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## A General Framework for Evaluating the Role of Electronic Banks in Achieving Sustainable Development According to 2030 Vision

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### **Abstract**

After the United Nations adopted in 2015 the 2030 Agenda to achieve sustainable development, which included 17 goals, which made achieving these goals one of the great challenges facing societies, reducing poverty, protecting the environment, preserving natural resources and achieving a just peace. Before 2030

Based on the foregoing, the purpose of the research was to determine the requirements necessary to enable electronic banks to achieve sustainable development goals in accordance with Egypt's Vision 2030 and in line with the United Nations 2030 Agenda.

The research was applied on the National Bank of Egypt, which includes 500 branches. A questionnaire form was used as a tool to apply the research and delivered to the main bank branch, which in turn distributed it to the bank's branches spread throughout the country.

The research studies the compatibility of the design of the electronic banking system and its applications with the sustainable development goals approved by the United Nations, and determine what are the requirements, whether marketing, technological or operational, to follow the technological development in the field of electronic banking so that the National Bank is a pioneer in this field among its competitors. The banking sector includes 39 banks, and each bank has many branches.

600 questionnaire forms were distributed to the bank's branches by the main branch, and 78 items were excluded, so the return forms became 522 forms.

The results of the data obtained through the questionnaire form were analysed and the required requirements were collected and divided into marketing, technological or operational requirements to include the 17 goals in the United Nations 2030 Agenda, taking into account the requirements of customers and employees, which included 17 elements of the system characteristics in order to achieve the 17 SDG goals.

In the end, the research recommended re-designing the electronic banking system according to the results obtained from the research and after excluding the features that are not required by customers and employees and replacing them with other characteristics required by them.

**Keywords:** electronic banking, sustainable development, United Nations 2030 Agenda, system requirements.

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## **1. Introduction**

Electronic banking applications have become an inevitable necessity and are applied in all Egyptian banks according to the different types of these applications from one bank to another. Achieving sustainable development goals in accordance with Egypt's Vision 2030 and in line with the United Nations 2030 Agenda

Despite the growing development in electronic banking and its replacement by traditional methods [1], there are many manifestations of failure in its applications, which entail the need to work on providing flexibility in the way it works in order to avoid those manifestations that cause malfunctions resulting from self-service banking for customers, and to maximize the benefits resulting from electronic banking applications To achieve the sustainable development goals, there are many accompanying manifestations, including:

- 1- The availability of banking services throughout the day, which makes them available at any time.
- 2- The available electronic banking activities have become many and varied and can be applied in many sub-points in addition to bank branches [2].
- 3- There are many possibilities available to develop and improve banking services through electronic banking in line with achieving sustainable development goals.

### **E-banking Sustainability**

There are many factors that affect business sustainability, and these factors are divided into environmental, social, economical, and security factors [3], which inevitably affect economic growth and sustainable development, which has an impact on business activities and banking and economic services provided through electronic banks [4].

The sustainable economy is the topic of the moment, as the world is currently facing many complex environmental regulations and laws, as well as a change in the climate and a difference in societal characteristics. Banks in general face challenges resulting from adopting the new thinking, which depends on the vision of the world 2030, which depends on the productive thought of products or services, which is Based on the cycle of obtaining resources and then processing, which results in consumption of waste, and these wastes, whether solid, liquid or gaseous, affect the environment.

### **The role of electronic banks in achieving the requirements of sustainable development**

The mediating role of banks throughout the economy. For banks, investment-related sustainability has become a key factor, especially in long-term investments [5]. When working to achieve the seventeen goals of sustainable development through electronic banking applications, the process of developing the system itself depends on several complex factors that can be used as criteria for evaluating their application in commercial banks. to achieve the sustainable development goals.

In order to ensure that achieving these goals can be achieved [6], there are many factors that confirm that the programs to achieve the requirements of sustainable development in electronic

banks are considered successful, and in order to confirm this success, the following must be done:

- 1- Defining specific long- and short-term goals linked to achieving the requirements of sustainable development.
- 2- Continuous improvement in line with achieving the requirements of sustainable development.
- 3- Commitment to the standards set in the United Nations 2030 Agenda
- 4- Emphasis on linking the objectives of banks with the objectives of sustainable development.
- 5- Improving the ways and means of communication with all those around the banks to ensure the achievement of the requirements of sustainable development

### **Sustainability challenges and opportunities**

There are many negative trends and expected obstacles that could stand in the way of achieving sustainable development [7], including:

- 1- All future environmental, social and political assessments depend on the historical background, which is based on the behavior of older generations.
- 2- The way in which previous generations deal with the environment changes from that of future generations
- 3- Forecasting changes in the environment, climate and natural resources requires recognizing [8] the behavior towards the environment on the part of previous and current generations.
- 4- It is necessary to look at the expected environmental changes in the future and how they can affect the balance of nature, including biological diversity, which is a key factor to support the concept of sustainability.
- 5- As for the social, political and economic dimensions, they are predicted by analyzing their own evidence, which is obtained from the views of experts, scholars, scholars and researchers.
- 6- The increasing environmental pressures resulting from the increase in population numbers.
- 7- Scarcity of natural resources.
- 8- High energy costs.
- 9- Consumers' need for safe products.
- 10- The need for levels of transparency and disclosure through social media.

### **Sustainability challenges and opportunities in Business Sustainability Management**

Business sustainability management [9] depends on studying the way to the future, or it is another case of understanding the future and predicting what will happen during the future, but in the beginning, it is necessary to have a good understanding of the past in order to predict the

future, and this means studying the environment, population growth and changes in the environmental climate.

Sustainability is related to all levels of human activity [10], whether at the global, national, organizational or even individual levels among individuals. The limits of nature, and sustainability also traces back to the state of a global system focused on ecological, social and economic systems.

This means that sustainable development is required to meet both the needs of current and future generations

### **Examples of business sustainability management**

- 1- Increasing need to improve quality.
- 2- Increasing reliance on computers of all kinds and take advantage of all their capabilities.
- 3- Increasing dependence on the Internet in communications.
- 4- Impact on the competitiveness and survival of organizations.
- 5- Taking into account that management practices are sustainable and directly related to environmental, social and economic matters

### **Opportunities available through environmental sustainability**

The value obtained through sustainable development is considered one of the basic matters that can positively affect the environment [11] by transforming traditional services into an electronic shape and reducing work by traditional methods, which depend on achieving the well-being that all livelihoods need.

Reducing environmental aggression may be directly or indirectly affects working conditions, and the direct effect comes through reducing the overuse of things harmful to the environment. Its impact extends for long periods, especially after the beginning of the industrial revolution, which led to environmental instability.

The social impact can be through human interactions with plants and animals surrounding him in general, which resulted from environmental diversity in general, which may affect humans as well and thus affected human activities in general

The economic impact can come through environmental awareness among citizens [12], as well as providing them with knowledge towards sustainable development. Biological diversity can be a source of economic returns that allow humanity to survive for a long period, but work must be done to maximize returns and provide profits without overestimating the environment, which achieves sustainability.

Also, politics plays an influential role in the transition towards sustainable development, so agreements, legislation and decisions can be drawn up, as well as enacting regulations and laws that include preserving the sustainability of the environment while preserving the available natural resources. Although there are many agreements in this field, there are many agreements that need to complete it.

### **Understand the general framework for sustainable development**

In order to provide a general framework for achieving sustainable development, it is necessary to work on the following:

- 1- Providing the necessary awareness towards preserving the environment and natural resources.
- 2- Determining the requirements for preserving the climate and the external environment.
- 3- Develop regulations and laws that obligate people to preserve the environment and work to ensure compliance with them.
- 4- Devise ways to recycle and reuse different products as much as possible.
- 5- Studying and analyzing historical data on the environment to predict what might happen in the future, as the clean environment is considered one of the forces supporting the economy, especially when thinking about sustainable development.

### **Framework for evaluating sustainable e-banking**

#### **Research problem:**

The problem of the study has emerged in the need of electronic banks for a reliable system to achieve and meet the requirements of sustainable development in the light of Vision 2030 where the bank under study faces the following:

- 1- The bank operates in different branches in different places throughout the republic, which makes it difficult to deal with the external environment, as the external environment varies from place to place according to each branch.
- 2- There is a weakness in the field of workers' knowledge and skills to meet the needs of sustainable development.
- 3- Experts from specialists in the field of sustainable development are not used, as the bank focuses on hiring experts from the Banking Institute, which is concerned with the requirements of electronic banking and neglects the requirements of sustainable development.
- 4- The financing available for the development of bank branches includes provisions for the development of electronic banking and does not include provisions for achieving sustainable development.
- 5- Banking operations include complex transactions to the extent that the bank is unable to meet the requirements of sustainable development through them.
- 6- The process of developing electronic banks to meet the requirements of sustainable development needs time, and this time is difficult to provide in light of the current employment.
- 7- Activities that meet the needs of sustainable development are limited to the requirements of the United Nations 2030 Agenda

8- There are many problems that may appear during daily banking transactions, and they are collected monthly for review.

### **Research questions**

Based on the research problem, the research can focus on answering the following questions:

- 1- What are the challenges facing sustainable development?
- 2- What are the currently available opportunities that can be employed in achieving sustainable development?
- 3- What is the environment of legislation, regulations and laws necessary to achieve sustainable development?
- 4- What is the international policy required to achieve sustainable development?
- 5- How can electronic banking services applications be redesigned for sustainable development?
- 6- How can business be directed towards sustainable development goals?
- 7- What are the Sustainability challenges and opportunities?
- 8- What are the Regulatory environment and international policy?
- 9- How to Design information technology, and planning for sustainability
- 10- How to Design Communications and marketing
- 11- How to manage Collaboration and partnerships
- 12- How to drive business towards the Sustainable Development Goals

### **Research importance:**

The importance of the research stems from the following points:

- 1- The importance of the role of electronic banks in achieving sustainable development
- 2- The importance of recognizing the standards to be taken into account when working in electronic banks while maintaining the achievement of sustainable development in the light of Vision 2030

### **Research goal**

In order to overcome the research problem, the development of the integrated electronic banking system is based on the needs of customers, employees and clients of the bank so that it is easy to use and compatible with the requirements of the United Nations 2030 Agenda has become a necessary requirement.

### **Research objectives:**

Based on what has been reviewed in the research problem of the phenomena of the problem, the research objectives can be summarized as follows:

- 1- Determining the requirements of customers to achieve the 17 goals of sustainable development.
- 2- Determining the operational requirements for workers as part of the requirements to achieve sustainable development in accordance with Egypt's Vision 2030.
- 3- Explore the characteristics required by the electronic banking information system to achieve sustainable development.
- 4- Know what the SDGs are and its relationship with e-banking
- 5- Understand the role of e-banking in the transition to sustainable development.
- 6- Evaluate the effectiveness of current e-banking strategies in contributing to the SDGs

### **Egypt Vision 2030 and the situation of electronic banks in Egypt**

The Egyptian government seeks to apply modern banking technology and employ it in order to achieve sustainable development goals in accordance with Vision 2030.

### **The impact of electronic banking on the surrounding environment**

The modernization of electronic banks is the latest form of direct social, economic and environmental changes, and according to the increasing number of activities carried out through electronic banks that were not available before, commitment to the United Nations 2030 Agenda is a necessary task that requires the development of banking transactions as well as seizing available opportunities in the external environment to support electronic banking services.

### **Benefits obtained in the electronic banking system in order to achieve sustainable development**

- 1- The possibility of collecting information about customers' opinions about the electronic banking service after obtaining it through the service evaluation on the bank's website after each customer receives any service and before its completion, which can be translated into the form of customers' requirements to develop the current system in a way that achieves the social dimension.
- 2- Reducing the time it takes to provide the service, as each customer depends on himself in obtaining the electronic banking service, which achieves the economic dimension.
- 3- The system focuses on meeting specific and clear requirements of customers, which leads to savings, which achieves the economic dimension.
- 4- Any reaction towards customers must be approved by the managers, which achieves the social dimension.
- 5- Through the system, it is easy to collect information on all data related to customer transactions and compare the extent of their correspondence with the needs of customers, which achieves the economic dimension.

6- Obtaining a remote electronic banking service from home reduces customers' leaving their homes and using transportation, which reduces exposure to environmental pollution, which achieves the environmental dimension.

7- The electronic banking service is provided without the need for paper, which preserves natural resources.

## **2. Research Methodology**

### **The field study:**

#### **Research Design**

This research is a case study of electronic banking transactions and exchange services with an in-depth analysis of the position of the National Bank of Egypt towards achieving sustainable development, as the nature of the problem, which was experienced in the National Bank, can have multiple dimensions. The goals of the United Nations 2030 Agenda are divided into 17 goals.

The study was carried out by evaluating the use of the facilities already in the bank and pre-built by experts in the field of electronic banking, which will be developed based on the results of the current study.

The study examined achieving sustainable development through embanking a questionnaire was distributed to the National Bank of Egypt employees the research questionnaire also took into account the study of the marketing and operational requirements of the current electronic banking system.

#### **Data sources**

Data sources in this study were obtained by answering questions and responses in personal interviews for employees of the main branch, as well as through responses to questionnaire forms that collected by the main branch, in which the research questions were answered.

The study focused on the needs of electronic banking transactions and exchange services to comply with the requirements of sustainable development and determine what already exists and what needs to be taken into account in the stage of re-designing electronic banking services applications.

This study did not use a comparative evaluation to study the experiences of electronic exchange services for banks in other countries, but focused on the local needs inside Egypt.

#### **Research community**

The research community consists of Egyptian commercial banks, consisting of 39 banks with their branches that provide electronic exchange services, as all banks in Egypt provide these services.

#### **The research sample**



The research was done as a case study on the National Bank of Egypt, and the National Bank of Egypt was chosen because it is one of the largest banks in Egypt and has more than 500 branches inside Egypt in addition to its branches outside Egypt, and the number of its customers exceeds 20 million customers, the questionnaire was distributed to 522 members of the bank employees.

### **Objectives of the field study:**

#### **Research hypotheses:**

- 1. First hypothesis:** There is no significance relationship between customers' ability to use electronic banks and achieving sustainable development According to the United Nations 2030 Agenda.
- 2. Second hypothesis:** There is no significance relationship between the use of electronic banks and the ability to protect natural resources and the safety of the surrounding environment.

#### **Questionnaire Design:**

The research required the design of a questionnaire directed to bank employees in order to test the hypotheses statistically as well as to achieve the objectives of the research. Electronic banking remained in addition to the design features of banking services that are already present in the Egyptian electronic transactions and exchange market, then the data was collected, classified and entered on the computer, and in the end the results were counted and tested by appropriate statistical methods.

#### **The statistical analysis method used:**

##### **Data analysis methods**

The descriptive analysis was done to identify and interpret the characteristics of the variables included in the study or to study the characteristics of the electronic banking service, which follows a group of applications to choose its suitability for the goals of sustainable development.

The descriptive analysis was done in this study to describe the research results collected through the questionnaire to identify the characteristics of the current system and the future requirements of the system.

##### **Analysis of the dimensions of sustainable development**

It is important to plan for sustainable development and take into account its objectives during the planning and development of the current systems.

Where it can improve customer satisfaction, reduce operating time and provide self-banking services

Working within a work team and the group's participation in the functional tasks through the branch managers scattered geographically throughout the Republic, who face the problem of standardizing the way of working in all branches.

The process of adhering to the standards leading to sustainable development is an essential thing that must be taken into consideration in the design and development phase of electronic banking services, in order to meet those specific needs in the United Nations 2030 Agenda as well as meet the desires of customers, where the customers' needs and expectations are described and the technological capacity available to the Bank To meet those needs in line with the requirements of sustainable development .

Through the collected data, whether from its primary or secondary sources, it became clear that the process of reaching sustainable development takes the following stages:

#### **The first stage: Defining the characteristics of the electronic banking service**

1- Develop the characteristics of the electronic banking service according to the priorities that need to be developed first, as weights can be made for each of the 17 goals, reflecting its importance to the customer or the user of the electronic banking service.

2- Service characteristics can be determined through market research, complaints and suggestions, as well as identifying general policy directions in the country.

3- The considerations to be taken into account when designing electronic banking services are determined according to the most important and least important, by giving more weight to the factors that customers consider relatively more important.

#### **The second stage: evaluation of the current electronic banking service**

At this stage, the current banking service is evaluated and compared with the service provided by competitors in other banks in the same country or in other countries, and a set of characteristics that must be available in the service after its development and according to standards that have been established to confirm this are deduced.

#### **The third stage: Defining the project objectives for the development of the electronic banking service**

Based on the evaluation that was done in the previous stage, a clear vision can be given towards the problems facing the electronic banking service, when compared to competitors, whether within the country or in other countries. And what are the services that do not need to be modified?

#### **Fourth stage: Implementation of the new system**

After reaching the new system and interacting with the public from customers and identifying the suitability of the service after the modification to customers, the developed service is applied.

Determining the technical characteristics required for electronic banking services

1- Make reports on the degree of customer satisfaction with the service.

2- Determining the economic savings achieved as a result of remote work.

3- Means of maintaining ecological balance.

- 4- Means of preserving natural resources.
- 5- Achieving the social dimension and social responsibility.
- 6- Saving in the exploitation of natural resources by working without paper.
- 7- Ease of interaction with the customer audience.
- 8- Securing customer accounts.
- 9- Maintain confidentiality of transactions.
- 10- The ability to store transaction data in a documentary form
- 11- Try to take advantage of the currently available resources.
- 12- Saving the time it takes to implement internal electronic applications through the intranet.

#### **Features to be excluded from electronic banking services**

- 1- Requests received by traditional methods and replaced by requests through electronic means.
- 2- Obtaining printed reports periodically and replacing them with electronic ones.
- 3- The ability to access the account from a laptop or mobile phone using only the password and without verifying the identity of the person entering the service through the features of the biometrics like a fingerprint, or a voice print.

#### **SDGs goals include:**

**Goal 1: "No Poverty."** End poverty in all its forms by targeting the most vulnerable and increasing access to basic recourses and services

**Goal 2: "Zero Hunger."** End hunger and malnutrition by achieving food security and improved nutrition through promoting sustainable agriculture

**Goal 3: "Good Health and Well-Being."** Ensure healthy lives and promote well-being for all at all ages by providing access to safe and affordable medicines and vaccines

**Goal 4: "Quality Education."** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

**Goal 5: "Gender Equality."** Achieve gender equality and empower all women and girls by affording equal rights to economic resources such as land and property and access to sexual and reproductive health

**Goal 6: "Clean water and sanitation."** Ensure access to safe, affordable water and sanitation for all

**Goal 7: "Affordable and clean energy."** Ensure access to affordable, reliable, sustainable and modern energy for all through investing in clean energy sources such as solar, wind and thermal

**Goal 8: "Decent Work and Economic Growth."** Promote sustained and inclusive economic growth, full productive employment and decent work for all

**Goal 9: “Industry, Innovation, and Infrastructure.”** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

**Goal 10: “Reduced Inequalities.”** Reduce inequality within and among countries

**Goal 11: “Sustainable Cities and Communities.”** Make cities and human settlements inclusive, safe, resilient and sustainable

**Goal 12: “Responsible Consumption and Production.”** Ensure sustainable consumption and production patterns

**Goal 13: “Climate Action.”** Take urgent action to combat climate change and its impacts

**Goal 14: “Life below Water.”** Conserve and sustainably use the oceans, seas and marine resources for sustainable development

**Goal 15: “Life on Land.”** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

**Goal 16: “Peace, Justice and Strong Institutions.”** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build Effective, accountable and inclusive institutions at all levels

**Goal 17: “Partnership for the Goals.”** Strengthen the means of implementation and revitalize the Global partnership for sustainable development

### **Statistical analysis and hypothesis testing**

The regression analysis method was used to study the relationship between the dependent variable and the independent variable

Where the aim of the research was to analyze the relationship between the ability of customers to use electronic banks and the extent of compatibility with the requirements of sustainable development, and the correlation and regression analysis method was used to test that relationship and ensure that the previously set goals were adhered to.

**The test establishes whether there is a relationship between the two variables or not**

### **Hypothesis**

#### **First Hypothesis maintaining sustainable development**

#### **Null and Alternative Hypotheses**

**Null Hypothesis:** there is no significant relationship between the use of e banking systems and maintaining sustainable development

**Alternative Hypothesis:** there is a significant relationship between the use of e banking systems and maintaining sustainable development

#### **Hypothesis test:**

**First hypothesis testing**

The results of the first hypothesis	Pearson correlation coefficient	Strength of the relationship	level of significance
the use of e banking systems and maintaining sustainable development	0.943	Powerful	0.000

On the basis of the data in the table above (1), we have found that the level of significance was (0.000) less than 0.05

It is a statistically significant relationship with the Pearson correlation coefficient was as strong = 0.943,

Null Hypothesis was rejected and the alternative hypothesis was accepted

The obtained correlation coefficient between these two variables was  $r = 0.943$

Because the correlation is positive, we conclude that the relationship is direct relationship. Meaning that scores on two different variables increase and decrease together

**The second hypothesis testing**

There is no significant relationship between the use of e banking systems and Availability of the requirements to achieve the sustainable development objectives in accordance with Egypt's Vision 2030

**Null and Alternative Hypotheses**

**Null Hypothesis:** There is no significant relationship between the use of e banking systems and Availability of the requirements to achieve the sustainable development objectives in accordance with Egypt's Vision 2030

**Alternative Hypothesis:** There is a significant relationship between the use of e banking systems and Availability of the requirements to achieve the sustainable development objectives in accordance with Egypt's Vision 2030

**Second hypothesis testing**

The results of the first hypothesis	Pearson correlation coefficient	Strength of the relationship	level of significance
the use of e banking systems and Availability of the requirements to achieve the sustainable development objectives in accordance with Egypt's Vision 2030	0.895	Powerful	0.000

On the basis of the data in the table above (2), we have found that the level of significance was (0.000) less than 0.05

It is a statistically significant relationship with the Pearson correlation coefficient was as strong = 0.895,

Null Hypothesis was rejected and the alternative hypothesis was accepted

The obtained correlation coefficient between these two variables was  $r = 0.895$

Because the correlation is positive, we conclude that the relationship is direct relationship. Meaning that scores on two different variables increase and decrease together

### **3. Discussion and conclusion**

The study presents an example report on the integration between knowledge in the field of electronic banking and achieving sustainable development according to the 2030 Agenda

The process of modernizing electronic banks has brought about a change in the lifestyle in society, and one of the most important of these manifestations is the purchase without cash through credit cards.

Also, there are many activities that take place through electronic banks without leaving the house, which allows saving a lot of time to spend the basic requirements for them so that they can survive and preserve natural resources for future generations, as the branch managers in the bank under study need to obtain an effective, accurate and fast system in response to the surrounding environmental changes, this system can be generalized by branch managers in banks.

This system can be used to maximize the effectiveness of the activities that take place in electronic banks.

The information resulting from financial transactions can be used to achieve economic savings by providing self-services that reduce employment, and thus through which it is possible to achieve economic savings and provide returns, as it is possible to measure all levels of cost for all banking transaction activities, as well as all levels of returns for each activity and measure the impact of Each activity on the unit that carried out it and identifying its compatibility with the social responsibility of those dealing with the bank, whether from employees or from outside the bank, whether customers or others .

The activities based on electronic banking have achieved many savings, becoming better and more efficient, which resulted in great savings in order to achieve the economic dimension. The electronic system has become widely available to customers through the decrease in the prices of computers, mobile phones and their software, which provided opportunities for customers to resort to electronic banks. But there are still some people who prefer to deal through traditional banks because they do not trust electronic banking services.

Despite the continuous development in the software used to secure the electronic banking system, there are still problems facing some customers who do not have sufficient knowledge of how to use electronic banking activities.

The information obtained from analyzing the answers to the survey forms was important to identify the surrounding environmental conditions or within the bank with its various branches, and this information could also be necessary to complete the data necessary to study how to develop electronic banking services.

A change in the bank's technological system to comply with the requirements of sustainable development may be a difficult requirement to achieve, as it needs a change in the current system, which contains the bank's customer data, numbering more than twenty million customers, as well as the need to retrain all employees and develop educational videos for customers on the bank's website to introduce them to how to use electronic banking services.

The way the reports and documents required for obtaining electronic banking services may need to be re-designed in line with the requirements of achieving sustainable development.

#### **4. Results**

1- There are many banks that seek to contribute to achieving the requirements of sustainable development, but they are faced with a lack of interest in achieving sustainable development on the part of many of their employees.

2- Electronic banking services, which allow achieving the requirements of sustainable development, are developed in banks, but as a result of being affected by the repercussions of the Corona pandemic, work on them is taking place very slowly.

3- During the research, the relationship between the development of electronic banking design and the readiness to achieve the requirements of sustainable development in accordance with the vision of Egypt 2030 was explored.

#### **Recommendations:**

Based on the results of the current study, the following can be recommended:

1- Providing workers in the field of electronic banking with a clear idea of the sustainable development goals in accordance with Egypt's Vision 2030.

2- Emphasizing that adherence to the standards accompanying the achievement of these goals is activated.

3- Integration of activities carried out in order to achieve the requirements of sustainable development and the effective development of electronic banking services, which can lead to providing sustainable opportunities for development

4- Banks can support national projects that aim to achieve the requirements of sustainable development and make them among the priorities of their investments.

5- Encouraging the continuation of support through electronic banks for the practices that are carried out continuously to achieve the requirements of sustainable development

#### **Research Appendix: Research Instrument**

##### **A survey form for employees of commercial banks**

Note: the data of this form is confidential and is only used for scientific research purposes

**Gender:** male [ ] female [ ]

**Age:** 20-30 [ ] [30-40] 40-50 [ ] 50 more [ ]

**Field of work:** Researcher [ ] administrative [ ] other [ ]

Please draw a circle on the chosen number, noting that each number corresponds to the corresponding item in the following table

strongly agree	agree	I do not know	disagree	strongly disagree
5	4	3	2	1

The appropriate number selection from (1) "strongly disagree" to (5) "strongly agree."

These Questions Relate to the use of e banking systems	Strongly Disagree			Strongly Agree	
	1	2	3	4	5
1- There is an integration between the components of the work systems when completing any banking operation	1	2	3	4	5
2- There are no obstacles that can hinder the completion of the tasks of work systems in electronic banks	1	2	3	4	5
3- Banking activities are carried out with high accuracy.	1	2	3	4	5
4- The tasks of work systems in electronic banks are accomplished with high performance standards.	1	2	3	4	5
5- There is a clear vision of the work team towards the way electronic banks work.	1	2	3	4	5
6- Each member of the business team has an influence in all or most of the banking activities.	1	2	3	4	5
7- The information on each banking activity is strictly confidential on the part of the work team.	1	2	3	4	5
8- Employees of electronic banks have the ability to constantly change work systems according to changes in the external environment	1	2	3	4	5

These Questions Relate to Availability of the necessary requirements to enable electronic banks to achieve sustainable development goals	Strongly Disagree			Strongly Agree	
	1	2	3	4	5
1- Electronic banking applications help provide the necessary requirements to enable electronic banks to achieve sustainable development goals.	1	2	3	4	5
2- Electronic banking applications are necessary to provide sustainable opportunities for development	1	2	3	4	5
3- Updates in electronic banking applications are periodically available to ensure the provision of the necessary requirements to enable electronic banks to achieve sustainable development goals.	1	2	3	4	5



4- Referring to experts in the field of sustainable development depends mainly on electronic banking applications.	1	2	3	4	5
5- Determining the appropriate decision in the field of sustainable development mainly depends on the use of electronic banking applications.	1	2	3	4	5
6- It was possible to provide the necessary requirements to enable electronic banks to achieve sustainable development goals that were not available before.	1	2	3	4	5
7- There is a possibility to achieve the requirements of sustainable development in the simplest and fastest possible way through the use of electronic banking applications	1	2	3	4	5
8- The difficulties in obtaining the necessary requirements to enable banks to achieve sustainable development goals can be overcome through electronic banking applications.	1	2	3	4	5

<b>These Questions Relate to Enabling electronic banks to achieve sustainable development goals</b>	<b>Strongly Disagree</b>			<b>Strongly Agree</b>	
.Goal 1: “No Poverty “The electronic bank provides many new job opportunities that contribute to poverty alleviation through investments in projects financed by the bank	1	2	3	4	5
Goal 2: “Zero Hunger ”.The electronic bank links sustainable food manufacturing systems as a condition for approving the financing of projects in the food industry provided by the bank .	1	2	3	4	5
Goal 3: “Good Health and Well-Being ”.The electronic bank emphasizes health systems and encourages good health for all ages by improving health care levels for bank employees and their families	1	2	3	4	5
Goal 4: “Quality Education ”.The electronic bank provides quality training and continuous professional education for all its employees to reach a competitive advantage among other banks and to emphasize increasing the share of each employee or employee of the bank with good education .	1	2	3	4	5
Goal 5: “Gender Equality ”.The electronic bank is based on achieving gender justice in all its dealings with customers .	1	2	3	4	5
Goal 6: “Clean water and sanitation ”.The electronic bank provides the necessary financing for national projects in the field of providing clean water and sewage disposal	1	2	3	4	5
Goal 7: “Affordable and clean energy ”.The electronic bank uses clean and cheap energy, works through green computing, and seeks to encourage investments in this field and provide the necessary financing for it .	1	2	3	4	5
Goal 8: “Decent Work and Economic Growth The electronic bank .By providing respectable work and contributing to economic growth by reducing budgets directed to retired projects that provide current returns without an increase in future returns, and directing them to projects with reasonable economic growth.	1	2	3	4	5

Goal 9: “Industry, Innovation, and Infrastructure ”.The electronic bank encourages innovation in industry and infrastructure by providing the necessary financing to finance projects in this field	1	2	3	4	5
Goal 10: “Reduced Inequalities ”.The electronic bank, through the newly developed financial technologies such as mobile money, digital finance and electronic investment applications, does not deal personally with customers, which prevents the occurrence of injustice .	1	2	3	4	5
Goal 11: “Sustainable Cities and Communities ”.The electronic bank provides technological knowledge to achieve sustainable cities and communities through electronic banking transactions .	1	2	3	4	5
Goal 12: “Responsible Consumption and Production ”.The electronic bank improves access to basic services and creates green jobs under new working conditions in order to reach sustainable consumption and achieve good production models .	1	2	3	4	5
Goal 13: “Climate Action ”.The Electronic Bank provides support for infrastructure projects to develop and improve the quality of life for each individual and thus maintain levels of improvement in their surrounding climate	1	2	3	4	5
Goal 14: “Life below Water ”.The electronic bank encourages work to preserve the use of water in seas, rivers and various water sources to achieve sustainable development	1	2	3	4	5
Goal 15: “Life on Land ”.The electronic bank provides additional electronic services and expands the range of services provided through it in new areas and remote, uninhabited places to contribute to life on Earth .	1	2	3	4	5
Goal 16: “Peace, Justice and Strong Institutions ”.The electronic bank is fair in setting criteria for accepting financing for national projects and responding to any change that enables it to improve economic indicators .	1	2	3	4	5
Goal 17: “Partnership for the Goals ”.The electronic bank participates in achieving global participation to achieve the goals of sustainable development .	1	2	3	4	5

What are the considerations to be taken into account when enabling electronic banks to achieve sustainable development goals?

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2) What are the obstacles to enabling electronic banks to achieve the goals of sustainable development?

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3) What are the proposals to overcome the obstacles to enabling electronic banks to achieve the goals of sustainable development?

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4) What are the factors that help the success of enabling electronic banks to achieve the goals of sustainable development?

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5) What are the suggestions that should be made to overcome the problems encountered in enabling electronic banks to achieve the goals of sustainable development?

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