Revue Internationale des Sciences de Gestion
ISSN: 2665-7473
Volume 8 : Numéro 1

Absorptive Capacity, Innovation and Performance in Moroccan Small and Medium-sized Enterprises

Capacité d'Absorption, Innovation et Performance dans les Petites et Moyennes Entreprises Marocaines

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Date submitted: 16/01/2025

Date of acceptance : 02/02/2025

To cite this article :

BOUGADIR H. & ZAHIR M. (2025) « Absorptive Capacity, Innovation and Performance in Moroccan Small and Medium-sized Enterprises », Revue Internationale des Sciences de Gestion « Volume 8 : Numéro 1» pp : 827 - 848

Abstract:

Given the scarcity of their resources, small and medium-sized enterprises (SMEs) are very sensitive to the effects of globalization and the rapid advancement of technology. Moreover, their internal knowledge is insufficient to enable them to achieve commercial performance, innovate, and survive. They must, therefore, imperatively seek external information. However, the development of dynamic capabilities and the capitalization on the opportunities offered within their environment to innovate, depend largely on their absorptive capacity. The objective of this article is to verify this postulate through empirical research using a qualitative approach based on a multiple case study. The aim is to examine how the five key components of absorptive capacity—recognition, acquisition, assimilation, transformation, and exploitation of knowledge— contributes to innovation, and therefore enhance performance, in the context of Moroccan SMEs. This study's findings can serve as a valuable resource for policymakers and organizations seeking to foster the growth and development of these enterprises. By identifying best practices and potential barriers to innovation, this research provides insights that can inform strategies for supporting SME success.

Keywords: Knowledge; Absorptive capacity; Innovation; Performance; SMEs

Résumé :

Compte tenu de la rareté de leurs ressources, les petites et moyennes entreprises (PME) sont sensibles aux effets de la mondialisation et à l'avancement rapide de la technologie. En outre, leurs connaissances internes sont insuffisantes pour leur permettre d'atteindre la performance commerciale, d'innover et de survivre. Elles doivent donc impérativement rechercher des informations externes. Cependant, le développement des capacités dynamiques et la capitalisation sur les possibilités offertes au sein de leur environnement pour innover dépendent en grande partie de leur capacité d'absorption. L'objectif de cet article est de vérifier ce postulat à travers des recherches empiriques moyennant une approche qualitative basée sur une étude de cas multiple. La finalité est d'examiner comment les cinq composantes clés de la capacité d'absorption — reconnaissance, acquisition, assimilation, transformation et exploitation des connaissances — contribuent à l'innovation, par conséquent à l'amélioration de la performance, dans le contexte des PME marocaines. Les résultats de cette étude peuvent constituer une ressource précieuse pour les décideurs politiques et les organisations souhaitant favoriser la croissance et le développement de ces entreprises. En identifiant les meilleures pratiques et les obstacles potentiels à l'innovation, cette recherche fournit des éléments d'analyse qui peuvent éclairer les stratégies de soutien à la réussite des PME.

Mots clés : Connaissance ; Capacité d'absorption ; Innovation ; Performance ; PME

Introduction

In the modern global economy, knowledge represents a critical resource to create value and to develop and sustain competitive advantages (Teece & al., 1997). Effective knowledge management allows the enhancement of operational efficiency, productivity, and quality, enabling the provision of new solutions to client requirements (Donate & Sánchez De Pablo 2015; Hammami & Bouzguenda, 2024). Nevertheless, the continuously evolving technological and competitive environment complicates a firm's capacity to maintain self-sufficiency in knowledge creation (Camisón & Forés, 2010). While internal knowledge is valuable, it is not enough to guarantee optimal innovation capacity. Therefore, firm must actively explore the external environment in order to benefit from its new and relevant knowledge (Audretsch & Belitski, 2024; Chesbrough & al., 2006; Lazzarotti & Manzini, 2009; Medase & Abdul-Basit, 2020).

In this context, recent studies (Audretsch, Belitski, Caiazza & Phan, 2023; Kondo & Papanikolaou, 2021; Kraus & al., 2021; Nguyen, Natoli, & Divisekera, 2021) indicate collaboration as a crucial mechanism for enhancing growth and productivity. However, it is not devoid of limitations. Audretsch and Belitski (2024) highlight the need for a balance between investing in internal knowledge and building external collaborative knowledge networks. Due to the critical importance of external knowledge resources, absorptive capacity has emerged as one of the most significant constructs in the last twenty years (Thomas & Wood, 2015). This concept, defined as a firm’s ability to recognize, assimilate, and apply external knowledge, is pivotal for the development and enhancement of dynamic capabilities (Cohen & Levinthal, 1990; Zahra & George, 2002).

Several studies have established a positive relationship between absorptive capacity and innovation capacity (Ali & al. 2016; Engelman & al. 2017; Enkel & al. 2017). Nevertheless, Cepeda-Carrion, Cegarra, and Jimenez-Jimenez (2012) noticed that a company's innovation potential is associated not only with its absorptive capacity but also with its ability to discard obsolete knowledge and outdated practices. A higher innovation expenditure is positively related to firm performance (Emodi, Murthy, Emodi, & Emodi, 2017).

Innovation serves as a mechanism by which organizations may generate value and attain higher performance, making a scientific study of the subject relevant. In this sense, some authors (e.g.,

Ali, Bahadur, Wang, Luqman, & Khan, 2020; Duong, 2020; Liang et al., 2018; Strom-Andersen, 2020) have examined the connection among absorptive capacity, innovation, and performance in various industries but mainly focused on large companies. There exists a notable gap in the comprehension of these intersections in small and medium-sized enterprises. In emerging economies, many SMEs are technologically backward, hence the importance of absorptive capacity and the adoption of innovation (Nagano, Stefanovitz, & Vick, 2014). The variation in the characteristics of SMEs presents a compelling subject for further analysis (Prakasa, Sujoko, Aziz & Muttaqin, 2022).

An exploratory qualitative approach through multiple case studies seems the most appropriate for deepening the concept of absorptive capacity in the context of Moroccan SMEs. Our objective is to understand how these companies acquire, assimilate, transform, and exploit external knowledge to stimulate innovation and improve their performance. The central question of this research is: *How does the ability of Moroccan SMEs to recognize, acquire, assimilate, transform, and exploit external knowledge contribute to their innovation adoption processes and, consequently, to their performance?*

To improve our understanding of this complex process, we surveyed two Moroccan SMEs in the textile and clothing industry. We facilitated data collection by using semi-structured interview guides addressed to the general director, technical director, commercial manager, and financial director. We complete the interviews by combining non-participant observation and secondary data.

This paper is structured as follows: First, we provide a literature review. Next, we describe the methodology and data sources employed in this study. We then analyze the empirical results, highlighting the key findings and comparing them with existing literature. Finally, the conclusion summarizes the study's contributions, discusses its limitations, and proposes directions for future research.

1. Literature Review

1.1. Resource Based-View

Penrose's (1959) contributions extend well beyond the concept of firm 'growth' (Michie & Oughton, 2024). Penrose (1959) presents a theory regarding the effective management of a firm's resources, productive opportunities, and diversification strategy. Wernerfelt (1984), Barney (1991), and other scholars have further explored it, leading to the development of the

resource-based view (RBV), which has become the predominant framework for understanding economic rent in management literature (Varadarajan, 2020).

The core of the Resource-Based View (RBV) is that resource heterogeneity, whether owned or accessible by a firm, serves as the primary determinant of variations in firm performance (Barney, 1991; Peteraf, 1993). The RBV posits that firms exhibit heterogeneity based on their resource possession and their capabilities to manage and innovate with these resources, thereby capitalizing on environmental opportunities (Peteraf, 1993; Kor & Mahoney, 2000, 2004; Safari & Saleh, 2020).

A firm with resource heterogeneity and the capability to manage these resources innovatively is more likely to attain a competitive advantage over its competitors (Montgomery & Collis, 1995). RBV serves as a framework for analyzing a firm's competitive positioning and assists firms in identifying strategic resources that enhance competitiveness. According to Montgomery & Collis (1995) and David-West & al. (2018), these resources encompass, but are not limited to, physical and capital resources (traditional factors of production), human resources, organizational processes, firm attributes, capabilities, social relationships (relational capital), coordinating mechanisms, etc. However, a resource has firm-specific strategic value if it satisfies two critical conditions: heterogeneity and immobility (Barney, 1991).

Knowledge is acknowledged as a critical strategic resource that influences long-term firm performance (Curado & Bontis, 2006). The possession or accessibility of knowledge ensures sustainable competitive advantage by encompassing essential characteristics outlined in the Resource-Based View (RBV). These characteristics include value addition to the firm, rarity, accumulation, complexity, and imitation difficulty (Andersén, 2011; Arend & Levesque, 2010; Barney, 2002; North & Kumta, 2018).

Grant (1996) posits that knowledge, as a strategic organizational resource, is characterized by transferability, aggregation capacity, and appropriability. The transferability of knowledge within the firm dictates its competitive advantage; however, the efficiency of knowledge transferability is significantly dependent on its potential for aggregation (Grant, 1996); similarly, appropriation of knowledge may be defined as the capacity of a resource owner to get benefits from that resource (Teece, 1987).

Knowledge-Based View is considered an offshoot of RBV, extending the portfolio of firm resources to knowledge-based resources (Grant, 1996). Nonetheless, exceptions exist, indicating that the knowledge-based view is associated with organizational learning theory within the framework of a firm's social perspective, which differs from an economic or market-based viewpoint (Kogut & Zander, 1996).

1.2. Absorptive capacity :

Absorptive capacity, as defined by Zahra & George (2002), is a dynamic organizational capability that enables firms to acquire, assimilate, transform, and exploit external knowledge. It is a critical factor in adapting to market changes and driving innovation (Zahra & George, 2002; Todorova & Durisin, 2007). Todorova and Durisin (2007) identified five distinct dimensions of absorptive capacity: First, recognizing the value of external knowledge refers to the process of searching by individuals to identify and assess knowledge existing outside the firm that has the potential to add value if acquired (Todorova & Durisin 2007). Individuals recognize the value of external knowledge through their intuitive and cognitive processes (Sun & Anderson, 2010). Second, knowledge acquisition refers to the effort of gathering knowledge (Todorova & Durisin 2007), which is also a socio-psychological process of intuition and cognition (Sun & Anderson 2010). New external information that is acquired by managers needs to be translated to the organizational context (Sun & Anderson 2010; Zahra & George, 2002). Thirdly, assimilation entails the interpretation, dialogue, and knowledge exchange among firm members, typically forming a culturally distinct subunit or group within the larger organization (Darwish, Zeng, Rezaei Zadeh, & Haak-Saheem, 2020, Sun & Anderson 2010). Fourth, transformation happens when knowledge of that sub-unit is transferred to the entire organization (García-Morales & al., 2007). It requires the integration of new knowledge while changing old routines (Sun & Anderson 2010; Todorova & Durisin 2007). Sun & Anderson (2010) define knowledge assimilation and transformation as processes of analyzing, interpreting, and understanding the external sources of knowledge in the context of the organization. And finally, knowledge exploitation refers to a firm's ability to leverage the new knowledge and realize benefits (Todorova & Durisin 2007; Zahra & George 2002). It is related to the value created from the institutionalization of this new knowledge as a new norm, hence a sign of learning at the level of the organization (Sun & Anderson 2010).

Zahra & George (2002) classified absorptive capacity into two categories: (i) Potential absorptive capacity refers to the acquisition and assimilation dimensions. It enables companies to monitor industry developments more effectively, hence facilitating the prompt implementation of essential capabilities, including production and technological competencies (Zahra & George, 2002). Radical innovations depend on distant knowledge and the reconfiguration of capabilities (Flor, Cooper & Oltra, 2018). Consequently, organizations' acquisition of external knowledge is anticipated to enhance the development of innovations characterized by a greater degree of novelty (Cruz-Gonzalez, Navas-Lopez, Lopez-Saez, & Delgado-Verde, 2012). Furthermore, as radical technological advances may emerge from external sources (Green & al., 1995), the capacity to identify and comprehend external knowledge is essential for facilitating knowledge transmission. Moreover, businesses possessing advanced acquisition and assimilation capabilities tend to excel in the continuous renewal of their knowledge base by identifying trends in their external environment and internalizing this information. These opportunities enable firms to enhance performance by leveraging strategic advantages, including first-mover benefits and responsiveness to customer needs (Zahra & George, 2002). The transfer of external knowledge to the organization for application in knowledge creation activities is essential for the effectiveness of external absorptive capacity routines (Lewin, Massini, & Peeters, 2011). While potential absorptive capacity is essential for identifying, filtering, and internalizing relevant external knowledge, a competitive advantage in innovation is achieved only when the firm also has realized absorptive capacity (Fosfuri & Tribo, 2008). (ii) Realized AC arises from processes of transformation and exploitation (Zahra & George, 2002).Once knowledge is acquired by the organization, it must be disseminated among its members and integrated with internally generated knowledge. Achieving success in radical product innovation necessitates that managers combine aspects of technological and customer knowledge and competencies in completely new ways (Henderson & Clark, 1990). Transformation enables firms to create new perceptual schemas or modify existing processes, while exploitation facilitates the conversion of knowledge into new products (Kogut & Zander, 1992). The capabilities of transformation and exploitation inherent in AC are likely to impact firm performance via product and process innovation (Zahra & George, 2002). Saemundsson & Candi (2017) emphasized the importance of this distinction, highlighting the separation between the identification of opportunities or external knowledge and the capacities necessary to internalize and exploit such knowledge.

Absorptive capacity has significant impacts (Zahra & George, 2002). First, by continuously acquiring and utilizing new knowledge, firms become more flexible to changing market conditions and can respond effectively to new opportunities and threats (Miroshnychenko, Strobl, Matzler, & De Massis, 2021). Second, absorptive capacity is linked to better firm performance through higher efficiency, new ideas, and a competitive edge (García-Morales & al., 2007; Lhuillery, 2011; Papazoglou & Spanos, 2021). Third, absorptive capacity can directly or indirectly affect innovation performance (Kang & Lee, 2017; Lim & Ok, 2021). It has significant impacts on innovation speed, innovation frequency, and innovation degree (Hong, Zheng, Deng, & Zhou, 2019). Tseng & al.'s (2011) study analyzes the three types of knowledge and demonstrates that knowledge input and knowledge absorptive capacity are positively related to innovation performance, while knowledge spillover is partially positively related to innovation performance.

1.3.Absorptive capacity, Innovation and SME performance

Innovation has become a necessity for all contemporary enterprises that want to survive in a world characterized by competition, technological change, and recurring crises (Adam & Alarifi, 2020). The literature agrees on three distinct phases for innovation adoption. Based on Gopalakrishnan and Damanpour (1997), Meyer and Goes (1988), and Rogers (1995), Hameed & al. (2012) define pre-adoption as the initiation phase during which a need is recognized, knowledge or awareness is acquired, an attitude towards the innovation is formed, and innovation for adoption is proposed. They define adoption as the decision-making phase during which an idea is evaluated; if such an idea is accepted, the options for its acquisition and implementation are then explored. Post-adoption is considered by the authors as the implementation phase during which an innovation is acquired; the organization is then prepared to use it, and a test is implemented to confirm its effectiveness. This is then followed by acceptance of the innovation by the users and the pursuit of the actual use of the innovation.

Several internal and external factors influence this adoption process, including risk aversion (Bougadir & Zahir, 2023; Meroño-Cerdán & al., 2018), experience (Yu & Tao, 2009), industry competition (Waarts & al., 2002), leadership (Chaithanapat & al., , 2022; dos Anjos & Kuhn, 2024; Unsworth & al. , 2012), human capital capacities (Marchiori & al., 2022), and acquisitive power (Hitt & al., 1990). SMEs tend to be innovation adopters, usually through capital goods acquisitions (Prokop & Stejskal, 2019). Indeed, firms with technological gaps tend to prioritize the adaptation of existing technologies before developing them internally (Wu, Ma, & Xu,

2009). Furthermore, financial incentives can significantly impact SME innovation adoption. Basit, Kuhn, & Ahmed (2018) found that SMEs receiving innovation subsidies tend to achieve superior firm performance. The key driver of innovation practices in enterprises is the ambition to get reimbursement in the form of better performance (Adam & Alarifi, 2021).

Regarding performance, Hult & al. (2004) defined it as achieving the institution's objectives related to sales, profitability, competition, market share, and any other strategic goals. Yıldız & al. (2014) further refined this concept, referring to performance as the effectiveness in carrying out the enterprise's tasks, which results in achieving its stated objectives. Achieving a high-performance level implicitly indicates enterprise success (Mahmudova & Kovács, 2018).

Innovation can be defined as the creation of some modifications in the enterprise's practices that are intended to obtain an improvement in performance (Curristine, 2006). The literature supports a significant positive relationship between innovation and SME performance (Lakhlifi & Abdellaoui, 2024; O'Cass & Sok, 2014; Oura & al., 2016; Rosenbusch & al., 2011; Verhees & Meulenberg, 2004; Yıldız & al., 2014; Zhang, 2022). Kostopoulos & al., (2011) argue that absorptive capacity contributes, directly and indirectly, to innovation and financial performance, but at different time intervals. Zulu-Chisanga & al. (2016) noted that the efforts exerted to develop different innovations are the primary reason for the improvement in SMEs' financial indicators. Freeman (2004) emphasized that distinct SME performance is a direct outcome of effectively implementing innovations. However, Lin & Chen (2007) argued that the impact of managers' innovation practices on SME income outweighs that of technological innovation.

2. Methodology

We exploited a multiple-case study approach following the method used by Khan & al. (2020b). It allows us to explore in detail a complex and contemporary phenomenon for which there is little prior knowledge (Benbasat & al., 1987; Yin, 2014). According to Thiétart & al. (2014), exploration in management sciences involves discovering or deepening the understanding of a structure or functioning in order to serve two main objectives: the search for explanation and the search for understanding.

Our case studies concern two Moroccan companies. We refer to the first one as X and the second one as Y. These SMEs were chosen based on a set of elements: a history of successfully integrating external knowledge into organizational practice, the leaders' concern for the

importance of openness to the outside, and the ability to innovate in a constantly changing environment. Established in 1998, Company X operates in a sustainable fashion and employs approximately 36 employees. Founded in 1987, Company Y operates in high-end leather goods and employs approximately 49 people in Casablanca.

To collect the data, we conducted 6 semi-structured interviews lasting between 60 and 80 minutes with executives from both companies, namely the general managers (X; Y), technical director (X), commercial manager (X; Y), and financial director (Y). These individuals were selected based on relevance criteria, including their seniority in the company, their area of expertise, and their strategic role. We contacted the participants via email, phone, and in person during the 21st edition of Maroc in Mode 2024. To facilitate the exchanges, the participants received a list of topics to discuss before each interview. With the participants' consent, we recorded the interviews using a smartphone and then manually transcribed them. To analyze the data, we adopted thematic analysis, which allows for grouping the main ideas into categories and subcategories (Saldaña, 2013). This approach ensures a clear structuring of the results and facilitates their interpretation.

3. Results and discussions:

This study explores the concept of absorptive capacity in the context of Moroccan SMEs, focusing on how these firms acquire, assimilate, transform, and exploit external knowledge to drive innovation and improve their performance.

3.1.Absorptive capacity

Building on Todorova and Durisin's (2007) framework, we examine the five key dimensions of absorptive capacity within two different SME, labeled X and Y: recognizing the value of external knowledge, acquiring knowledge, assimilating knowledge, transforming knowledge, and exploiting knowledge. Each of the companies has a specific approach depending on the objectives.

The recognition of the value of external knowledge through intuitive and cognitive processes, mentioned by Sun & Anderson (2010), is present. Indeed, all interviewees concur with the importance of staying abreast of industry trends and innovations. Expert 1 from Company Y emphasizes, "*To find new inspiration, I often travel and visit design exhibitions. During my visit to the LINEAPELLE International Leather Fair, I established friendly contact with the owner*

of an Italian tannery renowned for its know-how. I would not lie if I said that he played a decisive role in our development. In each of the discussions, I seek to learn more about the latest tanning techniques, new materials, and trends in finishing. In addition, I also subscribe to magazines specializing in fashion and luxury". As of Expert 1 from Company X, affirm: " *Our designer, upon returning from abroad, proposed the creation of a collection of unisex and modular pieces that can be worn in multiple ways. This suggestion was motivated by the fact that he had observed, during his travels, an evolution in consumption patterns to versatile and durable apparel. He was particularly inspired by the street style scenes where individuals mix styles and divert clothes from their initial use. Honestly, it was the beginning of our sustainability approach*". This proactive search for new information and ideas corroborates with Cohen & Levinthal's (1990) affirmation that a company's ability to "identify the benefit of newly acquired external knowledge" is a part of its "absorption capacity.

→ **P1 :** A competitive landscape enhances organizations' awareness of the significance of external knowledge by motivating actors to pursue new sources of differentiation and growth.

→ **P2 :** A leadership approach based on learning and change stimulates the process of absorbing external knowledge

Afterwards, expert 3 from Company X declared "*When assessing new information, we consistently inquire about its potential impact on our supply chain. Can we identify the requisite suppliers? Will it complicate our logistical operations? This new knowledge must align with our business strategy and enhance our partnerships.*". This underscores the need of analyzing the feasibility and compatibility of external knowledge prior to its acquisition, consistent with the concept that absorptive capacity entails not just the collection of information but also the assessment of its relevance and possible influence on the organization (Grigoriou & Rothaermel, 2017).

The process of knowledge assimilation involves the interpretation and exchange of information within the company. Expert 2 from Company X explained, "*Upon identifying a new technology or eco-friendly material, we initiate a study to evaluate its feasibility and influence on our production chain. Upon project validation, we will deploy all relevant teams and adjust our procedures appropriately. We train our staff on new techniques and transparently convey this innovation to our clients, with the proactive endorsement of our leader*." This highlights the

significance of leadership, internal discourse, information dissemination, and adaptability within the organization, which are essential for the efficient assimilation of knowledge (Darwish, Zeng, Rezaei Zadeh & Haak-Saheem, 2020). Also, Expert 3 from Company Y asserts, "*We cannot merely replicate a technique. We must comprehend, scrutinize, and reinterpret it according to our perspective. This ability to convert external inspirations into unique inventions has facilitated the development of our brand*.". This aligns with the research on AC, indicating that it encompasses not only the absorption of knowledge but also its "conversion" and "application" to create value (García-Morales & al., 2007).

→ **P3:** Continuous training contributes to the ability to assimilate new knowledge and supports the development of specific skills.

Expert 1 from Company X asserts, "*We must translate the acquired knowledge into tangible actions. It is essential to develop new prototypes, assess innovative manufacturing techniques, and adjust workflows in alignment with contemporary advancements*.". This requires a degree of flexibility and adaptation. Moreover, Expert 3 from Company Y emphasizes, "*By daring to experiment with new approaches, we accelerate the learning process. Failures, when thoroughly analyzed, serve as valuable sources of insight. Conversely, successful attempts contribute to enhanced operational efficiency*.". However, expert 2 from Company X cautions that altering their production methods entails significant risks and expenses: "*We need to carefully evaluate the costs and benefits before embarking on new ventures. We cannot afford to take reckless risks.*" Although García-Morales & al. (2007) refer to the potential for long-term value creation and competitive advantage in the market, different perspectives emphasize the difficulties associated with implementing knowledge effectively.

Expert 2 from Company X states, "*The ultimate goal is to leverage this new knowledge in the market. We need to develop innovative products, communicate our eco-responsible approach, and strengthen our brand image. We also need to explore new distribution channels, such as online sales and pop-up stores*." However, Expert 3 from Company X also acknowledges the importance of maintaining a balance between innovation and risk management, stating, "*As long as it doesn't compromise the quality and profitability of our production, I am open to new initiatives. But we must not forget that our priority remains customer satisfaction and the sustainability of our business.*" This emphasis on balancing innovation with business objectives

aligns with the literature on AC, which emphasizes the importance of "commercializing" knowledge to make a profit (Cohen & Levinthal, 1990).

→ **P4:** Sufficient financial resources facilitate the transformation of external knowledge into new products or services.

→ **P5:** A moderate risk-taking behavior contributes to exploring new opportunities, stepping out of the comfort zone, and seeking and exploiting new knowledge.

3.2.Absorptive capacity, Innovation and SME performance

While both align with broader trends in innovation literature, they exhibit contrasting focuses. Enterprise Y prioritizes product innovation, emphasizing incremental improvements through modifications in materials, shapes, and finishes. This aligns with Curristine's (2006) definition of innovation as "*the creation of modifications aiming to improve performance.*" However, Enterprise Y's innovation process appears less structured than theoretical models suggest (Gopalakrishnan and Damanpour, 1997). The emphasis on inspiration and artisanal craftsmanship can be viewed as a form of emergent, less formalized innovation. In contrast, Enterprise X adopts a more systemic approach, prioritizing process and business model innovation. This enterprise focuses on identifying customer needs and environmental challenges, aligning with innovation adoption models that emphasize a need recognition phase (Rogers, 1995). Enterprise X also demonstrates an awareness of "absorptive capacity," collaborating with academic partners and startups to develop new technologies. Notably, Enterprise X explicitly addresses the challenges of reconciling fashion demands with environmental and social constraints, highlighting the complex nature of innovation in a sustainable development context, an aspect often less explicitly treated in the literature.

→ **P6 :** The rapid adoption of disruptive innovations, enabled by a high absorption capacity, can generate new business models.

Both enterprises, while distinct, demonstrate key aspects of innovation adoption as outlined by Hameed & al. (2012). Enterprise Y, with its focus on incremental improvements, primarily operates within the "adoption" phase, evaluating and implementing modifications to existing products. Their emphasis on artisanal expertise suggests a strong reliance on internal knowledge and experience, aligning with the concept of "absorptive capacity." Enterprise X, on the other hand, exhibits characteristics of both the "pre-adoption" and "adoption" phases. Their focus on

customer needs and environmental challenges reflects a proactive identification of needs and potential innovation opportunities. Their collaborations with external partners exemplify the knowledge acquisition and evaluation processes characteristic of the pre-adoption phase. Simultaneously, their implementation of new technologies and business models places them within the adoption phase.

→ **P7 :** The variety of external knowledge sources (partnerships, networks, scientific publications, etc.) enriches the innovation adoption process by offering a wide array of viewpoints and ideas.

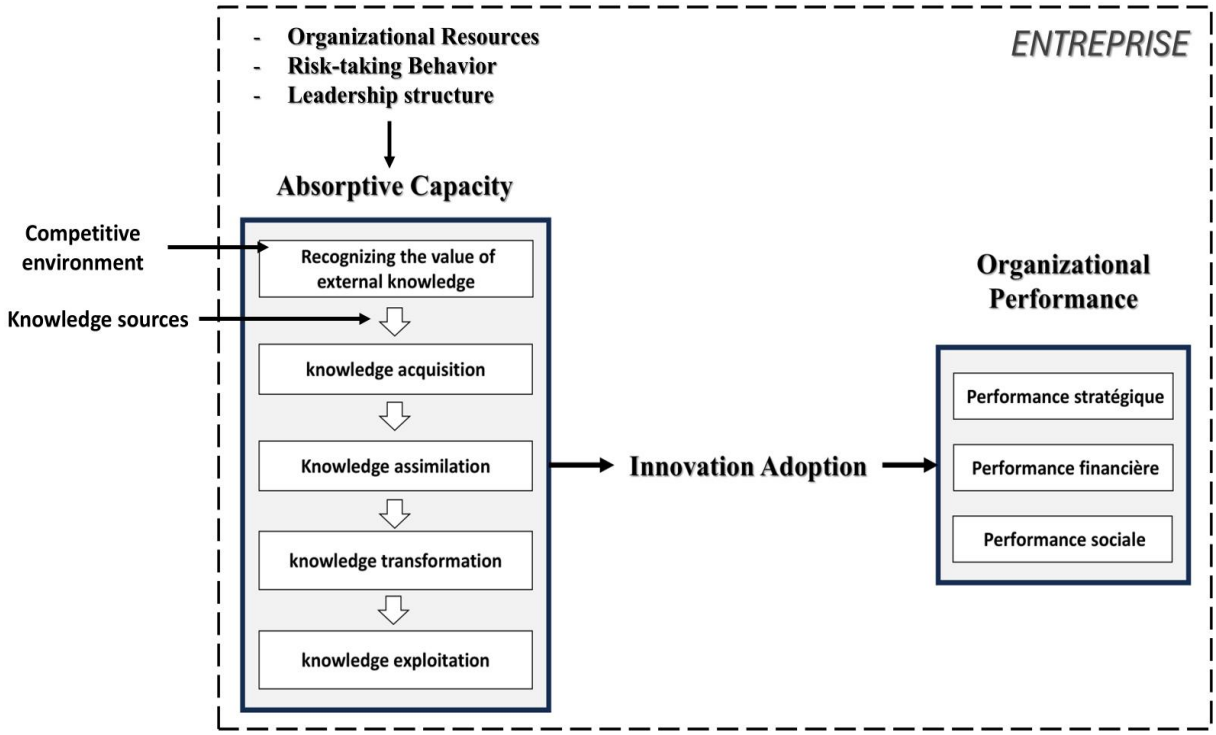
The collected verbatims suggest that, owing to reduced product life cycles, SMEs are compelled to innovate rapidly. This entails intricate production processes, new technologies, new materials, or adjusted work environments. The analysis of the responses gathered from the two SMEs reveals that this has led to issues and conflicts among the actors, as posited by Lakhlifi & Abdellaoui (2024). The findings of Bougadir & Zahir (2023) and Meroño-Cerdán & al. (2018) indicate that promoting innovation requires more than just support for R&D; it is essential to cultivate both horizontal and vertical linkages, encourage a propensity for risk-taking that fosters new knowledge creation, and ensure access to material, intellectual, and financial resources. Our case studies illustrate that SMEs face challenges in innovation networks due to inadequate internal structures for comprehending and managing partnership dynamics. Consequently, they risk losing their contributions and failing to benefit from the advancements in innovation.

Curristine's (2006) definition of innovation as performance improvement resonates strongly with both enterprises. Enterprise Y aims to enhance product performance through incremental modifications, while Enterprise X seeks to improve its overall performance by addressing customer needs and environmental challenges. This aligns with Hult & al.'s (2004) definition of performance as achieving institutional objectives, including market share and strategic goals. The literature consistently supports a positive correlation between innovation and SME performance (O'Cass & Sok, 2014; Oura & al., 2016; Qian & Li, 2003; Rosenbusch & al., 2011; Verhees & Meulenberg, 2004; Yıldız & al., 2014; Zhang, 2022). However, the specific drivers of performance can vary. While technological innovation is crucial, Lin and Chen (2007) argue that managers' innovation practices, such as those demonstrated by Enterprise X in its strategic approach, can have a significant impact on SME income.

→ **P8:** SMEs with well-developed absorption capacity are better equipped to adapt to technological changes and market evolutions, enabling them to maintain stable financial performance.

→ **P9:** SMEs with strong absorption capacity are more likely to develop products and services that meet stakeholders' needs, thereby improving their social performance.

Figure 1 : A Model of Absorptive Capacity, Innovation and Performance



Source: « Developed by the authors »

Conclusion

Resource-constrained SMEs give importance to knowledge management practices, and this holds true for every dimension of absorptive capacity. This study contributes to the understanding of absorptive capacity (AC) as an essential lever to stimulate innovation and improve business performance. On the managerial level, it highlights several key recommendations for SME managers. To enhance organizational performance and adaptability, managers must prioritize the proactive acquisition and assessment of external knowledge. By consistently monitoring emerging trends and sector innovations, they can discern potential opportunities and threats. This strategic oversight extends beyond mere information gathering; it involves a rigorous evaluation of the relevance of new knowledge in relation to the company's

objectives. Upon confirming its added value, it is crucial to integrate this knowledge coherently into decision-making processes and daily operations. Collaborating with external entities, such as universities, startups, and industry peers, serves as a significant catalyst for accelerating knowledge acquisition. These partnerships not only grant access to complementary expertise but also promote innovation by encouraging diverse perspectives and methodologies. To cultivate a culture of creativity and perpetual learning inside teams, managers must serve as genuine catalysts. By fostering transparent communication, endorsing measured risk-taking, and nurturing a culture that learns from failure, they create an atmosphere that facilitates the generation of new ideas and their conversion into tangible actions. Moreover, by consistently educating their workforce in innovative ways and encouraging receptiveness to external concepts, they enhance creativity and adaptability to market fluctuations.

This research provides in-depth insights into absorptive capacity, innovation, and organizational performance within SMEs; however, it presents several limitations. The adoption of multiple case studies limits the potential for findings' generalization. The characteristics of companies X and Y, such as their sector, size, and organizational culture, can influence the absorption capacity processes and the perception and measurement of innovation. The data collection occurred over a brief duration, complicating the evaluation of the long-term effects of the practices developed through external knowledge. Certain impacts necessitate a more comprehensive longitudinal follow-up. Future research should extend to more case studies of companies, both SMEs and large organizations, to facilitate a comparison of competitive advantage approaches based on sectoral, regional, or institutional factors.

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