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Influence of Technical (Hard Skills) and Behavioral (Soft Skills) on Entrepreneurial Success: The Case of Tunisian SMEs

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Imen Kammoun[1], Anis Jarboui[2]

Abstract:

Purpose : *This study aims to rigorously and comprehensively assess the critical influence of entrepreneurial skills—both technical and behavioral—on business performance and sustainability. Focusing on the Tunisian context, it seeks to provide robust evidence demonstrating that developing these skills is an essential strategic lever for ensuring entrepreneurs' success and competitiveness in a highly competitive economic environment.*
Design/Methodology/Approach: *This study is based on a comprehensive literature review to identify key entrepreneurial skills influencing business performance. Empirically, a quantitative survey was conducted using a structured questionnaire administered to a sample of 131 Tunisian entrepreneurs. The collected data were analyzed using SPSS version 26, employing Principal Component Analysis (PCA) to reduce variable dimensionality, followed by linear regression to examine the relationship between entrepreneurial skills—both technical and behavioral—and entrepreneurial performance.*
Findings: *The data analysis reveals a significant positive correlation between entrepreneurial skills—both technical and behavioral—and business performance. Entrepreneurs possessing these skills achieve better outcomes in terms of growth, profitability, and sustainability. These findings confirm the importance of entrepreneurial skills in fostering business success, particularly within the Tunisian economic context studied.*
Practical Implications: *These findings emphasize the importance of enhancing entrepreneurial skills to boost business performance. They form the foundation for a practical guide designed for entrepreneurs, helping them develop both technical and behavioral skills. Such targeted efforts contribute to increasing the resilience and competitiveness of businesses, especially in the Tunisian context.*
Originality/Value: *This study offers an original contribution by enhancing the understanding of entrepreneurial skills within a relatively underexplored context—the Tunisian environment. It proposes an integrated approach to both technical and behavioral skills, highlighting their key role in business performance. Furthermore, this work enriches the existing scientific literature on the topic, thereby reinforcing its relevance for researchers and domain specialists.*

[1]*Dr., Department of Management, University of SFAX, Tunisia,*
e-mail: imenkammoun815@yahoo.fr;
[2]*Professor of Finance and Accounting at the University of Sfax, Tunisia,*
e-mail: anisjarboui@yahoo.fr;

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1. Introduction

Small and medium-sized enterprises (SMEs) are a fundamental lever for job creation, innovation, and economic development (Mago and Modiba, 2022). Indeed, small and medium-sized enterprises (SMEs) are recognized as key drivers of economic growth, innovation, and job creation in both developed and developing countries (Paul and Kazaara, 2023).

In emerging economies, SMEs constitute a fundamental pillar, contributing up to 40% of the national gross domestic product (GDP) (World Bank, 2022). Tunisia perfectly illustrates this trend: SMEs now represent more than 90% of the economic fabric (Ben Youssef, 2025), compared to just over 80% in 2021 (INS, 2021). Furthermore, Tunisian SMEs represent a key driver of job creation: in the first quarter of 2025, they generated 3.568.900 jobs (INS, 2025), compared to only 1.087.000 in the first quarter of 2021 (INS, 2021). These figures confirm the remarkable rise of SMEs as key players in economic and social development in Tunisia.

In this context, entrepreneurs are called upon to carry out their projects in order to stimulate economic growth in a world dominated by technological advances (Marseno and Muafi, 2021). In this context, as agents of economic change, entrepreneurs must mobilize skills that involve knowledge, attitudes, and behaviors that enable the evolution of sustainable structures (Yustian *et al.,* 2021; Trisnawati and Darsana, 2021), whether technical or behavioral (Podolchak *et al.,* 2024). Today, entrepreneurial success depends on a balance between technical skills and behavioral skills in order to adapt to changes in the constantly evolving environment (Rodríguez-Jiménez *et al.,* 2021).

In the entrepreneurial field, technical skills (hard skills) refer to knowledge, processes and techniques (Pereira *et al.,* 2019; Rasid *et al.,* 2018, Gale *et al.,* 2017) while behavioral skills (soft skills) refer to the abilities that help entrepreneurs

manage themselves and collaborate effectively with others (Dell'Aquila *et al.,* 2017) in order to improve their professional performance (Muñoz-Peña and Pulido-Reina, 2025).

The literature on entrepreneurial skills, particularly technical and behavioral skills, remains underdeveloped in light of the importance of this concept. Based on this observation, we formulate the following problem: how do technical and behavioral entrepreneurial skills determine the success of small and medium-sized enterprises in Tunisia?

This article aims to address the impact of entrepreneurial skills (technical and behavioral) on the performance of Tunisian SMEs based on a survey carried out among 131 managers of small and medium-sized enterprises located in the regions of Sfax and Tunis.

First, a literature review will highlight the crucial role of these skills in entrepreneurial success. Next, a methodological approach based on PCA and linear regression will be used to empirically assess this relationship within the Tunisian entrepreneurial fabric. Finally, the results obtained through the use of SPSS 26 software will help identify concrete managerial implications for the sustainability of the SMEs in question.

2. Literature Review

2.1 Theoretical Framework

The Resource-Based View (RBV) theory, developed by Barney (1991), provides a robust theoretical framework for explaining SME performance. According to this theory, firms can achieve sustainable competitive advantage by exploiting valuable, rare, difficult-to-imitate, and irreplaceable resources (Barney, 1991; Grant, 1996). Among these resources, there are entrepreneurial skills – technical (hard skills) and behavioral (soft skills) – which are considered as intangible strategic assets essential to organizational success (Podolchak *et al.,* 2024).

Indeed, technical skills make it possible to optimize operational processes and increase productivity (Chandler and Jansen, 1992; Laviolette and Loue, 2007; Nkakleu *et al.,* 2013) while behavioral or interpersonal skills – notably emotional intelligence – strengthen internal cohesion and promote collaboration, which improves the success of the company (Goleman, 1998; Yukl, 2013; Muñoz-Peña and Pulido-Reina, 2025).

Therefore, the combination of these two types of skills (technical and behavioral) generates a synergistic effect that increases the competitiveness of SMEs and ensures their long-term sustainability (Podolchak *et al.,* 2024; Grant, 1996; Teece, 2018).

2.2 Entrepreneurial Skills: Hypothesis Development

Competence is defined by the Merriam-Webster dictionary (2023) as the ability to effectively mobilize one's knowledge to accomplish a task and achieve performance. Boyatzis (1982) identifies it as a set of knowledge, behaviors, and skills essential to any success. In the field of entrepreneurship, entrepreneurial skills refer to the set of commercial, technical, and personal abilities that an entrepreneur develops to effectively create and manage a business (Ademiluyi, 2017).

According to Rajendra Prasad (2022), entrepreneurs are distinguished by intrinsic skills that enable them to launch, manage, and succeed in their entrepreneurial activity (Gunawan, 2024). Indeed, Ikegbusi and Eziamaka (2016) emphasize that entrepreneurial skills are essential for planning, organizing, coordinating, recruiting, controlling, and making strategic decisions; they therefore play a direct role in the fulfillment of managers' missions and the achievement of organizational objectives.

Other authors emphasize that entrepreneurial skills help entrepreneurs identify and analyze opportunities, accurately assess risks, and understand the various factors that influence their environment (Albanus *et al.,* 2022 ; Norena-Chavez and Thalassinos, 2022a ; 2022b). These skills enable them to adopt appropriate strategies and make informed decisions.

However, individuals lacking these skills often encounter difficulties in complex situations because they lack the necessary tools to manage them effectively. On the other hand, competent entrepreneurs not only know how to face these challenges, but also overcome them successfully, which promotes the sustainability and growth of their businesses (Mwangi, 2020).

Furthermore, entrepreneurial skills promote business success in a competitive environment while mobilizing abilities such as resource management, decision-making, and leadership (Al-Madhoun and Analoui, 2022). Therefore, entrepreneurs must imperatively develop their entrepreneurial skills to better manage their businesses and thus improve the performance and sustainability of SMEs (*Kisubi et al.,* 2022).

Several studies have highlighted the relationship between these entrepreneurial skills and organizational performance (Srilekh and Kapoor, 2023; Sukriani *et al.,* 2023; Man, 2001; Alam *et al.,* 2016). Indeed, Mitchelmore and Rowley (2013) emphasize that business success relies on a combination of personal contacts, managerial skills, entrepreneurial capacity, and human relations. Thus, a competent entrepreneur is one who possesses a combination of technical and behavioral skills that improves business results and performance (Rehman *et al.,* 2021).

Consequently, the combination of technical and behavioral skills enables entrepreneurs to achieve operational performance while also mobilizing their teams

(Okoro and Okeke, 2022). Thus, technical (hard) and behavioral (soft) skills, although different, complement and reinforce each other, forming an essential lever for SME performance (Podolchak *et al.,* 2024).

2.2.1 Hard skills and entrepreneurial success

Hard skills refer to specialized knowledge, analytical skills, and the use of tools specific to a discipline (Annet *et al.,* 2023). Furthermore, Lyu and Liu (2021) present technical skills as specific, concrete, and measurable abilities necessary to accomplish specific tasks. In the field of entrepreneurship, hard skills refer to technical entrepreneurial skills, which designate the technical knowledge and skills of entrepreneurs essential to the success of their projects (Papulová, 2007; Chandler and Jansen, 1992).

Furthermore, Pereira *et al.* (2019) emphasize that technical skills refer to the set of skills specific to a given professional field, allowing an individual to effectively accomplish specific tasks. Indeed, they encompass the ability to apply established procedures as well as the skills necessary for the operational management of specific activities. These skills are essential to ensure the quality of work and the proper execution of operations.

Consequently, entrepreneurs must improve these skills through learning sessions, hence the need for constant investment in technical training to improve operational efficiency and reduce waste (Onwuegbuzie and Ezeani, 2022). Indeed, this training allows for tasks to be performed with greater precision and resources to be used optimally.

This helps limit errors, increase productivity, and strengthen the performance of SMEs. The authors emphasize that these effects are particularly beneficial in uncertain economic contexts. They therefore recommend that public authorities financially support skills development programs to strengthen competitiveness and entrepreneurial sustainability.

This research mobilizes three key skills, namely entrepreneurial, managerial and technical skills (Chandler and Jansen, 1992; Laviolette and Loue, 2007). Indeed, Chandler and Jansen (1992) emphasize that entrepreneurial skills include the ability to anticipate and identify opportunities in order to realize business creation.

According to Al-Madhoun and Analoui (2022), these skills designate the technical knowledge essential to the fulfillment of responsibilities and which promote optimal professional performance. In addition, Al-Madhoun and Analoui (2022) define managerial skills as technical knowledge necessary for the execution of managerial responsibilities and the achievement of SME performance (Ibrahim and Abdullahi, 2023; Onwuegbuzie and Ezeani, 2022).

Finally, technical skills include technical knowledge, analytical skills, and mastery of tools, methods, and processes specific to a given sector (Polycarp *et al.,* 2023), which play a decisive role in the effective management and performance of SMEs (Christopher *et al.,* 2022).

Several studies have explored the relationship between entrepreneurial skills and business performance (Chandler and Jansen, 1992; Chandler and Hanks, 1994; Man *et al.,* 2008; Laviolette and Loue, 2007; Nkakleu *et al.,* 2013a). We adopted the model presented by Chandler and Jansen (1992), which identifies three key dimensions of skills necessary for entrepreneurial success: entrepreneurial, managerial, and technical-functional skills (Laviolette and Loue, 2007).

This approach emphasizes concrete, technical, and action-oriented skills. More recently, Shabbir *et al.* (2016) have enriched this model by integrating behavioral skills (Luppi and Bolzani, 2019). Shabbir *et al.* (2016) show that soft skills are essential for entrepreneurial success and must be constantly developed (Chaker and Jarraya, 2021), especially in constantly changing environments (Poláková *et al.,* 2023).

In a complex world, success depends on a balance between technical skills and behavioral skills essential for adapting to environmental changes (Rodríguez-Jiménez et al., 2021). Therefore, both hard and soft skills are essential to ensure the smooth operation and sustainable performance of businesses (Smith and Johnson, 2022).

2.2.2 Soft skills and entrepreneurial success

Soft skills are also called social, interpersonal, or emotional intelligence (Matteson *et al.,* 2016), referring to skills, abilities, personality traits, and behaviors other than technical knowledge (Khanom, 2021). Thus, these behavioral skills encompass personal qualities such as: communication, team spirit and also emotional intelligence (Martins *et al.,* 2020) crucial in the professional world (Dell'Aquila *et al.,* 2017). Therefore, behavioral or soft skills are essential to exercise effective leadership within a company (Gruber *et al.,* 2022).

Behavioral skills, including emotional intelligence (self-awareness, self-management, motivation, empathy, and social competence), positively affect entrepreneurial success (Goleman, 1998). Indeed, business success depends on self-awareness, which helps entrepreneurs recognize their own emotions (da Silva, 2022), self-control, which helps manage and control our emotions (Shafiq and Rana, 2016), motivation, which stimulates initiative (Shafiq and Rana, 2016), empathy, which consists of managing the emotions of others (Ellouze and Louati, 2017), and social competence, which helps manage interpersonal relationships (Ellouze and Louati, 2017).

Therefore, these behavioral skills (soft skills) promote entrepreneurial performance (Muñoz-Peña and Pulido-Reina, 2025; Tahri and Al Maache, 2023). Unlike technical skills, which mainly involve abstract reasoning, behavioral skills are interpersonal and intrapersonal abilities that affect business success (Goleman, 1998). These skills enable individuals to adapt effectively and flexibly to various social contexts, which is essential in complex and constantly changing environments (Polaková *et al.,* 2023).

Mwita *et al.* (2023) showed that, in a constantly changing professional environment, mastering soft skills is now essential for meeting the complex demands of the labor market. They constitute a decisive lever for the adaptability, performance, and sustainability of career paths, particularly in a context marked by instability, rapid innovation, and constant transformation of professions. Faced with these upheavals, behavioral skills (soft skills) are now emerging as a key success factor for both individuals and organizations.

In recent years, numerous studies have demonstrated and confirmed the existence of a positive link between emotional intelligence and entrepreneurial success. They emphasize that managers who demonstrate high emotional intelligence achieve significant results in their professional environment (De-Esteban-Escobar *et al.,* 2025; Khattabi and El Amili, 2024; Tahri and Al Maache, 2023; Elghazi and Cherkaoui, 2021; Goleman, 2021; Lee and Kim, 2020).

3. Research Methodology

Based on the literature, we develop this model that presents entrepreneurial performance as the dependent variable, while technical (hard) and behavioral (soft) skills represent the independent variables. This model draws on the research of Chandler and Jansen (1992) to measure technical skills, while Goleman's (1998) model is used to measure behavioral skills in order to determine the impact of these two types of skills on entrepreneurial success.

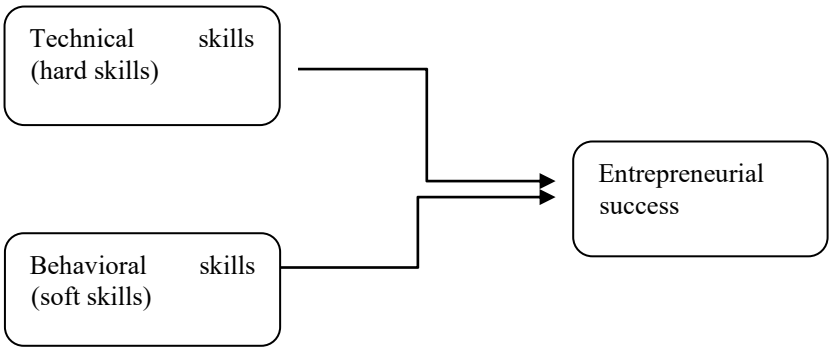
We predict two hypotheses:

H1.1: Technical (hard) skills positively affect entrepreneurial success.
H1.2: Behavioral (soft) skills positively affect entrepreneurial success.

This study is based on a quantitative empirical approach, with the primary objective of testing the hypotheses formulated within the framework of the proposed conceptual model. To this end, data were collected using a structured questionnaire, in accordance with the methodology recommended by Evrard *et al.* (2009). This questionnaire was administered to a targeted sample, selected according to specific criteria to ensure the relevance and reliability of the information obtained.

The survey was conducted among 131 managers of small and medium-sized enterprises (SMEs) located in the Sfax and Tunis regions using a non-probability sampling method (Giannelloni and Vernette, 2001). This type of method was chosen to directly target individuals affected by the issue under study in order to provide relevant and reliable responses.

Figure 1. *Conceptual Research Model*



Source : *Authors' model*

The questionnaire, a classic data collection tool in management science (Evrard *et al.,* 2009), was distributed in person and online to facilitate access to respondents and optimize the response rate. The questions were formulated using a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"), allowing participants' level of agreement to be measured in a simple and structured manner.

In this research, the data were analyzed using SPSS version 26 software. The validity and reliability of the items were verified using PCA to test the internal consistency of the scales (Evrard *et al.,* 2009). In addition, simple and multiple linear regressions then tested the relationships between variables in accordance with the hypotheses. Simple regressions assessed the effect of each variable independently, while multiple regressions examined their combined influence. These analyses made it possible to verify the validity of the hypotheses formulated.

4. Results

4.1 Exploratory and Reliability Analyses

Exploratory data analysis was conducted using SPSS software (version 26) to assess the psychometric validity of the measurement scales used in our conceptual model. The results are shown in Table 1:

✓ The Kaiser-Meyer-Olkin (KMO) index coefficients are greater than 0.6. Furthermore, Bartlett's test of sphericity is significant (Evrard *et al.,* 2009). We can conclude that our model is statistically factorizable.

✓ Cronbach's alpha coefficients exceed 0.6 (Evrard *et al.,* 2009) and even reach values greater than 0.7. These results confirm the internal consistency of the items and confirm the reliability of the measurement instruments.

Table 1. *Results of the exploratory analysis*

The variables	Number of items	KMO	Cronbach's Alpha
Entrepreneurial Success	4	.736	.789
Technical Skills (hard skills)	3	.711	.887
Behavioral Skills (soft skills)	5	.669	.775

Source: *Authors' calculations.*

4.2 Simple Linear Regression

We will then present the results of the simple linear regression, which allows us to rigorously assess the direct influence exerted by the independent variable (X) on the dependent variable (Y), according to the data summarized in Table 2.

Table 2. *Simple Regression Results*

Hypotheses Standardized	Standardized coefficient (β)	R^2	t of Student	Sig.	Fisher test	Sig.
H1.1	.842	.708	17.698	.000	313.208	.000
H1.2	.754	.569	13.048	.000	170.247	.000

Source: *Authors' calculations.*

Table 2 shows us that the coefficient of determination R^2 of the variable H1.1 is equal to .708. Indeed, our independent variable contributes to explaining 70.8% of the variance of the dependent variable. In addition, the Fisher test value is equal to 313.208 ($p<0.05$); therefore the model is globally significant.

Table 2 also shows us that "technical entrepreneurial skills (hard skills)" have a positive and significant effect on "Entrepreneurial success" with (β= .842; Student's t= 17.698 ($p<0.05$)). These results confirm that the relationship between technical entrepreneurial skills (hard skills) and entrepreneurial success is positive and significant. Therefore, we can deduce that hypothesis H1.1 is verified.

In addition, the results in Table 2 shows us that the coefficient of determination is satisfactory for the explanatory variable H1.2 (R^2= .569). In addition, the value of F is equal to 170.247 ($p<0.05$) ; therefore, the model is globally significant. This Table also shows us that "entrepreneurial skills Behavioral skills (soft skills)" have a positive and significant effect on "Entrepreneurial success" with (β = .754; Student's t = 13.048 ($p < 0.05$)).

These results show that the relationship between behavioral entrepreneurial skills and entrepreneurial success is positive and significant. Therefore, we can conclude that hypothesis H1.2 is supported. After performing the simple regression to examine the individual significance of the model, we will move on to multiple regression to test the overall significance of the model.

4.3 Multiple Linear Regression

The results from the multiple linear regression are presented in Table 3.

Table 3. *Multiple Regression Results*

Variables	**Standardized coefficients (ß)**	**t Student**	**Sig.**
Technical skills (hard skills)	.527	7.194	.000
Behavioral skills (soft skills)	.344	4.696	.000
Correlation (R)= .806			
Coefficient (R^2)= .650			
Fisher's F coefficient = 118.802 (sig=.000)			

Source: *Authors' calculations.*

5. Discussion of Results

The results show that entrepreneurial skills (H1) positively and significantly affect entrepreneurial success (H.1: $\beta = 0.806$, $T>1.96$, $p<0.05$). This demonstrates that entrepreneurial skills are crucial for business success. Numerous studies show that competent leaders excel through their ability to generate superior performance in their professional environment (Al-Madhoun and Analoui, 2022; Ezenwafor and Onokpaunu, 2017; Nkakleu *et al.,* 2013a; Laviolette and Loue, 2007; Chandler and Jansen, 1992).

Furthermore, the analysis shows that technical entrepreneurial skills (hard skills) (H1.1) and behavioral entrepreneurial skills (soft skills) (H1.2) play a decisive role in entrepreneurial success. The results in the table above show that the impact of hard entrepreneurial skills (H1.1) on entrepreneurial success is positive and significant ($\beta = .527$, $T>1.96$, $p<0.05$).

Therefore, we can deduce that technical entrepreneurial skills (entrepreneurial skills, managerial skills, functional skills) positively affect the performance of Tunisian companies.

The study conducted by Chandler and Jansen (1992) with 134 SME founders shows that the skills (entrepreneurial, managerial, and technical) of managers play a decisive role in the performance of their companies. Indeed, these skills constitute the technical variables of this work presented according to a technical approach

oriented towards the practical aspect (Laviolette and Loue, 2007). Indeed, entrepreneurial skills bring together technical knowledge used to bring a project to fruition (Chandler and Jansen, 1992) and which are essential for better management and business success (Gunawan, 2024).

Furthermore, managerial skills enable leaders to overcome challenges and boost their companies' performance (Ahya *et al.,* 2021). Finally, technical skills help improve quality and optimize processes to strengthen business performance (Polycarp *et al.,* 2023).

Thus, the results of Nkakleu *et al.* (2013a) show that entrepreneurial skills, structured along three dimensions, in line with the Chandler and Jansen (1992) model, contribute significantly to organizational performance. Therefore, we can deduce that entrepreneurs' technical skills positively affect the performance of their businesses (Podolchak *et al.,* 2024; Jollet, 2024; Christopher *et al.,* 2022; Pratama *et al.,* 2022; Olajide and Afolabi, 2021).

The results also show that the impact of behavioral entrepreneurial skills (H.1.2) on entrepreneurial success is positive and significant ($\beta = .344$; $T>1.96$, $p<0.05$). Therefore, behavioral skills (soft skills), presented by emotional intelligence in our work, positively affect the performance of Tunisian companies.

The study conducted by Goleman (1998) showed that emotional intelligence (self-awareness, emotion management, motivation, empathy, and social skills) positively affects organizational performance.

Indeed, entrepreneurial success depends on the ability of entrepreneurs to recognize their own emotions (da Silva, 2022), to manage them effectively (Afouda and Sogbossi, 2018), their motivation (Shafiq and Rana, 2016), their ability to decode and regulate the emotions of others (Ellouze and Louati, 2017) and their ability to build and maintain strong and effective interpersonal relationships (Afni and Amar, 2019; Jansen *et al.,* 2023).

The results of the study conducted by Tahri and Al Maache (2023) clearly demonstrate that emotional intelligence is a strategic lever for SME performance. Indeed, the ability to effectively manage personal emotions, combined with quality interpersonal communication, strengthens organizational effectiveness. Consequently, these skills are emerging as determining factors in the success and sustainability of small and medium-sized enterprises.

Consequently, we can deduce that behavioral skills, particularly emotional intelligence, effectively regulate the emotions of entrepreneurs and their teams, thereby promoting business success (De-Esteban-Escobar *et al.,* 2025; Muñoz-Peña and Pulido-Reina, 2025; da Silva, 2024, Tahri and Al Maache, 2023; Chen *et al.,* 2021; Lee and Kim, 2020).

In summary, it is clear that the complementarity between technical skills (hard skills) and behavioral skills (soft skills) constitutes an essential lever for entrepreneurial performance. Indeed, this alliance ensures operational excellence and also collective commitment in order to achieve entrepreneurial performance (Smith and Johnson, 2022; Teece, 2018).

Although distinct, these skills frequently intersect and reinforce each other in different contexts. Therefore, their combination constitutes a determining factor for professional success (Podolchak *et al.,* 2024).

6. Conclusion

This study focused on the major influence of entrepreneurial skills on the performance of SMEs in Tunisia. Indeed, this work enriches the limited number of research studies on the link between entrepreneurial skills (hard and soft skills) and entrepreneurial performance, particularly in Tunisia. To analyze this relationship, we used principal component analysis (PCA) as well as simple and multiple regression models. The results revealed that entrepreneurial skills, both technical and behavioral, have a positive effect on the performance of Tunisian SMEs.

However, the limited sample size is a major obstacle to generalizing the results to a larger population. Furthermore, the failure to consider other key success factors also represents a significant limitation, preventing us from gaining a comprehensive and nuanced view of the conditions for entrepreneurial success.

To strengthen this research, it is essential to integrate other key factors likely to influence entrepreneurial success in order to gain a more in-depth understanding of the key determinants of performance.

Furthermore, longitudinal studies are necessary to track the evolution of entrepreneurial skills and their impact on business sustainability. Comparative analyses between companies of different sizes and operating in diverse cultural contexts are also necessary to reveal disparities in their influence on entrepreneurial success.

On the managerial level, the contribution of our work highlights the need for organizations to rethink their skills development strategies, by simultaneously integrating hard and soft skills to support innovation, competitiveness and the sustainability of companies in a digital environment.

Faced with the rapid acceleration of digitalization and the profound transformations in the professional world, it is imperative to implement regular training for entrepreneurs to specifically strengthen their skills (hard and soft skills).

In an unstable and demanding environment, this training is not simply a lever for improvement, but a crucial condition for business sustainability.

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