

RESEARCH ARTICLE

THE INFLUENCE OF STRATEGIC AGILITY AND INNOVATION CAPABILITY ON COMPANY PERFORMANCE IN THE INDONESIAN MOTORCYCLE INDUSTRY

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Abstract : The purpose of this paper is to examine the effect of strategic agility and innovation capability on firm performance in the motorcycle industry in Indonesia. It also investigates the effect of innovation capability on strategic agility. Another thing to be obtained from this research is to know the mediating role of strategic agility in the influence of strategic agility on firm performance. The questionnaire was prepared based on previous studies, meanwhile data was obtained from 208 companies at the locus of the Indonesian motorcycle industry. The validity and reliability of the research constructs were tested using appropriate tests, while hypothesis testing was carried out using the SEM method. The results of the study show that innovation capability has a significant direct effect on strategic agility and firm performance, meanwhile, in contrast to previous research findings, strategic agility does not have a significant direct effect on firm performance. In addition, strategic agility does not mediate the strategic agility –firm performance relationship. As far as authors' knowledge, this study is the first study investigating the direct and mediating effects of strategic agility on performance in the motorcycle industry in the world.

Keyword: Supply chain management, strategic agility, innovation capability, firm performance, dynamic capability, ordinary capability.

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INTRODUCTION

Similar to other industrial sectors, the motorcycle industry, especially in Indonesia, has not been spared from shocks due to disruptions in the industrial environment. Domestic motorcycle sales reached their peak in 2011 with sales of over 8 million units per year and continued to decline so that they only reached 3.7 million motorcycles in 2020 (AISI, 2021). The biggest environmental challenges faced by the motorcycle industry include: electric vehicles (Burns, 2020), sharing rides such as gojek/grap (Techedge, 2016), smart, connected, and self-driving vehicles (Iyer, 2019), awareness of the need for vehicles environmentally friendly (Burns,

2020) and radical changes in customer behavior (Iyer, 2019). In addition to the things mentioned above, new problems have emerged that have arisen after the Covid 19 pandemic, for example, disruption to component supply, shortage of ships, and others (IHS Markit, 2020).

In his 30 years of research, Dave Ulrich has identified the main capabilities that organizations must have to succeed, and found that agility is the main capability that organizations must have to deal with disruptive environments (Ulrich, 2018). In previous studies, most researchers also see that agility is the most important factor for dealing with organizational change due to environmental disruption, so that organizations gain a competitive advantage (Baran & Woznyj, 2021; Antonacopoulou et al., 2019; Kaivo-oja & Lauraeus, 2018; Schoenthaler, 2019).

The next variable chosen in this study is innovation capability. The choice of innovation capability variable is because innovation capability is the most important variable that allows organizations to respond effectively and efficiently to fluctuations in the work environment, and has a direct impact on competitive advantage and organizational performance (Maldonado-Guzman et al., 2019; Al-Hawary & Batayneh, 2015; Migdadi et al., 2020; Farhana & Swietlicki, 2020). Meanwhile, Phankhong, Abu Bakar, and Poespowidjojo (2017) emphasize that innovation is a distinguishing feature in improving company performance through a focus on sustainable development activities and increasing the productivity of production elements. From the description above, it can be seen that innovation capability is an organizational capability that has a direct impact on competitive advantage and organizational performance.

The purpose of this research is to study the effect of agility strategy and innovation capability on company performance in the motorcycle industry in Indonesia. Due to the small amount of empirical research studying the effect of strategic agility and innovation capability on company performance both directly and indirectly, and how these two variables interact in the context of the motorcycle industry, the researchers created a model to better understand the factors that influence firm performance in the Indonesian motorcycle industry. Many researchers have examined the performance of SMEs (Basuki et al., 2021; Benzidia & Makaoui, 2020) the performance of telecommunication providers (Kurniawan et al., 2020; Clauss et al., 2019), mining supply chain performance (Naway & Rahmat, 2019; Moryadee & Jitt-Aer, 2020), logistics & transportation performance (Kalkan & Aydın, 2020; Umam & Sommanawat, 2019), general manufacture performance (Al Taweel & Al-Hawary, 2021; Arokodare et al., 2020; Garcí'a-Alcaraz et al., 2019) four-wheeled automotive performance (Dubey et al., 2019; Aisyah et al., 2021) but in the world there is no research discussing the performance of the motorcycle industry, except Vasuvanich et al, 2020.

Previous research on the effect of strategic agility on organizational performance was conducted in industries that can quickly change product and service offerings to customers such as banks, technology organizations, fashion and retail (Kurniawan et al. 2020; Haider & Kayani, 2021; Clauss et al., 2019; Kale et al., 2019). While the impact of strategic agility on organizations that do not change product and service offerings too quickly as in the automotive industry in general or the motorcycle industry in particular, is not found in previous references and becomes a novelty for this study. As far as the researcher's research goes, the variables of strategic agility, innovation capability and firm performance in the context of empirical research have never been discussed together in one research paper. Therefore the aim of this paper is to build a more balanced and empirically based picture of innovation capability and strategic agility activities in the perspective of the manufacturing industry, especially in the motorcycle industry, which have not been fully tested in the past literature.

LITERATURE REVIEW

2.1 Theoretical Framework

Strategic management has evolved over time in order to answer the internal needs of the organization and also to face the challenges of the external environment. To achieve competitive advantage, a set of management decisions and actions is needed that can help determine the long-term performance of an organization, including environmental scanning, strategic implementation, evaluation and control (Witcher, 2020; Wheelen & Hunger, 2018; David & David, 2017). According to the theory of resource-based view, it is found that an organization can obtain superior performance if it has competitive advantages that arise from organizations implementing value creation strategies through resources and capabilities that are value, rareness, inimitability, and non-substitutability which cannot be implemented properly by current and potential competitors (Barney, 1986, 1991, 2001; Mills et al., 2003; Peteraf & Bergen, 2003). In its development, capabilities in the context of

resourced based view theory are identified as ordinary capabilities (Helfat & Peteraf, 2003; Teece, 2012; Wilden et al., 2013; Teece et al., 2016; Schoemaker, 2018).

In this study, researchers looked at innovation capability in the perspective of resource-based theory, thus it was included in the ordinary capability category (Camisón & Villar-López, 2014; Pavlou & El Sawy, 2011). An important characteristic of ordinary capability is the ability to create value through new products and services directly, and being able to adapt to competition by changing market activities (Ambrosini et al., 2009).

In a dynamic environment, it is not enough for an organization to have ordinary capability only (Nieves & Haller, 2014), dynamic capability is proposed as an extension of the resource-based view to explain the competitive advantage of organizations in volatile, highly dynamic markets and changing environments (Teece, 2012; Eckstein et al., 2015). Dynamic capabilities provide organizational capabilities to deal with rapid environmental changes by integrating, configuring and deploying other resources and capabilities so that they can better sense and seize opportunities, avoid threats, and maintain organizational competitive advantages (Teece, 2014; Yu et al., 2018).

In a scenario of turbulent environmental conditions, where globalization influences consumer behavior and markets are affected by continuous changes, one of the most important success factors for companies is strategic agility (Morton et al., 2018; Vaillant & Lafuente, 2019). Apart from having a direct impact, in the dynamic capability framework, strategic agility is considered to have the ability to rearrange and transform static resources, knowledge, competencies, and existing capabilities into innovative products and processes (Makkonen, 2014; Pavlou & El Sawy, 2011) and function become a mediator (Wang et al. 2015) between ordinary capability and company performance. In this study, researchers used the opinions of Cepeda & Vera (2017) and Fawcett et al. (2011) which states that an increase in organizational performance can be obtained from the joint use of ordinary capabilities and dynamic capabilities, so that in this study both types of capabilities will be used.

2.2 Hypothesis

2.2.1 The Effect of Innovation Capability on Firm Performance

From the search results of empirical research with the theme of the effect of innovation capability on organizational performance, it was found that all gave positive results, including: In their research on the Indian automotive industry, Khan & Khumar (2019) found that there are three levels of technology capability, namely basic level (production capability) , medium level (investment capability), and advanced level (innovation capability) is what is needed to improve the performance of the automotive industry. Mir et al., (2016) who examined the automotive industry in Spain also found that innovation capability directly and positively affects innovation performance, which in turn affects business performance. Masoomzadeh et al. (2019) found that apart from the direct effect on organizational performance, the mediating effect of innovation capability appears to be equally important. From the explanation above, it is clear that innovation capability has a positive impact on firm performance. Therefore we hypothesize:

→ **Hypothesis 1 (H₁):** Innovation capability has a positive and significant influence on firm performance.

2.2.2 The Effect of Innovation Capability on Strategic Agility

Olaleye et al. (2021) stated that innovation capability has a positive and significant influence on strategic agility, while strategic agility mediates the relationship between innovation ability and corporate resilience. However, Al Taweel and Al-Hawary (2021) state that strategic agility has a positive and significant influence on innovation capability. This happens because strategic agility provides the ability for organizations to be able to sense opportunities and threats that occur in their environment, then respond and adapt quickly using their resources effectively and efficiently. By looking at innovation capability as ordinary capability and strategic agility as dynamic capability, where one of the roles of dynamic capability is to reconfigure ordinary capability, it can be concluded from the two studies above that innovation capability has a positive and significant influence on strategic agility. Teece et al. (2016) suggested that dynamic capability is a framework that streamlines agility through (a) sensing, (b) seizing and (c) Shifting. Considering that most researchers find that some dynamic capabilities are meta capabilities to enable an organization to achieve strategic agility (Ivory & Brooks, 2018; Gurkov et al., 2017; Hock et al., 2016), it can be concluded that innovation capability plays a positive role in influencing strategic agility through the seizing mechanism. Therefore, the research hypothesis can be formulated as follows:

→ **Hypothesis 2 (H₂):** Innovation capability have a positive and significant influence on strategic agility.

2.2.3 The Effect of Strategic Agility on Firm Performance

Studies on strategic agility in previous research studies were generally carried out in industrial contexts that could quickly change product and service offerings to customers such as banks, technology organizations, fashion and retail with most of the findings stating that the use of strategic agility by companies can convincingly increase excellence, organizational competitiveness and in turn increases organizational performance (Kurniawan et al. 2020; Haider & Kayani, 2021; Clauss et al., 2019; Kale et al., 2019). The effect of strategic agility on organizations that are not too fast changing product offerings, services have not attracted the attention of researchers yet. Similar to organizations in other industries, the motorcycle industry is currently operating in a turbulent business environment. The issue of electric motorbikes, changes in customer behavior, sharing rides, and smart & connected vehicles will very likely disrupt the industry. To succeed, the motorcycle industry's supply chain requires strategic agility, as it can significantly affect their business operations and competitiveness. Strategic agility is valued more when uncertainty and disruption reigns in the business environment (Schilke, 2014). Therefore, strategic agility can be considered as an important capability for the motorcycle industry supply chain to manage rapid changes that have the potential to disrupt organizational performance and their future. So we propose:

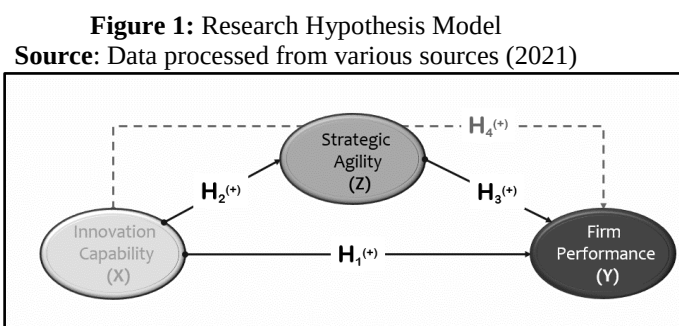
→ **Hypothesis 3 (H₃):** Strategic agility has a positive and significant influence on organizational performance.

2.2.4 The Role of Strategic Agility Mediates the Effect of Innovation Capability on Firm Performance

In the context of strategic agility where organizational excellence rests on the ability to create market opportunities through producing new products or services (Khoshnood & Nematizadeh, 2017), dynamic capability relates to adaptation, orchestration and innovation processes in identifying new products and services, as well as the potential to open new markets. (Teece, 2014). It is hoped that by becoming an intervening variable, strategic agility will enable organizations to monitor and respond to a changing marketing environment and provide value through updating and reconfiguring the organization's innovation capability so that it is more active in opening new products or services according to market needs (Patricio et al., 2019), compared to just focus on solving current problems so that in turn provides competitive advantage and improves organizational performance. Al Taweel and Al-Hawary (2020) in their research of 224 senior managers in finance, commercial and manufacturing companies found that innovation capability plays a mediating role in increasing the effect of strategic agility on organizational performance. While Zhou et al. (2019) found that innovation capabilities mediate the effect of marketing agility on financial performance. From these two studies, it is innovation capability that mediates strategic agility, but given the indirect role of the two variables on organizational performance, the mediation roles can be exchanged. So, based on the above considerations, the hypothesis is arranged as follows:

→ **Hypothesis 4 (H₄):** Strategic agility mediates the effect of innovation capability on firm performance

By considering the theoretical framework and hypotheses above, the authors created a hypothetical model as shown in **Figure 1** below.



1. METHODOLOGY

3.1. Population and Sample

With little empirical research studying the performance of the motorcycle industry, it is hoped that the selection of this locus will make a significant contribution to science. The data is taken from the top three motorcycle manufacturing companies in Indonesia (Honda, Yamaha and Suzuki) and layer 1 suppliers, which make around 90% of motorcycles in Indonesia (AISI, 2021) with a total of around 200 companies. Respondents are officials with the positions of managers, senior managers, general managers and directors in these companies. Data collection was carried out from 13 May 2022 to 24 July 2022 using a questionnaire on the Google form, where the questionnaire link was sent via email or WhatsApp. There are 68 data from OEM companies and 140 data from supplier companies that are completely filled out and can be processed for this study. The sample in this study was carried out using the probability sampling method with a proportional random sampling technique (Sekaran & Bougie, 2020). The proportion of the sample producers and suppliers of layer 1 is carried out by considering the proportion of the value of motorcycle components and overall risk management, so it is hoped that the generalization process can be carried out based on the data obtained from the target population.

3.2. Research Instruments

Questionnaires are the most widely used tool in social and managerial research, especially for collecting data from respondents (Al-Hawary & Al-Namlan, 2018; Saunders et al, 2019). The first part of the questionnaire was created to collect information about the respondent's profile (position, experience in managerial positions, type of work, type of company, number of OEM companies that are customers, number of employees and company experience in the motorcycle industry). While the second part is made to measure the variables of this study. The questionnaire was made using a Likert scale with six points, to avoid the tendency for respondents to give scores in the middle (Edwards, 1957).

Innovation capability variables are measured using 4 dimensions (product innovation, process innovation, market innovation and organizational innovation) and 16 indicators based on research instruments from Zhou et al., 2019; Migdadi et al., 2020; Najafi-tavani et al., 2018 and Camison, 2014. Strategic agility variables are measured using 3 dimensions (strategic sensitivity, resource fluidity, and leadership unity) and 11 indicators based on research instruments from Doz & Kosonen (2010), Hock et al. (2016), Clauss et al. (2019). Finally, firm performance variables are measured using 3 dimensions (operational performance, market performance and financial performance) and 6 indicators based on research instruments from Migdadi (2020), Clauss et al. (2019) and Garcí'a-Alcaraz et al. (2019).

Before being used to collect data, the research questionnaire had gone through several tests. In the first stage, a literature study was carried out on similar research to select items of questionnaire construct. Then each item was tested and refined using input from 4 experts on the research topic. The next stage is to conduct a pilot project on respondents to the target population and process the results using SPSS 25. Construct validity is measured by comparing the r_{count} value with r_{table} , if the r_{count} value is greater than r_{table} then the difference is considered significant and the instrument is declared valid (Krabbe, 2017). The r_{count} value of the 37 research indicators is between 0.523 – 0.872 which is greater than r_{table} 0.325, so that all research indicators are declared valid. Reliability testing was carried out using the Cronbach alpha test. A construct is declared reliable if it gives a Cronbach's alpha value > 0.60 (Ghozali, 2017). From the test results, the Cronbach's alpha value for all variables/constructs ranged from 0.881 to 0.968, which is more than 0.60 so that the instrument was declared reliable and usable.

3.3. Data Analysis Techniques and Hypothesis Testing

Researcher used PLS-SEM with SmartPLS 3 software to perform inferential analysis to test research models and hypotheses. There are three statistical processing methods used in this study: exploratory factor analysis (EFA) to ensure that the constructs in this study achieve a simple structure, confirmatory factor analysis (CFA) to ensure the quality of model fit with indicators (Hair, 2016), and SEM to test the hypothesis. The mediating effect follows that of Baron and Kenny's (1986) approach.

RESULTS AND DISCUSSION

4.1. Profile of Research Respondents

The profiles of respondents in this study were grouped into seven categories: position, experience in managerial positions, field of work, type of company, number of OEM companies that became customers, number of employees and experience of the company involved in the motorcycle industry as shown in **Table 1**.

Table1: Profile of Research Respondents
Source: processed from research data (2022).

Respondent Identity Variables	Category	Quantity	Percentage
1. Respondent's position in the company	Director	8	3,8%
	General Manager	15	7,2%
	Senior Manager	24	11,5%
	Manager	161	77,4%
2. The length of time the respondent held a managerial position in the company	< 3 years	28	13,5%
	3 – 5 years	28	13,5%
	5 – 10 years	44	21,2%
	10 – 15 years	32	15,4%
	> 15 years	76	36,5%
3. Field of work of respondents in the company	Marketing	66	31,7%
	Production/ PPIC	64	30,8%
	Quality	24	11,5%
	Engineering	23	11,1%
	Purchasing	13	6,3%
	HR & GA	8	3,8%
	Finance/Accounting	4	1,9%
	Information Tech.	2	1,0%
4. Type of company where the respondent works	OEM	68	32,7%
	Supplier	140	67,3%
5. (Specially for suppliers), Number of OEMs who are customers of the respondent company	1 company	25	17,9%
	2 companies	29	20,7%
	>2 companies	76	54,3%
	Confidential	10	7,1%
6. Total number of employees in the respondent's company	< 50 people	5	2,4%
	50-100 people	5	2,4%
	100 – 500 people	49	23,6%
	>500 people	149	71,6%
7. The experience of the respondent's company in the automotive industry	0 – 5 years	3	1,4%
	5 – 10 years	6	2,9%
	10 – 15 years	22	10,6%
	>15 years	177	85,1%

4.2. Measurement Model Estimation

Measurement of the estimation model was carried out using a two-level confirmatory factor analysis (CFA) approach. This approach aims to test the validity and reliability of each research construct. The first order CFA shows the relationship between the indicators and their dimensions, while the second order CFA shows the relationship between the dimensions and the research variables. From the first CFA sequence it was found that the IC-10 and STA-1 indicators had a loading value of less than 0.7 (Hair, 2021) so the data were excluded from the study. Then a second-order CFA was performed to estimate the validity and reliability of the 18 dimensions. The validity in this study was assessed based on convergent validity and discriminant validity, while the reliability test was determined based on the value of composite reliability and Cronbach's alpha. Complete validity and reliability test results can be seen in Table 2. From this table it is known that the loading factor of

all constructs is greater than 0.7; AVE value greater than 0.5; the CR value is greater than 0.7 and the cronbach's alpha value is greater than 0.7 so that the construct is considered valid and reliable.

Table 2: Results of CFAResearch Variables
Source: processed from research data (2022).

Construct	*SFL ≥ 0,7	*AVE ≥ 0,5	*CR ≥ 0,7	*α ≥ 0,7	Notes
Variable Innovation Capability		0,613	0,894	0,936	Good Reliability
Product Innovation Capability	0,844				Good Validity
Process Innovation Capability	0,899				Good Validity
Market Innovation Capability	0,873				Good Validity
Organizational Market Capability	0,887				Good Validity
Variable Strategic Agility		0,846	0,943	0,909	Good Reliability
Strategic Sesity	0,931				Good Validity
Resource Fluidity	0,920				Good Validity
Leadership Unity	0,906				Good Validity
Variable Firm Performance		0,783	0,916	0,862	Good Reliability
Operational Performance	0,937				Good Validity
Market Performance	0,883				Good Validity
Financial Performance	0,811				Good Validity

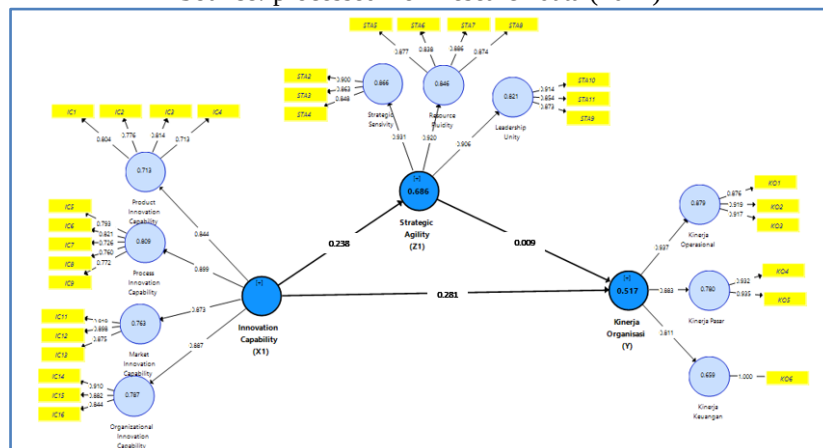
Notes: * SFL = Standardized Factor Loading * CR = Composite Reliability;

* AVE = Average Variance Extracted *α = Cronbach's Alpha

4.3 Structural Model Assessment

Structural models are used to predict causality relationships between latent variables or variables that cannot be measured directly. The structural model describes the causality relationship between latent variables that has been built based on the substance of the theory, as proposed in **Figure 1**. The structural model test was carried out using bootstrapping and blindfolding procedures in SmartPLS. The results of the fit model obtained using a p value < 0.5 are: SRMR = 0.045, d_ ULS = 0.339, d_ G = 0.373, Chi-Square = 416.149, NFI = 0.884 and rms Theta = 0.182. Thus, from the results of the fit model, irrefutable evidence is obtained that the model is fit with the research data, as shown in **Figure 2**.

Figure 2: SEM Estimation Results with Composite Indicators
Source: processed from research data (2022)



4.4. Hypotheses Testing

The next evaluation stage is to examine the estimation of the relationship between variables that represent each theoretical hypothesis. The results of direct and indirect influence checks can be seen in **Table 2**. The results show a direct and significant effect of innovation capability on firm performance (effect = 28,1%; $T_{\text{statistik}} = 2,595$; $P_{\text{value}} = 0.009$). There is also a direct and significant effect of innovation capability on strategic agility (influence = 23,8 %; $T_{\text{statistik}} = 3,313$; $P_{\text{value}} = 0.001$). Meanwhile, there was also no direct and significant effect of strategic agility on firm performance (influence = 0.9%; $T_{\text{statistik}} = 0.064$; $P_{\text{value}} = 0.949$) and the results of the indirect path significance test for the effect of business intelligence on organizational performance through strategic agility show a positive effect (value = 0,2%) but not significant with $T_{\text{statistik}}$ value = 0.062 and $P_{\text{value}} = 0.950$. So, H_1 , and H_2 are accepted, while H_3 and H_4 are rejected.

Table 2: Structural Relationships Test Results
Source: processed from research data (2022).

Hipo-tesa	Variabel	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values	Notes
H ₁	Innovation Capability (X) → Firm Performance (Y)	0,281	0,285	0,108	2,595	0,009	S
H ₂	Innovation Capability (X) → Strategic Agility (Z)	0,238	0,236	0,072	3,313	0,001	S
H ₃	Strategic Agility (Z) → Firm Performance (Y)	0,009	0,014	0,145	0,064	0,949	NS
H ₄	Innovation Capability (X) → Strategic Agility (Z) → Firm Performance (Y)	0,002	0,004	0,036	0,062	0,950	NM

***Notes:** NM= No Mediation; PM= Partialy Mediation; FM= Fully Mediation; S= Significant; NS= Not Significant

4.5 Discussion

Important findings in this study include: first, innovation capability has a positive and significant direct effect on organizational performance. This influence is mainly related to process innovation which has a direct impact on operational performance which is the dimension of the organizational performance variable that has the highest average score and load factor. The above can also be proven practically by increasing the number of exports from year to year which can only be achieved because the quality and global cost competitiveness (Wijaya, 2022; Beti, 2018).

Second, innovation capability has a positive and significant direct effect on strategic agility. By considering that most researchers find that some dynamic capabilities are meta capabilities to enable an organization to achieve strategic agility (Ivory & Brooks, 2018; Gurkov et al., 2017; Hock et al., 2016), it can be concluded that innovation capability plays a role positively influencing strategic agility through the seizing mechanism using the organization innovation dimension as well as through the shifting, transforming mechanism using the product innovation dimension & the process innovation dimension.

Third, in contrast to the results of previous studies, strategic agility does not have a significant direct effect on firm performance of the motorcycle industry in Indonesia. This difference especially because previous research regarding the effect of strategic agility on firm performance was carried out in industries that can quickly change product and service offerings to customers such as banks, information technologies, fashions and retails (Kurniawan et al. 2020; Haider & Kayani, 2021; Clauss et al., 2019; Kale et al., 2019). Meanwhile, the impact of strategic agility on organizations that do not change product or service offerings too quickly, such as in the automotive industry in general or the motorcycle industry in particular, has not been studied in previous studies

and has become a novelty for this study. This phenomena is related to the management position of OEM companies who see that decisions related to new offers to customers are more dominated by principal companies than local partner companies (Jakhotiya, 2019). In a study of the Japanese brand automotive industry in Thailand, Korwatanasakul (2023) found that even though local companies achieved acquisitions and technical improvements, the principal companies still monopolized research & development activities for new products and innovations, the position of local management in making new offers to customers was considered small. This is the reason why the effect of strategic agility on the performance of the Indonesian motorcycle industry is perceived as insignificant in this study.

Finally, it was found that strategic agility does not mediate the effect of innovation capability on company performance, due to the insignificant effect of strategic agility on the performance of the motorcycle industry in Indonesia.

CONCLUSION

5.1 Theoretical and Practical Implication

By using a view through the lens of RBV theory and dynamic capability, the findings of this study contribute theoretically to explaining the influence of innovation capability and strategic agility on firm performance and how the role of mediating strategic agility on the relationship between innovation capability and organizational performance. In terms of practical implications, the research results provide guidance on how companies can face competitive challenges in VUCA environmental conditions, these findings practically provide guidance for the motorcycle industry in Indonesia to focus on developing innovation capability, especially process innovation. This is related to how the industry is able to produce processes with low production costs and become the pioneer of the latest technology in its field.

The next finding is by looking at the current conditions, where sales of electric motorbikes are still not significant compared to conventional motorbikes, changes in customer behavior in terms of mass transport and sharing rides are still limited to big cities, and smart & connected vehicles are not yet popular, to be more competitive, the Indonesian motorcycle industry should not focus on strategic agility, but focus on other types of agility like supply chain agility or operational agility that able to perceive temporary and short-term changes in the supply chain and market environment (e.g. volatilities of demand, supply chain disruptions and changes in component prices) and respond quickly and flexibly to those changes within the existing supply chain (e.g. reduced material change times, reducing manufacturing lead time and adjusting delivery capacity) (Eckstein et al., 2015).

5.2 Study Limitations

This research was conducted during a pandemic, where the environmental challenges during a pandemic were different from normal conditions. This pandemic condition of course can affect the psychological condition of respondents when giving answers. Even though the author has tried to anticipate by using measurable answer choices, this bias cannot be completely eliminated.

5.3. Future Research

Future researchers are advised to take a deeper look at one of the results of this study, where strategic agility did not have a significant positive effect on improving organizational performance. From the literature study, it was found that this difference occurred because previous research on the effect of strategic agility on company performance was carried out in industries that could quickly change product and service offerings to customers such as banks, information technology, fashion and retail, while the impact of strategic agility on organizations that not changing product and service offerings too quickly as in the automotive industry in general or the motorcycle industry in particular, has not been studied in previous studies. To be able to generalize these findings, research using the same model is needed, but with a focus on industries that do not change their product and service offerings too quickly, such as the car industry.

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