

# The Relationship Between Customer Behavior Modeling and Banking Sustainability

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## Abstract

This research aims to reveal the critical role of banking marketing strategies and their role in modeling customer behavior to achieve banking sustainability in Rafidain Bank (Nile branch, Ur branch, Al-Rifai branch, Al-Fajr branch, Al-Qala'a branch, Al-Jabayish branch, Al-Nasr branch) and Al-Rasheed Bank represented by (Al-Gharraf branch, Eridu branch, Shatra branch) in Dhi Qar governorate. This leads to gaining the largest possible segment of customers when providing banking services with high efficiency and speed in submission. The importance of the research focuses on how to model customer behavior in the short and long term to find a customer with high loyalty through which the banks of the study sample can achieve banking sustainability. Also, this study contributed to addressing a real problem that directly affects the banking sector in the relationship between modeling customer behavior and how to achieve banking sustainability. In the current research, a questionnaire was used to collect data. (166) questionnaires were distributed to bank managers and heads of departments and administrative units in Rafidain Bank (Furgh Al-Nil, Ur branch, Al-Rifai branch, Al-Fajr branch, Al-Qala'a branch, Al-Jabayish branch, Al-Nasr branch) and Al-Rasheed Bank (Al-Gharraf branch, Arido branch, Shatra branch ) in Dhi Qar Governorate. (163) questionnaires were collected with a retrieval rate of (96%) and (3) invalid questionnaires were excluded. The number of valid forms was (160) questionnaires as. The most important results that were reached if the banking marketing strategies are of great importance in the study sample banks through the use of the growth strategy and the competitive strategy that contribute to achieving banking sustainability to determine their relationship with customers and in response to their needs in the long run. The marketing strategies followed by the study sample banks must be able to harmonize and simulate the customer behaviors that can be presented and also to achieve the sustainability that the banks aim at through modeling the behavior of their customers. The results show a positive correlation and effect with significant significance for banking marketing strategies in banking sustainability through modeling customer behavior.

**Keywords:** Banking Marketing Strategies, Banking Sustainability, Customer Behavior Modeling, Al-Rafidain Bank, Al-Rasheed Bank.

## 1. Introduction

Banks today face significant challenges due to choosing the organization's strategy to ensure growth and prosperity in a highly competitive environment. Banking marketing strategies are one of the essential contemporary concepts that, over the past few years, has been able to jump all efforts and marketing work and various activities to recent trends in line with the current era and its

variables, which contributed to the modeling of customer behavior to achieve banking sustainability, using multiple tools and advanced means and modern technology in the implementation of marketing processes and activities, especially concerning marketing communications, information technology, product and service delivery and completion of marketing processes through means of marketing processes and activities. First and

foremost, the marketing of banking services to various parties through these means. The researcher relied on the idea of the study on knowing the relationship between modeling customer behavior and achieving banking sustainability as one of the secretions of technological developments in various marketing activities within the information and communication revolution by adopting banking marketing in the management and implementation of all elements of modeling customer behavior to achieve banking sustainability. The main question can be asked: Do study sample banks in Dhi Qar model customer behavior to achieve banking sustainability. The problem of the study can be reflected by asking the following questions: What is the reality of the diagnosis of customer behavior modeling in the study sample? How well is bank sustainability available in banks in Dhi Qar? Does customer behavior modeling affect banking sustainability? The importance of the study can be seen from its introduction to the topic of modeling customer behavior as an essential topic within the marketing philosophy, especially in the field of banking, that modeling will achieve sustainability and cognitive growth of the bank's sample study and these modeling can contribute to giving competitive importance to these banks and achieve them an essential competitive position. The significance of the current study can be clarified through the following points:

1. Focus on customer modeling and participation in purchasing decisions to meet their wishes.
2. Developing the behavioral readiness of the customer, which is the main component to satisfy his wishes when accessing banking services.
3. Knowledge of the seismographic and geographical dimensions related to the customer and its role in stimulating banking products to motivate banks to maintain banking.
4. Identifying and identifying the general and essential frameworks for banking sustainability, namely economic sustainability, environmental sustainability, and social sustainability. Based on the problem of research and the priorities reviewed, the current study seeks to achieve the main objective of diagnosing the nature of the relationship between modeling customer

behavior and banking sustainability and analysis. Therefore several sub-objectives can be derived:

- Present the most important intellectual proposals for the two topics of customer behavior modeling and banking sustainability.
- Diagnosis of the reality of the practice of modeling customer behavior, banking sustainability in researched banks.
- Achieving banking objectives of economic sustainability and how banks can sample the study to achieve excellence and leadership in this field.
- Working to achieve environmental sustainability is an essential and crucial element at the moment, and the attention of banks to study this dimension that achieves leadership and growth.
- Assuring the social well-being of the communities in which banks are located by transforming them into socially significant institutions and meeting the expectations of the people who live and work there.

## 2. Research methodology

The methodology is the set of essential pillars and foundations that illustrate the researcher's behavior to achieve the effects to which it is aimed, a collection of procedural means and steps that the researcher is already practicing, and developing them from one stage to another during her research, thus relying on the current study on the method (analytical descriptive) Analytical Descriptive Approach To achieve its methodological, intellectual and field objectives, which is a broad and flexible umbrella for many curricula and sub-methods such as social surveys, case studies, evolutionary and field studies, etc., it is based on determining the characteristics of the phenomenon, describing its nature qualitatively and quantitatively, identifying the type of relationship between its variables, causes, trends, etc. revolving around the diagnosis of a particular problem or phenomenon and recognizing its reality in reality. Research is an appropriate approach to the study of social and behavioral phenomena. This approach is based on a comprehensive

analysis of the problem under study, the interpretation of the impact relationships of their variables, and the identification of their effects to reach their results because the process of description and analysis of the phenomena studied is almost common and exists in most types of scientific research the descriptive approach depends on the interpretation of the status quo and the identification of the relationships that exist between the variables studied The descriptive approach goes beyond simply collecting descriptive data on the phenomenon to the analysis, interpretation, classification, and conclusions of these data. The most prominent tools of this approach are determined by the following:

- A. What was written about the phenomenon researched, the scientific references, and the various periodicals that dealt with it?
- B. Theoretical recommendations in foreign sources and what websites publish.
- C. In the resolution field, the study sample used to collect data from the selection was distributed to bank workers.

The researcher, therefore, adopted this approach in her study and relied on a sample of managers and heads of departments and units in banks sample study to access accurate

information by seeing the actual reality of banks. Introducing a society and the sample of the research and showing its characteristics is a fundamental necessity on which the field study focuses, especially if we know that the nature of the compatibility between the parts of each of them allows the possibility of generalizing the results of the research in the sample to the rest of the vocabulary of the society from which it was withdrawn, and this calls for the precise identification of the community and model of the current study, and in view of the developments and the increasing importance that began to be occupied by banks in Dhi Qar province if the size of the study is represented by a group of branches of the Banks of Rafidain and Rashid: Al-Rafidain (Nile Branch, Or Branch, Al-Rifai Branch, Al-Fajr Branch, Al-Qala branch, Al-Jabaish Branch, Al-Nasr Branch), al-Rasheed Bank, which is represented by (Al-Gharaf Branch, Aerdo Branch, Al-Sahra branch) has been selected as a practical area for study, while the sample of the study may represent (bank managers, department heads and administrative units), consisting of (160) individuals, and shows table No. (1) banks, number of managers, heads of departments and administrative units.

Table 1 Banks, number of managers, heads of departments, and administrative units

| to | Bank            | Bank branches      | Community (Director and Head of The Responsible Unit) |
|----|-----------------|--------------------|---|
| 1  | Rafidain Bank   | Empty the Nile     | 25  |
|    |                 | Or Branch          | 20  |
|    |                 | Al, Rifai Branch   | 18  |
|    |                 | Dawn branch        | 15  |
|    |                 | Citadel branch     | 15  |
|    |                 | Al, Jabaish Branch | 13  |
|    |                 | Al, Nasr Branch    | 11  |
| 2  | Al, Rashid Bank | Al, Gharaf Branch  | 13  |
|    |                 | Erido branch       | 20  |
|    |                 | Al, Sahsa branch   | 10  |

Source: Prepared by the researcher based on bank information

### The limitations of the study

#### A. Conceptual boundaries

The conceptual boundaries of this study stand when analyzing the relationship and impact between modeling customer behavior in its

three dimensions (seismographic dimensions, behavioral dimensions, geographical dimensions) and banking sustainability in its dimensions (economic dimension, environmental dimension, social dimension).

Limiting the boundaries of the study to defined scopes is essential for any academic research within a particular scientific discipline, thus making it necessary to diagnose the specific limits of humanity, and the reasonable possibility of the current study, as follows:

### B. Spatial boundaries

Rafidain Bank and Branch (Nile Branch, Or Branch, Rifai Branch, Al-Fajr Branch, Citadel Branch, Al-Jabaish Branch, Al-Nasr Branch), Al-Rasheed Bank and Fara (Al-Gharaf Branch, Erido Branch, Al-Sahra Branch) were selected as the spatial boundaries of the study. This is because their geographical locations are spread throughout Dhi Qar province, among its borders. In addition, they have been selected for reasons related to the nature of the study variables, and the most important reasons are:

- 1) Rafidain and Rashid banks are government banks that have provided services and all their branches.
- 2) The fact that banks offer commercial advantages to public and private sector activity.
- 3) Its environment is eligible for study variables.
- 4) Excellent and leading in the provision of electronic services.

### C. Human borders

According to the variables of the study, the categories that influence the administrative levels (a higher, middle) (general managers (or branches), department managers (department heads), heads of people, and unit officers have been adopted.

To achieve the objectives of the study and cover its theoretical and field topics alike, the researcher relied on a set of scientific tools and means to achieve this purpose, which are the basis for highlighting the results of the study, as follows:

### The Questionnaire tool

The questionnaire represented the primary source or main tool that the researcher

adopted in collecting data and information on the variables of the study, and was careful in the formulation of the questionnaire its ability to diagnose and measure the variables of the leading and sub-study and the researcher relied in its preparation and identification on a set of global standards available and appropriate in the literature on the variables of the study, and the accumulation of knowledge in it, as well as benefiting from the opinions of experts and specialists in this field, and was directed The questionnaire form in its final form, Annex 2, as follows:

### 2. The decision of the elasticity

The questionnaire contains four main parts aimed at collecting the necessary information to test the theories of the study, as follows:

**Part 1:** Personal information was allocated to the study sample members.

**Part 2:** This part was devoted to the banking sustainability variable and included several paragraphs totaling (15) paragraphs, which were distributed into (3) dimensions: economic dimension (5) paragraphs, social dimension (5) paragraphs, environmental dimension (5) paragraphs.

**Part 3:** Its paragraphs were devoted to the variable modeling of the customer's behavior, and the entire paragraphs (16) paragraphs, distributed to (3) subdivisions as follows: seismographic dimensions (5) paragraphs, behavioral dimensions (5) paragraphs, geographical dimensions (5) paragraphs.

### 3. The measuring tool

The five-option Likert scale, one of the most common methods used in administrative and social sciences, was used as an easy-to-calculate and measured measure, clear and accurate, and scale values were set at (5) for the largest and (1) for the lowest scale.

### 4. Variables and metrics

Table 2 presents the variables and dimensions of the study and the measures used in the development of the study scale in a form that is appropriate for the banks of the study sample (Rafidain and Rashid) in the Iraqi environment, my agencies:

**Table 2 Study variables, dimensions, scale tool, coding, and sources approved in their identification**

| to       | Dimensions of the measuring tool | Shortcut | Number of paragraphs | Sources               |
|----------|----------------------------------|----------|----------------------|-----------------------|
| secondly | Bank sustainability              | BS       | 15                   | (2017, at. (Tooranloo |
| 1        | Economic dimension               | ECD      | 5                    |                       |
| 4        | Environmental dimension          | END      | 5                    |                       |
| 5        | Social dimension                 | SOD      | 5                    |                       |
| thirdly  | Customer behavior modeling       | CBM      | 16                   |                       |
| 1        | Seikographic dimensions          | PSD      | 5                    | (2012, Ma)            |
| 2        | Behavioral dimensions            | BED      | 5                    |                       |
| 3        | Geographical dimension           | GED      | 6                    |                       |

**Source:** Prepared by the researcher according to the sources mentioned

The procedural definitions of variables adopted in the study and their conceptual limits under the current study included a set of key and sub-variables that are the main focus in presenting their ideas and addressing their methodology so

that providing a procedural definition of these variables and determining their approved measures is a critical element of this framework, which can be clarified as in table (3) the following:

**Table 3. procedural definitions**

| # | Study variables                   | Procedural definitions   |
|---|-----------------------------------|--|
| 2 | <b>Customer behavior modeling</b> | It is a tool to help banking leaders interested in target marketing understand and meet the best characteristics of their customer base.   |
|   | <b>1 Seikographic dimensions</b>  | It is a set of psychological variables and unique features owned by banking leaders that may negatively or positively affect the customer base in how they attract services provided by banks.   |
|   | <b>2 Behavioral dimensions</b>    | It is the ability to read customers' ideas and loyalty to the bank's brand and what services meet their ambition to attract them and earn their satisfaction.  |
|   | <b>3 Geographical dimension</b>   | It is a set of variables that provide information about the properties of a place rather than just the location of that place.   |
| 3 | <b>Bank sustainability</b>        | The bank's ability to survive and grow in the long term, achieve economic, environmental, and social excellence and sustainability to serve the current and future customers, and preserve the organization's resources, assets, and funds, which are considered a resource of society in general and in the long run. |
|   | <b>1 Economic dimension</b>       | The bank's ability to achieve economic profits that will maximize its long-term profits to serve the external customer and apply marketing strategies.   |
|   | <b>2 Environmental dimension</b>  | The bank's ability to overcome environmental risks in all its questionnaires and adapt banking marketing strategies to capture marketing opportunities and gain customer friendliness.   |
|   | <b>3 Social dimension</b>         | It is a set of factors that bring social benefits to society through marketing strategies that socially serve, attract, and influence customers segments.  |

**Source:** Prepared by Researcher

### 3. The hypotheses Development

The hypotheses represent expected claims consistent in their directions with what person in the problem of study and the intellectual and field questions raised, so by relying on the

thinking and logical inference founding on the intellectual administrative and organizational inheritance, and the researcher's particular perception of the reality of the banks sample study (Rafidain and Rashid), went To

develop a set of hypotheses directed at testing the hypothetical plan of the survey, reflecting the trends of relationship and influence between its variables, and in order to respond to the objectives of the study, and provide an accurate answer to its questions, and provide a hypothetical cover that supports the logic of building hypotheses formulated according to the problem, objectives and plan of the study and in the form of proof and in order to complete the requirements of research and in order to answer its questions a set of hypotheses that crystallize were developed as follows:

### **First: correlation hypotheses**

**1- The first hypothesis (H1): There is a significant positive correlation between modeling customer behavior and banking sustainability.**

H3-1, there is a significant positive correlation between the seismographic dimensions of banking sustainability.

H3.2 There is a significant positive correlation between behavioral dimensions and bank sustainability.

H3-3, there is a significant positive correlation between geographical dimension and banking sustainability.

### **Second: The hypotheses of influence**

1. The first main hypothesis (H1): **There is a positive relationship significant to modeling customer behavior in banking sustainability** and branch out the following hypotheses:

H3-1 has a significant positive relationship with the cograph dimensions in banking sustainability.

H3.2 There is a significant positive relationship between behavioral dimensions in banking sustainability.

H3-3 There is a positive impact relationship that has a moral significance for the geographical dimension in banking sustainability.

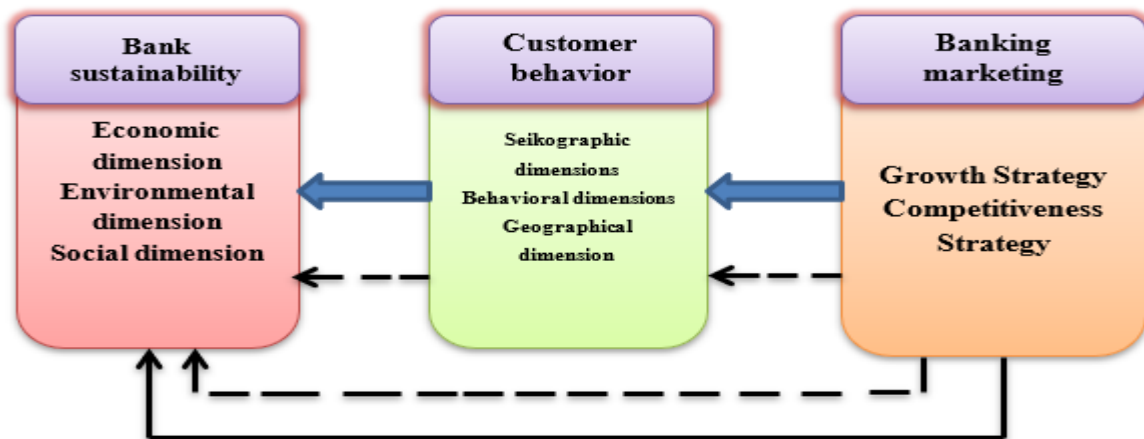
### **X: Hypothetical study chart**

The hypothetical plan of the study is designed according to a survey of the intellectual outputs of sober scientific literature related to the main and sub-study variables, where the chart provides an expressive picture of the idea of the study, explains the nature of relationships and trends of influence between their variables, and after conducting a broad review of modern studies in this field the

hypothetical plan of the study was developed to show the nature of the correlational and impact relationships between the main and sub dimensional dimensions and variables in support of the problem of study and achieving its objectives and illustrating its hypotheses and philosophical origins. To reflect the dimensions and variables of the phenomenon researched represented by the study's question and its basic premises, which provided for the analysis, diagnosis and role of banking marketing strategies in achieving banking sustainability by modelling customer behavior in the banks of the study sample, the study chart was interpreted as a harmonious combination of the proposed tracks of the current study to solve a problem, hence, in accordance with the problem, objectives and determinants of our recent study and through the comprehensive survey of literature related to the interests of the study was developed the hypothetical model of the study consisting of Three axes, and form (1) where the first axis of the hypothesis scheme, the components of banking sustainability represented by its removal (economic dimension, social dimension, environmental dimension), while the second axis of the plan is the dimensions and variables of modeling the behavior of the customer and consisted of (secograph dimensions, behavioral dimensions, Geographical dimensions) Figure 1 depicts the default chart of the study, which is a dynamic interaction between three intellectual and research components that can be distinguished by the following characteristics:

- a. It can be applied to most Iraqi governments and civil banks.
- b. The hypothetical scheme aims to express the impact relationships between the main components of the study by analyzing, studying, and modeling customer behavior for banking sustainability.

In the light of the above and as in figure 1, the hypothesis chart of the study, we believe that the direction of the movement of the scheme is fundamental to researchers as it is the basic determinant of the nature and direction of the main and sub-study hypotheses and that the shares linking the main and sub-study variables illustrate the nature of the impact relationships among them.



**Figure 1. The Research Model**

**Source:** Researcher's preparation.

**4. The theoretical framework of the study**

**4.1. Customer behavior modeling concept**

The concept of modeling customer behavior is modern and contemporary in marketing thought and has taken up a lot of attention at the level of management and marketing scientists alike, and the process of predicting the needs and desires of the customer has become a priority of all organizations seeking to gain their satisfaction and modeling was to have each customer employee, as the demand plays a vital role in the management of each business, so it helps

accurate predictions of the bank's need To reduce the risks involved in business activities and make critical business decisions, as well as to provide demand forecasting with insight into the bank's capital investment and planning for long-term activities as well as helping to assess our capabilities and performance for future competition, prepare for policies appropriate to future challenges (Bidoni, & Montreuil, 2021: 1118), The products and services are almost identical to demand in the global market, and suppliers are abundant. And because of the size and complexity of the markets, mass marketing is expensive, as described in the figure (), and investment returns are often questioned.



**Figure 2. communication with customers**

**Source:** Andersen, H., Andreasen, M. D., & Jacobsen, P. (1999). *The CRM Handbook*-from group to multi-individual. Norhaven: PricewaterhouseCoopers.

1:1 Means for each customer employee who

performs his duties until the desired service is completed

In the middle of the last century, customer behavior in economics was studied as a composition of many different scientific models.

**Table 4. Definitions of customer behavior modeling**

| Definition   | Author   | The year | to |
|--|--|----------|----|
| A process linked to situations in which individuals or groups choose to buy, use or sell products, services, ideas or experiences to meet needs and desires."  | (Gontareva et al                               | 2018     | 3  |
| Dynamic interaction of influence, perception, behavior, and the environment in which people implement aspects of exchange in their lives" focuses on the main stages of consumption, information retrieval, decision-making, and use | East, R., Singh, J., Wright, M., & Vanhuele, M | 2021     | 4  |

**Customer features that can be used for his profile are: (Wilson, 2013:21)**

- ✓ **Geographic** Geography: Has it been assembled regionally, nationally, or globally?
- ✓ **Cultural and ethnic culture and ethnic** race: What languages do they speak? Does race affect their tastes or purchasing behaviors?
- ✓ **Economic conditions, income, and purchasing** power: What is customers' average household income or purchasing power? Do they have any difficulty paying? How often does the customer spend on each service? Acquired customers can use repeat shopping, repeat complaints, degree of satisfaction, and preferences to build a purchase profile.
- ✓ **Age** Age: What is the dominant age group of target customers? How many children and what is his age in the family?
- ✓ **Values, attitudes, and beliefs** **Values, attitudes, beliefs**: What is customers' attitude towards the type of product or service you provide?
- ✓ **Life cycle**: How long does a customer spend buying products regularly?
- ✓ **Knowledge and awareness**: How much knowledge do customers have about a product, service, or industry? What education is required? How many brand-building announcements do you need to educate a group of customers about the offer?
- ✓ **Lifestyle**: What are the beneficial lifestyle characteristics of customers?
- ✓ **Media used**: How do target customers learn? What did they read? What magazines do they subscribe to?
- ✓ **Recruitment method**: How was the customer assigned?

**A. The importance of modeling customer behavior**

Modeling customer behavior is one of the topics that marketers are interested in because the process of external contradiction has

produced essential rules, including attracting and retaining the customer and building a behavioral model capable of predicting the customer's actions. There are critical points to determine the importance of modeling customer behavior:

- ✓ The emergence of CRM systems that collect and store customer information and transactions and use results to improve marketing, sales, and service evaluation.
- ✓ The customer behavior modeling index has become necessary for scientific studies related to marketing.
- ✓ The relatively newer stream of research into dynamic pricing and revenue management is paying increasing attention to modeling the behavior of individual customers.
- ✓ A variety of research methodologies are used to study customer behavior, multiplied by mathematical analyses, experimental examination of field data, and behavioral studies with practical experiments that provide evidence of academic and applied enrichment of modeling.
- ✓ Building a model for customer behavior is very important to create a state of marketing insight for marketing organizations to predict customers' needs.
- ✓ Continuous updating of customer data due to successive environmental changes and incredibly intense competition. (Shen et al. 2017:714)



**4.2. Bank sustainability**

**First: The concept of sustainability**

Sustainability is an important topic at all levels. A goal sought by all organizations has become a public issue. It emphasizes the availability of clean sustainability and environmental requirements to improve social living, demographic, and lifestyle transformations that have increased societal demand for land and other limited resources.

As these demands grow, they put pressure on all organizations' infrastructure, resources, and long-term sustainability (Deal et al.), 2011: 42). The word "sustainability" is widely used these days. However, different interpretations can make it a little confusing as to what it means, as the origin of the Roman word "sustinere," which means (to hold up) the ability to maintain, survive and continue (Kramer, 2009: 6-7).

Table 5. Definitions of bank sustainability.

| Author   | Year and Source                | to |
|--|--------------------------------|----|
| the ability to maintain or sustain, what is applied to a kind of human community development as well as it also refers to endurance and adaptation   | (Vencato et al., 2014, 432)    | 1  |
| The most common definition of sustainable development is provided by the World Commission on Environment and Development, according to the Brundtland Report: Development that meets the needs of the current generation without compromising the ability of future generations to meet their own needs. | (Presley et al., 2007, : 4596) | 3  |

**Source:** Prepared by the researcher based on the literature of the study

**Second: The concept of banking sustainability**

Organizations or banks have taken the initiative to determine value and acquisition from the concept of sustainability. Sustainability has become a necessity for almost all organizations in the 21st century and has evolved into a key market force

affecting the long-term financial viability and success; sustainability can be classified into three basic components often referred to as the "baseline": economic, social and environmental dimensions. Presley et al. , 2007, : 4596). Figure 2 reviews the sustainability trilogy



Figure 3. Sustainability – triple bottom line

**Source:** Fernando, R. (2012). Sustainable globalization and implications for strategic corporate and national sustainability. *Corporate Governance: The international journal of business in society*, 12(4),: 583.

Organizations must work effectively and strategically for sustainability. Therefore, it is essential that we choose and agree on what they mean to ensure their full perspective, including economic, environmental, and social sustainability, and are used to guide innovation

processes on the sustainability side. Strategic sustainability aims to develop very well and shows how to work towards it through a strategic approach to management (Hallstedt et al. 2013: 278). As reviewed by the figure (), the researcher believes that banking sustainability is one of the most critical factors for the success of the work of banks and others because the current era is the era of banking finance and can not succeed any organization if it does not have financial assets to cover its economic, environmental and social activities to achieve excellence and leadership in its field and this will reflect the final

sustainability of the bank.

Organizations are increasingly aware that choices made about services and processes can have profound environmental and social implications, with regulatory decision-makers taking on a wide range of stakeholder issues, pressures from environmental agencies, and increased social awareness towards workers, customers, and communities, which must be balanced while ensuring a reasonable return on long-term investment and the bank Of feasibility to regulatory shareholders (Presley et al., 2007: 4597). The format reviews areas of banking sustainability.

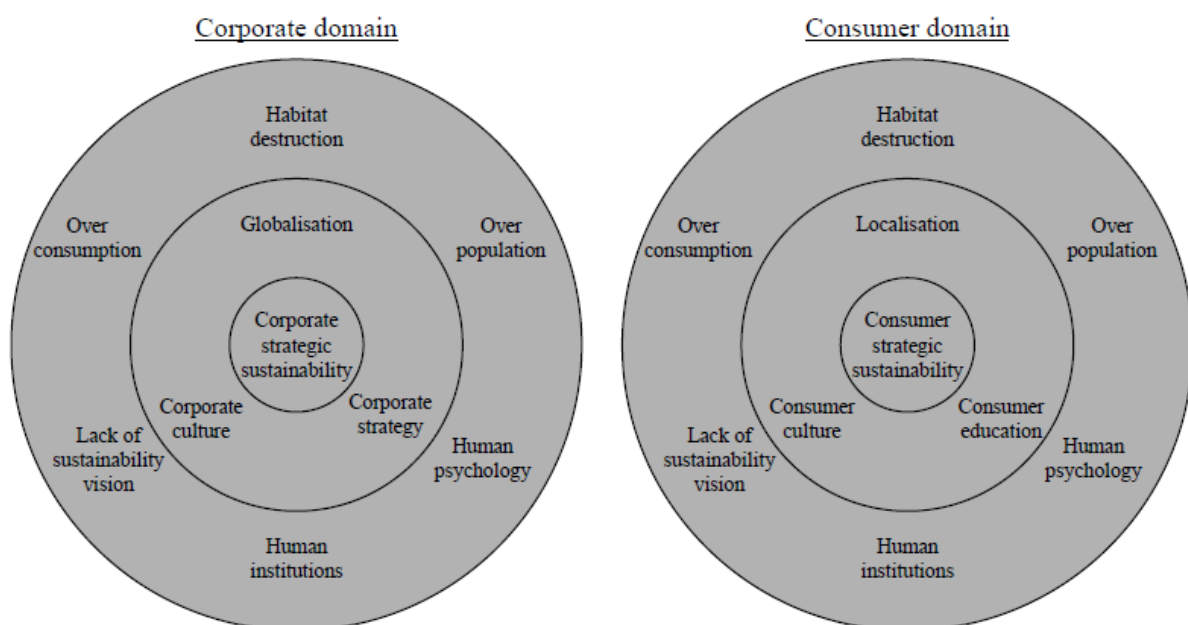


Figure 4. areas of banking sustainability

**Source:** Borland, H. (2009). Conceptualizing global strategic sustainability and corporate transformational change. *International Marketing Review*, 26(4/5),: 555.

Sustainability-based regulatory change must overcome significant internal and external barriers such as staff and senior management positions, bank cultures in terms of financial value, technological availability, knowledge, information, and regulatory constraints, and the often conflicting interaction and nature of these pressures and barriers makes sustainability-based decision-making a complex process. Moreover, its requirements and relationships extend beyond the bank's boundaries. Finally, the life cycle of

service and its extended processes must also be considered, further complicating the response to sustainability ( Presley et al. 2007: 4597).

Figure () of the strategic banking sustainability pyramid shows that there are two areas of banking sustainability now related to the customer. Here banks should direct their strategies to the customer to employ him and earn this to be a sustainable customer. The other area is how the bank achieves sustainability as a bank when it strategically considers maintaining its position and uniqueness in providing a sustainable service.

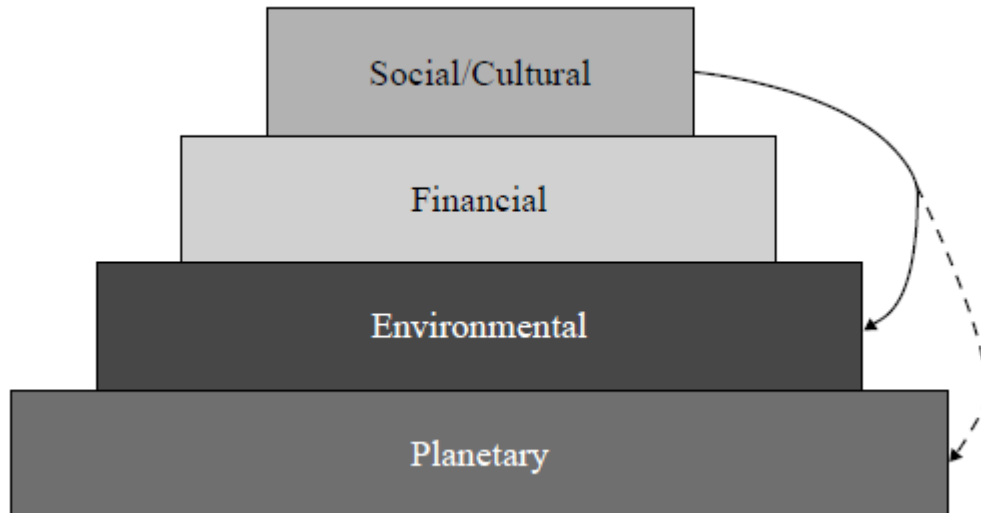


Figure 5. strategic sustainability pyramid

**Source:** Borland, H. (2009). Conceptualizing global strategic sustainability and corporate transformational change. *International Marketing Review*, 26(4/5): 555.

Through the form, it has been shown that sustainability is fundamental in the life of any

organization, which contributes to building a cultural and social fabric capable of preserving environmental dimensions, and includes the strategic sustainability of the organizations on the three elements described in the figure below.



Figure 6. strategic sustainability of the bank

**Source:** Fernando, R. (2012). Sustainable globalization and implications for strategic corporate and national sustainability.

*Corporate Governance: The international journal of business in society*, 12(4): 586.

## 5. The Results

### I. Testing the natural distribution of the paints:

Selecting statistical tests for specific data depends on whether or not they are parameter

Table 6. Natural Distribution Test for Intermediate Variable Data Customer Behavior Modeling

| Paragraph | N   | Skewness  |           | KurtosCS   |           |
|-----------|-----|-----------|-----------|------------|-----------|
|           |     | StatCStic | StatCStic | Std. Error | StatCStic |
| PSD 1     | 150 | -.929-    | .140      | .852       | .280      |
| PSD 2     | 150 | -.809-    | .140      | .025       | .280      |
| PSD 3     | 150 | -.876-    | .140      | .467       | .280      |
| PSD 4     | 150 | -.863-    | .140      | .120       | .280      |
| PSD 5     | 150 | -.809-    | .140      | -.070-     | .280      |
| BED 1     | 150 | -.841-    | .140      | .134       | .280      |
| BED 2     | 150 | -.708-    | .140      | -.154-     | .280      |
| BED 3     | 150 | -.942-    | .140      | .836       | .280      |
| BED 4     | 150 | -1.013-   | .140      | .996       | .280      |
| BED 5     | 150 | -.918-    | .140      | .749       | .280      |
| GED 1     | 150 | -1.059-   | .140      | .909       | .280      |
| GED 2     | 150 | -.802-    | .140      | -.196-     | .280      |
| GED 3     | 150 | -.791-    | .140      | -.111-     | .280      |
| GED 4     | 150 | -.914-    | .140      | .431       | .280      |
| GED 5     | 150 | -.815-    | .140      | .045       | .280      |
| GED 6     | 150 | -.748-    | .140      | -.144-     | .280      |

Source: BMSS V.26 results.

The results of Table 17 show that the data for this variable follow the natural distribution because all skewness and kurtosis values obtained by BMSS V.26 did not exceed the minimum and upper limits for natural distribution within +1.96, so the parameter statistics tests will be approved in the following steps From statistical analysis.

data. From data obtained from the bank's sample of the study, the researcher resorted to testing the type of distribution of data obtained from the recovered questionnaires by extracting kurtosis and skewness values for the data of all variables, as follows:

### 3. Natural distribution test for the dependent variable (bank sustainability):

Table 18 shows the results obtained from the test relating to the values of KurtosCS and Skewness for the variable of banking sustainability.

Table 7. Results of the Natural Distribution of the Variable of Banking Sustainability

| Paragraph | N   | Skewness  |           | KurtosCS   |           |
|-----------|-----|-----------|-----------|------------|-----------|
|           |     | StatCStic | StatCStic | Std. Error | StatCStic |
| ECD 1     | 150 | -.959-    | .140      | .461       | .280      |
| ECD 2     | 150 | -.977-    | .140      | .355       | .280      |
| ECD 3     | 150 | -.926-    | .140      | .366       | .280      |
| ECD 4     | 150 | -.948-    | .140      | .451       | .280      |
| ECD 5     | 150 | -.895-    | .140      | .280       | .280      |
| END 1     | 150 | -.905-    | .140      | .481       | .280      |
| END 2     | 150 | -.788-    | .140      | .167       | .280      |
| END 3     | 150 | -.921-    | .140      | .408       | .280      |
| END 4     | 150 | -.874-    | .140      | .306       | .280      |
| END 5     | 150 | -.795-    | .140      | .281       | .280      |
| SOD1      | 150 | -.953-    | .140      | .314       | .280      |
| SOD 2     | 150 | -.895-    | .140      | .243       | .280      |
| SOD 3     | 150 | -.993-    | .140      | .475       | .280      |

|       |     |        |      |        |      |
|-------|-----|--------|------|--------|------|
| SOD 4 | 150 | .874   | .140 | -.057- | .280 |
| SOD 5 | 150 | -.758- | .140 | -.072- | .280 |

Source: BMSSS V.26 results.

Table 7 indicates that the data for this variable track natural distribution because all skewness and Kurtosis values obtained by BMSSS V.26 do not exceed the minimum and upper limits of natural distribution within  $\pm 1.96$ , so the parameter statistics tests will be adopted in the next steps of statistical analysis.

### Descriptive statistical analysis

#### First: descriptive analysis of the customer behavior modeling variable:

##### A. Seikographic dimensions :

Table 8. Descriptive Analysis of Seikograph dimensions

| Paragraph   | Arithmetic medium | Standard deviation | Contrast      |
|-------------|-------------------|--------------------|---------------|
| PSD1        | 3.603             | 0.97               | .978          |
| PSD2        | 3.748             | 0.908              | .828          |
| PSD3        | 3.701             | 0.888              | .793          |
| PSD4        | 3.71              | 0.891              | .798          |
| PSD5        | 3.668             | 0.852              | .730          |
| <b>Rate</b> | <b>3.686</b>      | <b>0.9018</b>      | <b>0.8254</b> |

The results of Table 22 show that this dimension is present in the bank's sample of the study, based on the overall computational average of 3.686, which is higher than the hypothetical average (3), with a general standard deviation of (0.9018) and a general variation of (0.8254), indicating a decrease in the level of dispersion of sample members' answers from their computational medium.

To determine the level of availability of this variable in the bank's sample of the study, the descriptive analysis tests represented by (arithmetic medium and standard deviation) will be reviewed for this variable concerning its three dimensions: (**seismographic dimensions, behavioral dimensions, and geographical dimension**), and the level of availability was determined compared to the hypothetical medium of the Likert Five Point five scale (3), as follows:

##### B. Behavioral dimensions:

In table 23, the results for the arithmetic medium, standard deviation, and variation, based on the opinions of several bank employees, show the sample study.

Table 9. Descriptive Analysis of Behavioral Dimensions

| Paragraph   | Arithmetic medium | Standard deviation | Contrast      |
|-------------|-------------------|--------------------|---------------|
| BED1        | 3.551             | 0.914              | .851          |
| BED2        | 3.738             | 0.955              | .917          |
| BED3        | 3.776             | 0.94               | .888          |
| BED4        | 3.589             | 0.985              | .976          |
| BED5        | 3.706             | 0.938              | .885          |
| <b>Rate</b> | <b>3.672</b>      | <b>0.9464</b>      | <b>0.9034</b> |

Source: BMSSS V.26.

In the context of table 9 results, it is clear that this dimension is available in the bank's sample of the study, based on the overall computational average of 3.672, which is higher than the hypothetical average of (3), with a general standard deviation of (0.9464) and a general variation of (0.9034), indicating a lower level of dispersion of sample members from their computational medium.

C. Geographical dimension: Table 24 shows the results of the arithmetic medium, standard deviation, and variation, using the views of several bank employees sampled in the study

## D. .

Table 10. Descriptive Analysis of Geographical Dimension

| Paragraph   | Arithmetic medium | Standard deviation | Contrast     |
|-------------|-------------------|--------------------|--------------|
| GED1        | 3.71              | 0.927              | .467         |
| GED2        | 3.678             | 0.893              | .531         |
| GED3        | 3.668             | 0.874              | .513         |
| GED4        | 3.696             | 0.884              | .539         |
| GED5        | 3.757             | 0.905              | .591         |
| GED6        | 3.777             | 0.923              | .588         |
| <b>Rate</b> | <b>3.714</b>      | <b>0.901</b>       | <b>0.538</b> |

Source: BMSS V.26.

In the light of the results of table 10, it is clear that this dimension is widespread in the bank's sample of the study, based on the overall computational average of 3.714, which is higher than the hypothetical average (3), with a general standard deviation of (0.901) and a general variation of (0.538), indicating a lower level of fragmentation of sample members' answers from their computational medium.

Based on the results of the analysis and descriptive diagnosis of current study data according to the respondents' opinions in the bank sample study, table 25 shows the order of variable dimensions modeling customer behavior according to compatibility factors.

Table 11 The orderly importance of variable dimensions of customer behavior modeling

| Dimensions              | Arithmetic medium | Standard deviation | Ranking importance |
|-------------------------|-------------------|--------------------|--------------------|
| Seikographic dimensions | 3.686             | 0.9018             | 2                  |
| Behavioral dimensions   | 3.672             | 0.9464             | 3                  |
| Geographical dimension  | 3.714             | 0.901              | 1                  |

Source: Preparing the researcher based on the results of the statistical analysis.

Table 11 shows that the dimensions of modeling customer behavior in banks sample the study came at different levels. The seismograph dimensions appeared in the second place while the geographical extent seemed first. The behavioral size appeared in third place.

(arithmetic medium and standard deviation) will be reviewed for this variable concerning its three dimensions : (**economic dimension, environmental dimension, social dimension**), and the level of availability was determined compared to the hypothetical medium of the Five Point Likert scale (3), as follows:

### Second: Descriptive analysis of the banking sustainability variable:

To verify the level of appearance of this variable in the bank's sample of the study, the descriptive analysis tests represented by

#### A. Economic dimension:

Table 26 presents the results of the arithmetic medium, standard deviation, and variation, using the views of several bank employees sampled in the study sample.

Table 12, Descriptive Analysis of the Economic Dimension

| Paragraph | Arithmetic medium | Standard deviation | Contrast |
|-----------|-------------------|--------------------|----------|
| ECD1      | 3.575             | 0.991              | .987     |
| ECD2      | 3.659             | 0.912              | .836     |
| ECD3      | 3.673             | 1.003              | 1.010    |
| ECD4      | 3.659             | 1.037              | 1.080    |
| ECD5      | 3.866             | 0.94               | .889     |
| Rate      | 3.6864            | 0.9766             | 0.9604   |

**Source:** BMSSS V.26.

Based on the results of table 12, it is clear that this dimension is spread across the banks of the study sample, based on the overall computational average of 3.6864, which is higher than the hypothetical average of (3), with a general standard deviation of 0.9766 and a general variation of (0.9604), indicating

Table 13. Descriptive Analysis of the Environmental Dimension

| Paragraph   | Arithmetic medium | Standard deviation | Contrast      |
|-------------|-------------------|--------------------|---------------|
| SOD1        | 3.645             | 0.95               | .906          |
| SOD2        | 3.757             | 1.008              | 1.020         |
| SOD3        | 3.696             | 0.994              | .992          |
| SOD4        | 3.636             | 1.018              | 1.040         |
| SOD5        | 3.668             | 1.022              | 1.049         |
| <b>Rate</b> | <b>3.6804</b>     | <b>0.9984</b>      | <b>1.0014</b> |

**Source:** BMSSS V.26.

From the results of table 13, it is found that this dimension is present in the bank's sample of the study, based on the overall computational average of its paragraphs (3.6804) is higher than the hypothetical average (3), with a general standard deviation of (0.9984) and a general variation of (1.0014), indicating a decrease in the level of

a low level of dispersion of sample members from their computational medium.

#### **B. Environmental dimension:**

In table 27, the results on the arithmetic medium, standard deviation, and variation, according to the opinions of several bank employees, show the sample of the study.

dispersion of sample members from their computational medium.

#### **The social dimension:**

In table 14, the results for the arithmetic medium, standard deviation, and variation, according to the opinions of several bank employees, show the sample of the study.

Table 14 Descriptive Analysis of the Social Dimension

| Paragraph   | Arithmetic medium | Standard deviation | Contrast      |
|-------------|-------------------|--------------------|---------------|
| SOD1        | 3.738             | 0.97               | .945          |
| SOD2        | 3.687             | 0.986              | .977          |
| SOD3        | 3.71              | 1.014              | 1.033         |
| SOD4        | 3.724             | 0.992              | .989          |
| SOD5        | 3.659             | 1                  | 1.005         |
| <b>Rate</b> | <b>3.7036</b>     | <b>0.9924</b>      | <b>0.9898</b> |

**Source:** BMSSS V.26.

From the results of table 14, it is found that this dimension is present in the bank's sample of the study, based on the overall computational average of its paragraphs (3.7036) higher than the hypothetical average (3), with a general standard deviation of (0.9924) and a general variation of (0.9898), indicating a low level of dispersion of sample members from their computational medium.

Based on the results of the analysis and descriptive diagnosis of current study data according to the respondents' opinions in the bank sample study, Table 29 shows the order of the dimensions of the variable banking sustainability according to the compatibility factor.

Table 15 The orderly importance of bank sustainability variable dimensions

| Dimensions              | Arithmetic medium | Standard deviation | Ranking importance |
|-------------------------|-------------------|--------------------|--------------------|
| Economic dimension      | 3.6864            | 0.9766             | 2                  |
| Environmental dimension | 3.6804            | 0.9984             | 3                  |
| Social dimension        | 3.7036            | 0.9924             | 1                  |

**Source:** Preparing the researcher based on the results of the statistical analysis.

From table 15, it is clear that the dimensions of the banking sustainability of the bank's sample of the study came at different levels. The social extent appeared in the first place. In contrast, the economic dimension appeared in second place, and the environmental size appeared in third place.

Fourth research

## 6. Conclusions and recommendations

The concept of banking sustainability is a modern concept associated with human resources and strategy in the organization, which has become of interest to many organizations of all kinds, particularly in light of the evolving importance of knowledge and the role of intangible assets in the organization, including intellectual, innovative and creative resources, which can play an essential role in creating the organization's wealth of competition, profitability and productivity. Inferring the contents of customer behavior modeling is a subject of critical dimensions that have had a direct impact on the formulation, understanding, implementation, and evaluation of the strategy of business organizations at various levels, adopted in the face of the factors chosen by the work environment and marketing strategies, and to support the competitive advantage of the organization by focusing on the needs of the customer as well as knowledge of the market, expertise, and skills to create added value for the organization. However, customer behavior modeling topics still lack cognitive and applied clarity. Production, marketing, and cognitive resource-based behaviors are moving goals that cannot be framed or stable in a dynamic and rapidly changing environment. One of the most critical objectives of banking sustainability is to find the appropriate way to improve and retain the level of knowledge of the organization's staff and organizations through an ongoing review of knowledge processes to ensure their safety and readiness for use, as well as to expand the organization's knowledge base and work to generate knowledge through its ability to extract information and ideas from the organization's external and internal environment, thereby supporting sustainability-based work and increasing innovation and continued sustainability. There is a positive and significant impact of modeling customer behavior in banking sustainability.

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