

RELATIONSHIPS BETWEEN MARKET ORIENTATION, NON-TECHNOLOGICAL INNOVATION, AND BUSINESS PERFORMANCE AT SMALL AND MEDIUM INDUSTRIES (SMI)

JAM

15, 1

Received, December 2016

Revised, February 2017

Accepted, March 2017

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Abstract: This study aimed to examine the relationship between market orientation and business performance and mediated by non-technological innovation. This study uses a survey involving 71 companies producing automotive components. All companies are located in the district of Bandung, West Java, Indonesia. Data were analyzed using covariance-based structural equation modeling. The results showed that the orientation of the market is very important to improve the performance of the business and non-technological innovation capability. This study highlights the importance of the mediating role of non-technological innovation when examining the relationship between market orientation and business performance. The results imply that the company producing automotive components need to encourage them to increase the market orientation of non-technological innovation and business performance.

Keywords: market-oriented, non-technological innovation, business performance

Market orientation, which can be defined as the generation, dissemination, and response to information in all parts of the company in order to meet the needs and preferences of current and future customers (Kohli & Jaworski, 1990), has become an interesting topic and intense in the marketing literature. Interest in the study of the concept of market orientation caused by empirical evidence shows that companies with higher market orientation tend to get higher business performance. Many researchers have found empirical evidence of the positive effect of a market orientation

on business performance (Lado & Maydeu-Olivares, 2001).

Narver and Slater (1990), provides an understanding of market orientation, suggesting that the market orientation mainly consists of three orientations of behavior that is customer orientation, competitor orientation, and inter-functional coordination. This study assumes that market orientation is very important for small and medium industries (SMIs) producers of automotive components in Indonesia. Increased global competition and changing needs and preferences of consumers requires companies to get closer to their markets. To survive and grow in a competitive environment, companies must have a market orientation. From the perspective of market orientation, automotive components market in Indonesia is a potential to grow, both to meet the needs of the domestic and export (Kemenprin, 2015).

Numerous studies have examined the relationship between market orientation and business performance



Journal of Applied
Management (JAM)
Volume 15 Number 1,
March 2017
Indexed in Google
Scholar

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Jakarta, DOI: <http://dx.doi.org/10.18202/jam23026332.15.1.06>

and provide a general understanding of the positive relationship between market orientation and business performance (Slater and Narver, 2000). Kohli and Jaworski (1990) states that the greater the market orientation of a company, the greater the company's business performance. However, as stated by Narver and Slater (1990), a positive relationship between market orientation and business performance is dependent on environmental conditions and market. In this perspective, Kohli and Jaworski (1990) shows that the market orientation and business performance are not correlated with each other under a turbulent business environment. These inconsistencies need for further studies to investigate variables potentially moderation, to explain the relationship between market orientation and business performance.

Referring to some of the literature, there seems to be agreement on the important role of the variables of innovation in improving the business success of a company in a competitive business environment. It is based on the assumption that the company has the capability to innovate will be able to answer the challenges of the business environment with a faster way and better than companies that are not innovative. In particular, the literature provides evidence for the basic proposition that the market orientation has an influence on business performance at the same time also affects innovation capabilities. Market orientation is a business culture that generates performance by creating superior value to customers (Jimenez-Jimenez, et al., 2008;. Slater & Narver, 2000).

The innovation capabilities widely regarded as an important mediating variable in the relationship between market orientation and business performance (Kirca, et al., 2005), some previous studies, which focused on the relationship between market orientation, innovation, and business performance, has given the various results (Han, et al., 1998 and Hurley & Hult, 1998). The purpose of this study is to propose a non-technological innovation (organizational innovation and marketing innovation) as a mediator in the relationship between market orientation and business performance. Non-technological innovation has attracted attention because of the positive effect on business performance (gunday, et al., 2011; OECD, 2005). While innovation is generally referred to as an important antecedent for

the performance of the business, its important role as a mediator between market orientation and business performance has not been studied extensively. As emphasized by Han, et al. (1998), market orientation affects business performance through its effect on innovation. Moreover, although innovation is often linked with technological development functions, there is recognition of the importance of non-technological innovation (Jimenez-Jimenez, et al., 2008).

LITERATURE AND HYPOTHESES

Market Orientation and Business Performance

Orientation market gets a lot of attention in the marketing literature. The results of the literature review show that market orientation has been conceptualized and defined in different ways, with a focus on conceptualization given by Kohli and Jaworski (1990) and Narver & Slater (1990). In this perspective, Kohli and Jaworski (1990) define market orientation as the generation of market intelligence relating to the needs and preferences of its customers today and in the future, distribution of intelligence to all parts of the company, and the response of the whole company to market intelligence.

Market orientation has been described as an important resource to achieve sustainable competitive advantage in the long term (Liu, et al., 2003). Han, et al. (1998) suggested that market orientation set out the principles of organizational behavior fundamentally related to the company's business constituents including customers, competitors, and internal functions, which makes an impact on business performance explicitly.

Referring to the literature, it is known that the relationship between market orientation and business performance has been the subject of many studies (Liu, et al., 2003). Previous empirical research on the impact of market orientation on business performance provides various results. In this perspective, some previous studies provide empirical evidence about the positive impact of market orientation on business performance. However, several previous studies have also reported that the market orientation does not have a significant impact on business performance (Han, et al., 1998; Jaworski and Kohli, 1993; Narver & Slater, 1990). Many experts

agreed that the market orientation can lead companies to improve business performance. It is based on the idea that market orientation provides a better understanding of customers, competitors, and enterprise environments.

market orientation has been considered as a resource that allows businesses to create superior value for customers (Kohli & Jaworski (1990); Narver and Slater (1990); Liu et al., (2003). Specifically, the market orientation enabled the company to obtain information about market needs and to adjust decisions about market information. market orientation enables the company to provide an offering that in line with market requirements. The result is increased customer satisfaction and loyalty. Therefore, on the basis of the theoretical analysis, this study hypothesized as follows:

Hypothesis 1: market orientation positive effect on business performance for companies that produce automotive components in Indonesia

Market Orientation and Innovation

Much attention is given to the concept of market orientation, especially for its impact on business performance and innovation. According to Lado & Maydeu-Olivares (2001), a model of market orientation should focus on innovation, which is defined as the implementation of ideas, products, or new processes, as a primary strategy to respond the market changes. This is according to Han et al. (1998) suggest that market orientation is a primary determinant of innovation. The study of primary determinants of innovation is important. The reason is that innovation plays an important role in improving the long-term success of a company operating in a competitive market environment like this now (Jimenez-Jimenez et al., 2008).

The literature has provided a framework for studying the market orientation and relationship with innovation. At least, the two frameworks can be found in the marketing literature, that are the framework proposed by Narver and Slater (1990) and Kohli and Jaworski (1990). In this perspective, Narver and Slater (1990) highlights the cultural perspective as a realization of market orientation and view market orientation as a realization of the company's behavior towards customer orientation, competitor orientation, and inter-functional coordination. Meanwhile, Kohli

and Jaworski (1990) looked at the market orientation as the generation of market intelligence, market intelligence dissemination, and response to market intelligence to the entire companies.

Jimenez-Jimenez, et al. (2008), considers that both has similarities framework of the need to understand the needs and preferences of the market, the need for cross-functional integration, and relevance of actions in response to market opportunities. Therefore, market orientation is a cultural and behavioral aspect of a company that puts the customer at the center of the organization. Market orientation is also related to the process for obtaining market information, dissemination of market information between departments, and information processing markets to respond and adapt to market conditions.

Furthermore, Jimenez-Jimenez, et al. (2008), suggests that market orientation is interrelated to the company's innovation capabilities. These experts propose the following reasons. First, market orientation drove the company to generate new ideas and increase the motivation of companies to respond the demands of the market. Second, market orientation generates a thorough understanding of customer needs and market competition conditions. Third, increase the market orientation of the possibilities to innovate more in line with market needs, thus increasing the company's confidence in innovating. Lastly, market orientation creating an organizational environment that facilitates innovation. Therefore, on the basis of the theoretical analysis, as mentioned above, this study hypothesized as follows:

Hypothesis 2: market orientation was a positive effect on innovation in companies are producing automotive parts in Indonesia.

Innovation and Performance

Many definitions and concepts of innovation have been proposed in the literature. For example, innovation is defined as the introduction and implementation of new ideas or new knowledge within an organization (Hult et al., 2004) and new implementation of products (services), new processes, new marketing method, or a new organizational method in business practices, workplace organization or external relations (OECD, 2005). Moreover,

innovation can also be referred to the acquisition, dissemination, and the use of new knowledge (Calantone, et al., 2002) or the successful implementation of creative ideas within an organization (Amabile et al, 1996). Furthermore, the literature on innovation has introduced to several innovations typology. In this case, the OECD (2005) distinguishes four types of innovation that are product innovation, process innovation, organizational innovation, and marketing innovation. much literature mentions that product innovation and process innovation as technological innovation and organizational innovation and marketing innovation as non-technological innovation. This study focuses on non-technology. Jimenez-Jimenez, et al. (2008), considered that this innovation is very important in improving business performance, although experts tend to place greater emphasis on technological innovation.

Although there are differences in definitions and typologies of innovation, there seems to be a broad agreement among the experts that companies need to innovate to get high performance, creating new value for customers, and financial benefit for the company. Gunday, et al. (2011), suggested that innovation can actually increase business performance, including the performance of the market and financial performance of the company. Calantone, et al. (2002), argued that innovation has a positive impact on business performance. Innovation produces a better market position that allows companies to gain competitive advantage and superior performance.

The literature about innovation also emphasized the important role of innovation in improving the long-term success of a company in today's competitive market. It is based on the assumption that the company has the capability to innovate will be able to answer the environmental challenges faster and better than companies that do not innovate (Baker and Sinkula, 1999; Jimenez-Jimenez, et al., 2008). Therefore, on the basis of theoretical analysis mentioned above, this study hypothesized as follows: Hypothesis 3: The ability of innovation positive effect on business performance at companies that produce automotive components in Indonesia.

RESEARCH METHODS

The Collection of Data And Samples

The starting point of this research is the need for a deeper understanding of the relationship involving market orientation, innovation, and business performance in companies that produce automotive components in Indonesia. In harmony with the purpose of research, survey methods are considered as the appropriate approach for collecting data to explain phenomena in companies that produce automotive components in Indonesia. A survey was conducted to test the hypothesis listed above. Data were collected using a structured questionnaire distributed and collected from the manager/owner of companies are producing automotive components located in the district of Bandung, West Java Province, Indonesia. Of the 300 questionnaires distributed, obtained 71 questionnaires were returned and valid for use in the analysis.

Measurement of Variables

This study uses a scale of market orientation developed by Narver and Slater (1990). A total of 15 items were used to assess the market orientation variable. Non-technological innovation is a complex construct. This construct may be operated in a variety of different ways. Referring to gunday, et al. (2011), a total of 11 items have been used to measure the construct non-technological innovation. Specifically, this study used two different sizes of business performance is the performance of the market and financial performance. A total of 7 items performance and financial markets which were developed and adopted from gunday, et al. (2011).

Data Analysis Method

The variables examined in this study were treated as latent variables that consist of a set of indicators reflective of different. this study applied the structural equation model (structural equation modeling - SEM) to assess the structural model representing the relationship between these three variables. Referring to Anderson and Gerbing (1988), this study applied a two-stage approach in analyzing the proposed model.

The first stage is to assess the suitability of measurement models based on the aspects of reliability, validity, and the dimensional scale. In this case, the analysis method used is a confirmatory factor analysis (confirmatory factor analysis). The second phase is intended to test hypotheses about the structural relationship between market orientation, innovation, and business performance. This procedure is run by using AMOS 5 with maximum likelihood estimation technique. In this perspective, five statistical indexes applied to assess the suitability of the model that were Chi-square (X^2), goodness-of-fit index (GFI), the comparative fit index (CFI), Tucker-Lewis index (TLI), and root means square error of approximation (RMSA).

Research Model

This study focused on examining the relationship involving market orientation, innovation, and business performance to companies that produce automotive parts in Indonesia. Figure 1 illustrates the conceptual model proposed in this study.

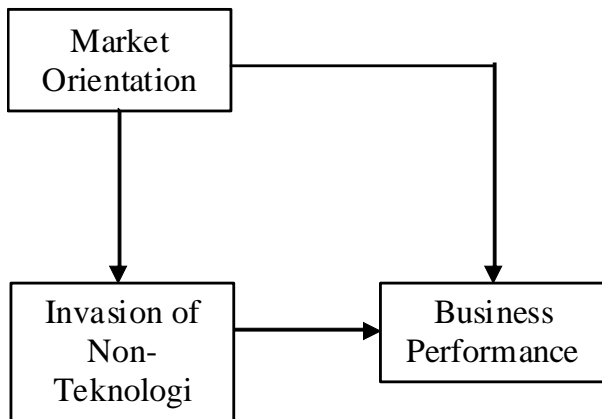


Figure 1. Conceptual Model of Research

Non-response bias test

The study assessed the existence of non-response bias by examining the difference between the response of an early group and responses from the survey of the last group. This study assumed that the final respondent’s responses are representative of non-respondents responses. For that purpose, in this study independent sample t-test performed on the responses of the two groups of the survey results. The results showed that the early response and final

response to all the items in the studied variables did not have significant differences in terms of the average value and standard deviation ($p > 0.05$). This suggests that non-response bias does not appear in this study.

Common method variance test

The study also examined the possibility of the common method variance, considered this study design used a single respondent. For this reason, this study did Harman’s one-factor test to check for the existence of Common method variance. For this, all the items were analyzed using unrotated principal component analysis (PCA). The study examined a number of factors generated from the analysis method. The test results showed that no single factor that appears from the analysis of PCA. In addition, the variance of the first factor did not dominate the total variance (21.6%). Therefore, Common method variance did not appear in this study.

Results and Discussion

Analysis of the measurement model

In the first step, this study assessed aspects of the dimensionality of each scale variable measurement of market orientation, innovation, and business performance. In this case, this study used principal component analysis (PCA). Furthermore, this study calculated Cronbach alpha values to assess the internal consistency of measurement scale. The results of PCA are presented in Table 1, Table 2 and Table 3. As seen in Table 1, Table 2 and Table 3, the PCA results showed that all the measurement scale factors are ≤ 0.50 . Meanwhile, the results of reliability analysis showed that the Cronbach alpha values for the variables of market orientation, innovation, and business performance were 0.81, 0.88, and 0.84. The results of this analysis confirm the validity and reliability of the measurement scale used in this study.

Analysis of Structural Models

This study analyzed the structural model to assess the causal relationship between the variables of market orientation, innovation, and business performance at companies that produced automotive components in

Table 1. The Validity of The Measurement Scale of Market Orientation

Dimension	Item	Factor
Orientation on Consumers	1. Commitment to consumers	0,71
	2. Creating values to consumers	0,76
	3. Understand the needs of consumers	0,77
	4. Work to meet customer satisfaction	0,88
	5. Measuring customer satisfaction	0,84
	6. Provide after-sales service	0,82
Orientation on Competitors	1. Responding to competitor strategies	0,76
	2. Create opportunities for new competition	0,88
	3. Analyze competitor strategies	0,84
	4. Mutual exchange of information	0,83
Coordination between Functions	1. All parts of the mutual exchange of information	0,76
	2. The integration of all parts in	0,81
	3. Contributions meet consumers	0,85
	4. All parts of the mutual exchange of resources	0,80
	5. All parts oriented to consumers	0,78

Table 2. The Validity of The Measurement Scale of Innovation

Dimension	Item	Factor
Organizational Innovation	1. Update the organizational structure	0,84
	2. System updates / production management	0,88
	3. The update work procedures	0,78
	4. System updates / HRM	0,77
	5. System updates / supply chain management	0,85
	6. Pemebaruan systems / information management	0,87
Marketing Innovation	1. Update method of promotion	0,83
	2. Updates distribution channels	0,76
	3. Update the sales price	0,81
	4. Update product design	0,82
	5. Updates routines / marketing activities	0,71

Tabel 3. The Validity of The Measurement Scale of Business Performance

Dimension	Item	Factor
Market Performance	1. Update the organizational structure	0,84
	2. System updates / production management	0,88
	3. The update work procedures	0,78
	4. System updates / HRM	0,77
	5. System updates / supply chain management	0,85
	6. Renewal systems / information management	0,87
Financial Performance	1. Return on assets	0,82
	2. Profitabilitas	0,80
	3. Return on sales	0,78
	4. Cash flow (excluding investment)	0,76

Indonesia. In this study, several indexes compatibility of the model applied to verify the suitability of the structural model has built. In this perspective, this study needs to ensure that the Chi-Square value per degree of freedom does not exceed 3, value Goodness-of-fit index (GFI) is greater than 0.90, value Tucker-Lewis

Index (TLI) exceeds 0.95, and the value of Root Mean Square Error of Approximation (RMSEA) does not exceed 0.08. Table 4 summarized the results of the suitability index analyze of a structural model. As seen in Table 4, it was found that the structural model that is built has a good fit to the data used.

Table 4. Suitability of The Structural Model

Suitability Index	Accepted Level	Test Results
$\chi^2/df.$	≤ 3	1.420
GFI	> 0.90	0.913
TLI	> 0.90	0.966
RMSEA	< 0.08	0.036

Hypothesis Test

This study applied three parameters to assess the hypothesis, which is the standard regression coefficient ($\hat{\alpha}$), a critical ratio (CR) and the level of significance (p). In this perspective, the relationship between the two variables was considered significant if the value C.R. greater than 1.96 and the value of significance (p) is smaller than 0.05. Figure 2 illustrates the output of confirmatory factor analyze (CFA) for the simultaneous relationships between the variables studied.

automotive components in Indonesia. This study hypothesized that market orientation will give a positive and significant effect on non-technological innovation. CFA analyze results, shown in Figure 2, shows that the market orientation had a positive impact and significant impact on non-technological innovation ($\beta = 0.511$; $p < 0.01$). Therefore, the second hypothesis of this study is accepted.

The third hypothesis of this study is related to the relationship between the non-technological innovation and business performance in companies

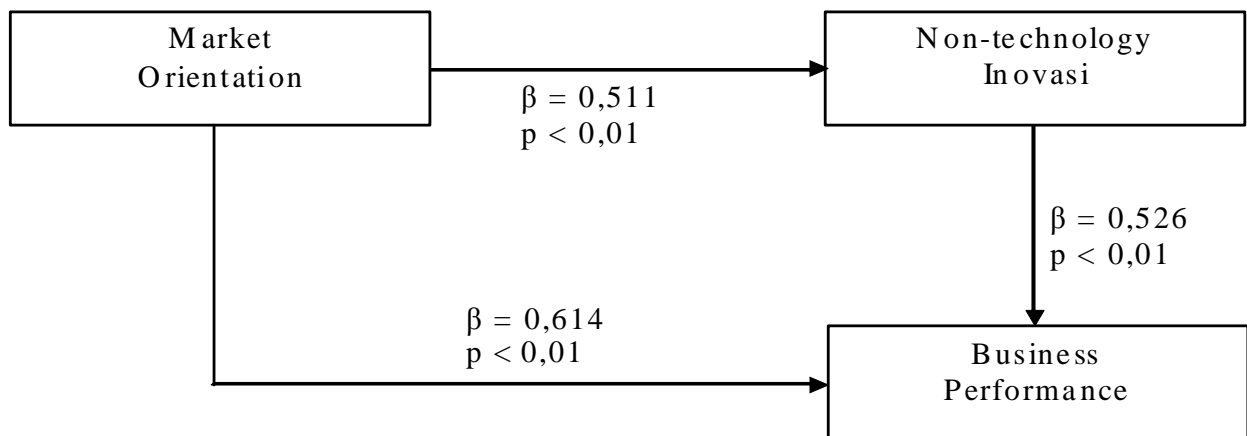


Figure 2. The Output of Confirmatory Factor Analyze (CFA)

The first hypothesis of this study is related to the relationship between market orientation and business performance at companies that produce automotive components in Indonesia. This study hypothesized that market orientation will provide a positive and significant effect on business performance. CFA analysis results, shown in Figure 2, shows that the market orientation provides a positive and significant impact on business performance ($\beta = 0.614$ and $p < 0.01$). Therefore, the first hypothesis of this study is accepted.

The second hypothesis of this study is related to the relationship between market orientation and non-technological innovation in companies that produce

that produce automotive components in Indonesia. This study hypothesized that non-technological innovation will provide a positive and significant effect on business performance. CFA analysis results, shown in Figure 2, shows that non-technological innovation provides a positive and significant impact on business performance ($\beta = 0.526$; $p < 0.01$). Therefore, the third hypothesis of this study is accepted.

Test the mediation role of the variables of innovation

This study examines the conditions suggested by Baron and Kenny (1986). In this perspective, this

study examines the relationship between market orientation and non-technological innovation to determine both variables have a significant relationship. Second, this study examines the relationship between market orientation and business performance to determine both variables have a significant relationship. Third, this study examines the relationship between non-technological innovation and business performance to determine whether the two variables have a significant relationship. Table 5 summarizes the results of the CFA to test the mediating effect of non-technological innovation.

business performance. However, if the variable non-technological innovations are included in the model as a mediator, the direct impact of variable market orientation on business performance will weaken. Market orientation affects business performance through non-technological innovation. The results of this study contribute to the understanding of the simultaneous impact of customer orientation, competitor orientation, and inter-functional coordination on market performance and financial performance. The findings of this study support the basic proposition

Table 5. The Results of CFA to Test The Mediating Effect of Non-Technological Innovation

Independent Variables	Dependent Variable	Regression Values	Regression Values (Without Variable Innovation)
Market Orientation	Business Performance	0.614 ^{***}	0.432 ^{**}
Market Orientation	Non-Technological Innovation	0.511 ^{***}	
Non-Technological Innovation	Business Performance	0.526 ^{***}	

Note: *** p < 0.01; ** p < 0.05

The first conclusion from Table 5, significant market orientation has a positive relationship with non-technological innovation. Therefore, the first condition for the mediating effect of innovation is supported. Second, market orientation has a positive and significant correlation with business performance. These results supported the second condition for mediating effect of innovation. Third, a positive and significant relationship between non-technological innovation and business performance also occurs. This study examines the changes in the value of chi-square for market orientation variables before and after the entry of non-technological innovation variables in the model. Effect of market orientation on business performance is reduced when non-technological innovation variables included in the model. CFA results (Table 5) showed that the mediates effect of non-technological innovation in the relationship between market orientation and business performance.

CONCLUSION AND SUGGESTION

Conclusion

The results showed that the orientation of individual markets had a positive impact in improving

that the market orientation affects business performance by creating superior value for customers.

Suggestion

The companies that produce automotive components in Indonesia must realize the importance of market orientation and non-technological innovation in improving the business performance. These companies should facilitate continuous innovation with market orientation. Specifically, the findings indicate the companies that produce automotive components in Indonesia needs to continue innovated in every aspect of their business operations to grow in the increasingly competitive market. Companies need to disseminate the results of market intelligence throughout the department and provide a response. Companies also need to apply the concept of Slater and Narver (1990) by encouraging cross-functional learning constantly about the needs and preferences of consumers, as well as analyze the strategies of their competitors. Companies also need to promote coordination between sections to create and exploit a learning of organization.

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