




Investigating the Impact of Entrepreneurial Management on Entrepreneurial Competence: Emphasizing the Role of Entrepreneurial Behavior

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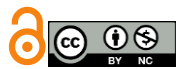
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ABSTRACT

Objective: In the scope of the new millennium, examining entrepreneurial ventures and entrepreneurial culture can be a valuable solution for fostering entrepreneurial thinking and youth employment. Therefore, the aim of this article is to investigate the influence of entrepreneurial management and entrepreneurial competencies, mediated by entrepreneurial behavior, in small and medium-sized enterprises.

Methods: The current research is considered exploratory in terms of purpose and applied in nature, employing a descriptive-correlational methodology. The population of this study consists of employees and managers of small and medium-sized enterprises in Tehran. Utilizing Cochran's formula for an unknown population, a sample size of 384 individuals was determined. Non-probability convenience sampling was employed in this study. Data collection was conducted through a questionnaire.

Findings: The results indicate that the influence of entrepreneurial management and entrepreneurial behavior on entrepreneurial competence in small and medium-sized enterprises is significant. Additionally, entrepreneurial management and entrepreneurial behavior, mediated by entrepreneurial behavior, have a positive and significant impact on entrepreneurial competence.

Conclusion: Thus, according to the findings of the conducted research, there is evidence of significant and positive effects of entrepreneurial management and entrepreneurial behavior on entrepreneurial competence in SMEs.

Keywords: *Entrepreneurial Management, Entrepreneurial Competence, Entrepreneurial Behavior, Small and Medium-sized Enterprises.*

1 Introduction

Entrepreneurship is perceived as a crucial factor in economic growth, and the contribution of entrepreneurship

to economic growth and development has widely been acknowledged by researchers (Michelacci & Schivardi, 2020; Mirzaaghaei et al., 2023; Nazari et al., 2023; Raharjo et al., 2023; Urbano & Aparicio, 2016). In fact,

entrepreneurial activities lead to high effectiveness in economic development, including job creation, innovation in businesses, and competitiveness (Stoica et al., 2020). The development of countries and organizations in the third millennium requires managers capable of initiating significant changes. One of the most effective solutions to address current challenges is to utilize entrepreneurial forces (Mobini Dehkordi et al., 2018). In a rapidly changing world, the growth and development of entrepreneurship are indicators of economic well-being. The role of entrepreneurship in ensuring economic dynamism is crucial. Therefore, attention to entrepreneurship in all fields of production, services, and activities is economically essential (Mirzaaghaei et al., 2023). Entrepreneurship deals with creating values, changes, and the emergence of new values. It is noteworthy that the absence of entrepreneurship in organizations, especially in the public sector, has intensified the culture of bureaucracy and reduced efficiency in organizational operations, resulting in less-than-expected activity and sometimes ineffectiveness (Kanaan-Jebna et al., 2022; Katrin, 2012; Khan et al., 2020). Entrepreneurship is a form of employment that engages in a dynamic, proactive process driven by enthusiasm to generate, create, and implement new ideas and innovative solutions (Abdelkarim, 2018), and to a great extent, predicts future successes, and its combination with proper specialized training can ensure a desirable future (Michelacci & Schivardi, 2020).

Researchers worldwide acknowledge the fact that entrepreneurship empowers individuals to start their own businesses, fulfill their dreams, and meet their needs for entrepreneurship (Boudreaux et al., 2019). Team entrepreneurship management in an organization is responsible for providing opportunities for employees to present their innovative ideas regarding new businesses or technologies to promote existing techniques and methods. Having entrepreneurial management in an organization is crucial as it finds ways for business success and also assists in launching a new small business capable of making profits (Rosemaro, 2022). As the environment becomes more complex, entrepreneurs become more creative and innovative, but without competence, the growth of any business will be incomplete. Therefore, to mitigate the negative consequences of challenging business environments, it is important for entrepreneurs to operate in a proactive environment. The competitive nature of our business environment requires innovation and creativity to achieve performance. Being innovative and creative is important, but competence is vital for the growth of any

business. These can be achieved through training, learning new skills, attitudes, personal communications, initiative, information search, and other means to achieve entrepreneurial goals. The issue of entrepreneurial competencies has received attention from researchers in recent years (Azizpourian et al., 2019), but some entrepreneurs are not creative, not risk-takers, not interested in their work, not active and always available, and even not willing to learn new skills due to lack of knowledge or information. This only happens when business owners strive to be innovative, risk-taking, enthusiastic, duty-bound, and ready to learn new skills to make them competent (Ochoa Jiménez et al., 2021; Raharjo et al., 2023). Entrepreneurial competencies are a set of individual capabilities and skills including knowledge, attitude, and skills of an individual in initiating a business and making it successful (Rahmani et al., 2021; Rosemaro, 2022). In the behavioral approach to entrepreneurship studies, entrepreneurial behaviors are emphasized. With this approach, factors influencing success or failure in the entrepreneurial process are explained based on the behaviors of entrepreneurial individuals - described as entrepreneurial behavior. Entrepreneurial behavior can be considered as individuals' responses to environmental stimuli or opportunities (Ivanova-Gongne et al., 2024). Entrepreneurial behavior describes individuals' ability to operationalize entrepreneurial concepts in the form of identifying opportunities, innovation, and risk management (Mulasari et al., 2019). Entrepreneurial behavior is important for promoting educational changes and innovation. The use of connecting pathways by managers can be effective in empowering and entrepreneurship in employees' work methods. Recent economic crises have more than ever proven the role of entrepreneurship in organizations as a driving force for development and sustainability, so the development of entrepreneurial behavior in organizations, especially government organizations, is of particular importance (Abbasi et al., 2022). Small and medium-sized enterprises are the largest companies in the world. They play a vital role in creating jobs and improving the living conditions of their local communities as they contribute to the growth of the country's gross domestic product. Due to their contributions to the country's economy, they have received much attention in entrepreneurship. Research has shown that innovation in small and medium-sized enterprises is accompanied by entrepreneurial characteristics and workforce capabilities (Saidi & Bagheri, 2016; Schmitt et al., 2017; Sumidartini & Muhyi, 2022).

In the current circumstances, these companies can seek to create more opportunities for expansion and diversity in industrial sectors. To enter new markets and maintain competitiveness in existing markets, companies must shift their focus from traditional methods to innovative approaches (Wang et al., 2015). Entrepreneurship, especially in small and medium-sized enterprises, is crucial for creating new jobs, reducing poverty, and promoting economic growth and development, as well as mitigating social and economic problems significantly (Alshebami & Seraj, 2021). According to Al Mamun et al. (2018) research, small and medium-sized enterprises act as indigenous entrepreneurship stimulants and, especially in terms of poverty alleviation, provide significant job opportunities and subsequently expand innovations and increase capital mobilization (Al Mamun et al., 2018). Small to medium-sized enterprises develop talents and entrepreneurial innovations, acting as engines of job creation and economic dynamism and are crucial for community sustainability (Al Mamun et al., 2018; Sumidartini & Muhyi, 2022). Sustainable and successful small to medium-sized enterprises require individuals with unique competencies and personality traits that have a profound impact on organizational success (Al Mamun et al., 2018). Entrepreneurial competence has been identified for organizational identification (López-Núñez et al., 2022). To benefit from the advantages of entrepreneurship in small and medium-sized enterprises, attention should be paid to the factors affecting organizational entrepreneurship and investment (Saidi & Bagheri, 2016). Accelerating economic activities and creating new job opportunities, entrepreneurship plays a strategic role in economic development (Heydari et al., 2021). Furthermore, entrepreneurial behaviors and processes play a significant role in the dynamism of small businesses (Nguyen et al., 2021). Small and medium-sized enterprises with high levels of entrepreneurial orientation are associated with higher levels of risk-taking activities. However, higher levels of risk-taking are associated with positive effects on innovation speed. Small businesses significantly contribute to economic growth by increasing productivity and competitiveness (Alabdullah & Asmar, 2022; Dey et al., 2020). Given their share in the country's economy, they have been highly regarded in entrepreneurship. In developing countries, small businesses play a vital role in the stability and growth of their economies. They contribute to maintaining the country's economic structure and improving its productivity (Kanaan-Jebna et al., 2022). Previous research findings on

entrepreneurship and small and medium-sized enterprises indicate that entrepreneurial orientations, including behavioral characteristics as well as psychological and sociological characteristics, are often recognized as the most potent and dominant factors influencing the performance of small and medium-sized enterprises (Hussain et al., 2022; Liu & Xi, 2021). However, various industrial and commercial factors and business strategies influence the success of small and medium-sized enterprises (González-López et al., 2021; Schmitt et al., 2017). On the other hand, entrepreneurial skills inevitably impact the performance of small and medium-sized enterprises (Aidara et al., 2021; Khan et al., 2020). In this regard, recent research emphasizes the vital need for entrepreneurs to discover personality traits (such as entrepreneurial behavior and entrepreneurial competence), as these traits are directly related to business success. Based on the above cases, the main question of the research is how entrepreneurial management and entrepreneurial behavior affect entrepreneurial competence in small and medium-sized enterprises. To expand the current literature and provide insights for improving business activities, this study focuses on personal factors such as entrepreneurial competence and entrepreneurial behavior as enablers of sustainable performance in small and medium-sized enterprises. Therefore, the research hypotheses include:

Entrepreneurial behavior significantly affects entrepreneurial competence in small and medium-sized businesses.

Entrepreneurial management significantly affects entrepreneurial behavior in small and medium-sized businesses.

Entrepreneurial management significantly affects entrepreneurial competence in small and medium-sized businesses.

Entrepreneurial management on entrepreneurial competence; with an emphasis on the role of entrepreneurial behavior in small and medium-sized businesses, has a significant effect.

2 Methods and Materials

Since the present study aims to examine the impact of entrepreneurial management on entrepreneurial competence, with an emphasis on the role of entrepreneurial behavior in small and medium-sized businesses. Therefore, this research, in terms of purpose, is of an applied research type. The present research, in terms of data collection and

analysis, is descriptive-correlational. The statistical population of this research includes employees and managers of small and medium-sized businesses in Tehran city. Due to the unknown population size, Cochran's formula will be used to determine the sample size. According to Cochran's formula, a sample size of 384 individuals was obtained. The sampling method in this research is non-probability sampling and of the convenience type. To measure the variables, the questionnaire a researcher-made questionnaire is used. All items were measured on a five-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree." Furthermore, the reliability of the research instrument was confirmed by Cronbach's alpha test. To test the hypotheses, the structural equation modeling (SEM) method was used, and statistical software including SmartPLS3 and SPSS was utilized.

Conceptual models are sets of systematically organized relationships that provide a comprehensive and coherent description of the relationships between several phenomena. Traditional models in structural equation modeling consist of two parts. Measurement models, which describe and explain the latent variables, and the structural model, which shows how latent variables are interconnected. Essentially, measurement models specify relationships between indicators (observed variables) of a construct (latent variable) and that construct. The research model is examined in two stages. In the first stage, the outer model of the research is examined, and in the second stage, the internal model is examined.

In this stage, the construct reliability related to the measured indicators of each variable under investigation is evaluated. Composite reliabilities above 0.70 are desirable, indicating adequate reliability of the indicator.

3 Findings and Results

Figure 1

Model with Factor Loadings

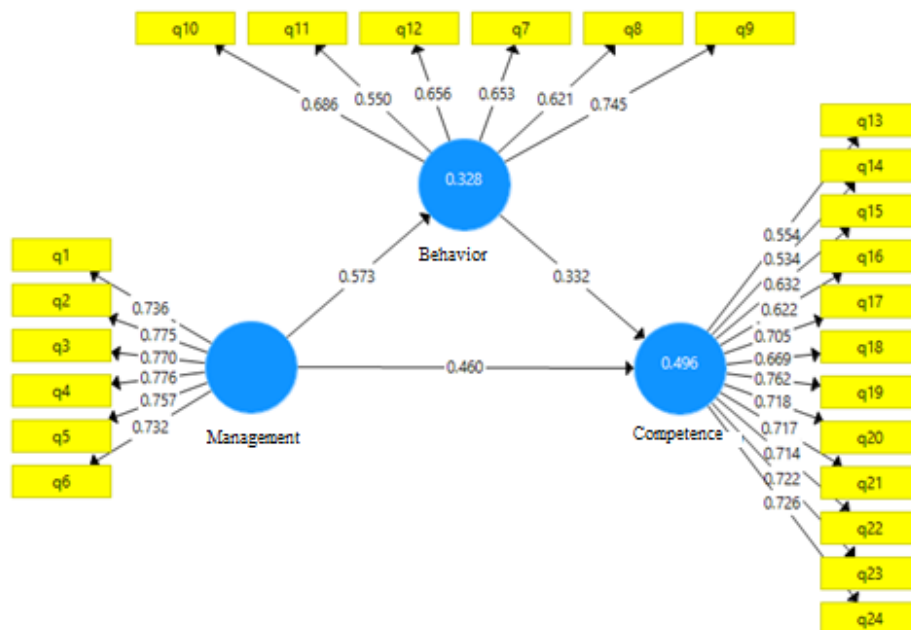


Table 1

Cronbach's Alpha, Composite Reliability, and Convergent Validity

Variables	Cronbach's Alpha	Composite Reliability	AVE
Entrepreneurial Behavior	0.733	0.817	0.429
Entrepreneurial Competence	0.890	0.909	0.458
Entrepreneurial Management	0.852	0.890	0.574

In the software SmartPLS, to fit measurement models in terms of reliability, the criteria of factor loading coefficients, composite reliability, and for convergent validity of measurement models, the average variance extracted (AVE) measure were used. For discriminant validity of these models, the Fornell and Larcker criterion is presented. Cronbach's alpha is a factor reliability index, the value of which ranges from 0 to 1, with values above 0.70 indicating acceptable reliability. However, Mos et al. (1998) introduced a value of 0.60 as the threshold for Cronbach's alpha for variables with few questions. Composite Reliability (CR), introduced by Werts et al. (1974), is superior to Cronbach's

alpha in that the reliability of structures is calculated not absolutely but based on the correlation of their structures with each other. If the composite reliability value for each structure exceeds 0.70, it indicates internal reliability for measurement models, and a value less than 0.60 indicates a lack of reliability. Fornell and Larcker (1981) introduced the Average Variance Extracted (AVE) measure for assessing convergent validity and stated that the critical value is 0.50. Wagner et al. (1996) considered a value above 0.40 for AVE to be sufficient. In Table 2, the value of this coefficient is presented for each of the structures. This index ranges from 0 to 1, with values above 0.40 accepted.

Table 2

Fornell and Larcker Table

	Entrepreneurial Behavior	Entrepreneurial Competence	Entrepreneurial Management
Entrepreneurial Behavior	0.655		
Entrepreneurial Competence	0.595	0.676	
Entrepreneurial Management	0.573	0.650	0.758

As observed in Table 2, the square root of the AVE values of the constituent variables in the present study, placed in the main diagonal cells of the matrix, is greater than the correlation between them, which is placed in the lower left cells, indicating a satisfactory fit of the measurement models in terms of discriminant validity.

Several criteria are used to examine the fit of the structural model of the research, the first and most fundamental criterion being the significant Z-value coefficients. The fit of the structural model using t-values is such that these coefficients must be greater than 1.96 to be significant at the 95% confidence level. If the t-value exceeds 1.96, the path coefficient is significant at the 95% confidence level, and if the t-value exceeds 2.58, the path coefficient is significant at the 99% confidence level.

R-squared (R²) is a measure used to connect the measurement section and the structural section of structural equation modeling, indicating the influence of an exogenous variable on an endogenous variable. It is essential to note that the R-squared value is only calculated for dependent (endogenous) constructs, and for exogenous constructs, this

value is zero. The higher the R² value for endogenous constructs in a model, the better the model fit. Chin (1998) considers values of 0.19, 0.33, and 0.67 as benchmarks for weak, moderate, and strong fit of the structural part of the model using the R-squared criterion. In this study, the determination coefficients for entrepreneurial behavior and entrepreneurial competence were 0.328 and 0.496, respectively, indicating their adequacy.

Predictive quality (Q²) determines the predictive power of the model. Models with acceptable structural fit should be able to predict indicators related to endogenous constructs of the model. Henseler et al. (2009) defined values of 0.02, 0.15, and 0.35 to demonstrate weak, moderate, and strong predictive power for constructs or their exogenous constructs. It is essential to mention that this value is only calculated for endogenous constructs of the model with reflective indicators. In this study, the Q² values for entrepreneurial behavior and entrepreneurial competence were 0.132 and 0.203, respectively, indicating their adequacy.

Table 3*Hypothesis Testing Results*

Row	Hypotheses	Path Coefficient	t-value	p-value	Significance Level	Test Result
1	Entrepreneurial Behavior -> Entrepreneurial Competence	0.332	3.776	0.000	0.05>	Accepted
2	Entrepreneurial Management -> Entrepreneurial Behavior	0.573	13.286	0.000	0.05>	Accepted
3	Entrepreneurial Management -> Entrepreneurial Competence	0.460	9.839	0.000	0.05>	Accepted
4	Entrepreneurial Management -> Entrepreneurial Behavior -> Entrepreneurial Competence	0.190	6.485	0.000	0.05>	Accepted

Structural fit is assessed using t-values, where these values must be greater than 1.96 to confirm their significance at the 95% confidence level. However, it should be noted that t-values only indicate the accuracy of relationships, and their magnitude does not measure the strength of the relationship between constructs. Path coefficients also indicate the positive or negative effect of one variable on another. As observed in Table 3, the research hypotheses were confirmed.

4 Discussion and Conclusion

This study aimed to investigate the impact of entrepreneurial management on entrepreneurial competence, focusing on the role of entrepreneurial behavior in small and medium-sized enterprises (SMEs). Particularly, this study demonstrates that start-ups and entrepreneurs effectively managed can somewhat enhance entrepreneurial competence, while the improvement of the respective institutions has a greater impact on their competence. Thus, according to the findings of the conducted research, there is evidence of significant and positive effects of entrepreneurial management and entrepreneurial behavior on entrepreneurial competence in SMEs.

In examining the first hypothesis of the study, a path coefficient of 0.332 was obtained, and considering the t-statistic (3.776) at the 99% confidence level, the effect of entrepreneurial behavior on entrepreneurial competence was found to be positive and significant, confirming this hypothesis. The result of the first hypothesis indicates that a higher level of entrepreneurial behavior leads to the growth and development of entrepreneurial competence. The results of this study regarding the first hypothesis are consistent with the study by Zhu et al. (2023) {Zhu, 2023 #15756}. Similarly, in investigating the second hypothesis, a path coefficient of 0.573 was obtained, and considering the t-statistic (13.286) at the 99% confidence level, the effect of entrepreneurial management on entrepreneurial behavior

was found to be positive and significant, confirming this hypothesis. The result of the second hypothesis suggests that a higher level of entrepreneurial management leads to the growth of entrepreneurial behavior. The results of the second hypothesis also align with the study by Zhu et al. (2023). In examining the third hypothesis, a path coefficient of 0.460 was obtained, and considering the t-statistic (9.839) at the 99% confidence level, the effect of entrepreneurial management on entrepreneurial competence was found to be positive and significant, confirming this hypothesis. The result of the third hypothesis indicates that a higher level of entrepreneurial management contributes to the growth and development of entrepreneurial competence {Zhu, 2023 #15756}.

As observed in the findings section, with regard to the examination of the mediating hypothesis of the study, which assessed the mediating effect of entrepreneurial behavior on the relationship between entrepreneurial management and entrepreneurial competence, this variable significantly mediates this relationship indirectly. It can be stated that the effect of entrepreneurial management on entrepreneurial competence is positively and significantly mediated by entrepreneurial behavior. Therefore, increasing entrepreneurial management and entrepreneurial behavior leads to an enhancement in entrepreneurial competence in SMEs, which is consistent with the prior studies {Zhu, 2023 #15756}.

When the institutional environment and related systems improve, employee competence significantly increases with the assumption of actively implementing intellectual initiatives. Managers play a crucial role in improving the quality of staff training and accelerating innovation and entrepreneurship development. They are also perceived as visionary, risk-taking, active individuals, social change agents, with a social motivation, and possessing opportunism and innovation. Studies demonstrated that entrepreneurial competence is influenced by various internal and external factors, especially the managerial atmosphere

and relevant regulations within the institution {Zhu, 2023 #15756}. The environmental decision-making theory, which claims that the environment has an absolute and unique influence on people, has received different reviews from researchers. However, entrepreneurial institutions' managers must create a facilitating environment to ensure that by allowing employees to express themselves freely, supporting their efforts, encouraging them to take risks, and motivating them for responsibility, conditions improve.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Authors Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Ethics principles

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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