psychology of investors decision to invest the enterprise or company becoming to reduce overall income (Makni, 2023).

Several studies show that if there are problems with market value, such as declining stock returns even after the COVID-19 pandemic (Paula-Vianez, 2023), investors' decisions to invest in enterprises or companies will decrease due to seeing future uncertainty or adverse events (ex. COVID-19 pandemic, stock market depression, less relevance of products to the market and a significant decline in productivity) (Harris, 2020 and Makni, 2023) will have an effect on company performance, namely a significant positive effect on 6 different manufacturing companies pre and post COVID-19. 19 pandemic, thereby making companies improve stable performance intensively even after the COVID-19 pandemic took place (Dahan, 2024). However, from all the studies that have been reviewed, there is still a lack of detailed discussion regarding company dynamic performance, so it is an important point in this research to study company dynamic performance in addition to studying the mediation of market value on company dynamic performance.

Dynamic performance, reflecting adaptability over time, serves as a metric encompassing production sustainability, business efficiency, and economic resilience during crises (Hong et al., 2018; Luftman et al., 2017; Ferreira et al., 2020). This adaptability, measured through financial data parameters and iterative processes, ensures efficient input-to-output transformations, defining a company's success (Wang et al., 2021; Ting et al., 2020; Brandenburg & Hahn, 2021). Unlike conventional financial ratio-based assessments, dynamic performance considers input changes in unstable economic situations, offering a

more comprehensive measure of company inputs. Emphasizing efficiency in processing resources to yield optimal outputs, this approach factors in both current and past years' achievements, providing a holistic view of a company's success (Muchtar et al., 2018). Focusing on operational expenses, fixed assets, and the cost of goods, this research explores their roles as input variables, mediated by market value, in determining dynamic performance. Operational expenses, representing daily costs for core business activities, impact a company's revenue generation, while efficient cost management enhances net profit and market value (Nimtrakoon, 2015).

II. Literature Review

A. Corporate Finance Theory and Company Dynamic Performance

The Modigliani-Miller Theorem, as elucidated by Copeland (1988), underscores the imperative for companies to execute operations, financial management, and investment efficiently. Ideally, a financial manager or CFO oversees cash flow management, while business managers focus on company processes, innovation, product sales, and maintaining fixed assets. Financial investors play a pivotal role in providing financial facilities (Vernimmen, 2014). Tirole (2006) adds key factors to the theorem, including the impact of company-owned assets, referred to as bubbles, on costs of goods sold and market value. Balancing fixed assets is crucial, considering the correlation with maintenance costs and the risk of a bubble collapse. Efficiently managing company operations, encompassing investments, operational expenses, fixed assets, and facility maintenance, becomes paramount for survival in the business realm, according to company behavioural finance. Vernimmen (2014) emphasizes three main tenets in corporate finance—return, risk, and value—essential for effective and efficient company operations. This research aligns with these principles, integrating

them into both company input (fixed assets, cost of goods sold, and operational expenses) and output (market value) to gauge dynamic performance.

Dynamic performance of a company or firm is influenced by several factors, be it the company's input or the company's output. Operational expenses of the company as company's input have a positive influence on company dynamic performance based on Pehlivan (2020) through ineffective R&D and marketing expenditure where if the company often carries out operating expenses in the form of ineffective R&D and marketing expenditure it will make the company intensify its dynamic performance to maintain its business operations (Zehir, 2018). Fixed assets also have a significant impact on business performance. Several previous studies presented results that there is a negative relationship between fixed asset investment and enterprise performance (Zheng, 2021 and Lin, 2022).

Added value and sustainable competitive advantage can improve a company's dynamic performance. Company capabilities are supported by resources that have their own uniqueness, in the sense that they are valuable, rare, costly to imitate and non-substitutable (Barney, 2021). For this reason, management must continue to increase its resources, especially intangible resources (Company Dynamic Performance), so that it is able to produce dynamic performance from year to year. What needs to be emphasized in this research is that this research applies a concept where dynamic performance is the dependent variable which will then be mediated by mediating variables in the form of output (Sales and Market Value). The independent variables in this research are input (Operational Expense, Fixed Asset, and Cost of Goods Sold).

Company dynamic performance is an assessment of efficiency and effectiveness carried out at one time so that performance is a function of two variables, efficiency, and empowerment (Siminica, et al., 2008). Human resources and other resources to create efficiency within the company. The performance measurement system is a set of concise and clear measures for the financial sector and non-financial

sector that supports the organizational decision-making process by management by collecting, processing, and analysing measurable data from performance information (Gimbert et al., 2010). Therefore, one way to measure and assess company performance is through DEA analysis on the company's input and output aspects.

B. Effect of Company Inputs Toward the Company Dynamic Performance

Company inputs, encompassing operational expenses, fixed assets, and cost of goods sold (COGS), plays a pivotal role in shaping dynamic performance. Operational expenses, vital for supporting company operations, include costs like sales and administration, distinct from COGS or depreciation. Examples range from machine depreciation to raw material purchases and employee salaries.

H1a. posits that operational expenses, viewed as company liabilities, negatively impact dynamic performance. Fixed assets, characterized by their valuable and fixed nature, contribute long-term financial benefits to business operations.

H2a. asserts that fixed assets, representing company liabilities, negatively affect dynamic performance. COGS, integral to cost management, significantly influences dynamic performance. Research indicates that lower leverage in managing COGS enhances dynamic performance, highlighting the importance of efficient cost flow management.

H3a. suggests that COGS as a company liability negatively affects dynamic performance. In summary, the total direct effect on dynamic performance stems from operational expenses, fixed assets, and COGS as independent variables.

C. Mediating Effect of Market Value Toward the Company Dynamic Performance

One part of the company's output that is emphasized in this research is market value. The company output emphasized in this research acts as a mediating variable for the company's dynamic performance variables. The company's dynamic performance does not only assess the company's achievements from financial ratios in the current year but also concerns the achievements of the previous year, so it is very important to maintain fluctuations/dynamics of success from year to year. The use of dynamic performance refers to the level of efficiency that can be achieved over a certain period. Therefore, discussions about dynamic performance will always involve previous performance achievements which influence the current year's performance assessment (Muchtar et al., 2018). Market value, which is part of the company's output, is directly proportional to the share price. A decrease in share prices causes market value to decrease further. This will affect the level of investor confidence which is increasingly decreasing. And if the level of investor confidence decreases, the company will lose the opportunity to obtain additional capital from investors (Naveed et al., 2020) to invest and develop the business. The following is the stock price index for companies in the primary consumer goods sector based on the IDX Industrial Classification as in the image below.

This research underscores market value as a significant component of company output, acting as a mediating variable for dynamic performance. Beyond assessing current financial ratios, dynamic performance evaluates achievements from both the present and preceding years, emphasizing the importance of maintaining success fluctuations annually (Muchtar et al., 2018). Market value, integral to the company's output, is directly linked to share prices. A decrease in share prices leads to a further decline in market value, diminishing investor confidence. Reduced investor confidence hinders the company's ability to secure additional capital for business investment and development (Naveed et al., 2020). The stock price index for primary consumer goods sector companies, based on the IDX Industrial Classification, reveals a decline attributed to decreasing sales and productivity, reflecting the impact of reduced market demand on company income (Qolbi, 2021). Figure 1 describe the decline in stock prices since 2018. In navigating dynamic environments, companies must implement effective strategies to remain competitive (Chandra, 2018).

H4a. posits that market value, as a mediator, influences company input toward dynamic performance. In summary, the total direct influence of company output as a moderating variable on dynamic performance is depicted in the model.

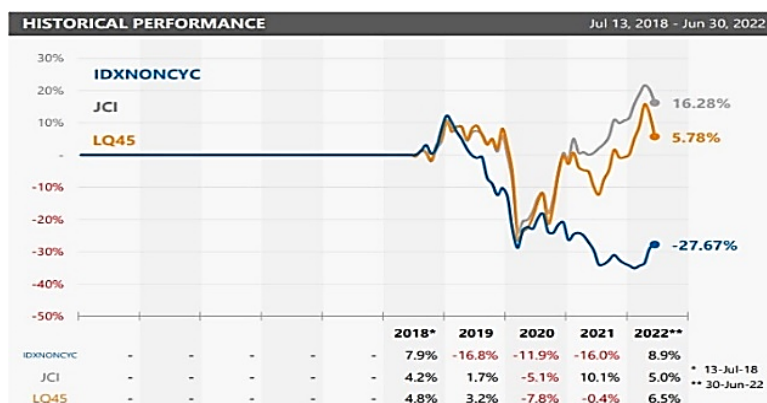


Figure 1. Primary consumer goods sector company share price index (Indonesia stock exchange, 2021)

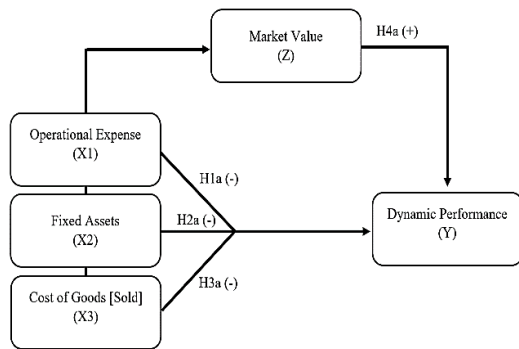


Figure 2. Hypothetical framework

From the hypothetical framework, dynamic performance in this research is the outcome variable, measured by inputs, sales and that market value as outputs is a mediator.

III. Methodology

The research approach applied a quantitative methodology based on an explanatory and positivist paradigm also mediates theory that have a relation to variable of research as a basis to construct a thinking framework to develop hypotheses. The research used path analysis using SmartPLS. The population of this research are 111 company which listed on the Indonesia Stock Exchange (IDX) and sample in this research conduct 35 Consumer Non-Cyclical Companies or manufacturing company listed on IDX using panel data regression sampling method of 35 company

from 2009 to 2020.

To analyze the data, precondition needed to be applied to the raw data. We used data envelopment analysis method to evaluate the dynamic performance of company rather it have efficient or inefficient performance for the research. Research by Wang et al. (2021) developed the conventional DEA method into Dynamic-DEA following previous research conducted by Tone & Tsutsui (2010) which stated that Dynamic-DEA was able to evaluate performance precisely because it chose more than one variable in its measurement. The production capability variables are the fixed asset, cost of goods sold and operational costs, while the production value variable is the company's market value. Dynamic-DEA calculations provide useful weights to ensure objectivity and provide suggestions for improvements for performance calculations using financial ratios.

Efficiently managing production cost components can enhance a company's gross profit (Salvi, 2020). Table 1 is describe input and output variables that became Dynamic performance whices counted with DEA methodically. Maintaining low operational costs is crucial when a company achieves a high gross profit to ensure sustained high net profit (Baima, 2020). Efficiency, in this context, extends beyond the production process and necessitates effective management of overall company operations.

The dynamic performance scope closely aligns with accounting data used in DEA, as accounting information is comprehensive and serves as a primary source for evaluating company performance (Harrison, J., & Rouse, P., 2016). DEA stands out as a sophi-

Table 1. Definition of input and output variables in company dynamic performance

Variables	Description
Productivity	
Fixed Assets (FA)	The sum of land, property, equipment, and other in the previous year.
Cost of Goods Sold (COGS/CGS)	Cost of sales less depreciation, amortization, and research and development expenses.
Operating Expenses (OE)	The sum of administrative expenses, advertising expenses, and research and development expenses.
Market Signal	
Market Value	The multiplication of the market price per-share and the total number of common shares.

slicated method for assessing company performance, offering nuanced rankings beyond simple performance ratios and efficiency models (Büschken, 2009). As demonstrated in the image, DEA analyses both input and output in assessing company performance.

Another method commonly used to measure company efficiency in order to assess the company's dynamic performance apart from using DEA is through the stochastic frontier efficiency method and econometric models. The stochastic frontier efficiency method emphasizes two main factors, namely integrating relative efficiency and stochastic intimidation to measure company performance (Eling, 2010). In other words, the stochastic frontier efficiency method pays attention to deviations from best practices consisting of white "noise" or random errors and company inefficiency (Theodoridis, 2008). The essential difference underlying the stochastic frontier analysis efficiency method and the DEA method lies in the efficiency orientation, where DEA is non-parametric focuses more on the company's input and output orientation to assess company performance. This is an advantage of using the DEA method compared to other methods in research needs to analyze dynamic performance by focusing on the input and output aspects of companies whose turnover tends to be dynamic from time to time.

The DEA calculation model, derived from previous research by Wang et al. (2021a), utilizes fixed assets, cost of goods sold, and operating costs as input proxies for dynamic performance. Output proxies include sales and market value of the company. These proxies collectively represent company efficiency. However, even though DEA is a method that is easy to use in analysing efficiency and measuring company dynamic performance, the DEA method also has shortcomings in its application, namely that the DEA method only measures relative efficiency without direction of causality so it cannot directly inform users about the best solution for increasing efficiency. and the dynamic performance of a company (Chen, 2021) as well as DEA's dependence on appropriate input and output company data so that it can provide reliable results (Costa, 2023). DEA does not take

into account differences in the scale of operations between the units analysed. As a result, units with different operating scales may receive unfair efficiency scores (Chen, 2021).

Data, collected from IDX over fourteen years of company performance, was chosen for its substantial time span, allowing for in-depth analysis of dynamic performance changes. The three-year operational cycle for DEA application over 12 years enabled the calculation of dynamic performance ten times. The data, in the form of ratios or scores, will be processed in Path Analysis using SmartPLS 3.0.

IV. Results and Discussion

A. Descriptive

The outcomes of the Data Envelopment Analysis (DEA) are represented through scatterplot graphs (see Figure 3), dividing companies into four quadrants based on efficiency and market value. Quadrant 4, with 43% of the companies, showcases a scenario where firms possess low market value yet demonstrate high dynamic performance. In contrast, quadrant 3, comprising 74% of companies, reflects instances where companies exhibit both low market value and dynamic performance. Quadrant 1, with only 0.028% of companies, signifies a situation where firms have both high market value and dynamic performance. Operational expenses, as a company input, show a trend in quadrant 4 (43% of companies) with low operational expenses and high dynamic performance, while quadrant 3 (46% of companies) indicates low operational expenses and dynamic performance. Fixed assets, another company input, display a trend in quadrant 4 (48.5% of companies) with low fixed assets and high dynamic performance, and quadrant 3 (46% of companies) reflects low fixed assets and dynamic performance. Lastly, cost of goods sold, as a company input, indicates a trend in quadrant 4 (23% of companies) with low costs but high dynamic performance, while quadrant 3 (65.7% of companies)

shows low costs and dynamic performance.

A key component of business valuation, fixed assets, vary greatly among the tested companies, from millions to billions of dollars. This variability highlights how different sector participants have different asset holding sizes and strategic resource allocation plans. The distribution is notably skewed to the right by outliers with unusually high fixed asset values, suggesting the existence of businesses with sizable asset bases that have a major impact on the sector's overall asset valuation. Cost of goods sold (COGS), a crucial indicator of cost control and operational effectiveness, displays high spending

levels among businesses. The COGS distribution exhibits a modest right skew, indicating diverse spending habits and differing degrees of cost conservation tactics employed by industry players. The non-cyclical consumer goods sector's dynamic production and operational strategies are reflected in the unpredictability of COGS. Another important financial statistic, operational expenses, shows a significant variation in spending patterns among the organizations under study. This variance highlights the varying financial commitments and operational techniques that companies in the sector have chosen to employ. The operational expense distribution

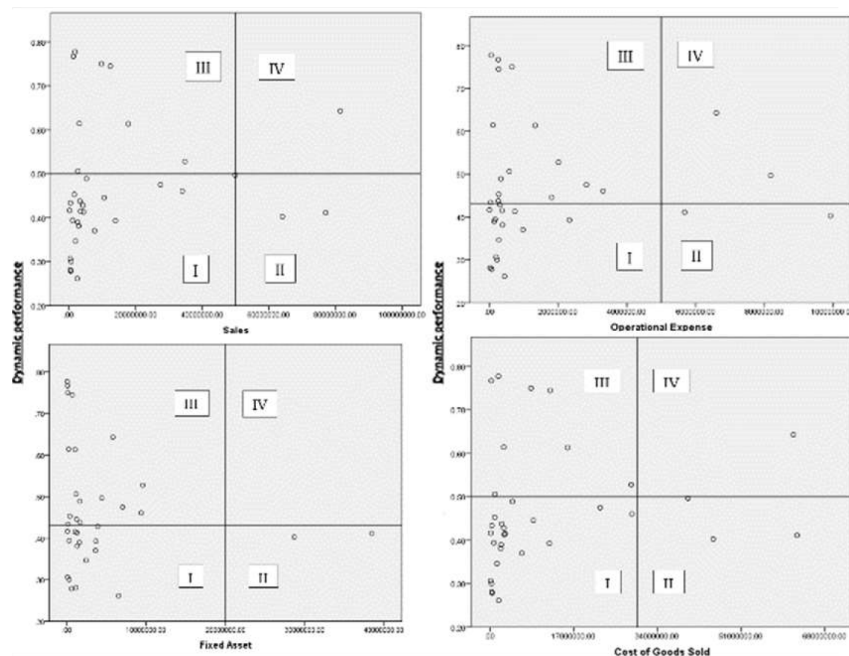


Figure 3. Descriptive mapping

Table 2. Descriptive statistics for all data envelopment analysis (DEA) variables

	Sum	Min	Max	Mean	Skewness	Kurtosis
	In thousands (USD)					
Fixed Asset	2,068,569.309	5.446	5,2081.133	3,693.874	4.079	18.669
Cost of Goods Sold	5,486,010.718	10.803	110,608.655	9,796.448	2.720	8.274
Operational Expense	853,875.014	-92.405	15,831.694	1,524.777	2.763	7.921
Sales	7,182,737.171	4.412	124,881.266	12,826.316	2.596	7.004
Market Value	13,448,425.750	0.024	5,793.650	24,015.046	4.914	27.170

shows a pattern that is right-skewed, indicating the existence of businesses with above-average operating costs that impact patterns in spending across the industry.

Within the non-cyclical consumer goods sector, a robust market presence and customer demand are indicated by the substantial average sales volume. The sales data distribution does, however, skew slightly to the right, suggesting that while the majority of businesses have sales figures below average, a small number of enterprises outperform the average in terms of sales, maybe as a result of creative marketing approaches or unique product offerings. Market values show notable differences in valuation amongst participants in the industry. The market value distribution is strongly skewed to the right, highlighting the existence of companies with extraordinarily high market valuations that have a significant impact on the market capitalization of the entire sector.

B. Hypothesis Testing

Data suggest that the company output (market value) path coefficient value which in this study acts as a mediating variable on company dynamic performance is -0.064 with the interpretation that the higher the market value owned by the company,

the more likely it is to have the effect of reducing company dynamic performance. The overall company input path coefficient (operational expense, fixed assets and Cost of goods sold) has a negative coefficient so it can be interpreted that the higher the company input of a company, the lower the company's dynamic performance.

Then, to test whether market value as company output is a mediating variable on company dynamic performance, a coefficient comparison is carried out between the path coefficient of input company on variable Y (company dynamic performance) and the path coefficient of company input on company output which acts as a mediating variable (market value). It is known that the path coefficient of company input to the mediating variable is greater than the path coefficient of company input to company dynamic performance, thus indicating that company output (market value) is a full mediating variable on company dynamic performance

C. Company Inputs and Dynamic Performance

The impact of operational expenses on company output, specifically reducing market value, is substantiated by Uddin's (2020) research, highlighting an inverse relationship between operational expenses

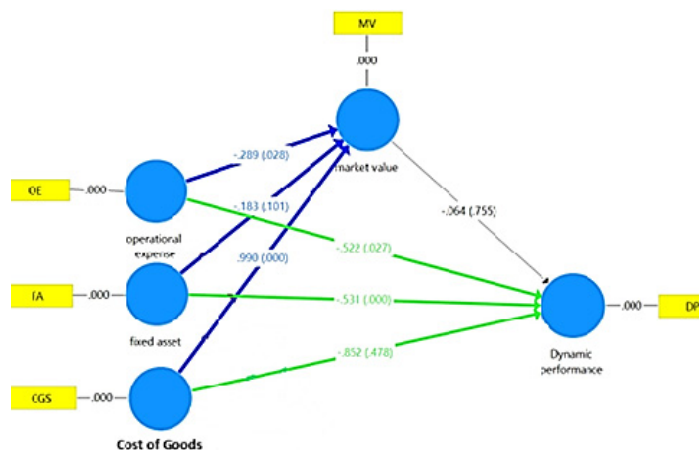


Figure 4. Path analysis using SmartPLS

and market value. High operational expenses diminish shareholder trust as excessive spending without proportional profits signals inefficiency, adversely affecting a company's longevity in the business world (Sumaryati, 2017). Such inefficiency is further evidenced by a decrease in share prices, reflecting public perceptions of the company's mismanagement.

Turning to the examination of fixed assets, these valuable and tangible entities integral to business operations contribute long-term financial benefits. The characteristics of fixed assets involve representation of future profits, provision of benefits to the company, and transactions entrusted to specific parties (Peterson, 2002). Analysis reveals that large fixed asset figures negatively influence market value, indicating that high maintenance, funding, and training costs associated with extensive fixed assets overwhelm a company and lead to decreased market value (Reyes, 2020). The public tends to perceive high fixed assets as inefficient, contributing to a decline in share prices.

In contrast, the positive influence of the cost of goods sold (COGS) on company market value is evident in the path analysis. Higher COGS corresponds to an improved market value, reflecting a company's enhanced production capacity and positive impacts on gross profit (Hayek, 2018). Increased COGS may indicate higher production volumes or improved product quality, stimulating consumer demand and positively influencing market value (Goestjahjanti & Widayati, 2020; Moheb-Alizadeh & Handfield, 2018). Effective cost management strategies, such as economies of scale or efficient supply chain practices, contribute to the positive relationship between COGS and market value (Moncayo-Martínez & Mastrocinque, 2016). Thus, a high COGS has a positive influence on market value, reflecting public perception that the company can meet increasing market demand, thereby boosting market value, share prices, and shareholder confidence. Overall, the modelling for hypotheses one to three that can be implemented in analyzing the total direct influence of company's inputs as an independent variable on the company dynamic performance is shown as follows:

$$- Y_{PD} = \beta_1 + \beta_2 + \beta_3$$

$$- Y_{PD} = -0.522X_{OE} - 0.531X_{FA} - 0.852X_{CGS}$$

Overall, all company inputs negatively impact the dynamic performance of a company. Cost of goods sold affects the highest with 85.2% of declining effects to the dynamic performance, followed by fixed asset about 53.1% and 52.2% of operational expenses

D. Market Value as Mediating Variable to Dynamic Performance

In this research, apart from analyzing the direct effects of independent variables on company dynamic performance, we also looked at and assessed the indirect effects of the market value as a mediating variable on company dynamic performance. Data suggest that company market capitalization, or in this study, market value, is a full mediating variable on company dynamic performance. This states that company market value can mediate company dynamic performance. Market value as a company's output is based, in part, on the value of the company's intellectual capital (Nugroho, 2021). In addition, research on US stock market suggest that shareholders ownership may play a slight role to the overall market value which implied to the company's performance (Lin & Yi, 2003). However, the resultant to manage the company mostly depends on the CEO capability to utilize the company resources (Shin et al., 2016).

Before determining the results of market value as mediating variable to dynamic performance, researchers first carried out correlation analysis among DEA variables before we generated regression results as shown in table below.

The correlation coefficient between Fixed Assets (FA) and Cost of Goods Sold (CGS) is notably strong at 0.741, indicating a positive and moderately high correlation. This suggests that companies with higher fixed asset investments tend to incur higher costs related to goods sold, reflecting a link between asset-intensive operations and production expenses.

Similarly, the correlation between Fixed Assets (FA) and Operational Expenses (OE) is positive and robust at 0.649, indicating a moderate correlation. This suggests that companies with larger fixed asset bases also tend to have higher operational expenses, possibly due to increased maintenance, staffing, or infrastructure costs associated with managing these assets.

The correlation between Fixed Assets (FA) and Profitability (PJ) is notably positive and strong at 0.756, indicating a significant correlation. This suggests that companies with higher fixed asset investments often experience higher levels of profitability, possibly due to improved operational efficiency, economies of scale, or competitive advantages stemming from these assets. Association between Cost of Goods Sold (CGS) and Operational Expenses (OE), the correlation coefficient is notably high at 0.799, indicating a strong positive correlation. This suggests that companies with higher costs related to goods sold also tend to incur higher operational expenses, reflecting interconnectedness between production costs and overall operational spending.

The correlation between Cost of Goods Sold (CGS) and Profitability (PJ) is extremely strong at 0.990, indicating an almost perfect positive correlation. This suggests that changes in cost of goods sold are highly predictive of changes in profitability, highlighting the critical role of cost management in driving overall profitability within the sector. Operational Expenses (OE) and Profitability (PJ) exhibit a positive and strong correlation of 0.856, indicating a significant relationship. This suggests that companies with higher operational expenses may also experience higher levels of profitability, potentially due to strategic investments or operational efficiencies that contribute

to increased revenue generation. Lastly, the correlation between Market Value (MV) and the other variables is notably weaker, with coefficients ranging from 0.325 to 0.565. This suggests a less pronounced relationship between market valuation and the specific financial metrics analysed in this study, indicating that other factors beyond fixed assets, costs, and profitability may influence market perceptions and company valuations within the non-cyclical consumer goods sector.

1. Operational expense

The positive mediating effect of Operational Expense (0.018) sheds light on the intricate dynamics among Operational Expense, Market Value, and Dynamic Performance. While the direct path from Operational Expense to Dynamic Performance is negative and statistically significant (-0.522, $p < 0.05$), signifying that higher operational expenses relate to lower Dynamic Performance, the positive mediating effect through Market Value implies that part of this negative impact is offset or elucidated by its influence on Market Value. In essence, elevated operational expenses may lead to lower Dynamic Performance, but companies with high operational expenses could still exhibit relatively higher Market Value. This phenomenon may result from effective cost management, positive market perceptions, or distinctive business strategies.

Efficient cost management strategies, which positively influence market perceptions, play a pivotal role in shaping this dynamic. Despite the general association of high operational expenses with lower Dynamic Performance, companies' adept at com-

Table 3. Correlation among data envelopment analysis (DEA) variables before regression results

	FA	CGS	OE	PJ	MV
<i>FA</i>	1				
<i>CGS</i>	0.741	1			
<i>OE</i>	0.649	0.799	1		
<i>PJ</i>	0.756	0.990	0.856	1	
<i>MV</i>	0.325	0.507	0.548	0.565	1

municating their strategies for managing such expenses in still confidence in investors (Chen et al., 2005). This enhanced market perception contributes to a higher Market Value despite elevated operational costs.

Strategic expenses, wherein companies strategically invest in technologies, processes, or resources to enhance operational efficiency, further complicate this relationship. Such investments can improve overall performance, potentially counteracting the negative impact of high operational expenses on Dynamic Performance. These efficiency gains, though not immediately reflected in direct performance metrics, can positively influence market valuations, particularly in industries with inherently high operational expenses like research and development-intensive sectors (Nimtrakoon, 2015; Chun & Shim, 2017). The mediated effect introduces complexity, suggesting that the influence of Operational Expense on Dynamic Performance is not solely direct; Market Value serves as a mediator, allowing companies to mitigate the negative impact of high operational expenses on Dynamic Performance by concurrently maintaining a higher Market Value

2. Fixed asset

The lack of a direct impact of Fixed Asset on Market Value ($p > 0.05$) implies that changes in fixed assets may not directly affect Dynamic Performance. However, the positive mediating effect suggests an indirect influence through Market Value. Factors like the long-term nature and strategic allocation of fixed assets, not immediately evident in performance metrics, contribute to a company's stability and growth, indirectly influencing Market Value.

Additionally, the positive mediating effect may indicate complex interactions beyond explicitly considered variables. Companies with significant fixed assets could signal financial stability or operational capabilities, indirectly influencing investor perceptions and, consequently, Market Value. This prompts a closer examination of fixed assets' characteristics and roles.

For example, a manufacturing company investing

in machinery enhances operational efficiency and technological prowess, indirectly influencing Market Value. Similarly, a technology company with intellectual property as fixed assets may not have a direct correlation with traditional metrics, but their strategic importance positively influences Market Value. The case of Evergrande in 2020 illustrates how perceptions shaped by owned assets turned liabilities in the future (Davidson & Hawkins, 2023; Hoskins & Oi, 2023).

3. Cost of goods sold

One possible explanation for this counterintuitive finding is the strategic positioning of companies in relation to their cost structures. High COGS might be associated with increased production costs, but it could also indicate a focus on product quality, innovation, or premium positioning within the market. Investors, recognizing the potential for higher revenue margins in the long term due to these strategic choices, may view companies with high COGS more favourably, thus contributing to a higher Market Value.

Furthermore, the negative mediating effect could imply that, despite the direct negative impact of high COGS on Dynamic Performance, companies managing to maintain a higher Market Value may mitigate the adverse consequences of elevated production costs. This could be attributed to effective marketing strategies, brand loyalty, or unique value propositions that resonate with consumers and investors, contributing to a positive market perception. For instance, industry-specific considerations also play a crucial role. In certain sectors, such as luxury goods or technology, where high COGS is often associated with premium quality or cutting-edge innovation, the negative impact on Dynamic Performance might be offset by the positive market sentiment driven by perceived quality and innovation. The phenomenon on this particular result can be seen on the different business perspective on European and Asian luxury goods (Donzé & Fujioka, 2015; Faschan et al., 2020).

Overall, the modelling for hypotheses four that can be implemented in analyzing the total direct

influence of company output as a moderating variable on the company's dynamic performance is shown as follows:

- Direct:

$$Y_{PD} = -0.522X_{OE} - 0.531X_{FA} - 0.852X_{CGS}$$

- Mediator:

$$Y_{Mb} = -0.289X_{OE} - 0.183X_{FA} + 0.990X_{CGS}$$

- Indirect: $Y_{Mb*PD} = -0.064X_{Mb}$

$$Y_{Total} = \frac{\beta_{indirect} + \beta_{mediator}}{\beta_{direct}} X_{Mediating}$$

$$Y_{Total} = -0.353X_{OE*Mb} - 0.247X_{FA*Mb} + 0.926X_{CGS*Mb}$$

V. Conclusion

Based on all of the results from this research, the conclusion are:

1. High operational expenses adversely impact market value, eroding shareholder trust due to excessive spending without proportional profits, as indicated by the model.
2. Tangible fixed assets, like production machines and computers, necessitate regular intensive maintenance in adherence to manufacturing standards.
3. Cost of goods sold positively influences company market value, reflecting a healthy company with robust production capacity that generates direct costs from sales.
4. A company's high market value signals consistent market demand, motivating efforts to enhance dynamic performance through careful calculations, operational efficiency, and market-driven innovation, leveraging intellectual capital

All data served are open access, limited to non-cyclical company of Indonesian Stock Exchange (IDXNONCYC) and only company that publicly share their annual report for 12 years. However, strict

criteria ensured to reveal the best fit of data to explain the mediation effect of market value to company dynamic performance. Ensuring supportive policies for non-cyclical company to maintain their business is crucial as the policy makers point of view. As the company's fixed assets requires maintenance, volatility may exacerbate the financial conditions of the company and may jeopardize the overall business or the dynamic performance.

Funding Statement

The research conducted by personal funding of each author, so the author declares there are no funding support from legal agency.

Conflicts of Interest

We have no known competing financial interests or personal relationships that could have appeared after publication of this research article and to influence the work that have been reported in this paper. The author of this research declare no conflict of interest.

Author Contributions

The authors confirm contribution to the paper as follows: conception and design study: Dewi Nari Ratih Permada and Ananda Sabil Hussein; data collection: Dewi Nari Ratih Permada; data analysis and result interpretation: Ananda Sabil Hussein, Risna Wijayanti, and Kusuma Ratnawati; drafting the manuscript and preparation of manuscript: Dewi Nari Ratih Permada, Ananda Sabil Hussein, Risna

Wijayanti, and Kusuma Ratnawati. All of this research authors reviewed the results, scanning and approved the final version of the manuscript.

References

- Baima, G., Forliano, C., Santoro, G., & Vrontis, D. (2020). Company Dynamic Performance and business model: A systematic literature review to explore their linkages. *Journal of Company Dynamic Performance*, 22(3), 653-679.
- Brandenburg, M., & Hahn, G. J. (2021). Financial performance and company efficiency of automotive manufacturers and their suppliers A longitudinal data envelopment analysis. *Logist. Res.*, 14(1), 1-26.
- Büschken, J. (2009). When does data envelopment analysis outperform a naïve efficiency measurement model? *European Journal of Operational Research*, 192(2), 647-657.
- Chandra, A. (2018). Persiapan Strategi Dalam Menghadapi Perubahan Lingkungan Bisnis Bagi Perusahaan. Retrieved 6 June, 2023, from <https://jtanzilco.com/>
- Chen, L., & Wang, Y.-M. (2021). Limitation and optimization of inputs and outputs in the inverse data envelopment analysis under variable returns to scale. *Expert Systems With Applications*, 183, 1-9.
- Chen, M. C., Cheng, S.-J., & Hwang, Y. (2005) An Empirical Investigation of the Relationship Between Company Dynamic Performance and Company's Market Value and Financial Performance. *Journal of Company Dynamic Performance*, 6(2), 159-170.
- Chun, H. M., & Shim, J. Y. (2017). A Comparison of Investors' and Analysts' Biases in Interpreting Book-Tax Difference: Evidence from Korean Stock Market. *Global Business Finance Review*, 22(2), 16-33. doi:10.17549/gbfr.2017.22.2.16
- Copeland, T. E., & Weston, J. F. (1988). *Financial Theory and Corporate Policy*. USA: Addison-Wesley Publishing Company.
- Costa, M. A., Lopes-Ahn, A. L., Kilger, A. C., & Micas, A. F. (2023). Limitations of weight restrictions in data envelopment analysis for benchmarking Brazilian electricity distribution system operators. *Utilities Policy*, 82, 000-000.
- Dahan, G., & Levi-Bliech, M. (2024). Assessing supply chain management's impact on new product performance: the mediating role of marketing innovation orientation during COVID-19. *Journal of Strategy and Management*, 17(2), 297-321.
- Davidson, H., & Hawkins, A. (2023, October 5). Evergrande, the 'runaway' developer that could become a wrecking ball for China's economy. The Guardian. <https://www.theguardian.com/business/2023/oct/05/evergrande-the-runaway-developer-that-could-become-a-wrecking-ball-for-china-s-economy>
- Donzé, P.-Y., & Fujioka, R. (2015). European luxury big business and emerging Asian markets, 1960-2010. *Business History*, 57(6), 822-840. doi:10.1080/00076791.2014.982104
- Eling, Martin and Luhnen, Michael. (2010). Frontier Efficiency Methodologies to Measure Performance in the Insurance Industry: Overview, Systematization, and Recent Developments. The Geneva Papers. Vol. 35, pp. 217-265.
- Faschan, M., Chailan, C., & Huaman-Ramirez, R. (2020). Emerging adults' luxury fashion brand value perceptions: A cross-cultural comparison between Germany and China. *Journal of Global Fashion Marketing*, 11(3), 207-231. doi:10.1080/20932685.2020.1761422
- Gimbert, X., Bisbe, J., & Mendoza, X. (2010). The role of performance measurement systems in strategy formulation processes. *Long Range Planning*, 43(4), 477-497.
- Goestjahjanti, F. S., & Widayati, C. C. (2020). Significance Effect Cost of Goods Sold and Inventory on Sales PT. Nippon Indosari Corpindo Tbk. In *Proceedings of the 4th International Conference on Management, Economics and Business (ICMEB 2019)*. doi:10.2991/aebmr.k.200205.037
- Harris, J. L., Sunley, P., & Harris, R. (2020). The Covid-19 crisis and manufacturing: How should national and local industrial strategies respond? *Local Economy: The Journal of the Local Economy Policy Unit*, 35(4), 403-415.
- Harrison, J., & Rouse, P. (2016). *DEA and Accounting Performance Measurement in Handbook of operations analytics using data envelopment analysis* (pp. 385-412). Springer, Boston.
- Hayek, M. A. (2018). The Relationship Between Sales Revenue and Net Profit with Net Cash Flows from Operating Activities in Jordanian Industrial Joint Stock Companies. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 8(3), 149-162.
- Hoskins, P., & Oi, M. (2023). Evergrande: Why should I care if China property giant collapses? BBC News. <https://www.bbc.com/news/business-58579833>
- Jan, N., Li, Z., Xiyu, L., Basheer, M. F., & Tongkachok, K. (2022). Pre- and post-COVID-19: The impact of the pandemic and stock market psychology on the growth and sustainability of consumer goods industries. *Front Psychol.*, 13(796287), 1-17.
- Lin, J., & Yi, B. (2003). Size Effect in The Relationship Between Equity Ownership Structure and Corporate Performance. *Global Business & Finance Review*, 8(1), 49-60.
- Lin, Y.-H. (2022). Fixed Asset Investment and Enterprise Performance Based on the Moderating Effects of the Nature of Equity. *BGP Business & Management*, 21, 151-160.
- Makni, M. S. (2023). Analyzing the impact of COVID-19 on the performance of listed firms in Saudi market. *Technol. Forecast Soc. Change.*, 187, 1-7.

- Moheb-Alizadeh, H., & Handfield, R. (2018). The Impact of Raw Materials Price Volatility on Cost of Goods Sold (COGS) for Product Manufacturing. *IEEE Transactions on Engineering Management*, 65(3), 460-473. doi: 10.1109/TEM.2018.2796447
- Moncayo-Martínez, L. A., & Mastrocinque, E. (2016). A multi-objective intelligent water drop algorithm to minimise cost Of goods sold and time to market in logistics networks. *Expert Systems with Applications*, 64, 455-466. doi: 10.1016/j.eswa.2016.08.003
- Muchtar, D., Nor, F. M., Albra, W., Arifai, M., & Ahmar, A. S. (2018). Dynamic performance of Indonesian public companies: An analysis of financial decision behavior. *Cogent Economics & Finance*, 6(1), 1-14.
- Naveed, M., Ali, S., Iqbal, K., & Sohail, M. K. (2020). Role of financial and non-financial information in determining individual investor investment decision: a signaling perspective. *South Asian Journal of Business Studies*, 9(2), 261-278.
- Nimtrakoon, S. (2015). "The relationship between Company Dynamic Performance, company market value, and financial performance": Empirical evidence from the ASEAN. *Journal of Company Dynamic Performance*, 16(3), 587-618.
- Nugroho, S. D. (2021). *The Market Value of a Company in View of Intellectual Capital with Financial Performance as a Mediating Variable* (Thesis for Bachelor). Fakultas Ekonomi dan Bisnis Islam, IAIN Surakarta, Jawa Tengah.
- Paule-Vianez, J., Orden-Cruz, C., Gomez-Martinez, R., & Escamilla-Solano, S. (2023). Fear of COVID-19 Effect on Stock Markets: A Proposal for an Algorithmic Trading System Based on Fear. *J. Theor. Appl. Electron. Commer. Res.*, 18(2), 1142-1156.
- Pehlivan, A., Gerekan, B., & Kocan, M. (2020). The Effect of Operating Expenses on Growth and Performance: AN Empirical Ananlysis of the Petroleum and Chemistry Industry in Turkey. *Asian Economic and Financial Review*, 10(11), 1299-1308.
- Qolbi, N. (2021). The performance of the primary consumer goods index remains negative, consider the stock recommendations. Retrieved July 24, 2023, from <https://investasi.kontan.co.id/>
- Reyes, M. A., & Haniyah, G. G. (2020). Tax and Accounting Treatment on the Revaluation of Fixed Assets (Land) in Indonesia. *Journal of Applied Accounting and Finance*, 4(2), 93-109.
- Salvi, A., Vitolla, F., Giakoumelou, A., Raimo, N., & Rubino, M. (2020). Intellectual capital disclosure in integrated reports: The effect on company value. *Technological Forecasting and Social Change*, 160, 1-8.
- Shin, J. S., Lee, H. Y., & Cin, B. C. (2016). Corporate Performance and CEO Turnover in Korea: A Comparative Analysis of Accounting and Market-based Performance Measures. *Global Business Finance Review*, 21(1), 1-12. doi:10.17549/gbfr.2016.21.1.1.
- Siminică, M., Berceanu, D., & Circiumaru, D. (2008). The performances of industrial company from Romania. Correlation dimension-indicators of results. *Financial Innovation and Competition in European Union*, 71-78.
- Sumaryati, A., & Tristiarini, N. (2017). The Influence of Cost of Equity on Financial Distress and Company Value. *Advances in Economics, Business and Management Research (AEBMR)*, 46, 194-197.
- Theodoridis, A. M., & Psychoudakis, A. (2008). Efficiency measurement in Greek dairy farms: Stochastic frontier vs. data envelopment analysis. *International Journal of Economic Sciences and Applied Research*. 1(2), 53-67.
- Ting, I. W. K., Ren, C., Chen, F. C., & Kweh, Q. L. (2020). Interpreting the dynamic performance effect of Company Dynamic Performance through a value-added-based perspective. *Journal of Company Dynamic Performance*. 21(3), 381-401.
- Tirole, J. (2006). *The Theory of Corporate Finance*. Princeton University Press, USA.
- Tone, K., & Tsutsui, M. (2010). Dynamic DEA: A slacks-based measure approach. *Omega*, 38(3-4), 145-156. doi:10.1016/j.omega.2009.07.003
- Uddin, H., & Hossain, M. S. (2020). Impact of Operating Expenditures on Company Profitability. *ELK Asia Pacific Journal of Finance*, 11(4), 1-18.
- Vernimmen, P., Quiry, P., Dallochio, M., Le-Fur, Y., & Salvi, A. (2014). *Corporate Finance Theory and Practice* (4th ed.). John Wiley & Sons, Ltd., UK.
- Wang, W. K., Lu, W. M., Ting, I. W. K., & Chen, Y. H. (2021). Social Networks and Dynamic Company Performance: Evidence from the Taiwanese Semiconductor Industry: Redes sociales y rendimiento dinámico de la empresa: Evidencia de la industria de semiconductores de Taiwán. *Revista de Contabilidad-Spanish Accounting Review*, 24(1), 62-74.
- Zehir, C., & Balak, D. (2018). Market Dynamism and Firm Performance Relation: The Mediating Effects of Positive Environment Conditions and Firm Innovativeness. *Emerging Markets Journal*, 8(1), 45-51.
- Zheng, Z., Lv, Y., & Wang, Y. (2021). The Influences of Fixed Assets on Corporate Performance - Evidence from Manufacturing-listed Companies in China. *The Journal of the Korea Contents Association*, 21(2), 548-561.