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Article

The Impact of Perceived Benefit as a Mediating Variable Between Digital Transformation Technologies and Financial Technology: An Applied Study

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Abstract: The current research aims to study the effect of Perceived Benefit as a mediating variable in the relationship between Digital Transformation Technologies, represented by (Technology, Digitalization of Processes, Databases, Human Resources), and Financial Technology, represented by (Ease of Diagnosis, Social Impact, Performance Expectations, System Security, Digital Payment Systems), among a sample of electronic payment cardholders (MasterCard) at the University of Thi-Qar. Based on this, the research problem was formulated under the question (Does Perceived Benefit play a mediating role between Digital Transformation Technologies and Financial Technology among electronic payment cardholders?), and to achieve the research objective of addressing the proposed problem and identifying the levels of research variables, only the descriptive qualitative method based on the questionnaire was adopted. A total of (250) questionnaires were distributed to electronic payment cardholders at the concerned university, and (237) were retrieved, of which (9) were defective, and (228) were valid for analysis, resulting in a response rate of (91.20%). To analyze the collected data, two packages were adopted, namely (SPSS & AMOS.V.29), to obtain the best and most accurate results. Accordingly, the research yielded several results, the most important of which is that electronic payment cardholders with a high level of awareness of the importance of accessing financial services, which strengthens their participation in their use. Technologies more effectively, which enhances their ability to use tools and Digital Transformation Technologies to ensure the enhancement of Financial Technology. The research also recommends the necessity of enhancing financial awareness among electronic payment card users by encouraging financial institutions to provide educational programs that focus on Perceived Benefit and their impact on financial decision-making. This awareness can help individuals understand how Digital Transformation Technologies can improve their financial experience.

Keywords: Digital Transformation Technologies, Perceived Benefit, Financial Technology, University of Thi-Qar.

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1. Introduction

Financial Technology has emerged in alignment with the development of the fast-paced lifestyle, as the remarkable advancements in Technology have led to the launch of a new service model, where service delivery has shifted from traditional technologies to digital technologies, making the measurement and evaluation of the digital transformation a challenge for organizations [1], [2]. Consequently, Digital

Transformation Technologies have garnered increasing attention from researchers worldwide over the past three decades, in addition to this, the efforts of early researchers on the dimensions of Digital Transformation Technologies have laid a suitable platform for other researchers to advance further in this subject, leading to the emergence of different measures for electronic service quality [3], [4].

On the other hand, the world today witnesses rapid technological advancements that have encompassed all fields and arenas, without exception, as a result of the Technology Revolution. The accelerated information development has posed significant challenges to every organization seeking to excel and improve its competitive position in the market, pushing them to adopt systems and management approaches that enable them to keep pace with these current technological developments, among the most important of which are the latest ones, digital transformation systems [5]. This is due to the significant role that digital transformation plays in the economic development process, where its benefits have emerged worldwide during economic crises, especially in the recent few years [6], [7], [8].

As digital transformation has the ability to face external pressures, it represents a radical shift in how companies and institutions deal with data and technology, significantly impacting their ability to innovate and improve performance, as it provides access to more accurate and faster information and enables better analysis, which facilitates the decision-making process and enhances corporate performance [9], [10]. Additionally, digital transformation can contribute to improving customer experiences and the continuous development of new products and services, thereby strengthening companies' competitive position in the market through their creativity and innovation in their field of activity.

2. Materials and Methods

First: Research Problem

In the digital transformation era, modern technologies have become an integral part of our daily lives, as these technologies directly and indirectly affect how individuals manage their finances, particularly regarding the use of electronic payment cards like MasterCard. Consequently, the importance of these technologies increases through the adoption of Perceived Benefit as a mediating variable in this context, as Perceived Benefit contributes to shaping users' behavior toward the use of Financial Technology. This, in turn, enhances users' perception of the value of the services provided by these technologies, which can directly influence their reliance on them, and ultimately helps in achieving their financial goal.

As the digital transformation in the financial sector is a major factor in reshaping the global financial system, it enables individuals to access diverse and user-friendly financial services. However, the question of how the digital transformation affects Perceived Benefit remains highly significant, as the benefits that users perceive from using these technologies play a crucial role in their decision to continue using them, which means studying this aspect can provide deep insights into how to improve these technologies to better meet user needs.

From another perspective, understanding the perceived benefit of Perceived Benefit on Digital Transformation Technologies requires a precise understanding of the psychological and social factors that affect individual behavior, which means focusing on how cultural and social factors influence the perception of benefits, and how these benefits can enhance the user experience, is extremely important as it works to identify the challenges individuals may face when dealing with these technologies, such as concerns about security and privacy, and how these concerns affect Perceived Benefit. Therefore, payment cards like MasterCard represent an important axis for understanding the mechanism of integrating Financial Technology into people's lives, as these cards offer multiple benefits, such as security, convenience, and ease of use, making them a preferred choice for many. However, the Perceived Benefit by users may vary based on their

personal experiences and social environment, which calls for an in-depth study to understand how to enhance this benefit to encourage more people to use these technologies. Thus, the research problem can be formulated under the question (Does Perceived Benefit play a mediating role between Digital Transformation Technologies and Financial Technology among electronic payment card holders?) To answer this question, it is necessary to determine an accurate answer to the following sub-questions:

1. To what extent does Perceived Benefit affect the use of electronic payment cards among electronic payment card holders at University of Thi-Qar?
2. How does the level of Perceived Benefit affect the behavior of electronic payment card holders in using financial technology?
3. What is the relationship between Digital Transformation Technologies and Perceived Benefit?
4. What are the factors that influence the formation of Perceived Benefit among electronic payment card holders?
5. How does Perceived Benefit act as a mediating variable between Digital Transformation Technologies and Financial Technology?
6. What are the barriers faced by electronic payment card holders in realizing the benefits associated with using electronic payment cards?

Second: The importance of the research

Research highlights the importance of identifying the factors that affect the use of Digital Transformation Technologies and Financial Technology, with a particular focus on Perceived Benefit as a mediating variable. In light of the rapid changes occurring in the financial sector, it has become essential to understand how Perceived Benefit influences the behavior of electronic payment cardholders (MasterCard) at the University of Thi-Qar. Therefore, this research is not limited to providing valuable information about the relationship between Perceived Benefit and Financial Technology, but also contributes to developing effective strategies targeting the promotion of these technologies among young people, thereby reflecting the importance of the research in fostering digital financial literacy in the community.

Furthermore, the results of this research can be a valuable reference for policymakers and designers in the financial sector, as they provide in-depth insights into how to improve the user experience by enhancing Perceived Benefit. The study also clarifies how Perceived Benefit can contribute to increasing the adoption of electronic payment cardholders of electronic payment cards, which helps financial institutions design more effective marketing campaigns based on an understanding of user needs and expectations. Thus, the research contributes to achieving the digital transformation goals in the financial sector, thereby enhancing operational efficiency and increasing customer satisfaction.

Third: The objectives of the research

The current research aims to study the effect of Perceived Benefit as a mediating variable in the relationship between Digital Transformation Technologies, represented by (Technology, Digitalization of Processes, Databases, Human Resources), and Financial Technology, represented by (Ease of Diagnosis, Social Impact, Performance Expectations, System Security, Digital Payment Systems), among a sample of electronic payment cardholders (MasterCard) at the University of Thi-Qar. The research also aims to identify the psychological and social factors that affect Perceived Benefit among electronic payment cardholders, which will help in building a comprehensive model that explains the relationship between digital transformation and Financial Technology. By analyzing the collected data from electronic payment cardholders, the research also seeks to understand how social and cultural factors can play a role in shaping the perception of benefits, thereby influencing their financial behavior. Additionally, the research aims to achieve several sub-objectives:

1. To identify the extent to which Perceived Benefit affects the use of electronic payment cards among electronic payment card holders at University of Thi-Qar.

2. To understand the mechanism of the influence of Perceived Benefit on the behavior of electronic payment card holders in using financial technology.
2. To measure the relationship between Digital Transformation Technologies and Perceived Benefit.
3. To identify the factors that influence the formation of Perceived Benefit among electronic payment card holders.
4. To explain the mechanism of Perceived Benefit as an intervening variable between Digital Transformation Technologies and Financial Technology.
5. To identify the barriers faced by electronic payment card holders in realizing the benefits associated with using electronic payment cards.

Fourth: Hypothetical Outline and Hypothesis Development

Developing a hypothetical research plan represents one of the important pillars of scientific research, as it highlights the research variables through which the research seeks to address the problem at hand and achieve the objectives through which this problem can be addressed. Figure (1) thus represents the hypothetical research plan, which was developed in light of the following variables:

Independent variable: Digital Transformation Technologies, measured across four dimensions (Technology, Digitalization of Processes, Databases, and Human Resources).

Mediating variable: Perceived Benefit, a one-dimensional variable.

Dependent variable: Financial Technology, measured across five dimensions (Ease of Diagnosis, Social Impact, Performance Expectations, System Security, and Digital Payment Systems).

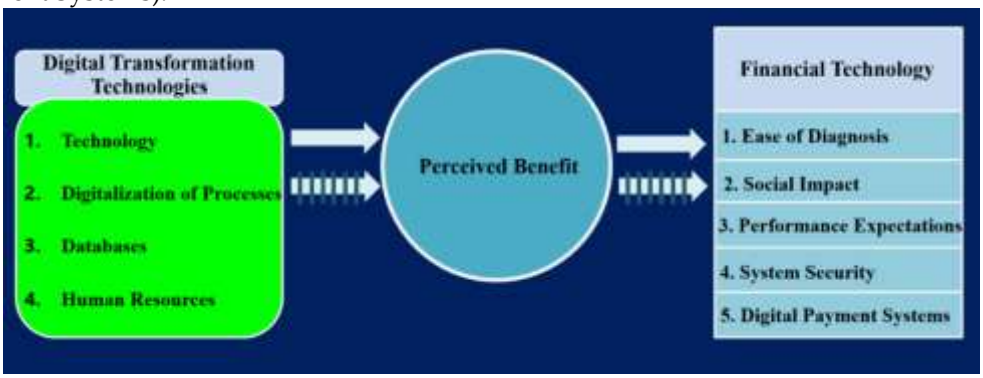


Figure (1): Research Hypothetical Outline

Source: Prepared by the researcher

Based on Figure (1), several main hypotheses can be developed:

H1: There is a significant relationship between Digital Transformation Technologies and Perceived Benefit, and the following results emerge from it:

1. There is a significant relationship between Technology and Perceived Benefit.
2. There is a significant relationship between Digitalization of Processes and Perceived Benefit.
3. There is a significant relationship between Databases and Perceived Benefit.
4. There is a significant relationship between Human Resources and Perceived Benefit.

H2: There is a significant relationship between Digital Transformation Technologies and Financial Technology. The following results emerge from it:

1. There is a significant relationship between Technology and Financial Technology in its dimensions.
2. There is a significant relationship between Digitalization of Processes and Financial Technology in its dimensions.
3. There is a significant relationship between Databases and Financial Technology in its dimensions.
4. There is a significant relationship between Human Resources and Financial Technology in its dimensions.

H3: There is a significant relationship between Perceived Benefit and Financial Technology. The following follows:

1. There is a significant relationship between Perceived Benefit and Financial Technology in its dimensions.
2. There is a significant relationship between Perceived Benefit and Financial Technology in its dimensions.
3. There is a significant relationship between Perceived Benefit and Financial Technology in its dimensions.
4. There is a significant relationship between Perceived Benefit and Financial Technology in its dimensions.

H4: There is a significant effect of Digital Transformation Technologies on Perceived Benefit. The following follows:

1. There is a significant effect of Technology and Perceived Benefit.
2. There is a significant effect of Digitalization of Processes and Perceived Benefit.
3. There is a significant effect of Databases and Perceived Benefit.
4. There is a significant effect of human resources and perceived benefit.

H5: There is a significant effect of perceived benefit on financial technology. The following results emerge from this:

1. There is a significant effect of perceived benefit and financial technology in its dimensions.
2. There is a significant effect of perceived benefit and financial technology in its dimensions.
2. There is a significant effect of perceived benefit and financial technology in its dimensions.
3. There is a significant effect of perceived benefit and financial technology in its dimensions.

H6: There is a significant effect of digital transformation technologies on financial technology through the mediating role of perceived benefit.

Fifth: Research Sample

The University of Thi-Qar is one of Iraq's universities located in the city of Nasiriyah, and was originally established as a branch of the University of Basra in 1992. Currently, it represents an independent government university, and the university contributes to scientific research and strategic partnerships, particularly in the fields of climate change and sustainable development, reflecting its commitment to its community role. It also offers postgraduate programs (PhD), thus representing the research community in the University of Thi-Qar. The research sample included holders of electronic payment cards (MasterCard), and therefore (250) questionnaires were distributed to cardholders at the concerned university, of which (237) were returned, with (9) damaged questionnaires and (228) valid for analysis, making the response rate (91.20%).

Part Two: Theoretical Aspect

First: Digital Transformation Technologies

1. The Concept of Digital Transformation

The digital transformation has become a common issue in recent years among experts and managers, with its use recently being developed in productive and service companies which have impacted the integration of technology (artificial intelligence, robotics, cloud computing and governance, mobile devices) and other technologies, as the digital transformation works to bring about a radical change in the organization's business and creates a deep transformation in business activities, processes, and capabilities in corporate business models, and although this change requires knowledge of the mechanisms and requirements of this digital transformation to know what the organization should do.

The term digitization refers to the conversion of data and information that were created digitally into digital data and information using digital formats and binary electronic systems, which helps to find very wide storage spaces that allow for data

storage, transfer, and processing using computer devices, while pointed out that digitization is the process of converting the physical format of information (paper) into an electronic format. As for the term digital processing, it is the process of using Technology to support a new business process to generate value for customers, as digital processing aims to enhance efficiency and effectiveness within companies based on digital information.

Indicated that the digital transformation is a process of fundamental changes in the organization's field of work through the adoption of advanced technologies that align with contemporary changes and the utilization of modern innovations to serve the organization and provide better products and services to its customers. In the same context, the term can be referred to as a fundamental change during which companies reinvent themselves, and this includes a change in the context in which the organization operates. Refer to the digital transformation as encompassing more than just transforming the information technology infrastructure, as it includes changes in the information network, communications, as well as methods of storing and accessing information.

Pointed out that it is a process where digital technologies lead to changes that achieve strategic responses from companies seeking to alter value generation pathways while managing structural changes and organizational barriers that affect the positive and negative outcomes of this process. described it as a change in the way companies operate, ensuring the achievement of their defined goals according to their strategies with lower costs and higher accuracy by leveraging digital technologies to align with achieving transparency in operations. Additionally, it contributes to reducing the routine and burdensome traditional procedures in its work.

And based on the foregoing, it can be said that Digital Transformation Technologies is the use of digital technologies to develop performance levels, increase efficiency and effectiveness, thereby achieving competitive response and improving the relationship between companies and their customers, as well as enhancing the services provided to them.

2. The Importance of Digital Transformation

The digital transformation has become a necessity for all companies seeking to improve and develop their services and facilitate access to beneficiaries. Digital transformation does not mean just applying digitization; it includes a comprehensive change that affects the organization's internal and external policies, as the increasing use of technologies by customers such as mobile devices within companies has led to increased process simplification and improved internal and external communications. Furthermore, it has improved all levels and metrics and company operations by leveraging digital capabilities to innovate new business models and products that blend digital and traditional businesses and customer experiences, achieving increased efficiency and effectiveness, especially since digital transformation is one of the pillars that measures the competitiveness of companies up to the digital economy. The connection of companies with digital transformation is determined by survival and continuity because it represents the ability to respond to disruptions in vital functions and changing corporate environments.

As mentioned by both, the importance of Digital Transformation Technologies is as follows:

1. Creating opportunities that enhance the provision of creative and innovative products that aim to achieve customer satisfaction and ensure competitive response.
2. Completing transactions and operational processes quickly to achieve efficiency and effectiveness in work and to ensure the satisfaction of beneficiary parties.
3. Expanding and spreading the scope of companies' operations to reach the largest segment of beneficiaries

3. Results and Discussion

Dimensions of Digital Transformation

Digital transformation can be measured through several dimensions, as follows:

a. **Technology**: Technology refers to the extent to which companies rely on advanced digital technologies to improve operations, develop products and services, and enhance interaction with customers and partners. This dimension is considered the most clear indicator of a company's progress in its digital transformation journey. Noted that the Technology dimension enables companies to look forward to a smarter and more efficient future, reducing time and costs through automation and streamlining processes.

b. **Digitalization of Processes**: Digitalization of Processes refers to the transformation of manual or traditional processes and procedures into electronic and digital systems, aiming to improve efficiency, reduce errors, accelerate performance, and increase transparency. This dimension focuses on redesigning processes in a technologically advanced way that contributes to improving the company's overall performance. It also reduces the need for paper and associated physical consumption costs, and provides fast and available services around the clock [11].

c. **Databases**: Databases play a crucial role in effectively storing, analyzing, and managing data, as modern Databases such as cloud-based and big data can be leveraged to improve information access, enhance data-driven decision-making, and facilitate integration between different systems. Agile and scalable Databases support digital transformation by enabling organizations to handle large volumes of data quickly and accurately [12], [13], [14].

d. **Human Resources**: Focuses on activating and developing human capital to keep pace with digital changes, which includes the use of digital Human Resources management systems, such as automation and electronic recruitment systems, as well as professional development through e-learning platforms [15]. This aspect also helps improve recruitment processes, streamline performance management, enhance employee interaction, and increase efficiency, in addition to contributing to building a digital organizational culture that supports innovation and change [16].

Second: Perceived Benefit

1. The Concept of Perceived Benefit

The perceived benefit represents the extent to which an individual believes that using Technology will enhance their task performance. Noted that it refers to the extent to which employees believe they will benefit from their job performance when following a certain system [17]. The perceived benefit is defined as the degree to which an individual believes that using a specific technological system will enhance their job performance. Many studies indicate that the perceived benefit has a direct or indirect effect on an individual's intention to use Technology through two reasons:

a. A direct effect on an individual's intention to use Technology.

b. An indirect effect through an individual's attitude toward using Technology.

According to the model, the perceived benefit refers to the ability of Technology to meet the user's expectations in enhancing their performance on a specific task when used.

Perceived benefit is the primary measure for evaluating the acceptance and success of e-learning systems, and there are issues related to this concept: First, there is a lack of evidence regarding the role of information technology infrastructure services in perceived benefit for e-learning systems, and second, the role of service delivery intermediaries in achieving perceived benefit requires further research [18], [19]. Perceived benefit can be understood as individuals' judgment on whether their decision to use or implement a specific technology is beneficial to them. It is defined as individuals' intention to use a new technology, where they firmly believe that this technology will improve their job

performance. Based on these definitions, and defining it (Majumder et al., 2022: 149) as the judgment of consumers or individuals who believe that the technologies they will adopt will improve the quality of their work or activities [20], [21], [22].

Based on the above, Perceived Benefit can be understood as individuals' perceptions of whether new Technology is capable of changing their work style, and whether it is capable of improving their performance. It is also the feelings of consumers about whether the new technologies they currently use will increase the efficiency and performance of the tasks they perform or not [23], [24].

2. The Importance of Perceived Benefit

Perceived Benefit plays a significant role in helping companies achieve success, especially those whose operations heavily rely on Technology development, as customers' perceptions that "the new product or Technology will not improve my performance, or will not provide me any additional value compared to the Technology or product I am currently using" may lead them to avoid purchasing or using a new product (developed by the company with new technologies) [25]. Perceived Benefit represents an influential factor in the adoption of mobile phone services, as both Perceived Benefit and emotion played important roles in explaining both the use of mobile banking services and the intention to use them through perceived value.

Perceived Benefit is considered one of the important factors in determining the extent to which users accept and succeed with a specific system or technology, as it reflects the degree to which users believe this system will provide them with clear benefits that help them accomplish their tasks more effectively and easily. When users realize that Technology will contribute to improving their performance, increasing their productivity, and simplifying their lives, the likelihood of their reliance and continued use of this system increases [26], [27], [28]. Additionally, focusing on enhancing Perceived Benefit helps companies and developers design products that meet user needs and fulfill their expectations. Perceived Benefit also strengthens trust in the product and supports rapid and immediate adoption. It is the users' perception of the benefit that determines their acceptance and the success of Technology in achieving its goals, making it a fundamental element for the success of any new technological or innovative investment [29].

Third: Financial Technology

1. The Concept of Financial Technology

The world has witnessed a technological revolution that reflected on all sectors, and the financial sector was no exception to this development. This contributed to the production of a range of financial tools that led to the development of the banking industry. Thanks to the widespread spread of technology on a global scale, this technology has become a fundamental part of human life [30]. This pushed banks to leverage this technology and employ financial innovations to provide advanced banking services to their customers, and from here emerged the term Financial Technology. Argue that Financial Technology aims to utilize technology and technological innovations in providing financial services. Financial Technology aims to improve and facilitate financial operations and transform traditional methods into more effective and flexible approaches through modern technology [30], [31]. Additionally, advanced financial analytics and data visualization technology help in understanding and analyzing financial data comprehensively, which contributes to making smarter and more accurate financial decisions. Financial Technology also contributes to developing new financing and investment methods, such as crowdfunding and cryptocurrencies [32], [33].

As you know, Financial Technology is the use of Technology in the financial system that produces new products, services, technology, and business models that can have an impact on cash stability, financial system stability, efficiency, smoothness, and the reliability of the payment system. Argue that Financial Technology represents the transformation of financial services through Technology that can produce business

models, applications, operations, and products with physical impacts related to financial services [34].

Financial Technology (Fintech) represents all the technologies, programs, and innovations used to complete withdrawal, deposit, payment, collection, transfer, lending, insurance, and electronic trading between the government, companies, and individuals. Fintech applications require integrating the efforts of mobile device manufacturers, computers, and electronic platforms [35]. Oxford Dictionary defines Financial Technology as computer programs and other Technology aimed at supporting or enabling banking or financial services. On the other hand, noted that, companies use Financial Technology to make financial systems more compatible and developed, offering financial services that are efficient and effective.

And from what has been mentioned, it can be said that Financial Technology represents a culmination of technologies, tools, and innovations that institutions adopt to improve and develop their internal capabilities and potential [36], [37], [38].

2. The Importance of Financial Technology

Financial Technology is a vital element in enhancing and developing the financial services sector. It provides customers with interactive and flexible means to access financial services, manage their accounts, and conduct transactions easily and quickly [39], [40]. Additionally, the importance of Financial Technology can be identified in the following aspects:

- **a.** Financial Technology provides consumers with more services by improving their ability to purchase and use the products they need [41].
- **b.** Financial Technology companies provide products and services based on collecting and storing customer data [42], [43].
- **c.** Facilitating and making alternative financing sources available for small and medium-sized enterprises.
- **d.** Achieving financial stability through the use of Technology in ensuring compliance with regulatory rules and risk management.
- **e.** It has become easier to process financial information faster and more accurately using Financial Technology.
- **f.** Providing advanced financial analytics based on the availability of a large financial data repository.
- **g.** Technology provides and facilitates access to online crowdfunding platforms [44].
- **h.** Encouraging economic diversity, thereby creating jobs and increasing the gross domestic product.

3. Dimensions of Financial Technology

Financial Technology can be measured through several dimensions, as follows:

- **a. Ease of Diagnosis**: In Financial Technology, Ease of Diagnosis refers to the ability of digital systems to provide users with accurate and direct information, which simplifies their understanding of their financial situation and enables informed decision-making [45]. These systems utilize advanced data analysis tools, such as artificial intelligence and machine learning, to offer comprehensive insights into expenses, income, and investments. This also enhances financial transparency, as users can see the impact of their financial decisions in real time [46].
- **b. Social Impact**: The social impact of Financial Technology is evident in its ability to transform the financial landscape in communities, where it contributes to improving access to financial services for marginalized groups. This technology enables individuals who were outside the traditional banking system to access services such as loans, insurance, and savings [47], [48]. By promoting financial inclusion, Financial Technology can help reduce economic and social gaps, empowering communities to grow and develop, while also contributing to the

innovation in financial service delivery, creating new job opportunities and boosting economic growth. Furthermore, these systems can support social initiatives, such as small and medium-sized enterprises, leading to improved living standards.

c. **Performance Expectations**: In the field of Financial Technology, Performance Expectations refer to the ability to use and analyze data to predict financial outcomes and potential risks, and these expectations rely on complex mathematical models and advanced analytics, enabling users to understand how their financial decisions impact the long term [49], [50]. According to Priyadarshi et al, Financial Technology enhances investment applications by providing forecasts about stock or fund performance, helping investors make informed decisions, thereby strengthening risk management, where individuals and companies can prepare for market volatility or economic change, as well as contributing to improved personal financial planning, where individuals can set effective strategies to achieve their financial goals.

d. **System Security**: System Security in Financial Technology is crucial for ensuring the protection of financial data and transactions from cyber threats and intruders, and security relies on a set of measures, including strong encryption, multi-factor authentication, and continuous system monitoring. These measures aim to protect sensitive information, such as banking account details and transactions, thereby enhancing trust between users and financial service providers [51], [52]. The increasing number of electronic attacks makes it essential for companies to adopt advanced security technologies to ensure that customer data is not exposed to risk. Additionally, transparency in security policies contributes to fostering trust among users; when individuals feel that their data is well-protected, they are more willing to use digital financial services.

e. **Digital Payment Systems**: Represent the most active and flexible banking activities offered by Financial Technology to users and customers, providing them with a variety of payment methods using smartphones, external financial transfers, and payment flow management for e-commerce and others 53], [54]. Note that Digital Payment Systems represent a significant advancement in how financial transactions are conducted, offering a fast and secure method for exchanging money online. These systems rely on modern technology to enhance the user experience, allowing payments to be made easily via smartphones or computers [55], [56]. They also reduce reliance on cash, simplifying transactions in stores and businesses. Through technologies like digital wallets, users can store payment information securely, making purchases more efficient.

Part Three: Practical Aspect

1. Coding and Description of Variables

This paragraph discusses three variables (Digital Transformation Technologies, Perceived Benefit, and Financial Technology) by expressing them through a set of symbols aimed at conveying the precise meaning of the data and building a clear understanding for the reader about the symbols used in the analysis [57]. Perhaps Table (1) clarifies the coding and description of the study variables more clearly.

Table (1) Coding and Description of the Variables Under Study

Variables	Dimensions	NO.	Code		Source
Digital Transformation Technologies	**Technology**	4	**DTT**	DTE	**Abeer&Shaima,2024**
	Digitalization of Processes	4		DDP	
	Databases	3		DDA	
	Human Resources	3		DHR	
Perceived Benefit	**One-Dimensional**	6	**PB**		**Shukr,2024 ; Liu et al.,2025**
Financial Technology	**Ease of Diagnosis**	4	**TIT**	TED	

	Social Impact	5		TSI	**Rahadjeng & Fiandari ,2022**
	Performance Expectations	4		TPE	
	System Security	5		TSS	
	Digital Payment Systems	5		TDP	

2. Moderation and Reliability Test of the Measurement Tool

It is evident from the results in Table (2) that the data related to the study variables follow a normal distribution, where a linear pattern is observed in their spread. This indicates that the distribution of the research sample data is highly similar to the normal distribution, and shows no imbalance. Therefore, we can accept the assumption that the data of the study variables were drawn from a community that exhibits a normal distribution [58], [59], [60].

It is clear from Table (2) that the research variables exhibit a relatively notable stability, where the variable Digital Transformation Technologies achieved a stability level of (0.844), while the variable Perceived Benefit recorded a stability value of (0.885). As for the variable Financial Technology, its stability value reached (0.806) [61]. These results reflect the consistency of the survey sections and their ability to achieve the necessary stability indicators, which require a value above (70%). This strengthens the reliability of the data derived from the study.

Table (2) Results of Moderation and Reliability Test of the Measurement Tool

Variables	Dimensions	Kol-Smi		)Sig.(		Cronbach's Alpha	
Digital Transformation Technologies	Technology	0.115	0.077	0.085	0.078	0.901	0.844
	Digitalization of Processes	0.100		0.083		0.892	
	Databases	0.172		0.102		0.832	
	Human Resources	0.129		0.131		0.839	
Perceived Benefit	**One-Dimensional**	0.121		0.135		0.885	
Financial Technology	Ease of Diagnosis	0.122	0.150	0.136	0.164	0.796	0.806
	Social Impact	0.099		0.113		0.792	
	Performance Expectations	0.171		0.180		0.782	
	System Security	0.216		0.130		0.791	
	Digital Payment Systems	0.169		0.183		0.802	

3. Statistical Description

From the results in Table (3), it is observed that the variable Digital Transformation Technologies (DTT) has an average score of (3.43) and a standard deviation of (0.46), indicating the presence of an acceptable level of perception among the sample regarding the use of Digital Transformation Technologies [62], [63]. The aspect that may have contributed to enhancing the capabilities of the sample in promoting and supporting this variable is the Technology DTE dimension, as it is an internal dimension of this variable that achieved a high level compared to other internal dimensions, with an average score of (3.50) and a standard deviation of (0.49) [64], [65]. Meanwhile, the Databases DDA dimension ranked last, with an average score of (3.35) and a standard deviation of (0.50). This suggests that Digital Transformation Technologies are perceived positively by the sample members, as the Technology dimension is considered one of the key elements that strengthen these technologies. However, the evaluation of the Databases dimension indicates the need for more focus and development, which highlights the necessity of improving the data infrastructure to enhance the effectiveness of digital transformation in organizations [66].

It is clear from the results in Table (3) that the variable Perceived Benefit PB has an average score of (3.39) and a standard deviation of (0.057), indicating the existence of an acceptable level among the concerned sample regarding Perceived Benefit [67]. Perhaps what contributed to improving the capabilities of the concerned sample in enhancing and supporting this variable is the second paragraph PB2, as it is an internal dimension of this variable that achieved a high level compared to other internal dimensions, with an average score of (3.54) and a standard deviation of (0.71). Meanwhile, the first paragraph PB1 came last, with an average score of (3.26) and a standard deviation of (0.67), which indicates that Perceived Benefit is highly valued by the sample, and the second paragraph (PB2) reflects strong elements that support this perception. However, the weakness in the evaluation of the first paragraph (PB1) highlights the need to focus on improving this paragraph to better support Perceived Benefit, which can contribute to enhancing individuals' experiences and increasing their satisfaction with the aspects related to the benefits of the system or service in question [68], [69].

The results in Table (3) indicate that the Financial Technology TIT variable achieved an average score of (3.52) with a standard deviation of (0.32), and perhaps what contributed to improving the capabilities of the concerned sample by enhancing and supporting this variable is the System Security TSS dimension, as it is an internal dimension of this variable that achieved a high level compared to other internal dimensions, with an average score of (3.80) and a standard deviation of (0.36), while the Social Impact TSI dimension came last with an average score of (3.34) and a standard deviation of (0.44), which indicates that Financial Technology is positively valued by the sample members, as System Security (TSS) is a key element in enhancing this perception [70], [71]. However, the decline in the evaluation of the Social Impact (TSI) dimension highlights the need to focus on enhancing this aspect to improve the overall user experience. Improving Social Impact can contribute to increasing the acceptance of Financial Technology and enhance the benefits associated with it, reflecting the importance of communication and social interaction in promoting the use of this Technology [72], [73].

Table (3) Presentation, Analysis, and Interpretation of the Research Variables

NO.	**Mean**	**S.D** [1]	**NO.**	**Mean**	**S.D**	**NO.**	**Mean**	**S.D**
DTE1	3.54	0.66	**PB1**	3.26	0.67	**TPE2**	3.34	0.71
DTE2	3.55	0.66	**PB2**	3.54	0.71	**TPE3**	3.23	0.66
DTE3	3.49	0.79	**PB3**	3.31	0.68	**TPE4**	3.74	0.57
DTE4	3.48	0.64	**PB4**	3.40	0.75	**TPE**	**3.42**	**0.46**
DTE	**3.50**	**0.49**	**PB5**	3.43	0.66	**TSS1**	3.68	0.59
DDP1	3.60	0.63	**PB6**	3.32	0.73	**TSS2**	3.83	0.65
DDP2	3.32	0.71	**PB**	**3.39**	**0.57**	**TSS3**	3.86	0.46
DDP3	3.43	0.73	**TED1**	3.40	0.70	**TSS4**	3.68	0.69
DDP4	3.40	0.70	**TED2**	3.18	0.66	**TSS5**	3.85	0.51
DDP	**3.44**	**0.47**	**TED3**	3.46	0.64	**TSS**	**3.80**	**0.36**
DDA1	3.28	0.65	**TED4**	3.54	0.69	**TDP1**	3.63	0.65
DDA2	3.51	0.62	**TED**	**3.40**	**0.53**	**TDP2**	3.68	0.59
DDA3	3.25	0.66	**TSI1**	3.31	0.53	**TDP3**	3.40	0.63
DDA	**3.35**	**0.50**	**TSI2**	3.35	0.54	**TDP4**	3.62	0.58
DHR1	3.37	0.67	**TSI3**	3.32	0.56	**TDP5**	3.82	0.63
DHR2	3.32	0.62	**TSI4**	3.35	0.62	**TDP**	**3.65**	**0.46**
DHR3	3.58	0.77	**TSI5**	3.42	0.70	**TIT**	**3.52**	**0.32**
DHR	**3.44**	**0.55**	**TSI**	**3.34**	**0.44**			
DTT	**3.43**	**0.46**	**TPE1**	3.34	0.67			

4. Hypothesis Testing

H1: There is a significant correlation between Digital Transformation Technologies and Perceived Benefit.

It is clear from the correlation matrix that there is a positive relationship between Digital Transformation Technologies and Perceived Benefit, which has a strength of (0.794), meaning that an increase in the use of Digital Transformation Technologies is associated with an increase in Perceived Benefit by individuals [74]. It is also evident that there is a fluctuating correlation relationship between the dimensions of these variables, ranging from the lowest value of (0.716) between the dimension Digitalization of Processes (DDP) and Perceived Benefit, while the highest value was (0.781) between the dimension Technology (DTE) and Perceived Benefit [75], [76]. This indicates that Digital Transformation Technologies have a significant impact on Perceived Benefit, reflecting the importance of enhancing these technologies to increase individual satisfaction. Furthermore, the difference in correlation values between the different dimensions suggests that the dimension Technology (DTE) can be the most influential in enhancing Perceived Benefit. Therefore, institutions should focus on improving this dimension through effective strategies to enhance the perceived value of Digital Transformation Technologies [77], [78].

H2: There is a significant correlation between Digital Transformation Technologies and Financial Technology.

The correlation matrix revealed a positive relationship between Digital Transformation Technologies and Financial Technology, with a strength of (0.826), meaning an increase in the use of Digital Transformation Technologies is associated with an increase in Financial Technology by individuals. It is also evident that there is a fluctuating correlation relationship between the dimensions of these variables, ranging from the lowest value of (0.598) between the dimension Databases DDA and the dimension System Security TSS, while the highest value was (0.799) between the dimension Technology DTE and the dimension Ease of Diagnosis TED [79], [80]. This indicates a strong correlation of Digital Transformation Technologies in enhancing the use of Financial Technology, reflecting the importance of institutions investing in the development of these technologies to improve financial benefits. Furthermore, the difference in the correlation values between the different dimensions shows that the dimension Technology (DTE) and Ease of Diagnosis (TED) play a crucial role in enhancing this relationship [81], [82]. Therefore, focusing on improving these dimensions is necessary to ensure the success of integrating Digital Transformation Technologies with Financial Technology.

H3: There is a significant correlation between Perceived Benefit and Financial Technology.

It appears from the correlation matrix that there is a positive relationship between Perceived Benefit and Financial Technology, with a strength of (0.711), which means that an increase in Perceived Benefit by individuals is associated with an increase in the use of Financial Technology [83], [84]. Additionally, there is a fluctuating correlation relationship between the dimensions of these variables, ranging from the lowest value of (0.541) between Perceived Benefit and the Digital Payment Systems TDP dimension, to the highest value of (0.735) between Perceived Benefit and the Ease of Diagnosis TED dimension. This indicates that Perceived Benefit plays a primary role in promoting the use of Financial Technology, as the strong relationship between them suggests that improving Perceived Benefit can lead to increased reliance on Financial Technology [85], [86]. Furthermore, the varying correlation values between the different dimensions highlight the importance of focusing on the Ease of Diagnosis (TED) dimension as a key factor that can enhance Perceived Benefit more significantly, which calls for development strategies targeting the improvement of this aspect to ensure the effectiveness of Technology use (Table 4).

Table (4) Correlation Matrix

	DTE	DDP	DDA	DHR	DTT	PB	TED	TSI	TPE	TSS	TDP	TIT
DTE	1											
DDP	.888**	1										
DDA	.811**	.832**	1									
DHR	.823**	.790**	.815**	1								
DTT	.844**	.839**	.825**	.822**	1							
PB	.781**	.716**	.728**	.736**	**.794****	1						
TED	.799**	.784**	.683**	.691**	.792**	.735**	1					
TSI	.744**	.668**	.623**	.628**	.714**	.597**	.608**	1				
TPE	.704**	.655**	.630**	.641**	.705**	.703**	.623**	.787**	1			
TSS	.649**	.702**	.598**	.623**	.689**	.549**	.571**	.701**	.649**	1		
TDP	.661**	.705**	.611**	.633**	.699**	.541**	.615**	.694**	.640**	.838**	1	
TIT	.810**	.811**	.721**	.739**	.826**	**.711****	.778**	.856**	.838**	.817**	.822**	1

H4: There is a significant effect of Digital Transformation Technologies on Perceived Benefit.

The results of Table (5) indicate that the increase in the sample's interest in Digital Transformation Technologies contributed to enhancing the Perceived Benefit by an amount of (0.869). This means that an increase in Digital Transformation Technologies by a single unit will contribute to an improvement of (86.9%) in the Perceived Benefit, and reduce the standard error to (0.097) [87], [88]. This implies that Digital Transformation Technologies strengthened the explanation of the (0.630) amount of variation in the Perceived Benefit [89], [90], [91]. From here, it can be said that the Perceived Benefit contributes to fostering innovation in the Financial Technology field by encouraging developers to improve the services offered. As individuals recognize the added value of using electronic payment cards, this motivates companies to innovate and provide new financial solutions. This dynamic contributes to developing a more advanced and innovative financial environment [92].

Table (5) Results of Analysis of the Effect of Digital Transformation Technologies on Perceived Benefit

Path			**S.W** [1]	**S.E**	**C.V**	**R^2**	**Sig.**
DTT	**--->**	**PB**	0.869	0.097	8.959	0.630	0.001

[1] Standard Weights (S.W), Standard Error (S.E), Critical Value (C.V).

Source: SPSS output

H5: There is a significant effect of perceived usefulness in Financial Technology.

The results in Table (6) indicate that an increase in the sample's interest in Perceived Benefit contributed to enhancing Financial Technology by an amount of (0.843). This means that an increase in Perceived Benefit by a single unit will contribute to an improvement of (84.3%) in Financial Technology, and reducing the standard error to (0.055), which means that Perceived Benefit enhanced the explanation of the (0.506) amount of the variation in Financial Technology [93], [94]. From here, it can be said that holders of electronic payment cards with a high awareness of the importance of accessing financial services enhance their participation in using technologies more effectively, which enhances their ability to use tools and Digital Transformation Technologies to ensure the enhancement of Financial Technology [95].

Table (6) Results of the Analysis of the Impact of Perceived Benefit on Financial Technology

Path			**S.W**	**S.E**	**C.V**	**R^2**	**Sig.**
PB	**--->**	**TIT**	0.843	0.055	15.327	0.506	0.001

Source: SPSS output

H6: There is a significant impact of digital transformation technologies on financial technology through the mediating role of perceived benefit.

The results of Table (7) indicate that Digital Transformation Technologies, through the mediating role of Perceived Benefit, contributed to improving Financial Technology by causing a significant support and improvement of 0.846. This means that an increase in Digital Transformation Technologies, based on the mediating role of Perceived Benefit, by a single unit of one will contribute to causing support and improvement in Financial Technology for the sample by 84.6%, reducing the standard error to 0.030. From the above, it can be said that Perceived Benefit works on improving the experience of electronic payment card holders with Digital Transformation Technologies, as it contributes to creating added value from using payment cards, such as security and convenience, which makes card holders more inclined to adopt this Technology. Thus, this improvement in the experience contributes to strengthening trust in digital transformation in financial transactions. Additionally, electronic payment card holders have a strong tendency to feel that modern payment technologies provide greater protection for their financial information. Therefore, this sense of security enhances individuals' trust in using Financial Technology, which leads to an increase in their reliance on electronic payment cards as a primary means of conducting transactions (Figure 2).

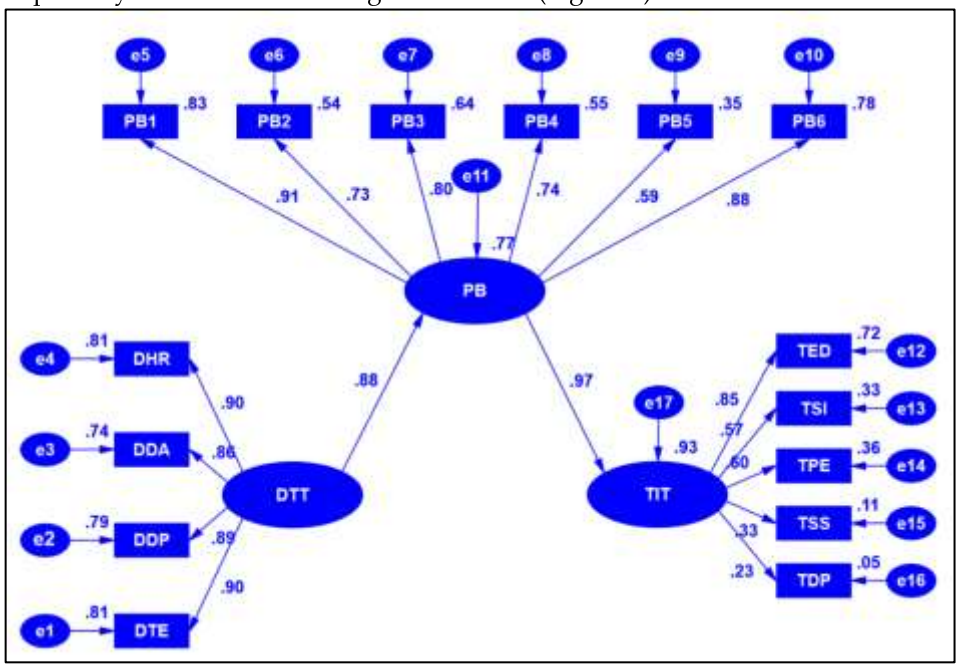


Figure (2) Measurement Model of the Impact of Digital Transformation Technologies on Financial Technology through the Mediating Role of Perceived Benefit

Table (7) shows that Digital Transformation Technologies, through the mediating role of Perceived Benefit, contributed to explaining an amount of (0.934) of the variance in Financial Technology, indicating that Digital Transformation Technologies play a crucial role in improving the ability of Financial Technology, especially when they intersect with Perceived Benefit.

Table (7) Results of the Analysis of the Impact of Digital Transformation Technologies on Financial Technology through the Mediating Role of Perceived Benefit

Path					S.W	S.E	C.V	R^2	Sig.
DTT		--->	PB		0.876	0.101	8.673	0.768	0.001
PB		--->	TIT		0.966	0.081	11.926	0.934	0.001
DTT	--->	PB	--->	TIT	0.846	0.030	28.200		0.001

Source: AMOS output

4. Conclusion

First: Conclusions

The results showed an indirect correlation and influence between the improvement of Digital Transformation Technologies, Perceived Benefit, and Financial Technology, specifically between:

1. Electronic payment card holders with high credit scores regarding the importance of accessing financial services, which enhances their participation in using technologies more effectively, thereby strengthening their ability to use tools and Digital Transformation Technologies to ensure the enhancement of Financial Technology.
2. Perceived Benefit improves the experience of electronic payment card holders with Digital Transformation Technologies, as it contributes to creating added value from using payment cards, such as security and convenience, which makes card holders more inclined to adopt this Technology. Thus, this improvement in the experience contributes to strengthening reliance on digital transformation in financial transactions.
3. The contribution of electronic payment cards in improving the efficiency of financial transactions through the adoption of Digital Transformation Technologies, as Perceived Benefit enhances individuals' perception of this efficiency. This is achieved by directing their attention to the use of these cards, which in turn saves time and effort. This perception increases the use of Financial Technology, leading to improved financial performance for institutions and individuals.
4. Those holding electronic payment cards have a strong tendency to feel that modern payment technologies provide greater protection for their financial information. Thus, this sense of security enhances individuals' trust in using Financial Technology, which in turn leads to increased reliance on electronic payment cards as a primary means of conducting transactions.
5. Electronic payment cards facilitate international transactions with ease and efficiency, which in turn supports the contribution of Perceived Benefit in enhancing the desire among individuals and companies to use these cards in international contexts. They provide the ability to shop across borders without the need for cash, thereby strengthening the role of Financial Technology in facilitating global commerce.
6. Electronic payment cards help individuals improve the management of their personal finances through available tools for expense analysis and management. As Perceived Benefit increases individuals' awareness of their ability to track expenses, it enhances more financially conscious decision-making, which in turn reinforces the use of Financial Technology as a tool for managing finances.
7. The results indicate that electronic payment cards enhance interaction between individuals and digital financial services, as Perceived Benefit makes individuals feel that using these cards gives them easier access to a variety of financial services, such as loans and insurance, and this interaction strengthens the effectiveness of Digital Transformation Technologies in delivering financial services.
8. Perceived Benefit contributes to fostering innovation in the Financial Technology sector by encouraging developers to improve the services offered, as individuals recognize the added value of using electronic payment cards, which motivates companies to innovate and provide new financial solutions, and this dynamic helps develop a more advanced and innovative financial environment.

Second: Recommendations

Achieving research results and reaching the best method to apply the variables under research requires identifying a set of recommendations that address the research problem and enhance the capabilities of electronic payment card holders in improving their capabilities using Digital Transformation Technologies by adopting Perceived Benefit to improve Financial Technology, and this in turn requires:

1. It is essential to enhance financial awareness among electronic payment card users, through financial institutions' reliance on educational programs that focus on Perceived Benefit and its impact on financial decision-making. This awareness can help individuals understand how Digital Transformation Technologies can improve their financial experience.
2. Financial application developers must focus on creating advanced expense management tools, as these applications can enhance Perceived Benefit. By providing users with precise analytics, they can feel greater control over their money, which strengthens the use of electronic payment cards.
3. Electronic payment companies should improve security and privacy features. As users perceive that their financial information is well-protected, their reliance on these cards will increase, which will enhance Perceived Benefit and encourage the use of Digital Transformation Technologies.
4. Financial institutions should offer attractive offers and rewards for electronic payment card holders. These offers can enhance Perceived Benefit, as users feel they are receiving additional value from using their cards, leading to increased usage.
5. Innovation in financial services must be supported to meet changing user needs, as by offering new and innovative services, Perceived Benefit can be enhanced, encouraging individuals to use electronic payment cards more extensively.
6. Banks and financial institutions must focus on facilitating access to information related to payment card services. When users have clear information about the benefits of using their cards, it strengthens their perception of added value, encouraging them to use them.
7. Regulatory bodies should create a competitive environment among payment service providers. Competition can lead to improvements in the services offered, enhancing Perceived Benefit for users and encouraging them to adopt Digital Transformation Technologies.
8. Payment service providers must focus on offering personalized experiences for users based on their financial behaviors. By customizing offers and services, Perceived Benefit can be strengthened, increasing individuals' reliance on electronic payment cards.

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