



The Digital Shift in Moroccan SMEs: Navigating Between Digitization, Digitalization, and Digital Transformation

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Abstract: This article highlights the difference between digitization, digitalization and digital transformation of Moroccan small and medium-sized enterprises. By conducting an in-depth survey of scientific publications and various official documents, this study highlights a serious lack of awareness of these notions among Moroccan SMEs. This is wrong on many levels and some organizations mistake simple digital initiatives like document scanning or social media use for some measure of overall digital transformation and miss the opportunity to fully embrace measurable, meaningful and sustainable digital evolution.

The findings emphasize the disembodied and superficial condition of Moroccan SMEs' digital adoption based on misconceptions, resource limitations, and the dearth of technological expertise. This misalignment (of consumable data) leads to missed innovation and eventually lower competitiveness and inefficiency, throughout the organizational processes. By contrasting them with the relative global best practices and academic definitions, the study offers a broad spectrum regarding the digital readiness of the Moroccan SMEs as well as constraints hindering their digital transformation.

Our findings contribute to the evolving, inter-cycle literature of SME digital transformation in developing economies, as well as broadening the conceptual understanding of the economic and organizational consequences of digital illusions. Its goal is to help raise the awareness of the policy-makers and professionals on the urgent relevance of targeted intervention to bridge these gaps so that Moroccan SMEs can thrive in an increasingly digital global market.

Keywords: Digitization ; Digitalization ; Digital Transformation ; Moroccan SMEs.

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1. Introduction

Accelerated development of technology and globalization created one of the new challenges for small and medium-sized enterprises (SMEs) to adapt their capabilities of digital transformation to be competitive in the economy. Digital transformation, often misused with digitization or digitalization, is the holistic strategic adaptation of business processes and structures and value creation through adoption of digital technologies. Digitization means converting analog data to digital format, digitalization means enhancing existing processes with digital technologies, but digital transformation is a whole new phenomenon it is the transformational paradigm shift in how well an organization operates and delivers value to its customers.

Indeed, SMEs are indispensable to Moroccan economy and society, representing 99.8% of the national business ecosystem and providing more than 50% of employment opportunities (MarocPME, 2023). But their digital maturity is dangerously half-baked, many of them unable to tell the difference between rudimentary digital behavior like document scanning or basic automation, and the strategic deployment of transformative technology. When organizations are too homogeneous, they develop blind spots by virtue of overwhelming similarities, their digital transformation potential is reduced, and they may be left insensitive to operational inefficiencies or even a threatened competitive position in an increasingly agile global ecosystem.

While the theme is becoming increasingly popular around the world, through the literature there is still hardly anything known about developing economies that includes Morocco. Past studies provide insight into the challenges faced by SMEs (e.g., financial constraints, low degree of digital literacy, unwillingness to transition), however do not delve into the misconceptions presently associated with the gradualism of the digitization, digitalization, and the digital transformation continuum. These misunderstandings do not only disable the strategic orientation of the Moroccan SMEs but also they decelerate the setting up of coherent and synergetic digital strategies that meet the challenges of a highly dynamic digital landscape.

This paper aims to fill this gap by systematically exploring those differences and how they are understood and implemented by Moroccan SMEs. Through review of scholarly literature and official reports, this study clarifies the impacts of the misconceptions on SME's performance and their organizational sustainability. The central aim of the paper is to provide a perspective for a debate of the broader academic discourse by identifying the challenges and opportunities that digital transformation offers to Morocco in the context of its local socio-economic context.

The article is structured as follows: Section 2 presents a comprehensive literature review to contextualize the concepts of digitization, digitalization, and digital transformation. Section 3 details the methodological framework used to analyze empirical data. Section 4 discusses the findings, focusing on the barriers and misconceptions faced by Moroccan SMEs. Finally, Section 5 concludes with a critical discussion of the study's implications and offers recommendations for future research and policymaking.

2. Literature Review: Contextualizing Digitization, Digitalization, and Digital Transformation

Digitization, digitalization and digital transformation are three terms associated with three stages of an organization's digital evolution. But the differences between them can be fine-grained, and they are critical to your ability to communicate effective digital strategies. That section provides an extensive review of these concepts highlighting their theoretical foundations as well as practical consequences for Moroccan SMEs.

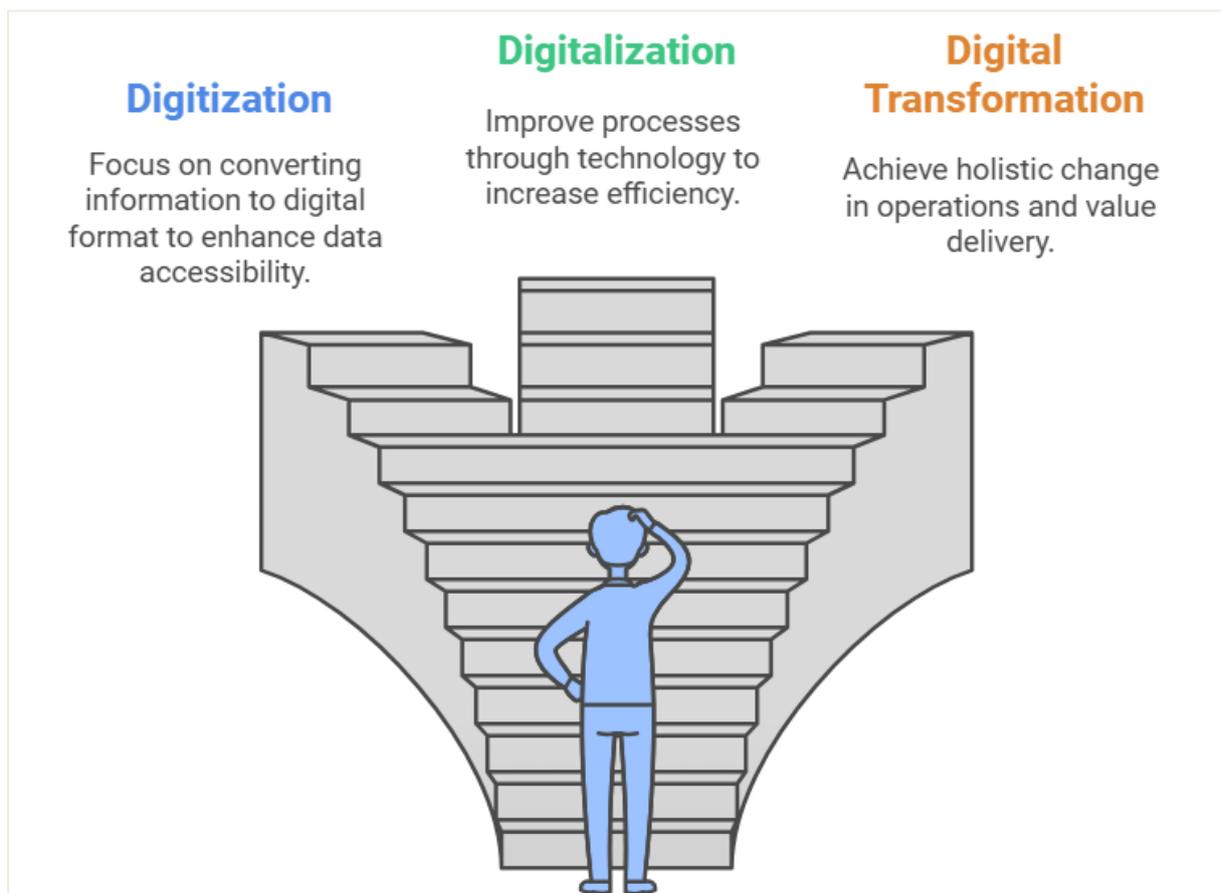


Figure 1: How should the organization approach its digital transition?

2.1. Digitization:

Data refers to the building blocks of research such as: data collection, processing, and documentation leading up to the digitization step (the process of converting data to a digital format). So while it helps get data more accessible and organized, it doesn't really change the processes of the business or how in root, the business operates. For example, digitization of Morocco's small and medium-sized enterprises (SMEs) typically consists of documents scanning or archives digitization, which although is a pre-requisite for digitization, represents little real transformation (OECD, 2021). without a plan surrounding how they plan to execute, digitization turns into a laggard exercise that does not assist in solving competitive challenges in changing markets.

2.2. Digitalization:

Digitalization refers to the use of digital technologies to optimize the existing business processes (Martin, 2018). During this stage, you can integrate systems such as Customer Relationship Management, supply chain automation, or digital marketing solutions to enhance not only operational productivity but also response (Chakib, 2019). Digitalization is nonetheless a continuous evolution, hardly transformative and does not impact the hierarchy or business model. Many moroccans SMES do not adopt the digitalization programmes as they prevent from financial support, technical skills and change resistance (Ahmed Fatima, 2020)

2.3. Digital Transformation:

Digital transformation is not just about transforming processes but a redesign of the what an organization does, how organization does it, their culture and what value an organization represents (Abdelkader Youssef, 2021). This essentially means seamless implementation of state of the art technology such as AI, Big Data, IoT across the entire enterprise. Digital transformation and failure to do so had become a must for Moroccan SMEs that cannot afford to bypass it in an ever more digitised and globalised economy. But not without difficulty, as institutional transformation of this magnitude will face significant obstacles, notably insufficient financing and the absence of strategic vision, excuses for inaction and entrenched cultural resistance.

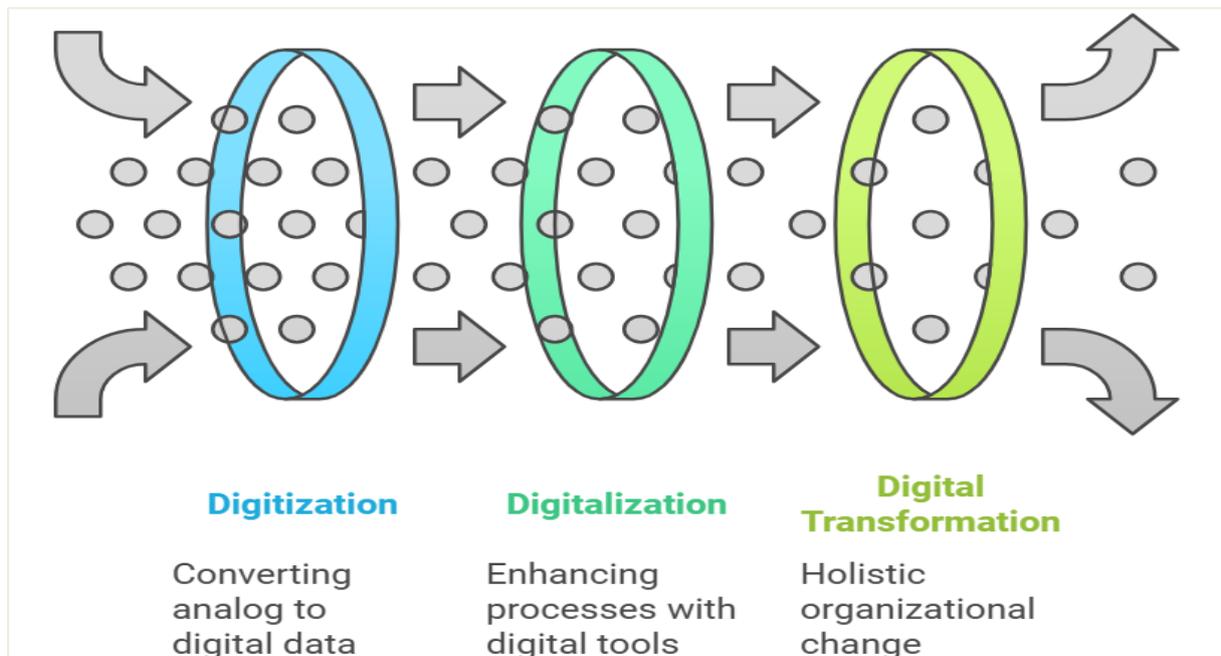


Figure2. Difference between digitization, digitalization, and digital transformation

3. Methodological Framework

Through a qualitative exploratory approach, this study examines the perception and implementations of digitization, digitalization and digital transformation by Moroccan SMEs. To do so, two databases are considered for this methodology: a systematic literature (2015–2024) review and a collection of official reports published within varied organizations (MarocPME, World Bank, OECD). Peer-reviewed articles were gathered from major academic databases (e.g., Scopus, Web of Science and IEEE Xplore) using keywords including "digitization," "digitalization," "digital transformation," and "SMEs in emerging economies."

Data were analysed using thematic coding and with targeted themes around conceptual clarity, adoption practices, transformation barriers and strategic gaps. This analytical framework uncovered significant misperceptions of digital concepts among Moroccan SMEs, and their implications for competitiveness and innovation.

As most of the research is based on secondary data, it provides a strong foundation from which to address the challenges as well as opportunities for digital adoption in the Moroccan SME context. Findings concluded provide insight into the current strategic constraints and corroborate upcoming research that relies on primary data collection.

4. Findings

What this article contributes to the knowledge of Moroccan SMEs in terms of their perception and adoption of digitization, digitalization, and digital transformation. The results draw attention toward the extent of misalignment towards these concepts, the fragmented nature of digital adoption practices, structural and organizational barriers toward SMEs, and strategic implications of aforementioned challenges.

The most eye-catching finding alone is that all three digital constructs Digitization, Digitalization and Digital Transformation are consistently misunderstood by Moroccan SMEs. What SME's are doing is conflating these vastly different processes tricking them into simplistic thinking, suggesting at its extreme that mundane elements as worrying about paper documents being turned into digitized systems or merely reaching out to customers through social media are equivalent to complete transformation. According to a survey conducted by MarocPME (2023) with SMEs, over 66% of the respondents claim that only basic technologies are required to gain digital transformation. This lack of a conceptual framework hinders SMEs updating their technology strategically, as they fail to recognise how several core advanced digital technologies can reshuffle their business composition.

Moreover, it also highlights the fragmented nature of digital adoption among Moroccan SMEs. Digital technologies are used by organizations as challenge-specific solutions often in silo pockets and do not effectively weave them into a cohesive digital strategy. While some aspects of digital technology may be used within organizations, many companies have adopted customer relationship management (CRM) systems or digital marketing tools they are rarely in line with companywide goals or workflows. This siloed mindset leaves many SMEs missing out on the synergies that are available in a fully integrated digital ecosystem. Moreover, the data generated by digital tools is often underutilized, as most SMEs lack the skills (or the models) to analyze and act on insights that such data could generate.

Additionally, the research identifies multiple systemic barriers that hinder Moroccan SMEs from maturing on the digital spectrum. One of the main hurdles is financial. Most of the SMEs do not have the resources to afford complex digital environments and nor are able to hire professionals that can implement these for them. Add in a narrow digitized work force, and workers who'd don't always know how to take advantage of digital technologies. Another significant factor is the cultural element as

managers and employees are hesitant to change the existing way of doing things in favour of a new way of doing it which technology enables. India, particularly the Andaman and Nicobar Islands as a Union Territory, still suffers from laden infrastructure deficiencies in the region, including access to steady internet services and more.

From a strategic standpoint, such misconceptions, tradition-bound practices and systemic barriers add a considerable layer of difficulty to the challenges thrust upon the Moroccan SME sector. For more digitally mature organizations, these companies are falling further behind, leading to heightened competitiveness gaps in local and global markets that are only increasing over time. These knowledge gaps impact their objective to innovate but also make them increasingly susceptible to disruption in the market and shifting consumer demands. In this regard, many of the businesses in the region embracing digital transformation pivoted quickly due to economic shock, while Moroccan SMEs were trapped into integrated digital systems. Consequently, these companies are at risk of being left behind in terms of the opportunities digital strategy provides that can drive improved customer engagement, enhanced efficiency and help reach new markets.

Table 1: Challenges and Strategic Implications of Digital transition in Moroccan SMEs

Theme	Description	Examples	Implications
Misconceptions	Moroccan SMEs often misunderstand the distinctions between digitization, digitalization, and digital transformation. Many equate basic digital practices with full transformation.	<ul style="list-style-type: none"> - Scanning invoices and storing them in a digital archive is perceived as achieving digital transformation. - Using social media for marketing is considered sufficient for competitiveness. 	<ul style="list-style-type: none"> - Misallocation of resources to superficial digital activities. - Inability to recognize the transformative potential of advanced technologies. - Missed opportunities for innovation.
Fragmented Adoption	Digital tools are implemented in silos, addressing specific functions without integration into broader strategies.	<ul style="list-style-type: none"> - A firm adopts a CRM system but does not integrate it with marketing or sales processes. - Use of digital marketing tools without aligning them with inventory management or logistics systems. 	<ul style="list-style-type: none"> - Operational inefficiencies due to lack of interconnectivity. - Incomplete realization of digital tools' potential benefits. - Underutilization of data for decision-making.
Barriers	Structural and organizational obstacles prevent SMEs from advancing in their digital journey.	<ul style="list-style-type: none"> - Financial: SMEs lack funding to invest in advanced tools. - Skills: Employees are untrained in using CRM or data analytics tools. - Cultural: Leadership resists automation due to fear of complexity. - Infrastructure: Rural SMEs face unreliable internet connectivity. 	<ul style="list-style-type: none"> - Slow adoption of transformative technologies. - Persistent reliance on manual processes. - Exclusion from global markets and innovative ecosystems. - Growing digital divide between urban and rural SMEs.
Strategic Implications	The cumulative effect of these challenges undermines	- Moroccan SMEs struggle to innovate or	- Growing gap between Moroccan

	the competitiveness and sustainability of SMEs.	adapt to changing market dynamics. - Inability to leverage e-commerce platforms for regional or international expansion.	SMEs and competitors in digitally mature economies. - Increased vulnerability to market disruptions. - Limited capacity to attract tech-savvy customers.
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5. Discussion

This study uncovers a basic misunderstanding among Moroccan SMEs regarding the distinction between digitization, digitalization and digital transformation. Such conflation betrays a general lack of strategic sensibility in which the most basic digital moves document scanning, use of social media are conflated with enterprise transformation. This myth limits SMEs to develop and create internal transformation by reconceptualising core processes or launching transformational value propositions.

The next major hurdle is the fragmented nature of digital adoption. SMEs in Morocco have developed their own isolated approaches for digital tools when needed to respond to an operational gap. This can lead to noise more than signal, and too many tactical programs without an overall digital strategy to feed them all. That said, CRM systems can flourish customer engagement, but this doesn't bring a fundamental improvement on business performance as long as this tool is still separated from the supply chain or inventory systems. Not integrating this indicates a leadership failure and a lack of organizational readiness for systemic change.

Systemic barriers compound these challenges. Financial constraints like an inability to invest in advanced technologies or upskill its workforce are particularly stifling. Compounding this challenge is a dearth of targeted funding mechanisms grants or subsidies. Moreover, skills shortages particularly prevalent among a sizable segment of the rural population hinder the effective uptake and use of digital tools, while culture acts as another barrier to transformative activity. The existing infrastructure gap, especially when it comes to internet coverage, is also exacerbated leading to a gap which needs to be bridged behind the rural SMEs in the digital race.

These findings further this proclamation by indicating that the challenges to digital transformation are not merely technology-driven, they are embedded within structural, cultural, and organizational dimensions. To tackle these challenges, we need a multi-faceted strategy that includes technical assistance, systemic changes, and education.

This reality is compounded by misconceptions, fragmentary practices, and systemic barriers that result in a much higher competitiveness gap among Moroccan SMEs. If left unattended, SMEs may miss critical opportunities for innovation, optimization, and global expansion. This stagnation would have greater implications for Morocco's economy since SMEs represent a major share of employment and GDP (MarocPME, 2023).

Bridging this gap takes a collaborative approach across the ecosystem. Policy makers have to target investments into digital infrastructure disasters in addition to grants and subsidies that should relieve resource constraints. These institutions can accelerate the digital journey through a workforce investment agenda that increases its capability to collaborate across industries, builds a basic comprehension of the digital environment and sharpens a spirit of innovation and entrepreneurship. The pooling of such means will shift the burden to long-term initiatives, allowing Moroccan SMEs to exploit their involvement in the global digital economy.

Digital transformation is more than a technological exercise; it eventually comes down to a vision distilled by executives and units of business in your organization. In practice, such transformation moves beyond just investing in tools – it is about a mindset shift, one that defines digital innovation as a growth enabler, not a polemic disrupter.

The findings point to an undeniable fact: Digital transformation is a fundamentally human exercise, and it's the hopes, fears and choices of the people that define it in the enterprise. Leaders, employees and policymakers working together to build an ecosystem of confidence, experimentation and shared accountability is key to progress.”

The realm of Moroccan SMEs is at a precipice. And by addressing these challenges with foresight and a shared vision, they can transition from reactive consumers of technology to proactive partners in innovation toward a more economically prosperous future for Morocco. They can become potent engines of resilience and innovation in the digital age – when they collaborate.

6. Conclusion

Through an examination of the extent of digital transformation spectrums, this research highlights opportunities all while critically investigating key challenges that may be faced by Moroccan SMEs. The research challenges existing misconceptions, structural limitations and strategic gaps that hinder SMEs' digital maturity based on the continuum of digitization to digital transformation construct. The challenges have deep-seated financial, cultural, and infrastructural roots, and overcoming them is essential for maintaining competitiveness over the long term.

Conclusion Aweigh Digital transformation for Moroccan SMEs calls for comprehensive, transformative initiatives rather than performative digital adoption. Develop a nurturing industry ecosystem for innovation, digital skills, and communities that connects stakeholders through collaboration between policymakers, training institutions, and industry leaders. For SMEs to be able to achieve those potential benefits and prosper in a digital economy, some targeted actions such as financial incentives and capacity-building programs tailored to their specific needs are required to reduce the burden of going digital.

Indeed, it suggests that such transformation goes beyond the challenges in the short term; that this transformation is a precious ally of Morocco, insofar as digitization was already considered as a lever for the economic development of the kingdom, and then of its resilience. A pragmatic and strategic approach of this kind will allow Moroccan SMEs to enhance their competitiveness at the international level while positioning them as actors in the future of the country and its sustainable development.

Digital transformation is more than just technology – it's about culture, leadership and vision, too. This work sets the stage for better steering in upcoming endeavors to support the development of Moroccan SMEs and their adaptation to an increasingly interrelated and fast-moving global market.

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