Drivers of innovation and its impact on business performance

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Abstract. In a turbulent business environment, innovation is the most important issue for business success. This paper addresses two main problems. First, we examine the relationship between market orientation (MO) and entrepreneurial orientation (EO) as key drivers of innovation. Second, it evaluates the impact of innovation on business performance. Model development using structural equation modelling (SEM). Data was collected based upon food sector small industries. The finding of this research provides support for the positive link of both MO and EO on innovation. Finally, innovation becomes a positive contributor to business performance. The study has implications that firms should emphasize enhance innovation and ultimately in order to achieve better competitiveness.

1. Introduction

Entrepreneurship is important in small and medium enterprises (SMEs) and local markets as well as large companies. Innovation is considered an important instrument of entrepreneurship. The main obstacles for SMEs in innovation are the costs of the research and development (R & D) activities, lack of funds and quality of employees [1, 2]. Research on innovation is usually carried out on large companies. However, over the past few decades, research attention has also focused on small entrepreneurial firms that are considered to play an important role in innovation and technological change [3]. Tight competition, tastes and needs of consumers change over time, it is important for an organization to adapt, develop and innovate to achieve competitive advantage and be successful.

Nowadays, the ability of entrepreneurs to produce new products is fundamental, because the organisational environment changes rapidly. Changes in socio-economic systems, changes in the expectations and needs and desires of customers, are challenges faced by organisations through new products or services as well. Innovations created by companies are the key to competitive advantage that determines the success of an organisation [4, 5]. The product's uniqueness will temporarily increase competitiveness. Innovation will increase the added value of a product and must be able to make different products so that consumers are more interested in buying these products than competing products.

Since innovation is an inherent condition the entrepreneurial domain, the importance of new products must be emphasised, because it plays a major role in the extent to which companies are able to survive and develop. Entrepreneurship encourages companies to innovate to improve performance and competitiveness. Empirical evidence states that MO has an influence on organisational performance encouraging the need for research to analyse the relationship of MO, innovation and business performance. So, it is important to explain how to convert MO into superior organisational performance [6]. The new concept of EO appears in the development of strategic management theory which is a description of the company's strategic orientation in influencing management practices and decision making. According to Bouncken et al. [7] innovation is also supported by EO so that it is able to take
opportunities and try to adopt new ideas. EO reflects the company's level of strategic processes that businesses use to achieve competitive advantage. This article reviews the role of MO and EO in driving innovation and its impact on business performance.

2. Literature review and hypotheses

2.1 Market orientation and innovation

Innovation is the driver of the company's success in the long run, especially in dynamic market [8]. Innovation will increase the added value of a product and must be able to make different products so that consumers are more interested in buying these products than competing products [9]. According to Lukas and Ferrell [10] that MO which is created by customer orientation, competitor orientation, and functional coordination have a significant impact on the introduction of various types of product innovation. Hooley et al. [11] claimed that increasing MO makes better customer relations and increases the ability to develop new products and services.

The relationship between MO and innovation has been widely studied. Some studies have been able to explain the positive relationship between MO and innovation [8, 12-15]. However, Kurtinaitiene [16] provides different findings, that mobile telecommunications operators in 15 countries incorporated in the European Union prove that there is no effect of MO on innovation. Although there is conflicting evidence, most empirical studies show a positive relationship between MO and innovation.

H1. Market orientation positively affect innovation

2.2 Entrepreneurial orientation and innovation

Drucker [17] asserts that innovation is an entrepreneurial activity, so there is a very close relationship and then the EO concept emerges. On the other hand, innovation is one of the critical EO dimensions in differentiation strategies to get better performance. EO is one of the most important concepts in entrepreneurship and strategic management [18, 19]. Miller [20] describes EO in three dimensions: innovative, risk-taking and proactivity, while Lumpkin and Dess [21] add aggressive competitiveness and autonomy.

Additionally, EO reflects the preference for seeking new opportunities for the growth of the firm, so that EO firms are persistent in seeking the growth of the firm through explorative strategic actions, such as developing new products [22]. New creative ideas impact the firm increasingly able to develop new ideas. Also, competitive aggressive will be able to meet dynamic consumer needs. Thus, firms should keep to trial-errors in developing new products [23]. In general, firms that have higher EO are more innovative [20, 21] and perform better, even though this increase declines when the level of uncertainty increases [7]. Numerous studies argue that there is a relationship between EO and innovation [24, 25].

H2. Entrepreneurial orientation positively affect innovation

2.3 Innovation and business performance

Innovation is critical in achieving competitiveness. In general, innovation strategic means to business success, especially in highly competitive environments. The capacity to innovate is the most important factors that affects performance. In addition, Keskin [26] point out SMEs need to formulate proactive strategies as a central part of entrepreneurship due their limited resources, turbulence in business environment to achieve better performance by applying innovation strategies. Previous studies of the relationship between innovation and business performance have shown mixed results, however, mostly reveal that innovation has a significant positive effect on firm performance [12, 27-30].

H3. Innovation positively affect business performance

3. Methods

The study was carried out on 47 food sector small industries operating in Batu-Indonesia with a purposive sampling method. Data was collected through a questionnaire with five-point Likert-type scales ranging from 1 (totally disagree) to 5 (totally agree). Market orientation focuses on three dimensions, namely customer orientation, competitor orientation, and inter-functional coordination. Entrepreneurial orientation
is defined along dimensions: proactive, risk-taking, innovative, competitive aggressiveness, and autonomy. Innovation is operationalised in three dimensions, i.e. product innovation, process innovation, and market innovation. Whereas business performance was represented by financial indicators. Total questionnaire is 25 items. Data analysis using Partial Least Square.

4. Results and Discussion
The results of the measurement model show indicate factor loadings are greater than 0.50 it means convergent validity approved. Evaluation of the Goodness of fit model showed that all variables obtained a Cronbach-alpha coefficient greater than 0.7 indicating 0.878, 0.877, 0.751, and 0.851 respectively (see Table 1). Additionally, composite reliability coefficients for the construct in the measurement model are all greater than 0.6 that mean high internal reliability exists in a model (see Table 1). Moreover, the measurement (AFVIF, GoF, SPR, RSCR, SSR and NLBCDR) of model confirms that the model acceptable.

| Table 1. The measurement indicators of constructs |
|-----------------------------------------------|
| Constructs/items                  | Factor loading | Cronbach alpha | Composite reliability |
| **Market orientation**          |                | 0.878          | 0.903                  |
| Customer orientation            | 0.521          |                |                        |
| 1. Responsiveness to customer   | 0.752          |                |                        |
| 2. Demand uncertainty           | 0.778          |                |                        |
| 3. Commitment to serve customers|                |                |                        |
| Competitor orientation          | 0.776          |                |                        |
| 1. Competitive intensity         | 0.776          |                |                        |
| 2. Responsiveness to competitors| 0.726          |                |                        |
| 3. Share information concerning | 0.716          |                |                        |
| competitor’s strategies         |                |                |                        |
| Inter-functional coordination   | 0.808          |                |                        |
| 1. Cooperate with each other     | 0.808          |                |                        |
| 2. Communication                | 0.600          |                |                        |
| 3. Share information            | 0.724          |                |                        |
| **Entrepreneurial Orientation** | 0.877          | 0.911          |                        |
| Proactive                       | 0.868          |                |                        |
| Risk taking                     | 0.802          |                |                        |
| Innovative                      | 0.898          |                |                        |
| Competitive Aggressiveness      | 0.761          |                |                        |
| Autonomy                        | 0.765          |                |                        |
| **Innovation**                  | 0.751          | 0.824          |                        |
| Product innovation              | 0.535          |                |                        |
| 1. New product development      | 0.535          |                |                        |
| 2. Product advantage            | 0.758          |                |                        |
| 3. Improve packaging            | 0.759          |                |                        |
| Process innovation              | 0.619          |                |                        |
| 1. New technology               | 0.619          |                |                        |
| 2. Process efficiency           | 0.542          |                |                        |
| 3. Production cost              | 0.245          |                |                        |
| Marketing innovation            | 0.822          |                |                        |
| 1. Promotion system             | 0.506          |                |                        |
| 2. Marketing strategy           |                |                |                        |
| **Business Performance**        | 0.954          | 0.851          | 0.912                  |
| Increasing sales                | 0.954          |                |                        |
| Increasing profitability        | 0.954          |                |                        |
| Increasing market shares         | 0.719          |                |                        |

Notes: AFVIF = 4.134; GoF = 0.559; SPR = 1; RSCR = 1; SSR = 1; NLBCDR = 1
The result of hypotheses testing can be seen in Figure 1 and Table 2 which shows that significant effect of MO on innovation is indicated by the path coefficient value 0.33 and p-value <0.01, so H1 is supported. The significant influence of EO on innovation, has a path coefficient value of 0.51 and p-value <0.01, meaning H2 is proved. The coefficient of determination (R1^2) shows a value of 0.67, which means that 67% of innovation variance is expressed by MO and EO. Moreover, the effect of innovation on business performance, has a path coefficient value of 0.62 and p-value <0.01, meaning that H3 is accepted. The coefficient of determination (R2^2) 0.39 indicates that 39% of the variance of business performance is explained by innovation.

Table 2. Hypotheses testing

| Hypotheses | Variable relationships | Path Coefficient | p-value | Description |
|------------|------------------------|------------------|---------|-------------|
| H1         | Market Orientation → Innovation | 0.33             | <0.01   | Supported   |
| H2         | Entrepreneurial Orientation → Innovation | 0.51             | <0.01   | Supported   |
| H3         | Innovation → Business Performance | 0.62             | <0.01   | Supported   |

Figure 1. Estimated model (MO: Market Orientation; EO: Entrepreneurial Orientation; IN: Innovation; BP: Business Performance)

MO means that organisations are committed to creating superior customer values so that they appreciate new ideas for creating new products according to the dynamics of customer needs [13-15]. Continuous communication with customers can bring new and creative ideas to the creation of new products. Besides that, always monitoring competitors will be able to understand what is done by competitors, especially related to product novelty, competitor strategies so that they can immediately improve or develop existing products [31]. Next, the organisation must always coordinate intensively to monitor marketing activities so that it can be used as a source of new creativity for innovation [9]. This finding prove that the success of new products is directly influenced by MO. This concept is consistent with previous studies [8, 10, 13, 14].

Regarding EO is one of the most important drivers of innovation. EO illustrates the extent to which companies tend to innovate, take risks and be proactive [18-20]. Therefore, in a competitive environment, firms must be entrepreneurially oriented in order to innovate. Effective innovation can help managers to create competitive advantages by creating added value for customers. That's why innovation and EO strategies are closely related to each other. These results strengthen the research of Avlonitis and Salavou [23] which concluded that EO has a positive effect on innovation. Firms should meet dynamic market needs so they should be innovative, proactive, and brave to face greater risks and challenges.

Our findings show that innovation affects the business performance positively. As a result, it can be said that innovation is an antecedent in developing competitive advantage. Tushman and Nadler [32] asserts that organisations can gain competitive advantage only by managing effectively for today while
simultaneously creating innovation for tomorrow. Better innovation, which is measured by improving product and process innovation, as well as marketing innovation can rise business performance. Most SMEs effort toward innovation increasing variety of products, new packaging, as well as superior product quality, will increase the attractiveness. In addition, success of SMEs in improving the production process will increase efficiency and reduce costs, so that business performance is better. The ability to innovate helps companies develop products to fulfill changing customer tastes. Thus, this finding adds important evidence that innovation has a positive impact in achieving competitiveness. Finally, firms pursue MO and EO to match market developments with existing resources and capabilities as drivers of innovation.

5. Conclusions

Innovation is the main activity of entrepreneurship and a source of competitive advantage, so organisations should foster innovate effectively in order to survive in the long term. An entrepreneurial firm should continually innovate to adapt to environmental changes. EO and MO are the foundation of innovation capabilities. Thus, listening to consumers' voices is important, supporting and exploiting new ideas, facilitating the creative process as determining factors for the success of innovation, which has contributed to offering products that are unique, different from competitors, and valuable to customers. This study indicates that innovation is a determinant of competitive advantage. Hence, a business must be MO and EO, because it is very important in innovation concepts and can increase profits. The majority of small businesses have any obstacles in order to innovate. Although resources are a constraint to innovation, SMEs should explore new opportunities that are profitable, and optimize the use of resources and capabilities they have. Consequently, owners or managers should improve the ability of innovation. The training course in entrepreneurship might improve the qualification of the workforce in order to better innovation capability.

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