Digital transformation in institutions as a mechanism to raise financial performance and achieve economic growth

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Summary:

This study aims to identify the challenges faced by institutions in order to raise economic and commercial performance, and this requires them to know customer trends, as they are the ones who decide how to enter into commercial relationships with these institutions, and therefore they must meet their needs in a better way, by taking advantage of From digitization.

The study concluded that it is necessary for institutions to adopt digital transformation in order to maintain the competitiveness of their services and products in order to win many customers in light of the great competition between institutions in using innovative technologies to achieve the desired profits.

Keywords: Digital transformation; economic and commercial performance; innovative technologies

Jel Classification Codes: O4; G39; O3

I-Introduction:

The information and communications revolution that the world witnessed during the nineties of the last century enabled the role of the digital economy to be strengthened in many aspects of life, as communications and information technology began to play a major role in supporting the performance of various economic sectors through their contribution to increasing levels of efficiency by reducing costs. The time required to complete economic and financial transactions, improve labor productivity, and increase levels of competitiveness. On the other hand, the growing role of the digital economy during the first and second decades of the new millennium was linked to the emergence of technologies related to the Fourth Industrial Revolution, including artificial intelligence technologies, big data, the Internet of Things, and cloud computing.

Although there is no specific agreed-upon definition of the digital economy, in this context it is possible to refer to the definition proposed by the Organization for Economic Cooperation and Development as representing "all economic activities that depend on the use of digital inputs, including digital technologies, digital infrastructure, "And digital services, data or those that the use of digital inputs can significantly support and enhance, including all producers and consumers, including government".

I.1. Research problem:

Based on the above, the main problem can be presented as follows:

What is the impact of digital transformation on the financial and economic performance of institutions?

To answer the main problem, we pose the following sub-questions:

- 1- What is the nature and importance of digital transformation as one of the information technology innovations?
- 2- What are the most important factors and determinants of the success of digital transformation strategies?
- 3- What is the nature of the challenges facing the implementation of digital transformation mechanisms?

I.2. Research hypothesis:

The research hypothesis is based on the application of digital transformation mechanisms, and the resulting positive role in enhancing the economic growth of institutions and improving their financial performance.

I.3. Research objectives:

The main objective of the research is to study the implications of applying digital transformation mechanisms on the economic growth of institutions and improving their financial performance, in an effort to achieve the following sub-objectives:

- 1. Study the nature and importance of digital transformation as one of the information technology innovations.
- 2. Analyze the most important factors and determinants of the success of digital transformation strategies.
- 3. Determine the nature of the challenges facing the implementation of digital transformation mechanisms.

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I.4. Importance of research:

The importance of the research lies in the following:

- 1) The increasing effective role of digital transformation as one of the information technology innovations in linking government and private sectors together, in a way that supports the implementation of joint business with real flexibility and harmony that is reflected in the quality of products and services provided to beneficiaries.
- 2) Enhancing the use of information technology in all aspects of life, whether in government or private sector transactions, in keeping with the developments of the digital era.
- 3) Establishing scientific frameworks and controls regarding activating digital transformation.

I.5. Previous studies:

1- Study (Al-Sharif, 2005):

Entitled E-commerce in Islamic countries, research presented during the Third World Conference on Islamic Economics - Umm Al-Qura University - Makkah Al-Mukarramah. The study sought to determine the extent of the importance of the phenomenon of electronic commerce and information and communications technology on aspects of life, with a focus on analyzing the reality of Islamic countries. The results of the study showed the extreme importance of the information revolution, its rapid development and its potential future effects on reshaping traditional economic structures, and through a review Indicators and comparing them with their counterparts in countries the data showed the extent of the lag of Islamic countries in this field. The study pointed to many obstacles and challenges facing these countries, which must be overcome in order to benefit from e-commerce applications. The study also pointed to the areas and sectors in which Islamic countries can employ information technology and commerce. electronic in order to activate and develop it.

2-Study (Abeer 2009):

Entitled The Role of the Digital Economy in Supporting Development with Special Reference to the Egyptian Economy, unpublished doctoral thesis, Faculty of Commerce, Ain Shams University. The study aimed to shed light on the concept of the digital economy and some of the concepts associated with it. Such as digital transformation, the digital revolution, knowledge, informatics, and globalization. The study sought to identify the experiences of some countries, such as the United States of America, India, and the United Arab Emirates, in the field of implementing this new economic pattern. The study concluded that digital transformation contributes to enhancing and improving government services, expanding human knowledge, and achieving economic development, and that communications and information technologies are an essential element for transforming societies and enhancing global economic growth.

II- <u>The theoretical framework of the relationship between digital transformation and economic growth:</u>

The world today is experiencing a revolution in the field of communications and information technology, and this revolution has brought about fundamental changes in lifestyles in various fields, as it directly led to changing new methods of the economy known as the digital economy and the means of implementing economic activities, which produced a qualitative impact and its impact was reflected positively. On society in general, so we find that the economy is moving more and more towards this new economy based on the use of information technology and modern means of communication.

Economic growth is considered one of the basic goals that countries seek to achieve, and the issue of economic growth has now become completely linked to the extent of institutions'

readiness for digital transformation and reliance on new means instead of old production elements, which requires the presence of the infrastructure for the communications and information technology sector and the necessary legal and legislative framework. For electronic business.

II.1. The concept of digital transformation:

Digital transformation is the use of computers and the Internet to create economic value with great effectiveness and efficiency. In other words, it refers to what new technology has in general about the way of working and interacting with it, and the way of creating wealth within the framework of this system. There have been various definitions that address digital transformation, which is defined as undertaking fundamental or fundamental change processes within the internal structure of the company. (Rueckel, Muehlburger, & Koch, 2020, p. 3)

The topic of digital transformation is dealt with extensively with new strategic concepts, especially digital business strategy and digital transformation strategy. Hence, the main idea in digital business strategy lies in how to understand information technology as a basic condition for innovation and achieving competitiveness. The concept of digital transformation as a process aimed at improving entities and institutions by launching significant changes to their characteristics using combinations of information, computing and communications technologies. In light of these efforts, there are internal and external users of digital services who must be included in digital transformation efforts through four aspects: (Mergel, Kattel, Lember, & Mcbride, 2018)

- 1. Dynamic capabilities as a prerequisite for digital transformation.
- 2. User participation in designing digital services.
- 3. Joint production and creativity to increase the legitimacy of digital services.
- 4. Co-creation with open registries to improve digital service delivery.

Digital transformation is one of the requirements for established institutions and companies in particular, as employers face challenges and barriers when searching for innovative business models and how to implement them for digital transformation, given their experiences. They are often forced to deal with conflicts and trade-offs between existing and new ways of doing business. Development and digital transition may often require a significant departure from the status quo and may lead to the obsolescence of current business models.

II.2. Digital transformation objectives

The goals of digital transformation at the social and economic levels are represented in the following points: (Ebert & Douarte, 2018).

- 1) Promoting the development of more innovative and cooperative technological systems and financial culture at the institutional and societal levels.
- 2) Changing the education system to provide new skills and future guidance for people so that they can achieve excellence in digital work and society.
- 3) Establishing and maintaining the digital communications infrastructure, ensuring its management and accessibility, and achieving a balance between the quality of service and the costs of providing it.
- 4) Enhancing digital data protection, transparency, ensuring independence requirements, and enhancing trust
- 5) Improving access to services, and establishing controls, mechanisms, and quality of digital services provided to society

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II.3. Stages of digital transformation as one of the information technology innovations: (Tarfdar & Davison, 2018)

The study reviewed various literature to find out the nature and nature of digital transformation for companies and public institutions. To understand digital transformation better, the viewpoints of different fields of knowledge must be studied instead of relying on a single field of knowledge. Knowledge exchange also helps to better understand the strategic necessities of digital transformation. It includes multiple functional areas including marketing, information systems, innovations, strategic management, and operations management. In addition, all disciplines define the stages of digital change, ranging from relatively simple changes to more widespread changes.

Most studies have identified three stages of digital transformation, which include the following: (Verhoefa, et al., 2019).

1- Digitization (modeling):

Digitization (modelling) represents the first stage, which refers to the encoding of analog information into a digital format (i.e. into zeros) so that computers can store, process and transmit this information. Digitization refers to the change in analog tasks into digital tasks or its perception as a technology integration. Information with current tasks and, more broadly, as developing or enabling cost-effective resource configurations using information technology. Based on the above, digitization is defined to describe the procedure for converting analog information into digital information. Examples relate to the use of digital forms in ordering processes, the use of digital questionnaires, or the use of digital applications for internal financial announcements. Digitization usually works mainly on digitizing internal and external documentation processes, but for value creation activities.

2-Digitization (visual representation):

The second stage of digital transformation refers to the digitization (visualization) stage, which reflects how information technology or digital technologies are used to change existing business processes, such as creating new communication channels via the Internet or mobile phone that allow all customers to easily communicate with companies, which changes interactions. Traditional relationship between the company and customers. (Li, Nucciarelli, Roden, & Graham, 2016)

This change often involves the organization of new socio-technological structures with digital artifacts, which would not be possible without digital technologies. In the field of digital technology, information technology acts as a major catalyst for taking advantage of new business capabilities by changing current business processes, such as communications, distribution, or managing business relationships. Through digitization, companies apply digital technologies to improve existing business processes by allowing more effective coordination between processes or by creating additional value for customers by enhancing customer experiences, and thus digitization does not focus on cost savings.

3- Digital transformation

It is the most common stage that describes change at the company level that leads to the development of new business models that may be new for leading companies or the industry in general. Companies also compete with each other in order to achieve a competitive advantage through their business models, as well as through how they during which the organization is created and provides value to customers, then the revenues received from using digital processes are converted into profits. Digital transformation introduces a new business model by applying a new business logic to create and preserve value. (Pagani & Pardo, 2017).

Digital transformation affects the entire company and the ways it does business, and digitization (visual representation) goes beyond changing simple organizational processes and tasks, as it rearranges processes to change the company's business logic or value creation process. For example, digital transformation is evident in the care sector. Healthcare through the broad and profound use of information technology, which fundamentally changes the provision of health care services. The use of information technology is considered transformative, leading to fundamental changes in current business processes, procedures, and capabilities, and allowing health care providers to enter or exit new existing markets. (Li, Su, Zhang, & Mao, 2018)

II.4. Dimensions of strategies for implementing digital transformation:

Companies in almost all industries have undertaken a number of initiatives to explore new digital technologies and exploit their benefits, often including transformations of key business processes and their impact on products and processes, as well as organizational structures and management concepts. Companies also need to establish management practices that govern these complex transformations, and one of these important approaches is to formulate a digital transformation strategy that serves as a central concept to integrate full coordination, prioritization, and implementation of digital transformations within the company.

There are a set of dimensions to digital transformation strategies. Regardless of the industry or company under which digital transformation strategies are embraced, digital transformation strategies have certain elements in common. These elements can be attributed to four basic dimensions as follows: (Matt, Hess, & Benlian, 2015).

1. Use of techniques/technology:

It addresses the company's position on new technology as well as its ability to exploit these technologies, so it contains the strategic role of information technology for the company and its technological ambition in the future.

2. Changes in value creation:

The issue here is the impact of digital transformation strategies on companies' value chains, and the extent to which new digital activities deviate from the classic (often still analog) core business. Further deviations provide opportunities to expand and enrich the existing range of products and services, but they are often accompanied by stronger needs for technological and product capabilities and higher risks due to less experience in the new field.

3. Structural changes:

Structural changes are often needed to provide a suitable basis for new operations, and structural changes refer to differences in the organizational settings of organizations, especially with regard to the placement of new digital activities within enterprise structures and administrative units.

4. Financial aspects:

The previous three dimensions cannot be activated except after considering the financial aspects. This includes the company's ability to finance due to the decline in core business in order to finance the requirements of digital transformation. Financial aspects are the engine and binding force to bring about digital transformation. While reduced financial pressure on the core business may reduce the perceived adoption trend, companies already under financial pressure may lack external ways to finance the

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transformation. Therefore, companies must confront the need for digital transformations and explore their options openly and in a timely manner.

Formulating and implementing a digital transformation strategy has become a major concern for many pre-digital organizations, given the transformative effects of digital technologies on almost all aspects of the organization's internal and external environment. Pre-tech enterprises represent existing companies in traditional industries, such as retail, automobiles, or financial services, that were financially successful in the pre-digital economy but to which the digital economy currently poses a major threat.

Unlike born-digital organizations like Alphabet, Amazon, or Tencent, pre-digital organizations often need to completely change their organization, business model, and operations as they adopt digital technologies. Digital technologies can transform an organization's products, services, operations, and business models. , as well as its competitive environment. For pre-digital organizations, digital transformation is a holistic form of business transformation enabled by information systems accompanied by fundamental economic and technological changes at both the organizational and industrial levels. (Chanias, Myers, & Hess, 2019)

III- <u>The relationship between digital transformation and economic growth</u>:

Endogenous growth theory explains long-term growth as stemming from economic activities that create new technological knowledge. Endogenous growth is long-term economic growth at a rate determined by forces internal to the economic system, particularly those forces that govern opportunities and incentives for creating technological knowledge. In the long run, the economic growth rate and the growth rate of output per capita depend on the growth rate of total factor productivity, which in turn is determined by the rate of technological progress

It is worth noting the neoclassical growth theory, including the Solow model, as it assumes that the rate of technological progress is determined by a scientific process separate from and independent of economic forces. Thus, the neoclassical theory indicates that economists can take the long-term growth rate as it is given externally from outside the economic system, endogenous growth theory challenges this neoclassical view by proposing channels through which the rate of technological progress can be affected.

Hence the rate of economic growth in the long term, as technological progress occurs through innovations in the form of new products, processes and markets, many of which are the result of economic activities, for example companies that learn from experience how to produce more efficiently, the pace of economic activity It can increase the pace of process innovation by giving companies more production experience. (Romer, 1990)

III.1. Digitalization and economic performance:

The company's major challenge must be that of improving its operational performance. Digitalization is an opportunity to gain efficiency, evolve in depth and finally align and serve customer expectations. This improvement requires work on the agility of the organization and the overhaul of internal processes and functions. (Fayon & Tartar, 2019)

III.2. Promote collaborative work:

The introduction of agility into its organization responds to the imperatives of responsiveness and flexibility dictated by the need to ensure customer satisfaction. The latter involves the acceleration of time-to-market, strong adaptability', and a contribution of value beyond the simple notion of return on investment. But agility cannot be decreed, it is learned and built with a view to providing value to customers while increasing its "productivity". Training and awareness are therefore necessary to create this state of mind.

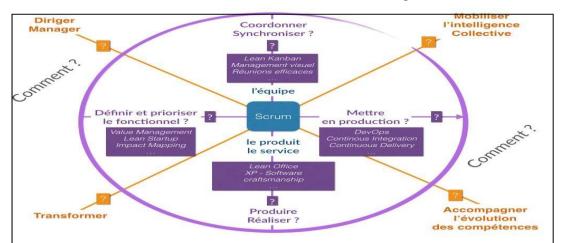


Figure (1): Collaborative work and the Scrum organization

The source: David Fayon, Michaël Tartar and Gilles Babinet (2019), "Digital transformation 2.0: 6 levers to counter disruptions", Pearson edition, Paris, p121.

As shown in Figure (1), collaborative work, involving all stakeholders in decision-making, provides a 360° vision of the issues. This new paradigm is not simply limited to customer-facing activities (sales, customer service, etc.), but extends to the entire organization, including back office (logistics, production, etc.). Agility also requires the implementation of performance measurement indicators focused on operational success. Finally, it requires granting.

III.3. Adapt your back office tools:

There cannot be agility and acceleration of cycles without adapting the back-office tools on which to rely to improve efficiency and responsiveness. However, these tools are often part of cumbersome processes and difficult to evolve. The company must therefore adopt specialized, collaborative ERPs open to partners and suppliers. Digitalization allows, for example, the dematerialization of pay slips, and the improvement of employee training through the use of e-learning platforms.

Digitalization is leading to the emergence of more flexible technologies, notably SAAS solutions (Software as a Service) and especially PAAS platforms (Platform as a Service), on which the company must bet. These platforms thus provide the basic building blocks enabling the rapid design and development of specific applications in the Cloud. PAAS therefore represents a unique opportunity to redefine the IT-business partnership via accelerated and personalized prototyping.

III.4. The transformation of uses and functions:

Supporting business actions and gestures through digital tools should enable the transformation of business uses and functions, in the field, in factories or pre-sales, for greater efficiency and productivity, as well as a better employee experience. This transformation involves the integration of new technologies into processes (IOT, mobile, etc.) in order to provide information in real time. The goal is to be able to manage action by generating dashboards, indicators of the efficiency of the established processes.

Processes must be optimized, made shorter and better integrated. Fleets of mobile terminals are a good example of process digitalization: communicating to field employees

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becomes quick, changing a route is simple, and giving a priority order becomes transparent for the employee.

III.5.The digitalization of business processes:

Too often, we see that the digitalization of business processes is not the subject of a rigorous approach: some believe, wrongly, that to achieve this it is enough to introduce a new terminal or replace paper with an application. However, it is necessary to build this digitalization well through a coherent approach and clear objectives. Otherwise, the risk is to have processes that are not mastered, poorly constructed and poorly accepted and therefore less efficient. In the end, a simple mirage of transformation. (Babinet, 2016, pp. 143-145)

III.5.1. The objectives of the digitalization of business processes:

- 1- Socialize processes: This involves encouraging conversation or collaboration between different actors and improving the efficiency of a task by sharing it with several people.
- 2- Circulate information: Dematerialize documents and processes, and identify and share business successes and best practices.
- 3- Reassign tasks: we identify optimizations, to allow more relevant third parties to carry out activities.
- 4- Open up to third parties: Authorize access to partners, suppliers and customers to promote external interactions.
- 5- Facilitate access to data: Enable real time, exploit and manage data and update repositories.

III.5.2. Methodology for the digitalization of business processes:

Thanks to a methodology adapted for transversal project management, and a transformation process with a value proposition that offers a holistic approach to the organization. And thus find the solutions best suited to the challenges, budget, deadlines and, above all, to the corporate culture.

- 1) Define use cases: this requires knowing the users, identifying associated profiles and uses and taking into account business expectations.
- 2) Adopt the right terminal: Take advantage of market innovations, be compatible with all terminals and take advantage of the multiplicity of terminals depending on the use cases.
- 3) Model the journeys: Establish the different stages of the journey, determine the "moment of truth", and work on the user experience (UX).
- 4) Supporting change: Evaluating change and defining the support strategy, and instilling digital culture.

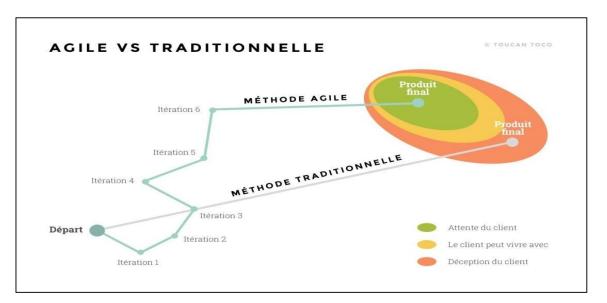


Figure (2): comparison between agile and traditional management methods

<u>The source</u>: Jim Robert High smith, Linda Lou and David (2019), "Robert Robinson EDGE: Leading Your Digital Transformation with Value Driven Portfolio Management", Addison Wesley edition, Boston, p125.

Digital technology has indeed brought new tools, new working methods but also new thinking and organizations. Veterans must learn to familiarize themselves with the new digital world but also with new recruits who are shaking up managerial habits. Speed, immediacy, impatience are often the terms that describe the new professional generation accustomed to using the web and social networks without ever disconnecting. (Highsmith, Luu, & Robinson, 2019, pp. 123-125)

IV. Conclusion:

If the subject of digital transformation is so frequently discussed today, it is because everyone is well aware that IT, networks, software, algorithms and data will definitively transform the world that knew about "pre-digital" or "digital migrants"; in other words, the "boomer" and "X" generations. In short, everyone over 35. Because the concept of digital transformation is aimed first and foremost at them. The following generations, the "digital natives", do not have to be convinced of this.

Improving operational performance relies on digital to affect the entire organization through the introduction of agility, and the support of collaborative and scalable tools.

More broadly, the challenges of business digitalization cover large territories. It is based on three pillars: Business, People and IT. Each of these pillars supports Digital Transformation, as much as the latter pushes them to transform.

Digital transformation has made it possible to increase the company's performance, by commonly developing customer experience and employee experience. Each company must therefore take these two turns to face the new digital revolutions: IOT, 3D printing, smart data, artificial intelligence, block chain... But transforming, evolving for a company, requires above all to be efficient in internal.

Finally, knowing the tools is good, understanding their use and purpose is better. Each structure must find its winning combination through the genesis and appropriation of its digital model. The overall understanding of the digital ecosystem will make it possible to better understand all its dimensions, to select and articulate tools and methods in order to reap all the benefits, in the service of the business project

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Bibliographie

- Chanias, S., Myers, M., & Hess, T. (2019, March). Digital transformation strategy making in pre-digital organizations: The case of a financial services provider. *The Journal of Strategic Information Systems*, 17-33.
- Fayon, D., & Tartar, M. (2019). *Transformation digitale 2.0 6 leviers pour parer aux disruptions*. Paris, France: Pearson.
- Highsmith, J., Luu, L., & Robinson, D. (2019). *EDGE : Value-Driven Digital Transformation*. Boston: Addison-Wesley Professional.
- Li, L., Su, F., Zhang, W., & Mao, J.-Y. (2018, November 1). Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal*, 1129-1157.
- Matt, C., Hess, T., & Benlian, A. (2015, August 4). Digital Transformation Strategies. *Business & Information Systems Engineering*, 339-343.

Babinet, G. (2016). Transformation digitale: l'avènement des plateformes. Paris: Le passeur.

Ebert, C., & Douarte, C. (2018, July 6). ResearchGate. Retrieved April 2, 2024, from researchgate.net/publication: https://www.researchgate.net/publication/326241618_Digital_Transformation?enrichId=rgreq-0704d9ed6c19ed7194314c992ed5e149-XXX&enrichSource=Y292ZXJQYWdIOzMyNjI0MTYxODtBUzo2NDkxMzkzNTY0NTA4MThAMTUzMT c3ODI5MTg1OA%3D%3D&el=1_x_2

- Li, F., Nucciarelli, A., Roden, S., & Graham, G. (2016, April 18). How smart cities transform operations models: a new research agenda for operations management in the digital economy. *Production Planning & Control The Management of Operations*, 514-528.
- Mergel, I., Kattel, R., Lember, V., & Mcbride, K. (2018, June 18). ReaserchGate. Retrieved from https://www.researchgate.net/publication/325495066_Citizen-oriented_digital_transformation: https://www.researchgate.net/publication/325495066_Citizenoriented_digital_transformation_in_the_public_sector?enrichId=rgreq-c2c1da0007480b0e284232d9c1ccdc4c-XXX&enrichSource=Y292ZXJQYWdlOzMyNTQ5NTA2NjtBUzo3MjkwNjcwODcyMDQzNTNAMTU1MD gzNDU0NzIzMQ%3D%3D&e
- Pagani, M., & Pardo, C. (2017, November). The impact of digital technology on relationships in a business network. *Industrial Marketing Management*, 185-192.
- Romer, P. (1990, October). Endogenous Technological Change. Journal of Political Economy, 98-130.
- Rueckel, D., Muehlburger, M., & Koch, S. (2020). An Updated Framework of Factors Enabling Digital Transformation. *Pacific Asia Journal of the Association For Information Systems*, 1-26.
- Tarfdar, M., & Davison, R. (2018, June 29). Research in Information Systems: Intra-Disciplinary and InterDisciplinary Approaches. *Journal of the Association for Information Systems*, 523-551.
- Verhoefa, P., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J., Fabian, N., & Haenlein, M. (2019, November 2). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 889-901.

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