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Innovative performance development model based on human capital and network quality toward improved marketing performance

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A B S T R A C T

This study seeks to explore how innovative performance development model, which is based on human capital and network quality, can contribute to the improvement of marketing performance. Respondents are the chief executives of Pertamina lubricants distributors, with sample size of 120 out of 460. For the analysis, the Structural Equation Model (SEM) is applied along with AMOS software. The result of the study shows that there was improvement on marketing performance through the implementation of innovative performance management based on network quality.

1. Introduction

Marketing performance, in general, is an important element of a company as it reflects the performance of the company itselfand it is a concept to measure the company's marketing achievement. Every company needs to know how good its achievement is in today's market competition as it shows the effectiveness of its efforts. Slater and Narver (1995) described that the effectiveness of the company's strategy can be seen in several factors: consumer satisfaction, the success of a new product and the increase on sales and company's profitability. It is because the marketing performance also reflects the company's capability to transform itself when it deals with certain challenges in its environment. A study showed that marketing performance was highly influenced by innovative perfomance (Cabello-Medina et al., 2011). Innovative activity usually derives from unique knowledge. For this reason, any business that masters new knowledge will have better chance in winning the competition. Good quality knowledge is intangible resource that can stimulate innovative performance of a company. A study by Hsu et al. (2007) revealed the incapability of small-scale industries in delivering innovativeness. However, organizations with highly-skilled and knowledgeable labours usually have better human capital, and therefore they are more likely to create knowledge, make the right decision and have better innovativeness (Hitt et al., 2001). Nonaka and Takeuchi (1995) suggested that only human capital itself would not bring any advantage to the company unless it also enabled knowledge sharing among its labours. Network quality becomes even more important since it is associated with how businesses build their relationships with others. Network perspective highlighted the incapability of most businesses to meet organizational innovativeness, and this is where network gains its importance. Network quality can promote technological innovativeness to create new and even better products (Aragón-Correa & Sharma, 2003).

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2. Literature review

2.1. Marketing Performance

Company performance is a way of measuring the results of a company's strategies or policies, and a good company performance usually can be seen from its marketing performance (such as in sales volume, market share and sales growth) and financial performance (Ferdinand, 1998). Marketing performance is the result of marketing activity that can boost income through sales growth and improvement in consumer satisfaction (Doyle, 2003). Outstanding marketing performance, which is based on exceptional consumer knowledge and thorough comprehension of the excellence of the new products, is a key factor to the success of new products that give superior value to the consumer. To give a conclusion, Marketing Performance is a measurement of the company's effectiveness in marketing its products and it can be seen from its sales volume, market share and sales growth. Marketing performance has been a common tool to measure the impact of a company's strategy on the field, whether it is effective or not. However, the way this performance is measured has always been a source of debate. This is a classical problem since marketing performance, as a construct, is multidimensional in itself. It involves several aspects like different goals and different types of organization. For this reason, performance should be judged using different types of measurement that work simultaneously (multiple measurement). Single measurement method will not be enough to depict the whole performance of a company and how it really works (Prasetya, 2002). Marketing performance can also be viewed as company's ability to transform itself, within long-term perspective, as a response to particular obstacle or challenge that emerges in its environment (Keats et al., 1988). Evaluation on performance is part of the company's efforts to adjust to changes that may occur and thus getting new insights to be applied on the upcoming strategies or policies. A company cannot be uprooted from the environment it lives in, and it is almost impossible to completely control or change that environment. The company simply needs to understand it well and try to get the best out of it for the sake of company's sustainability. If the company knows the environment well, then it has better chance to produce the right policies which, in turn, might also improve its marketing performance. Marketing performance is often used to measure the impact of company's strategies and orientation. Marketing strategy is always aimed to produce excellent marketing performance (that can be seen in some indicators like sales volume and sales growth) and eminent financial performance. Normally, company performance is measured through its sales value, Return on Investment (ROI) and Return On Assets (ROA). But those measures are viewed as aggregate measures through accounting and finance process, and do not directly represent managerial activities, especially marketing management (Ferdinand, 1998). Thus, it is better to use activity-based measure that can explain which marketing activities contribute to the improvement of marketing performance. For example, the amount of units that is sold or produced can be a more accurate indicator than sales value (in Rupiah) to start an analysis.

2.2. Innovatove Performance

A continuous action to build and develop the organization by embracing new technologies and creating breaktrough in new products and services, and to always seek to expand the new market, is called innovation (Prakosa, 2005). Innovation is not only limited to technical issues, but it also concerns organizational aspect (Han et al., 1998; Lau et al., 2010). Product innovation is a way to raise the value of the products, and it is the key determinant of a business operation that can bring competitive advantage to the company so it can be market leader. Innovation emerges as a consequence of market demand so that pursuing innovation can lead to competitive advantage of the company. Product innovation will bring positive impact on the company's performance. It can be concluded that innovative performance is a success indicator of a company in creating new products, new service methods and new customer-oriented technologies based on market demand. There are several indicators to measure the innovative performance: company's marketed products, new products, the counterfeit products or various competitors' products. Unique human resource can lead to competitive differentiation. Valuable but common (i.e., not rare) resources and capabilities are sources of competitive parity (Lane & Lubatkin, 1998; Nonaka & Takeuchi, 1995; Calantone et al., 2002; Pitt & Kannemeyer, 2000). Knowledge has important contribution in developing new ideas and products (James, 2002). Unique knowledge is a source of innovative activities. The mastering of new knowledge will increase the company's competitiveness. By saying this, we can conclude that knowledge is intangible resource that can boost innovative performance of a company. The study accomplished by Cabello-Medina (2011) showed that innovative performance can stimulate organization's performance. Therefore, the hypothesis in this research is:

H_1: Higher innovative performance leads to higher marketing performance.

2.3. Network Quality

Network is the result of any contact made by one person / organization to another person / organization, and it can also be classified as human resource (Dollinger, 1999; Liao, 2006). One of the most important variables a company should have, especially in regard to a more competitive economic environment, is network. The significance of a network is unquestionable as it enables easier access to information, human resource, market and technology (Gulati et al., 2000). Business network is associated with "the ability to build harmonious, systematic, synergetic and compact collaborative relationship between two parties or more to integrate business potentials to gain the desirable benefits" (Sudjatmoko, 2009). In other words, network performance is the company's ability to build collaborative relationship with other parties that has the same interest to maximize profit. The previous research showed positive correlation between network capability and business performance (Lukiastuti, 2012). Others believe that network performance could positively affect the business performance. A reliable company's network can provide valuable information about the latest market condition and competitor's products, and this is quite fundamental in the company's policy making as in setting the company's strategy for product innovation. In the way Pertamina markets for its lubricants, there are several networks summed up as distribution channel. Reliable networks must have the capability to provide valuable insights to manage the marketing model. If there are significant movements from the competitors and market, information from the marketing networks can help a company produce innovative ideas for the marketing of their products. Lee et al. (2005) also suggest that trust and friendship tend to make people more willing to share what they have to each other and be more cooperative in their interactions. Since the theory of social capital emphasizes the importance of friendship and trust in relational dimension, communication has become a determinant factor. Innovation is basically a collaborative action; hence communication, information diffusion and knowledge sharing are significant factors of innovative capability (Subramaniam & Youndt, 2005; Kogut & Zander, 1996). Innovative performance is a productivity booster and it contributes as an agent of change within the organization. The sustainability of an organization is driven by innovativeness. Nahapiet and Ghoshal (1998) suggest that the quality of a network might represent the desire to do some experiments by combining different types of information or to develop new knowledge. Therefore, the next hypothesis of this research would be:

H_2: High quality network will lead to higher level of innovative performance.

The available network resource may affect the strategic behaviour of a company as it can use the opportunity to improve its performance (Gulati et al., 2000). If more resources are available, it means more opportunities that can be seized. Therefore, the third hypothesis would be:

H_3: High quality network will lead to higher level of marketing performance.

2.4. Human Capital

Human capital is knowledge, skill and capability that one possesses that can be used to produce professional services and economic rent. Human capital theory distinguishes human capital in industry-specific human capital (Coff, 1997; Song et al., 1997). Human capital refers to worker's capacity limit that can be accommodated by the company (Penrose, 1959). A company with high-skilled and knowledgeable worker tends to have better human capital; hence the company will be more likely to produce new knowledge and make correct decision which lead to a better organizational innovation (Hitt et al., 2001). Thus, we can also conclude that human capital is a company's capital that comes from qualified workers (who have skill, knowledge and expertise); and their capabilities can be developed to achieve the company's goals. Human capital is unique, uniqueness that makes some workers irreplaceable and hard to find. It is difficult to transfer or duplicate into other positions or companies. Knowledge as a source of innovative activity is rarely available in the market (Nonaka & Takeuchi 1995). Another hypothesis proposed by this research is:

H_4: When human capital gets better, then the innovative performance will follow.

Human capital is characterized by the embedded set of knowledge that can be used to create value for the organization (Collin & Clark, 2003). A study showed that human capital management must look carefully at the source of the knowledge and the knowledge flow (Pennings et al., 1998). The kowledge flow here means skill development and institutionalization of knowledge --espececially that corresponds with the market. The fifth hypothesis in this research is:

H_5: Higher rate of human capital will lead to higher level of marketing performance.

Based on in-depth literature review, the research is based on empirical model and its scheme can be seen in Fig. 1.

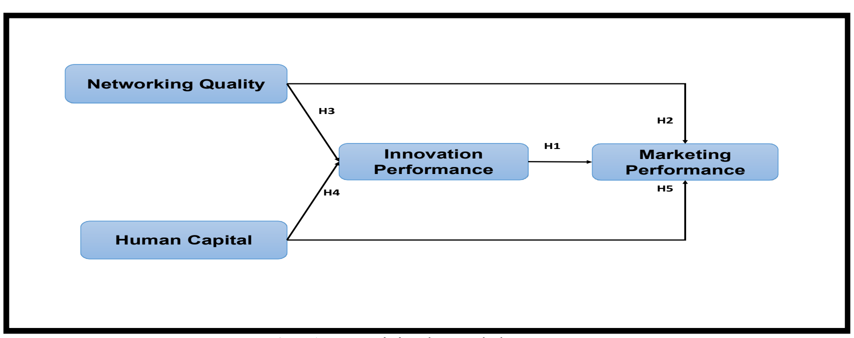

Fig. 1. Empirical Model

3. Research method

3.1 Sample

The research population consists of 460 distributors of Pertamina lubricants (including both the state-owned and private-owned distributors) in Central Java province. The sampling technique used in this research is purposive sampling, which is based on the characteristics of the population --i.e, the chief executives of Pertamina lubricants distributors in Central Java Province that have operated for at least 5 years. The sample size of this research --following Hair et al. (1996)-- is 120 respondents.

3.2 Measurement of variables

For the indicators of marketing performance, this research refers to Kaplan and Nornton (1996) that includes sales growth, customers and sales volume. While innovative performance includes introduction to the technology applied to the new products, how often the products significantly change and replaced, and the proportion of the new and applicable technology (Zerenler et al., 2008; Kang et al., 2008; Tsai, 2002). Network quality involves information sharing, resource sharing and market and technology sharing. According to Rastogi (2002), there are several factors that can be included in human capital, such as knowledge, competency and behavior. The variables were measured with questionnaire by using likert-scale with answer scale of 1-5. The scale represented the rating from 'strongly disagree' to 'strongly agree'. Table 1 shows the results of validity and reliability test. Table 1 shows a loading factor value above 0.7 and a minimum reliability value of 0.6 (Hair et al., 2010). Therefore, it can be concluded that the instrument has the validity and reliability.

Table 1
Validity and Reliability Test

No	Variable	Indicators	Loading Factor	Reliability
1	Marketing Performance	a) Sales growth	0.80	0.71
		b) Customer growth	0.80	
		c) Sales volume	0.79	
2	Innovation Performance	a) Introduction to new technology	0.83	0.70
		b) Product's replacement and change frequency	0.67	
		c) Applicable technology	0.76	
3	Networking	a) Information sharing	0.80	0.69
		b) Resource sharing	0.72	
		c) Market and technology sharing	0.87	
4	Human Capital	a) Knowledge	0.82	0.72
		b) Competency	0.77	
		c) Behavior	0.82	

4. Result and conclusion

4.1. Goodness of fit

The empirically model is examined using Structural Equation Modelling. The model indicates Chi-square = 78.166 with probability value of 0.058; GFI = 0.834, AGFI = 0.748 and TLI = 0.926, CFI = 0.943 while value of RMSEA = 0.077. The result of the model is a Fit. Based on statistically analysis the results of this study indicate conformity with the required standard values. Table 2 shows the results of the hypothesis test.

Table 2
Inner Path Model Coefficients and their Significance

No	Exogenous variable	Endogenous variable	Standard Estimate	T-value
1	Networking	Innovative Performance	0.287	2.685*
2	Human Capital	Innovative Performance	0.644	5.106**
3	Innovative Performance	Marketing Performance	0.215	2.631*
4	Human Capital	Marketing Performance	0.194	2.408*
5	Networking	Marketing Performance	0.180	2.026*

$p < 0.05$; * $p < 0.10$; ** $p < 0.01$; *** $p < 0.001$

Table 2 shows that five hypotheses have been supported by the empirical data. The first hypothesis, higher innovative performance leads to higher marketing performance, shows that the increase number of indicators on the introduction of technology of the new products, product's replacement and change frequency and on the new and applicable technology is directly proportional to the increase of sales growth, customer growth and sales volume. This study is relevant to what has been conveyed by Cabello-Medina et al. (2011), which basically suggested that innovative performance could stimulate organizational performance. Second hypothesis, high quality network will lead to higher level of innovative performance, means that the increase in information sharing, resource sharing and market and technology sharing will also increase the opportunity to use new technology, product's replacement and change frequency, and the applicable technology. Thus, this study is in line with Nahapiet and Ghoshal (1998) who suggest that the quality of the network may represent the will to experimenting by combining different kinds of information or to develop new knowledge. Third hypothesis, high quality network will lead to higher level of marketing performance. It indicates that information sharing, resource sharing and market and technology sharing can improve marketing performance. This study supports Gulati et al. (1999) who believe that the available resources may affect companies' strategic behavior as they can use the opportunities to perform better.

Fourth hypothesis, when human capital gets better, then the innovative performance will follow. It means that improvement on knowledge and competency, as well as behavior, will also improve information, resource, market and technology sharing. As Nonaka and Takeuchi (1995) suggest, human capital is unique, and this uniqueness makes workers become irreplaceable and rare. It is hard to transfer or duplicate them to different positions or companies. Knowledge is a source of innovative activity since it is rare or not widely available in the market. Fifth hypothesis, higher rate of human capital will lead to higher level of marketing performance. In other words, improvement on knowledge, competency and behavior will positively affect sales growth, customer growth and sales volume. Thus, this study supports the argument that human capital is characterized by the embedded set of knowledge that can be used to create value for the organization (Collins & Clark, 2003).

In summary, marketing performance can be improved through innovative performance that is built upon network quality -- with some indicators such as market and resource sharing, and applicable technology.

5. Limitations and Future Research

The calculation result with AMOS software shows that the coefficient of human capital and network quality significance is below 20%, which is low category. It can be an interesting area of study. This research has not considered other factors like environment support or added value. It is worth considering those factors to be included in the next research.

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