

Entrepreneurship leadership, organizational learning and market orientation: Basis for technology-based small and medium enterprises' competitiveness framework

Fu, Gaoyuan ✉

Graduate School, Lyceum of the Philippines University - Batangas, Philippines



ISSN: 2243-7770
Online ISSN: 2243-7789

Received: 5 July 2024

Revised: 6 August 2024

Accepted: 8 August 2024

OPEN ACCESS

Available Online: 15 August 2024

DOI: 10.5861/ijrsm.2024.1219

Abstract

This study investigated the entrepreneurial leadership, organizational learning, and market orientation of small and medium-sized technology enterprises (SMEs) in China, to develop a framework for enhancing the competitiveness of these SMEs. A self-made questionnaire was used as the data collection tool. The participants of the study were 384 managers from technology SMEs in Zhengzhou, Henan Province. Weighted Mean and Rank were used to describe the performance of entrepreneurial leadership in terms of innovation ability, decision-making style, and incentive mechanisms; describe the performance of organizational learning in terms of learning mechanisms and structures, learning motivations, and learning evaluation and feedback; and assess market orientation from three aspects: market-oriented organizational culture, market-oriented ability to obtain market information, and market-oriented customer relationship management. Spearman Rank (Spearman rho) was used to test significant relationships as part of the non-parametric tests. All analyses were conducted using SPSS version 28. The study revealed that respondents agreed on the entrepreneurial leadership in terms of innovation ability, decision-making style, and incentive mechanisms. Respondents moderately agreed on the organizational learning in terms of learning mechanisms and structures, learning motivations, and learning evaluation and feedback mechanisms. With regard to market-oriented organizational culture, market-oriented ability to obtain market information, and market-oriented customer relationship management, respondents showed moderate agreement on the market orientation of their organization. Significant high correlations were found between entrepreneurial leadership, organizational learning, and market orientation. A competitiveness framework for small and medium-sized technology enterprises (SMEs) was developed.

Keywords: entrepreneurship leadership, organizational learning, market orientation, competitiveness framework

Entrepreneurship leadership, organizational learning and market orientation: Basis for technology-based small and medium enterprises' competitiveness framework

1. Introduction

Dynamic changes in consumer consumption structure and logic in the market create excess profits and market opportunities within industries, providing excellent opportunities and incentives for new enterprises to enter the market. Consequently, most new entrants struggle to compete fiercely with existing firms. In the context of the internet economy and new media environment, the intense competition among enterprises has become transparent. Companies need to adjust their existing business concepts and strategic orientations to adapt to changes in the consumption environment. For enterprises, the chances of success during development are typically small. In any country, fewer than 5% of companies survive beyond five years after establishment. The probability of entrepreneurial success is very low, and entrepreneurial failure is common. These failures prompt reflection: why can some new ventures, even in such volatile external environments, effectively cope with various temporal and spatial challenges, continuously driving strategic innovation and achieving steady development, while others fail?

In today's era, a company's success is largely influenced by its leaders. The growth and development of new enterprises are closely related to the behavior and characteristics of entrepreneurial leaders. In uncertain environments, the development of newly established firms is significantly influenced by the behavior traits of entrepreneurial leadership, which are crucial resources and capabilities needed during development. In China, the major factor impeding the effectiveness of enterprise innovation is not a lack of funds, talent, or ideas but the organizational structure and leadership behavior (Bao et al., 2023). In newly established enterprises, leaders play a critical role in driving the company forward. Notable examples include Ren Zhengfei of Huawei, Lei Jun of Xiaomi, and Wang Tao of DJI, whose leadership significantly contributed to their companies' establishment and growth. Ren Zhengfei once said he felt a constant sense of crisis, fearing failure. This strong crisis awareness led Huawei to prioritize technological research and innovation, eventually becoming one of the world's leading patent holders. Similarly, innovation enabled Xiaomi to become China's fastest-growing tech company, joining the Global 500 within just eight years of its founding. Innovation in products and marketing was key to Xiaomi's success, with Lei Jun's leadership playing a crucial role. However, many tech entrepreneurs face challenges transitioning from technical experts to business leaders. They must shift from focusing on personal technical growth to considering overall company strategy, from doing what they excel at and enjoy to tackling necessary but challenging tasks, from prioritizing technological advancement to addressing user needs, and from seeking personal achievement to ensuring employee satisfaction. The transition from technical expert to entrepreneur involves numerous challenges.

Since the COVID-19 crisis, new companies face a harsher survival environment compared to established firms. According to the National Bureau of Statistics, China's GDP growth rate declined by 12.8% year-on-year in the first quarter of 2020, marking the first quarterly negative growth since 1992. The pandemic severely impacted high-tech startups. A February 2020 report from CEIBS Business Review, based on a survey of 995 SMEs by Tsinghua and Peking Universities, found that 34% of these companies could only sustain operations for one month with their existing cash, 33.1% for two months, and 17.91% for three months. Thus, 85.01% of the surveyed companies could only sustain operations for up to three months, while less than 10% could sustain beyond six months. This highlights the lack of effective leadership capabilities in Chinese startups to handle sudden crises and uncertain risks. In an ever-changing and highly unpredictable environment, leading a company to sustained development is a primary focus for leaders. Entrepreneurial leadership, characterized by an entrepreneurial mindset, has garnered increasing academic attention. Entrepreneurial leadership is critically important for the success of small and medium-sized enterprises (SMEs). Entrepreneurial leadership

encompasses not only decision-making and managerial abilities but also innovative thinking and a sharp awareness of new opportunities. However, further research is needed to explore how entrepreneurial leadership manifests and operates in different cultural and economic environments.

In the era of the knowledge explosion, organizational learning is a dynamic process that helps businesses enhance their overall capabilities by continuously accumulating knowledge, experience, and skills. Recent research highlights the crucial role of organizational learning in enabling enterprises to adapt to rapidly changing market environments. Despite this, further empirical research is necessary to understand how to effectively implement organizational learning and the specific impacts of different learning types (such as single-loop and double-loop learning) on organizational performance. In today's rapidly changing market landscape, effective market orientation refers to an enterprise's ability to systematically gather and analyze market information, understand customer needs, and make corresponding strategic adjustments and decisions. Market orientation involves not only market research but also internal coordination and response mechanisms within the enterprise. However, current research predominantly focuses on large enterprises, necessitating more empirical evidence on how small and medium-sized enterprises can effectively implement market orientation and its specific roles in diverse market environments.

Entrepreneurial leadership, organizational learning, and market orientation mutually influence and reinforce each other. Despite extensive research on entrepreneurial leadership, organizational learning, and market orientation, there are still research gaps. For instance, there is a lack of systematic empirical research on how these variables manifest and interact in different industries and market contexts. Moreover, effectively integrating these three factors to form a comprehensive competitive framework remains a crucial area for further exploration. Conducting research on the impact of entrepreneurial leadership, organizational learning, and market orientation on the competitive framework of SMEs aims to address these gaps. It provides a systematic theoretical and empirical foundation to help SMEs enhance their competitiveness and sustainable development in fiercely competitive market environments. By exploring the mechanisms of interaction among these three factors and identifying best practices, specific guidance and strategies can be developed to enhance SMEs' innovation capabilities and market responsiveness, thereby achieving long-term stability and growth objectives.

Objectives of the Study - The study aimed to examine the corporate values, ethical leadership and social responsibility practices in mature companies in China. Specifically, it described the corporate values in terms of economic values, social, moral, spiritual, professional, aesthetic and physical; assessed the ethical leadership as to care, critique and justice; determined the social responsibility practices with reference to economic practices, social and environmental; tested the significant relationship among corporate values, ethical leadership and social responsibility practices and developed a strategic plan to enhance ethical leadership and corporate values of the mature companies.

2. Methods

Research Design - This study employed a descriptive research approach. According to Rahi (2019), descriptive research is a style of research that gathers relevant facts, data, and information while providing a detailed depiction of situations, individuals, or events. Descriptive research also aims to document and examine emerging sensations that are imperceptible to objective observers (Polit & Beck, 2020). In this study, the descriptive research method was used to characterize the recent experiences of employees in mature SMEs in China that embrace practices of entrepreneurial leadership, organizational learning, and market orientation. This descriptive research style proved effective in swiftly gathering responses from respondents and identifying relationships between the study's variables.

Participants of the Study - This study targeted technology-based small and medium-sized enterprises (SMEs) that have been established for over three years and possess entrepreneurial leadership or certain organizational learning capabilities, such as agricultural equipment and mining equipment manufacturing

companies. Compared to newly established enterprises, those that have been operating for many years generally have higher credibility and reputation in the market. Participants from these enterprises are more likely to share their experiences and viewpoints, providing more in-depth information, thereby making the survey data richer and more reliable. The questionnaire survey mainly utilized the social resources of teachers, classmates, and the author to conduct interviews and surveys with grassroots personnel or management personnel of 20 qualified enterprises in Zhengzhou, Henan Province, China. Among these, there were 7 mechanical equipment manufacturing companies, 8 new material development companies, and 5 mining equipment manufacturing companies. A total of 400 questionnaires were distributed, and 384 valid questionnaires were collected, aiming for comprehensive coverage to effectively avoid research bias that could be caused by other differing factors.

Data Gathering Instrument - The questionnaire involved in this study is mainly formulated from the selected dimensions of three variables, so it is primarily divided into three modules. Each dimension of each variable is formulated as a measure of a question that can be answered. The measurement method adopts the 4-level Likert scale: 1 stands for "Totally disagree"; 2 stands for "Disagree"; 3 stands for "Agree"; 4 stands for "Totally agree". The researcher used relevant research articles, books, and published dissertations to construct the questionnaire and for the interpretation and analysis of data. The first module, "Entrepreneurial Leadership," with a Cronbach Alpha of 0.899, includes three dimensions: Innovation Ability, Decision-making Style, and Incentive Mechanism. The second module, "Organizational Learning," with a Cronbach Alpha of 0.959, includes three dimensions: Learning Mechanism and Structure, Learning Motivation, and Learning Evaluation and Feedback. The third module, "Market Orientation," with a Cronbach Alpha of 0.95, includes three dimensions: Market-Oriented Organizational Structure, Market-Oriented Ability to Obtain Market Information, and Market-Oriented Customer Relationship Management. Based on result, the Entrepreneurial Leadership, Organizational Learning, and Market Orientation Instrument has an Excellent consistency as exhibited by the Cronbach Alpha value of (.975). This was validated by the Good results from Entrepreneurial Leadership (.899), and Excellent result from Organizational Learning (.959) and Market Orientation (.950) which shows that the instrument at hand passed the reliability index test. Thus, the researcher can now proceed to the actual survey using the aforementioned instrument.

Data Gathering Procedure - The purpose of this study was to explore the relationship between entrepreneurial leadership, organizational learning, market orientation, and corporate competitive framework. Since these variables do not have industry and regional particularities in the broader context of China, and due to research time and budget constraints, this study collected samples in Henan Province, China. In this study, data were obtained through the distribution of questionnaires. First, through a literature review, the research background and status quo of corporate values, organizational support, and corporate social responsibility behaviors were summarized, identifying real-world problems and issues existing in previous studies. The researcher used relevant research articles, books, and published dissertations to construct the questionnaire and for the interpretation and analysis of data. Upon approval of the research topic, the researcher asked experts to validate the content of the questionnaire. Subsequently, 20 valid questionnaires were distributed and collected. The questionnaire underwent pilot testing to determine the consistency of the indicators of the three variables. The data was used to test its reliability. After passing the reliability test, the data collection process was conducted through mail, online, and face-to-face methods. The researcher sought permission from the heads of organizations so she could collect data from their employees.

Ethical Considerations - Ethics were considered throughout the research process to ensure that all data was only used for research purposes, preserving the objectivity and integrity of the study. Respondents were not asked for their identities while they completed the questionnaires, ensuring their confidentiality and anonymity. The researcher also ensured that respondents filled out the surveys voluntarily. Most importantly, it was ensured that no study participants were harmed or endangered, with their safety and security always being the top priority.

Data Analysis - In this study, the respective indicators of the different dimensions of the three core variables

have been designed and coded to achieve the digitized structuring of statistical data. Module evaluation is conducted through pre- processing and statistical transformation for preliminary statistical analysis. Weighted Mean and Rank were used to determine the entrepreneurial leadership as to innovation ability, decision-making style, and incentive mechanisms, describe the organizational learning as to Learning mechanism and structure, learning motivation, learning evaluation and feedback, evaluate market orientation from three aspects: market-oriented organizational culture, market-oriented ability to obtain market information, and market-oriented customer relationship management. The result of Shapiro-Wilk test showed that p-values of all variables were less than 0.05 which means that the data set was not normally distributed. Therefore, Spearman rho was used as part of the non-parametric tests to determine the significant relationship. All analyses were performed using SPSS version 28.

3. Results and discussion

Table 1

Summary Table on Entrepreneurial Leadership

Key Result Areas	Composite Mean	VI	Rank
Innovation Ability	3.03	Agree	2
Decision-making Style	3.05	Agree	1
Incentive Mechanisms	2.99	Agree	3
Grand Composite Mean	3.02	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Table 1 provides a summary of entrepreneurial leadership covering key areas such as innovation capability, decision-making style, and incentive mechanisms. The overall composite average is 3.02, indicating that respondents generally perceive SMEs positively across these leadership dimensions. The indicator with the highest weighted mean is "Decision-making style" (composite average of 3.05, ranked 1st). This suggests that SME managers demonstrate notable performance in decision-making, characterized by maintaining calm under pressure, adapting quickly, and making decisions aligned with business interests. The high ranking of this dimension underscores its crucial role in driving organizational effectiveness and flexibility. Ranked 2nd is "Innovation capability" with a composite average of 3.03. Ranked 3rd is "Incentive mechanisms" (composite average of 2.99), indicating a slightly lower perception compared to the first two dimensions. This suggests that while SMEs commonly use incentive mechanisms to enhance employee motivation, there may be room for improvement in transparency, fairness, and long-term sustainability. The dimension with the lowest composite average in the table is "Incentive mechanisms" (composite average of 2.99, ranked 3rd). This lower ranking may stem from challenges in maintaining fairness and transparency, which are critical for employee trust and motivation. Additionally, concerns about the sustainability of long-term financial incentives may influence respondents' perceptions, reflecting the need for strategic financial planning to support sustainable incentive practices.

Table 2

Summary Table on Organizational Learning

Key Result Areas	Composite Mean	VI	Rank
Learning Mechanism and Structure	3.08	Agree	1
Learning Motivation	3.04	Agree	2
Learning Evaluation and Feedback	2.99	Agree	3
Grand Composite Mean	3.04	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Table 2 shows the summary on organizational learning, which mainly covers the key result areas of organizational learning, including learning mechanisms and structures, learning motivation, and learning evaluation and feedback. The overall composite average score is 3.04, indicating that respondents generally agree on the importance of these key result areas for organizational learning. This result suggests that SMEs'

practices and investments in these areas are highly recognized, highlighting their significance in enhancing the overall learning capability and performance of the enterprises.

Among all the indicators, the weighted average for learning mechanisms and structures is the highest at 3.08, ranking first. This indicates that respondents believe that investments and practices in learning mechanisms and structures are the most important for enterprises. Learning mechanisms and structures include training and development programs provided by the enterprise, opportunities for knowledge sharing, resources that support innovation and experimentation, and more. The reason for this result may be that robust learning mechanisms and structures can systematically enhance employees' skills and knowledge, promoting innovation and development within the enterprise. Related research supports this view, such as Garvin et. al. (2008), who point out that strong learning mechanisms and structures are key characteristics of high-performing organizations, helping enterprises maintain a competitive edge. Therefore, SMEs should focus on establishing and improving learning mechanisms and structures to ensure continuous learning and growth for their employees.

The second-ranked indicator is learning motivation, with a weighted average of 3.04. Learning motivation involves employees' interest and effort in acquiring new knowledge and skills, including participating in training courses, completing learning tasks, and persisting when faced with challenges. High learning motivation can stimulate employees to proactively learn and apply new knowledge, thereby enhancing both individual and organizational performance. Related research indicates that employees' learning motivation is closely linked to organizational culture, managerial support, and incentive mechanisms. For instance, Deci et. al.,(2012) emphasize that autonomous motivation significantly impacts employees' learning and job performance. Therefore, SMEs should enhance employees' learning motivation by creating a supportive learning environment and effective incentive mechanisms.

Learning evaluation and feedback have the lowest weighted average, at 2.99, ranking third. Despite the relatively low score in this area, it still indicates that respondents agree on its importance. Learning evaluation and feedback involve the use of assessment tools, the collection and analysis of learning outcome data, and providing timely and constructive feedback on employee performance. The lower score in this area might be due to the complexity and resource-intensive nature of the evaluation and feedback process, leading to insufficient practice and investment by companies. Related research also points out that effective learning evaluation and feedback play a crucial role in enhancing employee learning outcomes and organizational performance.

Table 3

Summary Table on Market Orientation

Key Result Areas	Composite Mean	VI	Rank
Market-oriented Organizational Culture	2.99	Agree	2
Market-oriented Ability to Obtain Market Information	2.97	Agree	3
Market-oriented Customer Relationship Management	3.07	Agree	1
Grand Composite Mean	3.01	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Table 3 presents the summary of market orientation, with an overall weighted average of 3.01, indicating that respondents generally agree with the performance of SMEs in terms of market orientation. This result suggests that SMEs have a certain level of practice in cultivating market-oriented culture, obtaining market information, and managing customer relationships, but there is still room for improvement.

Firstly, the indicator for Market-oriented Customer Relationship Management has the highest weighted average of 3.07, ranking first. This shows that SMEs perform well in customer relationship management, effectively using customer relationship management (CRM) systems and technological means to enhance customer experience. Specifically, the employee suggestion program, which encourages employees to submit ideas for improving customer experience, scored the highest at 3.15, indicating that internal innovation and participation mechanisms are crucial for enhancing customer experience. Related research supports this view.

For instance, Bao et. al.,(2023) point out that effective use of technology and active employee participation can significantly improve customer relationship management, thereby increasing customer satisfaction and loyalty. Therefore, SMEs should continue to optimize their CRM systems and encourage employee participation to continuously improve customer service.

Secondly, the indicator for Market-oriented Organizational Culture ranks second with an overall average of 2.99. This suggests that SMEs have a foundation in cultivating a market-oriented culture but still need to strengthen it further. Specifically, the weighted average for having a dedicated customer success team is 3.06, indicating that specialized teams can effectively enhance customer satisfaction and loyalty. Research shows that market-oriented organizational culture has a significant impact on business performance. For example, Yao et. al. (2019) note that a market-oriented culture can enhance a company's market responsiveness, thereby improving business performance. Therefore, SMEs should focus on cultivating a market-oriented organizational culture by establishing dedicated customer teams and using CRM systems to enhance customer service levels.

Market-oriented ability to obtain market information has an overall average of 2.97, ranking third. This suggests that SMEs still have room for improvement in obtaining and analyzing market information. Specifically, the indicator for the timeliness and accuracy of market information scored 3.01, indicating that respondents believe timely and accurate information is crucial for market decisions. Related research supports this view. For example, Tian et al. (2023) point out that timely and accurate market information can significantly enhance a company's market responsiveness and decision quality. Therefore, SMEs should establish systematic processes for collecting and analyzing market information to ensure the timeliness and accuracy of information, thereby improving the effectiveness of market decisions.

The lowest weighted averages are found in Market-oriented Ability to Obtain Market Information and Market-oriented Organizational Culture, both at 2.95 and 2.99 respectively. Although these areas scored relatively low, respondents still agreed on their importance. This indicates that SMEs need to put more effort into these aspects. Specifically, systematic processes for collecting and analyzing market information and cultivating a market-oriented culture are areas that SMEs need to focus on. Related research shows that improvements in these areas have a significant impact on business competitiveness. For example, Shao et. al.,(2022) note that market-oriented culture and effective information management are crucial for the long-term success of businesses. Therefore, SMEs should invest more in these two aspects to comprehensively enhance their market orientation capabilities.

Table 4

Relationship Between Entrepreneurial Leadership and Organizational Learning

Variables	rho	p-value	Interpretation
Innovation Ability			
Learning Mechanism and Structure	0.872**	< .001	Highly Significant
Learning Motivation	0.872**	< .001	Highly Significant
Learning Evaluation and Feedback	0.872**	< .001	Highly Significant
Decision-making Style			
Learning Mechanism and Structure	0.849**	< .001	Highly Significant
Learning Motivation	0.859**	< .001	Highly Significant
Learning Evaluation and Feedback	0.873**	< .001	Highly Significant
Incentive Mechanisms			
Learning Mechanism and Structure	0.874**	< .001	Highly Significant
Learning Motivation	0.887**	< .001	Highly Significant
Learning Evaluation and Feedback	0.878**	< .001	Highly Significant

** . Correlation is significant at the 0.01 level

Table 4 analyzes the relationship between entrepreneurial leadership and organizational learning. It shows the correlation coefficients (rho) and significance levels (p-values) between three key entrepreneurial leadership variables (innovation capability, decision-making style, and incentive mechanisms) and three dimensions of organizational learning (learning mechanisms and structures, learning motivation, learning evaluation and

feedback). All relationships show highly significant positive correlations with p-values less than 0.001, indicating strong positive relationships between these variables.

First is on the relationship between innovation capability and the dimensions of organizational learning. The correlation coefficients between innovation capability and learning mechanisms and structures, learning motivation, and learning evaluation and feedback are all 0.872, with significance levels of <0.001 . This indicates a highly significant positive correlation. This means that in SMEs, the stronger the innovation capability, the stronger the aspects of organizational learning. The importance of this relationship lies in the fact that innovation capability is a critical factor for maintaining competitiveness and adapting to market changes. Previous research by Zhang et al. (2022) pointed out that the positive correlation between innovation capability and organizational learning is key to the sustainable development of enterprises. Innovation capability can promote the generation and dissemination of knowledge within the organization, thereby enhancing the adaptability and competitiveness of the enterprise.

Next is the relationship between decision-making style and the dimensions of organizational learning. The correlation coefficients between decision-making style and learning mechanisms and structures ($\rho=0.849$), learning motivation ($\rho=0.859$), and learning evaluation and feedback ($\rho=0.873$) also show highly significant positive correlations. This indicates that the more flexible and open the decision-making style, the stronger the aspects of organizational learning. Previous research by Yin et al. (2021) pointed out that participatory decision-making style can enhance employees' learning motivation and the effectiveness of organizational learning because this style encourages employees to participate in the decision-making process, thereby increasing their motivation and engagement in learning.

Finally, the relationship between incentive mechanisms and the dimensions of organizational learning also shows highly significant positive correlations. The correlations between incentive mechanisms and learning mechanisms and structures ($\rho=0.874$), learning motivation ($\rho=0.887$), and learning evaluation and feedback ($\rho=0.878$) are all highly significant. The effective implementation of incentive mechanisms can significantly enhance employees' learning motivation and the effectiveness of organizational learning. Related research shows that effective incentive mechanisms can stimulate employees' intrinsic learning motivation, thereby improving the overall effect of organizational learning (Cheng et al., 2024).

In summary, the data from Table 4 clearly shows the strong positive correlations between entrepreneurial leadership variables (innovation capability, decision-making style, and incentive mechanisms) and dimensions of organizational learning (learning mechanisms and structures, learning motivation, learning evaluation and feedback). The high significance of these relationships suggests that strengthening entrepreneurial leadership can significantly enhance the effectiveness of organizational learning, thereby improving the overall competitiveness and adaptability of enterprises. Therefore, in their management practices, SMEs should focus on and strengthen various aspects of entrepreneurial leadership, especially the development of innovation capability, participatory decision-making styles, and incentive mechanisms. This will not only help enhance employees' learning motivation and the effectiveness of organizational learning but also improve the enterprise's innovation capability and market competitiveness. Future research could further explore the causal relationships between these variables and how these relationships change in different contexts (such as different industries or market environments) to provide more comprehensive and specific management recommendations.

Table 5 shows the relationships between three entrepreneurial leadership variables (innovation capability, decision-making style, and incentive mechanisms) and three dimensions of market orientation (market-oriented organizational culture, market information acquisition capability, and market-oriented customer relationship management). All relationships exhibit highly significant positive correlations, with p-values less than 0.001, indicating strong positive relationships between these variables. The relationship between innovation capability and the dimensions of market orientation. The correlation coefficients between innovation capability and market-oriented organizational culture ($\rho=0.860$), market information acquisition capability ($\rho=0.866$), and

market-oriented customer relationship management ($\rho=0.889$) all show highly significant positive correlations. This indicates that the stronger the innovation capability, the stronger the aspects of market orientation. Previous research by Zhou et. al. (2024) pointed out that innovation capability can enhance a company's market orientation because innovation enables the company to better meet customer needs, quickly respond to market changes, and improve market competitiveness. Innovation capability keeps the company flexible and adaptive in the market, thus enhancing customer satisfaction and loyalty.

Table 5

Relationship Between Entrepreneurial Leadership and Market Orientation

Variables	rho	p-value	Interpretation
Innovation Ability			
Market-oriented Organizational Culture	0.860**	< .001	Highly Significant
Market-oriented Ability to Obtain Market Information	0.866**	< .001	Highly Significant
Market-oriented Customer Relationship Management	0.889**	< .001	Highly Significant
Decision-making Style			
Market-oriented Organizational Culture	0.853**	< .001	Highly Significant
Market-oriented Ability to Obtain Market Information	0.867**	< .001	Highly Significant
Market-oriented Customer Relationship Management	0.882**	< .001	Highly Significant
Incentive Mechanisms			
Market-oriented Organizational Culture	0.864**	< .001	Highly Significant
Market-oriented Ability to Obtain Market Information	0.868**	< .001	Highly Significant
Market-oriented Customer Relationship Management	0.880**	< .001	Highly Significant

** Correlation is significant at the 0.01 level

The correlation coefficients between decision-making style and market-oriented organizational culture ($\rho=0.853$), market information acquisition capability ($\rho=0.867$), and market-oriented customer relationship management ($\rho=0.882$) also show highly significant positive correlations. A participatory decision-making style can enhance employees' market orientation awareness because this style encourages employees to participate in the decision-making process, thereby increasing their sensitivity to market information and responsiveness. Zeng (2022) pointed out that a market-oriented corporate culture can be strengthened through a participatory decision-making style, thereby improving the overall market orientation level of the enterprise.

Lastly, the relationship between incentive mechanisms and the dimensions of market orientation also shows highly significant positive correlations. The correlations between incentive mechanisms and market-oriented organizational culture ($\rho=0.864$), market information acquisition capability ($\rho=0.868$), and market-oriented customer relationship management ($\rho=0.880$) are all highly significant. Effective incentive mechanisms can enhance employees' market-oriented behaviors because these mechanisms can stimulate employees' intrinsic motivation, making them more actively involved in market information collection and customer relationship management activities. Related research indicates that effective incentive mechanisms can not only improve employees' job performance but also enhance the company's market orientation capabilities (Xu , 2024).

Table 6

Relationship Between Organizational Learning and Market Orientation

Variables	rho	p-value	Interpretation
Learning Mechanism and Structure			
Market-oriented Organizational Culture	0.863**	< .001	Highly Significant
Market-oriented Ability to Obtain Market Information	0.857**	< .001	Highly Significant
Market-oriented Customer Relationship Management	0.866**	< .001	Highly Significant
Learning Motivation			
Market-oriented Organizational Culture	0.867**	< .001	Highly Significant
Market-oriented Ability to Obtain Market Information	0.844**	< .001	Highly Significant
Market-oriented Customer Relationship Management	0.884**	< .001	Highly Significant
Learning Evaluation and Feedback			
Market-oriented Organizational Culture	0.901**	< .001	Highly Significant
Market-oriented Ability to Obtain Market Information	0.882**	< .001	Highly Significant
Market-oriented Customer Relationship Management	0.881**	< .001	Highly Significant

** Correlation is significant at the 0.01 level

Table 6 illustrates the relationship between organizational learning and market orientation, showing highly significant positive correlations between three organizational learning variables (learning mechanisms and structures, learning motivation, and learning evaluation and feedback) and three market orientation dimensions (market-oriented organizational culture, market information acquisition capability, and market-oriented customer relationship management). All correlation coefficients (ρ) range from 0.844 to 0.901, with p-values less than 0.001, indicating strong positive relationships between these variables.

As per the relationship between learning mechanisms and structures and the dimensions of market orientation. The correlation coefficients between learning mechanisms and structures and market-oriented organizational culture ($\rho=0.863$), market information acquisition capability ($\rho=0.857$), and market-oriented customer relationship management ($\rho=0.866$) all demonstrate highly significant positive correlations. This suggests that effective learning mechanisms and structures significantly enhance a company's market orientation capability. Previous research by Zhang et. al. (2020) indicated that organizational learning mechanisms and structures promote the creation and dissemination of knowledge, thereby enhancing the company's sensitivity and responsiveness to market information. Such mechanisms and structures help companies better understand customer needs, adapt quickly to market changes, and improve market competitiveness.

Secondly, in terms of the relationship between learning motivation and the dimensions of market orientation, the correlation coefficients between learning motivation and market-oriented organizational culture ($\rho=0.867$), market information acquisition capability ($\rho=0.844$), and market-oriented customer relationship management ($\rho=0.884$) also demonstrate highly significant positive correlations. High levels of learning motivation can inspire employees to actively participate in market information collection and customer relationship management activities. Deci et al. (2000) proposed the Self-Determination Theory, suggesting that intrinsic motivation significantly improves individual learning outcomes and job performance, thereby enhancing a company's market orientation capability.

Lastly, the relationship between learning evaluation and feedback and the dimensions of market orientation also exhibits highly significant positive correlations. The correlation coefficients between learning evaluation and feedback and market-oriented organizational culture ($\rho=0.901$), market information acquisition capability ($\rho=0.882$), and market-oriented customer relationship management ($\rho=0.881$) are all the highest. This indicates that timely and effective learning evaluation and feedback significantly enhance a company's market orientation capability. In the literature, Gao (2023) pointed out that constructive and timely feedback significantly improves learning outcomes and job performance, thereby enhancing a company's market orientation capability and customer satisfaction.

In summary, the data from Table 6 clearly demonstrate the strong positive correlations between organizational learning variables (learning mechanisms and structures, learning motivation, and learning evaluation and feedback) and market orientation dimensions (market-oriented organizational culture, market information acquisition capability, and market-oriented customer relationship management). The high significance of these relationships suggests that strengthening various aspects of organizational learning can significantly enhance a company's market orientation capability, thereby improving its market competitiveness and customer satisfaction.

SME's Competitiveness Framework

This study empirically confirms significant mutual influences and positive relationships among entrepreneurial leadership, organizational learning, and market orientation, as shown in Figure 1. Results indicate that these three factors mutually reinforce each other, collectively enhancing a company's innovation performance and competitiveness.

Entrepreneurial leadership, by driving innovation, optimizing decision-making, and motivating employees,

significantly enhances the organization's learning capabilities and market orientation level. Leaders play a crucial role in setting the company's vision and strategic direction. They promote continuous advancement by fostering an innovative culture and providing resource support. Organizational learning provides systematic knowledge management and capability enhancement mechanisms for companies. Through continuous learning and improvement, companies can better adapt to market changes and competitive pressures, thereby enhancing overall innovation capabilities. The strong correlation between organizational learning and market orientation suggests that companies should enhance market responsiveness and customer satisfaction through systematic learning mechanisms. By driving companies to focus on customers, market orientation enhances their capabilities in market information acquisition and customer relationship management, directly influencing their innovation performance. Market-oriented organizational culture and systematic information management mechanisms ensure that companies maintain a leading position in intense market competition.

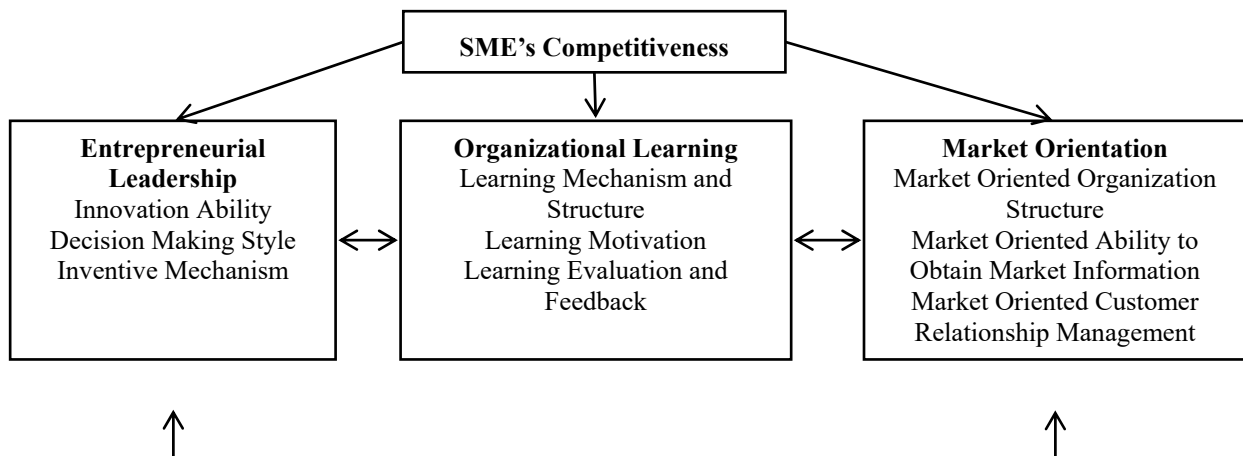


Figure 1. SME's Competitiveness Framework

4. Conclusions and recommendations

Respondents showed agreement on the entrepreneurial leadership as to innovation ability, decision-making style, and incentive mechanisms. The organizational learning was moderately agreed as to learning mechanisms and structures, learning motivations, and learning evaluation and feedback mechanisms. Respondents have moderate agreement on being market-oriented of the organization relative to market-oriented organizational culture, market-oriented ability to obtain market information, and market-oriented customer relationship management. High significant relationships were found between entrepreneurial leadership, organizational Learning, and market orientation. A competitiveness framework for small and medium enterprises (SME's) was developed.

The Human Resource Manager may develop various learning and development programs aimed at fostering entrepreneurial skills among employees. The Human Resource Department may empower employees to identify their own learning needs to ensure learning initiatives are relevant and engaging. Department heads may design a training program to cultivate a market orientation mindset among employees which could focus on customer empathy, competitor analysis, and the importance of data-driven decision making. The proposed competitiveness framework may be used for reference and utilization of small and medium enterprises (SME's). Future researchers may explore the factors that influence the development of entrepreneurial leadership and organizational learning capabilities. They may also investigate the long-term outcomes beyond market orientation, such as firm performance, innovation success, and employee well-being.

5. References

Bao, Qun, & Liao, Sainan. (2023). Domestic production networks and indirect export spillovers: Evidence from

- customer-supplier relationships. *Management World*, 08, 20-45.
- Cheng Xinsheng & Zhang Shiyin. (2024). Evolution and Prospect of Innovation Incentive Theory. *Shandong Social Sciences* (03), 135-144.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Deci, E. L., & Ryan, R. M. (2012). Motivation, Personality, and Development within Embedded Social Contexts: An Overview of Self-Determination Theory. *The Oxford Handbook of Human Motivation*, 85-107.
- Gao, Ruiyi. (2023). The influence of organizational learning atmosphere on employees' learning motivation and career development willingness: An empirical analysis based on a survey of employees in small and medium-sized enterprises. *Modern Enterprise Culture*, 14, 157-160.
- Garvin, D. A., Edmondson, A. C., & Gino, F. (2008). Is Yours a Learning Organization? *Harvard Business Review*, 86(3), 109-116.
- Shao Shuai & Li Xing. (2022). Can Market-Oriented Low-Carbon Policies Promote High-Quality Economic Development? Evidence from Carbon Emission Trading Pilots. *Guangdong Social Sciences* (02), 33-45.
- Tian Dan & Ding Bao. (2023). Research on the Measurement and Mechanism of High-Quality Development of Enterprises: Based on the Perspective of Organizational Resilience. *China Soft Science* (09), 154-170.
- Xu Eryang. (2024). Optimization Strategies of Incentive Mechanisms for Human Resource Management in Market Economy. *Business Information* (03), 187-190.
- Yao, Meifang, Huang, Yicong, & Dong, Baobao. (2019). Market orientation, strategic flexibility, and new enterprise growth: The mediating role of dual innovation. *Journal of Jilin University (Social Sciences Edition)*, 03, 18-29+231.
- Yin Kui, Zhao Jing, Li Can, Wang Honglei & Wang Chongfeng. (2021). The Formation Mechanism of Leadership Empowerment Behavior. *Advances in Psychological Science* (06), 1097-1110.
- Zeng Pengyun. (2022). Research on the Relationship between Market Orientation and Organizational Performance Based on Corporate Culture. *Business Information* (18), 91-94.
- Zhang Jingwen & Zheng Zhaolan. (2022). Relationship Quality, Organizational Learning, and Dual Innovation: Empirical Analysis Based on Strategic Emerging Industry Enterprises. *Financial Education Research* (02), 44-54.
- Zhang Mengxiao & Gao Liangmou. (2020). Meta-analysis of the relationship between organizational learning and organizational innovation: Dimension differentiation and boundary effects. *Science and Technology Progress and Countermeasures*, 19, 17-23.
- Zhou Ran, Tang Fanxian, Cao Jianxing & Li Xin. (2024). Market Orientation, Dynamic Capabilities, and Corporate Strategic Performance: A Comparative Study of Dual Cases. *Case Study and Review* (01), 56-71.