

Unlocking the Potential of SMEs in the UAE: Exploring Challenges, Opportunities, and the Role of Organizational Learning in Manufacturing Innovation

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Abstract

Despite the importance of SMEs in the UAE as key contributors to economic diversification and growth, several challenges constrain this sector. These challenges include resource limitations, regulatory compliance burdens, limited access to financing, and gaps in leadership and innovation adoption. Thus, this review paper aims to explore the opportunities, strengths, weaknesses, challenges, and threats faced by SMEs in the UAE manufacturing sector, with a particular focus on the role of organizational learning in driving innovation and performance. The findings reveal that while SMEs benefit from government initiatives, such as Vision 2030 and Operation 300bn, they are hindered by resource constraints, ineffective leadership styles, and insufficient knowledge management practices. Opportunities lie in adopting open innovation, green learning orientation, and fostering learning-based cultures. This paper recommends future research focus on integrative frameworks linking organizational learning with innovation strategies to enable resilience, sustainability, and enhanced competitiveness in the UAE's manufacturing SMEs.

Keywords: Challenges, Opportunities, Organizational, Learning, Manufacturing, Innovation

Introduction

In the contemporary corporate landscape, the prosperity of Small and Medium Enterprises (SMEs) depends on adaptability, innovation, and consistent performance, particularly in swiftly evolving areas such as the United Arab Emirates (UAE), where SMEs play a crucial role in economic development. Organizational learning, the mechanism by which organizations get, distribute, and utilize knowledge, is a pivotal element affecting their development, especially within the UAE's industrial sector, where current study has not adequately explored its influence. Research indicates that organizational learning fosters innovation and sustained success by allowing organizations to adapt to changes and refine internal processes, so securing a competitive advantage (Jarrahi et al., 2023). Considering that SMEs

constitute more than 94% of firms in the UAE (Shrivastava and Riaz, 2023), it is essential to comprehend the impact of organizational learning on their creative capabilities and competitive advantage. In the face of globalization, economic fluctuations, and technological advancements, organizations are compelled to seek innovative strategies for survival and success, transcending traditional methods such as cost control and effective management practices (Shrivastava and Riaz, 2023). This paradigm shift is particularly prominent in the dynamic business landscape of the United Arab Emirates (UAE), characterized by rapid economic development and a diverse business environment. Organizational learning has emerged as a critical determinant of success in the contemporary competitive milieu (Easterby-Smith et al., 2004).

The capacity of organizations, including Small and Medium Enterprises (SMEs), to adapt, acquire new knowledge, and apply it effectively is intricately linked to enhanced performance and sustained innovation (Cohen and Levinthal, 1990). However, a notable research gap exists in understanding the specific influence of organizational learning on SMEs, particularly within the distinctive business landscape of the UAE. SMEs in the UAE face unique challenges, such as rapid market changes, intense competition, and limited resources. These challenges make organizational learning crucial for adapting to these conditions and fostering innovation. (Kiyabo and Isaga, 2020), underscore that in the face of escalating global competition, organizations adept at efficiently navigating through changes are more likely to maintain a competitive advantage. The significance of organizational learning is emphasized as an effective strategy for enhancing and sustaining organizational performance and competitiveness. In turbulent environments where knowledge is a critical resource, companies prioritizing learning optimize organizational performance (Gomes, Seman and De Montreuil Carmona, 2021).

Managers play a pivotal role in supporting knowledge acquisition, sharing, application, and utilization for improved technical and inventive administrative performance. (Espinosa and Porter, 2011), emphasize the significant impact of an organization's learning orientation on its long-term corporate growth. They argue that a strong commitment to continuous learning is pivotal in fostering the acquisition of new knowledge, which, in turn, plays a crucial role in driving innovation and enhancing overall performance. According to (Al Dhaheri, Ahmad and Papastathopoulos, 2024), innovation practices and strategies are highly valued among well-established SMEs to gain a competitive edge and enhance their performance. However, SMEs' knowledge management and organizational learning practices differ from larger organizations due to resource constraints, ineffective learning management, knowledge loss, and inefficient use of external knowledge sources (Li et al., 2023). Therefore, the focus on this research is on SMEs manufacturers sector. The manufacturing sector continues to play a pivotal role in shaping the economic landscape of the United Arab Emirates UAE). As of 2023, the sector accounts for approximately 13% of the nation's Gross Domestic Product (GDP), making it the second-largest contributor to the UAE's economy. This percentage is still low compared to 41% in the mining and quarrying sector. Therefore, UAE governments introduce several strategies to diversify the economy through improving SMEs sector. These initiatives, outlined in Vision 2021 and Vision 2030, aim to reduce the nation's dependence on oil and gas and foster growth in non-oil sectors, particularly manufacturing.

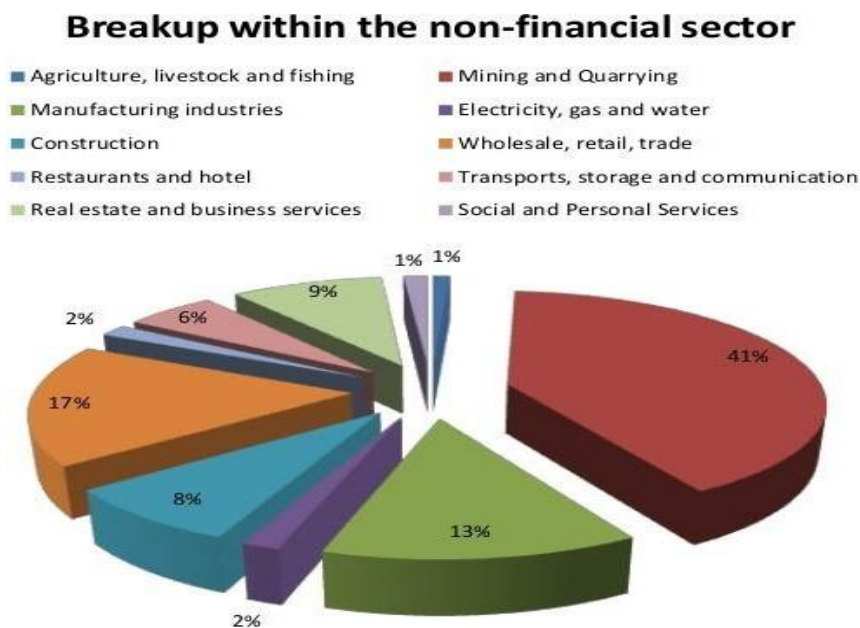


Figure 1.1 GDP Contribution by Sector (Ministry of Finance, 2024)

Opportunities and Challenges

The UAE has strategically positioned itself to diversify its economy by emphasizing industrial development and focusing on sectors that contribute to the higher end of the value chain. This initiative aligns with the broader vision of creating a sustainable and diversified economy. A notable example is the Dubai Industrial Strategy 2030, introduced by His Highness Sheikh Mohammed bin Rashid Al Maktoum in June 2016. This strategy envisions Dubai as a regional and global hub for knowledge-based, competitive, and innovation-oriented industries, reflecting the UAE's commitment to securing economic prosperity beyond reliance on oil (Alefari, Almani and Salonitis, 2020). The Dubai Industrial Plan, approved by His Highness, projects an infusion of approximately Dh165 billion into the economy and the creation of 27,000 jobs by 2030. This development underscores the UAE's forward-looking approach to achieving sustainable growth.

The Dubai Industrial Strategy outlines five primary objectives that form the foundation for Dubai's economic future. These objectives include increasing production and value-added contributions in the manufacturing sector, fostering knowledge and creativity, establishing Dubai as a preferred manufacturing hub for multinational corporations, promoting environmentally friendly and energy-efficient manufacturing practices, and positioning Dubai as a global hub for Islamic goods. The strategy further identifies six priority sub-sectors critical to achieving these goals: pharmaceuticals and medical equipment, maritime industry, aluminum and fabricated metals, food and beverage, machinery and equipment, and automotive and aerospace industries (ZARROUK et al., 2020). These sub-sectors were selected for their potential to drive sustainable economic growth, expand export capacity, and deliver long-term economic benefits. The emphasis on industrial development within these sectors is a key pillar of the UAE's economic strategy. By prioritizing high value-added activities, the UAE aims to enhance its global competitiveness while promoting innovation and environmental sustainability. The strategy's focus on energy efficiency and environmentally conscious practices aligns with the nation's commitment to

fostering industries that contribute to both economic and ecological resilience. This comprehensive approach highlights the UAE's determination to reduce dependency on oil, stimulate industrial innovation, and ensure economic stability.

Within the United Arab Emirates (UAE), manufacturing sector contributed 13% to the overall GDP in 2015 (Rahman, 2015). An ambitious aim has been set to reach 20% by 2021 and ultimately 25% by 2025 (Alefari, Almani and Salonitis, 2020). The manufacturing sector in UAE is composed mostly of SMEs; (Alefari, Almani and Salonitis, 2020), reports that 94% of the manufacturing sector companies are SMEs. It is thus obvious that the challenges identified for SMEs are the challenges that the whole manufacturing sector is facing in UAE. The UAE government's Vision 2030 has an ambitious goal to elevate the nation to a position of global industrial leadership through improving SMEs manufacturing sector. However, SMEs often face unique challenges that significantly influence their innovation capabilities and overall performance. Operating in a highly volatile and competitive business environment, SMEs are frequently pressured by the rapid pace of technological advancements and constant shifts in market demands (Khalifan et al., 2021). These conditions demand agility and innovation, yet many SMEs lack the resources and capabilities needed to adapt effectively. Resource constraints, including limited access to financing, skilled labor, and technological infrastructure, hinder their ability to invest in research and development or adopt new technologies (Ghak and Zarrouk, 2022). The inability to navigate such challenges often leaves SMEs struggling to innovate and compete effectively, ultimately impacting their performance and sustainability (Shrivastava and Riaz, 2023). To address these challenges, several studies such as (Ahmad, Abu Bakar and Ahmad, 2019), (Alefari, Almani and Salonitis, 2020), (Khalifan et al., 2021), (Ghak and Zarrouk, 2022) and (Zahoor et al., 2023) attempted to uncover the factors that influence SMEs performance in the UAE. These studies paid a considerable attention on the importance of financial support, leadership and employees skills, leaving a gap in how to improve SMEs innovation that is the key driver for firm performance and sustainability (Hasan and Rahman, 2023).

Several studies have highlighted the pivotal role of organizational learning in driving innovation and improving the performance of SMEs. Siddique (2018) demonstrated that fostering a learning organization culture significantly enhances skill development, innovation capacity, and revenue growth. Similarly, Gomes and Wojahn (2017), found that organizational learning capabilities positively impact innovation processes and operational performance, especially in dynamic and competitive environments. Furthermore, Baquero (2024) emphasized the interplay between green learning orientation and green innovation, showing that SMEs prioritizing organizational learning achieve superior outcomes in both product and process innovation. These findings underscore organizational learning as a critical enabler of SME success. However, organizational learning has been defined differently across studies, reflecting its multifaceted nature. For instance, Argyris and Schön (1978) describe it as a process of detecting and correcting errors, while Nonaka and Takeuchi (1995) emphasize knowledge creation and sharing as central elements. Despite its acknowledged importance, there are relatively few studies investigating how organizational learning influences various aspects of organizational innovation and performance, particularly within the UAE's unique economic and cultural context. Therefore, drawing on experiential learning theory (Kolb, 1984) and adaptive learning theory (Fiol & Lyles, 1985), this study aims to examine the impact of organizational learning on SMEs' innovation

capabilities and overall performance. In addition, organizational learning encompasses critical factors such as dialogue, interaction, and propensity to risk, all of which play a pivotal role in driving innovation and enhancing performance. Dialogue fosters open communication and collaborative problem-solving, creating an environment where diverse perspectives contribute to innovative solutions (Schein, 1995). Effective dialogue encourages trust and knowledge sharing, which are essential for innovation and improving organizational outcomes (Gomes & Wojahn, 2017). Interaction, particularly with external environments, enables organizations to acquire and integrate new knowledge, facilitating innovative practices and market responsiveness (Chiva et al., 2007). Engaging with external stakeholders, such as customers and partners, allows firms to adapt to dynamic market conditions and enhance their innovation capabilities (Gomes & Wojahn, 2017).

Propensity to risk, characterized by a tolerance for uncertainty and the encouragement of experimentation, is vital for fostering a culture of innovation (March & Shapira, 1987). Organizations that embrace calculated risks are more likely to explore novel opportunities, leading to breakthrough innovations and improved performance (Chiva et al., 2007). Together, these factors dialogue, interaction, and propensity to risk form integral components of organizational learning that significantly influence innovation and performance. Small and Medium Enterprises (SMEs) are pivotal to the United Arab Emirates' (UAE) economic diversification and industrial growth. In Dubai, SMEs constitute 95% of all establishments, employing 42% of the workforce and contributing approximately 40% to the emirate's value-added output. The UAE government has implemented several policies to bolster SMEs, including the National SME Programme, which offers support and incentives to enhance their competitiveness. Additionally, the Operation 300bn initiative aims to increase the industrial sector's contribution to GDP from AED 133 billion to AED 300 billion by 2031, with SMEs playing a significant role in this expansion. The UAE government actively supports SMEs by providing access to financing, innovation hubs, and industrial zones. Programs like the Khalifa Fund for Enterprise Development offer financial assistance and mentorship to aspiring entrepreneurs. Research by Almehairbi et al. (2023) and Al Nuaimi et al. (2023) highlights the opportunities created by adopting open innovation frameworks and organizational learning capabilities. Furthermore, initiatives such as the National Innovation Strategy encourage firms to adopt new technologies, fostering an environment conducive to innovation. These efforts are complemented by industrial strategies like Operation 300bn, which sets ambitious targets for SME contribution to the industrial sector by 2031.

As shown at Table 1, despite significant support, manufacturing SMEs face challenges, including limited access to financing, adoption of innovation, regulatory compliance, and leadership gaps. Many SMEs struggle with stringent lending criteria, hindering expansion efforts. A lack of resources and expertise impedes the adoption of innovative practices, as discussed by Siddique (2018) and Haddad et al. (2020). Navigating complex regulatory requirements can burden SMEs, particularly smaller firms with limited administrative capacities. Additionally, ineffective leadership styles hinder successful lean manufacturing adoption, affecting operational efficiency. Organizational innovation is critical for SMEs to remain competitive. Almehairbi et al. (2023) identified the significance of innovation strategy, transformational leadership, and creative climates in fostering sustainable competitive advantage. Open innovation, which emphasizes collaboration with external partners, allows SMEs to adopt new technologies and address market needs

effectively. The research by Al Nuaimi et al. (2023) showed that organizational learning capabilities enhance both inbound and outbound open innovation. Inbound innovation improves profitability and market effectiveness, while outbound innovation strengthens external partnerships. These findings underscore the importance of fostering innovative cultures to achieve operational excellence. Organizational learning serves as the foundation for sustainable innovation. Siddique (2018) highlighted how learning organization initiatives positively impact employee skill development, innovation, and revenue growth. By fostering a culture of continuous learning, SMEs can adapt to changing market dynamics, identify new opportunities, and implement best practices. Baquero (2024) explored green learning orientation and its impact on green innovation among UAE manufacturing SMEs. Findings revealed that firms prioritizing knowledge management and resource orchestration achieved superior outcomes in green product and process innovation. This demonstrates the potential of organizational learning in driving both economic and environmental sustainability.

Table 2.1

Related Work on SMEs Manufacturers in the UAE

Author(s) and Year	Objectives	Methodology	Findings	Future Research
Siddique (2018)	Investigate the impact of learning organization culture.	Survey of 254 firms in Dubai and Abu Dhabi.	LO initiatives positively impact skill development, innovation, and revenue growth.	Explore industry-specific LO implementations.
(Almehairbi, Arunprasad and El Hathat, 2024)	Examine the role of OI, TL, and IS on SME competitiveness.	Systematic literature review (110 publications).	OI and TL enhance SMEs' competitive advantage.	Empirical validation in UAE SMEs.
(Al Nuaimi, Singh and Ahmad, 2024)	Study the role of learning capabilities in OI and performance.	Survey of 384 UAE manufacturing SMEs.	Inbound OI drives profitability and market effectiveness.	Examine external environmental factors affecting OI.
(Jabeen, Faisal and Al Matroushi, 2019)	Investigate innovation factors for Emirati women-owned SMEs.	Analytical Hierarchy Process (AHP).	Government policies and skill development are key to innovation.	Study sector-specific innovation among female-owned SMEs.
(Alefari, Almani and Saloni, 2020)	Assess lean manufacturing adoption in UAE SMEs.	Structured questionnaires and surveys.	Leadership styles affect lean implementation success.	Explore the role of leadership in diverse SME sectors.
(Baquero, 2024)	Explore green learning orientation and innovation.	Survey of 167 manufacturing firms in UAE.	GLO significantly impacts green product and process innovation.	Investigate long-term impacts of green learning on firm performance.
(Anon, 2020)	Examine innovation strategies in SMEs.	Interviews and document analysis.	Leadership and customer involvement are critical for innovation.	Analyze specific innovation practices in UAE manufacturing SMEs.

Conclusion and Recommendation

The literature reveals several gaps in understanding how SMEs, particularly in the UAE manufacturing sector, can leverage organizational innovation and learning to enhance performance and competitiveness. While existing studies emphasize the importance of open innovation, leadership, and strategic orientations, there is limited empirical exploration of how specific organizational learning practices translate into long-term innovation outcomes. For instance, the interaction between learning-oriented organizational cultures and technological adoption remains underexplored, particularly in contexts where resource constraints hinder experimentation and risk-taking. Additionally, while the role of green innovation and sustainability is gaining traction, more research is needed to understand how knowledge-sharing mechanisms and employee training initiatives can drive environmentally conscious innovation in resource-intensive manufacturing SMEs. These gaps highlight the critical need for integrative frameworks that link organizational learning capabilities with innovation strategies to foster adaptability, market responsiveness, and sustainable performance improvements in SMEs. Addressing these gaps can offer actionable insights into developing learning-based innovation ecosystems tailored to the unique challenges and opportunities in the UAE.

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