The impact of smart cards on attaining perceived service quality
A study conducted on a selection of commercial banks in Iraq.

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Abstract:
This study focused on the impact of smart cards on perceived service quality in Iraqi commercial banks. It aimed to determine the extent to which these banks can provide banking services through smart cards and assess the level of perceived service quality. The study aimed to identify correlations and influences between the research variables and determine how the use of smart cards can contribute to customer-perceived quality of service. The findings revealed several conclusions, including the insufficiency of automated teller machines (ATMs) and electronic points of sale (POS), which are limited to withdrawals, balance inquiries, and minimal deposits. The banks in the research sample also faced challenges in the technical and marketing aspects, highlighting the need for the development and redesign of smart card services. To ensure the provision of high-quality electronic services that meet customer needs and desires, the study provided recommendations. These recommendations emphasized the allocation of sufficient financial resources by bank management to increase the number of ATMs and POS systems, as well as expanding the range of services offered through ATMs. Additionally, the study emphasized the importance of bank management focusing on the technical and marketing aspects by establishing specialized technical units dedicated to developing and redesigning electronic products and services based on market research.
Keywords: smart cards, perceived service quality.

Introduction
Iraqi banks are operating in a time of technological advancement, particularly in the field of information and communications technology. Smart cards have emerged as a crucial component of the modern era, offering speed, convenience, and security in financial transactions between banks and their customers. This replaces traditional payment methods. In order for banking institutions to effectively carry out their functions, they must offer advanced banking services that meet the expectations of their customers. This is important for building a positive reputation among customers and increasing their market share. Therefore, Iraqi commercial banks should set themselves apart from their competitors by providing banking services through smart cards, which will enable them to deliver a perceived high-quality service.

Chapter one
Methodology of research and previous studies
Methodology of research
- ## Research problem
The research problem revolves around the importance of banks offering high-quality banking products and services that cater to the needs of customers. In order to stay competitive, increase market share, and maximize profits, it is crucial to focus on service quality, as it greatly influences customer behavior towards the bank. To achieve this, it is necessary for Iraqi commercial banks to adopt modern methods such as providing banking services through smart cards. Based on this, the research problem can be defined by addressing the following questions:
١. .Have Iraqi commercial banks been successful in implementing banking services via smart cards?
.٢. What is the level of perceived service quality provided by Iraqi commercial banks?
٣. .Is there a correlation between smart cards and perceived service quality?
٤. Does the use of smart cards have an impact on perceived service quality?

Research significance:

The significance of the research can be outlined as follows:

١. Understanding the level of interest and capacity of Iraqi commercial banks in utilizing smart cards to attain a perceived high quality of service.

٢. Enhancing the motivations of Iraqi commercial banks to address the issue of neglecting the significance of perceived service quality, as it contributes to maximizing their profits and improving their standing among other institutions.

٣. Facilitating financial transactions between the bank and the customer by offering round-the-clock smart card services Research aims:

The objectives of this study are as follows:

1. To assess the impact of smart card provision on enhancing customer-perceived service quality.

2. To evaluate the perceived service quality offered by commercial banks in Iraq.

3. To pinpoint the key obstacles that Iraqi commercial banks encounter in adapting to the advancements in information and communications technology.

4. To elucidate the correlation and causal relationships between smart card services and customer-perceived service quality in Iraqi commercial banks.

Research hypothesis:

The exploration is grounded on the following main suppositions

- There's a significant correlation between smart card services and perceived service quality at a significant position (0.05).

- There's a significant influence relationship between smart card services and perceived service quality at a significant position (0.05).

The research sample:

The Iraqi banking comprises 16 public and private commercial banks, as per the Central Bank of Iraq's annual report for 2019. A representative sample of four banks was chosen. The research sample consisted of employees providing electronic banking services in these banks. The research population was 167 individuals, with a 75% response rate, and the sample included various customers and smart card service beneficiaries who dealt with these banks, numbering 125. **Table (1) Banks of the research sample**

	Bank name	Research community	The research sample	Percentage %
1	Rafidain bank/Governmental	70	50	72
2	Rasheed Bank/Governmental	62	40	65
3	Gulf Commercial bank/private bank	20	20	100
4	Iraqi Middle East Investment Bank/Private bank	15	15	100
	Total	**167**	**125**	**75%**

Previous studies:

- According to a study by Ismail et al. in 2013, titled "Smart Cards and Their Role in Reducing Banking Risks - An Exploratory Study of a Sample of Rafidain Bank Customers at Al Khadra Branch," the aim of this study is to explain the function, impact, and importance of smart cards in reducing banking risks. The most important conclusions of the study indicate that there is an effect of smart cards in reducing banking risks. The researchers recommend the need for applying information technology tools in banking work to simplify the process of using smart cards for a large number of individuals and institutions.- Al-Bahi (2016) conducted a study titled "The impact of electronic banking service quality on customer satisfaction: A field study on Jordan Islamic Bank in Amman, Jordan." This research aimed to determine how the quality of electronic banking services, specifically ease of use, time-saving, confidentiality, and security, impact customer satisfaction. The study concluded that the

overall level of electronic banking service quality was high, and it recommended maintaining and monitoring the high-quality dimensions of these services on an ongoing basis.

Chapter two

The theoretical framework of smart card service and perceived service quality

Smart Cards

Smart cards emerged as a solution to the issues associated with traditional credit cards that had magnetic stripes. They were invented by French electronics engineer Ronald Moreno in 1974, who also created the electronic payment device (TPE) used by merchants accepting these cards. Their usage began in 1980s before Philips, and became widespread thereafter (Radwan, 2014: 59). These cards are considered one of the latest types of non-cash payment tools due to their versatility, ability to store large amounts of information, and the holder's reduced risk of fraud compared to other cards (Hashifa, 2014: 162). They are commonly known as cards with an electronic chip that offer more features and capabilities than traditional cards with magnetic stripes. They use advanced and complex encryption techniques for high protection against counterfeiting. They can be used for multiple purposes and functions, such as a loyalty and credit card, storing value, and serving as a repository for storing information. Personal cards (Moussa, 2007: 127), and Ahmed defined them as: plastic cards equipped with an electronic chip that can store specific amounts of data, and be used for online payment and purchasing from traditional markets (Ahmed, 2008: 43 According to the researcher, a smart card is an electronic device used for conducting financial transactions such as withdrawing, depositing, and transferring money. It contains a tiny chip embedded on one side that serves as a microprocessor. When the card is swiped through a card reader, the data on the card is accessed, allowing the transaction to be processed.

Types of smart cards:

The issuance of smart cards is classified into several categories based on their purpose:

Credit Cards: These are plastic cards that contain information such as the holder's name, date of issue, and expiration date. The cardholder is given a unique personal identification number (PIN) and can be used to withdraw money and make purchases from the merchants that accept it. The cardholder is granted a line of credit from the issuing bank, which allows them to obtain goods and services by presenting the card to the merchant. The value of the purchases is then paid by the issuing bank, and the bank receives interest in return for providing the cardholder with a financial credit. Banks issue these cards after verifying the customer's financial solvency or requesting a guarantee (Hejazi, 2008: 489-490). The cardholder must pay the value of the services obtained to the bank within a predetermined period from the date of receipt of the purchase list (Al-Shammari, 2015: 47). Credit cards are used as a tool of loyalty and credit, as they allow the cardholder to obtain goods and services and pay for them at a later date (Al-Ansari, 2017: 53).

The most prominent types are:

A - The Visa Card: It is one of the most prevalent cards around the globe. It is issued by the International Visa Organization, which is headquartered in San Francisco, California, in the United States of America. Financial and banking institutions are members of this organization and contract with it in order to issue these cards, which are subject to the terms and conditions of their issuance. The Visa Silver Card has relatively low credit limits and is granted to customers who meet the minimum requirements for issuing a card. On the other hand, the Golden Visa Card has high credit limits and is granted to high-net-worth customers, along with providing its holder with life insurance, health insurance, and numerous international services such as priority reservations in travel agencies and hotels (Radwan, 2014: 89-90).B - Master Card: These cards are less widespread than the Visa Card, and the headquarters for their issuance is located in St. Louis in the United States of America. They provide similar services to the Visa Card, and are somewhat similar to them in terms of organization and management. Financial and banking institutions participate in its membership and contract with them in order to issue them (Hashifa, previous source: 163 Debit cards: These cards are linked to customers' bank accounts, and they do not provide any credit to the user. They serve as a means of payment for the purchase of goods or services by debiting the account balance. The card data is read using a microprocessor, and the transaction is processed through the issuing bank. If the balance allows for the transaction, it is completed automatically, and the payment is added to the merchant's account. However, if the balance does not allow the transaction, the device will display an error message, and the purchase will not be completed (Al-Qalyoubi, 2007: 66-67)ATM cardThis bank-issued card can be obtained either directly from the bank or through a partner company. It allows customers to access their account balance, make deposits, and withdraw cash from the bank's ATMs. Additionally, they can request a mini-statement of their balance and use ATMs belonging to other banks that are part of the same network, provided

they are willing to pay a fee. The cardholder is entitled to a maximum cash withdrawal limit, which can be exceeded for an additional charge. To use the card, the customer inserts it into the ATM and enters their personal identification number (PIN). The machine then verifies the PIN and presents the user with a menu of options using the keyboard, which it can select by pressing the "accept" key (Hejazi, 2008: 486).A - Prepaid card: This type of card allows consumers to purchase and load it in advance without needing an account with the issuing bank. It can be used internationally and has a specific amount with a maximum spending limit (Shafi, 2007: 231). B - Debit card: This card is used for purchases and its usage depends on the availability of funds in the customer's linked bank account. If the purchase value exceeds the account balance, the transaction is declined. In case of sufficient funds, the purchase value is deducted from the account balance. The card (Elias, 2004: 225).

Perceived service quality:

The quality of service is closely linked to customer requirements and expectations, as the service provided must have unique characteristics that distinguish it from others, allowing the customer to judge the extent of the provider's ability to meet their current and future needs and desires (Al-Saleh, Al-Sarimi, 2015: 76). To compete effectively and retain customers, banks must provide high-quality banking services. Enhancing service quality can increase customer confidence, satisfaction, loyalty, and retention. To adapt to threats and seize opportunities, banks should be aware of the specific dimensions of evaluating service quality. Then, they should focus on providing performance according to these dimensions (Alawneh, 2013:16).Service quality is crucial to the success of any service organization, as it interacts closely with various aspects, and gives customers the opportunity to evaluate services by comparing what they received with the services required in exchange for what they gave (Asgari, etal, 2015:31). According to Alawi (2008, 47), quality of service means "meeting or exceeding the customer's expectations." Therefore, it is considered that service quality is one of the main factors for building the customer's perceived value, which influences purchase intention, market share, and profitability.Moreover, the quality of service plays a major role in attracting customers and gaining their loyalty and profitability (Asgari etal, 2015: 28). Quality of service is viewed differently from both the service provider (the bank) and the beneficiary (customer) perspectives. From the service provider's perspective, it means conformity of the service to the standards previously set for it. From the customer's perspective, it means the compatibility of this service with their expectations and uses (Majid, Al-Zayadat, 2015: 18). Everyone knows that perceived service quality is a measure of the extent to which the level of service provided matches customer expectations (Baskar, Ramesh, 2010:45). According to Chieh (2019, 3), it is defined as "the customer's perception of the overall quality or superiority of the product or service in relation to its intended purpose compared to other alternatives.".(According to the researcher, perceived service quality is the extent to which a service satisfies customers' anticipations by fulfilling their needs and wants with great proficiency and productivity.

Criteria for measuring perceived service quality:

The customer can evaluate the quality of the banking service provided and form their perception of it through a set of criteria that are of relative importance to them. These criteria include:

١. Dependency: This is represented by the guarantees provided by the bank and its ability to meet deadlines for completing work, allowing the customer to rely on the bank.

٢. Physical evidence: This includes tangible things in the work environment, such as modern technical devices, appropriate physical facilities for the type of service provided, and the design of buildings, as well as employees with tidy uniforms and good behavior (Al-Khalidi, 2012: 27).

٣. Reliability: This refers to the bank's ability to fulfill its promises correctly and provide a service that meets the customer's needs and desires while being as risk-free as possible.

٤. Response: This refers to the bank's intention and enthusiasm to help customers by providing the required services, which is determined by the bank's organizational flexibility and productivity (Belghis, et al, 2015: 2).

٥. Performance: This refers to the levels at which the service characteristics operate (low, medium, high, very high).

٦. Accessibility: Obtaining the required service without obstacles, which may constitute an obstacle to obtaining the service.

٧. Timing: The speed at which the service is provided and providing it at the right time, which is one of the important criteria for the quality of banking service from the customer's point of view (Al-Saleh, Al-Sarimi, 2015: 80).

٨. Efficiency: The bank's possession of employees who have knowledge, skill, and technical ability, and the extent to which the customer is convinced of the efficiency of the service provided and its effectiveness in conveying

confidence to the customer (Proctor, 2002:48).The relationship between banking services using smart cards and perceived service quality:Smart cards are the latest type of bank cards and are considered the most secure. They contain microprocessors or computer chips that store all the information about the cardholder, such as their name, address, phone number, card number, and the name of the issuing bank. Customers can load their cards with the amount they want from their bank account and withdraw it anytime and anywhere using automated teller machines (ATM). These cards have a large data storage capacity compared to those with magnetic stripes. They also offer flexibility in use as they combine the advantages of traditional paper money and electronic payment cards. Modern research has shown that the quality of smart card services can impact customers' behavior towards a bank based on their assessment of the service quality. Therefore, banks must allocate the necessary resources to ensure the provision of high-quality smart card services (Al-Khatib, 2014: 55). Additionally, Carlson and O'Cass (2010: 114) stated that customers compare the perceived service they receive with the service they expected. If the perceived service is less than expected, they will feel dissatisfied and disappointed. However, if the perceived service is greater than expected, the customer's loyalty to the bank increases (Abu Alfa, 2002: 513).According to the researcher, providing banking services through a smart card has numerous benefits for both the bank and its customers, merchants, and society as a whole, such as saving time and effort, ensuring security, minimizing costs, making it easy to carry and use, and other benefits. Therefore, it is essential for banks to offer them with appropriate quality at a reasonable price. This will help to satisfy customers, enabling the bank to retain existing customers, attract new ones, increase the number of smart card customers, and achieve maximum profits by providing high-quality smart card services to their customers.

Chapter three:

The practical framework for smart card service and the perceived quality of service:

An introductory overview of Iraqi commercial banks

- Rafidain Bank, it was established pursuant to Law No. (33) of 1941 and started operating on 5/9/1941. In 1964, it underwent multiple stages of merger that included the commercial banks operating in Iraq. These banks were unified in 1974, making Rafidain Bank the sole commercial bank in Iraq at the time. It continued to work alone in the field of banking until 1988 when another government-owned bank, Rashid Bank, was established. In 1998, Rafidain Bank was transformed into a public company owned by the state in accordance with the Public Companies Law No. (22) of 1997. This was done to support the national economy in the field of commercial banking, invest money, and provide financing to various sectors in line with development plans and the state's economic, financial, and monetary policies. The number of bank branches is currently (164) branches inside Iraq, in addition to (7) branches abroad in Cairo, Beirut, Abu Dhabi, Bahrain, Sanaa, and Amman. https://www.rafidain-bank.gov.iq(.

- Rasheed Bank is the second biggest government-owned bank in Iraq. It was formed in 1988 under Law No. (52) and transformed into a public corporation according to the Public Companies Law No. (22) of the year. The bank boasts (151) branches spread across Iraq. Its goal is to contribute to the development of the Iraqi economy by providing top-notch, integrated banking services that adhere to international standards. Its vision is to be a part of Iraq's leading integrated financial group, earning the trust and respect of both its clients and rivals.)http://rasheedbank.gov.iq/ar.

- Gulf Commercial Bank began operating on April 1, 2000, following its establishment in 1999. The bank is allowed to carry out comprehensive banking activities according to Central Bank of Iraq Law No. (64) of 1976. As of 2019, the bank has 21 branches, with seven in Baghdad and fourteen in other governorates. This information is available in the bank's 2019 annual report.

- The Iraqi Middle East Investment Bank was established in 1983, and it commenced operations through its main branch on 5/8/1994. As of 2018, the bank had a total of 18 branches, including six branches located in Baghdad and twelve branches spread across other governorates. (Annual Report of the Iraqi Middle East Investment Bank, 2018: 12).

The main questions of the questionnaire were analyzed using descriptive statistics. Frequency distributions, percentages, mean values, standard deviations, coefficients of variation, and levels of importance were calculated for all items on the questionnaire. The results were presented in tables and summarized as follows:

The findings of the study were obtained from the participants of the research sample and are presented in the following tables:

Table (2) Smart cards

	Smart cards	Coefficient of variation	Standard deviation	Arithmetic mean	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Measuring
1	Smart cards enhance the efficiency of financial transactions for banks while also minimizing the time, effort, and expenses for customers.	20.18	0.83	4.10	1	16	20	133	80	Recurrence
					0	6.4	8	53.2	32	Percentage %
2	ATMs and electronic POS services make use of smart cards more convenient by covering large areas.	46.71	1.17	2.50	50	103	31	55	11	Recurrence
					20	41.2	12.4	22	4.4	Percentage %
3	Providing bank customers with various smart	20.44	0.79	3.87	0	24	24	162	40	Recurrence

	cards increases their value.									
					0	9.6	9.6	64.8	16	Percentage %
4	Allowing banks to grant loan facilities via smart cards allowed them to keep their current clients and attract new ones.	22.89	0.89	3.90	2	20	41	125	62	Recurrence
					1	8	16.4	50	24.8	Percentage %
5	Smart card holders have more flexibility in selecting the type of services they can use.	25.75	0.96	3.72	1	40	33	130	46	Recurrence
					0	16	13.2	52	18.4	Percentage %
The result		15.99	0.58	3.62	54	203	149	605	239	Recurrence
					4	16	12	48	19	Percentage %

Source: Prepared by the researcher, based on the results of the statistical analysis program spss-26. According to Table 2, the outcomes for the axis "Banking Services via Smart Cards" heading towards "Agree" are evident for the entire research sample. The mean value is 3.62, and the responses are in good harmony with one another. This is supported by the deviation value. The standard deviation and coefficient of variation are 0.58

and 15.99, respectively. The final result for the axis is 67%, which is distributed between "Strongly Agree" and "Agree," and this is the highest percentage of agreement. The graph (1) depicts this.Regarding the statistical measures related to the second axis of our study, which evaluates perceived service quality, the table below presents the frequencies, percentages, average values, standard deviations, coefficient of variation, and direction of the research sample.

Coefficient of variation	Standard deviation	Arithmetic mean	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Measuring	Perceived service quality	
53.2	1.33	2.5	53	106	15	65	11	Recurrence	The bank develops its electronic offerings and solutions in response to the requirements and aspirations of its customers.	1
			21	42	6	25	4	Percentage %		
28.42	1.08	3.8	9	49	38	116	38	Recurrence	Customers are heard by the employees in the bank.	2
			4	20	15	46	15	Percentage %		
30.41	1.08	3.55	8	47	38	114	43	Recurrence	Banking services are available electronically and require no intricate procedures or repetitive tasks.	3
			3	19	15	46	17	Percentage %		
62.30	1.57	2.52	50	115	7	60	18	Recurrence	The bank's advertised electronic	4
			20	46	3	24	7	Percentage %		

46.62	1.13	2.42	45	127	17	50	11	التكرار	banking services match the reality.	
			45	127	17	50	11	التكرار	The bank provides the necessary electronic service on the designated date without encountering any hindrances.	5
46.62	1.13	2.42	18	51	7	20	4	Percentage %		5
41.9	1.24	2.96	165	444	115	405	121	Recurrence	The result	
41.9	1.24	2.96	13	36	9	32	10	Percentage %	The result	

Source: Prepared by the researcher, based on the results of the statistical analysis program spss-26.

According to Table 3, the data indicates a uniform shift towards the neutral point for all items under the perceived service quality axis. The mean average of these responses is 2.24, with a moderate level of agreement among the respondents, as indicated by the standard deviation of 1.24 and coefficient of variation at 41.9. Ultimately, 49% of responses fell under the "disagree" and "strongly disagree" categories.

Results of testing research hypotheses:

- A strong association exists between the use of smart cards and the perceived quality of banking services at a 0.05 level of significance. To verify this claim, it will base analysis on the Pearson correlation between the independent variable (smart cards) and the dependent variable (perceived service quality), as shown in the table below:**Table (4) shows the Pearson correlation coefficient between the smart card usage and perceived service quality.**

Perceived service quality		Smart cards
Probability value	correlation	
0.007	0.749	

Source: Prepared by the researcher, based on the results of the statistical analysis program spss-21.

From Table (4), we notice that the correlation coefficient between the independent variable (smart cards) and the dependent variable (perceived service quality) is 0.749, which signifies a strong positive correlation. Additionally, its probability value reached 0.007, which is less than the level of significance (0.05), indicating that it is a statistically significant correlation. This suggests that there is a strong, positive, and significant correlation between the variable of banking services via smart cards and the variable of perceived service quality. Consequently, we accept the first main hypothesis, which states that there is a significant correlation between smart cards and perceived service quality at a significance level of 0.05.A crucial relationship between smart cards and perceived service quality exists at a considerable level (0.05). To test this hypothesis, we will employ simple linear regression analysis, where the independent variable is smart cards, and the dependent variable is perceived service quality, as per the following tables:To assess the link between the smart cards variable and the perceived service quality variable, a Table (5) ANOVA can be conducted.

Probability value sig	Value F	The coefficient of determination	Average	Degrees of comparison	Total	Sources of variance
			20.38	1	20.38	Regression
0.00	34.468	0.122	0.59	248	146.61	Residual
				249	166.99	Total

Source: Prepared by the researcher, based on the results of the statistical analysis program spss-26.

From Table (5), we find that the calculated arithmetic F value is 34.468, while the tabular F value is 3.89. Since the arithmetic F value is higher than the tabular value, and the test probability value of 0.00 is less than the significance level of 0.05, we can conclude that the simple linear regression model is valid for measuring the causal relationship between the independent variable and the dependent variable. This means that we accept the previous hypothesis which states that there is a significant influence relationship between smart cards and perceived service quality at a significance level of 0.05.Regarding the testing of the simple linear regression coefficients related to the model, we can find these values in the following table.**Table (6) Evaluating the values of the coefficients in a simple linear regression model.**

Probability value sig	Calculated t-test value	Standard error St. Error	Standard coefficients)Beta(	Value of the dependent variable
0.00	3.94	0.31	1.22	Constant
0.00	5.87	0.08	0.49	Smart cards

Source: Prepared by the researcher, based on the results of the statistical analysis program spss-21.

According to Table 6, the t-test value for the smart cards variable was 5.87, and its probability value was 0.00, which is less than the significance level of 0.05. This indicates that the smart cards variable has a significant impact on the perceived service quality variable in the simple linear regression equation. The beta coefficient value was 0.49, meaning that a change of one unit in the smart cards will result in a 49% change in the perceived service quality.

Chapter four

Conclusions and Recommendations

Conclusions:

Based on the above, a set of conclusions were reached, as follows:

١. The implementation of smart cards contributes to the elimination of traditional methods, enhancing the efficiency of banking operations and transactions, simplifying the interaction between the bank and customers, and reducing time, effort, and costs.

٢. The existing automated teller machines (ATM) and electronic points of sale (POS) are inadequate as they are limited in number, restricted geographically, and do not match the number of smart cards issued to customers. Additionally, ATMs only provide limited services such as checking balance and making small deposits.

٣. The banks in the sample face technical and marketing challenges, and need to invest in developing and redesigning their electronic banking products and services to produce high-quality services that meet customers' needs and desires.

٤. There is a direct correlation between the smart card variable and the perceived service quality variable, which means that the more banks in the research sample improve smart card services, the higher the perceived service quality.

٥. There is a positive influence relationship between the provision of smart card services and the perceived service quality, meaning that banks in the research sample that offer smart card services have a positive effect on the perceived service quality.

Recommendations:

Based on the conclusions reached by the research, we present the following recommendations:

1. The need for banks to develop banking services provided via smart cards; To get rid of traditional work, and increase the efficiency of the bank's performance in its financial transactions, as well as striving to provide different types of smart cards, which in turn will lead to increasing the number of bank customers.

2. In order to use smart cards effectively, bank management must allocate the necessary amounts of money to increase the number of automated teller machines (ATM) and electronic points of sale (POS) and spread them in different geographical areas. This will facilitate the performance of financial transactions between the bank and the customer, as well as increasing the number of services provided through ATMs.

3. Bank management needs to pay attention to both the technical and marketing aspects, by establishing specialized technical units whose primary mission is to develop and redesign electronic banking services. This will achieve the production of high-quality electronic services that meet the needs and desires of customers, based on market research, as most of the tasks of the technical departments of the banks in the research sample are installing ready-made software and maintaining computers.

4. Providing the basic infrastructure required for communication networks by coordinating the senior management of banks with the Central Bank of Iraq; To provide the necessary government support for this, as well as seeking to develop the electronic systems used through the assistance of specialized technical cadres and companies. This will secure safe and effective lines of communication between banks and their branches, which is one of the most important obstacles that Iraqi commercial banks suffer from.

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