

# Impact of Digital Transformation on Re-engineering Decisions in light of Sustainable Digitization: An Applied Study on a Sample of Iraqi Private Banks<sup>1</sup>

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## ABSTRACT

The research aims at analyzing and philosophizing the impact of digital transformation of Iraqi private banks with their administrative and financial methods of work and applying new business models commensurate with the changing global environment and sustainable competition in re-engineering decisions and business in a way that parallels the actual need for change towards the new world system and the high performance of banks in light of the adoption of renewable, sustainable and updated digitization To keep pace with the global movement of change. Where Iraqi banks suffer from clear negligence in following the latest digital developments that contribute to programming and engineering their decisions by adopting digital transformation as a new method of work. The researcher will rely on the analytical descriptive approach in addressing its variables philosophically and statistically by using a questionnaire form prepared for this purpose with a number of (30) paragraphs. And the adoption of the five-point Likert scale and some descriptive and statistical methods to treat its non-parametric data, which will be applied in a sample consisting of (10) private banks and an intentional sample of (100) to answer the paragraphs of the questionnaire. The researcher reached a number of conclusions, the most important of which is the existence of a statistically significant effect of digital transformation in re-engineering decisions in light of sustainable digitization.

**Keywords:** *digital transformation; decision re-engineering; sustainable digitization.*

## INTRODUCTION

In light of the crowd of new global variables and the introduction of modern methods of work in the world of banking, the world has moved towards building a work system that adopts information technology and banking communications in promoting the digital transformation of business models to re-engineer its decisions and banking operations in a way that serves the new trend and provides a better service resulting when it is actually needed. It aimed to perpetuate the state of sustainable competition with digital models capable of solving the problem of Iraqi banks by making a scientific transition towards renewable digitization. Where the researcher adopted the descriptive and statistical methods by dealing with his qualitative variables through a questionnaire and the five-point Likert scale. Where the research came with a structure that included three sections, the first topic included the research methodology, the second topic came to the theoretical side of its variables (digital transformation - re-engineering decisions - sustainable digitization), and the third topic came to the practical side, then the fourth topic came to conclusions and recommendations.

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## RESEARCH METHODOLOGY

### Research Problem

Iraqi banks in general and private banks in particular suffer from clear negligence in keeping pace with the movement of banking developments in adopting information and communication technology and banking service technology in conducting digital transformation operations in providing banking services and working to re-engineer their financial, banking and administrative decisions in line with the reality, future and aspirations of the customer to obtain To better serve quickly and accurately with high performance to reach the ranks of high-performance organizations and the need to follow the latest global digital developments and sustainability in them, and in light of that, the research raised the following questions:

1. What is the extent of awareness and awareness that private banks enjoy of the importance of digital transformation to support their decisions and the sustainability of digitization?
2. Is there a significant and significant role for digital transformation in business methods and models in re-engineering its financial, banking and administrative decisions?
3. What is the level and nature of the research variables (digital transformation - re-engineering decisions - sustainable digitization)?
4. Is there a significant correlation between the research variables?
5. Is there a significant impact of digital transformation on re-engineering decisions in the banks under study?
6. Is there a significant impact of sustainable digitization in the digital transformation and re-engineering of decisions in the surveyed banks?

### The Research importance

The importance of the research lies in the extent of the benefit that we will get from the theoretical and practical treatments to reach the solution of the problem and to see the research variables and deal with them within the principles of scientific research and follow the latest digital developments in the world of finance and banking and explain the important role that the vocabulary of digital transformation plays in order to reach the provision of better services to the customer and the development of work Banking and reducing time, effort and cost by adopting advanced software to re-engineer its financial, banking and administrative decisions to enhance the mental image of employees and customers about the speed of access to information, service and high accuracy in banking transactions in light of a turbulent environment characterized by a low percentage of cases of certainty and work in an atmosphere of studied possibilities, and work on The need to follow up the global developments in the field of information technology and banking communications and to change electronic payment systems towards the summit of high performance in the completion of banking transactions.

### The Research Goals

The research aims to reach the facts through which the researcher sees the clearness of the problem, which must match its questions, which can be summarized as follows:

1. Indicating the extent of awareness and awareness of the research community about the need to adopt digital transformation, re-engineering its decisions, and sustainable follow-up to obtain renewable digitization.
2. Statement of the role that digital transformation plays in finding methods and business models to re-engineer its financial, banking and administrative decisions.
3. Measuring and testing correlations between research variables.
4. Measuring and testing the impact of digital transformation on re-engineering decisions.
5. Measuring and testing the impact of sustainable digitization on digital transformation and decision re-engineering.

### Research Community, Sample and Methods

The research community is represented by (10) Iraqi private banks, while the intentional sample came with (100) employees from managers, assistants, department and division officials. The researcher relied on a questionnaire with (30) paragraphs that included the variables of the study and used descriptive and statistical methods in processing its non-parametric data, including (the arithmetic mean, standard deviation, relative importance, Spearman's rank correlation coefficient, R2 coefficient of determination, (Z) and (F) tests.

Table (1) Response strength matrix

Wilted	Level (Direction of Response)	Not's
1-1.8	Completely Disagree	Where collected the Length of the Class, According to the following rate: 4/5=0.8
1.8-2.6	Disagree	
2.6-3.4	Neutral	
3.4-4.2	Agree	
4.2-5	Completely agree	

**Research Hypotheses**

1. There is a statistically significant correlation between digital transformation and decision re-engineering.
2. There is a statistically significant correlation between digital transformation and sustainable digitization.
3. There is a statistically significant correlation between sustainable digitization and decision re-engineering.
4. There is a statistically significant effect of digital transformation and decision re-engineering.
5. There is a statistically significant effect of sustainable digitization in the relationship between digital transformation and decision re-engineering.

**Research Hypothesis Plan**

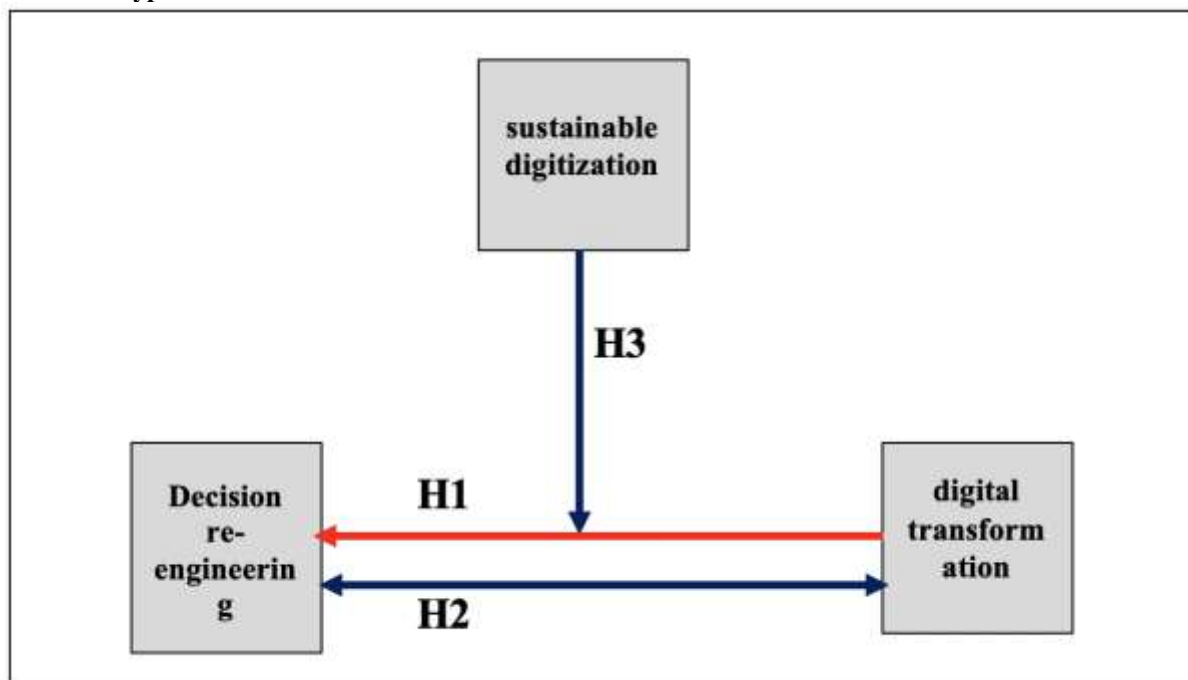


Figure (1)  
Research hypothesis

**LITERATURE REVIEW**

**Concept of Digital Transformation**

The process of digital transformation applied by banking institutions is one of the main pillars of its current dealings, as it is noted in it that the integration of digital technology is observed in all areas of business to make operational transformations better with the changing requirements of customers, as defined by (Moselhi, 13: 2021) “the pursuit of a strategy that works to provide Innovative services that give businesses a sustainable, strong and safe competitive advantage at the lowest costs and develop business models by investing in technologies, developing talents, reorganizing operations and managing change to create new value and experiences for customers, employees and stakeholders to achieve survival and continuity. Also, (Trenerry, et al., 2021, p2) defines it as “a process of profound change that occurs through the integration of multiple technologies and a fundamental redefinition of organizational value and identity,” as defined by (Fitzgerald et al., 2013:9). “Digital transformation is Benefit from

modern digital technologies, such as social media, mobile phones, or embedded devices, so that banks can achieve their main operations efficiently and effectively, enhance customer experience, facilitate operations, and create new businesses.

### **The Importance of Digital Transformation**

The digital transformation contributed to building a new base of influences and innovations by creating business models capable of transforming work methods and banking transactions into a new formula that contributes to reducing time, effort and cost, achieving directed, rapid and advanced utilization to maximize banking services and build a mental image capable of acquiring customers and achieving their goals and those of banking institutions. Its importance can be determined as follows:

1. Creating positive and creative developments and impacts on business and dealing with people in a more cautious manner with money, as customers are the beneficiaries of the rapid and directed digital transformation. (Peltoniemi, 2016:33)
2. Bringing about modern developments in production and distribution with knowledge of digital channels for customers, good customer experience and flexibility in their offers to obtain a distinguished position. (Nicoletti, 2017:11)
3. A major role in the financial and banking industries by finding and inventing new methods in the banking business. (Chen & Zhang, 2018:9)
4. Banks tend to keep pace with the times towards using technology to apply digital transformation in providing their banking services to achieve customer satisfaction.
5. Contribute to linking government and private banks to each other through cooperation and coordination via the Internet to maintain their competitiveness and create value.

### **Digital Transformation Requirements**

For the purpose of applying the digital transformation, some requirements must be provided that make the application bear a scientific, realistic and future vision in the banking business, which can be summarized as follows: (Kane, 2015) (Matt et al, 2015)

1. Preparing the infrastructure for the digital work environment that banking institutions need and that enables them to reach the aspirations of customers. (Muslehi, 14:2021)
2. Providing digital technologies such as hardware, equipment, software, communication networks, digital archiving, and specialized skills in the field of digitization.
3. Building digital strategies in the set of organizational operations and goals for digital transformation.
4. Preparing predictive and analytical capabilities capable of advancing banking institutions, predicting environmental conditions, adapting to them, and addressing new global changes.
5. Defining new business structures and models for digital marketing activities, knowing the work mechanisms available within banking institutions, and designing new mechanisms that enable customers to know how to benefit from digital transformation. (Shadid, 208:2021)
6. Re-engineering the digitization of customers and their relationships, knowing the impact of digital technological progress on them, and developing the communication network to create a high level of speed, accuracy, and communication.
7. Building awareness, awareness and a new culture for the intended community to enhance the role of digital transformation.
8. Building and developing new digital business models of a sustainable competitive nature.

### **CONCEPT OF DECISION RE-ENGINEERING**

#### **Re-engineering**

Reconsidering and thinking about the method used in dividing work into simple tasks, re-integrating the main tasks into coherent operations, and finding new and innovative methods of doing business.

## Decisions

A mental process carried out by managers of banking institutions to choose a method of carrying out work methods among several options depending on the personality of the decision-maker, his goals, his creativity in work, and the purpose of taking it.

## Re-engineering Decision

The process of rearranging and designing methods and models of financial, banking and administrative business and decisions according to information of high specificity that parallels the movement of decisions and the production of new solutions to simple and complex problems that keep pace with the movement of global developments.

## The importance of Decision re-engineering

The importance of re-engineering decisions lies in getting rid of the old procedures used in providing banking services and replacing them with procedures that contribute to improving the quality of service and decisions related to it and making fundamental changes by adopting digital methods using specialized information systems or philosophical thinking with a strategic vision to remove these decisions, and accordingly the importance of the variable can be determined from Through the benefits it provides as follows:

1. Re-improving the financial, banking and administrative operations in an efficient and effective manner and improving the quality of service and performance.
2. Analyzing and interpreting financial, banking and administrative decisions in a way that ensures the survival of the fittest and the optimal use of those decisions.
3. Re-engineering of decisions helps with digital transformation by adopting advanced technology and information systems that help in choosing the best alternative.
4. Bringing about radical and rapid changes in business organizations by adopting new decisions and rethinking building business models that parallel the banking growth movement.
5. Re-engineering decisions that contribute to reducing costs, speeding up business completion, and arranging work methods away from routine.
6. Reducing the volume of administrative and financial decisions to the extent that they can be addressed to adapt to the new changes.
7. Work on reproducing and evaluating decisions along the stages he needs.
8. Rearrange the impact of long-term decisions on the micro and macro levels and strengthen their strategies.

## Decision re-engineering requirements

1. Providing the infrastructure of a digital nature, including hardware, equipment, software, digital archiving, communication networks, and digital knowledge work.
2. Rehabilitating decision makers in a way that is equivalent to scientific thinking to re-engineer and evaluate decisions digitally and intellectually.
3. Adopting the stages of decision re-engineering according to scientific bases and studied steps:
  - a. Diagnostic stage.
  - b. stage of identifying alternatives.
  - c. The alternatives evaluation stage.
  - d. selection stage.
  - e. decision implementation stage.

And the. The stage of follow-up and monitoring the implementation of the decision.

4. Developing the program (NNIS) Neural Network Information Systems and (GAIS) Genetic Algorithms Information Systems for digital contribution to streamlining decisions and choosing the best alternative.
5. Building a strategy with an intellectual, philosophical and digital dimension that contributes to the promotion and development of financial, banking and administrative decisions.
6. Determine the objectives of re-engineering decisions and determine the link between re-engineering steps according to the capabilities of banking institutions and the work environment.

## Concept of Sustainable Digitization

"A scientific and technical methodology that helps financial, banking and administrative institutions to practice their functions, develop their skills, and enhance their business methods and models in a creative and innovative way

that manages, stores, analyzes and retrieves their information that bears the characteristic of sustainability in modernity and change." (Abdul-Rahman, 2019) and also defined it as "the use of information technology and banking communications, including advanced hardware, software, systems and networks, to accomplish sustainable strategic business and to make a quantum leap in improving business procedures and models, achieving the goals of banking institutions, and activating the modernity of digital application."

### **The Significance of Sustainable Digitization**

The importance of sustainable digitization with renewed modernization in use and application can be determined through the following:

1. Sustainable digitization helps promote digital transformation and support decisions by continuing to update their requirements for use and application. (Abdul-Ghani and Abdel-Fattah, 2017: 34-35) and (Abdul-Rahman, 2019: 188)
2. Sustainable digitization is an increasingly valuable initiative for banking institutions to access the information and decision highway via updated digital media.
3. The updated, sustainable digitization with a strategic orientation is intended to give the beneficiaries of the banking service easy access, with high accuracy and outstanding performance.
4. Sustainable digitization works to build a digital archiving system capable of assimilating, analyzing, changing and supporting administrative, financial and banking decisions.
5. Sustainable digitization saves time, effort and cost, and opens new investment fields.
6. Sustainable digitization works to consolidate a single electronic portal away from duplicating traditional businesses and providing new business opportunities.
7. Sustainable digitization helps shorten the administrative hierarchy, organize its bases, improve job performance, and organize service operations.
8. Sustainable digitization helps support digital transformation and enables and facilitates the speed of social communication.
9. Sustainable digitization helps follow up on strategic information systems and their updates and apply their use in new work methods and streamlining decisions.

### **Sustainable Digitization Requirements**

In order to achieve sustainability in the modernization of digitization, it is necessary to provide the necessary requirements for it:

1. Business re-engineering of administrative, financial and technical banking institutions in line with the flexibility required for change.
2. Providing administrative and technical material means that help follow the latest global changes to achieve the principle of digital transformation.
3. Building a sustainable strategy with a high-performance dimension to be applied in accordance with the new variables and the qualitative transition in methods.
4. Provide an advanced administrative, banking and technical cadre with specializations and skills affecting digitization and its sustainability.
5. Work on building a leadership base for decision-making and developing its capabilities and mental abilities.
6. Work to provide an adequate financial budget to rebuild the digital system in line with the movement of change and the actual need.

### **THE LOGICAL AND PHILOSOPHICAL RELATIONSHIP BETWEEN THE RESEARCH VARIABLES**

As a result of the new and renewed global changes and the emergence of the digital world as a basic pillar in financial and banking transactions and the adoption of banking service technology in those institutions to advance them towards the top of high banking performance to provide better service to customers, as the world turned towards adopting a modern concept in methods and business models, it was used as a qualitative leap and a turning point towards Building a mental image that touches the new performance of the scientific and behavioral banks, and found the "digital transformation", which is the transition in methods and models from traditional to electronic to provide better service and decisions that work under the survival of the fittest model and its support for decision makers in how and when to take the decision, so the electronic integration between digital transformation and re-engineering has become Decisions need advanced specialized hardware, systems, software, networks and energies that streamline, redesign and arrange decisions to serve the aspiration towards change. These variables only work in light of the

concept of modernized digitization with a strategic dimension, which needs sustainability in ownership, application, and work on its modernization and development. On this basis, the shadow of sustainable digitization has become a strong influence factor in the relationship between digital transformation and re-engineering of administrative, financial, banking and technical decisions.

## DATA ANALYSIS

### Preface

In this section, the validity and reliability tests of the questionnaire will be presented, followed by the presentation and analysis of the results and the testing of the research hypotheses. This included three axes, as follows:

**The first axis:** tests of validity and reliability of the questionnaire.

**The second axis:** presenting and analyzing the results of the descriptive analysis of the research variables.

**The third axis:** testing research hypotheses.

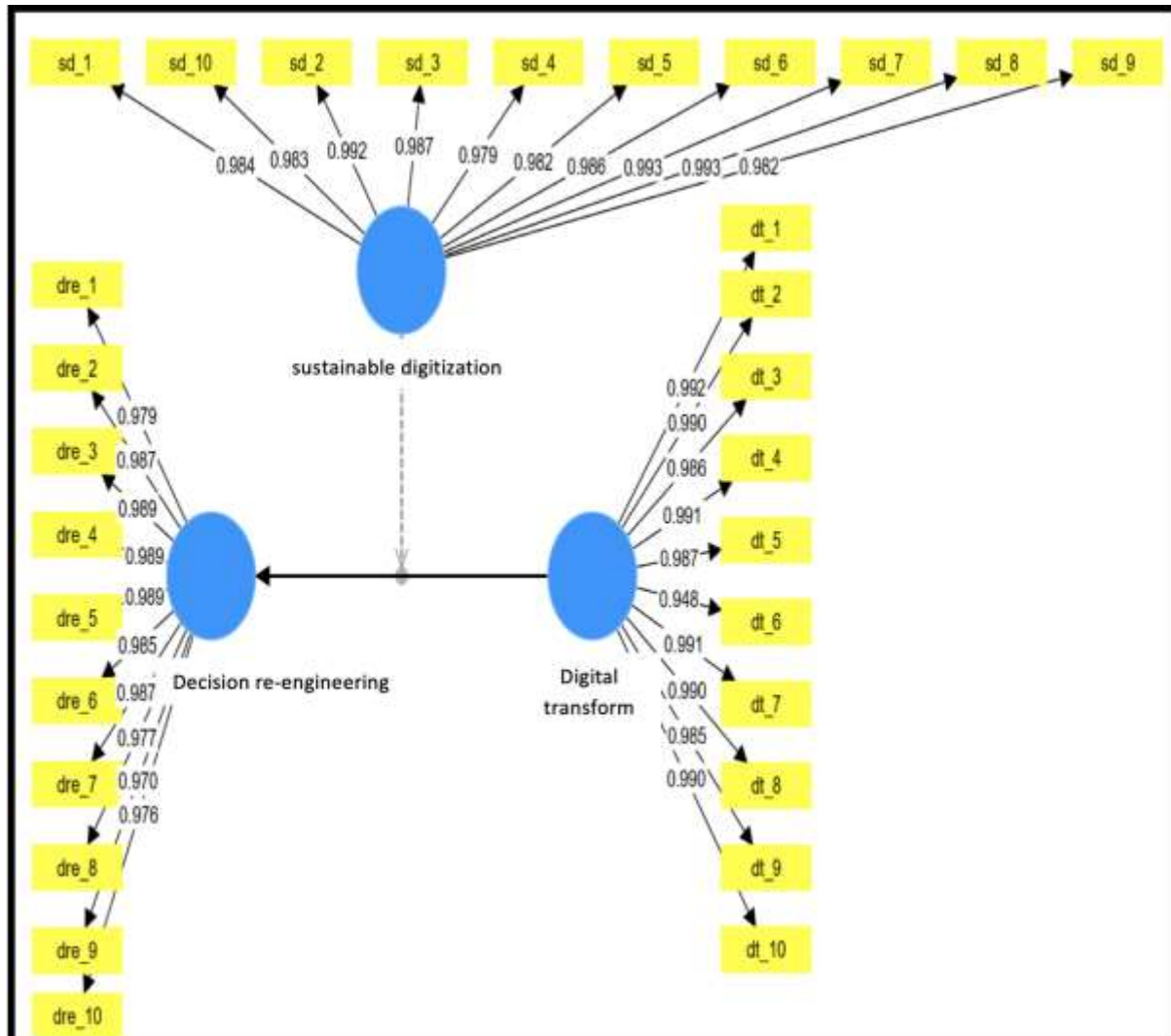
### THE FIRST AXIS .. TESTS OF STABILITY AND VALIDITY OF THE QUESTIONNAIRE

Honesty and reliability are among the conditions that must be met in the questionnaire to become eligible for use in the analytical study, as the validity test is used to confirm the degree of accuracy of the accuracy of the thirty paragraphs of the questionnaire in representing the subject of the research tagged (the effect of digital transformation in re-engineering decisions in light of sustainable digitization / an applied study in a sample of Iraqi private banks) the best representation.

- Testing the stability and validity of the questionnaire: stability means that if the scale is applied to the same group of individuals after a period of time, it will give the same results. The amount is (70%), and this means that the research questionnaire with its various scales is of high stability and can be adopted at different times for the same individuals and gives the same results.

- Testing the validity of the construction for the resolution:

The constructive validity represents the factorial analysis of the items of the scale, which refers to the amount of saturation of the elements (the items of the scale) in representing the variable to be measured, and whenever the amount of saturation of those elements is greater than the acceptable minimum of 0.40, this indicates the existence of constructive validity of the components of the scale. The amount of saturation is less than the acceptable minimum, so those elements are excluded. Figure (2) shows the amount of saturation of the components of the research variables: the independent variable (digital transformation), the interactive variable (sustainable digitization), and the responsive variable (reengineering + decisions), as it is noted that the amount of The saturation values for all elements of the research variables were greater than (0.90), which indicates that the questionnaire with its variables enjoyed very high constructive honesty.



**Figure (2) The amount of saturation of the constituent elements of the research variables**

Source: prepared by the two researchers based on the results of the statistical analysis using the Smart-PLS4 statistical program.

**The second axis .. Viewing and analyzing the results of field research**

The researchers review the results of the descriptive statistical analysis of the research variables in this axis, as the research shows the level of the sample's response through the matrix of the respondent's response strength, which represents an estimated scale according to the five-point Likert scale, as detailed in Table (2), as we note through it that if the value of the arithmetic mean The weighted ranges from (1 to less than 1.8), then the strength of the response means complete disagreement at a very low level. The weighted arithmetic ranged (from 2.6 to less than 3.4), the strength of the response means neutral at a moderate level, while the weighted mean value was recorded within the category (from 3.4 to less than 4.2), the strength of the response means agreement at a high level

In the process of descriptive data analysis, the researcher relies on weighted arithmetic mean measures, standard deviations, and relative importance applied to each paragraph of the questionnaire and to all paragraphs of digital transformation (independent variable), sustainable digitization (modified interactive variable), decision re-engineering (responsive variable). The results of the analysis were as follows:



**Table (2) Statistical measures for the digital transformation items. n=100**

code	Paragraph	SMA	standard deviation	Relative importance	Paragraph arrangement
dt_1	Banks have awareness and awareness of the importance of digital transformation in methods and business models.	3.51	.9210	70.2%	4
dt_2	Banks have the infrastructure to implement digital transformation.	3.56	.9540	71.2%	3
dt_3	Banks take into account the procedures of operational transformations to match the changing requirements of customers.	3.58	.9850	71.6%	2
dt_4	Banks are building a digital transformation strategy to provide innovative services that give businesses a competitive advantage.	3.43	.9220	68.6%	7
dt_5	Banks adopt the development of methods and business models by investing in technologies.	3.74	.9350	74.8%	1
dt_6	Banks adopt talent development and constantly reorganize operations.	3.47	.9210	69.4%	5
dt_7	Banks take into account change management to create new value and experiences for customers, employees and stakeholders.	3.40	.9320	68%	10
dt_8	Banks take advantage of modern digital technologies, such as social media and embedded devices, to achieve their operations efficiently and effectively	3.43	.9860	68.6%	8
dt_9	Banks take into account enhancing customer experience, facilitating operations and creating new business.	3.41	.9990	68.2%	9
dt_10	Banks contribute to the developments of production and distribution in order to know the digital channels for customers and flexibility in their offers.	3.46	.9420	69.2%	6
<b>the average</b>		<b>3.499</b>	<b>6.930</b>	<b>%98.69</b>	

Source: Statistical analysis results using spss v.28

This variable was measured through paragraphs (dt\_1- dt\_10). Table (2) indicates the arithmetic mean, standard deviations, and relative importance related to the point of view of the researched sample regarding digital transformation. ((3.499) and this value falls within the category from (from 3.4 to less than 4.2) in the matrix of the respondents' response strength to show that the level of importance of the sample's answers to all items (digital transformation) tended towards agreement, with a high level of response and a standard deviation of (0.936), which indicates There is a relatively weak dispersion in the answers of the members of the researched sample, and the relative importance of this variable was (69.98%). As the survival of organizations in the business market and in light of the intense competition is very important, the digital organization must be in line with the rapid developments, since digital technologies have become an important driver for all levels of the organization and for the re-engineering of its decisions and the use of technology to transform any business, especially the service, into something better and more clearly in line with the changes. Banking institutions need to have an advanced information infrastructure that enables them to conduct their activities via the Internet, as well as contribute to reducing waste of money and saving effort and time.

As for the paragraphs of this dimension, paragraph (dt\_5), which stipulates (banks depend on developing their business methods and models by investing in technologies), has been achieved at the highest arithmetic mean by (3.74) and with a standard deviation of (0.935) and with a relative importance of (74.8%) and a level High response regarding this paragraph, while paragraph (dt\_7), which stipulates (banks take into account change management to create new value and experiences for customers, employees and stakeholders) achieved the lowest arithmetic mean at the level of this dimension, which amounted to (3.40) and with a standard deviation of (0.932), With a relative importance of (68%) and a high level of response regarding this paragraph.

Second: Description and diagnosis of the paragraphs and criteria for sustainable digitization (modified interactive variable):

Table (3) Statistical measures for the paragraphs of sustainable digitization. n=100

code	Paragraph	SMA	standard deviation	Relative importance	Paragraph arrangement
sd_1	Sustainable digitization is a technology that helps banking institutions to practice their functions and develop their skills.	3.52	0.987	70.4%	8
sd_2	Sustainable digitization enhances work methods and business models in a creative and innovative manner.	3.84	0.891	76.8%	3
sd_3	Sustainable digitization promotes digital transformation with updated technologies and software.	3.67	0.974	73.4%	6
sd_4	Sustainable digitization helps modernize, re-engineer and streamline decisions.	3.97	0.832	79.4%	1
sd_5	Banks have a clear strategy for sustainable digitization and the stages of acquisition and digital implementation.	3.44	0.990	68.8%	9
sd_6	Sustainable digitization enhances added value through updated digital means.	3.56	0.935	71.2%	7
sd_7	Sustainable digitization with its updates enhances customer service with ease, high accuracy, and outstanding performance.	3.75	0.876	75%	5
sd_8	Sustainable digitization reduces the time, effort and cost of new investment areas.	3.30	1.01	66%	10
sd_9	Sustainable digitization redesigns banking structures through every modernization and digital development.	3.85	0.948	77%	2
sd_10	Sustainable digitization helps to adopt strategic systems and software to streamline its decisions.	3.76	0.896	75.2%	4
<b>the average</b>		<b>3.664</b>	<b>0.976</b>	<b>%73.28</b>	

Source: Statistical analysis results using spss v.28

This variable was measured through paragraphs (sd\_1 - sd\_10). Table (3) refers to the arithmetic mean, standard deviations, and relative importance related to the point of view of the researched sample regarding sustainable digitization, as the mentioned table reflects a general arithmetic mean that is higher than the standard arithmetic mean of (3) as (3.664) This value falls within the category (from 3.4 to less than 4.2) in the matrix of the respondents' response strength to show that the level of importance of the sample's responses to all items (sustainable digitization) tended towards agreement, with a high level of response and a standard deviation of (0.976), which indicates There is a relatively weak dispersion in the answers of the respondents, and the relative importance of this variable reached (73.28%). Facilitating work tasks between customers and the bank, providing banking services with ease and ease, and moving away as much as possible from traditional business by relying on new work methods and streamlining decisions in order to be able to keep pace with the requirements of the external environment and harmony and flexibility with the latest changes in the external environment to work according to the principle of digital transformation based on systems and software and updated technologies.

As for the paragraphs of this dimension, paragraph (SD\_4), which stipulates (sustainable digitization helps to modernize, re-engineer and streamline decisions), achieved the highest arithmetic mean by (3.97) and with a standard deviation of (0.832) and with a relative importance of (79.4%) and with a high level of response regarding This paragraph, while paragraph (sd\_8), which stipulates (sustainable digitization reduces the time, effort, and cost of new investment fields) was achieved at the lowest arithmetic mean at the level of this dimension, which amounted to (3.30) and with a standard deviation of (1.01), and with a relative importance of ( 66% with a moderate level of response regarding this paragraph.

**Third: Description and diagnosis of the paragraphs and criteria of re-engineering decisions (the responsive variable):**

**Table (4) Statistical measures for the paragraphs of decision re-engineering. n=100**

code	Paragraph	SMA	standard deviation	Relative importance	Paragraph arrangement
dre_1	Banks have awareness and awareness of the importance of adopting digitization by re-engineering decisions.	933.	0.897	78.6%	1
dre_2	Banks take into account the adoption of systems and software (GAIS-NNIS) in streamlining decisions.	763.	0.976	75.2%	8
dre_3	Decision re-engineering contributes to directing thinking about the methods used towards leading the best choice.	793.	0.903	75.8%	6
dre_4	The personality of the decision maker contributes to the re-engineering of decisions according to behaviors.	683.	0.974	73.6%	9
dre_5	Re-engineering decisions depends on getting rid of old procedures by adopting digitization to streamline decisions.	833.	0.863	76.6%	5
dre_6	Contribute to re-improving financial and administrative operations in an efficient and effective manner.	863.	0.852	77.2%	3
dre_7	Decision re-engineering needs to improve digital service quality and balanced performance.	773.	0.912	75.4%	7
dre_8	The digital transformation contributes to enhancing the re-engineering of decisions in a way that guarantees the survival of the fittest and the optimal ones.	893.	0.968	77.8%	2
dre_9	Decision re-engineering contributes to reducing costs and speeding up business completion.	853.	0.848	77%	4
dre_10	Reducing the size of the administrative and financial continents contributes to the reproduction and evaluation of decisions along the stages.	3.29	1.01	65.8%	10
the average		3.765	0.943	75.3%	

**Source: Statistical analysis results using spss v.28**

This variable was measured through paragraphs (dre\_1- dre\_10). Table (4) refers to the arithmetic mean, standard deviations and relative importance related to the point of view of the researched sample regarding re-engineering decisions, as the mentioned table reflects a general arithmetic mean that is higher than the standard arithmetic mean of (3) It reached ((3.765), and this value falls within the category from (from 3.4 to less than 4.2) in the matrix of the strength of the respondents' response to show that the level of importance of the sample's answers to the total items (re-engineering decisions) tended towards agreement, with a high level of response and a standard deviation of (0.943). Which indicates a relatively weak dispersion in the answers of the sample members, and the relative importance of this variable was (75.3%). The importance and necessity of relying on re-engineering decisions on digitization by providing the infrastructure of a digital nature in modern systems and software in a manner that contributes to improving the quality of digital service and performance, brightening decisions, contributing to reducing costs and speeding up business completion according to developments in the external environment in line with developments in the world of competition And rebuilding the steps of re-engineering decisions according to the capabilities of banking institutions.

As for the paragraphs of this dimension, paragraph (dre\_1) was achieved, which stipulated (banks have awareness and awareness of the importance of adopting digitization by re-engineering decisions.), on the highest arithmetic mean by (3.93) and with a standard deviation of (0.897) and with a relative importance of (78.6%) and a level of response High for this paragraph, while paragraph (dre\_10), which stipulates (reducing the volume of administrative and

financial decisions contributes to the reproduction and evaluation of decisions along the stages.) achieved the least arithmetic mean at the level of this dimension, which amounted to (3.29) and a standard deviation of (1.01). ), with a relative importance of (65.8%) and a moderate level of response regarding this paragraph.

### THE THIRD AXIS: TESTING RESEARCH HYPOTHESES.

**First:** Examining the correlation between digital transformation and decision re-engineering

The analysis of the hypothetical research scheme requires testing its hypotheses according to their inclusion in the research methodology. This paragraph seeks to determine the nature of the relationship between the independent variable (digital transformation) and the responsive variable (decision re-engineering) to find out the extent of acceptance or rejection of the first research hypothesis, using the simple correlation coefficient (Pearson). Correlation), which is one of the statistical methods used to measure the strength and direction of the relationship between two variables using the ready-made statistical program (SPSS) version 28.

In order to analyze the nature of the relationships between these variables, Pearson Correlation coefficients were calculated to examine the existence of the relationship, as in the following table (5):

**Table (5) Pearson rank correlation coefficients to examine the existence of the relationship between digital transformation and decision re-engineering n = 100**

Hypothesis	Variables		Pearson	Sig. (2-tailed)	Relationship strength and direction
H1	digital transformation	Decision re-engineering	0.601**	sig /< (0.001)	direct medium

Source: Statistical analysis results using spss v.28

Note: The symbol \* means that the value of the correlation coefficient is significant at a significant level (0.05), and the symbol \*\* means that the value of the correlation coefficient is significant at a significant level (0.01).

In Table (5), we note that the value of the correlation coefficient between digital transformation and decision re-engineering was (0.601), which is a significant and direct correlation of medium strength at the Sig level of significance. (2-tailed) 0.001) > That is, with confidence limits greater than 99.9%, and this result indicates that the greater the level of interest in digital transformation, this leads to a rise in the level of re-engineering decisions, meaning that re-engineering decisions for the research sample of private banks can be It is generally enhanced once a positive change occurs in the level of digital transformation, and this result supports the first research hypothesis, which means accepting this hypothesis, i.e. there is a statistically significant correlation between digital transformation and decision re-engineering.

#### Second: Testing the effect between research variables

This paragraph seeks to test the second research hypothesis related to testing the effect between the research variables: digital transformation (the independent variable) and decision re-engineering (the responsive variable) using simple linear regression analysis.

To test the validity of the second research hypothesis, whether there is a significant effect of digital transformation in re-engineering decisions in general or not, simple linear regression analysis was used, and the results are as in Table (6).

**Table (6) Analysis of variance table for regression equations, digital transformation in re-engineering decisions, n = 100**

hypotheses	Variables	F- test	*Sig. (2-tailed)	$\beta$	$\alpha$	R <sup>2</sup> %	
H2	digital transformation	re-engineering decisions	368.55	< (0.001)	0.855	0.537	36.1%

**Source: Statistical analysis results using spss v.28**

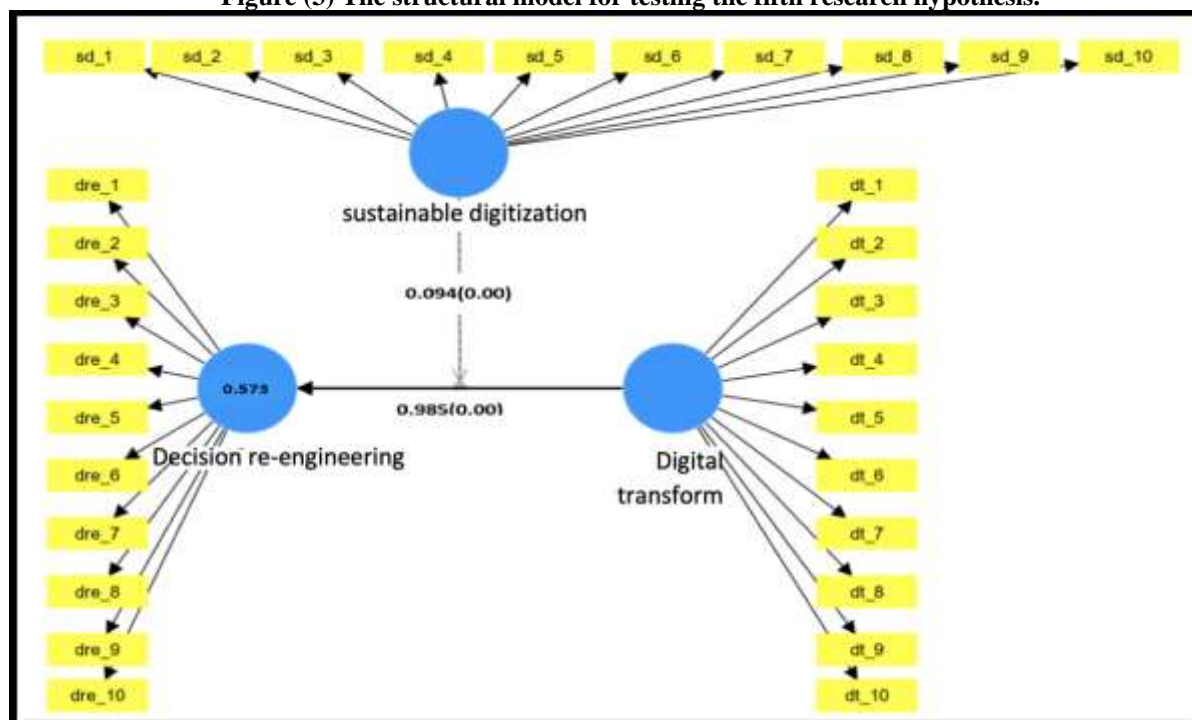
To test the validity of the second research hypothesis, Table (6) shows the values of the F-test for digital transformation in decision re-engineering, which amounted to (55.368), with the significance level of Sig. (2-tailed) (0.001) >, this means that there is a significant effect of digital transformation in re-engineering decisions at a confidence level of 99.9%). Even if the re-engineering of decisions is equal to zero, and the value of the coefficient  $\beta$  was (0.855), meaning that increasing the value of digital transformation by one unit will lead to a change of (0.855) in the re-engineering of decisions in the research sample of private banks under study, and the value of the determination coefficient indicated (R<sup>2</sup>) of (0.361), which means that (36.1%) of the variation in decision reengineering is explained by the digital transformation that entered the model, and that (63.9%) is explained by factors that did not enter the regression model of the current study So, the second hypothesis of the research is accepted, that is, there is a statistically significant effect of digital transformation in re-engineering decisions.

### **Third: Examining the modified role of sustainable digitization**

For the purpose of testing the third research hypothesis whether there is a positive interactive role of sustainable digitization in increasing the impact of digital transformation in re-engineering decisions or not, the Structural Equations Modeling Method in Partial Least Squares (PLS-SEM) was used via the Smart-PLS4 program, which is It is one of the statistical methods that do not need a large sample size to be conducted, in contrast to the method of least squares structural equation modeling based on covariance (CB-SEM) via the AMOS program, which needs large sample sizes to ensure the accuracy of its results.

To test the third research hypothesis, the structural model shown in Figure (3) was built, the results of which are presented in Table (7).

Figure (3) The structural model for testing the fifth research hypothesis.



Source: Smart-PLS output

Table (7) The results of evaluating the structural model of the modified interactive mediation of the fifth hypothesis

SRMR	Hyp.	المسار	effect type	impact	t value	p value	(R <sup>2</sup> )
0.048	H3	Decision re- ← Sustainable Digitalization → Digital transform engineering	Positive rate reaction	0.985	11.074	0.001	0.573

Source: Prepared by the researcher based on the outputs of the Smart-PLS4 program

Table (7) shows the results of evaluating the structural model for the third hypothesis, which showed that the criterion (SRMR), which is the unified mean square root criterion used to verify the quality of conformity of the structural model of the pathway, had a value of (0.048), which is less than (0.08), and this means that the model achieves a quality standard Matching, the value of the indirect path coefficient (modified effect) was (0.985), the t value was (11.074) and the p-value significance level was (0.001), which documents the significance of the modified effect, and the value of the determination coefficient was (0.573), meaning that the modified path model explains Its value is (57.3%) of the changes that occur in the re-engineering of decisions, and its value (42.7%) is due to other variables that did not enter the path model. Decision engineering, and this result leaves the fifth research hypothesis, which states (the impact of digital transformation in re-engineering decisions is growing in light of the modified role of sustainable digitization).

### CONCLUSIONS

1. The private banks surveyed have awareness and awareness of the importance of digital transformation and support them by re-engineering their decisions to achieve digital sustainability.
2. The important and prominent role of digital transformation has become clear in the use of business models and the integration of technologies to maximize banking services after re-engineering its various decisions.
3. Digital transformation contributes to creating the necessary infrastructure for the digital work environment in line with the requirements, goals and aspirations of customers.

4. Sustainable digitization contributed to the modernization, re-engineering and streamlining of decisions through the use of innovative digital means.
5. Private banks have awareness and awareness of the importance of adopting sustainable digitization to re-engineer their decisions to contribute to reducing costs and speeding up business completion.

### Recommendations

1. Enhancing awareness and awareness among private banks of the importance of following the digital transformation to support decision engineering and achieving digital sustainability.
2. Giving importance to increasing the use of business models in re-engineering decisions of all kinds and integrating modern technologies with them.
3. Enhancing the contribution of digital transformation to create the necessary infrastructure to make the digital work environment sustainable in line with the requirements and goals of customers.
4. Directing attention, saving money, and re-engineering decisions to provide all modern digital means to quickly complete the organization's work to achieve its goals.
5. Enhancing awareness and awareness among private banks of the importance of adopting sustainable digitization in all areas of work, especially for re-engineering and streamlining decisions to improve the quality of digital service to achieve outstanding performance.

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