



Green banking marketing and its impact on consumer behavior¹: An analytical study of the opinions of a sample of individuals working in some branches of government banks in Najaf Governorate

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Abstract. *This study examines the impact of green banking marketing on customer behavior by analyzing the opinions of employees working in selected branches of government banks in Najaf Governorate, Iraq. The banks included in the study are Al-Rafidain Bank (Hay Al-Amir Branch No. 334, Najaf Branch No. 007, and Muslim bin Aqeel Branch No. 329), Al-Rasheed Bank (Al-Sadiq Street, Al-Rawda, and Kufa branches), and the Trade Bank of Iraq (Najaf Branch). The research problem centers on determining the extent to which green banking marketing practices influence customer behavior in the banks under investigation. The significance of the study lies in highlighting the role of environmentally friendly banking practices and corporate communication regarding green initiatives in shaping customers' responses and behavior toward banking services.*

To achieve its objectives, the study employs a descriptive-analytical approach and uses a questionnaire as the primary data collection instrument. A total of 195 questionnaires were distributed, of which 156 valid responses were retained for statistical analysis. The data were analyzed using SPSS version 26 and AMOS version 24. Green banking marketing was measured using two dimensions: environmentally friendly green activities and corporate communication about green practices. Customer behavior was assessed through five dimensions: perception, motivation, learning, attitudes, and personality.

The findings reveal a statistically significant positive effect of green banking marketing on customer behavior in the banks examined. The results also demonstrate statistically significant positive effects of both environmentally friendly green activities and corporate communication about green practices on customer behavior. These findings highlight the importance of environmentally responsible banking practices and effective communication about green initiatives in shaping customers' responses to banking services.

Keywords: *green banking marketing, customer behavior, state-owned banks in the province of Najaf al-Ashraf.*

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1. INTRODUCTION

The banking sector has witnessed rapid transformations in recent years due to increasing attention to environmental issues. This has prompted banks to adopt modern marketing practices that consider the environmental dimension. Green banking marketing is one of the most prominent modern trends, aiming to provide environmentally friendly banking services, enhance the bank's image, achieve sustainable development, and influence customer decisions and behavior.

The importance of this research lies in highlighting the role of green banking marketing in influencing customer banking behavior. It also lies in attempting to link green banking marketing with customer behavior. Furthermore, the research gains practical significance through the analysis of a sample of branches of some government banks in Najaf Governorate, a unique banking environment experiencing growth in financial and banking activity. Therefore, the results of this research offer practical benefits to the banks studied and other banks in the region. It also aims to determine the extent to which green marketing practices via social media affect customer banking behavior.

The research stems from a central question that represents the problem: What is the impact of green banking marketing on customer behavior? The research model was tested using software such as SPSS version 23 and SMARTPLS. The research adopted a descriptive-analytical approach to address the research problem. To achieve the objectives of this research, it was divided into four sections as follows:

Section One: This section includes the research methodology and a review of previous studies.

Section Two: This section contains the theoretical framework, which addresses green banking marketing, its concepts and dimensions, and customer banking behavior.

Section Three: This section includes the applied aspects of the research.

Section Four: This section presents the conclusions and recommendations.

2. RESEARCH METHODOLOGY AND SOME PREVIOUS STUDIES

2.1. Research Methodology:

2.1.1 Research Problem

Green banking marketing has become an important approach through which banks can incorporate environmental considerations into their marketing activities and strengthen their relationships with customers. However, the extent to which such practices are adopted and communicated may vary across banking institutions and branches. In the context of government banks in Najaf Governorate, it is therefore important to examine the extent to which the branches under study implement environmentally friendly green activities and communicate their green practices, as well as the relationship between these practices and customer behavior.

The research problem arises from the need to identify the actual level of green banking marketing practices in the banks under investigation and to determine how these practices influence customer behavior. In particular, the study focuses on two dimensions of green banking marketing: environmentally friendly green activities and corporate communication about green practices. It also examines customer behavior through five dimensions: perception, motivation, learning, attitudes, and personality. Accordingly, the study seeks to provide an analytical understanding of the impact of green banking marketing on customer behavior based on the opinions of employees in selected branches of government banks in Najaf Governorate.

Based on the above, the main research question is formulated as follows:

(What is the impact of green banking marketing on customer behavior in the banks under study?)

This leads to the following sub-questions:



- a. What is the level of adoption of green banking marketing in the banks under study?
- b. What is the nature of customer behavior in the banks under study?
- c. What is the impact of environmentally friendly green activities on customer behavior in the banks under study?
- d. What is the impact of corporate communication about green practices on customer behavior in the banks under study?

2.1.2 Importance of the research

- a. This research contributes to understanding the impact and dimensions of green banking marketing on customer behavior, including preferences, purchasing decisions, and level of commitment to sustainable banking services.
- b. The importance of this research stems from the role of banks in economic activity, particularly in light of environmental changes and challenges.

2.1.3 Research Objectives

- a. This research aims to measure the impact and dimensions of green banking marketing on customer behavior.
- b. To determine the level of adoption of green banking marketing in the banks under study.
- c. To identify the nature of customer behavior in the banks under study.

2.1.4 Hypothetical research plan

The hypothetical model was designed based on relevant literature concerning the research variables and in light of the research problem and objectives. Figure (1) illustrates the interaction between the variables, which can be explained as follows:

- a. The independent variable (green banking marketing), which consists of two dimensions: (environmentally friendly green activities and institutional communication about green practices).
- b. The dependent variable (customer behavior), which consists of five sub-dimensions: (perception, motivation, learning, attitudes, and personality). Figure (1) illustrates the hypothetical model for the research.

2.1.5 Research Hypothesis

In light of the research problem and objectives, the research hypothesis can be summarized as follows:

Main Hypothesis (H1): There is a statistically significant effect of green banking marketing, in all its dimensions, on customer behavior, in all its dimensions, within the branches of the banks under study. The following sub-hypotheses are derived from this main hypothesis:

- a. Sub-hypothesis (H11): There is a statistically significant effect of the dimension of environmentally friendly green activities on customer behavior, in all its dimensions, within the banks under study.
- b. Sub-hypothesis (H12): There is a statistically significant effect of the dimension of institutional communication regarding green practices on customer behavior, in all its dimensions, within the banks under study.

2.1.6 Data Collection Methods

1. Utilizing available written and published literature related to the current study topic, including books, research papers, theses, and dissertations.
2. Using the internet to obtain data and information published online.
3. Data was collected through a questionnaire distributed to a sample of individuals working in the banks under study.

2.1.7 Spatial, temporal, and human boundaries

- a. Spatial scope: Selected branches of government banks in the Najaf Governorate.

b. Temporal scope: The period during which the researcher worked on this research, from the date the research title was determined on July 24, 2025, through all stages of the research, until the final draft was completed on March 15, 2026

c. Human scope: The individuals working in selected branches of the banks included in the research.

2.1.8 Research population and sample

The research community consists of all employees in the government banking sector in Najaf Governorate, while the research sample consists of some employees in some of the three government banks being researched in Najaf Governorate, namely: (Rafidain Bank - Al-Rasheed Bank - Trade Bank of Iraq (TBI)).

2.1.9 Research scale

The researcher adopted a questionnaire as the primary instrument for this research, aiming to gather the necessary information. The questionnaire consists of a five-point Likert scale, which includes five levels: (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree). A preliminary version of the questionnaire was presented to a number of experts and reviewers to gather their opinions and feedback on its items. The questionnaire comprises two sections:

- Section One: This section includes information about the respondents to the questionnaire items, such as (Bank Name, Gender, Age, Educational Qualification).

- Section Two: This section includes the questionnaire questions related to the study variables and contains (28) items: (8) items for the variable of green banking marketing via social media, and (20) items for the variable of customer behavior.

The questionnaire includes the main variables and their sub-dimensions, which were selected based on previous studies, as detailed in Table (1).

The following is an explanation of the response level and general data about the research sample.

To meet the research requirements, the researcher distributed (195) paper questionnaires to the research sample, which consisted of all employees in government banks. The sample was selected purposively to include all employees except those who were absent or did not wish to answer for various reasons. The number of valid questionnaires was (156). Table (2) shows the branches of the banks included in the research sample and the number of distributed questionnaires valid for statistical analysis in the banks studied.

2.1.10 Some previous studies

1. Previous studies on green banking marketing

Table (3) Some Arabic studies in the field of green banking marketing via social media.

Study 1	(Samaka and Al-Ameedi, 2022)
Study Title	Green banking marketing and its role in supporting customer retention activities: An analytical study of the opinions of a sample of customers of government banks in the city of Najaf.
Study sample	The study sample consists of (207) customers of branches of some government banks in Najaf Governorate who were randomly selected.
Study objective	It aims to demonstrate the reality of adopting green marketing in the banks studied, and its role in supporting customer retention activities.
Statistical methods used	(Arithmetic mean, standard deviation, Cronbach's alpha test, simple linear regression test).
Key conclusions	There is a statistically significant positive effect of green marketing in supporting customer retention activities.
Benefits	The study was used in the theoretical aspect.

Differences	The study differed in the nature of the sample.
Study 2	(Gunawardena & Jayarathne,2020)
Study Title	Impact of Green Marketing Functions and Nature of Organization on Green Brand Equity in the Banking Industry in Sri Lanka.
Study sample	A sample of 221 customers from government and private banks.
Study objective	The study aims to measure the impact of green marketing functions on green brand equity in the banking industry in Sri Lanka.
Statistical methods used	(Standard deviation, kurtosis, mean variance and composite reliability, KMO, Bartlett's test for sphericity, and Cronbach's alpha).
Key conclusions	There is a significant relationship between green marketing functions and green brand equity, and the nature of the organization softens and modifies the relationship between green marketing functions and green brand equity.
Benefits	The study was used in the theoretical aspect.
Differences	The study differed in the nature of the community and the sample.

2. Some previous studies on customer behavior

Table (4) Some Arabic studies in the field of customer behavior.

Study 1	(Bouchrit, 2022)
Study Title	Green marketing as an approach to rationalizing customer behavior towards environmental protection: A case study of the Sirgaz product of Naftal Corporation.
Study sample	A sample of 384 customer respondents.
Study objective	Exploring and analyzing the extent to which green marketing mix elements contribute to environmental protection, and how green marketing mix elements influence the customer's intention to engage in environmentally friendly behavior.
Statistical methods used	(Percentages and frequencies, arithmetic mean, standard deviation, Cronbach's alpha coefficient, Pearson correlation coefficient, normality test, one-sample t-test, simple linear regression test, multiple regression, one-way ANOVA).
Key conclusions	There is a significant and positive effect of the green marketing mix elements on rationalizing the environmental behavior of the study sample, except for the green product element.
Benefits	The study was used in the theoretical aspect.
Differences	The study differed in the nature of the community, the sample, and some statistical methods.
Study 2	(Loussif, 2024)
Study Title	The role of green marketing in promoting environmentally friendly customer behavior: A case study of a sample of customers of the Baladi Agroleval Mila Foundation.
Study sample	A sample consisting of 62 customers.
Study objective	The study aims to highlight the role of green marketing and its dimensions in promoting green customer behavior among a sample of customers of the Baladi Agrolifel Mila Foundation.
Statistical methods used	(Range, Pearson correlation coefficient, Cronbach's alpha reliability coefficient, frequencies and percentages, arithmetic mean, standard deviation, regression, skewness and kurtosis coefficient, variance inflation coefficient and allowable variance, Durbin-Watson test, one-sample t-test, two independent samples t-test, and one-way variance loading).

Key conclusions	There is a relationship between the combined dimensions of green marketing and environmental customer behavior; the elements of the green marketing mix influence the purchasing decision of the environmental customer . .
Benefits	The study was used in the theoretical aspect.
Differences	The study differed in the nature of the sample and the dimensions of the independent variable.

3. Discussion of previous studies and the extent to which they can be utilized

By reviewing and analyzing previous studies related to the research topic, the following points can be identified:

1. Previous studies have demonstrated the importance of modern marketing approaches in the banking sector and their role in strengthening customer relationships and influencing customer behavior, which aligns with the focus of the current research.
2. Previous studies helped the researcher enrich the theoretical framework of the current research.
3. Most previous studies relied on questionnaires as the primary data collection tool, a method adopted by the researcher in this study due to its suitability for the research objectives.
4. Previous studies guided the researcher in selecting appropriate statistical methods for data analysis and hypothesis testing.
5. The content of the scales used in previous studies helped in developing and refining the scale for the current research to suit the nature of the research population.

Based on the above, although the current study shares common ground with previous studies in examining green marketing and customer behavior, it differs in its focus on green banking marketing within selected branches of government banks in Najaf Governorate, Iraq. Specifically, it examines the effects of environmentally friendly green activities and corporate communication about green practices on customer behavior, considering its five dimensions: perception, motivation, learning, attitudes, and personality. Furthermore, the study provides empirical evidence from the local banking environment, thereby contributing to a better understanding of the relationship between green banking marketing practices and customer behavior in the banks under investigation. The study also differs from previous research in terms of its applied setting, research population, and sample.

2.2 METHODS

2.2.1 The concept of green banking marketing

Green marketing incorporates social and ethical considerations aimed at reducing the negative impact of institutions on society, whether through environmental preservation and sustainability or by offering products that consider both customer and environmental needs. Therefore, it can be said that green marketing is a manifestation of social responsibility (Samaka & Al-Ameedi, 2022: 103).

(Marta, 2018: 462) defines green banking as "the development of new green financial products, such as loans that finance cleaner technologies, and environmental strategies, such as energy efficiency and waste management programs, that improve banks' environmental performance and reputation."

Others have defined it as "all activities designed to generate and facilitate any exchange aimed at fulfilling human needs or wants, such that these needs and wants are satisfied with the least harmful impact on the natural environment" (Abu Bakr, 2021: 21).

Based on the above, the researcher defines green banking marketing as the integration of environmental considerations into banks' marketing activities through the promotion of environmentally friendly banking services and communication with customers about green

practices and initiatives. It aims to enhance customer awareness of environmental responsibility, highlight the environmental benefits of banking services, and strengthen relationships between banks and their customers based on sustainability and environmental commitment.

Accordingly, the researcher concludes that:

- a. Green banking marketing represents a strategic approach that enables banks to integrate environmental and social considerations into their marketing activities while pursuing economic objectives and supporting sustainable banking practices.
- b. Green banking marketing extends beyond the promotion of banking services by raising customers' awareness of environmental initiatives and fostering stronger relationships between banks and their customers based on transparency, trust, and environmental responsibility.

2.2.2 The importance of green banking marketing

Green banking marketing is a fundamental approach to protecting customers and the environment. Its importance lies primarily in its impact on an organization's reputation and competitiveness, and secondarily in the results it achieves in terms of protecting individuals, their health, and the environment (Al-Agha, 2017: 17).

The following is a statement of the importance of green banking marketing: (Amrawi, 2016: 70-71) (Fathi, 2018: 168)

- a. Green banking marketing responds to growing market opportunities, especially in light of increasing customer awareness.
- b. When organizations adopt green banking marketing, they demonstrate a clear commitment to social responsibility, which contributes to improving their image among their audiences.
- c. As a practical approach to marketing policies, green banking marketing helps to face competition and meet the aspirations of environmentally conscious customers.
- d. Social acceptance of banks: Banks that adopt the green banking marketing philosophy can strengthen their acceptance within the community by demonstrating their commitment to environmental sustainability and social responsibility.
- e. Sustainability of banking operations: Green banking marketing supports the sustainability of banking operations by encouraging environmentally responsible practices, strengthening community support, and promoting public acceptance of banks' environmental and social objectives.

2.2.3 Functions of Green Banking Marketing in the Banking Sector

Green marketing in banks has several functions, including, for example, providing loans to companies that use renewable energy sources and green logistics services in waste management, as well as to companies that produce organic materials; investing in companies that produce environmentally friendly products; financing green investment funds; participating in customer outreach projects aimed at raising environmental awareness and interest; and distributing informational materials and brochures that promote green marketing (Samaka & Al-Ameedi, 2022: 109).

The researcher believes that green marketing in the banking sector is not limited to institutions fulfilling their environmental responsibilities, but is rather a strategic tool aimed at improving competitiveness and increasing customer interest in sustainable products and services. Therefore, it can be said that the functions mentioned above are essential elements for the success and effectiveness of implementing green marketing within banks, as they contribute to integrating sustainability into banking operations and enhance the positive image among customers and investors.

2.2.4 Dimensions of green banking marketing

For the purposes of this research, the dimensions proposed by (Samaka & Al-Ameedi, 2022) and Gunawardena & Jayarathne, 2020) were adopted due to their relevance to the subject and nature of the current research. These dimensions are:

a. Environmentally Friendly Green Activities

Banks offer specific financial services. Green loans are a form of credit provided to finance environmentally sustainable projects. These loans align with the principles of sustainable finance and are used by borrowers (usually corporations) to finance projects such as renewable energy facilities, energy-efficient buildings, and sustainable agriculture. These loans are financial instruments specifically designed to support environmental projects that improve environmental conditions and mitigate negative impacts, and may include the installation of renewable energy systems or improvements to waste management infrastructure. (lapinkiene et al., 2025:2&5)

Strategically, green banking is key to mitigating many types of risks, such as legal, credit, and reputational risks. These practices also include internal and external activities such as carbon credit institutions, green financial commodities, green mortgages, carbon mitigation, energy awareness, and green building. To promote sustainability practices, the banking sector should focus on ensuring the financing of environmentally friendly projects through financially viable services. This will enhance banks' competitiveness and generate higher profits while improving existing assets. (Mir, 2022: 249-250)

Based on the above, the researcher believes that green activities, as defined in this study, refer to the set of practices and procedures adopted by banks to reduce their negative environmental impacts and promote sustainability. This includes implementing green finance policies, reducing carbon emissions, and encouraging customers to use banking products and services that comply with environmental standards. This contributes to achieving a balance between economic growth and environmental protection within the framework of banks' social responsibility.

b. Corporate Communication on Green Practices

Corporate communication is "all forms of communication efforts undertaken by governments or public and private institutions such as banks to influence and guide citizens' behavior towards accepting policies, supporting decisions, aligning with and endorsing the targeted idea, and sometimes even adopting and promoting the idea itself." (Issawi & Al-Sadiq, 2023: 414) Effective communication in the banking sector is crucial because it helps build trust, adapt to changes, and improve customer experience, compliance, and transparency.

Furthermore, effective corporate communication improves relationships by fostering trust and coordination within the institution. In this case, banks operate within sectors that demand transparency and openness. The banking sector is highly sensitive to information, corporate image, and public perception. Effective corporate communication plays a key role in bridging the gap between the bank and the public, customers, shareholders, and the government. Thus, it enables banks to build effective relationships with stakeholders, such as customers and the public. (Bakhoya, 2025: 1) Its sub-elements include:

- **Green Advertising:** This is advertising adopted by green organizations to convey their environmental philosophy to their target audience. Green advertising is characterized by promoting environmentally friendly values and customer culture, coordinating with official (governmental) and unofficial regulatory bodies (such as customer protection and environmental associations), and adhering to traditional advertising characteristics such as (clarity of the advertising message, honesty, integrity, and credibility). (Kafi, 2014: 33-34)

- **Green Sales Promotion:** The American Marketing Association (AMA) defines sales promotion as any marketing activity, other than direct selling, advertising, and promotion, that aims to attract customer interest in a product or service. There are several ways to promote sales in an environmentally friendly manner, including using discount coupons, participating in contests, offering eco-friendly gifts, and providing product quality guarantees. (Al-Agha, 2017: 25-26)

- **Green Personal Selling:** Personal selling is one of the most effective promotional tools at certain stages of the buying process, particularly in identifying and persuading customers.

Personal selling can be defined as "the personal and verbal presentation of a product, service, or idea with the aim of motivating a potential consumer to purchase it or be convinced of its merits."

It is also defined as "face-to-face contact" with one or more potential customers to close a sale, or the process of informing and persuading potential customers to purchase products during personal interaction. (Abu Maryam, 2016: 69)

- **Green Public Relations:** Public relations is a crucial promotional element that helps build strong relationships between the bank and its clients, and enhances the bank's image in the market by connecting service seekers and service providers.

Public relations refers to "the planned and ongoing administrative efforts aimed at establishing and strengthening mutual understanding between the bank and its public." The British Institute of

Public Relations defines it as: "The planned and deliberate effort to create and maintain a relationship of good faith between an organization and its community." (Al-Khafaji, 2021: 38-39)

Within the framework of environmental promotion, institutions must maintain close communication with the media and provide necessary environmental responses and statements when required, or in cases of ambiguity regarding their environmental practices.

- **Green Direct Marketing:** Direct marketing is defined as an interactive marketing communication system that uses a variety of non-traditional methods to elicit a tangible response with minimal effort, ranging from direct mail to the internet. Responses can be measured directly, customers interact directly and clarify their requests, and they can be reached from anywhere.

Direct marketing includes using mail, telephone, fax, email, or the internet to communicate directly with customers and encourage them to respond immediately. (Abdulbari, 2023: 4)

Based on the above, the researcher concludes that institutional communication regarding green practices in this study refers to a set of planned and organized communication procedures implemented by the bank to raise environmental awareness among customers and the community, and to instill a culture of environmental responsibility. This communication aims to enhance the bank's image as a sustainable institution and to build customer trust and loyalty through transparent and honest messages that support a shift towards positive environmental behavior.

2.3.1 The concept of customer behavior

customer behavior refers to how customers decide to purchase goods and use services. It is a broad field encompassing several factors, including the reasons why people make decisions about how, where, and when to satisfy their wants and needs (Traustason & Jonsson, 2024:4).

In other words, it includes awareness of customer preferences, tastes, expectations, and spending habits (Martin, 2021:18-19).

It is defined as "the set of actions taken by individuals related to the purchase and use of economic goods and services, including the decision-making process that precedes and determines these actions" (Laftah, 2022:44).

Therefore, the researcher believes that consumer behavior can be defined as: the sum of overt and covert actions taken by individuals during the stages of research, selection, purchase, use,

and evaluation, influenced by a range of psychological, social, economic, and environmental factors.

2.3.2 The importance of studying customer behavior

The importance of studying customer purchasing behavior is evident in the following elements: (Haroun, 2020: 228) (Al-Jarjari et al., 2024: 92-93)

- a. Identifying suitable marketing opportunities: In light of intense market competition, every organization strives to identify available marketing opportunities that are adapted to the surrounding environment.
- b. Market segmentation: This process involves dividing the market into distinct customer segments that share similar characteristics and features within each segment, but differ from one segment to another.
- c. Building a competitive product position: To ensure the product's survival in the market, the organization must determine its competitive positioning.
- d. Responding quickly to changing customer needs and desires: It is essential for the organization to regularly analyze customer purchasing and consumption behaviors to adapt to these changing needs and desires.
- e. Developing and improving customer services: customer behavior is naturally influenced by the marketing policies established by the organization.
- f. Understanding the role of family members in decision-making: Studying customer behavior helps us understand the different roles that each family member plays when making a decision to purchase goods and services.

2.3.3 Customer behavior characteristics

Customer behavior and actions share common characteristics, including: (Khalifi & Madani, 2017: 63-64) (Haroun, 2020: 230)

- a. All customer behaviors are human actions that must have a motive or reason. No human behavior or action can exist without at least one motive or reason.
- b. Human behavior is rarely the result of a single motive or reason. Rather, it is most often a combination of multiple motives and reasons that complement or conflict with each other.
- c. Human behavior is intentional, meaning it aims to achieve one or more specific goals. Therefore, it is impossible to conceive of behavior without a goal.
- d. Individual behavior is not isolated or independent; rather, it is linked to events and actions that precede and may follow it.
- e. The unconscious often plays a significant role in determining human behavior.
- f. Human behavior is a continuous and consistent process. There are no defined beginnings or ends to each behavior; rather, it is a link in a chain of interconnected and integrated relationships.
- g. Human behavior is flexible, meaning it is adaptable and can be modified or changed according to the circumstances and situations an individual encounters.
- h. It is difficult to predict the behaviors individuals will exhibit most, if not all, of the time.

Based on the above, the researcher believes that the behavior of financial services customers is highly complex and influenced by diverse internal and external factors, making it unstable and subject to change depending on circumstances. Furthermore, the multiplicity of motivations and the flexibility of responses reflect the need for banks to develop comprehensive and adaptable marketing strategies.

2.3.4 Dimensions of customer behavior

The dimensions of banking customer behavior were determined based on what was stated in a number of previous studies, such as the study by (Jarallah, 2025) and (Lafteh, 2022), and because

the selected dimensions are appropriate to the nature of the current research, they can be explained as follows:

a. Perception

Understanding human behavior begins with understanding how individuals gather, analyze, and interpret information from their environment. Perception is the process of receiving, organizing, and assimilating meaning from a stimulus received through the five senses (sight, hearing, taste, smell, and touch). Through these senses, a person perceives or recognizes events, stimuli, or products. Perception is defined as the customer's choice to interpret stimuli received from the external world, and also as the process of organizing and interpreting information and sales incentives received through the five senses. This process determines how customers respond to commercial offers. From a marketing perspective, perception is the process by which a customer forms a clear picture of things based on their knowledge, giving meaning to what they observe. The meaning a customer ascribes to something depends on their personal experience, beliefs, and memories. (Abdullah, 2016, pp. 84-85)

The researcher argues that perception refers to how customers form a mental impression of green banking services offered by banks, through their interpretation of marketing incentives and environmental information received via their five senses. This perception is reflected in their knowledge of the bank's environmental practices, their understanding of the philosophy behind green services, and their evaluation of the credibility and impact of these services on their purchasing decisions and behavior toward the bank.

B. Motivation

Individuals have multiple needs at different times. Some of these needs may arise from internal factors, such as hunger, fear, discomfort, or the desire for distinction and respect. A need becomes a motive when it reaches a certain level of intensity. Here, motivation can be defined as the need that drives an individual to adopt a specific behavior to satisfy it. Therefore, decision-makers in institutions must implement an effective marketing program to stimulate these needs in customers and encourage them to satisfy them through their products. (Al-Hajj & Sudani, 2022: 545) Based on the above, the researcher believes that motivation in this study refers to the set of psychological or environmental factors that stimulate and encourage customers to engage in green banking services. These motivations stem from personal needs for security, distinction, and environmental values, or from external influences such as marketing campaigns and societal trends toward sustainable development. This dimension is reflected in customers' desire and willingness to choose environmentally friendly banking products and services and meet their needs through them.

C. Learning

Learning can be defined as "all the continuous, systematic, intentional, and unintentional procedures and processes that provide or enable individuals to acquire the knowledge and information they need when purchasing available ideas, concepts, goods, and services. This includes modifying their ideas, beliefs, attitudes, and behavioral patterns toward a particular product or service." (Barbara, 2023: 51) Learning depends on several factors, including the customer's maturity, experience, motivation, or desire to learn, as well as their receptiveness, the learning method employed, and other factors such as repetition, a stimulating learning environment, and exposure to specific stimuli to elicit a response. Therefore, banking marketing staff bear the responsibility of maintaining customer service and encouraging continued purchases through appropriate marketing strategies, including promotional ones. Promotional activities have a significant impact on the customer learning process, fostering optimal interaction with the market and the ability to make informed purchasing decisions without regret after the purchase. However,

it is also important to note that banks can allocate time and effort to ensure customers receive specific training on using available services. While activities vary between banks, each bank may have unique interactions and approaches, which customers must understand and internalize to ensure smooth operations and transactions. (Lafteh, 2022: 57)

Based on the above, the researcher believes that learning in this study refers to the process by which customers acquire knowledge and experience in green banking services through direct experience, exposure to marketing information, or interaction with others. This process leads to changes in their behavior and attitudes toward these services.

D. Attitudes

Through practice and learning, people acquire beliefs and attitudes. These, in turn, influence their purchasing behavior. A belief is a descriptive idea that a person holds about something. These beliefs may be based on factual knowledge, opinion, or faith, and may or may not carry emotional weight. Marketers are interested in the beliefs people form about specific products and services because these beliefs shape the product and brand image, which in turn influences purchasing behavior. If some of these beliefs are incorrect and prevent purchases, the marketer will launch a campaign to correct them. (Kotler et al., 2018: 173)

The researcher believes that attitudes in this study refer to customers' psychological and emotional inclinations toward green banking services, reflecting their degree of acceptance or rejection based on their beliefs, experiences, and the extent to which these services align with their values and environmental concerns. This dimension is manifested in customers' tendency to adopt a positive attitude toward green banking or to recommend it, which directly affects their purchasing decisions.

E. Personality

Some define personality as "an individual's consistent behavioral responses to recurring stimuli or situations," or as "a set of internal traits and distinctive behavioral tendencies resulting from repeated and persistent behavioral patterns toward specific situations."

Given the similarity of banking services offered by most banks, they can consider personal factors in their relationships with customers. Banks can serve all age groups—young and old, educated and uneducated, new and loyal customers—as well as other demographics within the same environment. The effort, banking service, and service quality provided to each of these groups vary according to their personalities, skills, and abilities.

Therefore, we conclude that there is a close relationship between a consumer's personality and their purchasing behavior. Banks must consider these factors if they wish to offer diverse services and retain their customers. (Samaka, 2016: 90)

Based on the above, the researcher believes that personality in this study refers to a set of relatively stable psychological and behavioral traits and characteristics that distinguish customers and determine their reactions and attitudes toward green banking services, such as openness, environmental awareness, responsibility, and commitment to excellence. This dimension is reflected in how customers interact with their banks, the extent to which their purchasing decisions and loyalty are influenced by their individual characteristics, and their inclination to adopt environmentally friendly practices.

3. The practical aspect of the research

3.1 Measuring the face validity of the research scale and the reliability of the questionnaire

3.1.1 Measuring the face validity of the research scale:

In order to determine the face validity of the research scale and the possibility of adopting the scale, the scale was presented to a group of experts in order to give their feedback, and a

number of necessary modifications were made according to the experts' opinions to make the questionnaire in its final form.

3.1.2 Measuring the reliability of the questionnaire:

To determine the reliability of the questionnaire, the researcher used Cronbach's alpha test. The results of the statistical analysis, shown in Table (8), indicate that the overall reliability of the independent research variable, "green banking marketing via social media," was 0.830, while the overall reliability of the customer behavior variable was 0.792. The results demonstrate a high reliability ratio, which meets the research objectives.

3.1.3 Constructive assertive truth

The researcher examined the validity of the confirmatory construct by performing confirmatory factor analysis, a key application of structural modeling. This analysis aims to understand the nature of the hypothetical model, which consists of underlying variables. These variables represent the assumed dimensions of the scale, and the arrows point towards the dependent or measured variables (i.e., the arrows point towards the items that measure the dimension).

a. Confirmatory Factor Analysis of the Independent Variable: Green Banking Marketing

Figure (2) illustrates the results related to the confirmatory factor analysis of this variable, as follows:

All factor loads for the items of the independent variable "Green Banking Marketing" were above the acceptance threshold, as shown in Figure (2). Table 10 shows the standardized regression weights (SRW), indicating that the data for this variable are suitable for further statistical testing. Factor loads for all items were greater than ≥ 0.50 . Items with loads less than ≥ 0.50 were excluded from the analysis. According to (Hair et al., 2017), the critical ratio was greater than 1.96, and the significance level was less than 0.001 for all items.

B. Confirmatory Factor Analysis for the customer Behavior Variable

The results of the confirmatory factor analysis for this variable are shown in Figure (3). All factor saturations for the items of the dependent variable, customer behavior, were above the acceptance threshold, as shown in Figure 3. Table 11 shows the standardized regression weights (SRW), indicating that the data for this variable are suitable for further statistical analysis. The factor saturations for all items were greater than ≥ 0.50 . Items with saturations less than ≥ 0.50 were excluded from the statistical analysis. According to (Hair et al., 2017), the critical ratio was greater than 1.96, and the significance level was less than 0.001 for all items.

3.2 Descriptive analysis of research variables

3.2.1 Descriptive analysis of the green banking marketing variable

a. Descriptive Analysis of the Environmentally Friendly Green Activities Dimension

Table (12) shows the responses of the sample members to the items related to the environmentally friendly green activities dimension. The relative importance of this dimension reached (0.760), the standard deviation (1.178), and the arithmetic mean (3.802). Based on the results, this dimension is considered highly important for some branches of the government banks under study, namely (Rafidain Bank, Rasheed Bank, and the Trade Bank of Iraq (TPI) in Najaf Governorate). This dimension illustrates the practices and procedures adopted by the banks in the research sample to reduce negative environmental impacts, including pollution and the consumption of natural resources. As agreed upon by the sample members, this dimension exceeds the hypothetical arithmetic mean of (3). Item (4) was one of the most significant contributors to this dimension, demonstrating the bank's ability to grant low-interest loans to individuals wishing to

purchase clean energy vehicles (electricity and gas), which reduce environmental pollution. This item achieved an arithmetic mean of (3.988), a standard deviation of (1.181), and a relative importance of (0.798), indicating a high level of responses from the sample members regarding this item. Item (1) of the The items that contributed least to this dimension, achieving the lowest mean (3.519), standard deviation (1.247), and relative importance (0.704), indicate that the bank branches in the study sample use the internet, applications, and digital technologies to facilitate the provision of environmentally friendly services.

The variation in respondents' answers may reflect differences in employees' awareness of, or exposure to, environmentally friendly banking practices across the selected branches. This suggests that, despite the generally positive assessment of these activities, respondents' perceptions of their implementation were not entirely consistent.

B.Descriptive analysis of the institutional communication dimension regarding green practices

Table (13) shows the responses of the sample members to the items related to the dimension of institutional communication about green practices. The relative importance of this dimension was (0.758), the standard deviation was (1.524), and the arithmetic mean was (3.792). Based on the results, this dimension is considered highly important for some branches of the government banks under study, namely (Rafidain Bank, Rasheed Bank, and the Trade Bank of Iraq (TPI) in Najaf Governorate). This dimension reflects the set of planned and organized procedures implemented by the bank branches in the study sample to raise environmental awareness among customers and the community, and to instill a culture of environmental responsibility, as agreed upon by the sample members. This dimension exceeds the hypothetical arithmetic mean of (3). Item (3) was among the items that contributed most to the formation of this dimension, demonstrating the ability of the bank branches under study to hold public environmental events and exhibitions to promote environmentally friendly services. This item achieved an arithmetic mean of (3.994), a standard deviation of (1.096), and a relative importance of (0.799), indicating that the responses of the sample members to this item were high. Meanwhile, item (4) was among the items that contributed least to the formation of this dimension. This dimension achieved the lowest arithmetic mean of (3.609), a standard deviation of (1.050), and a relative importance of (0.722), indicating that the bank branches in the research sample hold press conferences to encourage media outlets to promote environmentally friendly activities.

After examining all dimensions, the statistical study revealed that the government bank branches in the sample (Rafidain Bank, Rasheed Bank, and the Trade Bank of Iraq (TPI) in Najaf Governorate) demonstrated all dimensions of the green banking marketing variable via social media, and all were at acceptable levels. This indicates acceptance by the bank branches in the sample of adopting green banking marketing via social media. The dimensions of this variable can be summarized in Table (14).

The data in Table (27) shows that the dimension of environmentally friendly green activities ranked first, according to relative importance and the arithmetic mean, reflecting the opinions of individuals working in the bank branches under study in Najaf Governorate. Meanwhile, the dimension that received the lowest ranking in importance was that of institutional communication regarding green practices.

3.2.2 Descriptive analysis of the customer behavior variable

a. Descriptive Analysis of the Perception Dimension

Table (15) shows the responses of the sample members to the items related to the perception dimension. The relative importance of this dimension was (0.682), the standard deviation was (0.723), and the arithmetic mean was (3.412). Based on the results, this dimension is considered



highly important for some branches of the government banks under study, namely (Rafidain Bank, Rasheed Bank, and the Trade Bank of Iraq (TPI) in Najaf Governorate).

From the perspective of the employees, this dimension indicates how customers form a perception and mental impression of the green banking services offered by the banks in the study sample, through their interpretation of the marketing incentives and environmental information they receive through their five senses. This dimension exceeds the hypothetical arithmetic mean of (3).

Item (3) was one of the items that contributed most to the formation of this dimension, indicating that the digital marketing used in the banks under study contributes to increasing customer perception of green banking services. This item achieved an arithmetic mean of (3.904) and a standard deviation of (3.904). The significance level (0.982) and relative importance (0.781) indicate that the responses of the sample to this item were high.

Meanwhile, item (2) contributed the least to this dimension, achieving the lowest mean of (3.038), a standard deviation of (0.761), and a relative importance of (0.608). This suggests that customer perception depends on the accuracy and credibility of the information available about green banking services offered by the banks in the research sample.

B. Descriptive Analysis of the Motivation Dimension

Table (16) shows the responses of the sample members to the items of the motivation dimension. This dimension achieved a mean score of (3.377), a standard deviation of (0.957), and a relative importance of (0.675). This indicates that the sample members agreed that this dimension is an important factor in some branches of the banks included in the research sample in Najaf Governorate. This dimension refers to the set of psychological or environmental factors that motivate and encourage customers to engage in green banking services. The arithmetic mean for this dimension exceeds the hypothetical mean, which was (3). The most relevant item for this dimension is (4), which shows the consumer's desire to acquire green banking services that satisfy their financial needs. The arithmetic mean reached (3.771), the standard deviation was (0.830), and it achieved a relative importance of (0.754). This indicates that the level of interaction was high for this item within the context of this dimension.

Item (2), which states that " customers purchase green banking services when they have complete information about them," received the lowest mean (3.046), standard deviation (0.866), and relative importance (0.609). This indicates a high level of engagement with this item within this dimension.

C. Descriptive Analysis of the Learning Dimension

Table (17) shows the responses of the sample members to the items related to the learning dimension. The relative importance of this dimension was (0.671), the standard deviation was (0.592), and the arithmetic mean was (3.356). Based on the results, this dimension is considered highly important for some branches of the government banks under study, namely (Rafidain Bank, Rasheed Bank, and the Trade Bank of Iraq (TPI) in Najaf Governorate).

From the perspective of the employees, this dimension refers to the process by which customers acquire knowledge and experience in the field of green banking services, through direct experience, access to marketing information, or interaction with others. This dimension exceeds the hypothetical arithmetic mean of (3). Item (1) was one of the items that contributed most to the formation of this dimension, indicating that having knowledge about green banking services affects purchasing decisions. This item achieved an arithmetic mean of (4.026), a standard deviation of (0.849), and a relative importance of (0.805). This means that The responses of the sample to this item were high. Item (3), however, contributed the least to this dimension, achieving the lowest mean (3.042), standard deviation (0.772), and relative importance (0.608), indicating that "

customer behavior towards acquiring green banking services changes according to the opinions of other customers."

D. Descriptive Analysis of the Attitude Dimension

Table (18) shows the responses of the sample members to the items related to the attitude dimension. The relative importance of this dimension was (0.689), the standard deviation was (0.751), and the arithmetic mean was (3.445). Based on the results, it appears that this dimension is highly important for some branches of the government banks under study, namely (Rafidain Bank, Rasheed Bank, and the Trade Bank of Iraq (TPI) in Najaf Governorate). From the sample's perspective, this dimension indicates the psychological and emotional inclinations of customers towards green banking services, reflecting their degree of acceptance or rejection based on their beliefs, experiences, and the extent to which these services align with their values and environmental concerns. This dimension exceeds the hypothetical arithmetic mean of (3).

Item (4) was among the items that contributed most to the formation of this dimension, demonstrating that customer beliefs contribute to building a specific attitude towards the bank and its green services. This item achieved an arithmetic mean of (4.090), a standard deviation of (0.860), and a high importance. The relative importance (0.818) indicates that the responses of the sample to this item were high. Item (2), on the other hand, contributed the least to this dimension, achieving the lowest mean (3.051), standard deviation (1.002), and relative importance (0.610), which indicates that social media contributes to changing customer attitudes towards purchasing green banking services.

E. Descriptive Analysis of the Personality Dimension

Table (19) shows the responses of the sample members to the items related to the personality dimension. The relative importance of this dimension was (0.746), the standard deviation was (0.790), and the arithmetic mean was (3.732). Based on the results, this dimension is considered highly important for some branches of the government banks under study, namely (Rafidain Bank, Rasheed Bank, and the Trade Bank of Iraq (TPI) in Najaf Governorate). The arithmetic mean for this dimension exceeded the hypothetical arithmetic mean of (3).

Item (1) was among the items that contributed most to the formation of this dimension, indicating that the consumer's environmental awareness and openness determine the nature of the green banking services they intend to purchase. This item achieved an arithmetic mean of (4.103), a standard deviation of (1.036), and a relative importance of (0.821). This means that the responses of the sample members to this item were high. In contrast, item (4) was among the items that contributed least to the formation of this dimension and achieved the lowest mean. My calculation yielded a value of (3.455), a standard deviation of (1.126), and a relative importance of (0.691), indicating that customer personality contributes to the selection of the appropriate green banking service.

The results of the statistical analysis mentioned above show that all dimensions of customer behavior were present in some branches of the banks included in the research sample in Najaf Governorate, and were within acceptable levels. This indicates acceptance by the banks in the research sample of the application of these dimensions of customer behavior. The dimensions of customer behavior can be summarized in Table (20).

Table (20) shows that the personality dimension received the highest ranking compared to the other dimensions, based on relative importance and the arithmetic mean, which reflected the responses of the sample members in some branches of the banks under study in Najaf. The dimension with the lowest ranking, based on the arithmetic mean and importance, was the learning dimension.

3.3 Testing the research hypothesis:

3.3.1 Testing the main hypothesis:

This hypothesis demonstrates a positive and significant impact of the green banking marketing on customer behavior from the perspective of employees in some branches of government banks (Rafidain Bank, Rasheed Bank, and the Trade Bank of Iraq (TPI)) in Najaf Governorate. Figure (4) illustrates the structural equation model created by the researcher for the purpose of conducting the test.

Figure (4) shows that the model achieves statistical acceptability based on the obtained conformity quality measures, where the CFI index was above 90, the GFI index was above 90, the NFI index exceeded 90, and the RMSEA index was below 80. This model demonstrates the impact of green banking marketing on customer behavior. The impact coefficient between the research variables was (0.564), as shown in the table below, with a significance level of (0.001), thus confirming the acceptance of this hypothesis. Furthermore, the coefficient of determination (R^2) was (0.32), indicating that the independent variable (green banking marketing) contributed to explaining (0.32) of the factors affecting the dependent variable (customer behavior), while the remaining percentage relates to other factors not addressed in this research.

From the above, the researcher concludes that the more green banking marketing is done in some branches of government banks (Rafidain Bank, Al-Rasheed Bank, and the Iraqi Trade Bank (TPI) in Najaf Governorate, the more the consumer's purchasing behavior increases in the banks under study.

3.3.2 Testing sub-hypotheses:

Figure (5) below shows the structural equation model that was created by the researcher for the purpose of testing the sub-hypotheses that emerge from the main hypothesis.

Figure (5) shows that the model achieves statistical acceptability based on the obtained conformity quality measures, where the CFI index was above 90, the GFI index was above 90, the NFI index exceeded 90, and the RMSEA index was below 80. This model demonstrates the impact of green banking marketing dimensions on customer behavior. Furthermore, the coefficient of determination (R^2) was (0.503), indicating that the dimensions of the green banking marketing explained (0.503) of the factors explaining the customer behavior variable, while the remaining percentage relates to other factors not addressed in this research.

From the above, the researcher concludes that the more the dimensions of green banking marketing, represented by (environmentally friendly green activities, institutional communication about green practices), increase in some bank branches in Najaf Governorate, the research sample, the more the customer's purchasing behavior increases. Based on the above, the sub-hypotheses emanating from the hypothesis of the effect of the dimensions of green banking marketing on customer behavior can be tested as follows:

a. Sub-hypothesis 1: This hypothesis indicates a positive relationship between the dimension of environmentally friendly green activities and customer behavior from the perspective of employees in some branches of government banks (Rafidain Bank, Rasheed Bank, and the Trade Bank of Iraq (TPI) in Najaf Governorate). The results of the impact coefficient between the variables are shown in Table (40). At a significance level of (0.001), the impact coefficient value of (0.313) clearly indicates acceptance of the current hypothesis.

b. Sub-hypothesis 2: This hypothesis indicates a positive relationship between the dimension of institutional communication regarding green practices and customer behavior from the perspective of employees in some branches of government banks (Rafidain Bank, Rasheed Bank, and the Trade Bank of Iraq (TPI) in Najaf Governorate). The results of the impact coefficient between the



variables are shown in Table (40). At a significance level of (0.001), the impact coefficient value of (0.404) clearly indicates acceptance of the current hypothesis.

4. Conclusions and Recommendations

4.1 CONCLUSIONS

1. Green banking marketing contributes to strengthening customer behavior in the branches of the banks under study by highlighting the importance of environmentally responsible banking practices and their role in shaping customers' responses to banking services.
2. Environmentally friendly green activities represent an important dimension of green banking marketing, as they reflect banks' commitment to environmental responsibility and are associated with customer behavior toward banking services in the branches under study.
3. The use of the internet, applications, and digital technologies to facilitate environmentally friendly banking services represents an area that requires further attention in the banks under study. Strengthening these practices may support the delivery of more accessible and environmentally responsible banking services.
4. Institutional communication about green practices is an important component of green banking marketing, as it helps banks communicate their environmental initiatives and raise customer awareness of environmentally friendly banking services. Developing clear and appropriate communication programs may strengthen customers' understanding of these practices and their responses to the services offered.
5. Press conferences appear to be a less prominent channel for communicating environmental initiatives in the banks under study. Diversifying communication methods may help these banks enhance media awareness of their environmentally friendly activities and initiatives.
6. Social media can serve as a communication channel for raising customer awareness of green banking practices. Therefore, banks need to consider how effectively these platforms communicate their environmental initiatives and engage customers with environmentally friendly banking services.

4.2 Recommendations

1. The banks studied should prioritize marketing green services due to their impact on customer purchasing behavior.
2. The management of the banks studied should capitalize on the existing customer desire for green banking services and take appropriate measures to encourage their purchase.
3. Banks should increase their efforts to adopt the internet, applications, and digital technologies to facilitate the provision of environmentally friendly services.
4. The research emphasizes the importance of the banks studied focusing on effective communication with customers and adopting this as a fundamental principle in marketing green banking services.
5. Promotional efforts should be increased to showcase environmentally friendly services to the public through seminars, press conferences, and the allocation of appropriate financial resources.
6. The research recommends that bank management adopt green banking marketing via social media as a permanent strategic option within their marketing plans, given its effective role in influencing customer behavior and enhancing their purchasing decisions.

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Figure and tables

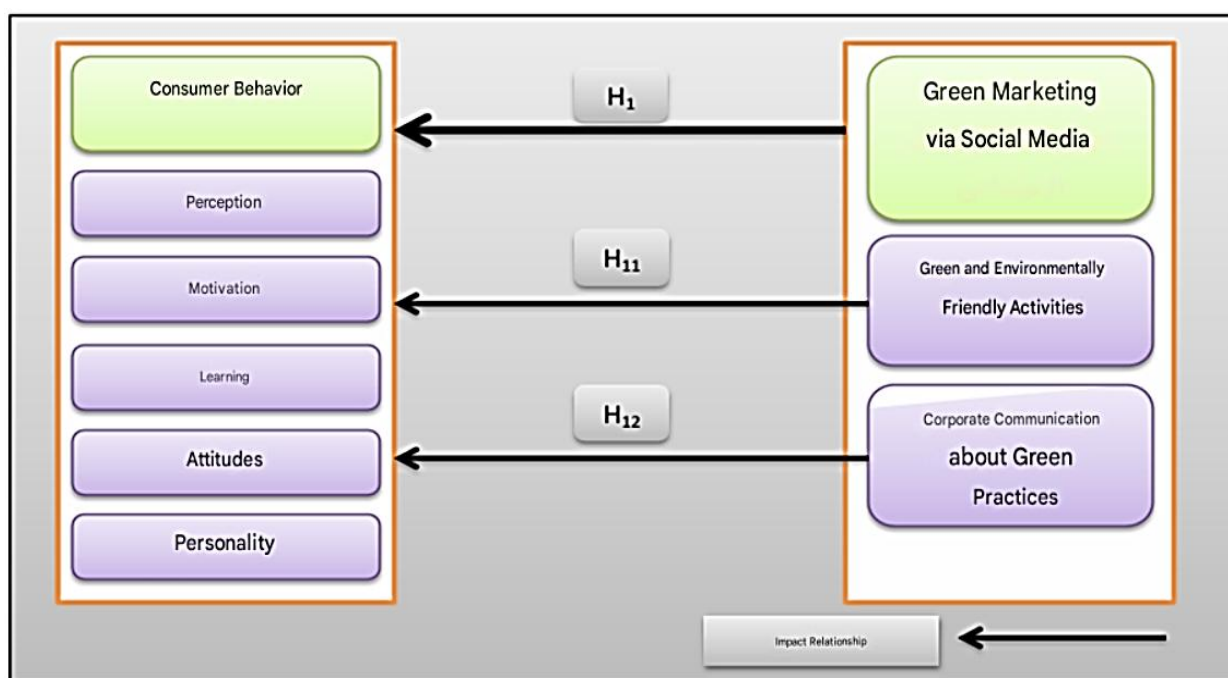


Figure (1) Hypothetical research plan.

Source: Prepared by the researcher.

Table (1) Studies that were relied upon in selecting the sub-dimensions of the main variables.

T	The main variable	Sub-dimensions	Studies that were relied upon in selecting the dimensions
1	Green Banking Marketing	•Environmentally friendly green activities. •Corporate communication about green practices.	(Samaka and Al-Ameedi, 2022), (Gunawardena & Jayarathne, 2020)
2	Customer behavior	- Perception. - Motivation. - Learning. - Attitudes. - Personality.	(Jarallah, 2025), (Lafta, 2022)

Source: Prepared by the researcher.

Table (2): Branches of the banks included in the research sample, number of distributed questionnaires, and percentage of returned questionnaires valid for statistical analysis in the banks studied.

Bank name	Bank branches	Total number of forms distributed	Number of valid forms	Invalid forms	Forms valid for analysis %
Rafidain Bank	Rafidain Bank - Al-Amir District Branch 334	35	31	4	%19.87
	Rafidain Bank - Najaf Branch 007	56	46	10	%29.48
	Rafidain Bank – Muslim Bin Aqeel Branch 329	30	20	10	%12.82
Al-Rasheed Bank	Al-Rasheed Bank – Al-Sadiq Street Branch	10	6	4	%3.84
	Al-Rasheed Bank – Al-Rawda Branch	27	25	2	%16.02
	Al-Rasheed Bank – Kufa Branch	22	18	4	%11.53
Iraqi Trade Bank	Najaf branch	15	10	5	%6.41
Total		195	156	39	%100

Source: Prepared by the researcher based on the research findings.

Table (5): Main Research Variables and Questionnaire Reliability

variable	variable symbol	Distance	Dimension symbol	Number of paragraphs	Cronbach's alpha coefficient for dimensions	Cronbach's alpha coefficient for variables
Green Banking Marketing	Gbmsm	green, environmentally friendly activities	EFGA	4	.822	.830
		Corporate communication about green practices	CCAGP	4	.810	
Customer behavior	Cob	perception	Pece	4	.882	.792
		Motives	Mot	4	.855	
		Learning	Lear	4	.781	
		Attitudes	Attitu	4	.794	
		Personality	Pers	4	.844	

Source: Prepared by the researcher using SPSS version 26.

Table (6): Indicators and matching rule for confirmatory factor analysis models

T	Index	The base
1	Comparative Fit Index (CFI)	CFI ≥ 0.90
2	Normed Fit Index (NFI)	NFI ≥ 0.90
3	Goodness of Fit Index (GFI)	GFI ≥ 0.90
4	Root Mean Square Error of Approximation(RMSEA)	RMSEA ≤ 0.08

The source was prepared by the researcher based on

Source :Hair, J., Hult., Ringle, C. & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (PLS-SEM. Los Angeles: Sage

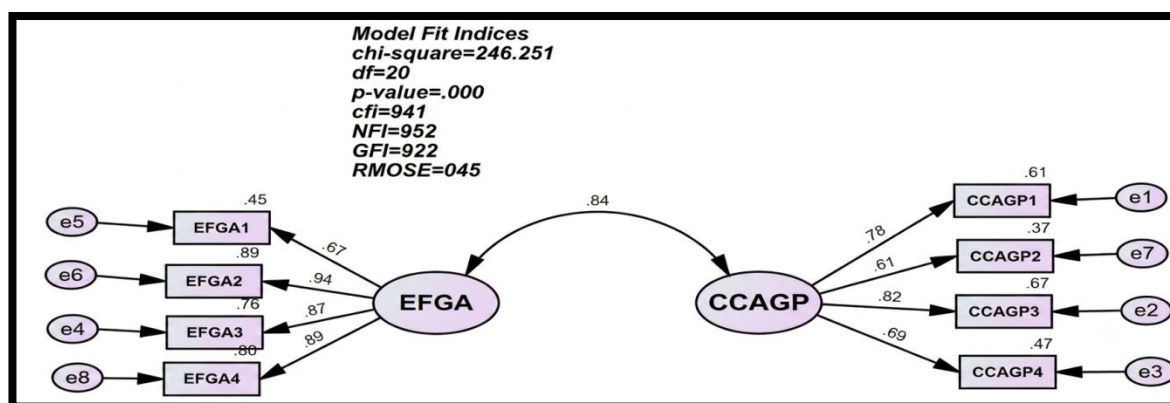


Figure (2) Confirmatory Factor Analysis for the Green Banking Marketing Variable

Source: Prepared by the researcher using the AMOS v.24 statistical software

Table (7) Factor Analysis Saturations for the Green Banking Marketing Variable

T	Paragraphs	S.R.W	S.E	C.R	P
1	The bank uses the internet, applications and digital technologies to facilitate the provision of environmentally friendly services.	.673	.136	9.709	0.001
2	The bank invests its money in projects that produce environmentally friendly materials, such as organic materials in agriculture, and in clean energy projects.	.942	.127	8.352	0.001
3	The bank offers low-interest loans to individuals wishing to use renewable energy sources (such as solar power systems).	.875	.117	6.812	0.001
4	The bank offers low-interest loans to individuals wishing to purchase clean energy vehicles (electric and gas).	.894	.081	6.197	0.001
5	Television, print and electronic advertisements reflect the bank's environmentally friendly image and its commitment to a clean environment.	.783	.155	7.700	0.001
6	The bank encourages raising environmental awareness among customers through the implementation of advertising campaigns using social media.	611.	.059	7.076	0.001
7	The bank participates in public environmental events and exhibitions to promote its environmentally friendly services.	823.	.056	8.381	0.001
8	The bank holds press conferences to inform the media about the progress of its environmental activities.	.695	.044	4.471	0.001

Source: Prepared by the researcher using AMOS v.24 software

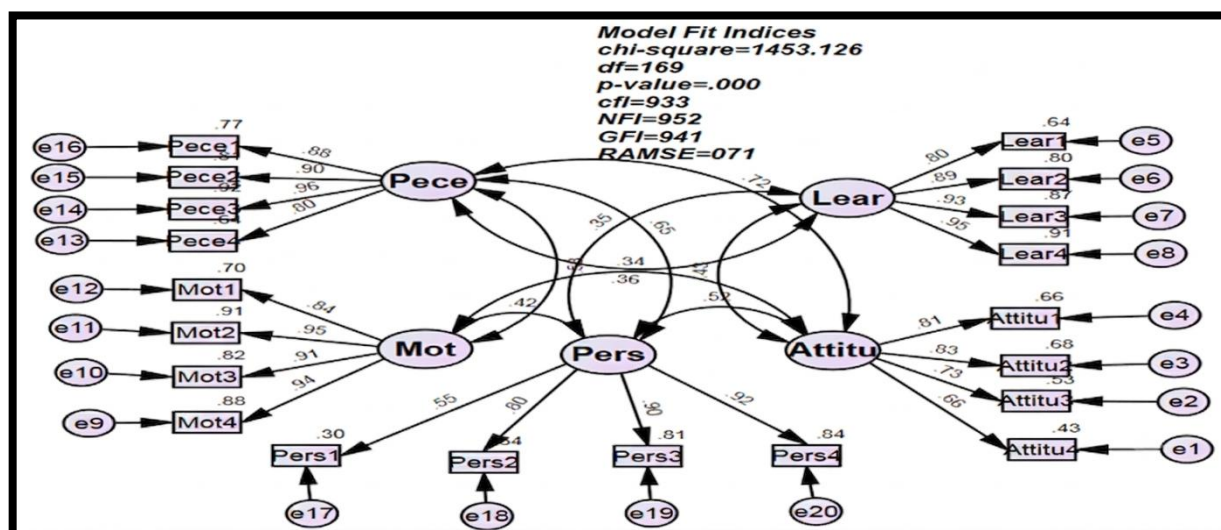


Figure (3) Confirmatory Analysis of Customer Behavior Variable

Source: Prepared by the researcher using the AMOS v.24 statistical software

Table (8) Factor Analysis Saturations for Customer Behavior Variable

T	Paragraphs	S.R.W	S.E	C.R	P
1	The customer's decision to acquire green banking services depends on their conviction and impressions towards those services.	.883	.097	8.192	0.001
2	Customer perception depends on the accuracy and credibility of the information available about green banking services.	.902	.178	10.109	0.001
3	The digital marketing approach adopted by the bank contributes to increasing customer awareness of green banking services.	.962	.200	11.349	0.001
4	The customer interprets the information obtained about the bank and its green banking services in light of their mental image.	.804	.069	14.079	0.001
5	customers tend to choose green banking services based on their positive characteristics.	.844	.127	11.932	0.001
6	customers opt for green banking services when they have complete information about them.	.952	.060	7.858	0.001
7	The customer's need for green banking services is the main motivation for purchase.	.915	.116	7.370	0.001
8	customers prefer to acquire green banking services that satisfy their financial needs.	.940	.061	6.073	0.001
9	Customer awareness of green banking services influences their purchasing decisions.	.633	.042	6.285	0.001
10	Repurchasing green banking services enhances the consumer's experience with those services.	.902	.070	8.102	0.001
11	Customer behavior towards acquiring green banking services changes based on the opinions of other customers.	.942	.062	7.247	0.001
12	The decision to adopt green banking services depends on customers' past experiences.	.863	.047	5.939	0.001
13	Decisions to purchase green banking services are influenced by customer attitudes and trends.	.811	.038	4.637	0.001
14	Social media is contributing to changing customer attitudes towards purchasing green banking services.	.835	.035	5.973	0.001
15	Customer sentiment influences their evaluation of the bank and its green services.	.734	.049	7.087	0.001

16	Customer beliefs contribute to building a specific attitude towards the bank and its green services.	.661	.045	4.904	0.001
17	Customer environmental awareness and openness determine the nature of the green banking services to be acquired.	.551	.090	7.950	0.001
18	A customer profile study determines the type of green banking services that should be provided.	.802	.069	8.071	0.001
19	The bank displays information about green banking services on social media based on the consumer's profile.	.902	.036	4.290	0.001
20	The consumer's personality contributes to choosing the appropriate green banking service.	.923	.032	6.869	0.001

Source: Prepared by the researcher based on the AMOS v.24 statistical software.

Table (9) Descriptive Analysis of the Environmentally Friendly Green Activities Dimension

T	Paragraphs	arithmetical mean	standard deviation	Relative importance	Sort by importance
1	The bank uses the internet, applications and digital technologies to facilitate the provision of environmentally friendly services.	3.519	1.247	0.704	4
2	The bank invests its money in projects that produce environmentally friendly materials, such as organic materials in agriculture, and in clean energy projects.	3.891	1.063	0.778	2
3	The bank offers low-interest loans to individuals wishing to use renewable energy sources (such as solar power systems).	3.808	1.170	0.762	3
4	The bank offers low-interest loans to individuals wishing to purchase clean energy vehicles (electric and gas).	3.988	1.181	0.798	1
EFGA total after		3.802	1.178	0.760	

Source: Prepared by the researcher using SPSS version 26.

Table (10) Descriptive Analysis of the Institutional Communication Dimension Regarding Green Practices

T	Coding	arithmetical mean	standard deviation	Relative importance	Sort by importance
5	Television, print and electronic advertisements reflect the bank's environmentally friendly image and its commitment to a clean environment.	3.737	1.186	0.747	3
6	The bank encourages raising environmental awareness among customers through the implementation of advertising campaigns using social media.	3.827	1.236	0.765	2
7	The bank participates in public environmental events and exhibitions to promote its environmentally friendly services.	3.994	1.096	0.799	1
8	The bank holds press conferences to update the media on the progress of its environmental activities.	3.609	1.050	0.722	4
CCAGP total after		3.792	1.524	0.758	

Source: Prepared by the researcher using SPSS version 26.

Table (11): Dimensions and Levels of Green Banking Marketing via Social Media

Distance	arithmetical mean	standard deviation	Relative importance	Sort the paragraphs by importance
green, environmentally friendly activities	3.802	1.178	0.760	1
Corporate communication about green practices	3.792	1.524	0.758	2

Source: Prepared by the researcher using SPSS version 26.

Table (12) Descriptive Analysis of the Perception Dimension

T	Paragraphs	arithmetic mean	standard deviation	Relative importance	Sort by importance
1	The customer's decision to purchase green banking services depends on their conviction and impressions of those services.	3.144	1.202	0.629	3
2	Customer perception depends on the accuracy and credibility of the information available about green banking services.	3.038	0.761	0.608	4
3	The bank's digital marketing efforts contribute to increasing customer awareness of green banking services.	3.904	0.982	0.781	1
4	The customer interprets the information obtained about the bank and its green banking services in light of their mental image.	3.561	1.026	0.712	2
Perc total after		3.412	0.723	0.682	

Source: Prepared by the researcher using SPSS version 26.

Table (13) Descriptive Analysis of the Motivation Dimension

T	Paragraphs	arithmetic mean	standard deviation	Relative importance	Sort by importance
5	Customers tend to choose green banking services based on their positive characteristics.	3.204	0.793	0.641	3
6	Customers will choose green banking services when they have complete information about them.	3.046	0.866	0.609	4
7	The customer's need for green banking services is the main motivation for purchasing.	3.488	0.827	0.698	2
8	Customers prefer to acquire green banking services that satisfy their financial needs.	3.771	0.830	0.754	1
Total Mot after		3.377	0.957	0.675	

Source: Prepared by the researcher using SPSS version 26.

Table (14) Descriptive Analysis of the Learning Dimension

T	Paragraphs	arithmetic mean	standard deviation	Relative importance	Sort by importance
9	Customer awareness of green banking services influences their purchasing decisions.	4.026	0.8497	0.805	1
10	Repurchasing green banking services enhances the customer's experience with those services.	3.227	0.836	0.645	2
11	Customer behavior towards acquiring green banking services changes based on the opinions of other customers.	3.042	0.7724	0.608	4
12	The decision to adopt green banking services depends on customers' past experiences.	3.128	0.8325	0.626	3
Lear total after		3.356	0.592	0.671	

Source: Prepared by the researcher using SPSS version 26.

Table (15) Descriptive Analysis of the Attitudes Dimension

T	Paragraphs	arithmetic mean	standard deviation	Relative importance	Sort by importance
13	Decisions to purchase green banking services are influenced by customer attitudes and trends.	3.224	0.808	0.645	3
14	Social media is contributing to changing customer attitudes towards purchasing green banking services.	3.051	1.002	0.610	4
15	Customer sentiment influences their evaluation of the bank and its green services.	3.417	1.260	0.683	2
16	Customer beliefs contribute to building a specific attitude towards the bank and its green services.	4.090	0.860	0.818	1

Overall Attitude After	3.445	0.751	0.689	
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Source: Prepared by the researcher using SPSS version 26.

Table (16) Descriptive Analysis of the Personality Dimension

T	Paragraphs	arithmetic mean	standard deviation	Relative importance	Sort by importance
17	Customer environmental awareness and openness determine the nature of the green banking services to be acquired.	4.103	1.036	0.821	1
18	A customer profile study determines the type of green banking services that should be provided.	3.647	1.052	0.729	3
19	The bank displays information about green banking services on social media based on the customer's profile.	3.724	0.920	0.745	2
20	The consumer's personality contributes to choosing the appropriate green banking service.	3.455	1.126	0.691	4
Pers total after		3.732	0.790	0.746	

Source: Prepared by the researcher using SPSS version 26.

Table (17): Dimensions and Levels of the Customer Behavior Variable

Distance	arithmetic mean	standard deviation	Relative importance	Sort the paragraphs by importance
Total after perception	3.412	0.723	0.682	3
Total after motives	3.377	0.957	0.675	4
Total after learning	3.356	0.592	0.671	5
Total after situations	3.445	0.751	0.689	2
Total after personality	3.732	0.790	0.746	1

Source: Prepared by the researcher using SPSS version 26.

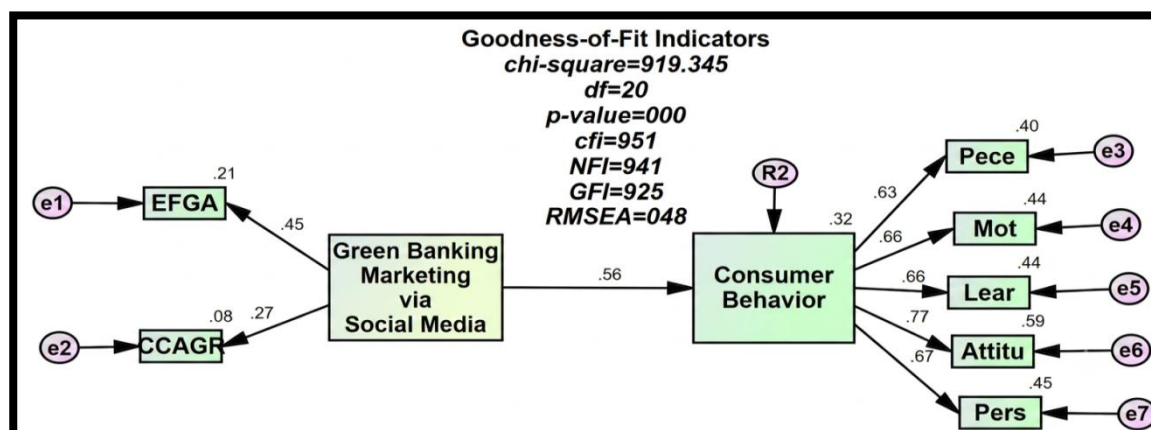


Figure (4) shows the impact factor of green banking marketing on customer behavior.

Source: Prepared by the researcher using AMOS v.24 software.

Table (18) Impact Coefficient between Green Banking Marketing via Social Media and Customer Behavior

The path			S.R.W	S.E	C.R	Coefficient of determination R ²	P
Green Banking Marketing	<--	Customer behavior	.564	.069	11.511	0.32	0.001

Source: Prepared by the researcher using AMOS v.24 software

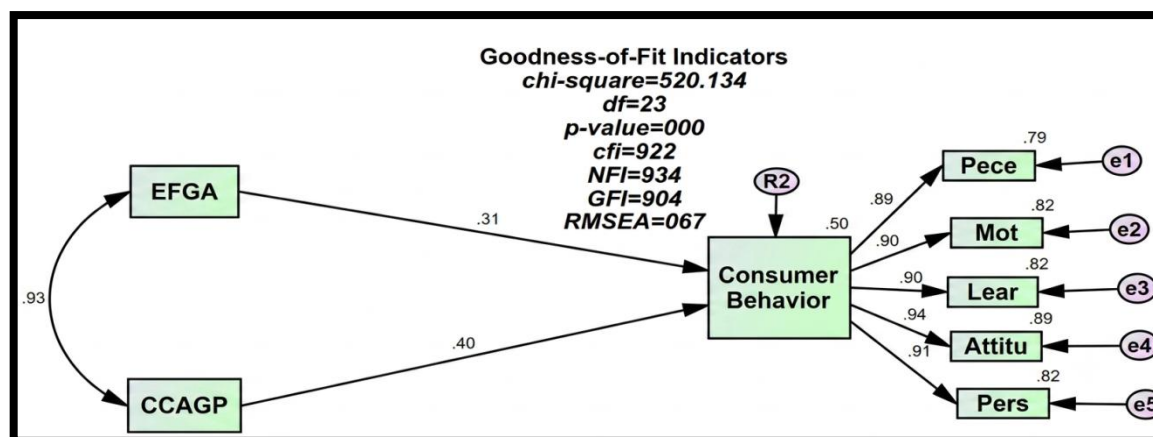


Figure (5) shows the structural equation model for testing the sub-hypotheses of the impact of green banking marketing dimensions on customer behavior.

Source: Prepared by the researcher using AMOS v.24 software.

Table (19) shows the results of the impact between the dimensions of green banking marketing via social media and customer behavior.

The path			S.R.W	S.E	C.R	Coefficient of determination R ²	P
EFGA	<---	Customer behavior	.313	.048	8.554	0.503	0.001
CCAGP	<---	Customer behavior	.404	.062	9.467		0.001

Source: Prepared by the researcher using AMOS v.24 software