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The Relationship between Entrepreneurial Orientation (EO) and Organizational Innovativeness among Small and Medium Enterprises (SMEs) in Malaysia

Nor Hazana Abdullah, Yee See Mei, Alina Shamsuddin and Eta Wahab

Universiti Tun Hussien Onn Malaysia 86400 Batu Pahat, Johor, Malaysia.

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ABSTRACT

Understanding forces that contribute to the success of small and medium enterprises (SMEs) is very important for both developed and developing economies. Since innovativeness is among the most important means through which such businesses contribute to economic growth, numerous research studies had been conducted to determine which factors positively impact on organizational innovativeness. However, much of the existing research on predictors of organizational innovativeness was aimed at identifying the effect of factors that are more appropriate for larger firms and undermine the unique characteristics of SMEs. Fewer studies have considered the role of entrepreneurial orientation (EO) on organizational innovativeness despite the compelling influence of SMEs' owner-managers. Furthermore, empirical evidence in existing studies was mainly derived from samples in developed countries and fragmented efforts in developing countries especially Malaysia. Therefore, this paper aimed to explore the relationship between entrepreneurial orientation (EO) and organizational innovativeness among SMEs in Malaysia. This research was conducted using quantitative approach, where questionnaires were used as the major instrument in data collection. Purposive sampling was used in this research since it is exploratory in nature and the inherent facts that SMEs' participation in research is discouraging. A total of 36 SMEs participated from various sectors including manufacturing and service. It was found that entrepreneurial orientation explained 31.9% of variance in organizational innovativeness among SMEs in Malaysia. The results showed that three out of five dimensions of entrepreneurial orientation (innovativeness, risk taking and autonomy) have significant relationship with organizational innovativeness. The finding verifies the importance of developing entrepreneurial characteristics among SMEs by focusing on these dimensions. Thus, it is essential for the entrepreneurs of SMEs in Malaysia to have an innovative skill to tackle the unpredictable market. (279 words)

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INTRODUCTION

Malaysia as well as many other economies in the world, is dominated by a large proportion of small medium enterprises (SMEs). SMEs contribute more than 90% of business entities around the globe from developed countries (e.g. Japan, USA and UK) to the third world countries (e.g. Indonesia, Cambodia and Myanmar). The strategic positioning of SMEs in national economies has been furiously debated and majority has agreed that development of SMEs should become focal agenda in any striving nations. According to Keizer *et al.* (2002), developing a group of diverse and competitive small and medium enterprises (SMEs) is a central theme towards achieving a sustainable economic growth. This could be accomplished by developing and commercializing innovations (Marscati *et al.*, 2008). Innovations could serve as agents of change, generators for new ideas and innovative activities.

Despite its importance, organizational innovativeness remains a challenging issue in Malaysia. National Survey of Innovation (NSI) which was carried out by the Ministry of Science, Technology and Innovation, Malaysia (MOSTI), found that majority of small and medium enterprises are non innovating firms which encompasses 64.25% of small companies and 50.58% from medium companies. According to Vora *et al.* (2012) and Hacıoglu *et al.* (2012), lack of entrepreneurial competencies, managerial abilities and skills among the main

Corresponding Author: Nor Hazana Abdullah, Department of Technology and Management, Universiti Tun Hussien Onn Malaysia.
E-mail: hazana@uthm.edu.my

founder-owners are the most significant reasons for failures among SMEs. However, very limited studies have been focusing on this issue. A literature scan performed on three major databases (Emerald, Proquest and Science Direct) from year 2000 to 2012 indicated that despite a drastic increase in organizational innovativeness literatures, focus on Entrepreneurial Orientation has been scarce. Hence, this research serves to explore the relationship between entrepreneurial orientations and organizational innovativeness of among SMEs.

Literature Review:

Armbruster *et al.* (2008) discussed organizational innovativeness in detail, noting that organizational innovativeness is indeed true innovation, as it may increase productivity and profits and thereby improve the competitiveness of the firm. Innovations in general aim at gaining a competitive advantage by either shifting the demand curve of the firm's products (Santos-Vijande & Álvarez-González, 2007). For instance, through increasing product quality, offering new products, or opening up new markets. Shifting of the firm's cost curve is done through reducing the unit cost of production or engaging in purchasing, distribution, or transactions. In both cases, firms will be able to obtain extra short-term profits, either through a temporary monopoly (product innovations) or through temporary marginal costs below the market price.

Organization innovation generally has been understood as introduction of new thing or method. Newness is the common denominator for research on innovation, whether the innovation is new to an individual adopter, a group or an organization (Mol & Birkinshaw, 2009). Organizational innovativeness is referred to a firm's capacity to engage in innovation. That is, introduction of new processes, products, or ideas in the organization (Hult *et al.* 2004). According to Wang and Ahmed (2004), by combining strategic orientation with innovative behavior, an organization is able to introduce new products to the market or opening up new markets.

Moreover, innovation has been presented in various forms, such as process or product innovation, radical and incremental innovation, administrative or technological innovation, etc. (Zaltman *et al.*, 1973; Utterback, 1994; Cooper, 1998). The authors have been emphasized the importance of different dimensions. For example, Schumpeter (1934) suggested a range of possible innovative alternatives, there are developing new methods of production, developing new products, identifying new markets, discovering new sources of supply, and developing new organizational forms. Miller and Friesen (1983) adopted four dimensions which are new product or service innovation, methods of production or rendering of services, risk taking by key executives, and seeking unusual and novel solutions. Whereas Capon *et al.* (1992) focused on three dimensions of organizational innovativeness which are included market innovativeness, strategic tendency to pioneer, and technological sophistication. From various researches, Wang and Ahmed (2004) identified five main areas which could determine an organization's overall innovativeness. There are product innovativeness, market innovativeness, process innovativeness, behavioural innovativeness, and strategic innovativeness. Based on different perspectives from several authors, this study adopted Wang and Ahmed (2004) organizational innovativeness which is defined as "an organization's overall innovative capability of introducing new products to the market, or opening up new markets, through combining strategic orientation with innovative behavior and process". Selection of this concept of organizational innovativeness is based on the assumption that multidimensional measurement is more reliable compared to the unidimensional aspect of organizational innovativeness.

A number of studies were conducted recently with the goal to discover which factors contribute to innovation efforts by SMEs (Keizer *et al.*, 2002). According to Keizer *et al.* (2002), the factors that have effect on innovation can be categorized as internal and external, where internal variables refer to characteristics and policies of SMEs while external variables refer to opportunities that SME can seize from its environment. The predictors which are commonly discussed included market orientation (Raju *et al.*, 2011), learning orientation (Škerlavaj *et al.*, 2010), knowledge management (Liao and Wu, 2010), total quality management (Wang *et al.*, 2012), strategic orientation (Laforet, 2008) and customer orientation (Tajeddini, 2010). However, entrepreneurial orientation (EO) is seen as one of the critical issues in the mist of ongoing restructuring management and organizational practices designed to cope with an increasing complex and competitive technology based economy.

According to Miller (1983), an organization is entrepreneurial orientation (EO) when it is simultaneously risk taking, innovative and proactive. Covin and Slevin (1988) further refined Miller's definition by stating that, "the entrepreneurial orientation of a firm is demonstrated by the extent to which the top managers are inclined to take business-related risks (the risk-taking dimension), to favour change and innovation in order to obtain a competitive advantage for their firm (the innovation dimension), and to compete aggressively with other firms (the proactiveness dimension) (Miller, 1983). Many authors have adopted entrepreneurial orientation (EO) definitions similar to that of Miller (1983) and Covin and Slevin (1988), but others have made changes that alter the meaning of the construct. For example, Merz and Sauber (1995) and Knight (1997) have limited the construct by focusing on proactiveness and innovation and therefore exclude risk taking. Furthermore, Merz and Sauber (1995) only focus on the actions of business units and to innovations that result in new offerings, instead of for example process improvements. By contrast, Lumpkin and Dess (1996) have extended the construct by including two dimensions totalling five dimensions of innovativeness, risk taking, proactiveness, competitive

aggressiveness and autonomy. Further, Lumpkin and Dess (1996) have extended the domain by suggesting that “an EO refers to the processes, practices and decision-making activities that lead to new-entry”. This is in contrast with Covin and Slevin (1988) who suggested that EO is a strategic attitude reflecting the decisions and processes of the firm, but not explicitly limited to those that lead to new entry, but rather representative of an overall gestalt within an organization. Despite numerous and diverging perspectives, this study adopted the Lumpkin and Dess ‘s concept of entrepreneurial orientation (EO) since focuses on new entry and it is not context specific.

There are five dimensions of entrepreneurial orientation (EO) that were adopted which consist of innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy. First, innovativeness is referred to a willingness to support creativity and experimentation to introduce new products or services, technological leadership and research and development in developing new processes. Second, risk taking is referred to a tendency to take bold actions, such as entering unknown new markets, committing a large portion of resources to ventures with uncertain outcomes or borrowing heavily. Third, proactiveness is referred to an opportunity seeking, forward looking perspective which involves introduction of new products and services ahead of the competition and acting in predicting future demand by creating change and shape the environment. Fourth, competitive aggressiveness is referred to a firm’s efforts to directly and intensely challenge its competitors to achieve entry or improve position to outperform industry rivals in the marketplace. Fifth, autonomy is referred to independent action taking by a team or an individual aimed to bringing forth a business concept or vision and carrying it through completion.

Organizations with an entrepreneurial orientation (EO) are able to continuously identify and exploit opportunities that arise from asymmetries of market and technological knowledge (Hayton, 2005). EO can also help organizations to explain which managerial processes lead to the early recognition of these signals which will likely lead to a better performance than that of competitors. Furthermore, EO reflects the priority that firms place on the process of identifying and exploiting market opportunities (Baker, 2009). Underlying an entrepreneurial orientation (EO) is a tendency to pursue the creation and acquisition of new knowledge and the integration of new knowledge and capabilities with existing resources in the form of new combinations (Hayton, 2005). Therefore, EO stimulates the innovative potential of an organization. Table 1 summarizes literatures on the hypothesized relationship between EO and organizational innovativeness. As evident from the table, studies on EO and organizational innovativeness have been fragmented yet promising.

Table 1: Summaries of Literatures on EO and OI

Author	Title	Findings
Marcati <i>et al.</i> , (2008)	The Role of SME Entrepreneurs’ Innovativeness and Personality in the Adoption of Innovations	The results showed entrepreneurs’ innovativeness and personality has direct influence on the adoption of innovations.
Rhee <i>et al.</i> , (2010)	Drivers of Innovativeness and Performance for Innovative SMEs in South Korea: Mediation of Learning Orientation	The findings imply that managers with entrepreneurial orientation and market orientation should place much emphasis on learning orientation in order to boost innovativeness and ultimately achieve performance.
Hacioglu <i>et al.</i> , (2012)	The Effect of Entrepreneurial Marketing on Firm’s Innovative Performance in Turkish SMEs	The results revealed that proactiveness, innovativeness, customer intensity, resource leveraging dimensions of entrepreneurial marketing are positive related with innovative performance.
Soininen <i>et al.</i> , (2012)	The Impact of Global Economic Crises on SMEs: Does Entrepreneurial Orientation matter?	The findings found that the more innovative and proactive the firm is, the less its operations are affected by the recession and the more risk taking the firm is, and the more its profitability is affected by recession.
Tajeddini, (2009)	Effect of Customer Orientation and Entrepreneurial Orientation on Innovativeness: Evidence from the Hotel Industry in Switzerland	The results showed that customer orientation, entrepreneurial orientation and innovativeness are associated with improved business performance.
Avlonitis, and Salavou (2007)	Entrepreneurial Orientation of SMEs, Product Innovativeness, and Performance	The findings showed that product innovators, who take equal care of reducing customer’s burden in adopting new products and entrepreneurial attitude act as an important contributor to product performance.

Conceptual Framework And Hypoteses:

Measurement theories used in this study include innovation diffusion theory for organizational innovativeness and sociological entrepreneurship theory for entrepreneurial orientation. The structural theory binding these two measurement theories is the upper echelon theory. The review of previous studies provides

empirical supports on the hypothesized relationships. In the context of this study, entrepreneurial orientation is defined as having five dimensions namely innovativeness, risk-taking, proactiveness, competitive aggressiveness and autonomy (Dess and Lumpkin, 2005). Innovativeness stimulates creativity and experimentation in an organization. Such attitude is necessary for organizations that want to explore opportunities that may result in organizational development (Dess and Lumpkin, 2005). Furthermore, innovativeness contributes in renewing the presence of the organization in existing markets and businesses (Kollmann and Stöckmann, 2010). According to Baker (2009) innovativeness describes creativity and experimentation in new product development, technology adaptation and internal processes and procedures. Therefore, this study hypothesizes the first hypothesis as:

H₁: Innovativeness influences on organizational innovativeness.

Organizations which are engaging in radical innovations must be willing to take financial and business risks to be successful (Kollmann and Stöckmann, 2010). When organizations face uncertainty, risk taking may give the organization bias to take action (Dess and Lumpkin, 2005). Therefore, this study hypothesizes the second hypothesis as :

H₂: Risk taking influences on organizational innovativeness.

Proactiveness is an opportunity seeking, forward-looking perspective (Lumpkin and Dess, 2001). A proactive attitude facilitates an organization with the introduction of new products or services ahead of competition, because it is more receptive for trends in customer demands (Kollmann and Stöckmann, 2010) and it enhances processes and operations that make operations stay ahead of competitors (Dess and Lumpkin, 2005). Therefore, this study hypothesizes the third hypothesis as:

H₃: Proactiveness influences on organizational innovativeness.

Competitive aggressiveness requires intense action that is aimed to outperforming industry rivals. Competitive aggressiveness mobilizes continuous competitor assessment and thus the deconstruction of the value packages of the rivals to generate superior offerings (Hughes and Morgan, 2007). The input about the strength and weaknesses of the competitors serve for both the adjustments of existing offerings and for radical new products and services (Kollmann and Stöckmann, 2010). Therefore, this study hypothesizes the fourth hypothesis as:

H₄: Competitive aggressiveness influences on organizational innovativeness.

Autonomy encourages innovation as it is a source for creativity and initiative. Entrepreneurial initiatives are transformed in entrepreneurial outcomes by autonomous efforts of key individuals acting outside the chain of command (Lumpkin *et al.*, 2009). Such individuals are often referred to as champions (Green *et al.*, 1999). Therefore, this study hypothesizes the fifth hypothesis as:

H₅: Autonomy influences on organizational innovativeness.

Methodology:

A quantitative research approach using a cross sectional survey was used in this research. The selection of approach and design were based on the need to observe the natural setting of the phenomenon and testing of hypothesis. The unit of analysis in this study is organizational level with focus on the owners or top management of SMEs. Non probability sampling in forms of purposive sampling was chosen due to its exploratory nature. Furthermore, difficulty to get access to the data and low research participation rate among SMEs pose major limitations if probability sampling is to be used. , it would be more appropriate to use purposive sampling in this research since it is very difficult to get the data from the SMEs based from the previous study. This study adopted two established instruments which are organizational innovativeness measures were developed by Wang and Ahmed (2004) and entrepreneurial orientations were taken from Lumpkin and Dess (1996). Both instruments had high reported reliabilities and had been used in previous studies (e.g. Madhoushi *et al.*, 2011; Li *et al.*, 2009; Talaga, 2013; Riivari, 2011; Arief, 2013; Kaya, 2009; Wang, 2008).

There was total of 36 SMEs participated in this study. The data for the study were collected using face to face interview since self-administered survey usually has poor return rate. Collected data were subjected to data cleaning, transformation and finally statistical analysis. Both descriptive and inference statistics were performed using IBM SPSS. The first is to get the feel of the data and profiles and the second is to answer the hypotheses. Reliability of the measures were performed to re affirmed the internal consistency of both instruments. It is found that both instruments had high reliabilities of 0.0.857 for EO and of 0.918 for organizational innovativeness. These figures indicated that both variables had good reliability since the Cronbach's Alpha was more than 0.70, which is higher than that recommended by Hair *et al.*(2006). Confirmatory factor analysis was performed which yielded Kaiser-Meyer-Olkin measure of sampling of 0.720 for EO and 0.527 for

organizational innovativeness which is above the cut-off point 0.5. Considering small sample size, these figures are expected. Bartlett's test of sphericity for EO was significant at $\chi^2 (78) = 167.753$, $p < 0.05$) with all item loading exceeded 0.5. Organizational innovativeness's Bartlett's test of sphericity was significant $\chi^2 (406) = 845.00$, $p < 0.05$) with all item loading exceeded 0.5. Therefore, both instruments were reliable and valid.

RESULT AND DISCUSSION

The profiles of respondents are shown in Table 2.0. Majority of the respondents were managers (39%) and directors (36%) of the SME, followed by owner and manager (22%). 'Others' represents respondents who were in other important position in the organization such as partner. Sixty-four percent of the companies are small size based company, and then the rest are medium sized companies based on the number of employees that have (SME Corp, 2011). Most of the companies were private limited companies which constituted 8% (28 SMEs) and partnership occupies 8% of the SMEs in this research. Majority of the respondents are involved in 'others' sector which include retail and wholesale business which contributes 50% (18 SMEs), followed by SMEs in service related business (42%) and the other remaining SMEs are involved in manufacturing sector.

Table 2: SMEs Profiles

		Frequency	Percentage
Position	Director	13	36
	Manager	14	39
	Owner and Manager	8	22
	Others	1	3
Size of SMEs	Small	23	64
	Medium	13	36
Types of Business	Sole- Proprietorship	5	14
	Partnership	3	8
	Private Limited Company	28	78
Industrial Sector	Manufacturing	3	8
	Services	15	42
	Others	18	50

The descriptive statistics of both variables and their dimensions are depicted in Table 3.0. Process innovativeness had the highest mean ($M = 3.569$, $SD = 0.672$) followed by behavior innovativeness, product innovativeness, market innovativeness and strategic innovativeness. Dimensions of EO shows that autonomy has the highest mean ($M = 3.625$, $SD = 0.731$) followed by risk taking ($M = 3.343$, $SD = 0.481$), proactiveness ($M = 3.269$, $SD = 0.579$), innovativeness ($M = 3.25$, $SD = 0.629$) and competitive aggressiveness ($M = 3.236$, $SD = 0.528$).

Regression is a technique that can be used to investigate the effect of one or more predictor variables on an outcome variable. Linear regression is important for this research as the result of regression is an equation that represents the best prediction of dependent variable from independent variable. Hence, linear regression analysis was applied to identify which independent variable (entrepreneurial orientation) is significant to predict the outcome of dependent variable (organizational innovativeness). Testing of assumptions for regression analysis showed a linear relationship between independent and dependent variables, homoscedasticity, reliability and normality of variables are met. The regression was performed since the assumptions were met.

Table 3: Descriptive Statistics

	Mean	SD
Organizational Innovativeness	3.383	0.489
Behavioural Innovativeness	3.472	0.714
Product Innovativeness	3.319	0.549
Process Innovativeness	3.569	0.672
Market Innovativeness	3.285	0.633
Strategic Innovativeness	3.271	0.498
Entrepreneurial Orientation	3.344	0.469
Proactiveness	3.269	0.579
Innovativeness	3.25	0.629
Risk taking	3.343	0.481
Competitive Aggressiveness	3.236	0.528
Autonomy	3.625	0.731

Table 4 presents the linear regression results of entrepreneurial orientation (EO) and organizational innovativeness (OI). The results indicated that 31.9% of variance in organizational innovativeness in SMEs was significantly explained by entrepreneurial orientation (EO). All dimensions of entrepreneurial orientation except proactiveness and competitive aggressiveness were significantly related to organizational innovativeness with r values more than 0.3, which indicate practical significance (Cohen, 1988). The strongest relationship was

organizational innovativeness and risk taking, followed by innovativeness and autonomy based on R^2 as shown in Table 4. Thus, H_1 , H_2 and H_5 were accepted.

Table 4: Regression Results

Variables	R ²	Beta	Sig.
Entrepreneurial Orientation	0.319	0.565	0.0001*
Innovativeness	0.335	0.578	0.0001*
Risk Taking	0.342	0.585	0.0001*
Proactiveness	0.098	0.314	0.062
Competitive Aggressiveness	0.067	0.259	0.127
Autonomy	0.245	0.495	0.002*

*Significant at $p < 0.05$

Conclusion:

From this research study, it is found that there is a significant positive relationship between entrepreneurial orientation and organizational innovativeness among SMEs in Malaysia. This study found that risk taking, innovativeness and autonomy would lead to a higher organizational innovativeness as well as competitiveness in the business performance of SMEs. This result supports prior researches such as Kollmann and Stöckmann (2010).

However, competitive aggressiveness and proactiveness did not have significant effects on organizational innovativeness. One plausible explanation of this finding is the influence of national culture. Malaysia has a higher power distance and collectivism. As such, competitiveness and proactiveness that would challenge the status quo might not appeal to the SMEs. According to majority of participated owner or managers, they started their business with a very low level of skills and expertise especially managerial and technical know-how. They take some time to acquire proficiency and adapt to the firm's environment. Although infrastructure and resources were important for SMEs' growth and sustainability, entrepreneurs with entrepreneurial orientations, positive attitudes, strong vision, and growth motivation could overcome barriers and go ahead with it. The important roles of entrepreneur of firm innovativeness also confirm the work of Mel *et al.*, (2009). Their study indicated that owner's ability, personality traits, and ethnicity played significant and substantial impact on the likelihood of a firm innovating, thus confirming the importance of the entrepreneur in the organizational innovativeness. In short, this study points out the importance to improve and develop SMEs' owner or managers innovative abilities, attention to create entrepreneurial climate, and confront with external competitiveness as a means to be more entrepreneurial to improve business performance. SMEs need to demonstrate a high degree of innovation in designing the strategies and organizational practices as well as coordinating with the conditions of the external environment to gain competitive advantage in this competitive market.

This study has several limitations inherent to its design, data collection method and small sample size. However, the exploratory nature of this study and the insight gained from this study are important to pave new fruitful research areas.

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