



THE IMPACT OF DIGITAL TRANSFORMATION ON ORGANIZATIONAL AGILITY IN SMALL AND MEDIUM ENTERPRISES (SMES)

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Abstract

Digital transformation has become an important factor determining the competitiveness in the current fast-paced business world. The current research explores the effect of digital transformation on organizational agility in Small and Medium Enterprises (SMEs). Organizational agility is described by a firm's capacity to identify changes in the external environment and react to these changes through innovation, flexibility, and rapid response. The study employs a mixed methodology, which includes collecting quantitative information from 120 SMEs using a questionnaire and qualitative data obtained through interviewing 15 business managers. Data analysis used statistics, including correlations and regressions, by utilizing the SPSS software. Based on the findings from the research conducted, there exists a significant positive relationship between digital transformation and organizational agility. The incorporation of innovative technology such as cloud computing, analytics, and automation has played a major role in enhancing organizational agility among SMEs. Nevertheless, problems related to expensive implementation process, low level of digital skills, and resistance to changes exist. It should be stated that digital transformation is a strategic and cultural process, rather than a technological one.

Keywords: *Digital Transformation, Organizational Agility, SMEs, Innovation, Cloud Computing, Data Analytics, Automation, Leadership*

1. Introduction:

In today's world, companies operate in a fast-changing business setting with respect to innovations in technology, customer preferences, and competition. Agility within an organization can be explained in terms of its ability to respond to changes promptly and efficiently. This is true for digital transformation whereby the use of digital technologies plays an important role in how businesses run leading to transformation on how they produce value. Global events in recent times, especially the outbreak of the coronavirus disease, have seen

increased digitalization especially by small and medium-sized enterprises (SMEs). They were forced to adopt the digital technology to ensure their survival and therefore improving their agility and resilience. The significance of SMEs in terms of economic development includes job creation, innovation, and contributing towards the GDP of a nation. However, challenges faced by these businesses include insufficient finances and reluctance to change.. At the same time, they have a competitive advantage in the form of flexibility and quick decision-making abilities.

Thus, the current research paper seeks to investigate the impact of digital transformation on organizational agility of SMEs.

2. Objectives of the Study:

In particular, the study objectives will be as follows:

- To determine the level at which digital transformation has been adopted by SMEs.
- To investigate the influence of digital transformation on organizational agility in small and medium enterprises.
- To identify the main technology factors that influence organizational agility (for example, cloud computing, big data analytics, automation technologies)
- To finds Digital transformation and its implications on innovation, flexibility, and adaptability of small and medium firms.
- To identify Issues faced while implementing digital transformation within small and medium firms.
- To determine Role of leaders and organization culture in digital transformation.

3. Literature Review:

Digital transformation has received much consideration in the academic community. Bharadwaj et al. (2013) define it as the application of digital technologies for the purpose of developing innovative business models and increasing performance. On the other hand, Vial (2019) refers to it as a change that takes place through information, communication, and connectivity technologies.

Agility in organizations is often seen as a facet of dynamic capabilities. According to Teece (2007), companies must possess the capability to integrate and restructure competencies due to the rapidly changing environment. Key features include flexibility, responsiveness, and innovativeness.

Previous research points to the importance of digital technology use for performance enhancement. Cloud technologies facilitate scalability, while data analytics supports better decision-making processes. Moreover, automation leads to higher efficiency. According to Kane et al. (2015), the factor behind successful transformations is strategy, not technology alone.

Though there are numerous studies in the area of interest, little attention is paid to the issue of the impact of digital transformation on organizational agility in SMEs.

4. Theoretical Framework:

The Dynamic Capabilities Theory is the main theoretical framework for this study. This theory asserts that firms should always be ready to integrate, develop, and reconfigure their internal and external capabilities to deal with dynamic environments. Digital transformation plays a significant role in enhancing the capability of SMEs to integrate, develop, and reconfigure the organization through the provision of information on the dynamic environment, seizing opportunities offered by the market, and transforming internal activities. Another theoretical framework that is used in the analysis is that of TOE framework. The technology aspect of TOE framework looks at the availability and suitability of the technology. The organizational aspect takes into account the size of the organization, management support, and the availability of resources. Furthermore, the Diffusion of Innovation Theory plays a role in grasping how SMEs adopt digital innovations with time. It outlines the impacts that perceived ease-of-use, perceived usefulness, and social influence play in terms of the pace at which adoption takes place. Early adopting SMEs enjoy an edge through innovation and agility. Organizational agility is also complemented by the Contingency Theory, which posits that a one-fits-all model of management cannot exist. Rather, firms have to adjust themselves according to environmental influences. In this respect, digital transformation helps SMEs become agile in accordance with changing environmental needs. The above theoretical perspectives provide a multidimensional framework through which the impacts of digital transformation on organizational agility can be comprehended.

5. Research Methodology:

The current study uses a descriptive and analytical methodology for the purpose of studying the effects of digital transformation on organizational agility in Small and Medium Enterprises (SMEs). A mixed-methodology has been employed, where both qualitative and quantitative methods have been utilized to derive in-depth insights. This study involves the use of both

primary and secondary sources of data. Primary data has been obtained from the responses of 120 SME owners/managers who completed the questionnaires and 15 managers who were interviewed using semi-structured interviews.

A convenient sampling strategy was utilized considering the limitations of time and availability, with the study concentrating on the SMEs selected from specific regions. Digital transformation will be considered as an independent variable in the research that will be assessed through the incorporation of different technologies such as cloud computing, data analysis, and automation. On the other hand, organizational agility will be used as a dependent variable, which will include flexibility, responsiveness, innovation, and adaptability.

Analysis of the data was done by using statistical package for social sciences (SPSS). Different statistical methods like descriptive statistics, correlation analysis, and regression analysis were used to test the hypothesis. The current study seeks to test the hypothesis that there is a statistically significant relationship between digital transformation and organizational agility among SMEs. The reliability of the data was assured by using the correct procedures, while validity was attained through proper designing of the questionnaire, and the literature review. Ethics were adhered to throughout the research process.

6. Results and Discussion

6.1 Results: The research has revealed that there is a high degree of correlation between digital transformation and agility in organizations ($r = 0.68$), which accounts for 46% of the variance. Data analytics contributes to decision making, and automation/artificial intelligence facilitates innovation within small businesses.

6.2 Industry-Specific Findings: The digital revolution has proven to be very effective in enhancing agility in technology-driven industries like IT and e-commerce than in traditional industries like manufacturing.

6.3 Problems Encountered

- Scarcity of skilled labour
- Expensive to implement
- Resistant to change
- Low knowledge on use of digital tools

6.4 Discussion

- The results show clearly that digital transformation increases agility in organizations. But for digital transformation to succeed, there is need to have other important elements besides technology itself.

7. Conclusion

It is clear from this study that digital transformation plays an important role as one of the key drivers for organizational agility in SMEs. Through incorporation of digital technologies in the business, organizations can become agile and innovative.

- In addition, digital transformation not only helps organizations become efficient through operational improvement, but they also provide strategic value by improving customer experience and competitive positioning. In order to ensure that the process of digital transformation is a success in the organization, there are certain factors that need to be taken into account, including organizational culture, readiness of employees, and commitment of management.

- Digital transformation process in SMEs requires an integrated approach, whereby the firm adopts new technologies, acquires skills, and develops organizational culture.

- Finally, digital transformation process is not a one-off process, but rather a continuous improvement process within the firm.

8. Recommendations

- Introduction of digital learning programs to train staff
- The government needs to support the initiative financially and through policies
- Necessity to experiment and foster innovation
- Development of an effective digital strategy
- Making cyber security investments

9. Limitations of the Research:

- Even though this research yields meaningful findings, several limitations have to be pointed out.

- The limitation is that the sample size of 120 small and medium-sized enterprises is relatively small. Moreover, since the research design is cross-sectional, it limits the capacity for temporal analysis. It is essential to consider a longitudinal perspective in order to understand the effects in depth.

- Lastly, there is an emphasis on certain digital technologies in the analysis and ignores the full extent of innovations affecting organizational agility.

10. Future Research Directions:

Several possibilities for future research exist with regard to the current work.

- For example, future studies can involve a longitudinal approach to determine how digital transformation affects organizational agility through time and at various stages of development of the firm.
- Moreover, studies could compare SMEs to large organizations to determine how they differ with respect to digital transformation processes and effects on organizational agility.
- As another option, future studies may look into emerging technologies, including block chain, artificial intelligence, and the Internet of Things, in terms of increasing organizational agility.
- The use of industry-based studies will allow researchers to gain an insight into the specific industry challenges in the context of digital transformation.
- The topic of government intervention and digital infrastructure support in encouraging digital transformation is another area that deserves attention.
- Finally, qualitative research based on case studies will provide valuable information regarding successful digital transformation processes.

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