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## THE IMPACT OF ENTREPRENEURIAL SPIRIT ON FIRM PERFORMANCE: A PILOT STUDY ON MEDIATING EFFECTS USING SPSS ANALYSIS

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### Abstract:

The research investigates the interplay between entrepreneurial spirit, dynamic marketing capabilities, and firm performance. Prior to initiating large-scale data collection, a pilot study was carried out to assess the questionnaire's reliability and validity. Online questionnaires were disseminated to the owners and managers of small and medium - sized manufacturing enterprises, and ultimately, 64 valid samples were obtained. The collected data was analyzed by means of descriptive, correlation, regression, and mediation effect analyses using SPSS20.0 software. The main discovery indicates that dynamic marketing capabilities act as a mediator in the relationship between entrepreneurial spirit and firm performance. This research offers a preliminary foundation for comprehending these relationships, serves as groundwork for large-scale studies, and enriches relevant theories to offer guidance for corporate decision-making and operations.

### Keywords:

Entrepreneurial Spirit; Firm Performance; Dynamic Marketing Capabilities; Pilot Study

### Introduction

In today's business environment, where globalization and digital change are intertwined, the market landscape is changing rapidly and the competitive landscape is becoming more and more intense (Darmasetiawan, Rapina, Martusa, & Meythi, 2023). The performance of a firm

determines its ability to be robust, maintain its existence and achieve sustainable growth in an environment of uncertainty (Park, 2023). Among the many complex factors affecting firm performance, entrepreneurial spirit and dynamic marketing capabilities have come to the forefront and are widely recognized by academics and businesses as two key drivers (Mostafiz, Ahmed, & Hughes, 2022; Santos-Vijande, Lopez-Sanchez, Loredo, Rudd, & Lopez-Mielgo, 2022).

Entrepreneurial spirit, characterized by innovative thinking, risk-taking, keen market insights and perseverance, is the source of endogenous power for enterprise development (Chang & Yang, 2024). Innovative entrepreneurs dare to break away from traditional thinking and actively explore new technologies, products and business models to open up new development paths for their enterprises; risk-taking entrepreneurs are able to make decisive decisions and boldly invest resources in the market where opportunities are fleeting, and lead their enterprises to venture into new fields, so as to seize the first opportunity in the market (Suder, Kusa, Duda, & Karpacz, 2024).

Dynamic marketing capability is the key to maintain the competitiveness of enterprises in the rapidly changing market environment (Mostafiz et al., 2022). It requires enterprises to be able to quickly perceive market dynamics, accurately capture the changing trends of consumer demand, and timely adjust marketing strategies and resource allocation to efficiently meet customer demand. With strong dynamic marketing capabilities, enterprises can flexibly respond to market fluctuations, stand out from fierce competition, and increase market share and brand influence (Supriyanto, Said, Firdaus, Asma, & Redawati, 2024).

Although the importance of entrepreneurial spirit and dynamic marketing ability to firm performance has been widely recognized, unfortunately, the specific mechanism of action between the three has not yet been fully revealed. This not only limits academics' in-depth understanding of the inherent laws of enterprise development, but also makes enterprises lack clear theoretical guidance in practice, making it difficult for them to accurately implement strategies to fully utilize the advantages of entrepreneurial spirit and dynamic marketing capabilities to achieve effective performance improvement (Zhang, Zhou, & Bao, 2020).

Based on this, this pilot study expects to try to initially unveil how entrepreneurial spirit affects firm performance through dynamic marketing capabilities by deeply mining and carefully analysing a large amount of actual data, and applying scientific and rigorous research methods, such as correlation analysis, regression analysis, and mediation effect test. By identifying the key paths and influencing factors and laying a solid foundation and clarifying direction for more in-depth and comprehensive research.

## Literature Review

### ***Entrepreneurial spirit and firm performance***

Entrepreneurial spirit is a rich and complex concept that encompasses a number of key aspects such as innovation spirit, risk-taking spirit and contractual spirit. Innovation spirit, as a crucial element of entrepreneurial spirit, enables enterprises to break into new markets, introduce novel products, and strengthen their competitive edge, thereby driving performance improvement; the spirit of risk-taking encourages entrepreneurs to seize market opportunities and promote enterprise development; the contractual spirit guarantees stable operation of enterprises and

lays the foundation for performance improvement. These elements are intertwined and synergistic, and together they influence the trajectory and performance of an enterprise.

The spirit of innovation, as one of the core elements of entrepreneurial spirit, is like a powerful engine for the development of enterprises. In the ever-changing market environment, entrepreneurs with the spirit of innovation not only maintain a keen insight into new market-oriented technologies, operational processes and marketing strategies-along with industry development trends-but also actively explore new markets by leveraging these market-oriented innovations (Chang & Yang, 2024). On this basis, they dare to break through the constraints of traditional thinking, boldly try to transform new ideas into practical action, and meet the increasingly diversified and personalized needs of consumers by providing unique new products(Santos-Vijande et al., 2022).

Profit comes from uncertainty(Dimand, 2021). As an integral part of entrepreneurial spirit, risk-taking spirit endows entrepreneurs with the courage to make decisive decisions in the face of such uncertainty, helping them seize potential profit opportunities that others may avoid (Ratten, 2021). In a business world where market opportunities are fleeting, risk-taking motivates entrepreneurs to break the mold and take on challenges (Santos-Vijande et al., 2022). When opportunities arise in emerging markets or industry changes, risk-taking entrepreneurs are able to quickly capitalize on these potential opportunities and decisively invest resources in new business areas or projects (Cui & Song, 2022).

Based on the positive impact of innovation spirit, risk-taking spirit and contractual spirit on firm performance demonstrated in the process of business development, the hypothesis is shown:

**H1:** Entrepreneurial spirit has a positive impact on firm performance.

### ***Entrepreneurial Spirit and Dynamic Marketing Capabilities***

There is a strong and complex link between entrepreneurial spirit and dynamic marketing capabilities in the development process of firms (Yay & Yay, 2022). Specifically, the innovative and risk-taking spirit within entrepreneurial spirit serves as strong driving forces, playing a vital role in enhancing a firm's dynamic marketing capabilities (Mostafiz, Ahmed, Ibrahim, & Tarba, 2024; Santos-Vijande et al., 2022).

The spirit of innovation makes entrepreneurs brave to break through the confines of traditional marketing thinking and actively explore new marketing models and strategies (G. G. Fang, Qalati, Ostic, Shah, & Mirani, 2022). In the booming digital economy, the market environment is changing day by day, and consumers' behaviors and needs are also changing. Innovative entrepreneurs are able to capture these trends and take the lead in integrating emerging technologies into their marketing activities (Hou, 2021).

Risk-taking gives entrepreneurs the courage to try new strategies, technologies and processes in the face of uncertainty (Dimand, 2021). In a highly competitive market, new marketing models and strategies often come with a certain amount of risk; however, entrepreneurs with a sense of risk-taking will not be deterred by fear of risk (Dimand, 2021). They dare to take the lead in investing resources and trying new marketing channels, such as social media marketing and live streaming(z. Li, 2021).

In the highly competitive market environment, the contractual spirit makes entrepreneurs focus more on the long-term development and social value of enterprises rather than short-term benefits, thereby promoting entrepreneurs to actively explore market changes, gain insight into market demand to capture business opportunities, and evolve business concepts from business opportunities, on the basis of which entrepreneurs integrate resources according to market demand to achieve optimal allocation of resources. Create more customer value (b. Wang & Chen, 2021).

In summary, entrepreneurs' innovation spirit, risk-taking spirit and contractual spirit promote enterprises to explore new marketing models and strategies from multiple dimensions, which in turn significantly enhance their dynamic marketing capabilities. Based on this, the below is the hypothesis:

**H2:** Entrepreneurial spirit positively affects dynamic marketing capability.

### ***Dynamic Marketing Capabilities and Firm Performance***

Dynamic marketing capabilities, as a key element for firms to maintain competitiveness in complex and changing market environments, encompass the dimensions of market sensing, supply collaboration, and customer response capabilities (Day, 1994; Kusyana, Giantari, Sukaatmadja, & Ekawati, 2025). These capabilities are interrelated and synergistic, and together they have a profound impact on firm performance (E. Fang & Zou, 2009; Helfat & Peteraf, 2003; Hoque, Ahammad, Tzokas, & Gabay, 2021a).

Market sensing capability is a crucial means for enterprises to gain insight into market dynamics (Li, ming, 2021; Mitreaga, 2019; Nikbin, Iranmanesh, Ghobakhloo, & Foroughi, 2022). In the digital era, market information travels extremely fast and consumer needs change rapidly. With advanced data analysis technology and market research tools, enterprises are able to collect and analyse massive amounts of market data in real time and accurately capture subtle changes in market trends (Kankam-Kwarteng, Sarpong, Amofah, & Acheampong, 2021).

Supply collaboration capability is a strong guarantee for an enterprise to respond efficiently to market demand (Correia, Teixeira, & Dias, 2022). It involves the collaboration between various departments within the enterprise, as well as between the enterprise and its suppliers and partners. In the increasingly complex supply chain, enterprises need to establish close strategic alliances with upstream and downstream partners to achieve information sharing, resource integration and process optimization (L. Li, Wang, Chen, Zhao, & Yang, 2023).

Customer response capability is directly related to customer satisfaction and loyalty to the brand (Day & Van den Bulte, 2002). In a customer-centric market environment, the ability of a company to quickly and accurately meet individual customer needs is critical (Moradi, Jafari, Doorbashi, & Mirzaei, 2021). Enterprises can provide personalized product solutions and high-quality after-sales service by establishing a comprehensive customer relationship management system to keep abreast of customers' feedback and needs (Martin, Javalgi, & Ciravegna, 2020).

To summarize, market sensing capability, supply collaboration capability and customer response capability together contribute to the development of firm performance from the aspects of market insight, resource integration and customer service, respectively. Based on this, the hypothesis is proposed:

**H3:** Dynamic marketing capability has a significant positive influence on firm performance.

#### ***The Mediating Role of Dynamic Marketing Capabilities***

In the complex ecology of business operations, there is an inextricable link between entrepreneurial spirit, dynamic marketing capabilities and firm performance. Given the positive effect of entrepreneurial spirit on dynamic marketing capabilities and the facilitating effect of dynamic marketing capabilities on firm performance described earlier(Sari, Susilowati, & Moko, 2024), it is reasonable to hypothesize that entrepreneurial spirit does not act directly on firm performance, but rather indirectly affects firm performance through the key bridge of enhancing dynamic marketing capabilities (Kusyana et al., 2025).

At the theoretical level, the entrepreneur's spirit of innovation prompts enterprises to continuously explore new marketing concepts and methods, and the spirit of risk-taking helps enterprises to dare to try emerging marketing channels and strategies, all of which provide intrinsic motivation for the improvement of dynamic marketing capabilities. With keen market insights, entrepreneurs identify potential market opportunities, which in turn drives enterprises to continuously optimize their market sensing and quickly and accurately capture changes in consumer demand(Mostafiz et al., 2024; Santos-Vijande et al., 2022). This precise grasp of market dynamics enables enterprises to adjust their supply strategies in a timely manner, strengthen synergistic cooperation with suppliers, and to make sure that the products or services can efficiently satisfy market demand. At the same time, the entrepreneur's emphasis on customer value has prompted companies to improve customer responsiveness and provide customers with a better service experience. And the enhancement of these dynamic marketing capabilities ultimately translates into the growth of firm performance, such as the expansion of market share, the enhancement of brand awareness, and the increase of profits (Hoque, Ahammad, Tzokas, & Gabay, 2021b).

From the perspective of empirical research, many researchers have explored this in depth in recent years. For example, Nguyen et al. (2024) found that entrepreneurial spirit significantly affects dynamic marketing capability and dynamic marketing capability plays a partly mediating role between entrepreneurial spirit and firm performance by researching SMEs in several industries and analyzing them with structural equation modeling. This suggests that entrepreneurial spirit has a strong relationship with firm performance directly on the one hand, and at the same time, it indirectly promotes the improvement of firm performance by enhancing dynamic marketing capability(Nguyen, Han, & Pham, 2024). Homburg & Wielgos's (2022) study further confirms that, in the context of accelerated digital transformation, innovative entrepreneurs are more inclined to make use of digital technology to enhance the dynamic marketing capability of their firms such as carrying out precision marketing and personalized services, thereby enhancing the firm's performance in the marketplace. and thus enhance the competitiveness of enterprises in the market and realize performance growth(Homburg & Wielgos, 2022). To summarize, based on theoretical derivation as well as empirical research, the hypothesis is proposed:

**H4:** Dynamic marketing capabilities play a mediating role in the relationship between entrepreneurial spirit and firm performance.

## Method

### ***Sample Selection and Data Collection***

This research selected SMEs in China's manufacturing sector as the sampling objects, and there were several reasons for this choice. The manufacturing industry is the bedrock of China's real economy, playing an essential and irreplaceable role in the national economic structure. Research on this industry can offer valuable insights for its high-quality development. Additionally, SMEs, which are abundant in the manufacturing sector, have distinct approaches when facing intense market competition, limited resource distribution, and marketing-related decision-making (c. l. Wang, 2024). Investigating the relationships among entrepreneurial spirit, dynamic marketing capabilities, and firm performance in these enterprises can yield more generalizable research findings. These results can then provide SMEs with targeted strategies and theoretical guidance.

Since the research focuses on the top management of SMEs, the actual research process revealed that the questionnaire response rate from this group was relatively low (Borgholthaus, Bourgoin, Harms, White, & Fezzy, 2025). Therefore, conducting a pilot study became highly essential. Prior to the large-scale research, a pilot study serves to preliminarily assess the scientific nature of the research method, the accuracy of the measurement tool, and the practical applicability of relevant concepts. Failing to conduct a pilot study may lead to a waste of significant human and material resources, and it could severely undermine the quality and progress of the entire research project (Bell, Bryman, & Harley, 2022).

During the data collection phase, 89 SMEs were selected via the purposive sampling method. The questionnaires were distributed through China's "Wen Juan Xing" online questionnaire-based research platform. Prior to distribution, in-depth communication was carried out with the senior management of the sampled companies. We elaborated on the research objectives, the guidelines for completing the questionnaires, and assured them of data confidentiality and other crucial aspects. The questionnaires were designed to measure entrepreneurial spirit and marketing-related aspects, drawing on classical theories and research findings in relevant fields.

## **Variable - Scale Specifications for Core Constructs**

### ***Entrepreneurial Spirit***

Entrepreneurial spirit consists of 24 items, innovation spirit (7 items), risk-taking spirit (7 items), and contractual spirit (10 items) as three dimensions were used to measure the entrepreneurial spirit of the organization. Both innovation spirit and risk-taking spirit were drawn from the well-established scales.

### ***Dynamic Marketing Capabilities***

Dynamic marketing capability consists of 22 items designed to measure a firm's dynamic marketing capability, which is measured using three dimensions: market sensing capability (7 items), supply collaboration capability (8 items), and customer response capability (7 items). The measurements of these dimensions were taken from Li (2015).

### ***Firm Performance***

Firm performance is measured in two dimensions: long-term performance (4 items) and short-term performance (4 items). Among them, short-term performance is measured by financial

indicators such as sales growth rate, profit growth rate, return on assets, return on investment, etc.; long-term performance is measured by competitive advantage indicators such as speed of response to the market, efficiency of internal operations, customer's evaluation of the value of the products and services, and the speed of innovation (E. Fang & Zou, 2009). Measurement indicators mainly refer to the research of Fang&zou (2009) and other researchers.

## Data Analysis

### ***Descriptive Statistical Analysis***

The collected data underwent summary statistical analysis using SPSS20.0 software, and the outcomes are shown in Table 1.

**Table 1: Descriptive Statistics of Each Variable**

V	Min	Max	M	SD
Entrepreneurial spirit (ES)	2.90	5.00	4.2019	0.67335
Dynamic marketing capability (DMC)	2.68	5.00	4.2105	0.64840
Short-term performance (SP)	2.00	5.00	4.0430	0.81352
Long-term performance (LP)	1.25	5.00	4.0742	0.87137

Source: Author's (2025)

Based on the results of Table 1, it shows that the sample firms present specific characteristics in terms of entrepreneurial spirit, dynamic marketing capabilities, long-term performance and short-term performance.

The mean value of entrepreneurial spirit (ES) is 4.2019 (on a 5-point scale), indicating a generally high level of entrepreneurial orientation among the participating SMEs. This finding aligns with prior research emphasizing the prevalence of entrepreneurial traits in small and medium-sized enterprises operating in competitive environments (Real, Roldán, & Leal, 2014).

The mean value of dynamic marketing capability (DMC) is 4.2105, reflecting the participants' perception that their firms possess a reasonably strong capacity to adapt marketing strategies in response to market changes. Wilden et al. (2013) argue that dynamic capability scores above the mid-point are essential for firms to adapt to market changes(Wilden, Gudergan, Nielsen, & Lings, 2013).

In terms of firm performance, the mean values of short-term performance (SP) and long-term performance (LP) are 4.0430 and 4.0742, respectively. These results are consistent with the view that dynamic capabilities positively influence both financial and strategic outcomes (Zahra, Sapienza, & Davidsson, 2006).

The relatively small standard deviations across variables suggest homogeneity within the sample, but may also indicate a lack of significant competitive differentiation among the participating firms—a common phenomenon observed in sector-specific studies of SMEs.

**Correlation Analysis**

Subsequently, the Pearson correlation coefficient among the variables was computed, and the findings are presented in Table 2.

**Table 2: Correlation Analysis of The Variables**

Variable	ES	DMC	SP	LP
ES	1			
DMC	0.799** (0.000)	1		
SP	0.597** (0.000)	0.744** (0.000)	1	
LP	0.672** (0.000)	0.731** (0.000)	0.869** (0.000)	1

\*\*. Significantly correlated at the 0.01 level (bilaterally)

Source: Author's (2025)

The correlation analysis results in Table 2 reveal the relationships among the variables as follows:

**Relationship between ES and other variables:** the correlation coefficient between ES and DMC stands at 0.799, with a significant correlation at the 0.01 level. This implies that a stronger entrepreneurial spirit is associated with a potentially stronger dynamic marketing capability for the firm. Additionally, ES is significantly and positively correlated with the SP and LP of firms, with correlation coefficients of 0.597 and 0.672 respectively. This indicates that entrepreneurial spirit has a positive influence on both the SP and LP of firms.

**Relationship between DMC and FP:** The correlation coefficients of DMC with firms' SP and LP are 0.744 and 0.731 respectively, and both are significantly correlated at the 0.01 level. This suggests that better-developed dynamic marketing capabilities are likely to lead to better short-term and long-term performance for firms.

**Relationship between SP and LP:** The correlation coefficient between SP and LP of enterprises is 0.869, significantly correlated at the 0.01 level. This shows an obvious positive correlation between short-term and long-term performance, meaning that an enterprise with good SP is likely to also have good LP.

**Regression Analysis****Variable Description and Correlation**

In the descriptive statistics and correlation analysis in table1 and table2, SP and LP were analyzed separately. It was discovered that both SP and LP were significantly correlated with ES and DMC. Moreover, a strong positive correlation (with a correlation coefficient of 0.869) existed between short-term and long-term performance. This outcome indicates that short-term and long-term performance are highly consistent in reflecting business results.

Consequently, to explore more comprehensively the causal relationships among entrepreneurial spirit, dynamic marketing capability, and overall firm performance, in the subsequent regression analysis, short-term performance and long-term performance were integrated into a single comprehensive firm performance (FP) variable. By doing so, the potential multicollinearity issue that could occur when considering SP and LP separately can

be avoided, and the relationships between variables can be examined from an overall perspective.

As indicated in Table1 and Table2, the mean value of entrepreneurial spirit (ES) is 4.2019, with a SD of 0.67335. The dynamic marketing capability (DMC)' mean value is 4.2105, and its SD is 0.64840. The mean value of short-term performance (SP) is 4.0430, with a SD of 0.81352, while the mean value of long-term performance (LP) is 4.0742, and its SD is 0.87137. These data demonstrate that entrepreneurial spirit has an obvious positive correlation with dynamic marketing ability, short-term performance, and long-term performance. Additionally, dynamic marketing ability is also significantly and positively related to short-term performance and long-term performance.

### **Regression Model Analysis**

The regression analysis was carried out using the Process macro program in SPSS, and the regression results are presented in Table 3.

**Table 3: Regression Analysis of The Variables in The Mediation Model**

Variable	Model 1		Model2		Model3	
	$\beta$	t	$\beta$	t	$\beta$	t
ES	0.7694	10.4627	0.7954	6.8743	0.1615	0.9771
DMC					0.8239	4.8006
$R^2$		0.6384		0.433		0.588
F		109.4678		42.257		43.553

Source: Author's (2025)

**Regarding the regression analysis of entrepreneurial spirit on dynamic marketing capability (corresponding to Model 1),** dynamic marketing capability (denoted as DMC) was set as the dependent variable, and entrepreneurial spirit was used as the independent variable. The resulting regression equation is  $DMC = 0.9775 + 0.7694 \times ES + \epsilon$ , where  $\beta_1 = 0.7694$ ,  $t = 10.4627$ , and  $p < 0.05$ . By referring to Model 1 in Table 3, one can clearly observe the correlation coefficients and t-values of the regression of ES on DMC. This indicates that entrepreneurial spirit has a significant positive impact on dynamic marketing capability, thus supporting hypothesis H2. This finding not only corresponds to the strong positive correlation between the two variables in the previous correlation analysis but also aligns with the research results of Nguyen, H. T. N., Han, J. W., & Pham, H. C. (2024).

**For the regression analysis of entrepreneurial spirit on firm performance (corresponding to Model 2),** a linear regression was conducted. Firm performance (combining long-term and short-term performance, denoted as FP) was set as the dependent variable, and entrepreneurial spirit (ES) was the independent variable. The regression equation is  $FP = 0.7165 + 0.7954 \times ES + \epsilon$ , with  $\beta_3 = 0.7954$ ,  $t = 6.8743$ , and  $p < 0.05$ . The regression coefficients and t-values of ES can be directly obtained from Model 2 in Table 3, which shows that entrepreneurial spirit has a significant positive effect on firm performance, thereby supporting hypothesis H1. When combined with the previous correlation analysis, this further validates the positive relationship between entrepreneurial spirit and firm performance. This result is also consistent with the research findings of Ahmad, N., & Kausar, A. (2023) and Huang, Y., & Wang, X. (2022).

**In the regression analysis of dynamic marketing ability on firm performance (corresponding to Model 3),** firm performance was set as the dependent variable, and dynamic marketing capability was the independent variable. The regression equation is  $FP = -0.0889 + 0.8239 \times DMC + \epsilon$ , where  $\beta_5 = 0.8239$ ,  $t = 4.8006$ , and  $p < 0.05$ . From Model 3 in Table 3, one can see the coefficients and the significance of DMC on the FP regression. This indicates that dynamic marketing capability has a significant positive impact on firm performance, supporting hypothesis H3. This is consistent with the positive relationship between dynamic marketing capability and firm performance found in the correlation analysis. The result also concurs with the research results of Okok et al. (2024), further confirming and enriching the understanding of the relationship between the two.

#### *A Test of The Mediating Role of Dynamic Marketing Capabilities*

To further explore whether dynamic marketing capabilities mediate the relationship between entrepreneurial spirit and firm performance, the stepwise regression method proposed by Baron and Kenny (1986) was employed for the test. The results are shown in Table 4.

**Table 4: Analysis of Mediating Effects of Expected Dynamic Marketing Capabilities**

Effect type	E	SE	Bootstrap95%CI		Proportion of Total Effect
			UL	LL	
Total effect	0.658	0.096	0.466	0.849	100%
Direct effect	0.134	0.137	-0.140	0.407	20.3%
Indirect effect	0.524	0.201	0.199	0.987	79.7%

Source: Author's (2025)

The stepwise regression involves three steps. First, firm performance was regressed on entrepreneurial spirit (Model 1). Second, dynamic marketing capabilities were regressed on entrepreneurial spirit (Model 2). Finally, firm performance was regressed on both entrepreneurial spirit and dynamic marketing capabilities (Model 3).

$$\text{Model 1: } FP = 0.7165 + 0.7954 \times ES + \epsilon$$

$$\text{Model 2: } DMC = 0.9775 + 0.7694 \times ES + \epsilon$$

$$\text{Model 3: } FP = -0.0889 + 0.1615 \times ES + 0.8239 \times DMC + \epsilon$$

The results indicate that in Model 1, the coefficient of entrepreneurial spirit on firm performance is significant ( $\beta_7 = 0.7954$ ,  $p < 0.05$ ). In Model 2, the coefficient of entrepreneurial spirit on dynamic marketing capabilities is significant ( $\beta_9 = 0.7694$ ,  $p < 0.05$ ). In Model 3, the coefficient of dynamic marketing capabilities on firm performance is significant ( $\beta_{12} = 0.8239$ ,  $p < 0.05$ ), while the coefficient of entrepreneurial spirit on firm performance ( $\beta_{11} = 0.1615$ ) decreases compared to Model 1 and becomes insignificant ( $p = 0.3324$ ). Considering the data of total, direct, and indirect effects in Table 4, it can be inferred that dynamic marketing capabilities play a fully mediating role between entrepreneurial spirit and firm performance, thus supporting hypothesis H4. The direct effect accounts for 20.3% of the total effect, and the indirect effect accounts for 79.7%, highlighting the crucial mediating role of dynamic marketing capabilities.

## Discussion and Conclusion

### *Discussion of Findings*

This pilot research is designed to comprehensively discover the intricate relationships between entrepreneurial spirit, dynamic marketing capabilities, and firm performance, with a particular

focus on small and medium-sized manufacturing enterprises. Understanding these relationships is crucial for uncovering the internal driving forces behind business development. Through data collection and analysis, the relevant hypotheses were examined, and the following conclusions were drawn:

During the descriptive statistics and correlation analysis phase, a significant correlation was identified between the short-term performance (SP) and long-term performance (LP) of firms, as well as entrepreneurial spirit (ES) and dynamic marketing capability (DMC). Notably, the correlation coefficient between short-term and long-term performance reached 0.869.

For the regression analysis, the Process macro program in SPSS was utilized. The results indicated that entrepreneurial spirit has a significant positive influence on firm performance. The regression equation  $FP = 0.7165 + 0.7954 \times ES + \epsilon$ , with  $\beta_1 = 0.7954$ ,  $t = 6.8743$ , and  $p < 0.05$ , validates hypothesis H1. This finding aligns with the positive relationship observed in the correlation analysis. It is interesting to note that Suder (2024), in a study involving 150 small printing firms, also found that entrepreneurial spirit positively impacted firm performance in both crisis and non-crisis situations, consistent with the results of this study (Suder et al., 2024).

Entrepreneurial spirit also exerts a direct effect on dynamic marketing capability. The regression equation is  $DMC = 0.9775 + 0.7694 \times ES + \epsilon$ , where  $\beta_3 = 0.7694$ ,  $t = 10.4627$ , and  $p < 0.05$ , suggests that an increase in entrepreneurial spirit can effectively enhance firms' dynamic marketing capabilities, thus supporting hypothesis H2. Kusyana et al (2025), in their research on 235 SMEs in the Bali fashion industry through questionnaires, arrived at similar conclusions, further demonstrating the role of entrepreneurial spirit in promoting dynamic marketing capabilities (Kusyana et al., 2025).

Furthermore, dynamic marketing capability has a significant impact on firm performance. The regression equation  $FP = -0.0889 + 0.8239 \times DMC + \epsilon$ , with  $\beta_5 = 0.8239$ ,  $t = 4.8006$ , and  $p < 0.05$ , supports hypothesis H3. This result reaffirms the findings of the correlation analysis. The outcomes are in line with those of Zehir & Vural (2024), who conducted a questionnaire survey among 619 managers from various industries.

Finally, by applying the stepwise regression method to test the mediating role of dynamic marketing capabilities, it was discovered that dynamic marketing capabilities mediate the relationship between entrepreneurial spirit and firm performance. Hypothesis H4 was supported, and this finding was also verified by Kusyana et al (2025), further validating the reliability of this study's results.

## Research Contributions

### *Theoretical Contributions*

This research offers initial empirical evidence for exploring the relationships among entrepreneurial spirit, dynamic marketing capabilities, and firm performance. It significantly enriches the theoretical framework in relevant academic areas. In contrast to prior research that did not consider these three elements within a unified research framework, this study delves deep into the direct and indirect influence mechanisms of entrepreneurial spirit on firm performance. By applying rigorous descriptive statistics, correlation analysis, and regression analysis, it discovers that entrepreneurial spirit has a direct positive impact on firm performance and also has an indirect one through the mediating role of dynamic marketing capabilities. This

fills a void in existing theories regarding the relationships among these three factors and refines the theoretical framework of firm performance influencing factors. Moreover, the findings of this study are consistent with relevant literature like Suder (2024) and Kusyana et al (2025), enhancing the generalizability and reliability of research results in this field.

### ***Practical Contributions***

The outcomes of this research hold great practical significance for the development of SMEs. Firstly, it emphasizes the urgency and importance of nurturing entrepreneurial spirit within SMEs. Business managers can directly boost firm performance by fostering entrepreneurial characteristics such as innovation spirit and risk-taking spirit. Simultaneously, leveraging entrepreneurial spirit to enhance dynamic marketing capabilities, including improving market sensing, supply collaboration, and customer responsiveness, can indirectly drive firm performance growth. This offers clear guidance for business managers to make strategic decisions, create an environment conducive to entrepreneurial spirit development, and increase investment in enhancing dynamic marketing capabilities. Additionally, the research results can serve as a reference for industry associations and government departments. They can use these findings to formulate more targeted policies, guiding enterprises to enhance their competitiveness and promoting the healthy development of the entire industry.

### ***Research-method-related Contributions***

The results of this pilot study serve as a solid foundation for future large-scale research. Through this study, the feasibility of the research methodology has been confirmed, and potential issues and solutions during the research process have been identified, such as sample selection limitations and data collection difficulties. This provides valuable experience and a reference for future studies when expanding the sample scope to include enterprises from different industries and regions. It also enables subsequent research to explore the relationships among the three factors more comprehensively and deeply, contributing to the improvement of relevant theoretical and practical systems.

### ***Research Limitations and Prospects***

This pilot study has certain limitations. The relatively small sample size might not comprehensively represent all firms, which could lead to restricted generalizability of the research findings. Since the data collection mainly depends on questionnaires, there is a possibility of subjective bias from the respondents. For future research, it would be advisable to increase the sample size to include enterprises from diverse industries, with different scales and located in various regions. Meanwhile, a range of data collection methods, like interviews and secondary data collection, can be employed to enhance the reliability and generalizability of the study.

Moreover, conducting more in-depth investigations into the underlying mechanisms of the relationships between entrepreneurial spirit, dynamic marketing capabilities, and firm performance is crucial. This can involve exploring other potential mediating factors, such as strategic flexibility, market orientation, corporate culture, and organizational learning capabilities, as well as moderating variables, including the level of market competition, business environment, and environmental uncertainty. Such efforts will contribute to a more comprehensive understanding of this intricate relationship network.

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