Market Orientation and Enterprise Resources Planning: Do They Influence Small-Medium-Enterprises' Marketing Performance?

Harry Soesanto[*]**; M Mudiantono; Danang Kurniawan; I Made Sukresna; Suryono Budi Santosa; K Kholidin** and **H Hersugondo,** Universitas Diponegoro, Jl. Prof. Sudarto, Semarang, Indonesia. [*]E-mail : harryjogja99@gmail.com; hersugondo@lecturer.undip.ac.id

The number of small-medium-enterprises (SMEs) is significantly increasing, yet this trend is not followed by their average sales. Hence, this study considers the factors influencing SMEs' performance by analysing the impacts of market orientation and the implementation of Enterprise Resources Planning (ERP) on innovation, competitive advantage, and SME's marketing performance. A survey was delivered to 128 SMEs' owner across Central Java, Indonesia. Structural Equation Modelling (SEM) shows ERP implementation mostly influences the consequences in the conceptual model. As such, this study suggests that SMEs need to improve their innovation. The improvement may deploy ERP implementation, based on the guidance of the ERP modules.

Keywords*: Market orientation; ERP implementation; innovation; competitive advantage; marketing performance.*

Introduction

Recent stiff business competition ensures that companies have winning-market strategies and here strategic management possesses an important role. According to Wheelen and Hunger (2008), strategic management is a combination of managerial decisions and actions that determine long-term performance. The decision includes strategy formulation, implementation, control, and evaluation with a main goal of continuity of a company's success in dealing with changes and thus the firm can build, maintain, and preserve its competitive value.

A competitive marketing strategy aims to help a company achieve its stated goals by developing a marketing strategy. The process utilizes the company's resources and capabilities as well as external trends and influences. Several basic steps include external and internal trend analysis, strategic analysis, Strengths-Weaknesses-Opportunities-Threats (SWOT) and problem analysis, goal setting, strategy selection, action plan, implementation, and performance evaluation.

As of large-sized business, SMEs need competitive marketing strategies to overcome such stiff competition. SMEs play a significant role in the economy, such as in the labour absorption, foreign exchange contributions, and regional income. In Indonesia, SMEs are categorized as follows:

a. A Small Enterprise is a productive economic enterprise established by individuals or businesses that are not a branch of a company and subsidiary that are owned, controlled, or become a member (directly or indirectly) of either a medium or large company. Specifically, it has total assets within Rp. 150,000,000-Rp. 500,000,000 and a turnover between Rp. 300,000,000 and Rp. 2,500,000,000, in a year.

b. A Medium Enterprise is a productive and independent economic enterprise established by individuals or business entities that are not a branch of a company and subsidiary that are owned, controlled, or become members either directly or indirectly as part of a small or large company or business. It has total assets around Rp. 500,000,000-Rp. 10,000,000,000 and a turnover of Rp. 2,500,000,000 to Rp. 50,000,000,000, in one year.

In Central Java-Indonesia, the number of Small and Medium Enterprises is ever-increasing. Nevertheless, such growth is not followed by the growth of average turnover per SMEs. Table 1 shows the indicators of each SMEs sector. In 2016 to 2017 the average number of SMEs expanded by 15.5%. Labour absorption increased by 16% (in 2016 SMEs absorbed 791,767 workers and increased by 126,688 workers so in 2017 there were 918,455 people absorbed into the SMEs workforce). The number of assets in 2017 increased by 14.6% from the previous year. Meanwhile, the turnover increased by 13% from 2016. Finally, there was a decline in the average turnover per SME, where in 2016 the average turnover per SME was 0.376 billion per year; decreased to 0.368 billion per year in 2017.

Table 1

Small and Medium Enterprises (SMEs) Indicators

No.	Data Description	Unit	Year		Change	
			2016	**2017**	**Total**	**%**
1	Total SMEs	Unit	115.751	133.679	17.928	15,5%
	Production / Non-Agriculture	Unit	39.799	45.936	6.164	15,5%
	Agriculture	Unit	19.335	22.329	2.994	15,5%
	Trade	Unit	42.599	49.198	6.599	15,5%
	Service	Unit	14.018	16.189	2.171	15,5%
2	Labour Absorption	People	791.767	918.455	126.688	16%
3	Asset	Rp. Billion	22.891	26.249	3.358	14,6%
4	Turnover	Rp. Billion	43.570	49.247	5.677	13%
5	Average turnover per SMEs	Rp. Billion	0,376411	0,368397	(0,007756)	(-2%)

Source: The Office of Cooperative and SMEs-Central Java (2018)

The ever-increasing competition with large industries and imported commodities stimulates SMEs to establish a proper marketing strategy for their products. Marketing performance is a common measure of the impact of company strategy. In this sense, Zimmerer and Scarborough

(2005) argue that merely undertaking usual business cannot win the market competition and as such there should be a continuous process, in line with a company's competitive advantage. Based on the Balanced Scorecard approach, satisfying customer needs will depend on the success of the process side and this could be achieved by implementing productive and cost-effective processes. One way to realize the speed of the service is by implementing an Enterprise Resources Planning (ERP) information system. According to Mudiantono et al. (2018), currently both SMEs and large companies do apply ERP. Some vendors have adjusted their ERP products to small companies at an affordable cost.

This study will discuss the marketing performance of SMEs in Central Java, Indonesia. In this area, SMEs population is significant, and they experience dynamic competition in marketing their products. Many products are considered qualified yet still unfamiliar to the market, perhaps because of the use of conventional methods. Therefore, the purpose of this study is to analyse the effects of market orientation and ERP implementation on SMEs' marketing performance across Central Java, Indonesia.

Hypotheses Development

The Effect of Market Orientation on Innovation

Market orientation is the tendency of a company to meet the needs and desires of consumers, in order to gain a competitive advantage and create the value of the company (Idar & Mahmood, 2011). Companies must focus on the market and quickly respond to the needs of customers (McNaughton, et al, 2001). Kirca et al (2005) asserts that market orientation positively impacts innovation. As such, a company's value could be sustained when the company consistently innovates. This leads to a hypothesis as follows:

H_1: M*arket orientation positively influences innovation*

The Effect of ERP Implementation on Innovation

ERP is a software-based business application that allows users to manage an efficient and effective resources utilization (materials, human resources, finance, etc.) by integrating all lines of the company (Nah & Dalgado, 2006). Although the company has implemented ERP in its

operational process, the company does not yet produce new product innovations. Trott and Hoecht (2004) found that ERP implementation delivers a positive impact on the innovation process within a company albeit they also find the existence of several ERP factors that may hinder the process of innovation in such a company. Based on the findings, the second hypothesis is as follows:

H2: *The higher the ERP implementation, the higher a company's innovation*

The Effect of Market Orientation on Competitive Advantage

Bharadwaj et al (1993) argues that competitive advantage is a result of strategy implementation that utilizes various resources owned by the company. Here, specific skills and assets are seen as sources of competitive advantage. Whereas market orientation may deliver progressive results since this view deeply emphasizes customer orientation and competitor orientation. The progressive results may improve a company's specific skills and assets. On the other continuum, such competitive advantages may be benefited by consumers stemmed from the product or service provided by the company (Tsiotsou & Vlanchopoulou, 2011). As such, this leads to the following hypothesis:

H3: *The higher market orientation, the higher competitive advantage*

The Effect of ERP Implementation on Competitive Advantage

Mudiantono et al (2018) investigate the process of implementing ERP and found that companies that implement the ERP process will be more sustainable than companies without an ERP system. Moreover, the success of ERP implementation will build the competitive advantage of SMEs. In the application of information systems, there are many factors that can be used as benchmarks to achieve success. Contador and Ferreira (2012) argue that the use of information systems plays an important role in achieving a company's competitive advantage. Specifically, the main benefit of information systems is to support the effectiveness and efficiency of a company's performance as well as to deliver an edge in business competition (Raharjo et al., 2015). This leads to the following hypothesis:

H4: *The higher the ERP implementation, the higher a company's competitive advantage*

The Effect of Innovation on Competitive Advantage

Hurley and Hult (1998) define innovation as a system performed by companies to be able to maintain business continuity and to adapt to a changing business environment. This is the step where by a company creates new thoughts and ideas in order to create new and innovative products; eventually leading to increased customer satisfaction. Han et al. (1998) argues that companies need to apply sustainable innovation because innovation is a basic need which will deliver on achieving a competitive advantage. In general, the word innovation itself means ideas related to new products. However, over time the meaning of these innovations is broadened, by also covering new processes performed by companies in their effort to adapt to business competition (Hansen et al., 2003). As such, this leads to the following hypothesis:

H_5: *The higher the innovation, the higher competitive advantage.*

The Effect of Market Orientation to Marketing Performance

Kirca et al (2005) states that market orientation has a positive impact on marketing performance. Whereas, according to Chang et al (2012), market orientation delivers significant results to marketing performance, after the innovation variable was included as a mediating variable. Those statements support the research conducted by Pulendran et al (2000), that found that market orientation can either increase or decrease a firm's marketing performance. Thus, this leads to the following hypothesis:

H_6: *The higher Market Orientation, the higher Marketing Performance*

The Effect of Innovation on Marketing Performance

According to Chang et al. (2012), marketing performance is a business process in which there is a feedback of performance within the marketing area. Companies that are able to implement sustainable innovations in their products will produce and maintain the suitability of these products to the desires and needs of consumers. This eventually may lead to improved marketing performance. Im and Workman (2004) further reinforce such arguments by investigating a link between innovations and marketing performance. They found a positive influence of innovation on marketing performance. As such, a hypothesis is proposed as follows:

H_7: *The higher innovation, the higher the marketing performance*

The Effect of Competitive Advantage on Marketing Performance

Competitive strategy refers to a company's future, an estimated demand for products, relationships and support of industry, and the description of upcoming business competition. Bennett and Smith (2002) argue that in order to maintain the existence of the business, the company must develop and implement a variety of strategies. The concept of competitive strategy is basically a way of a company to protect itself from competitors through innovation or uniqueness that is not possessed by competitors and adjusting to the needs of consumers and thus also be able to create consumer desires and actions. The concept of competitive strategy is commonly directed to improve marketing performance such as sales improvement, customer profitability, and company profitability in the future (Raharjo et al., 2015). Voss and Voss (2000) explain a company's marketing performance could be observed from its total sales, the number of customers, profitability, and sales growth. Marketing performance reflects the company's ability to transform itself when facing long-term challenges of the business environment (Keats and Hitt, 1998). Companies that possess a sound concept of competitive strategy could dominate the market, and as such they can increase their marketing performance. This leads to the following hypothesis as:

H_8: *The higher competitive advantage, the higher marketing performance*

All hypotheses are displayed in Figure 1.

Figure 1. Conceptual Framework
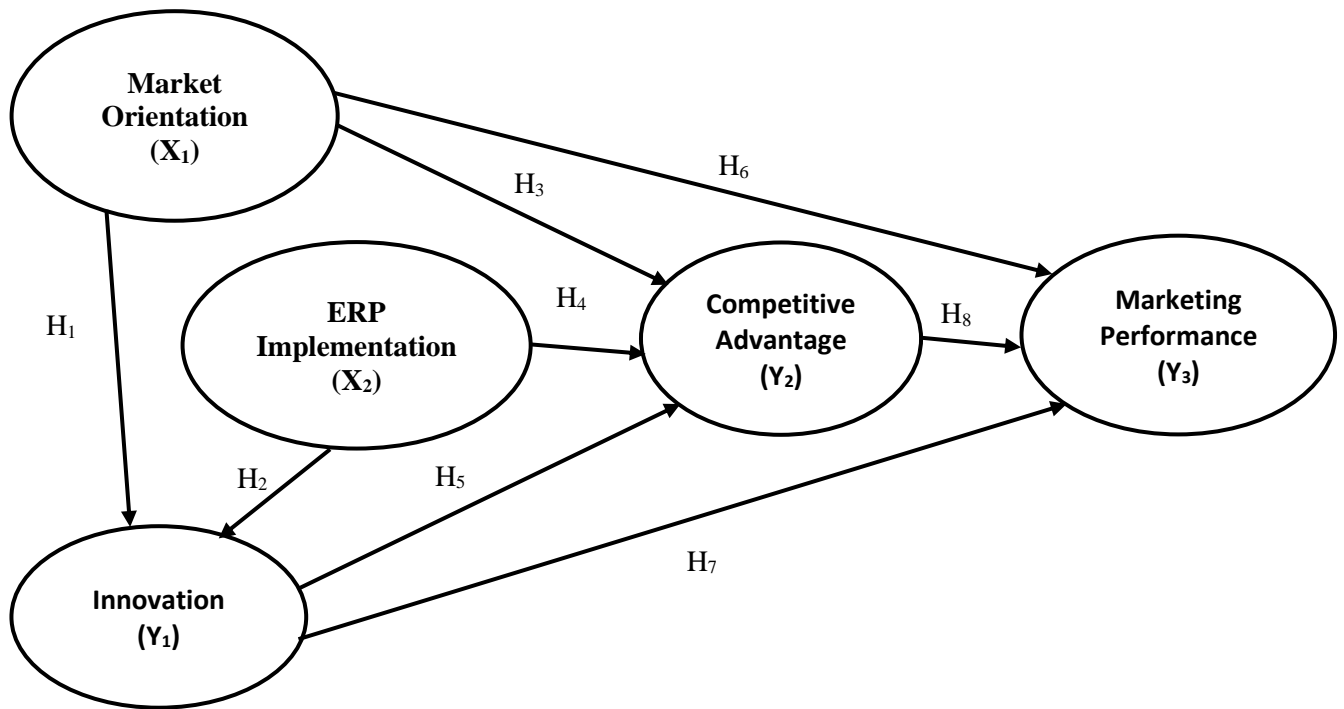
Sources: Hult et al. (2004), Kirca et al. (2005), Nah and Delgado (2006), Iddar and Mahmood (2011), Tsiotsou and Vlanchopoulou (2011), Chang et al. (2012), Mudiantono et al. (2018).

Method

Variable

Based on the conceptual model of Figure 1, the dependent variable in this study is marketing performance, whereas the independent variables are market orientation and ERP implementation. Finally, the intervening variables are innovation and competitive advantage.

Population and Sample

The population of this study is the SMEs in Central Java. The study utilizes purposive sampling as this technique determines the sample based on some considerations, and is adapted to the research objectives. As such, the sample taken is SMEs from Central Java which use ERP.

Data Collection

Questionnaires are used to collect the data for the study. The questionnaire contains questions and statements and it is administered either by mail, telephone, or via face-to-face interviews (Ferdinand, 2006). The questionnaire consists of a total of 16 close-ended and open-ended questions. The target respondents are 128 owners of SMEs.

Results and Discussion

This study uses Structural Equation Modelling (SEM) to test the impacts of market orientation on innovation (H1), ERP implementation on innovation (H2), market orientation on competitive advantage (H3), ERP implementation on competitive advantage (H4), innovation on competitive advantage (H5), market orientation on marketing performance (H6), innovation on marketing performance (H7), and competitive advantage on marketing performance (H8).

Out of the 128 targeted respondents, this study finally received a usable 100 responses from SMEs owners, who have been running their businesses for at least one year (N = 100). Most business are in the culinary field with a percentage of 50% (N = 50). The most widely used of ERP modules is the sales module, with a percentage of 32% (N = 32).

Structural Equation Model (SEM)

Table 2 shows the goodness-of-fit of the model. Only one parameter (AGFI) delivers a marginal fit while the others show a good fit.

Table 2

Goodness of Fit Test of Variable

Goodness-of-Fit Index	Cut-Off Value	Data Results	Evaluation
Chi-square		111,306	Small value is expected
Significance Probability	$\geq 0,05$	0,136	Fit
CMIN/DF	$\leq 2,00$	1,159	Fit
AGFI	$\geq 0,90$	0,865	Marginal
GFI	$\geq 0,90$	0,905	Fit
CFI	$\geq 0,90$	0,978	Fit
TLI	$\geq 0,90$	0,973	Fit
RMSEA	$\leq 0,08$	0,035	Fit

Based on Table 2, it can be seen that all constructs used to make the research model in the analysis process have met their goodness-of-fit. This provides sufficient information for the unidimensionality of the hypotheses, and as such the variables can be analysed further. The value of loading factors and construct reliability imply that the data is valid and reliable.

Table 3

Results of Hypotheses Testing

	Estimate	S.E.	C.R.	P	Label
Innovation < - - - Market Orientation	,330	,085	3,894	***	par_12
Innovation < - - - ERP Implementation	,880	,240	3,666	***	par_18
Competitive Advantage <- - - Market Orientation	,239	,083	2,895	,004	par_14
Competitive Advantage < - - - ERP Implementation	,424	,214	1,986	,047	par_15
Competitive Advantage <- - - Innovation	,367	,162	2,267	,023	par_16
Marketing Performance <- - - Market Orientation	,323	,137	2,359	,018	par_13
Marketing Performance <- - - Innovation	,716	,323	2,213	,027	par_17
Marketing Performance <- - - Competitive Advantage	-,172	,386	-,445	,656	par_19

Table 3 and Figure 2 show the results of hypotheses testing. The proposed hypotheses are tested by observing the value of the critical ratio and the level of significance in the regression weight. Here, the value of C.R $\geq$1.96 and P $\leq$0.05 is required as a threshold for hypotheses acceptance. Results show that most hypotheses are accepted, except for H_8.
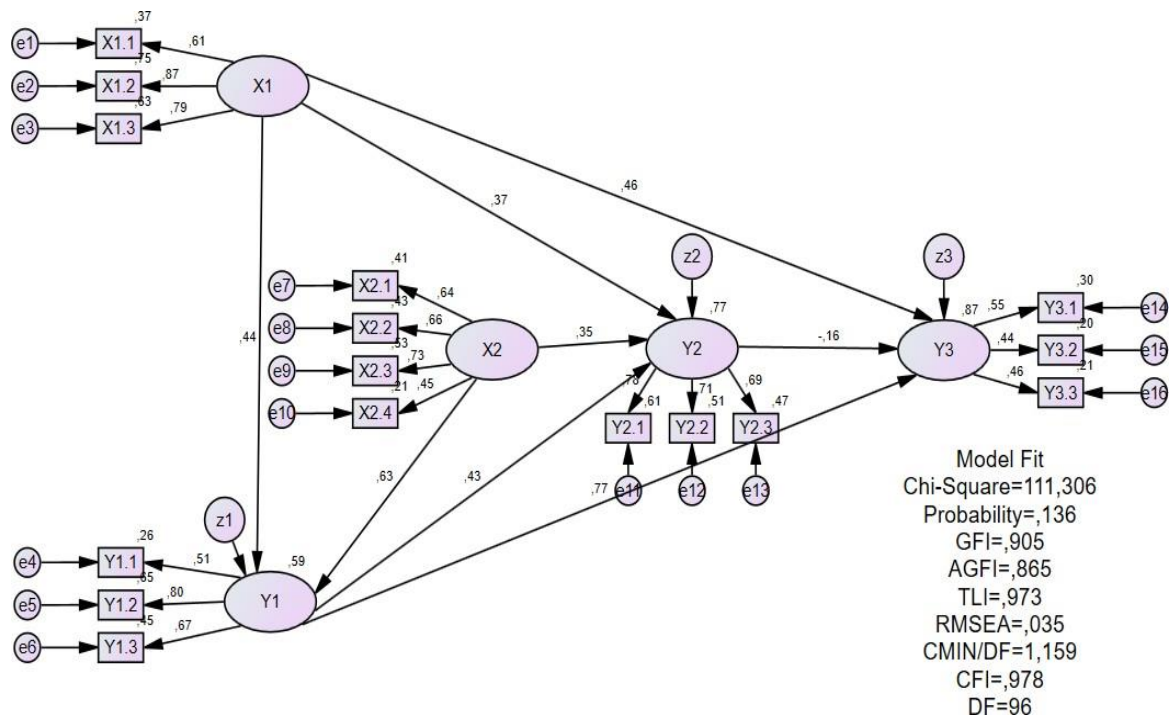
Figure 2. Structural model with path analysis

Conclusion and Managerial Implications

Conclusion

Results of the study show that innovation is the variable with the strongest effect. The model contains 5 variables, in which there are 2 independent variables (market orientation and ERP implementation), 2 intervening variables (innovation and competitive advantage), and a dependent variable (marketing performance). The study implies that innovation is warranted to increase marketing performance. This is in line with Han et al. (1998) whose study reveals a direct relationship between on-going innovation, administration, and company performance. Here, companies which conduct and implement on-going innovation and implement innovations will optimize the companies' performance.

Furthermore, results of this study showed that improving marketing performance significantly increases innovation. Here, innovation in the process delivers the highest loading factor in the innovation variable.

Managerial Implications

Based on the results of the study, SMEs should improve their marketing performance by innovating the process of new products' production. This could lead to a change or modification of the existing process, and thus could eventually create efficiency and effectiveness. By such action, SMEs could save time and costs. This could be conducted, for example, by using tools and learning methods from modules and the internet and by updating product designs or improving the quality and aesthetic of packaging to make a product becomes more attractive.

On the other hand, the application of other variables is also recommended. Here, the market orientation focused SMEs should be improved by discovering the thorough needs of consumers and by exploring the technologies and strategies of competitors. Finally, the deployment of the most suitable ERP module could help SMEs in each business process.

References

Bharadwaj, S.G., Varadarajan, P.R., & Fahy, J. (1993). Sustainable competitive advantage in service industries: A conceptual model and research proposition. *Journal of Marketing*, 57(4), 83-99.

Bennett, R.J. & Smith, C. (2002). Competitive condition, competitive advantage and the location of SMEs. *Journal of Small Business and Enterprise Development*, 9 (1), 73-86.

Chang, S.-H., Chen, C.-H., & Ho, Y.C. (2012). A study of marketing performance evaluation system for notebook distributors. *International Journal of Business and Management*, 7(13), 85-93.

Contador, J.C & Ferreira, A.A. (2012). IT outsourcing: Methodology for selecting suppliers criterion for competitive advantage. *Journal of Information Systems and Technology Management*, 9(1), 123-146.

Han, J.K., Kim, N., & Srivastava, R.K. (1998). Market orientation and organizational performance: Is innovation the missing link? *Journal of Marketing,* 6(24), 30-45.

Hurley, R.F., & Hult, G.T.M. (1998). Innovation, market orientation, and organizational learning: An integration and empirical examination. *Journal of Marketing*, 62(3), 42-54.

Idar, R., & Mahmood, R. (2011). Entrepreneurial and marketing orientation relationship to performance: The SME perspective. *Interdisciplinary Review of Economics and Management,* 2:1-8.

Keats, B.W., & Hitt, M.A. (1998). A causal model of linkages among environmental dimensions: Macro organizational characteristic and performance. *Academy of Management Journal*, 31(3), 570-598.

Kirca, A.H., & Jayachandran, S., & Bearden, W.O. (2005). Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing*, 69(2), 24–41.

McNaughton, R.B., Osborne, P., Morgan, R.E., & Kutwaroo, G. (2001). Market orientation and firm value. *Journal of Marketing Management, 17*(5–6), 521–542.

Mudiantono, Prasetiono, Muid, D., Laksito, H., & Nugraheni, R. (2018). The role of ERP in increasing marketing performance of SMEs in Central Java, Indonesia. *Advanced Science Letter,* 24(12), 9706-9709.

Nah, F.F-H., & Santiago, D. (2006). Critical success factors for enterprise resource planning implementation and upgrade. Journal of Computers Information Systems, 46(5), 99-113.

Pulendran, S., Speed, R., & Widing, I.I. (2000). The antecedents and consequences of market orientation in Australia. *Australian Journal of Management,* 25(2), 119–144.

Raharjo, S.T., Mudiantono, & Perdhana, M.S. (2015). SME's Enterprise Resource Planning Implementation, Competitive Advantage, and Marketing Performance: Finding from Central Java, Indonesia. *Journal of Entrepreneurship, Business and Economics*, 4(1), 22-44.

Im, S., & Workman Jr., J.P. (2004). Market orientation, creativity, and new product performance in high-technology firms. *Journal Of Marketing*, 68(2) ,114-132.

Tsiotsou, R.H., & Vlachopoulou, M. (2011). Understanding the effects of market orientation and marketing on service performance. *Marketing Intelligence & Planning*, 29 (2), 141-155.

Trott, P., & Hoecht, A. (2004). Enterprise Resource Planning (ERP) and its impact on the innovative capability of the firm. *International Journal of Innovation Management*, 8(04), 381–398.

Voss, G.B., & Voss, Z.G. (2000). Strategic orientation and firm performance in an artistic environment. *Journal of Marketing*, 64(1), 67-83.

Wheelen, T.L., & Hunger, J.D. (2008). *Strategic Management and Business Policy*. 11th Ed., Pearson Education, Inc.: Upper Saddle River, NJ.