Analysis of the Influence of Strategic Orientation on Entrepreneurial Performance Based on SPSS Statistical Method: Opportunity-Resource Integration as Intermediary

Zhenying Xu
School of Business Administration, Zhejiang Gongshang University, Hangzhou, China

Keywords: Entrepreneurial Orientation, Market Orientation, Opportunity-Resource Integration, Entrepreneurial Performance, SPSS Statistical Method.

Abstract: Start-ups need to take reasonable strategic orientation to deal with the turbulent and complex environment and fierce market competition, so as to obtain resources to break through the dilemma of resource constraints. Entrepreneurial orientation and market orientation play a key role in entrepreneurial performance, but there is a lack of research based on the perspective of opportunity-resource integration. Therefore, based on dynamic capability theory and opportunity-resource integration theory, this paper constructs a 'orientation-process-performance' model to explore the mechanism of the interaction between entrepreneurial orientation and market orientation affecting the entrepreneurial performance of start-ups through opportunity-resource integration behavior.

1 INTRODUCTION

At present, China is in a new stage of economic transformation and social development. The state attaches great importance to industrial upgrading and independent innovation. Small and medium-sized enterprises have become the backbone of promoting economic development. However, the failure rate of entrepreneurship is still very high. In the process of carrying out independent innovation activities, start-ups are faced with the problem of how to improve entrepreneurial performance through innovation. Studies have shown that strategic orientation will have an impact on entrepreneurial performance, especially entrepreneurial orientation and market orientation as the key to independent innovation of new ventures. Entrepreneurial orientation and market orientation are not mutually exclusive.

They affect the competitiveness and performance of enterprises from different perspectives. There are more and more studies on the effective combination of the two. Foreign scholars have realized the importance of combining entrepreneurial orientation and market orientation earlier. Both have their limitations, and the combination can bring higher value. Some studies have pointed out that the interaction between entrepreneurial orientation and market orientation has a positive effect on corporate performance, but there is a lack of research on the mechanism of entrepreneurial performance of start-ups.

Most of the research on entrepreneurial behavior is based on the opportunity perspective or resource perspective. However, the development and utilization of opportunities and resources are two mutually influential behaviors of enterprises in the entrepreneurial process, and the two are closely related. For SMEs, continuous innovation and meeting customer needs are the key to improving entrepreneurial performance. Enterprises are driven by both technology and market, and their entrepreneurial process is driven by both opportunities and resources (Ge, 2020). In summary, based on dynamic capability theory and opportunity-resource integration theory, this paper constructs a 'orientation-process-performance' model to explore the mechanism by which the interaction between entrepreneurial orientation and market orientation affects the entrepreneurial performance of start-ups through opportunity-resource integration behavior.
2 THEORETICAL ANALYSIS AND RESEARCH HYPOTHESIS

2.1 Interaction Between Entrepreneurial Orientation and Market Orientation and Opportunity-Resource Integration

There have been many studies on the impact of the interaction between entrepreneurial orientation and market orientation on corporate performance. However, there is a lack of research on the interaction between the two for the opportunity-resource integration entrepreneurial process. Opportunity-resource integration entrepreneurial process is divided into opportunity-resource internal integration and opportunity-resource external integration. According to the opportunity-resource integration theory, opportunities and resources are closely related and indispensable in the process of enterprise entrepreneurship. The dynamic balance between the two has a profound impact on the development of start-ups. Entrepreneurial success depends on the high level of internal and external integration.

Entrepreneurial orientation reflects the attitude of enterprises to cope with changes and risks, and is a key strategic measure for start-ups to survive in a fierce competitive environment (Hu, 2012). Enterprises with entrepreneurial orientation have higher innovation awareness than other enterprises. Most of these enterprises pursue innovation, actively develop new products and technologies, dare to face risks, and actively influence and change the surrounding environment. In a turbulent market environment, entrepreneurial firms grasp new opportunities by identifying and utilizing external scarce resources to achieve external opportunity-resource integration, and integrate and utilize internal resources to create new opportunities and achieve internal opportunity-resource integration. Market orientation is reflected in the strategic behavior of enterprises to obtain customer and market information. In the stage of information generation, enterprises can identify potential changes in the market, discover and utilize new external opportunities and resources, and realize the external integration of opportunities and resources. In the stage of information dissemination and response, enterprises obtain new opportunities by deploying existing internal resources, and realize the internal integration of opportunity-resources. Making full use of the role of market orientation is reflected in the process of identifying market opportunities, which helps to enhance the dynamic capabilities of enterprises (Zahra, 2008), thus promoting the entrepreneurial process of opportunity-resource integration.

The study of Kumar et al. (2011) (Kumar, 2011) shows that the interaction of multiple strategic orientations is the key to the success of start-ups, and a single orientation is difficult to maintain long-term advantages. This shows that the interaction effect of entrepreneurial orientation and market orientation is better than single orientation on the opportunity-resource integration process. In summary, this paper proposes the following hypothesis:

H1: The interaction between entrepreneurial orientation and market orientation has a positive impact on opportunity-resource integration.

2.2 The Interaction Between Entrepreneurial Orientation and Market Orientation and Entrepreneurial Performance

The interaction between entrepreneurial orientation and market orientation plays different roles in the development of start-ups and affects entrepreneurial performance from different aspects. Zahra (2008) believes that entrepreneurial orientation and market orientation reflect the complementarity of organizational capabilities, and the emphasis on market orientation will strengthen the relationship between entrepreneurial orientation and financial performance. Ahmad (2016) (Ahmadi, 2016) conducted an empirical study on new technology enterprises. The results show that the combination of entrepreneurial orientation and market orientation can produce greater utility and improve product performance. The combination of market orientation and entrepreneurial orientation plays a positive role in the overall development of enterprises, reflected in product innovation, profitability and customer response (González-Benito Ó, 2009).

Entrepreneurial orientation is closely related to the behavior of enterprises to seize market opportunities. Innovation, initiative and risk-taking are the three main aspects of entrepreneurial orientation. Highly entrepreneurial-oriented companies often pursue progress, break through the old framework constraints to adapt to the new environment, and base themselves on long-term future development (Zhu, 2018). However, too much emphasis on innovation will bring high uncertainty and risk to enterprises. Sun (2019) (Sun, 2019) believed that enterprises need to combine market orientation and balance the potential risks in entrepreneurship by paying close attention to changes in the market environment. Market orientation reflects the attitude of enterprises to external factors such as customers and government (Kohli,
which is mainly reflected in the behavior of enterprises to generate, transmit and respond to market information. Enterprises that attach importance to market orientation are more sensitive to potential risks in market operation, and the pursuit of certainty can reduce the uncertainty risk generated by entrepreneurial orientation. The comprehensive consideration of the two is conducive to improving entrepreneurial performance.

According to the dynamic capability theory, startups need to rationally allocate and utilize various internal and external resources to cope with the rapidly changing market to ensure their dominant position. Market orientation can improve enterprises' understanding of the market, clarify the direction of enterprises' efforts, reduce enterprises' excessive risk-taking behavior, and reduce the possibility of risks caused by wrong decisions. Firms that adhere to entrepreneurial orientation actively identify potential opportunities in the environment and promote business change through innovative behavior can avoid the lag and structural inertia of market orientation. The interaction between the two is conducive to improving entrepreneurial performance. In summary, this paper proposes the following hypothesis:

H2: The interaction between entrepreneurial orientation and market orientation has a positive impact on entrepreneurial performance.

2.3 Opportunity-Resource Integration and Entrepreneurial Performance

Entrepreneurship is a complex process. Start-ups want to gain a foothold in the market, need to interact with the internal and external environment, and adapt to environmental changes by constantly learning to actively adjust their behavior (Day, 2011). Enterprises want to gain a competitive advantage in a competitive business environment to win long-term development, is inseparable from the efficient development of opportunities and resources. Some scholars explain the relationship between the two from the perspective of opportunity recognition. They believe that the identification of opportunities is the beginning of entrepreneurship, enterprises in the process of entrepreneurship demand for resources. When they obtain resources, they will screen them and explore new opportunities (Cai, 2011; Eckhardt, 2003). The organization's internal resources flow with the opportunity to selectively attract external resources, especially some scarce resources (Ardichvili, 2003). Therefore, the identification of opportunities and resource identification of mutual coordination, together contributed to new business opportunities for product development or service upgrade laid the foundation. Some scholars have studied from the perspective of the relationship between opportunity utilization and resources, and concluded that opportunity utilization requires effective resource matching. Hills et al. (1995) (Hills, 1995) consider the use of opportunities and resources as a process of matching needs and resources between unnoticed opportunities and underutilized resources. Opportunity utilization and resource allocation at the same time, in order to realize the opportunity, the integration of existing resources, while the development of new resources, promote the development of opportunities, and ultimately the output of new products and new services, enhance entrepreneurial performance. In Gaoyang et al. (2019) (Gao, 2019), through research, it is concluded that opportunity-resource integration will have a positive effect on corporate entrepreneurial performance. The internal integration and external integration of opportunity-resource are not independent of each other. The two are complementary and both are conducive to improving corporate performance. Li et al. (2021) (Li, 2021) conducted an empirical study on 274 new ventures, and concluded that the interaction of opportunity-resources internal integration and opportunity-resources external integration has a positive effect on entrepreneurial performance. The flexible allocation of resources is conducive to opportunity development, enhancing the competitiveness of enterprises and bringing higher entrepreneurial performance (Hitt, 2001). Previous studies have confirmed that there is a positive correlation between opportunity-resource integration and corporate performance. Systematically balancing opportunities and resources is conducive to start-ups to cope with risks in entrepreneurship and improve entrepreneurial performance more comprehensively. When the enterprise implements the opportunity-resource integration strategy, the internal and external integration reaches a high level. The two can promote each other and complement each other, and work together to improve the entrepreneurial performance of the enterprise. In summary, this paper proposes the following hypothesis:

H3: Opportunity-resource integration has a positive impact on entrepreneurial performance.

2.4 The Mediating Role of Opportunity-Resource Integration

There are many studies on the impact of the interaction between entrepreneurial orientation and market orientation on corporate performance, but there are
few studies on the mediating role of opportunity-resource integration. The strategic orientation of enterprise capability will not automatically bring better performance, but through the enterprise internal values and beliefs cause behavior change and then affect the performance of enterprises (Zhou, 2005). Sarkar et al. (2016) (Sarkar, 2016) found through research that strategic orientation is a necessary condition for long-term success of enterprises, but it is not a sufficient condition, and it needs to be combined with other behaviors or capabilities to play a role. Bosso (2018) (Boso, 2018) believes that entrepreneurial orientation and market orientation do not have a direct impact on corporate performance alone or together. They must first recombine corporate resources and processes to improve performance. Shane (2000) (Shane, 2000) studied the relationship between opportunities and resources, and found that the development of enterprises depends on the acquisition and utilization of opportunities and resources, and the continuous integration of resources is a necessary condition for mining new opportunities. Facing the complex and changeable market environment, start-ups need to do their best to integrate opportunity-resources to achieve higher entrepreneurial performance. Therefore, the opportunity-resource integration theory will affect the interaction between entrepreneurial orientation and market orientation on entrepreneurial performance. Therefore, this paper proposes the following hypothesis:

H4: Opportunity-resource integration plays an intermediary role between entrepreneurial orientation, market orientation interaction and entrepreneurial performance.

In summary, the mechanism between the interaction of entrepreneurial orientation and market orientation and the entrepreneurial performance of start-ups is basically determined, in which opportunity-resource integration is a mediating variable. The research model of this paper is as follows:

![Theoretical model of the study](image)

Figure 1: Theoretical model of the study.

3 RESEARCH DESIGN

3.1 Sample and Data

Affected by the local epidemic situation, this study mainly collects data from the respondents by sending WeChat links and filling in questionnaires. The research objects are start-ups with a history of no more than 8 years. A total of 235 questionnaires were distributed in this study. After filtering and screening, 215 valid questionnaires were obtained, with an effective recovery rate of 91%. The personnel of the surveyed enterprises are mainly concentrated in the Yangtze River Delta region of China with relatively high entrepreneurial activity.

3.2 Variable Measurement

The questionnaire on the impact of entrepreneurial orientation, market orientation and opportunity-resource integration on entrepreneurial performance of start-ups has 28 items, including entrepreneurial orientation, market orientation, opportunity-resource integration and entrepreneurial performance. The questionnaire uses the Likert 5-level scale, and the respondents choose to score from 1 to 5 according to...
the actual situation. Among them, 1 means very disagree and 5 means very agree. The design of various items is based on literature research and pre-analysis data, which has been modified and improved. The entrepreneurial orientation scale adopts the three-dimensional scale of entrepreneurial orientation of Covin and Slevin (1989) (Covin, 1989) and Li Xueling et al. (2010) (Li, 2010), which is measured from three aspects: innovation, initiative and risk-taking, with a total of 9 items. The market orientation scale refers to the market-oriented behavior scale of Jaworski and Kohli (1993) (Jaworski, 1993) and Zhou et al. (2008) (Zhou, 2008). It is measured from three aspects: the generation, dissemination and response of market information. There are 7 items. According to the research scale of Gao Yang et al. (2019), the degree of opportunity-resource integration is measured from two aspects of internal and external integration, with a total of 6 items. In addition, based on the scale of Spanjer and Van (2017) (Spanjer, 2017), the entrepreneurial performance of start-ups is measured from the two aspects of profitability and growth, with a total of 6 items. In terms of control variables, it is considered that enterprise age and enterprise size are the influencing factors of entrepreneurial performance of start-ups, as variables to control organizational scenarios, in order to obtain stable research conclusions.

3.3 Reliability and Validity Analysis

This study used SPSS25.0 software to measure reliability and validity. This paper tests the reliability of each scale by Cronbach's $\alpha$ coefficient test. As shown in Table 1, the $\alpha$ values of each variable and its dimensions are greater than 0.7, indicating that the stability and internal consistency of the scale are good. In terms of validity, many scholars have tested the content validity of the scale for many times, so the measurement scales used in this paper are relatively mature, so the content validity of the scale is good. In view of the structural validity, this paper uses the factor analysis method to test. Through the calculation of SPSS25.0 data analysis software, the KMO values of the measurement scale are all greater than 0.7. The Bartlett spherical test sig values of the three variables were all equal to 0.000, indicating that the significance level was reached. Thus, the study sample data is suitable for factor analysis, the variable measured items have common factors and can be extracted. In this paper, the principal component method is used to extract the common factors of the pre-test data variables by setting the eigenvalue range of the extracted factors to be greater than 1, and the factors are orthogonally rotated by the maximum variance method. Then by observing the rotated factor loading matrix, the number of common factors extracted from each scale is consistent with the division of each variable dimension in this study. Therefore, the structural validity of each scale is also good. The specific values of the reliability and validity test are shown in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach's $\alpha$</th>
<th>Sig value</th>
<th>KMO value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial orientation</td>
<td>0.841</td>
<td>0.000</td>
<td>0.904</td>
</tr>
<tr>
<td>Market orientation</td>
<td>0.815</td>
<td>0.000</td>
<td>0.857</td>
</tr>
<tr>
<td>Opportunity-resource integration</td>
<td>0.770</td>
<td>0.000</td>
<td>0.843</td>
</tr>
<tr>
<td>Entrepreneurial performance</td>
<td>0.752</td>
<td>0.000</td>
<td>0.758</td>
</tr>
</tbody>
</table>

4 EMPIRICAL ANALYSIS

4.1 Main Effect Test

In this study, the hierarchical regression analysis method is used to test the research hypothesis, and the regression model shown in Table 2 is obtained. The specific analysis is as follows: model 1 is the regression model of control variables on opportunity-resource integration, and model 2 is the interaction between entrepreneurial orientation and market orientation on opportunity-resource integration. The results show that the regression coefficient of entrepreneurial orientation*market orientation to opportunity-resource integration is 0.620 ($p<0.01$), hypothesis 1 is verified. Model 3 is the regression model of control
variables on entrepreneurial performance. Model 4 adds the impact of entrepreneurial orientation*market orientation on entrepreneurial performance on the basis of model 3. The results show that the interaction between entrepreneurial orientation and market orientation has a positive impact on entrepreneurial performance ($\beta=0.590$, $p<0.01$), and hypothesis 2 is established. The results of Model 5 show that opportunity-resource integration has a significant impact on entrepreneurial performance of new ventures ($\beta=0.609$, $p<0.01$), and Hypothesis 3 is verified.

4.2 Mediation Effect Test

By comparing the data of Model 4-6 and combining the analysis results of Model 2, it can be seen that the preconditions for the establishment of the mediating effect have been met. According to model 6, when the independent variables and mediating variables are added to the regression equation, the interaction between entrepreneurial orientation and market orientation is still positively correlated with the innovation performance of new ventures ($\beta=0.347$, $p<0.01$), and the opportunity-resource integration positively affects the entrepreneurial performance of new ventures ($\beta=0.392$, $p<0.01$). This shows that opportunity-resource integration plays a partial mediating role between the interaction of entrepreneurial orientation and market orientation and the entrepreneurial performance of new ventures. According to the above analysis hypothesis 4 is verified.

Table 2. Regression model and results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Opportunity-resource integration</th>
<th>Entrepreneurial performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>0.075</td>
<td>0.034</td>
</tr>
<tr>
<td>Enterprise scale</td>
<td>0.093</td>
<td>0.049</td>
</tr>
<tr>
<td>EO*MO</td>
<td>0.620$^{**}$</td>
<td>0.590$^{**}$</td>
</tr>
<tr>
<td>Opportunity-resource integration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R$^2$</td>
<td>0.020</td>
<td>0.399</td>
</tr>
<tr>
<td>Adj.R$^2$</td>
<td>0.010</td>
<td>0.391</td>
</tr>
<tr>
<td>F-value</td>
<td>2.122</td>
<td>46.781$^{***}$</td>
</tr>
</tbody>
</table>

Note: $^*$p<0.05, $^{**}$p<0.01, $^{***}$p<0.001.

5 CONCLUSIONS

5.1 Research Conclusions

Due to the large number of small and medium-sized enterprises, they have become the main driving force of our country’s economic development. However, due to the new weakness, new enterprises are constrained in terms of resources, capabilities and so on. Therefore, new ventures need to pay close attention to market changes and adopt a variety of strategic orientations to efficiently develop and utilize opportunities and resources, so as to improve entrepreneurial performance. This paper reveals the mechanism of the interaction between entrepreneurial orientation and market orientation on entrepreneurial performance of start-ups, and explores the mediating role of opportunity-resource integration. Through empirical analysis, the following conclusions are drawn: First, the interaction between entrepreneurial orientation and market orientation has a positive and significant impact on entrepreneurial performance and opportunity-resource integration of start-ups. Therefore, new enterprises need to combine the two strategic orientations to promote the efficient development of opportunities and resources, and give full play to the complementary role of the two on business performance. Secondly, opportunity-resource integration has a significant positive impact on entrepreneurial performance of start-ups. It shows that in the context of resource constraints, new enterprises need to coordinate and integrate opportunities and resources, cobble together internal resources to create new opportunities, identify external resources to find new opportunities, and bring higher performance to enterprises through high integration of internal and external. Third, opportunity-resource integration plays an intermediary role between the interaction of entrepreneurial orientation and market orientation and entrepreneurial performance of start-ups. This conclusion shows that, on the one hand, start-ups enhance their...
awareness of the environment and promote the development and utilization of opportunities and resources by combining entrepreneurial orientation and market orientation. On the other hand, the improvement of opportunity-resource integration of start-ups helps to improve entrepreneurial performance.

5.2 Research Significance

From the perspective of academic research, firstly, this paper enriches the research on opportunity-resource integration. Most of the existing studies on opportunities and resources are based on a single perspective of opportunities or resources (Fan, 2021). The existing research on opportunity-resource integration is mainly based on concept and dimension discussion, and lacks in-depth research on opportunity-resource integration entrepreneurial behavior. Secondly, it enriches the existing theoretical system of entrepreneurship research. By sorting out the existing literature and analyzing the actual situation of start-ups, this paper studies the impact of strategic orientation interaction on start-up entrepreneurial performance through opportunity-resource integration by constructing the theoretical model of “orientation-performance” of start-ups.

From a practical point of view, through the study of the impact of the interaction between entrepreneurial orientation and market orientation on the entrepreneurial performance of start-ups, start-ups are guided to make strategic choices. Secondly, through the study of the mediating effect of opportunity-resource integration, this paper explores the mechanism of the interaction between entrepreneurial orientation and market orientation on the entrepreneurial performance of start-ups, guides start-ups to pay attention to the characteristics of dual channels of opportunities and resources, and coordinates and integrates the two, so as to win competitive advantages and achieve high-quality development of enterprises.

5.3 Research Limitations

Although this study reveals the mechanism of the interaction between entrepreneurial orientation and market orientation, opportunity-resource integration on the relationship between entrepreneurial performance of start-ups, the proposition is novel and innovative, but there are still some shortcomings.

First, the nature of data is limited. This paper is a study of cross-sectional data, and the sample size is relatively small, there are some defects in the support of causality. If longitudinal large sample data can be obtained, it can provide more powerful empirical support for the interaction between entrepreneurial orientation and market orientation, the relationship between opportunity-resource integration and entrepreneurial performance of start-ups; second, the limitations of research variables. This paper only focuses on enterprise-level factors such as strategic orientation and opportunity-resource integration behavior, and does not examine the impact of external environmental dynamic factors such as market volatility, competition intensity, and technological changes. Therefore, the determinants of entrepreneurial performance cannot be completely excluded.

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