Chapter 7
Catalysts of Change:
SMEs and Dynamics of AI Adoption

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ABSTRACT

Redefining conventional business paradigms, the incorporation of artificial intelligence (AI) in small and medium-sized organizations (SMEs) has become a disruptive catalyst. This research explores the factors that motivate, hinder, and have repercussions for the adoption of AI in small and medium-sized enterprises (SMEs). This research aims to identify the critical elements influencing successful AI integration, the impact of AI on SME operations, and the potential for improving competitiveness and sustainability through a thorough analysis of industry case studies and a thorough review of the existing literature. This study provides important insights into the complex link between AI adoption and SME development by clarifying the way that technology is changing in the SME sector in terms of encouraging innovation and causing organizational transformation.

INTRODUCTION

- **Background and Significance of AI Adoption in SMEs:** The explosive growth of artificial intelligence (AI) in recent years has given small and medium-sized businesses (SMEs) a game-changing chance to modernize their operational procedures, boost productivity, and maintain their competitiveness in the ever-changing business environment. The emergence of AI technology has caused a transformation in traditional business models, leading small and medium-sized enterprises to view the integration of AI as an essential strategic endeavor (Riaz *et al.*, 2022).

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Explore the entrepreneurship opportunities for young female students in emerging nations. Adopting the technology acceptance model paradigm, the authors attempt to understand the moderating effects of perceived usefulness on social media behavior. The authors conduct a person-administered survey on 241 female students with entrepreneurship intentions. The survey is analyzed using structural equation modeling (Amos). According to the findings, the variables such as social influence, perceived ease of use, perceived enjoyment, perceived usefulness, attitude toward social media and social-media behaviors have a significant relationship, indicating tremendous entrepreneurial opportunities, especially social-media-based, for young women in emerging nations. Results also show that social media attracts women entrepreneurs positively in emerging countries. Since the data was collected only in a single Asian nation, the results may not be generalizable. The study have a significant impact on social media and entrepreneurial development.(Emmanuel et al. 2022). The ubiquitous role of the smartphone in expanding entrepreneurial opportunity among women in emerging Asia. This study attempted to explore the hidden issues behind increased innovative entrepreneurial tendency. Results show a significant relationship among the independent and dependent variables of the study which indicates a significant entrepreneurship opportunity for women in emerging Asia.(Hossain et al. 2020). The study reviews the literature on social media, social networking, mobile usage, and media entrepreneurship. This research identifies the immense popularity of social networking, online shopping, and digital media entrepreneurship due to available and affordable usage of mobile phones. To do so, the research investigates related literature from the last five years (2013 and 2018). The findings indicate that even though media entrepreneurship gained increased popularity, it has not been implemented or initiated properly. This research also indicates a new path towards ease of online shopping, building trust, ease of decision making in online purchase, as well as reduction of unemployment problem in emerging and developing nations. Despite some limitations discussed in the study such as inconsistent research papers, limited studies in the specific field, and limited empirical evidence, it still offers implications and contributions for online shoppers, marketers, policymakers, and entrepreneurs. Finally, the research acknowledges the emerging role of social networking in media entrepreneurship development in the context of mobile phone usage in online shopping. (Hossain et al. 2019).

- **Problem Statement and Research Questions**: Notwithstanding the potential advantages, SMEs have had difficulty implementing AI due to a number of issues, including as limited resources, sophisticated technology, and a lack of thorough knowledge about the effects of integrating AI(Vijayakumar, 2021). In order to shed light on the methods necessary to support a smooth and successful integration process, this study aims to address the fundamental challenge of identifying the major catalysts and obstacles driving AI adoption in SMEs(Taherizadeh and Beaudry, 2023). This raises a number of important research questions, including what factors lead to the effective adoption of AI, how AI affects the performance of SMEs, and what steps need to be taken to get over barriers to AI implementation in SMEs(Hanelt *et al.*, 2021).
- **Purpose and Objectives of the Study:** This study's main goal is to offer a thorough examination of the dynamics and consequences of AI adoption in the SME market. The goal of this project is to provide important insights into the efficient application of AI technologies to support development, innovation, and sustainability inside SMEs by investigating the underlying variables driving AI integration and the difficulties related to this process(Yathiraju, 2022). The report also aims to pinpoint useful tactics and suggestions for small and medium-sized enterprises (SMEs) looking to integrate AI efficiently into their operational frameworks(Riaz *et al.*, 2022).

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