Chapter 10
Keys in the Adoption of New Technologies in Latin American SMEs:
Challenges for a Sustained Growth in the AI Age

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ABSTRACT

This research examines the integration of advanced technologies, particularly Artificial Intelligence (AI), in Small and Medium-sized Enterprises (SMEs) across Latin America. It addresses a gap in scholarship regarding technological advancement in regional SMEs. Our study, based on data from 306 SME executives in six countries, reveals a growing trend towards technology adoption, especially in customer-oriented sectors, driven by desires for improved operational efficiency and productivity. Major barriers include high initial costs and lack of skilled personnel. The findings highlight the need for tailored digital advancement strategies in Latin America, considering the unique motivations, challenges, and operational contexts of SMEs. This study offers insights for policymakers, tech industry leaders, and SME decision-makers navigating technological transformation in the AI era, emphasizing the importance of strategic alignment, comprehensive implementation across business areas, and addressing workforce skill gaps for successful digital evolution.

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INTRODUCTION

The digital transformation sweeping across the global business landscape has emerged as a defining challenge for enterprises of all sizes, with particularly profound implications for Small and Medium-sized Enterprises (SMEs) in Latin America. As we navigate the complexities of an increasingly interconnected and technologically driven world, the ability of these businesses to adapt and innovate has become a critical determinant of their success and longevity. This phenomenon is especially significant in Latin America, a region characterized by its vibrant economic potential and growing integration into the global market.

In the rapidly evolving landscape of global business, the adoption of new technologies has become a critical factor in determining the success and longevity of enterprises. This phenomenon is particularly significant for SMEs in Latin America, a region characterized by its dynamic economic growth and increasing integration into the global market (Liñán et al., 2020). As we stand on the beginning of a new era dominated by artificial intelligence (AI) and other advanced technologies, the challenges and opportunities facing Latin American SMEs are more pronounced than ever.

The technological revolution, often referred to as the Fourth Industrial Revolution or Industry 4.0, has started a new paradigm of business operations. This paradigm shift is marked by the convergence of digital, physical, and biological technologies, fundamentally altering the way companies operate, compete, and deliver value to their customers. For Latin American SMEs, which form the backbone of the region's economy, embracing these technological advancements is not just an option but a necessity for sustained growth and competitiveness in the global marketplace (Ferraro & Rojo, 2018).

However, the path to technological adoption has challenges for these businesses. Limited resources, both financial and human, often constrain the ability of SMEs to invest in and implement new technologies (Molina-Ycaza & Sánchez-Riofrío, 2016). Moreover, the rapid pace of technological change can be overwhelming, making it difficult for smaller enterprises to keep up with the latest innovations and integrate them effectively into their operations. The skills gap in the workforce, coupled with resistance to change among employees and management, further complicates the adoption process (Akpan et al., 2022).

Despite these challenges, the potential benefits of technological adoption for Latin American SMEs are immense. Enhanced productivity, improved operational efficiency, and increased competitiveness are just a few of the advantages that come with successful implementation of new technologies (Ramírez-Solis et al., 2022). In an age where data is often referred to as the new oil, the ability to collect, analyze, and leverage information can provide SMEs with unprecedented insights into their