

Exploring the Role of Digital Transformation in Competitive Advantage: Mediating Role of Organizational Culture.

An Empirical Research in Banking Sector in Egypt

¹**Prof. Dr. Adel Zayed**
Faculty of Commerce,
Cairo University, Giza,
Egypt

²**Nada Amr Hussein**
DBA Candidate
Arab Academy for Science,
Technology & Maritime
Transport

Abstract

This research aims to explore the role of digital transformation in achieving a competitive advantage, with the mediating role of organizational culture in the banking sector in Egypt.

Design/Methodology/Approach: Data was collected through a quantitative method using a survey administered to employees from the technology-related departments of the National Bank of Egypt and Banque Misr, both of which have been significantly impacted by digital transformation. The departments included in the study are the Department of Digital Banking, the Information Technology (IT) Department, and the Innovation and Digital Transformation Unit. A large-scale sample survey questionnaire was employed, and structural equation modeling (SEM) was used to analyze the data collected from 319 employees.

Findings: The study revealed the important role of digital transformation as a key driver for competitive advantage. It also demonstrated that creating a supportive organizational culture is essential for banks in Egypt to harness the benefits of digital transformation effectively.

Keywords: Digital Transformation, Competitive Advantage, Organizational Culture, Egyptian banking sector.

الملخص :

يهدف هذا البحث إلى التعرف على دور التحول الرقمي في تحقيق الميزة التنافسية، مع الدور الوسيط للثقافة التنظيمية في القطاع المصرفي في مصر. **التصميم/المنهجية:** تم جمع البيانات من خلال الاعتماد على المنهج الكمي باستخدام مسح تم إجراؤه على موظفين من الإدارات ذات الصلة بالتكنولوجيا في البنك الأهلي المصري وبنك مصر، حيث أن كلاهما تأثر بشكل كبير بالتحول الرقمي. والأقسام التي شملتها الدراسة هي قسم الخدمات المصرفية الرقمية، وقسم تكنولوجيا المعلومات، ووحدة الابتكار والتحول الرقمي. تم استخدام استبيان مسح عينة واسع النطاق، وتم استخدام نمذجة المعادلة الهيكلية (SEM) لتحليل البيانات التي تم جمعها من ٣١٩ موظفًا.

النتائج: كشفت الدراسة عن الدور المهم للتحول الرقمي كمحرك رئيسي للميزة التنافسية. كما أظهر أن خلق ثقافة تنظيمية داعمة أمر ضروري للبنوك في مصر لتسخير فوائد التحول الرقمي بشكل فعال. **الكلمات المفتاحية:** التحول الرقمي، الميزة التنافسية، الثقافة التنظيمية، القطاع المصرفي المصري.

1. Introduction

In the modern competitive landscape, a stark contrast emerges when compared to the stable and predictable strategic paradigms of the 20th century (Bharadwaj et al., 2013). Traditional strategic thinking was heavily influenced by the industrial organization (IO) school of thought, which posited that a firm's competitive advantages (CAs) were largely determined by the structure of the industry and the firm's positioning within it (Porter, 1981). Complementing this view was the resource-based view (RBV) school, which argued that firms' CAs stemmed from their unique arrangement of valuable, rare, and hard-to-imitate resources, known as VRIN resources. The RBV was further extended by the concept of "dynamic capabilities," which suggested that CAs arose from the unique ways firms combined their internal resources and capabilities (Leão & da Silva, 2021).

However, a contemporary "structural flaw" in these traditional strategic schools is their reliance on an outdated analog technology paradigm, which fails to account for the innovative technology trends of the digital era and their profound impact on business strategies (Koch & Windsperger, 2017). In essence, while traditional strategic thought emphasized VRIN resources as the primary sources of competitive advantage, this concept is rapidly becoming obsolete. The digital era is characterized by blurred industry boundaries, hyper-competition (Orji, 2019), an increased emphasis on services,

and a shift from hardware to software as the main source of CAs (Leão & da Silva, 2021).

Digital transformation is now a must for all financial institutions looking to grow, enhance their offerings, and make access easier for beneficiaries. It encompasses more than just the technology used inside banks; it's a comprehensive program that changes how financial institutions operate both internally and externally, as well as how they provide services to their target market to make processes easier and faster. Digital transformation facilitates the banking industry's connection to the public and private sectors, allowing for flexible and amicable collaboration (Rashwan et al., 2021).

According to Kolodiziev et al (2021) the need for digital transformation in financial institutions has become more urgent than ever due to the rapid advancements in information technology tools across all aspects of life. Whether interacting with the government, private sector, or individuals, there is clear pressure from all segments of society on financial institutions to enhance their services across all channels. Digital transformation significantly reduces costs and effort, improves operational efficiency, and streamlines processes. It also enhances service quality, simplifies procedures for obtaining services, and creates opportunities for innovative and creative service delivery, moving away from traditional methods.

This transformation contributes to increased public satisfaction and acceptance of banking services. Mobile applications and e-commerce sites are key examples of these new methods. Once implemented, digital transformation will generate a vast amount of data and information, invaluable for decision-makers in the banking sector listed on the Stock Exchange. The nation's banking industry plays a crucial role in determining the financial and credit system as well as the potential for economic expansion. Through the employment of increasingly innovative banking tools, techniques, and products for service users, competition among banking institutions shapes market conditions in the industry (Rashwan et al., 2021).

The study's findings have verified that, in the current market, digital transformation can drive competitiveness by identifying banks' competitive advantages and opening up new avenues for them to grow their clientele and service offerings. Egypt's experience over the last ten years amply demonstrates successful Public Financial Management (PFM) reform, as the country has addressed numerous critical PFM characteristics. Without question, there has been progress, especially in the areas of tax and customs reform (Esawe & Elwekeel, 2020).

Egypt Vision 2030 focuses on digital transformation as a strategic objective to achieve development goals and enhance Egypt's position in the global economy, where the digital economy is

considered one of the most important components. The general state of Egyptian organizations is falling behind in this regard. Some are ignoring the risk of digital disruption, while others lack the capacity for transformation. This puts banks, telecom, retail, education, and other organizations at risk of becoming obsolete in as little as three to five years (Central Bank of Egypt, 2018).

A comprehensive review and synthesis of scientific literature demonstrate the applicability of several organizational culture development factors. In the context of shifting corporate culture, scientists devote a great deal of attention to developing evolutionary views on the conceptual apparatus, researching emerging trends, defending methodological and scientific tenets, and developing suggestions for the management of advancements in the enterprise administration system (Trushkina et al., 2020). However, further scientific investigation is required due to the diverse, complex, and contentious nature of particular concerns surrounding the selected topic. This subject is particularly significant since digital transformation involves social, organizational, and cultural elements. As such, it has the potential to either create or solve a wide range of issues within the information economy. Therefore, this research aims to explore the role of digital transformation in competitive advantage with the mediating role of organizational culture in the banking sector in Egypt.

2. Literature Review and Hypothesis Development

2.1: The Role of Digital Transformation in Competitive Advantage

In the case of "digital transformation," in addition to being a relatively recent idea that "emerged" in the gray literature and commercial periodicals, particularly from 2009 onward (Figure 1), it also has two characteristics that "blur" general perceptions about it. As was previously indicated, the first blurring characteristic of DT is a "evolution" of the "IT era," which is why the perception that DT operates at such a level even if it has de facto become the firm's strategy persists. As a result, in both theory and reality, IT and DT are not the same. The second component of DT's blurring is related to the fact that, as was also previously said, DT is "surrounded" by a number of emerging digital technologies that, because of their level of innovation and prominence, are occasionally mistaken for DT itself. This feature "narrows" the true nature of a much more dynamic, multifaceted, and broadly applicable phenomenon to the firm (Leão, P., & da Silva, M. M. 2021).

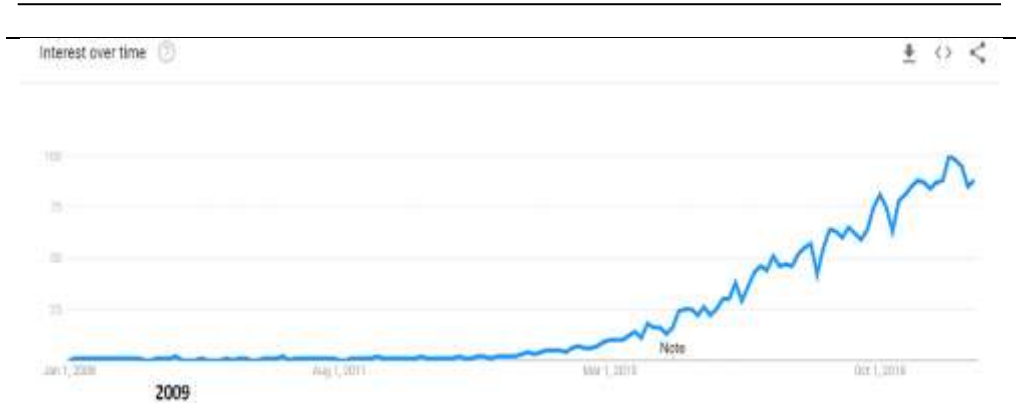


Figure (١) Google trends “digital transformation” search results
[Color figure can be viewed at wileyonlinelibrary.com]

Source (Leão, P., & da Silva, M. M. 2021)

There is much more to digital business transformation than AI, and chatbots. It involves adopting technology, but it also involves the process alignment and cultural transformation that organizations need in order to achieve their expectations for agility. The term "digital transformation" describes a shift in productivity that is fundamental and involves information technology. Innovation or efficiency may be the driving force behind the adjustments. Because IT supports the enterprise performance journey, we can refer to "digital business transformation" and "digital business optimization" as two aspects of the same process (Leão, P., & da Silva, M. M. 2021).

A state of satisfaction and acceptance from the public towards banking services will be created by digital transformation, which also significantly reduces cost and effort,

improves operational efficiency, regulates it, works to improve its quality, and simplifies procedures for obtaining services provided to the public. Mobile applications and e-commerce sites are two examples of these methods. Once this concept is implemented, a vast amount of data and information will be available, which will in turn assist decision makers in the banking sector (Rashwan Et al. 2021). In order for the digital transformation strategy to be successful, it must be possible to develop digital products that satisfy customer expectations, facilitate business operations so that customers interact with the bank more frequently, and are shaped by the needs, preferences, and skills of users (Laila, M. K., & Kusumawardhani, A. 2022).

Customers using digital banking can connect with one other and with financial and non-financial operations without physically meeting. By connecting with clients and consumers more deeply and widely, these services help banks lower operating costs, enhance customer experience and engagement, and develop new business models. Innovation is critical to sustainable development and gives businesses a competitive edge in the global marketplace of today (Oliva et al., 2019). *In response the researchers suggest that: -*

H1; Digital transformation has positively impact on competitive advantage in Egyptian banking sector.

2.2: The impact of Digital Transformation on Organizational Culture

As today's information society develops, corporate processes are being digitally transformed through extensive use of digital technology, creating new demands on company staff, such as a higher degree of digital skills and knowledge. Organizational culture shifts cause the need for information and communication technology (ICT) specialists to expand, which in turn causes the educational system to modernize. According to recent research on digital transformation, there is a growing need in the labor market for people with digital abilities. Additionally, given the rapid expansion of information societies, firms must create and put into place a set of measures to transform their organizational culture (Trushkina et al. 2020).

According to Kokorev (2019), digital transformation entails modernizing the organizational culture of each corporate entity and introducing digital technologies and communications. This allows the business to take advantage of new opportunities and build an ecosystem with its contact audiences. Making the most of information technology resources and systems, especially to boost efficiency and cut expenses, is the primary objective of digitalization. This calls for a change in the company's overarching orientation and philosophy (Trushkina et al. 2020).

A company's embrace of digital technologies is only one aspect of digital transformation (DT). Nonetheless, it suggests alterations to the business plan, tactics, and culture of an organization. However, there hasn't been much research done on how DT affects organizational culture (OC) (Pfaff et al. 2023). which allows us to define our hypotheses as follows:

H2; Digital transformation has positively impact on organizational culture in Egyptian banking sector.

2.3: The impact of Organizational Culture in Competitive Advantage

Any competitive benefits that a culture's good attributes (such being "rare" or "valuable") could offer are diminished when it is easily copied. The resource-based view holds that a firm's cultural traits cannot provide a source of long-term competitive advantage if they are easily transferable to other enterprises. While it appears that constructive cultures can emerge in almost any kind of organization, this does not mean that these cultures are all the same. Anthropology's core tenet is that every culture is, at its most basic, distinct. Regardless of whether the norms are defensive or constructive, organizational culture is unique and cannot be replicated (Klein, A. 2008).

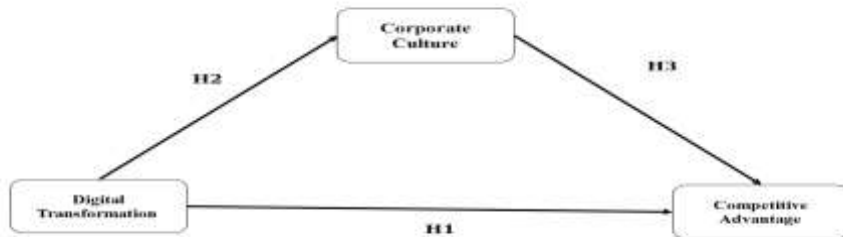
Analyzing a firm's advantages and disadvantages is the most effective way to study competitive advantage. This "resource-based

view" is in contrast to the environmental view, which is the conventional emphasis on a firm's possibilities and dangers. If the resources are unique in the cutthroat market, aid in combating environmental challenges, and are difficult for rivals to completely copy or replace, they can provide a competitive edge. This viewpoint, which suggests that a strong corporate culture can be an important asset, is consistent with the universalistic understanding of organizational culture. This method can also be applied to other HRM procedures and initiatives that a company may use. Among other prerequisites, a firm's culture needs to be imperfectly imitable in order to maintain a competitive advantage (Bogdanowicz, M. 2014). In response the researchers suggest that: -

H3; organizational culture has positively impact on competitive advantage in Egyptian banking sector.

3. Conceptual Model

This research aims to exploring the role of digital transformation in competitive advantage: Mediating Role of organizational culture. in Banking Sector in Egypt. For this reason, the researchers presented the researcher's model based on a review of previous studies, as stated in the previous part.



**Figure (٢) Conceptual Model
Developed By Researcher**

4. Research Objectives

- *The main objective of this research* was to investigate the impact of digital transformation on competitive advantage, given that digital transformation is currently considered a crucial factor influencing Egypt's banking industry.
- *The second objective of this study* is to assess how digital transformation affects corporate culture within Egyptian banks.
- *The third objective of this study* is to evaluate the influence of corporate culture on competitive advantage in Egyptian banks.
- This research posits that organizational and environmental factors, such as corporate culture, influence competitive advantage. Therefore, the final objective of this study was to explore the role of corporate culture in the relationship between digital transformation and competitive advantage within the Egyptian banking sector.

- By systematically testing these hypotheses, this research aims to uncover the critical cultural elements that foster a conducive environment for digital initiatives, thereby offering strategic recommendations for Egyptian banks aiming to navigate the digital age successfully.

5: Research Questions

Based on the above objectives, many research questions have been formulated, as follows:

Q1: What's the impact of digital transformation on competitive advantage in Egyptian banking sector?

Q2: What's the impact of digital transformation on organizational culture in Egyptian banking sector?

Q3: What's the impact of organizational culture on competitive advantage in Egyptian banking sector?

Q4: What's the mediating role of organizational culture in the relationship between digital transformation on competitive advantage in Egyptian banking sector?

6. Research Methodology

Research Design: Once the sincerity and consistency of the study tool—the resolution—had been established, the researchers in this study turned to the descriptive analytical approach.

Population and Sample The ongoing study Population includes all technology-related divisions at Banque Misr and the National

Bank of Egypt, whose activities have recently been greatly influenced by digital transformation. Because of their size and scale of operations, the researchers relied on these institutions because they were thought to be typical of the Egyptian banking industry. The following departments are among them: -

1. Department of Digital Banking.
2. The Department of Information Technology (IT).
3. The Digital Transformation and Innovation Unit.

Sample profile the sample descriptive profile displayed in table (1) shows that most of the sample respondents (54%) were males while female respondents were (46%). The majority of the respondents were from 35 to less than 45 years old (48%). A total of 151 respondents (47%) were employees, and 98 respondents (31%) were managers.

Table (1) Response Description

	Sample Description	Number	%
Gender	Male	172	54%
	Female	147	46%
Age	From 35 to less than 45	153	48%
	From 45 to less than 55	147	46%
	55 years and over	19	6%
Professional Experience	Less than 3 years	26	8%
	From 3 years to less than 5 years	69	22%
	From 5 years to less than 10 years	216	67%
	10 years and more	8	2%
Career Level	Employee	151	47%
	Manager	168	53%
Education	Bachelor's	98	31%
	Postgraduate	221	69%

The scope of this research was the mediating role of organizational culture in the relationship between digital transformation and competitive advantage in the Egyptian banking sector.

Measurement Tools: The researchers utilized a five-point Likert scale with responses ranging from strongly disagree (1) to strongly agree (5). The questionnaire was created based on validated scales. Digital transformation within the department is assessed by adopting (Rashwan & Kassem, 2021) three factors included (Digital Transformation Strategy from DTS1 to DTS4, Human Resources from DTHR5 to DTHR8, and Innovation from DTF10 to DTF12). While organizational culture is assessed by Flamholtz, E. G., and Randle, Y. (2012), with 8 items from CC13 to CC20. Competitive advantage two factors included: (Differentiation from DF1 to DF6 and Cost Reduction from CR1 to CR4. Assessed by (Teo, T. S., & Pian, Y. 2003).

7. Model Evaluation

It is imperative that researchers consider internal and external validity. While external validity assesses the capacity to extrapolate results from a particular sample to a larger population, internal validity looks for errors or other plausible explanations for the results (Punch, 2005). All of the variables in table 2 had loading factor values or points above 0.50, indicating that the validity of the data had already been met.

In addition, to determine the data's dependability, researchers required to evaluate its composite reliability and discriminant validity. Discriminant validity was proven by cross loading. The correlation value between an indicator and its construct should be higher when comparing the correlation values of the two indicators. The value of the discriminant validity in the interim was shown in Table 2. When the PLS data were subjected to the Fornell-Lacker criterion (Hair, Sarstedt, Ringle, & Mena, 2012), it was found that the AVE for each construct was higher than the correlation value. This meant that all of the constructs in one model that had been estimated met the criteria for discriminant validity.

To further assess the build dependability, Cronbach alpha from the indicator's unit measurement construct may be utilized. A construct was considered to be more reliable when its Cronbach alpha value was larger than 0.70.

Table (2) Outer Loadings of the Model for the Research Variables' Measures

	Factors	Outer Loading	AVE	Composite Reliability	Cronbach's Alpha (α)
Digital Transformation	DTS1	0.446	0.615	0.945	0.934
	DTS2	0.839			
	DTS3	0.874			
	DTS4	0.830			
	DTHR5	0.695			
	DTHR6	0.767			
	DTHR7	0.826			
	DTHR8	0.740			
	DTF9	0.839			
	DTF10	0.874			
	DTF11	0.835			

	DTF12	0.446			
Corporate Culture	CC13	0.793	0.614	0.927	0.910
	CC14	0.725			
	CC15	0.781			
	CC16	0.831			
	CC17	0.840			
	CC18	0.764			
	CC19	0.771			
	CC20	0.826			
Competitive Advantage	DF1	0.826	0.623	0.943	0.932
	DF2	0.728			
	DF3	0.798			
	DF4	0.731			
	DF5	0.714			
	DF6	0.836			
	CR1	0.829			
	CR2	0.710			
	CR3	0.858			
	CR4	0.843			

Source: Result of Smart PLS

8. Data Analysis

Descriptive Analysis and Pearson Correlation

Pearson's correlations between study variables are reported in Table 3. presents the findings of the Pearson correlation matrix (Pearson's r) between the study variables. As shown in Table 3 below,

Digital Transformation has positively and significantly relationship with Organizational Culture (0.729).

Digital Transformation has positively and significantly relationship with Competitive Advantage (0.556**).

Organizational Culture has positively and significantly relationship with Competitive Advantage (0.569**).

Table 3 Means, SD and intercorrelations between the study variables

	M	SD	Digital Transformation	Organizational Culture	Competitive Advantage
Digital Transformation	3.53	.051	1		
Organizational Culture	3.62	.048	0.729**	1	
Competitive Advantage	3.75	.051	0.556**	0.569**	1

*p < .05.

**p < .01.

9. Hypothesis Testing

Structural Equation model and Path Coefficients

A thorough statistical method for examining intricate relationships between variables is structural equation modeling (SEM). Researcher testing of theoretical models that specify relationships between observed and latent (unobserved) variables is made possible by SEM, which integrates multiple regression analysis, factor analysis, and path analysis into a single framework (Hair et al. 2017).

This study examined the mediating role of organizational culture in the relationship between digital transformation and competitive advantage, in accordance with recommendations made by Zhao et al. (2010) and Hair et al. (2017). The results are displayed in Table (4), and Figure (3) which demonstrates that: -

Digital transformation has a direct impact on competitive advantage (direct effect= 0.534, $p < 0.05$).

Digital transformation has a direct impact on organizational culture (direct effect 0.848, $p < 0.05$).

Organizational culture has a direct impact on competitive advantage (direct effect= 0.351, $p < 0.05$).

Organizational Culture mediates the relationship between Digital Transformation and Competitive Advantage (Direct Effect= 0.534, Total Effect= 0.832, $P < 0.05$).

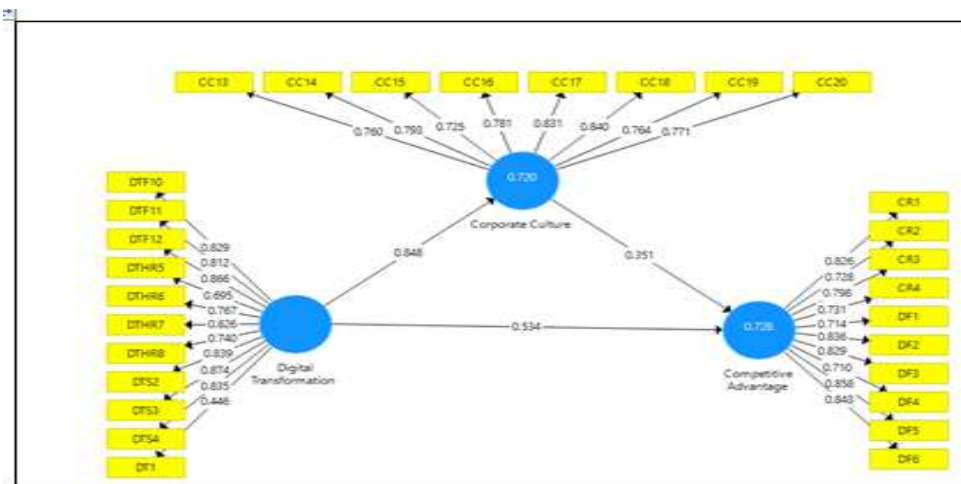


Figure (3) measurement model

Source: Result of Smart PLS

Table (4) Path Coefficients

	Direct Effect	Indirect Effects	Total Effects	Result
Digital Transformation -> Competitive Advantage	0.534	0.298	0.832	Supported
Digital Transformation -> Organizational Culture	0.848	-	-	Supported
Organizational Culture -> Competitive Advantage	0.351	-	-	Supported

Source: Result of Smart PLS

10. Practical Implications

- The term "digital transformation" describes a series of technological developments that are changing the country's banking industry. From blockchain technology, data analytics, and artificial intelligence (AI) apps to mobile banking and online payment platforms, these advancements are fundamentally altering the way financial institutions operate. By utilizing these digital technologies, banks have created multi-channel client connections, streamlined procedures, and provided personalized services.
- Digital technology has brought about a significant transformation in Egypt's banking industry in recent years, bringing with it a new era of innovation that is changing the nature of business. The digital revolution is a strategic realignment that impacts banks' operations, competitiveness, and market positioning. It goes beyond a simple technological

upgrade. The objectives of Egyptian banks' embrace of digitalization extend beyond enhancing customer satisfaction and operational effectiveness. They are aware of the crucial role organizational culture plays as a mediating in this revolutionary path and are working to gain a strategic advantage in the evolving financial landscape.

- This research emphasizes how crucial it is for managers to concentrate on fostering cultural values in order to reap the rewards of a unique cultural environment. However, implementing cultural changes can be difficult in developing nations like Egypt. Due to ignorance, a large number of people are unaware of the crucial role culture plays in the development of organizations. Consequently, it is the responsibility of leaders to create a corporate culture that upholds the organizational manifesto and encourages communication between managers and staff. With this strategy, managers would be able to develop opportunities that add value and increase revenue, like delivering superior products, providing technology-driven services, enhancing customer analytics, and accomplishing mass customization in business-to-business settings (Azeem et al., 2021).

11. Theoretical Implications

- This study significantly adds to the corpus of existing research on the competitive advanced in many ways. The purpose of this study was to clarify the intricate mechanism through which competitive advantage is impacted by digital transformation. This work adds culture as a factor and clarifies this crucial mechanism, which advances our understanding of competitive advancement.
- The study's findings provide insight into how organ culture might bolster the competitive advantage of the banking sector. It is advised that the banking sector, which emphasizes constant innovation and growth, cultivate an atmosphere that prioritizes adaptability over strict regulation.

12. Recommendations

Based on the earlier findings, the new study makes a number of recommendations:

1. Evaluate the Banks' Current Culture

Evaluating the culture of a bank requires examining several factors, including its values, leadership style, employee engagement, customer service, risk management, and adaptability.

2. Clearly state your goals for the digital transformation

The digital transformation aims to enhance the customer experience, improve operational efficiency, enhance risk management, foster innovation, boost employee productivity,

expand the digital footprint, and support sustainability and CSR initiatives. By focusing on these areas, the bank can ensure a successful digital transformation that aligns with its strategic objectives and positions it for future growth and competitiveness.

3. Communicate the Vision and Benefits

Clarity: Clearly articulate the vision, goals, and benefits of the initiative.

- **Relevance:** Demonstrate how the initiative aligns with the organization's overall mission and strategic objectives.
- **Impact:** Highlight the positive impact on both the organization and its stakeholders, such as improved efficiency, customer satisfaction, or financial performance.

4. Involve Leadership Early

- **Early Engagement:** Involve leaders in the planning stages to ensure their input and buy-in.
- **Stakeholder Meetings:** Organize meetings with key leaders to discuss the initiative and gather their feedback.

5. Showcase Data and Evidence

- **Data-Driven Approach:** Present data, case studies, and evidence that support the initiative's potential for success.
- **Benchmarking:** Compare with similar successful initiatives in other organizations to provide a benchmark.

13. Discussion

This research addresses one of the most important issues in the world, including in Egypt, where Egypt's banking sector is considered the key driver of economic development. It is reflected in the political and financial stability of the country. Based on the results of this study, the importance of digital transformation and its impact on competitive advantage are confirmed. It also confirms that the positive and significant relationship can improve the efficiency and effectiveness of Egypt's banking sector.

This research demonstrates the positive and direct mediating role of organizational culture on the relationship between digital transformation and competitive advantage by confirming its ability to enhance, instill, and improve the process of good behavior for staff in Egypt's banking sector. Based on these results, the researchers presented a set of scientific and applied contributions, and a set of recommendations that are presented to bank managers and officials in Egypt with the aim of enhancing the competitive advantage of banks.

References

- Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. V. (2013). Digital business strategy: toward a next generation of insights. *MIS quarterly*, 471-482.
- Bogdanowicz, M. (2014). Organizational culture as a source of competitive advantage: A case study of telecommunication company in

Poland. *International Journal of Contemporary Management*, 2014(Numer 13 (3)), 53-66.

• Esawe, A. T., & Elwkeel, E. M. (2020). Managing the digital transformation, strategic management, and tactical actions to implement GFMIS: an Egyptian case study. *Journal of Management Research*, 38(3), 63-83.

• Flamholtz, E. G., & Randle, Y. (2012). Corporate culture, business models, competitive advantage, strategic assets and the bottom line: Theoretical and measurement issues. *Journal of Human Resource Costing & Accounting*, 16(2), 76-94.

• Klein, A. (2008). Organizational culture as a source of competitive advantage. *E-Leader Bangkok*, 1-10.

• Koch, T., & Windsperger, J. (2017). Seeing through the network: Competitive advantage in the digital economy. *Journal of Organization Design*, 6, 1-30.

• Kokorev, A. S. (2019). Digital economy: changing values and guidelines in enterprise management. *Moscow Journal of Economics*, (1), 252-259.

• Kolodiziev, O. M., Krupka, M., Shulga, N., Kulchytsky, M., & Lozynska, O. (2021). The level of digital transformation affecting the competitiveness of banks.

• Laila, M. K., & Kusumawardhani, A. (2022). Digital Transformation as a Competitive Advantage an empirical study at PT. Bank Negara Indonesia (Persero), Tbk. Region 05. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 5(2).

• Leão, P., & da Silva, M. M. (2021). Impacts of digital transformation on firms' competitive advantages: A systematic literature review. *Strategic Change*, 30(5), 421-441.

- Oliva, F. L., Semensato, B. I., Prioste, D. B., Winandy, E. J. L., Bution, J. L., Couto, M. H. G., Bottacin, M. A., Mac Lennan, M. L. F., Teberga, P. M. F., Santos, R. F., Singh, S. K., da Silva, S. F., & Massaini, S. A. (2019). Innovation in the main Brazilian business sectors: characteristics, types and comparison of innovation. *Journal of Knowledge Management*, 23(1), 135–175. <https://doi.org/10.1108/JKM-03-2018-0159>.
- Orji, C. I. (2019). Digital business transformation: towards an integrated capability framework for digitization and business value generation. *Journal of Global Business and Technology*, 15(1), 47-57.
- Pfaff, Y. M., Wohlleber, A. J., Münch, C., Küffner, C., & Hartmann, E. (2023). How digital transformation impacts organizational culture—A multi-hierarchical perspective on the manufacturing sector. *Computers & Industrial Engineering*, 183, 109432.
- Porter, M. E. (1981). The contributions of industrial organization to strategic management. *Academy of management review*, 6(4), 609-620.
- Rashwan, A. R. M. S., & Kassem, Z. A. E. A. (2021). The role of digital transformation in increasing the efficiency of banks' performance to enhance competitive advantage. In *The big data-driven digital economy: Artificial and computational intelligence* (pp. 325-335). Cham: Springer International Publishing.
- Teo, T. S., & Pian, Y. (2003). A contingency perspective on Internet adoption and competitive advantage. *European Journal of Information Systems*, 12, 78-92.
- Trushkina, N., Abazov, R., Rynkevych, N., & Bakhautdinova, G. (2020). Digital transformation of organizational culture under conditions of the information economy. *Virtual Economics*, 3(1), 7-38.