The Effects of Resource Management to Firm’s Performance Through Exploratory and Exploitative Innovations

(An Empirical Research on Real Estate Developer Firms in Indonesia)

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Abstract—Strategic Entrepreneurship is a firm’s capability to exploit current competitive advantage and explore the new opportunity for future competitive advantage simultaneously. This study examines how the real estate firm manages its strategic resources and leverage it through the exploratory and exploitative innovation in efforts to create a superior firm’s performance. This study using multiple regression methods with sample study are real estate firms in Indonesia. The results show that resource management that leveraged through the interaction of exploratory and exploitative innovation generates value to customers and owners and create a competitive advantage to the firm.

Keywords—resource management, exploratory innovation, exploitative innovation, real estate

I. INTRODUCTION

The capability to pursue exploratory and exploitative innovation simultaneously to create superior performance have become research attention in the past few years. It has been the center of attention of the Strategic Entrepreneurship study. Researches showed that small firms are competent in recognizing new business opportunities, but then are unable to build a strong foundation of competitive advantage. In contrast, large firms are effective at exploiting competitive advantage but are less effective in recognizing new entrepreneurial opportunities [1]. For the firm to be able to pursue exploratory & exploitative innovation simultaneously, a strong foundation of the strategic resource must be managed, bundled, and leveraged [2,3].

Resource Management is a framework to manage resources strategically. It consists of structuring resources, bundle resources to establish the capabilities, and leverage resources, and its distribution is targeted to facilitate behavior to pursue new opportunities and competitive advantages simultaneously [1,3-6].

Resource Management departing from Resource-Based View (R.B.V.), which answered the criticism that R.B.V. is far too fixated on the characteristics of a strategic resource, and forget how the process of the strategic resource is being built [7].

According to Ireland et al., there are three kinds of resources that are important in resource management, financial, human, and social resources [1]. Financial resources are tangible assets in the form of all sorts of shapes that can be used by companies to develop and execute their strategy, such as factories, buildings, and plants, etc. Human and social resources are intangible assets. Human resource is a collection of knowledge and skills of the entire labor force and is a critical aspect to the success of an organization. Social resources are a set of relationships between individuals and among individuals with the organization that facilitates the action [9]. Based on the relationships within the organization and outside units, social resources help companies gain access and control to other resources and absorb knowledge [10,11].

Resource management is a foundation for firms in managing their resources and capability. But to be able to generate superior performance, the firm’s resources must have leveraged through innovative action. There are two types of innovation, namely the exploratory innovations generated by the behavior of pursuing entrepreneurial opportunities, and exploitative innovation, that is behavior to pursue competitive advantages [4,12,13]. Exploratory innovation includes activities such as the search for a new consumer segment, the development of new markets or products, and new entrepreneurial opportunities. Meanwhile, exploitative innovation is activities such as increased efficiency, improve the quality of products and services. The success of the strategic entrepreneurship is the ability of companies to manage the balance of exploratory and exploitative innovation simultaneously, as well as the balanced allocation of resources to both activities [4].

The real estate industry plays an important role and contributes about 9.01% to national G.D.P., according to B.P.S. in 2011. With stable economic growth of 5 – 6% each year, it will bring to the real estate demand about 800,000 houses each year; meanwhile, the housing backlog supply had to reach 13.6 million. For the government can only supply 200,000 units/years, the rest was supposed to be fulfilled by private sectors. Although there is a huge opportunist in the housing demand, real estate was trailed by high uncertainty, such as long investment time, highly dependable to banks, changes in the economic condition, and customer buying power. All of these make real estate firms in a vulnerable condition. This has been proved in the era of the economic crisis of Indonesia in 1988-1990, 1998, and 2008. The property

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sector experienced a crisis, and a number of companies went bankrupt. In 1988-1990, the number of members of the Association of Indonesia Real Estate companies fell by almost 50%, from about 1700 to 900 members. Even though under these crisis conditions, a number of companies are able to survive and then rise up to become a market leader in the property industry. The ability of resource management and balanced allocation to exploratory and exploitative innovation simultaneously is what makes real estate companies able to survive and build sustainable competitive advantage.

II. THEORETICAL BACKGROUND AND HYPOTHESIS

The following sections will review the theoretical basis and the development of the hypothesis in this paper.

A. Resource Management, Exploratory and Exploitative Innovation

Resource management is a response to criticism of the research on R.B.V., which emphasizes the characteristics of the firm’s resources and less able to explain how the process of formation of a firm’s strategic resource [14]. In Strategic Entrepreneurship constructs, resource management will be able to create and increase value when directed to strategic action that increase value to the customer [1].

Strategic alliances are commonly happening in emerging markets, which are characterized by lack of resources [15]. Firm or partner will increase investment to the relationship if the perceived alliance will give the expected results [16]. The next decision is how to leverage bundle of capabilities within and between SBU. Effective leveraging process is the result of managerial decisions compared to the amount of competitors, and naturally is the result of creativity and entrepreneurial [14]. Tacit knowledge inherent in human resources is also critical in leveraging capability. The experience of human resources will influence the decision of leveraging the capabilities, particularly to exploit opportunities, build and sustain competitive advantage. Resources are recognized capable to encourage competitive action, and when the action was capable of leveraging these resources, then the performance of the firm will rise. Ndofor et al. proved that the firm’s resources have a positive influence on the firm’s performance, especially when resources are mediated by competitive actions [17].

Companies with more limited resources were able of defeating enterprise with abundant resources. What was accomplished by the I.B.M. and Apple is not located in the resources controlled, but rather to how these resources are managed and leveraged to create a competitive advantage [18]. Research shows that investment in the resource that different from the norms that exist in the industry will negatively affect the firm’s performance results, with the exception of the difference in investment is adjusted with resources leveraging strategy [19]. Alignment between investment and leveraging process will result in the creation of value and a competitive advantage for the firm [20].

In the real estate industry, the ability to find and acquire new land is a key capability that must be developed. New land with high strategic value will help companies achieve their goals effectively and efficiently. In addition, the company must be able to find segments and target consumers that fit with the location to be developed. The ability to access financial resources and create new ways of financing is also important to firms. The above entrepreneurial abilities are innovation activities that are explorative in nature.

H1: Resource Management positively affects exploratory innovation

The land alone does not guarantee the successful management of real estate companies. The collapse of real estate companies in times of crisis, proves that there are other resources that are important to real estate companies. Such as the ability to manage resources and company operations efficiently [21], orientation to consumers and improvement of product and service quality [22]. These are an exploitative innovative activity. In resource management, recruit human resources and form capabilities in harmony with the targets to be achieved. Establishing good relationships with banks and bundling with other resources will create the company’s competitive advantage.

H2: Resource Management positively affects exploitative innovation

B. Exploratory and Exploitative Innovation

Exploitation involves the efficient utilization of existing resources, and exploration implies the invention of new resources. Exploratory innovation has been associated with flexibility, decentralization, and loose cultures, while exploitative innovation has been related to efficiency, centralization, and tight cultures [4,23]. However, research in exploratory and exploitative innovation show diverse interpretation and different results. Auh and Menguc linked the performance results of exploratory and exploitative innovation to the effectiveness and efficiency of enterprise seen from the types of strategies used [24]. By using the strategy typology of Miles & Snow, the prospectors, and defender, Auh & Menguc found that exploratory innovation provides effective influence than exploitative innovation, while exploitative innovation effect the efficiency of firms compared to exploratory innovation of both strategy typology [24]. This means exploitative innovation will show performance results in the short term, while the exploratory innovation will exhibit performance results over a long term period.

Siggelkow and Rivkin, in their research on the process of exploratory innovation, did by the manager of lower levels, showed a negative influence on the performance, in which it’s allegedly for their interests and narrow minds of managers to pursue current interests, namely building competencies themselves [25]. While Bierly & Daly, in a study of small and medium manufacturing enterprises, found that exploitative innovation is better in predicting performance [26]. They also found that the exploratory Innovation show better results on a high-tech manufacturing company; on the contrary, for manufacturing industries with low technology, innovation exploitative work better in improving performance. They conclude, competition in low-technology industries is not driven by innovation leadership, but more by marketing, product quality, customer service, and production efficiency [26]. In relation to environmental conditions, the competitive environment but relatively stable, the exploitative innovation will have a positive impact, and otherwise in a dynamic environment, it will be more involved exploratory Innovation [27].
Exploratory innovation is focused on searching new opportunity, risk and experimentation to reach new markets and customers; therefore, the result is usually visible over the longer-term, give difficult challenges for the firm. Research on small and medium-sized manufacturing firms show that it takes more than four years to develop new products and technologies successfully, and over five years to earn profit from them [28]. Even though outputs of exploration, are critical to firm adaptation and survival [4,24].

Research and development (R&D), might increase risk, but it also can promote flexibility to adapt to market changes and generate better firm’s performance [29]. Firms that maintain strong R&D can benefit from economies of scale and scope [30], which can give a better position to the firms for future innovations. Joint ventures, alliances, and mergers or acquisitions also provide opportunities for exploration [31]. Acquisitions allow for the exchange of resources to help maintain strong capabilities [32]. Pharmaceutical firms, for example, thrive on this kind of arrangement, often relying on them to augment their drug development process. Alliances in the pharmaceutical industry also help to share the large-scale costs (estimated at $800 million to $1 billion). Given the characteristics of the pharmaceutical industry, these ventures can contribute to a firm’s competitive advantage.

In empirical studies on a diversification strategy, related diversification is found to lead to higher firm performance [33]. This type of diversification strategy enables firms to utilize and share their existing resources more effectively than unrelated diversification. So in the situation of incremental change, the exploitation of existing resources and capabilities seems to be appropriate.

In a research on the performance of human resources in professional services firms, it shows that human resources recruited for activities that focus on exploitative activities, i.e., current capabilities, show decrease in short-term performance but they show better performance than human resources recruited to handle explorative activities, such as R & D and new activities. Human resources recruited to handle explorative activities experience decreasing in short-term and long-term performance. This performance of human resources recruited in explorative activities would be better when combined with the senior human resources in the firms [34].

H3: Exploratory Innovation positively affects firm’s performance

H4: Exploitative Innovation positively affects firm’s performance

C. The Interaction of Exploratory and Exploitative Innovation and Firm’s Performance

Managing the balance of exploratory and exploitative innovation is not easy because of nature, and the result is somehow paradoxical and contradictory. Organizations are seeking a balance between the contradictory demands of short-term efficiency and effectiveness of long-term, but it requires a different operational, structural, and cultural mechanisms [4,35]. However, various studies show, balancing exploratory and exploitative innovation is key to achieving prosperity. Organizations can create borders of exploratory and exploitative innovation at a certain time and space so that exploratory innovation and exploitative innovation is not carried out simultaneously in the same domain or organization. In addition, knowing the context of this contradiction is a prerequisite in managing the balance. In an effective Strategic Entrepreneurship construct, exploitation, and exploration are the key sources of sustainable competitive advantage [28].

However, positive results from the interaction between exploratory and exploitative innovation indicate that organizations can run both those activities simultaneously, which is managing the balance between exploratory and exploitative innovation. Overall, the process of exploratory and exploitative innovation is believed to improve the performance of the firm [31].

He and Wong, in their study on manufacturing firms in Singapore and Malaysia during the period from 1999 to 2000, found that companies that implement strategies ambidexterity, that is the process of a relatively balanced between exploratory and exploitative innovation has a positive effect to the increase in sales, and imbalanced ambidexterity will negatively affect the increase in sales [13]. Janzen et al. found that the company will build ambidexterity of exploratory with exploitative to face a dynamic environment, and decentralized business units having a good social relation, will be able to build organizational ambidexterity (O.A.) [12].

Cegarra-Navarro & Dewhurst in a study of the S.M.E. company in optometry & telecommunication in Spain, using the concept of the continuous interaction of exploratory and exploitative innovation, or so-called ambidexterity contextual, found that the ambidexterity contextual positively affect the consumer resource (customer capital), that good relationship with consumers will bring in current revenue or in the future. Bodwell suggests that the interaction of exploratory and exploitative innovation affects financial performance and has a correlation with the internal environmental conditions (particularly decentralization) and external environmental conditions (dynamic environment) [27].

H5 : Exploratory, exploitative innovation and their interaction positively affects firm’s performance

H6 : The effect of resource management to firm’s performance, depend on exploratory, exploitative innovation and their interaction.

The research framework is shown in Figure 1.

Fig. 1. Research framework.

III. RESEARCH METHODS

The research was conducted on real estate firms in Indonesia. The respondents are the board of directors or managers of the firms. This study uses existing scales from literature, except for resource management that is incomplete. The questionnaire was developed with a six-point Likert scale.
ranging from (1) strongly disagree to (6) strongly agree [36]. Four latent variables are used in this theoretical model. One latent dependent variable is the firm’s performance, and three independent latent variables are resource management, exploratory innovation, and exploitative innovation.

The analysis in this study uses Eview ver.8 with the phases of the analysis as follows: first, conducting factor analysis to obtain the factors that make up each of the latent variables. The next step was to perform bivariate correlation analysis to examine the causal relationship between pairs of variables to test the hypothesis H1 s / d H4 [36]. Inferential analysis was used to investigate the causal or the up and down relationship among a set of variables related to hypothesis H5 - H6 testing.

IV. ANALYSIS AND RESULTS

Before conducting the analysis, a reliability and validity test was performed. A validity test was done with the analysis of the correlation between variables. It was measured by the results of the correlation between the measured variables, as was conducted in the factor analysis. The results of the analysis show Cronbach’s Alpha 0.981 (> 0.7); therefore, it’s concluded that the data meet the validity and reliability test. The next step was to carry out the bivariate correlation analysis after obtaining the factors that make up the variables. Summary results of the analysis show that data support the hypothesis H1 – H4 at the significance level α: 0.01. as shown in Table 1 below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Coef r &gt;0, 7</th>
<th>t-stat.</th>
<th>Prob p &gt;0</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Resource Management positively affects exploratory innovation</td>
<td>0.888</td>
<td>14.09</td>
<td>0.000</td>
<td>support</td>
</tr>
<tr>
<td>H2 Resource Management positively affects exploitative innovation</td>
<td>0.891</td>
<td>14.26</td>
<td>0.000</td>
<td>support</td>
</tr>
<tr>
<td>H3 Exploratory innovation positively affects firm’s performance</td>
<td>0.778</td>
<td>9.02</td>
<td>0.000</td>
<td>support</td>
</tr>
<tr>
<td>H4 Exploitative innovation positively affects firm’s performance</td>
<td>0.789</td>
<td>9.35</td>
<td>0.000</td>
<td>support</td>
</tr>
<tr>
<td>H5 Exploratory, exploitative innovation and their interaction positively affects firm’s performance</td>
<td>0.000</td>
<td></td>
<td></td>
<td>support</td>
</tr>
<tr>
<td>H6 The effect of resource management to firm’s performance, depend on exploratory, exploitative innovation and their interaction</td>
<td>0.000</td>
<td></td>
<td></td>
<td>support</td>
</tr>
</tbody>
</table>

V. DISCUSSION

The purpose of this study was to examine the practice of strategic entrepreneurship on real estate firms. The results showed that resource management positively affects exploratory innovation and exploitative and firm’s performance. These results support previous research on strategic entrepreneurship, stating the importance of performing resource management and directed to innovations that are exploratory and exploitative simultaneously will be creating added value to the company [1,4]. In addition to the above findings, some other findings related to the results of this research will be described in the following section.

First, in terms of a firm’s strategic resource development, aspects related to financing resources, i.e., access to banks/financial institutions as sources of financing, the capability to build a network with banks, and creating a corporate brand are considered as important resources. This is consistent with previous research that real estate firms are not solely dependent on the land but also other factors, such as developing the firm’s resources and competencies efficiently [21]. These results also support research confirming the capability of establishing access or relationship with banks as sources of financing, and corporate brand is an important resource to be developed by real estate firm [22,37].

Regarding the resource structuring process, especially the resource divestment, the results showed that the divestment of the firm’s resources, especially land resources, is not an option to be taken. Although the land is not able to generate profits to the company yet and somehow show uncertainty in return. This reinforces the theory about the importance of the land in the real estate industry; in this case, the land is a source of key raw materials and is a resource that cannot be renewed. Malpezzi and Wachter showed that scarcity of land supply became speculation because of demand in general, cause boom & bust in the real estate cycle [38].

The next finding was the positive effects of exploratory and exploitative innovation and their interaction with a firm’s performance. The results showed the importance of the balanced interaction of exploratory and exploitative innovation to create value for the firm. The balanced interaction between exploratory and exploitative innovation generates better firm’s performance is showed by 55% of the sample compared to firms that perform imbalanced interaction of exploratory and exploitative innovation (16%). These findings support previous research, which was showed that interaction of balance between exploratory and exploitative innovation improve the firm’s performance [13,24]. It also strengthens the theory that states the strategic entrepreneurship with resource management directed towards exploratory and exploitative innovation simultaneously will create added value to the company [1,4,39].

The efforts to find new ways of financing to consumers and market opportunities / new consumer is considered important in the exploratory innovation, while the improvement of the quality of products and services to consumers and efficiency on the improvement of work processes are important aspects in exploitative innovation. This finding is in line with the results of research on the importance of access to financial resources and efficiency in the work process as well as increasing customer service [21].

A. Implication

First, the implications of the theory on strategic entrepreneurship. This research provides a deeper meaning, especially in terms of resource management and its effect on exploratory and exploitative innovation. This study provides empirical evidence of the effect of resource management, which is affected by exploratory and exploitative innovation simultaneously will create an excellent performance. These also give implication to resource management, which is defined as the process of structuring, bundling, and leveraging the
firm’s resources. Resource management has evolved into an important theory in strategic management; however, measurement of resource management is still limited. This study complements these gaps.

This study demonstrates the importance of the decision of the firm resources and capabilities that are aligned to the leveraging action and with corresponding to industry context, will provide maximum results [3]. Zhang formulates the strategic resources and capabilities that need to be managed and leveraged by real estate firms [22]. In this research, the resources and capabilities include: access and capability in a relationship with sources of funds/banks, corporate reputation, improved the quality of products and customer service, process efficiency, adequacy of reserves of land, are important resources in the real estate industry.

The third implication regarding the interaction of exploratory and exploitative innovation and its effect on a firm’s performance. These interactions can be categorized as follows:

The balanced interaction, where exploratory and exploitative innovation is interacting in a balanced intensity, in this case, it might be high intensity or low intensity. Firms apply both exploratory and exploitative innovation and their interaction in a balanced manner. Firms that carry out this strategy called ambidexterity organization, where companies make efforts to seek new opportunities while improving the quality of production and other operational activities in creating a competitive advantage today. Firms with this strategy show better performances. Firms with the interaction of low exploratory or exploitative innovation will have difficulties, and might not be able to grow and survive in the long run.

The focus strategy. The intensity of exploitation is higher than exploratory and vice versa. Some companies put the effort more on exploitative innovation, such as continuous quality improvement, customer service orientation, etc. Focus on exploitative innovation and forgetting exploratory innovation will cause difficulty to the firm in the long run. It could threaten the viability of the firm because without new land resources mean the firm does not have a product to sell. On the contrary, some companies focus more on exploratory innovation, ie.: search for new land or project. Companies that focus on exploratory innovation would sacrifice the current competitive advantage. This can cause difficulties, particularly financial /cash flow difficulties, etc. This result support previous research that balanced ambidexterity increases performance, while the imbalance ambidexterity causes a decrease in performance [13,24].

B. Limitation and Future Research

This study has some limitations and suggestions for future research. First, this research was carried out using sectional data of the year 2015, where the condition of the property business was in a state of decline. Therefore this study does not yet explicitly capture the influences of these property cycles on inclining state. Future research is suggested to be conducted where the real estate is in the incline business cycle.

Suggestions for future research to be conducted in other industries that have similar conditions in real estate industry, such as manufacture firms, natural resources and mining firms. These firms are usually characterized by heavy investment in assets. Results of research on those firms might enable scholars on strategic entrepreneurship to draw a more comprehensive and general conclusion. Future research suggestions also might be conducted on firms in telco industry, which is a more dynamic competition environment, so it will give a complete picture of how the practice of strategic entrepreneurship.

VI. Conclusion

This research shows the importance of resource management, which is directed through strategic actions that affect a firm’s performance. In this case, the interaction of exploratory and exploitative innovation shows better results than the two actions carried out alone. This indicates that the concept of strategic entrepreneurship is essential for the firm in creating a sustainable competitive advantage.

REFERENCES


