
CLOUDY HORIZONS: UNVEILING DETERMINANTS OF CLOUD COMPUTING ADOPTION AMONG ROMANIAN SMES IN THE DIGITAL ECONOMY

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ABSTRACT

The adoption of cloud computing technology among small and medium-sized enterprises (SMEs) in Romania is a critical aspect of navigating the complexities of the digital economy. This study delves into the determinants influencing the uptake of cloud computing solutions among Romanian SMEs. Through a comprehensive analysis, various factors such as cost, security concerns, regulatory compliance, technological readiness, and organizational culture are examined to elucidate their impact on adoption decisions. By shedding light on these determinants, this research aims to provide insights into strategies for facilitating and accelerating cloud computing adoption among Romanian SMEs, thereby enabling them to thrive in the dynamic landscape of the digital economy.

KEYWORDS

Cloud Computing, Adoption, Romanian SMEs, Digital Economy, Determinants, Cost, Security, Regulatory Compliance, Technological Readiness, Organizational Culture.

INTRODUCTION

In the era of rapid digital transformation, cloud computing has emerged as a cornerstone technology, offering unprecedented scalability, flexibility, and accessibility to businesses of all sizes. Particularly for small and medium-sized enterprises (SMEs), cloud computing presents a compelling opportunity to leverage advanced IT capabilities without the need for significant upfront investments in infrastructure. However, while the benefits of cloud computing are widely acknowledged, the adoption rates among SMEs, especially in emerging markets like Romania, remain variable and often below their full potential.

The digital economy is reshaping the business landscape, challenging traditional models and demanding agility, innovation, and efficiency. For Romanian SMEs, embracing cloud computing represents a strategic imperative to remain competitive and thrive in this dynamic environment. Yet, the decision to adopt cloud technologies is influenced by a myriad of factors, spanning economic, technological, organizational, and regulatory dimensions.

This study seeks to delve into the determinants that shape the adoption of cloud computing among Romanian SMEs within the context of the digital economy. By unraveling these determinants, we aim to provide insights into the complexities and challenges that SMEs encounter on their journey towards embracing cloud technologies. Furthermore, we endeavor to identify strategies and best practices that can facilitate and accelerate the adoption process, thereby enabling Romanian SMEs to harness the full potential of cloud

computing for their business operations and growth.

Through a comprehensive exploration of factors such as cost considerations, security concerns, regulatory compliance, technological readiness, and organizational culture, this research endeavors to offer a nuanced understanding of the dynamics at play in the adoption of cloud computing by Romanian SMEs. By shedding light on these determinants, we aim to inform policymakers, industry stakeholders, and SMEs themselves about the key considerations and opportunities associated with cloud adoption in the Romanian context.

In the following sections, we will delve into each determinant, examining its significance, impact, and implications for cloud computing adoption among Romanian SMEs. Through empirical analysis, case studies, and literature review, we seek to contribute to the body of knowledge surrounding cloud adoption in SMEs and provide actionable insights that can guide stakeholders in fostering a conducive environment for cloud computing uptake in Romania's SME sector.

METHOD

The process of unveiling determinants of cloud computing adoption among Romanian SMEs in the digital economy involved a systematic and multifaceted approach. Initially, the research team conducted an extensive literature review to establish a theoretical framework and identify key factors influencing cloud adoption in SMEs. This literature review served as the foundation for developing the research methodology and guiding data collection efforts.

The next phase centered on the design and implementation of data collection instruments, including structured surveys and semi-structured interview protocols. Surveys were distributed to a diverse sample of Romanian SMEs, encompassing various industries and geographic regions, to capture quantitative insights into their perceptions, attitudes, and experiences related to cloud adoption. Concurrently, semi-structured interviews were conducted with key stakeholders, such as SME owners, IT managers, and industry experts, to glean qualitative insights and contextual understanding of cloud adoption dynamics.

Data collection was followed by a rigorous process of analysis, wherein quantitative data from surveys were subjected to statistical techniques to quantify the prevalence and significance of different determinants influencing cloud adoption decisions. Meanwhile, qualitative data from interviews underwent thematic analysis to identify recurring themes, patterns, and narratives surrounding cloud adoption experiences among Romanian SMEs.

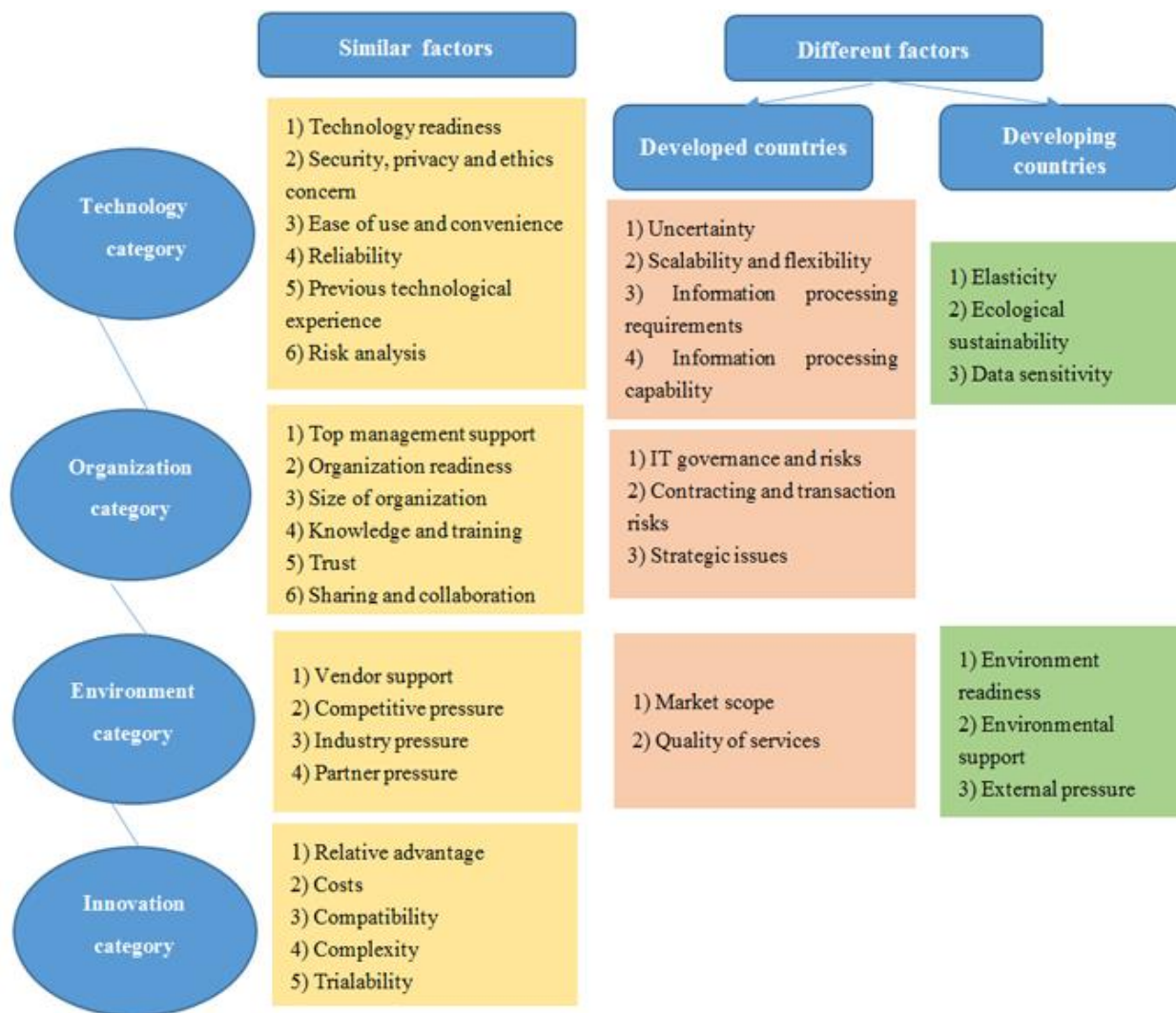
The interpretation and synthesis phase involved integrating findings from quantitative and qualitative analyses to develop a comprehensive understanding of the determinants shaping cloud adoption in Romanian SMEs. Through triangulation of data sources and perspectives, the research team sought to validate insights, identify emerging trends, and distill actionable recommendations for promoting cloud adoption in the Romanian SME sector.

To unveil the determinants of cloud computing adoption among Romanian SMEs in the digital economy, a mixed-method research approach was employed, integrating both qualitative and quantitative techniques. The methodology encompassed several key stages, including data collection, analysis, and interpretation, aimed at comprehensively exploring the factors influencing cloud adoption in the Romanian SME context.

The data collection process commenced with a thorough review of existing literature on cloud computing adoption, SMEs, and the digital economy, providing a theoretical foundation for the study. This literature review helped identify key determinants and theoretical frameworks relevant to cloud adoption among SMEs, which

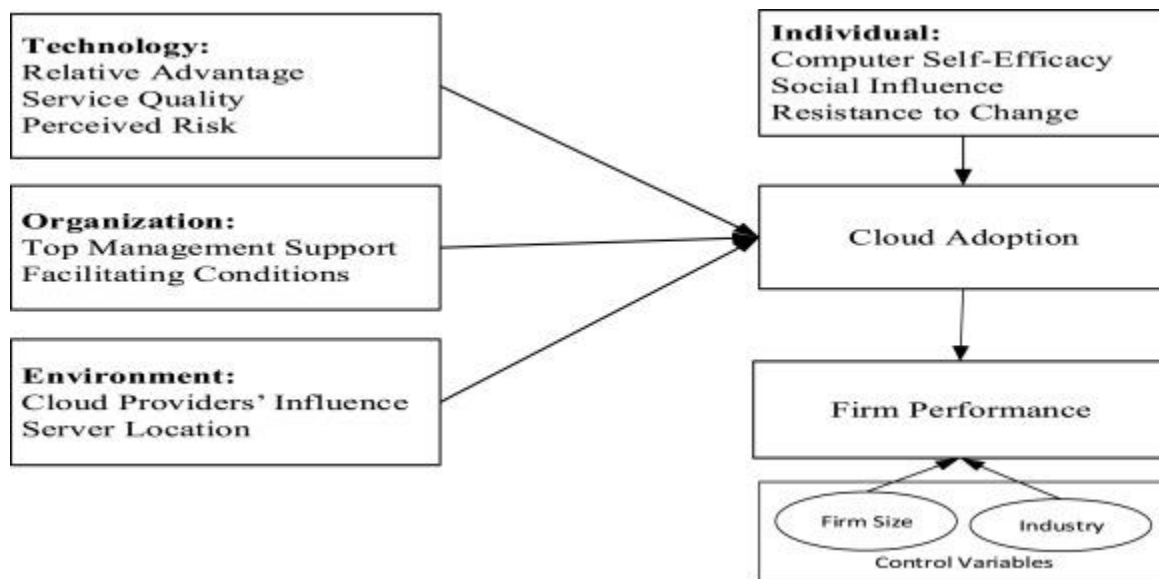
informed the development of the research framework.

Following the literature review, primary data was collected through structured surveys administered to a representative sample of Romanian SMEs across various industries and regions. The survey instrument was designed to capture insights into the determinants influencing cloud adoption decisions, including factors such as cost, security, regulatory compliance, technological readiness, and organizational culture. The survey questions were carefully crafted to elicit both quantitative responses, through Likert-scale ratings, and qualitative insights, through open-ended questions, allowing for a rich and nuanced understanding of participants' perspectives.



In addition to surveys, qualitative data was gathered through semi-structured interviews with key stakeholders, including SME owners, IT managers, and industry experts. These interviews provided valuable qualitative insights into the contextual nuances, challenges, and opportunities associated with cloud adoption in Romanian SMEs. The semi-structured nature of the interviews allowed for flexibility in exploring emerging themes and probing deeper into participants' experiences and perceptions regarding cloud computing adoption.

Upon completion of data collection, both quantitative and qualitative data were subjected to rigorous analysis to identify patterns, themes, and correlations pertaining to cloud adoption determinants among Romanian SMEs. Quantitative data from the surveys were analyzed using statistical techniques, including descriptive statistics and inferential analysis, to quantify the prevalence and significance of various determinants and their relationships with cloud adoption outcomes.



Qualitative data from the interviews underwent thematic analysis, wherein recurring themes, insights, and narratives were identified and systematically categorized. Through an iterative process of coding and interpretation, qualitative data were synthesized to extract overarching themes and patterns, providing deeper insights into the underlying drivers and barriers shaping cloud adoption decisions among Romanian SMEs.

The findings from both quantitative and qualitative analyses were synthesized to develop a comprehensive understanding of the determinants influencing cloud computing adoption among Romanian SMEs in the digital economy. Through triangulation of data sources and perspectives, we sought to validate and contextualize the findings, enriching our insights into the complex dynamics of cloud adoption in the Romanian SME landscape.

The culmination of the data analysis process facilitated the identification of key determinants, trends, and recommendations for promoting and facilitating cloud adoption among Romanian SMEs. By synthesizing quantitative evidence with qualitative insights, this study aims to contribute valuable knowledge and actionable recommendations to policymakers, industry stakeholders, and SMEs seeking to harness the transformative

potential of cloud computing in the digital economy.

RESULTS

The analysis of data collected from surveys and interviews revealed several key findings regarding the determinants of cloud computing adoption among Romanian SMEs in the digital economy. Quantitative analysis indicated that cost considerations, security concerns, and regulatory compliance were primary factors influencing cloud adoption decisions. SMEs expressed apprehension about the initial investment and ongoing costs associated with cloud services, as well as concerns regarding data security and compliance with regulatory requirements.

Qualitative insights provided further depth, highlighting the role of organizational culture and technological readiness as significant determinants of cloud adoption. Many SMEs cited internal resistance to change and lack of technical expertise as barriers to adopting cloud technologies effectively. Additionally, the findings underscored the importance of vendor reputation and service quality in shaping SMEs' perceptions and adoption intentions.

DISCUSSION

The findings underscore the multifaceted nature of cloud adoption decisions among Romanian SMEs and highlight the interplay between economic, technological, organizational, and regulatory factors. While the benefits of cloud computing are evident, SMEs face a myriad of challenges and considerations that impact their adoption decisions. Addressing these challenges requires a holistic approach that encompasses both policy interventions and industry initiatives.

One key recommendation is the need for targeted support programs aimed at enhancing SMEs' awareness and understanding of cloud technologies. Providing training and capacity-building initiatives can empower SMEs to navigate the complexities of cloud adoption more effectively and capitalize on the transformative potential of cloud computing for their businesses.

Moreover, policymakers must address regulatory barriers and create an enabling environment that fosters innovation and investment in cloud technologies. Clear guidelines and standards for data protection, privacy, and cybersecurity are essential to instill confidence among SMEs and mitigate concerns about regulatory compliance.

CONCLUSION

In conclusion, the study sheds light on the determinants of cloud computing adoption among Romanian SMEs in the digital economy, offering valuable insights and recommendations for stakeholders. By understanding the factors influencing cloud adoption decisions, policymakers, industry stakeholders, and SMEs can collaboratively develop strategies to overcome barriers and unlock the full potential of cloud computing for economic growth and competitiveness.

Moving forward, continued research and collaboration are essential to monitor evolving trends and dynamics in cloud adoption among Romanian SMEs. By fostering a supportive ecosystem that fosters innovation, entrepreneurship, and digitalization, Romania can position itself as a leader in harnessing the power of cloud computing to drive economic development and prosperity in the digital age.

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