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NGHIÊN CỨU VỀ TÍNH THUẬN CẢ HAI TAY TRONG ĐỔI MỚI CỦA DOANH NGHIỆP VỪA VÀ NHỎ TẠI VIỆT NAM

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Tóm tắt

Nghiên cứu được thực hiện nhằm làm rõ hiện trạng đổi mới mang tính thuận cả hai tay của các doanh nghiệp vừa và nhỏ (SMEs) tại Việt Nam, thể hiện qua hai khía cạnh: đổi mới khám phá và đổi mới khai phá. Nhóm nghiên cứu đã tiến hành thu thập dữ liệu sơ cấp từ nhân viên đang làm việc tại các doanh nghiệp vừa và nhỏ của Việt Nam và sử dụng phương pháp thống kê mô tả để phân tích. Kết quả nghiên cứu đã chỉ ra phần lớn nhân viên cho rằng doanh nghiệp của họ đang theo đuổi sự đổi mới mang tính thuận cả hai tay thông qua việc đánh giá mức độ tham gia vào các hoạt động đổi mới khám phá và đổi mới khai phá trên ngưỡng trung bình. Bên cạnh đó, các doanh nghiệp vừa và nhỏ tại Việt Nam có xu hướng tập trung nhiều hơn vào các đổi mới khai phá gắn liền với việc tối ưu hóa năng lực hiện có, hơn là đổi mới khám phá nhằm tìm ra những thế mạnh mới phục vụ cho sự phát triển lâu dài của doanh nghiệp. Từ những kết quả trên, nhóm nghiên cứu đưa ra những ý kiến thảo luận và đề xuất định hướng nghiên cứu trong tương lai.

Từ khóa: tính thuận cả hai tay trong đổi mới, đổi mới khám phá, đổi mới khai phá, doanh nghiệp vừa và nhỏ, thống kê mô tả

RESEARCH ON INNOVATION AMBIDEXTERITY OF SMALL AND MEDIUM-SIZED ENTERPRISES (SMES) IN VIETNAM

Abstract

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The research was conducted to clarify the current state of innovation ambidexterity of small and medium-sized enterprises (SMEs) in Vietnam, expressed through two dimensions which are explorative innovation and exploitative innovation. The authors collected primary data from employees working at SMEs in Vietnam and used descriptive statistical methods to analyze the survey results. The findings indicate that the majority of employees consider their firms to pursue innovation ambidexterity as the extent to which they participate in explorative and exploitative practices are above average. In addition, the results of this study also demonstrate the tendency of small and medium-sized firms in Vietnam to pay more attention to exploitative innovation activities which frequently link with the implementation and optimization of existing competencies, rather than explorative innovation practices relating to the discovery of new capabilities that can help them achieve long-term development. At the end of the study, the authors draw several discussions and suggest directions for future research about innovation ambidexterity in Vietnamese SMEs.

Keywords: innovation ambidexterity, explorative innovation, exploitative innovation, SMEs, descriptive statistics

1. Introduction

Small and medium-sized enterprises (SMEs), compared to larger counterparts, face more pressures such as limited managerial experience, resource-constrained on human and financial basis (Forbes & Milliken, 1999). To be able to survive and develop in a fierce business environment, innovation is one of the outstanding measures to help enhance the performance of SMEs (Le et al., 2023).

Innovation ambidexterity is defined as the capability to simultaneously pursue explorative and exploitative innovation (Tushman and O'Reilly, 1996). Maintaining the balance between these two options is crucial for the development and even the survival of organizations (March, 1991). However, improving existing offerings with explorative activities and uncovering new market opportunities with exploitative practices at the same time can be a paradoxical challenge as they require inconsistent and different resources (Jansen et al., 2008). Although innovation ambidexterity is receiving increasing attention, research on this topic about SMEs in Vietnam is still limited. Therefore, in this study, we collect primary data in order to specify the current state of innovation ambidexterity amongst SMEs in Vietnam, as reflected by two dimensions: explorative innovation and exploitative innovation.

Besides the introduction, our research contains 5 other parts as follows: Section 2 reviews previous studies about innovation ambidexterity. Section 3 shows the data collection method and measurement of variables. Section 4 displays research results as the base for the discussion of section 5. Finally, Section 6 summarizes the study, indicating limitations and suggesting future research directions.

2. Literature review

2.1. *Innovation ambidexterity*

Tushman and O'Reilly (1996) highlighted that it is not only evolutionary change which firms need to have incremental adaptation to deal with but also revolutionary change that requires discontinuous innovation. However, it is a success paradox for firms to overcome when they desire to apply these two types of innovation simultaneously as they have to face conflicting and interrelated demands in their operations. Hence, ambidexterity has been defined as the capability of firms to pursue incremental and discontinuous innovation that makes changes in structures, processes and cultures (Tushman and O'Reilly, 1996).

Under the theoretical lens of innovation management, several researchers have pointed out that ambidexterity is the ability of successfully combining two conflicting modes of innovation at the same time which are exploration and exploitation to achieve superior performance (Jansen et al., 2008; Andriopoulos and Lewis, 2009).

2.2. Roles of innovation ambidexterity

Innovation ambidexterity is believed to have a direct impact on firm performance (Tushman and O'Reilly, 1996; Gibson and Birkinshaw, 2004). Ambidextrous innovation with an interaction between exploration and exploitation can positively influence business performance of SMEs in the service sector (McDermott and Prajogo, 2012). Results displayed that firms with high levels of both exploration and exploitation perform better than those who just pursue individual practice. In contrast, a meta-analysis study conducted by Wenke et al. (2020) argued the positive impact of ambidexterity on SMEs performance is significantly less than that of exploration or exploitation only due to limited resources.

Besides, Lin et al. (2013) demonstrated that innovation ambidexterity mediates the relationship between learning capability and business performance regarding the resource-based theory. Through the facilitation of innovation ambidexterity, learning capability can indirectly affect firms' revenues, profits and productivity growth compared to their rivals. Using quantitative analysis methods, an empirical study of Wiratmadja et al., (2020) also indicated the partial mediating role of innovation ambidexterity in the relation between dynamic environment and firm performance. The internal organizational structure in an environmental dynamism context can leverage ambidexterity abilities thus results in business performance gains.

Furthermore, in light of the resource-based view and the rationed perspective, Tsai and Wang (2017) investigated the moderating role of ambidextrous innovation on the link between service innovation and firm performance. Empirical results indicated that service-oriented firms which apply explorative and exploitative approaches are likely to gain more advantages from service innovation to achieve better value creation. On the other hand, regarding the research of Zhao et al., (2020), the combined dimension of ambidexterity is proved to have a positive moderating effect on the impacts of green supplier integration on financial and environmental performance of firms whereas that of balanced ambidexterity is insignificant.

2.3. Dimensions of innovation ambidexterity

Several studies have mentioned innovation ambidexterity with two main dimensions: explorative innovation and exploitative innovation. Explorative innovation refers to things such as risk taking, experimentation, discovery with a view to creating new competencies.

Meanwhile, exploitative innovation concentrates on refinement, efficiency and implementation in order to utilize and develop what the organization already has (March, 1991).

Previous research of Rosing et al. (2011) highlighted that the complicated and non-linear innovation processes result in the need of organizations to constantly shift from exploitation to exploitation and vice versa. Trade-off happens when explorative innovation requires long-term efforts for new ideas to have diffuse effects while exploitative one needs resources to precisely increase the efficiency of existing competencies (March, 1991).

In the context of technological innovation, He and Wong (2004) examined how exploration and exploitation can jointly affect firm performance. By analyzing the data collected from over 200 manufacturing firms in Singapore and Malaysia, the study showed that the interaction between explorative and exploitative activities can increase the sales growth rate while the relative imbalance of these two dimensions brings about the opposite result.

Very low levels of both explorative and exploitative innovation are not likely to leverage the firm's performance (He and Wong, 2004). In line with this idea, Gibson and Birkinshaw (2004) emphasized the benefits of maintaining high levels of balance between explorative and exploitative activities. The authors indicated that having a flexible structure can help organizations in supporting explorative innovation while maintaining the efficiency required for their exploitative activities.

From the standpoint of ambidextrous leadership for innovation, literature review conducted by Rosing et al. (2011) unpacked two types of leader behavior that are aligned with exploration and exploitation. Whereas "opening leader behavior" with practices such as motivating experimental changes and independent thinking is related to explorative actions, "closing leader behavior" can help foster the exploitative innovation through providing clear guidelines or taking corrective action in order to reduce the variance in subordinates' performance.

Additionally, based on the strategic management perspective, Cao et al. (2009) proposed the conceptualization of organizational ambidexterity with two distinct but related dimensions, which are "balanced dimension of ambidexterity" (BD) and "combined dimension of ambidexterity" (CD). BD is denoted as managing trade-offs between exploration and exploitation while CD refers to the combination of both taking advantage of existing competencies and finding new opportunities. At SMEs level, Chang et al. (2011) argued that BD plays the partial mediating role in the relationship between organizational, environmental forces and firm performance. This study also pointed out that, in order to maintain a close balance of exploration and exploitation thus enhancing firm performance, SMEs tend to internalize the pressures from the external environment. In addition, another research by Peng et al. (2019) indicated that incorporating balanced and combined dimension ambidexterity would be beneficial for high-tech firms as it helps generate higher performance.

In this research, we would select the construct of innovation ambidexterity conceptualized by Tushman and O'Reilly, (1996) which includes two dimensions: exploration and exploitation.

3. Methodology

For the study, primary data was collected by using a structured questionnaire distributed to 108 respondents, with 73 valid answers, accounting for approximately 67.59% validity. The questionnaire has 10 items divided into 4 parts, which are respectively related to each variable that have been used in this study, starting with demographic variables, then explorative innovation and exploitative innovation.

Before sending the survey, the authors determined the minimum sample size to ensure sample size requirements. According to research by Bentler and Chou (1987), with 10 observed variables in our study, the minimum sample size must be 50 (10x5) to get reliable results.

The survey subjects that the authors target are employees currently working at small and medium-sized enterprises (SMEs) in Vietnam. Survey forms are distributed to survey subjects via an online platform. The survey is conducted in the form of a structured questionnaire with objective, independent assessment. The answers of one subject do not affect the answers of the other subject and the information and answers of the survey taker are guaranteed to be recorded correctly and confidentially.

All items used to measure constructs are framed around 7-point Likert scales. Respondents were asked to evaluate the extent to which their firms had incorporated explorative and exploitative innovation practices (1-very low; 7-very high). Measures for implementing the constructs were adapted from previous research of Chen et al. (2018).

The measurement of variables in our research is demonstrated in Table 1.

Table 1: Variables and measurement

Variable	Item	Meaning	Reference
Explorative innovation (ERI)	ERI1	Acquire manufacturing technologies and skills entirely new to the firm	Chen et al. (2018)
	ERI2	Learn product development skills and processes entirely new to the industry	
	ERI3	Acquire entirely new managerial and organizational skills that are important for innovation	
	ERI4	Learn totally new skills in funding new technology and training R&D personnel	
	ERI5	Strengthen innovation skills in areas where it has no prior experience	

Exploitative innovation (ETI)	ETI1	Upgrade current knowledge for familiar products	Chen et al. (2018)
	ETI2	Invest in exploiting mature technologies that improve the productivity of current innovation operations	
	ETI3	Enhance abilities in searching for solutions to customer problems that are near to existing solutions	
	ETI4	Upgrade skills in product development processes in which the firm already possesses rich experience	
	ETI5	Strengthen the knowledge and skills to improve the efficiency of existing innovation activities	

Source: Adapted from Chen et al. (2018)

4. Results

4.1. Descriptive statistics of the sample

4.1.1. Gender

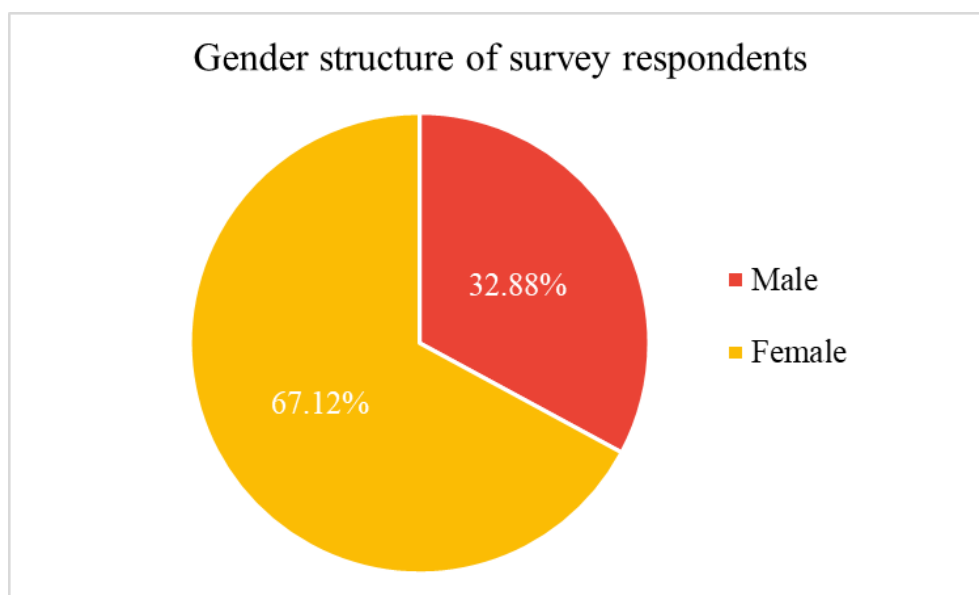


Figure 1: Gender structure of survey respondents

Source: Survey results of the authors

Among 73 valid respondents, there were 24 male respondents, which accounted for 32.88% of total surveyees and the remaining 49 female respondents, which constituted 67.12%. This difference in gender distribution could provide us with more diverse and accurate responses to the survey.

4.1.2. Age

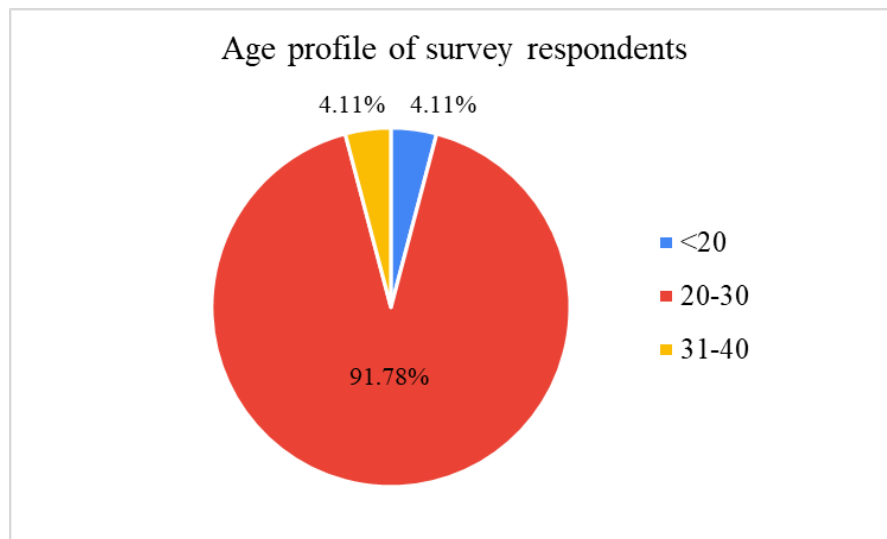


Figure 2: Age profile of survey respondents

Source: Survey results of the authors

The majority of respondents aged from 20 to 30 years old, which constitutes 91.78% of the total respondents and followed by them in 31-40 years old and in less than 20 years old, making up 4.11% each. The large number of surveyees in this labor age credit the responses to exact perspectives from employees and managers.

4.1.3. Education

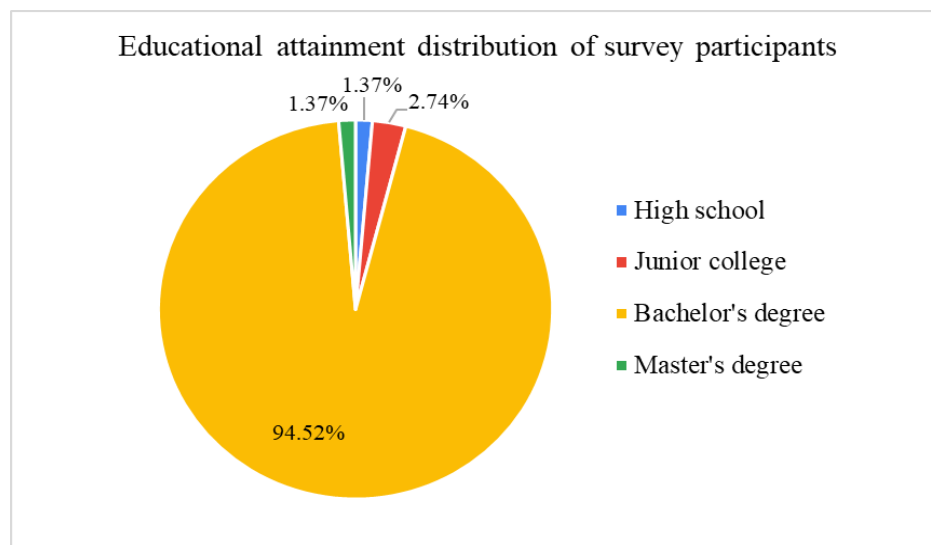


Figure 3: Educational attainment distribution of survey participants

Source: Survey results of the authors

Among the 73 respondents, the greatest number of respondents was from the bachelor's degree with a percentage of 94.52, then came with the junior college degree, accounting for 2.74% of the respondents. The amount of surveyeeyes who complete high school education and who gain master's degree account for 1.37% each. The number differentiates and diversifies the level of education and types of SMEs.

4.1.4. Firm size

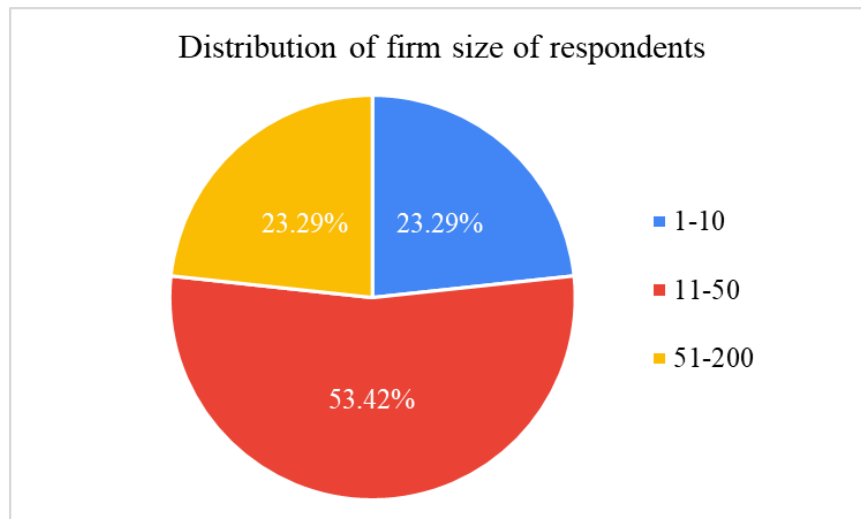


Figure 4: Distribution of firm size of respondents

Source: Survey results of the authors

The number indicates the portion of firms with “from 11 to 50” employees constitute the largest, which is 53.42% for 39 firms, and followed by firms with “from 1 to 10” employees and “more than 50 to 200” employees which each accounted for 23.29% equally.

4.1.5. Industry of operation

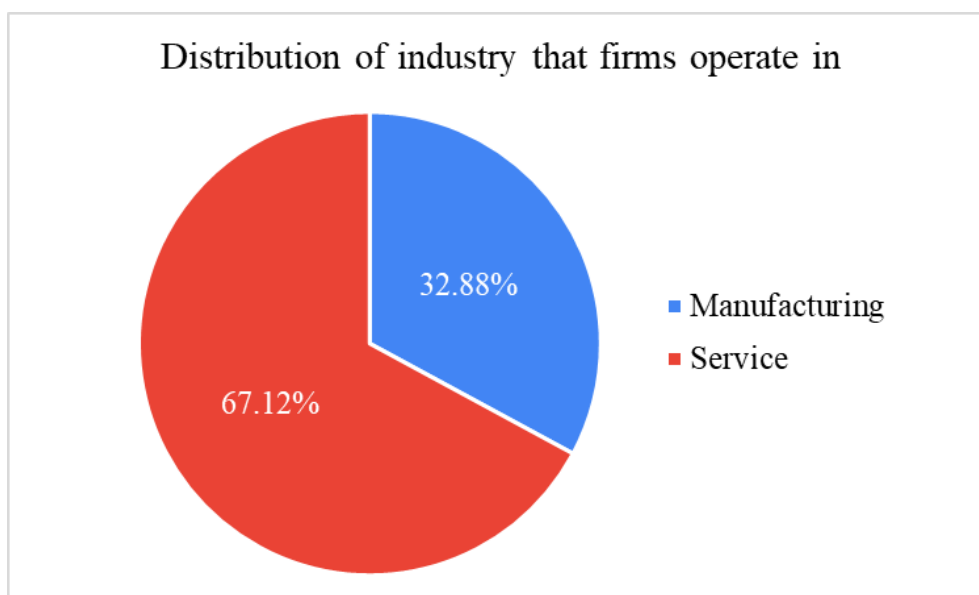


Figure 5: Distribution of industry that firms operate in

Source: Survey results of the authors

A wide distribution of industries can be seen among the respondents. Overall, 24 respondent firms (32.88%) operated in manufacturing industries while 49 respondent firms (67.12%) operated in service industries.

4.2. Descriptive statistics of the scale

Descriptive statistics of the scale in our study are shown in Table 2.

Table 2: Descriptive statistics of the scale

Item	N	Min	Max	Mode	Mean	Std. Dev
ERI - Explorative innovation						
ERI1	73	1	7	5	4.23	1.20
ERI2	73	1	7	5	4.21	1.37
ERI3	73	2	7	5	4.33	1.37
ERI4	73	1	7	5	4.23	1.42
ERI5	73	2	7	5	4.58	1.45
ETI - Exploitative innovation						
ETI1	73	1	7	4	4.56	1.55
ETI2	73	1	7	5	4.56	1.35
ETI3	73	2	7	6	4.77	1.50
ETI4	73	2	7	5	4.95	1.41
ETI5	73	2	7	6	4.82	1.51

Source: Based on STATA analysis results

With the mean scores ranging from 4.21 to 4.95, both Explorative innovation (ERI) and Exploitative innovation (ETI) groups of items have relatively high average ratings. Moreover, the mode of almost all items are equal or greater than 5, except for ETI1 which scores 4. Thus, the results indicate a generally positive perception among respondents about the extent to which

their enterprises are engaged in exploration and exploitation practices. However, the variation is quite large with standard deviations all greater than 1, demonstrating a significant variance in opinions among respondents.

Notably, the item with the highest mean score is ETI4, focusing on enhancing skills in product development processes where the firms already possess rich experience, with a mean score of approximately 4.95 and a standard deviation of 1.41. In terms of exploitative innovation, the numbers also generally indicate the firms' priority over the knowledge, abilities of human involved and the processes. "Exploited mature technologies" (ETI2) and "upgraded knowledge for familiar products" (ETI1) also attract attention, albeit with lower rates, reflected by lower mean score (both at 4.56) and relatively high standard deviations (1.35 and 1.55 respectively), showing how varied firms respond to the innovation topic.

Conversely, ERI2, which pertains to acquiring entirely new product development skills and processes within the industry, received the lowest mean score of 4.21, with a standard deviation of 1.37. Regarding explorative innovation, while highest attention is given to "strengthened innovation skills in areas with no prior experience", firms are more hesitant to update in terms of "technologies" and "processes".

Comparing the statistics of explorative and exploitative innovation (mean scores), it could also be noted from the results that SMEs in Vietnam show a tendency to prioritize exploitative innovation more than explorative ones. Moreover, the item with the highest standard deviation of approximately 1.55 is ETI1 - upgrading current knowledge for familiar products, which reflects large differences in employees' answers regarding this particular aspect.

5. Discussion

Specializing in Vietnamese SMEs, after analyzing, the data and results illustrate that Vietnamese SMEs pay attention and invest in both explorative and exploitative dimensions of innovation, which reflects the ambidexterity in their operation. However, under the context of agribusiness, the study of Minh and Hjortsø (2015) raised an opposing view that instead of performing innovation ambidexterity, SMEs in Vietnam just concentrate on exploiting existing competencies which helps them to improve short-term profitability. The lack of explorative practices for innovation which hinders the promotion of technology transfer as well as long-term development of SMEs is attributed to the inadequate and uncertain support mechanisms of the responsible public agencies.

Additionally, according to our research, Vietnamese SMEs concern non-stop innovations and at the same time, build up and prepare for long-term visions; albeit with a lower willingness for risk-taking to achieve explorative changes than to continuously make exploitative innovation. Factors given most attention by targeted enterprises are "knowledge" and "processes" in terms of exploitation; while regarding exploration, it shows that small enterprises are more willing to uplift skills in disciplines that they have no experience before, rather than acquire entirely new "technologies" and product development "processes". There are numerous justifications for this phenomenon, as in fact, SMEs often face more challenges due to limited resources, shortage of experience, making them more susceptible when making

big investments for innovation. The findings from a large number of prior studies related to innovation ambidexterity depict the SMEs' simultaneous pursuit of explorative and exploitative shapes to be more difficult than big companies'. According to Cao et al. (2009), whose research testing on China high-tech companies, resource-constraint companies derive more benefits from trading off instead of investing to meet both incremental and radical needs, while the opposite conclusion applies to bigger corporations. In numerous SMEs, the lack of clarity in position specialization and divide, along with resource-constraint scenarios, foster the preference to trade off between two dimensions, rather than trying to achieve both goals.

6. Conclusion

Through analyzing the survey results of 73 employees from various profile backgrounds in Vietnamese SMEs, our study indicates that the majority of employees perceive their enterprises as positively engaging in innovation ambidexterity practices by assessing their levels of engagement in explorative and exploitative innovation above the average level. However, significant disparities persist among the survey responses, which may reflect the diversity in the application of innovation ambidexterity depending on the characteristics of the enterprises individually as well as the subjective perceptions of the survey respondents. Additionally, the survey data also show that SMEs in Vietnam tend to focus more on exploitative innovation, which often links to utilization of existing resources and continuous changes to adapt the fast pace of market demand; than explorative innovation, characterized by higher uncertainty but longer vision and benefits in the future.

The study acknowledges certain limitations that the primary data collected was still a limited sample size, which may not accurately represent all SMEs in Vietnam. Hence, future research could consider using methods with larger samples and tracking how variables change overtime, helping to improve variable quality. In addition, the authors focused on data research through structured questionnaires, so it was necessary to consider from the subjective perspective of the survey subjects. Future studies could use additional survey methods from the surveyor's perspective such as group interviews and in-depth interviews. Finally, the current study primarily focused on descriptive statistics, providing a preliminary overview of the data. However, the ambidextrous pursuit may vary across sectors and disciplines, whose differences are not made clear through the research (for example, the difference between manufacturing and service firms in facilitating ambidexterity is not mentioned and reflected in the result). This ambiguity has hindered the comparison process between the study's result to another. It is suggested that more comprehensive and in-depth findings can be accumulated if this limitation is resolved.

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