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## The Relationship Between Using ATM Technology and Achieving Competitive Advantage For A Sample of Iraqi Commercial Banks



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**Abstract:** This research aims to show the relationship between the ATM as one of the modern electronic banking techniques and to achieve the competitive advantage of a sample of Iraqi commercial banks in a way that enables it to survive and continue in the banking industry sector and keep abreast of developments in this sector as a result of the emergence of modern banking services, and in order to achieve the goal of the research the researcher By designing a questionnaire form directed to employees of those banks as a tool for collecting data and knowing their opinions regarding the experience of the ATM and its role in achieving competitive advantage with other banks, and in order to prove the hypotheses of the research, the results were analyzed using the statistical program (SPSS) and through a number of statistical methods to determine those The relationship, and after the analysis, a set of conclusions was reached, the most important of which was the existence of a statistically significant correlation between the use of ATM technology and the competitive advantage in its four dimensions. Achieving a competitive advantage.

**Keywords:** Electronic Banking, Automated Teller Machine, Competitive Advantage.

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**1. Introduction:** The ATM service is one of the most prominent electronic banking services provided by banks in recent times, as a way to pay cash dues instead of the traditional method that was and still is provided by Iraqi commercial banks, and in order for these banks to survive, continue and develop in the banking industry sector, they must Achieving the competitive advantage that enables it and distinguishes it from other financial organizations, and this can only be achieved by keeping pace with developments in the field of technology and by moving from providing traditional banking services to modern electronic banking services that achieve many advantages to enable them to increase market share and raising the efficiency of its performance by speeding up the completion of transactions and reducing paper use as well as reducing costs. Findings and suggestions that would help the research sample banks achieve their goals, the most prominent of which is competition with banks and institutions other financial institutions.

## **2. Theoretical framework**

### **2.1. ATM : The concept of automated teller machines**

ATMs are one of the most common and widely used banking services, and it is one of the modern banking services that banks provide to their customers. And the appropriate places for them by any of the bank's ATM devices, which are placed in the customer service halls or public places by entering the customer's electronic card and his password (Shendi, 2011: 7), so ATMs can be defined as terminals It is connected to the computer through which banking services are provided without interruption and without the help of bank employees. It allows customers who hold smart cards to deal with their bank accounts at any time and 24 hours a day (Horia, 2013: 37), or it is a system that allows customers to carry cards to transact With their bank accounts during or outside official working hours, during vacations and holidays, and around the clock (Arif and Mohsen, 2017: 163).

**2.2. Services provided by ATMs:** As a result of the developments that have taken place on ATMs, they provide many banking services besides the cash withdrawal service. Perhaps the most prominent of these services are:

- Withdrawal, cash deposit and balance inquiry.
- Obtaining a statement of the customer's withdrawal and deposit operations.
- Pay bills such as water, electricity, telephone, and others.
- The exchange of electronic messages between the bank and the customer.
- Making money transfers (Al-Barzanji, 2018: 203).

**2.3. Types of ATMs and the nature of their work:** Two types of ATMs can be distinguished:

- The first type is (DAB) devices: they are automatic devices connected to an electronic monitoring unit that have the ability to read the magnetic orbits of the card, as they allow card holders to make withdrawals from their account balances without going to the bank, and they are spread in banks and public places and work without

interruption on around the clock, as these devices contributed significantly to relieving the momentum of the bank's branches (Mozghish, 2019: 14).

- The second type is GAB devices: they are also automatic devices, but they are more complex than the first type. They are connected to the main computer of the bank. They read the magnetic orbits of the card that allow the customer to inquire about his balance using a secret code. In addition to the withdrawal services that it provides, it provides other services such as acceptance Deposits, making money transfers, requesting a check book, inquiring about the balance, and others (Al-Ani, 2007: 144).

#### **2.4. Advantages of using ATMs:**

- The possibility of withdrawing cash from anywhere where an ATM is located, at any time and around the clock.
- Lower bank overhead costs as a result of reducing the number of employees.
- Low cost of cash withdrawals from ATMs compared to the bank.
- Reducing paper use and lengthy procedures for the withdrawal process.
- Shortening geographical distances, allowing customers to access their accounts and monitor their balances with high flexibility.
- Giving the bank the opportunity to expand its electronic activity and to enable it to achieve a competitive advantage.
- Increasing the number of customers outside the branch network leads to an increase in the bank's deposits and then its profits (Zaim, 2019: 13).

### **3. Competitive advantage:**

**3.1. The concept of competitive advantage:** The concept of competitive advantage is one of the concepts that emerged as a result of the great developments that have taken place in the world of business management. The banking industry, and accordingly, the competitive advantage is gained by providing greater value to the customer, either through lower prices, or more benefits that justify higher prices (Kotler & Armstrong, 2006:495). The intensity of competition among them continued, so the competitive advantage was defined as the ability of the organization to find a position for it in the market and maintain it for the longest possible period. It was also known as adopting a new idea or behavior for the organization's industry, market or general environment (Nashat, 2014: 68), Or it distinguishes the organization over its competitors with one or more products in a new way, successful method, and greater profitability, and competitive advantage is seen as the exploitation of all the strengths that the organization possesses that enable it to achieve value that may not be lost. Competitors will be able to achieve it (Jouda, 2012: 56).

**3.2. The importance of the competitive advantage:** The importance of the competitive advantage for banks is highlighted through the following:

- An important criterion for evaluating the bank's performance by providing a new service or product that enables it to survive and continue when the old services become exposed and known by competitors.

- The competitive advantage is a positive indicator of the bank's ability to maintain a large market position compared to its competitors, which enables it to maintain the satisfaction and loyalty of its customers on the one hand, and increase its sales and profits on the other hand.
- Competitive advantage is an important criterion for choosing the appropriate strategy adopted by the bank in its work, which enables it to survive and continue in the competitive market.
- The competitive advantage is a powerful weapon in the hands of the bank that enables it to face challenges in the competition market by keeping pace with developments in the banking industry and seizing the available opportunities (Al-Hariri, 2016: 56).

### **3.3. Competitive Advantage Strategies: There are three strategies that banks can follow to achieve competitive advantage:**

- **Cost strategy:** It is a strategy based on a set of integrated procedures for the production and delivery of goods and services at a low cost compared to competitors and with specifications acceptable to customers. It can compete in the banking industry sector and maintain its market share (Nashat, 2014: 83).
- **Differentiation strategy:** This strategy is based on providing unique services and different from what the competitors offer, then the bank will be able to offer high prices for those services as it offers something distinct and this makes it able to outperform its competitors, so this strategy has become one of the required strategies Nowadays, as a result of the great diversity of customers' desires and preferences, which cannot be met through traditional services (Al-Sumaidaie and Youssef, 2011: 252).
- **Focus strategy:** Under this strategy, focus is placed on one or more specific market sectors in terms of service, care and attention in order to achieve excellence and leadership in this sector, as the goal of this strategy is to build a competitive advantage and reach a distinguished position in the market by satisfying The needs of a particular category of consumers or a specific geographical market, the distinguishing feature of this strategy is the focus on serving a part of the market, and not all of the market is dependent on this, on the assumption that serving a target market with greater efficiency and effectiveness is better than serving the market as a whole (Ma'ala, 2008: 333).

**3.4. Dimensions of Competitive Advantage:** Writers and researchers have differed regarding the subject of the dimensions of competitive advantage, based on multiple points of view, but the most common dimensions and agreement among them are:

- **Cost dimension:** The cost dimension is considered one of the important dimensions in achieving competitive advantage by reducing production costs compared to competitors to reach competitive prices in the market, as the lowest cost is a major goal in the competition of banks among themselves even if they compete in other advantages than Cost, and after cost, does not mean that banks provide services at a lower

price at the expense of quality, but rather that they must strive to achieve a competitive advantage by reducing the costs of marketing their products and services while maintaining quality (Al-Lami, 2008, 21).

- **Quality dimension:** The quality dimension refers to the ability of banks to improve and develop operations and performance by reducing costs, controlling time, and providing banking services with characteristics and specifications that meet the needs, desires and expectations of customers, enabling them to survive and succeed in the competitive market. The customer always seeks to obtain a quality service. High depending on the trade-off between price and quality, so we see that banks seek to speed up meeting the needs of customers by providing services that fulfill their expectations on both sides (Al-Najjar and Mohsen, 2009:59).
- **Speed dimension:** The speed dimension is the bank's ability to meet customers' requests for its services regularly and deliver them on time and according to the specified schedule. Therefore, the time factor has become one of the most important sources of competitive advantage in recent years. On this basis, we find that many banks are striving to expand their base with Customers by focusing on the time of delivery and service delivery to them (Al-Jourani, 2011: 73).
- **After creativity:** Creativity here means to present new ideas for the bank's marketing activities in a way that makes it superior to other banks in this aspect, and creativity helps the bank to develop its products or introduce new products, so it has become a source for achieving competitive advantage, especially when the bank is able to offer those products. In the form and speed required by customers, then he can compete and achieve his goals in the market, from here we find that creativity has become one of the most important indicators of the level of competitive advantage (Al-Ta'i, Al-Abadi, 2009: 355).

**4. Previous research and studies:** The study (Zaim, 2019), the title of the study (the impact of electronic banking on the competitive advantage of Algerian commercial banks), this study aimed to show the impact of electronic banking on the competitive advantage of Algerian commercial banks at the level of a group of banking agencies in the state of Biskra, and a questionnaire was used as a tool to collect The data was distributed to (40) employees using the Statistical Package for Social Sciences (SPSS) program, and several statistical methods were used to test the hypotheses of the study. The competitive advantage of the commercial banks under study, and the study recommended the need to develop electronic banking and keep pace with recent developments in the field of information and communication technology, as this contributes to achieving competitive advantage.

Study (Mazghish, 2019), the title of the study (electronic banking services as an entry point to achieve a competitive advantage in commercial banks), this study aimed to show the extent to which electronic banking services contribute to achieving competitive advantage in commercial banks. Through

the questionnaire tool as one of the data and information collection tools in order to know the degree and impact of the strength of the relationship between the variables of the study, and descriptive and inferential statistics methods were used for statistical analysis and testing using the statistical program (SPSS), and after the study and analysis, several results were reached. The most important of which was the adoption of the concept of electronic banking, which leads the bank to provide a variety of banking services of high quality, which enables it to achieve its goals in serving its customers and strengthening its competitive position. Therefore, the study recommended the need to work on promoting the use of the latest technological means to practice banking work.

A study (Horeya, 2013), the title of the study (The Role of Electronic Banking in Improving the Quality of Banking Services), this study aimed to measure the effect of electronic banking in improving the quality of banking services by applying it to the Popular Credit Bank of Algeria and through a set of hypotheses to prove that effect. Follow the descriptive analytical approach to describe the electronic banking system as well as the historical approach to study the historical development of electronic banks and analyze the extent to which the quality of banking services has been improved by those banks. There are benefits and advantages that were not available in traditional services, such as shortening time, effort and cost. The study recommended that banks should conduct studies to follow up on everything new regarding the development of banking services.

**5. Research Methodology:** Research problem: Electronic banking services are considered a revolution in the world of the banking industry, so banks, with all their material and moral capabilities, took to providing the best services to their current and prospective customers, enabling them to achieve a competitive advantage that would enable them to increase their market share, so the research problem lies In the quality and method of electronic banking services, especially the ATM service provided by the banks of the research sample, which will gain them a competitive advantage over other banks and financial institutions, and this leads us to the following questions:

1. What is the relationship between the use of ATM technology and the competitive advantage?
2. To what extent do banks adopt the research sample for the ATM service in order to achieve a competitive advantage?
3. Does the use of ATM technology affect the dimensions of competitive advantage?

The importance of the research: The research acquires its importance from the great importance of the subject of electronic banking services at the present time, and after the application of ATM technology as a means of paying dues has become one of the means that enable banks to achieve a competitive advantage in light of recent developments in the banking industry.

Research objectives: The objectives of the research are summarized as follows:

- 1- Shedding light on the theoretical concepts of the ATM and the competitive advantage.
- 2- To highlight the importance of electronic payment systems and their role in developing the work of banks and gaining them a competitive advantage.
- 3- Measuring the correlation relationship between the use of ATM technology and the competitive advantage of the research sample banks.

Research Hypotheses: The research seeks to prove one main hypothesis:

There is a statistically significant correlation between ATM technology and the dimensions of competitive advantage, and the following hypotheses are derived from this hypothesis:

1. There is a statistically significant correlation between the ATM technology and the cost dimension.
2. There is a statistically significant correlation between the ATM technology and the quality dimension.
3. There is a statistically significant correlation between the ATM technology and the speed dimension.
4. There is a statistically significant correlation between ATM technology and creativity.

Research community and sample: The research community is represented by a number of Iraqi commercial banks, namely (Al-Rafidain Bank, Al-Rasheed Bank, Iraqi Trade Bank, Sumer Commercial Bank), which provide ATM service, while the research sample was represented by a group of employees of those banks to know their opinions On the subject of the research under study.

- Research Methodology: In order to be familiar with all the research axes and achieve its goal, the researcher adopted the descriptive approach in determining the theoretical aspects of the subject as the most appropriate approach for this type of research. Using the statistical program (SPSS.)
- Sources of data collection: In collecting data related to the theoretical aspect of the research, the researcher relied on a group of books, theses and university theses, while the practical aspect relied on a questionnaire that included (20) questions that were asked to the sample.

#### **hypothetical research scheme**

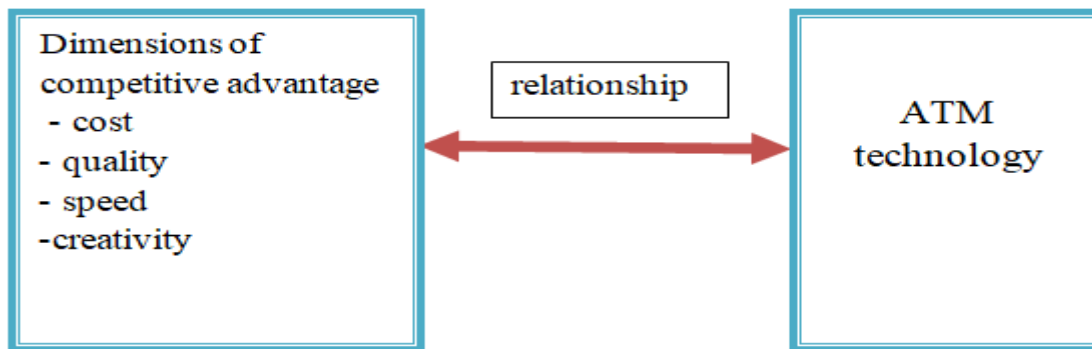


Fig.(1) hypothetical research scheme

Source: prepared by the researcher.

## 6. Experimental framework

### View survey results

For the purpose of reaching the desired goals of the research and proving its hypotheses, the questionnaire form was designed to include the research variables in a way that enables the researcher to analyze and reach the results. as follows:

The first axis (ATM technology): It includes (8) questions related to the use of ATM technology as one of the forms of electronic banking that banks are interested in presenting in order to compete.

The second axis (competitive advantage): It includes (12) questions related to the dimensions of the competitive advantage that banks seek to achieve by providing the best services. Table (1) shows the number of (20) paragraphs of the questionnaire distributed on two axes.

**Table (1) The number of paragraphs of the questionnaire is divided into two axes**

| No. of Axis | Item                                | No.of items |
|-------------|-------------------------------------|-------------|
| 1           | automated teller machine            | 8           |
| 2           | Dimensions of competitive advantage | 12          |
|             | Dimensions of cost                  | 3           |
|             | Dimensions of quality               | 3           |
|             | Dimensions of speed                 | 3           |
|             | Dimensions of creativity            | 3           |

The researcher distributed (70) questionnaires at a rate of (100%). As for the recovered and valid forms for analysis, their number reached (50) and at a rate of (71%), and the questionnaire's paragraphs were processed according to a five-degree (Likert) scale, and table (2) shows this scale.

**Table (2) Five-point Likert scale**

| Scaling | Very agree | agree | neutral | Not agree | Very not agree |
|---------|------------|-------|---------|-----------|----------------|
| weight  | 1          | 2     | 3       | 4         | 5              |

As for the personal characteristics of the members of the research sample, they were reviewed according to the tables below:

**Table (3) Distribution of the sample members according to gender**

| gender | The number | Percentage |
|--------|------------|------------|
| male   | 29         | 58 %       |
| female | 21         | 42 %       |
| total  | 50         | 100 %      |

Ref : Prepared by the researcher, based on the questionnaire

It is clear from the results of Table (3) that the proportion of male respondents constituted (58%), while females constituted (42%).

**Table (4) Distribution of the sample members according to age**

| age     | The number | Percentage |
|---------|------------|------------|
| 20 - 30 | 11         | 22 %       |
| 31 - 40 | 21         | 42 %       |
| 41 - 50 | 18         | 36 %       |
| 51 - 60 | 0          | 0 %        |
| Total   | 50         | 100 %      |

Ref : Prepared by the researcher, based on the questionnaire

It is clear from the results of Table (4) that the age group from 31-40 came with the highest percentage (42%), while the age group from 20-30 came with the lowest percentage (22%).

**Table (5) Distribution of the sample members according to Academic achievement**

| Academic achievement | The number | Percentage |
|----------------------|------------|------------|
| Technical Diploma    | 13         | 26         |
| Bachelor             | 22         | 44         |
| Higher Diploma       | 0          | 0          |
| Master's             | 15         | 30         |
| PhD                  | 0          | 0          |
| Other                | 0          | 0          |
| Total                | 50         | 100 %      |

Ref : Prepared by the researcher, based on the questionnaire.

It is clear from the results of Table (5) that the sample members who obtained a bachelor's degree constituted the highest percentage (44%), while those who obtained a technical diploma constituted the lowest percentage (26%).

**Table (6) Distribution of the sample members according to specialization**

| specialization                 | The number | Percentage |
|--------------------------------|------------|------------|
| Accounting                     | 22         | 44 %       |
| Banking and Financial Sciences | 25         | 50 %       |
| Business Administration        | 0          | 0 %        |
| Economies                      | 0          | 0 %        |
| Other                          | 3          | 6 %        |
| Total                          | 50         | 100 %      |

Ref : Prepared by the researcher, based on the questionnaire

It is clear from the results of Table (6) that the major in banking and financial sciences constituted the highest percentage (50%), while other majors formed the lowest percentage (6%).

**Table (7) Distribution of the sample members according to years of service**

| years of service | The number | Percentage |
|------------------|------------|------------|
| Less than 10     | 15         | 30%        |
| 10 – 15          | 18         | 36 %       |
| 16 – 20          | 13         | 26 %       |
| 21 - more        | 4          | 8 %        |
| Total            | 50         | 100 %      |

Ref : Prepared by the researcher, based on the questionnaire

It is clear from the results of Table (7) that the research sample of those who have service from 10-15 formed the highest percentage (36%), while those with service of 21 years or more formed the lowest percentage (8%), and after reviewing the personal characteristics of individuals The research sample ratios proved that their answers to the questions put to them can be relied upon in order to extract the best results related to the topic under study.

#### Sample opinion analysis

In this paragraph, the opinions of the sample in the surveyed banks will be analyzed as follows:

**Table(8) Frequency distribution, percentages, mean, standard deviation, and intensity of answering questions for the first axis (ATM technology)**

| S.N | item  | scale | Very agree | agree | neutral | Not agree | Very not agree | mean | standard deviation | intensity of answering |
|-----|---|-------|------------|-------|---------|-----------|----------------|------|--------------------|------------------------|
| 1   | ATMs in the bank are sufficient to provide service to customers.  | Freq. | 13         | 13    | 9       | 9         | 6              | 3.44 | 0.972              | 52%                    |
|     |   | %     | 26%        | 26%   | 18%     | 18%       | 12%            |      |                    |                        |
| 2   | Using an ATM saves effort and time.   | Freq. | 25         | 25    | -       | -         | -              | 4.52 | 0.575              | 100%                   |
|     |   | %     | 50%        | %50   | -       | -         | -              |      |                    |                        |
| 3   | Automated teller machines (ATMs) operate throughout the day and are continuously replenished with liquidity.          | Freq. | 18         | 22    | 6       | 4         | -              | 4.06 | 0.956              | 80%                    |
|     |   | %     | 36%        | 44%   | 12%     | 8%        | -              |      |                    |                        |
| 4   | The ATM service contributes to improving the reputation of the bank and increasing the confidence of customers in it. | Freq. | 28         | 18    | 4       | -         | -              | 4.46 | 0.762              | 92%                    |
|     |   | %     | 56%        | 36%   | 8%      | -         | -              |      |                    |                        |
| 5   | Customers prefer ATMs to withdraw cash rather than go to the bank.  | Freq. | 25         | 25    | -       | -         | -              | 4.52 | 0.575              | 100%                   |
|     |   | %     | 50%        | %50   | -       | -         | -              |      |                    |                        |
| 6   | The lack of banking awareness among customers is an obstacle to the spread of ATM service.                            | Freq. | 19         | 16    | 9       | 6         | -              | 3.92 | 1.104              | 70%                    |
|     |   | %     | 38%        | 32%   | 18%     | %12       | -              |      |                    |                        |
| 7   | The ATM   | Freq. | 22         | 15    | 13      | -         | -              | 4.12 | 0.940              | 59%                    |

|             |  |       |     |     |      |     |   |      |       |     |
|-------------|--|-------|-----|-----|------|-----|---|------|-------|-----|
|             | service contributes to increasing the number of dealers with the bank and thus its market share. | %     | 44% | 30% | 26%  | -   | - |      |       |     |
| 8           | Automated teller machines help in the speed of obtaining the service.                            | Freq. | 25  | 21  | 4    | -   | - | 4.50 | 0.540 | 92% |
|             |  | %     | 50% | 42% | 8%   | -   | - |      |       |     |
| Total index |  | Freq. | 175 | 155 | 45   | 19  | 6 | 4.20 | 0.803 | %81 |
|             |  | %     | 43  | 38  | 12.5 | 4.5 | 2 |      |       |     |

**Ref :** Prepared by the researcher, based on the questionnaire

- (%52) of the research sample members agreed that ATMs in the bank are sufficient to provide service to customers, with a standard deviation of (0.972) and an arithmetic mean (3.44), which is greater than the hypothetical mean of the study.
- (%100) of the research sample members agreed that using ATMs saves effort and time, with a standard deviation of (0.575) and an arithmetic mean (4.52), which is greater than the hypothetical mean of the study.
- (%80) of the research sample members agreed that ATMs work throughout the day and are continuously fed with liquidity, with a standard deviation of (0.956) and an arithmetic mean (4.06), which is greater than the hypothetical mean of the study.
- (%92) of the research sample members agreed that the ATM service contributes to improving the reputation of the bank and increasing the confidence of customers in it, with a standard deviation (0.762) and an arithmetic mean (4.46), which is greater than the hypothetical mean of the study.
- (%100) of the research sample members agreed that customers prefer ATMs to withdraw cash instead of visiting the bank, with a standard deviation of (0.575) and an arithmetic mean (4.52), which is greater than the hypothetical mean of the study.
- (%70) of the research sample members agreed that the lack of banking awareness among customers is an obstacle to the spread of ATM service, with a standard deviation (104.1) and an arithmetic mean (3.92) which is greater than the hypothetical mean of the study.
- (%59) of the research sample members agreed that the ATM service contributes to increasing the number of dealers with the bank and then its market share, with a standard deviation (0.940) and an arithmetic mean (4.12), which is greater than the hypothetical mean of the study.
- (%92) of the research sample members agreed that the ATMs should help in the speed of obtaining the service, with a standard deviation of (0.540) and

an arithmetic mean (4.50), which is greater than the hypothetical mean of the study.

By analyzing the answers above, we find that they are at the percentage of agreement for most of the questions asked, and this is what Figure (2) shows.



Fig.(2) Agreements about the questions of the first axis (ATM technology)

**Table(9) Frequency distribution, percentages, mean, standard deviation, and intensity of answering questions for the second axis (Competitive advantage)**

| S.N                  | item   | scale | Very agree | agree | Neutral | Not agree | Very not agree | mean | standard deviation | intensity of answering |
|----------------------|--|-------|------------|-------|---------|-----------|----------------|------|--------------------|------------------------|
| Dimension of cost    |  |       |            |       |         |           |                |      |                    |                        |
| 1                    | The bank provides ATM service at the lowest possible cost.               | Freq. | 7          | 28    | 9       | 6         | -              | 3.74 | 0.828              | 70%                    |
|                      |  | %     | 14         | 56    | 18      | 12        | -              |      |                    |                        |
| 2                    | The cost of withdrawing cash from ATMs is low compared to competitors.   | Freq. | 20         | 15    | 15      | -         | -              | 3.90 | 0.995              | 70%                    |
|                      |  | %     | 40         | 30    | 30%     | -         | -              |      |                    |                        |
| 3                    | The bank seeks to minimize costs to encourage customers to deal with it. | Freq. | 14         | 25    | 11      | -         | -              | 4.08 | 0.778              | %78                    |
|                      |  | %     | 28         | 50    | 22      | -         | -              |      |                    |                        |
| Dimension of quality |  |       |            |       |         |           |                |      |                    |                        |
| 4                    | The bank   | Freq. | 13         | 31    | 6       | -         | -              | 3.70 | 1.051              | 88%                    |

|                         |   |       |     |     |     |     |   |      |       |     |
|-------------------------|---|-------|-----|-----|-----|-----|---|------|-------|-----|
|                         | provides high quality ATM service compared to other banks.  | %     | 26% | 62% | 12% | -   | - |      |       |     |
| 5                       | The ATM service is developed based on the opinions of customers about that service.                 | Freq. | 19  | 25  | 3   | 3   | - | 4.22 | 0.815 | %88 |
|                         |   | %     | 38% | 50% | %6  | %6  | - |      |       |     |
| 6                       | The Bank is interested in research and studies related to improving the quality of banking service. | Freq. | 16  | 22  | 6   | 6   | - | 3.96 | 1.009 | 76% |
|                         |   | %     | 32% | 44% | 12% | 12% | - |      |       |     |
| Dimension of speed      |   |       |     |     |     |     |   |      |       |     |
| 7                       | The bank provides its services to customers quickly compared to competitors.                        | Freq. | 18  | 28  | -   | 4   | - | 4,06 | 0.956 | 92% |
|                         |   | %     | 36% | 56% | -   | 8%  | - |      |       |     |
| 8                       | ATM service is available around the clock and is instant.   | Freq. | 19  | 25  | 3   | 3   | - | 4.22 | 0.815 | 88% |
|                         |   | %     | %38 | 50% | 6%  | 6%  | - |      |       |     |
| 9                       | Bank employees have the ability to meet customers' requests quickly.                                | Freq. | 25  | 15  | 6   | 4   | - | 4.12 | 0.940 | %80 |
|                         |   | %     | 50% | 30% | 12% | %8  | - |      |       |     |
| Dimension of creativity |   |       |     |     |     |     |   |      |       |     |
| 10                      | The bank seeks to provide new electronic services that distinguish it from competitors.             | Freq. | 22  | 22  | 3   | 3   | - | 4.16 | 0.762 | 88% |
|                         |   | %     | 44% | 44% | 6%  | 6%  | - |      |       |     |

|             |  |       |       |       |       |      |   |      |       |       |
|-------------|--|-------|-------|-------|-------|------|---|------|-------|-------|
| 11          | The bank has the financial and human capabilities to provide everything new in the banking industry sector.                  | Freq. | 15    | 28    | 7     | -    | - | 4.12 | 0.773 | 86%   |
|             |  | %     | 30%   | 56%   | 14%   | -    | - |      |       |       |
| 12          | The bank is interested in new ideas and innovations and works on developing them to meet the desires and needs of customers. | Freq. | 19    | 22    | 6     | 3    | - | 4.18 | 0.748 | 82%   |
|             |  | %     | 38%   | %44   | %12   | 6%   | - |      |       |       |
| Total index |  | Freq. | 207   | 286   | 77    | 32   |   | 4.04 | 0.875 | %82.1 |
|             |  | %     | 34.5% | 47.6% | 12.5% | 5.4% |   |      |       |       |

**Ref :** Prepared by the researcher, based on the questionnaire

- (%70)of the research sample members agreed that the bank should provide the ATM service at the lowest possible cost, with a standard deviation of (0.828) and an arithmetic mean (3.74) which is greater than the hypothetical mean of the study.
- (%70)of the research sample members agreed that the cost of withdrawing cash from ATMs is low compared to competitors, with a standard deviation of (0.995) and an arithmetic mean of (3.90), which is greater than the hypothetical mean of the study.
- (%78)of the research sample members agreed that the bank seeks to reduce costs to the minimum extent to encourage customers to deal with it, with a standard deviation of (0.778) and an arithmetic mean (4.08), which is greater than the hypothetical mean of the study.
- (%88)of the research sample members agreed that the bank should provide the ATM service with high quality compared to other banks, with a standard deviation of (1.051) and an arithmetic mean of (3.70), which is greater than the hypothetical mean of the study.
- (%88)of the research sample members agreed that the ATM service should be developed based on the opinions of customers about that service, with a standard deviation of (0.815) and an arithmetic mean (4.22) which is greater than the hypothetical mean of the study.
- (%76)of the research sample members agreed that the bank should be interested in research and studies related to improving the quality of banking service, with a standard deviation of (1.009) and an arithmetic mean (3.96),

which is greater than the hypothetical mean of the study.

- (%92)of the research sample members agreed that the bank should provide its services to customers quickly compared to competitors, with a standard deviation of (0.956) and an arithmetic mean (4.06), which is greater than the hypothetical mean of the study.
- (%88)of the research sample members agreed that the automatic teller service is available around the clock and takes place instantly, with a standard deviation of (0.815) and an arithmetic mean (4.22) which is greater than the hypothetical mean of the study.
- (%80)of the research sample members agreed that bank employees have the ability to meet customers' requests quickly, with a standard deviation of (0.940) and an arithmetic mean (4.12) which is greater than the hypothetical mean of the study.
- (%88)of the research sample members agreed that the bank seeks to provide new electronic services that distinguish it from competitors, with a standard deviation of (0.762) and an arithmetic mean (4.16), which is greater than the hypothetical mean of the study.
- (%86)of the research sample members agreed that the bank has material and human capabilities to provide everything that is new in the banking industry sector, with a standard deviation of (0.773) and an arithmetic mean (4.12) which is greater than the hypothetical mean of the study.
- (82%) of the research sample members agreed that the bank should be interested in new ideas and innovations and work on developing them to meet the desires and needs of customers, with a standard deviation of (0.748) and an arithmetic mean (4.18), which is greater than the hypothetical mean of the study, it is noted from the analysis of the sample opinions. Most of their answers to the questions put to them in this axis were at the level of agreement, and this is what Figure (3) shows.

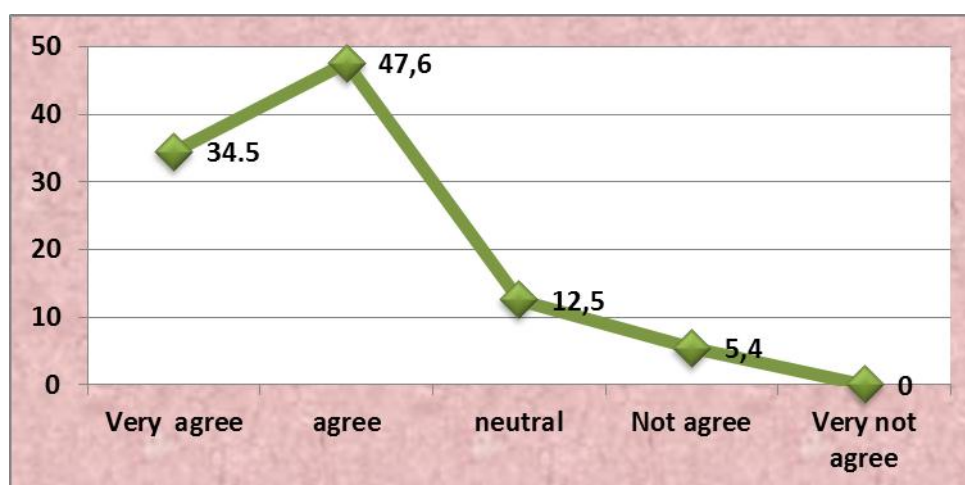


Fig.(3) Agreeing percentages on the questions of the second axis (competitive advantage)

### 5 – 3 : Hypothesis Test

After the opinions of the sample were analyzed according to the questions of the questionnaire distributed to them, in this paragraph, the correlation between the ATM technology as an independent variable and the competitive advantage in its four dimensions as a dependent variable will be established, i.e. the main hypothesis of the research, which was expressed by four sub-hypotheses using some appropriate statistical indicators for this type of The analysis is as follows:

A - The main hypothesis: There is a statistically significant correlation between the ATM technology and the competitive advantage in its four dimensions, as shown in Table (10).

**Table(10) Spearman's correlation between ATM technology and competitive advantage**

| independent variables    | The value of the multiple correlation coefficient | Value of calculated (T) | indication |
|--------------------------|---|-------------------------|------------|
| automated teller machine | 0.81  | 2.47                    | sign       |

Ref : Prepared by the researcher, based on the questionnaire .

From the results of Table (10), it is clear that the correlation coefficient between ATM technology and the competitive advantage in its four dimensions has reached a ratio of (0.81), which is a positive value that confirms the existence of a statistically significant correlation between both variables, while the (T-TEST) test has It was less than (0.05), and this indicates that the calculated T whose value was (2.47) is greater than the tabular T whose value was (2.011), and with degrees of freedom (48), and with a significance level of (0.01), and therefore the main hypothesis of the research is accepted, which was It states that there is a statistically significant correlation between ATM technology and competitive advantage.

B- Sub-hypotheses: There is a statistically significant correlation between ATM technology and each of (cost, quality, speed, and creativity), as shown in Table (11).

**Table(11) Simple correlation coefficient between ATM technology and dimension (cost, quality, speed, and creativity)**

|   | dependent variables      | correlation coefficient | Value of calculated (T) | indication |
|---|--------------------------|-------------------------|-------------------------|------------|
| 1 | Dimensions of cost       | 0.72                    | 2.22                    | sign       |
| 2 | Dimensions of quality    | 0.84                    | 2.24                    | sign       |
| 3 | Dimensions of speed      | 0.86                    | 2.27                    | sign       |
| 4 | Dimensions of creativity | 0.85                    | 2.25                    | sign       |

It is evident from Table (11) that:

- The correlation coefficient between the ATM technology and the cost dimension was (0.72), which is a positive value indicating the existence of a statistically significant correlation between the two variables, and the probability value (P.value) for the T-test was less than the level of statistical significance ( $\alpha=0.05$ ). , that is, the calculated T value was estimated at (2.22), which is greater than the tabular T, whose value was estimated at (2.11), with degrees of freedom (48), and with a level of significance (0.01), and accordingly the first sub-hypothesis is accepted, whose content is the existence of a correlation relationship Statistically significant between ATM technology and the cost dimension.
- The correlation coefficient between the ATM technology and the quality dimension was (0.84), which is a positive value indicating the existence of a statistically significant correlation between the two variables, and the probability value (P.value) of the T-test was less than the level of statistical significance ( $\alpha=0.05$ ). , that is, the calculated T value was estimated at (2.24), which is greater than the tabular T, whose value was estimated at (2.11), and with degrees of freedom (48), and with a level of significance (0.01), and accordingly the first sub-hypothesis is accepted, whose content is the existence of a correlation relationship Statistically significant between ATM technology and quality dimension.
- The correlation coefficient between the ATM technology and the speed dimension was (0.86), which is a positive value indicating the existence of a statistically significant correlation between the two variables, and the probability value (P.value) for the T-test was less than the level of statistical significance ( $\alpha=0.05$ ). , that is, the calculated T value was estimated at (2.27), which is greater than the tabular T, whose value was estimated at (2.11), with degrees of freedom (48), and with a significance level (0.01), and accordingly the first sub-hypothesis is accepted, whose content is the existence of a correlation relationship Statistically significant between ATM technology and speed dimension.
- The correlation coefficient between ATM technology and creativity was (0.85), which is a positive value that indicates the existence of a statistically significant correlation between the two variables, and the probability value (P.value) of the T-test was less than the level of statistical significance ( $\alpha=0.05$ ). , that is, the calculated T value was estimated at (2.25), which is greater than the tabular T, whose value was estimated at (2.11), and with degrees of freedom (48), and with a significance level of (0.01), and accordingly the first sub-hypothesis is accepted, whose content is the existence of a correlation relationship Statistically significant between ATM technology and creativity.

## **Conclusions and Recommendations**

### **Conclusions**

After conducting a field study for the research under study to find out the effect of using ATM technology in achieving competitive advantage in the surveyed banks, the following conclusions were reached:

- 1) The use of ATM technology as a form of electronic banking is considered a competitive weapon in the hands of banks to attract the largest possible number of customers.
- 2) The use of ATM technology by the surveyed banks helps them to gain a competitive advantage by reducing costs and effort and gaining time as well as providing high quality service.
- 3) The competitive advantage represents the end result of the intensive efforts of banks to keep pace with developments in the field of information and communication technology through the optimal use of their material and human resources.
- 4) The results of the statistical analysis showed that there is a statistically significant correlation between the use of ATM technology and the competitive advantage in its four dimensions.

### **Recommendations**

After presenting the findings of the research, the recommendations came as follows:

- 1) Working on developing communication and information technologies, protecting the Internet, and ensuring confidentiality of work in a manner that ensures the flow of electronic banking services with high efficiency.
- 2) The necessity of focusing on the ATM service and its expansion by the surveyed banks because of the great impact of this service in achieving the competitive advantage.
- 3) Using ATMs to provide various banking services such as deposits and transfers instead of being limited to cash withdrawals in a way that relieves the burdens of the bank's employees and thus achieves a competitive advantage.
- 4) The surveyed banks should work to increase banking awareness among their customers when providing ATM service so that the use of these devices is easy, simple and uncomplicated so that all customers can use them with their different educational levels.
- 5) The surveyed banks should encourage their customers to use ATMs for cash withdrawal purposes instead of traditional methods by clarifying the benefits of this method in a way that achieves a competitive advantage for them.

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