"Using the Modified TAM to Improve Customer Retention Levels for Banks Operating in Egypt"

Yasmine Mahmoud Meselhy

The Arab Academy for Science, Technology & Maritime Transport (AASTMT)

Prof. Dr. Wael Kortam

Professor of Marketing, British University in Egypt

Dr. Nihal Avad

The Arab Academy for Science, Technology & Maritime Transport (AASTMT)

Abstract

This research aims to measure customer retention levels for banks operating in Egypt by applying a modified version of the Technology Acceptance Model (TAM). Customer retention management is one of the most crucial marketing and management functions and banks are searching for innovations in their products/services like keeping an eye on the latest technological tools and techniques such as mobile banking to attain customer retention.

The TAM has been identified as a comprehensive model, which can be applied in vast contexts, fields, and for every type of user. TAM has been mainly counted as the widest, strongest, and most dominant applicable model to define and examine consumer behavior. Originally, the TAM included three main variables which are attitudes towards using, perceived ease of use, and

perceived usefulness. In this research, the researcher modified the model and added customer trust and customer experience. Five research objectives are developed and achieved in this research. This research aims to test the relationship between attitudes towards using m-banking, PEOU of m-banking, PU of m-banking, customer trust, and customer experience of m-banking with customer retention for operating banks in Egypt. An exploratory study is applied at the beginning of the research to help the researcher gain more insights into the research problem. **Keywords:** *Technology Acceptance Model, customer trust, customer experience, customer retention, mobile banking.*

الملخص:

يهدف هذا البحث إلى قياس مستويات احتفاظ العملاء للبنوك العاملة في مصر من خلال تطبيق نسخة معدلة من نموذج قبول التكنولوجيا .(TAM) يعد إدارة احتفاظ العملاء أحد أهم وظائف التسويق والإدارة، وتبحث البنوك عن ابتكارات جديدة في منتجاتها / خدماتها مثل مراقبة أحدث الأدوات والتقنيات التكنولوجية مثل الخدمات المصرفية عبر الهاتف المحمول لتحقيق الاحتفاظ بالعملاء. تم تحديد نموذج قبول التكنولوجيا (TAM) كنموذج شامل يمكن تطبيقه في سياقات مجالات واسعة ولكل نوع من المستخدمين. وقد تم احتساب نموذج قبول التكنولوجيا (TAM) بشكل أساسي كأوسع وأقوى وأبرز نموذج قابل للتطبيق لتحديد وفحص سلوك المستهلك. في الأصل، يتضمن نموذج قبول التكنولوجيا (TAM) ثلاثة متغيرات رئيسية وهي المواقف تجاه الاستخدام، وسهولة الاستخدام المتصورة، والفائدة المتصورة. في هذا البحث، قام الباحث بتعديل النموذج وأضاف ثقة العملاء وتجربة العملاء. تم تطوير وتحقيق خمسة أهداف بحثية في هذا البحث. يهدف هذا البحث إلى اختبار العلاقة بين المواقف تجاه الاستخدام، وسهولة الاستخدام المتصورة، والفائدة المتصورة، وثقة المماقة بين المواقف تجاه الاستخدام، وسهولة الاستخدام المتصورة، والفائدة المتصورة، وثقة المواقف تجاه الاستخدام، وسهولة الاستخدام المتصورة، والفائدة المتصورة، وثقة المواقف تجاء الاستخدام، وسهولة الاستخدام المتصورة، والفائدة المتصورة، وثقة المواقف تجاء الاستخدام، وسهولة الاستخدام المتصورة، والفائدة المتصورة، وثقة المواقف تجاء الاستخدام، وسهولة الاستخدام المتصورة، والفائدة المتصورة، وثقة المواقف تجاء الاستخدام، وسهولة الاستخدام المتصورة، والفائدة المتصورة، وثقة المواقف تجاء الاستخدام، وسهولة الاستخدام المتصورة، والفائدة المتصورة، وثقة المواقف تجاء الاستخدام، وسهولة الاستخدام المتصورة والفائدة المتصورة، والفائدة المتصورة وثقة المواقف تجاء الاستخدام، وسهولة الاستخدام المتصورة، والفائدة المتصورة، والفائدة المتصورة والفائدة المتورد والفائدة المتصورة والفائدة المتصورة والفائدة المتصورة و

العملاء، وتجربة العملاء للخدمات المصرفية عبر الهاتف المحمول مع احتفاظ العملاء بالبنوك العاملة في مصر. يتم تطبيق دراسة استكشافية في بداية البحث لمساعدة الباحث على اكتساب المزيد من الرؤى حول مشكلة البحث. تم تطوير واختبار خمس فرضيات. يمكن أن تكون نتائج البحث والتوصيات بمثابة توجيه جيد للمسوقين وصانعي السياسات لاكتساب المزيد من المعرفة حول المفهوم وتطوير الاستراتيجيات الأنسب للاحتفاظ بالعملاء في القطاع المصرفي في مصر.

الكلمات المفتاحية: نموذج قبول التكنولوجية، ثقة العملاء، تجربة العملاء، الاحتفاظ بالعملاء والخدمات المصرفية عبر الهاتف المحمول

1. Introduction

In the marketing field. Customer retention management is one of the most crucial marketing and management functions. Marketing and Management scholars support the importance of this function for two main reasons. First, the cost of acquiring new customers in volatile market environments is very high. Second, customers have become more profitable as they continue business relationships with companies (Kumar and Ayodeji, 2021).

The popularity of customer retention has attracted both academicians as well as business professionals (Kumar and Ayodeji, 2021; Mostafa & Mahmoud, 2020; Prentice and Nguyen 2020). Customer retention strategies not only retain customers but also have become a novel approach for building loyalty and promoting sales of additional products and services. In the current era where science and technology dominate all areas of our lives, banking services have become very practical

and innovative globally. Technology has reshaped the ways banking is applied, and it gave banking a new aspect by moving it from manual ledgers to digitalized and systemized processes which brought more efficiency, convenience, and timesaving. The aggressive competition in the banking sector has increased in the last few years and to remain in the competition, banks are searching for innovations in their products/services like keeping an eye on the latest technological tools and techniques to attain customer retention (Younis et al, 2021). Mobile banking is a tool towards it. It is the digitalized revolution in the banking industry which brings with it convenience, credibility, ease of use, promptness and a smooth banking experience at finger clicks by its users. It is the act of doing banking transactions on a mobile device (Cell phone, tablet etc). At this point, mobile banking applications (part of Fintech, or financial tech) are not just helpful methods to check your account balances, they are an essential factor of the overall user financial customer experience and something that customers assess while choosing a bank (Younis et al., 2021).

It has been proven by (Becker and Jaakkola, 2020; De Keyser et al., 2020; Lemon and Verhoef, 2016) that designing and providing customer with a successful optimal experience has become a major priority for marketing practitioners and scholars. Business firms are exponentially increasing their investment in customer experience (CX) by having the expectations that these

investments will eventually provide positive financial returns and will help in the customer retention process.

Considering the previous literature, some of the recent research studies have chosen to focus on the initial adoption of m-banking (Mullan, Bradley, & Loane, 2017) and the motivations toward m-banking without focusing on the post-adoption or retention perspective (Siyal et al., 2019). Recent studies by Mohammadi (2015) and Sharma et al. (2017) have neglected the unexploited market potential of nonusers and have focused on studying the users alone, whereas others have explored the technological aspects of mobile banking rather than user behaviors (Kazi & Mannan, 2013), and it comes to a surprise that most of those research studies focus on developed countries that have already relatively mature markets for fin- technologies. There is a research gap in the post-actual use of overall mobile banking applications in developing countries such as Egypt.

Siyal et al., (2019) stated that academic researchers have been continuously searching for factors that enhance the acceptance of and loyalty to their usage thus retaining them. Few models have been developed to predict individuals' inclination to use information systems, such as the technology acceptance model (TAM) which has been widely applied in studying technological information system acceptance (Davis, 1989; Venkatesh & Davis, 1996).

TAM has been mainly counted as the widest, strongest, and most dominant applicable model to define and examine consumer behavior toward technology acceptance as well as its application from a business form perspective. "Davis (1989) described determinants of intention to use any information technology which predicts actual behavior toward the usage of online facilities. TAM assumes that an individual's behavioral intention (BI) to use any technological channel can be measured by two main variables: perceived ease of use (PEOU) and perceived usefulness (PU)"

Several empirical studies in the literature have been conducted to determine the impact of these two variables and found PU as the strongest determinant of intention to use while PEOU is counted as the second significant antecedent of intention to use (Venkatesh and Devis, 1996).

After that, adjustments and modifications in TAM have been further extended to the list of research constructs and in line with the collaboration of other theories and models to unwrap the traditions of additional directions of research.

Previous research shows that the elements of the TAM have direct positive effects on the

adoption of online banking (Lee, 2009) and on the adoption of mobile banking (Lule

et al., 2012). Therefore, in this research, the TAM is utilized to better understand how technology usage of online banking impacts customer retention levels in an Egyptian banking context.

Even though substantial benefits of customer retention are well established, however, there has been limited empirical research on how retention is practiced by financial organizations such as the operating banks in Egypt. This research study aims to measure the customer retention levels of operating banks in Egypt through the employment of a modified TAM model.

The Mobile Banking in the Egyptian Context

Banks in emerging economies such as Egypt are still facing key environmental challenges for the acceptance of mobile banking and may require more time and effort from the service providers. In comparison with developed economies, the issues related to fintech, and technology adoption have already been addressed to a greater level (Sharma et al., 2017).

The Banking sector is going through huge transformations such as offering their customers services over handheld mobile devices. Such services are not constrained by geographic locations, legal or other barriers and therefore it has successfully facilitated the online customer experience on hand. The development and coverage of wireless telecommunications have

served as a remarkable stage for mobile banking services (Younis et al, 2021).

Mobile banking (m-banking) is a part of e-banking that provides clients access to a wide range of online banking services like saving accounts and credit account information. Customers can submit payments or transfers of money through electronic platforms and channels. The m-banking users are not required to physically visit the bank branches, as a result, they save a lot of time and money. Mobile banking users can easily track their money transactions and thus help with better management of funds. Many of the population across all demographic and socioeconomic levels use mobile phones in their daily life. Such users of mobile phones, if they sign up for m-banking, can get services like checking account balances, buying certificates of deposit, statements, transferring funds (internally & mini getting externally), online transactions, and password administration right on their mobile phones. (Younis et al., 2021).

The application of artificial intelligence in the banking sector can make banking operations more efficient and hassle-free (Manning, 2018). Some of the areas in the banking industry, where artificial intelligence can be successfully applied are listed below (Noonan, 2018; Punamaraju, 2018).

In the opinion of Jamall, (2017), the banking sector in the Middle East has strongly expanded over the years, and as a result, the

competitiveness of the sector has increased, and retaining customers has become a challenge.

AlZaidi (2018) "The use of advanced technological innovation in the banking and financial sector has been a global trend for quite some time, it has been adopted in both developed and developing economies. Adaptation of technological innovation in the Middle East banking and financial sector has been rapid in recent years, which provided a lot of benefits to the bank's customers as well as the service providers (banks) by reducing their cost of the services. The new technological tools are working in parallel; with the banking sector can provide a more harmonized and modern customer experience.

1.1Exploratory Research

This section covers the exploratory study for this research including the secondary data analysis, qualitative analysis, and the in-depth interview questions and answers.

1.1.1 Secondary Data Analysis

The researcher aims to gain more insights and to highlight the research problem. In this study the secondary data is collected from the Central Bank of Egypt (CBE), the official bank websites, and the mobile banking applications of some banks operating in Egypt. CBE is the autonomous regulatory body supervising the banking sector in Egypt.

According to the Central Bank of Egypt, there are 37 registered operating banks in Egypt (CBE, 2023). However, not all banks provide mobile banking applications for their customers. The researcher viewed some of the banks that provide m-banking application services. The following data is collected from reviewing M-banking applications from the National Bank of Egypt (NBE), Commercial International Bank (CIB), and Banque Misr (BM). Those specific M-banking applications are chosen due to their relatively high number of users in Egypt.

1. National Bank of Egypt (NBE)

National Bank of Egypt is a bank founded in Egypt in June 1898 and is the country's largest bank in terms of assets, deposits, loans, bank capital, number of total branches, and employees. NBE currently controls 23.6% of the market share (NBE official website, 2022). NBE Digital Services has an online banking platform, and a M-banking application called "NBE Mobile" provides customers with convenient and secure banking services tailored to meet their needs online without visiting the branch. The application contains a lot of banking services that can be held with few clicks. It has proven to be efficient in the last years, especially during the Covid-19 pandemic. Afterward, customers kept using the application for quicker transactions instead of going to the branch and waiting in long queues. After interviewing some NBE Mobile application users, most respondents said that the

application serves their banking needs well, but the interface of the application could be better. Also, the application sometimes goes down and the shutdown lasts for a few days without informing the users.

2. Commercial International Bank (CIB)

CIB is the leading private-sector bank in Egypt, offering a broad range of financial products and services to its customers, which include more than 500 of Egypt's largest corporations, enterprises of all sizes, institutions, households. CIB was from the first movers of introducing the internet banking in Egypt. Their mobile banking allows you to take care of your banking needs securely and with control. CIB is ranked first among all Egyptian Banks in governmental and commercial domestic E-payment transactions, reflecting the significant increase in volume and value of transactions, with more than 1 million users in the Online Banking Digital Consumer Channel by the end of 2021 (CIB official website, 2022). The M-banking application named "CIB" provides users with the service to complete all their day-to-day transactions with just a few clicks on their phone screen. Their "bank on the go" service is exceptional. The majority of the respondents said that it's quick efficient, personable, transparent, and consistent. The bank also provides a customer care email for any application malfunctions, and the most important thing is that the customer care team responds

immediately to make sure the user experience is smooth and quick. The mobile application is one of the reasons that we are loyal and retained to this bank.

3. Banque Misr (BM)

Banque Misr was established in 1920 by the pioneer economist and financial expert Mohamed Talaat Harb Pasha. Banque Misr was established as the first wholly Egyptianowned bank. The bank has about 18,000 employees, serving a large base of more than 10 million clients in Egypt, with a total paid-up capital amounting to EGP 15 billion (Banque Misr Official Website, 2022). Banque Misr developed its Mbanking application named "BM Online", allowing users to enjoy the comfort of safely, easily, conveniently, and quickly taking care of their banking needs. Services include transactions, accounts and card reviews, opening certificates of deposits, and paying with credit cards. The majority of the respondents said that the application satisfies their banking needs and is less costly than visiting the branch.

1.2The In-depth Interview

Objectives: The objectives of the in-depth interview are:

1. Examining the Egyptian customers' attitudes towards using the M-banking application.

- 2. Examining the Egyptian customers' perception of using the M-banking applications in terms of ease of use and application usefulness.
- 3. Examining the Egyptian customers' service experience and customer's trust in using the M-banking applications.
- 4. Examining the customer retention levels as a result of using the M-banking applications in Egypt.

Sources of Information: In-depth interviews are conducted with 30 M-banking application users of different age groups of different banks operating in Egypt. The respondents of the interviews are selected using a judgmental sampling method.

1.2.1 In-depth Interview Questions

- 1. How long have you been in the bank?
- 2. Do you use the M-banking application? And for how long?
- 3. How frequently do you use the mobile banking application of your bank? Do you expand your usage of it?
- 4. Do you recommend the bank to someone else?
- 5. What are the most important things you like about the mobile banking system of the bank?
- 6. What are the most important things you don't like about the mobile banking system of the bank?
- 7. What are the most positive customer experiences you have had in dealing with the bank?
- 8. What are the most negative customer experiences you have had in dealing with the bank?

- 9. Is the mobile banking of your bank a major contributing factor to staying with the bank?
- 10. Is the mobile banking of your bank a major factor that lets you recommend the bank to your friends and relatives?
- 11. What are the phases that you have gone through in adopting the mobile banking application of your bank?
- 12.Do you recommend it to other customers or help other customers in improving their awareness and adoption of mobile banking?
- 13. What is the impact of mobile banking on your overall customer trust?
- 14. What is the impact of mobile banking on your overall customer experience?
- 15. What is the impact of mobile banking on your overall customer retention?
- 16. Are you willing to continue to deal with the bank?

1.2.2 Interview Questions & Answers

- 1. How long have you been in the bank?
- The respondents' answers varied between 1 year minimum and 11 years maximum.
- 2. Do you use the M-banking application? And for how long?
- The majority of the respondents answered yes, they use the mobile banking application of their bank, as for the second question, the answers varied between a minimum of 1 year and a maximum of 5 years.

- 3. How frequently do you use the mobile banking application of your bank? Do you expand your usage of it?
- The respondents answered that they use it frequently ranging from 3-5 times per week. They highly rely on it to complete their banking transactions such as paying their credit card balance, transferring money to either internal accounts or external accounts, paying mobile, electricity, and internet bills, donating money to charities, transferring money to other people, opening certificates of deposits, requesting, and paying loans installments and issuing cheque books.
- 4. Do you recommend the bank to someone else?
- All the respondents answered yes to this question except for only one respondent who said no.
- 5. What are the most important things you like about the mobile banking system of the bank?
- The respondents said that M-banking is always available, they like it because it can complete their banking needs and money transactions in a very short time, in an easy way with just a few clicks. Also, they like that it is secured with the one-time password feature (OTPs), so it is a trusted platform.
- In addition, some of the respondents said that it is very transparent, very secure, and very responsive when submitting online payments. It is very easy to use and always

available, and most of the banking services are available on the application.

- Some of the respondents also highlighted that M-banking makes communication easier and more efficient as there is no need to go physically to the bank. They also mentioned that everything is saved on their mobile, so they have documented evidence, and everything is under their control. The interface of the applications is smooth and easy. The procedure for conducting a transaction is easy and clear to the user.
- 6. What are the most important things you don't like about the mobile banking system of the bank?
- The majority of the respondents said that when the application is turned down but that rarely happens, their requests are delayed for security reasons. And sometimes on the weekend, the data takes a while to be updated and reflected correctly. Moreover, some of the respondents are frustrated because the passwords of the M-banking application must be changed every 90 days for security reasons.
- 7. What are the most positive customer experiences you have had in dealing with the bank?
- The respondents have mentioned some positive experiences, and they are summarized as follows:

- Responsive customer service management especially when the transactions are related to online payments.
- The application is accessible anytime to check their balances.
- The application is very responsive to their requests and the requests are completed much faster than going physically to the bank.
- 8. What are the most negative customer experiences you have had in dealing with the bank?
- The respondents have mentioned some negative experiences, and they are summarized as follows:
- Waiting for long queues to enter the bank, I have to spend the whole day at the bank to get our requests done.
- The interface of some M-banking apps is complicated and sometimes the system breaks down without informing the users.
- Security issues regarding paying online for the subscriptions.
- Long lines for 10 mins procedure, lack of information when completing a procedure.
- Some of the respondents did not have any negative experiences with their banks.
- 9. Is the mobile banking of your bank a major contributing factor to staying with the bank?
- All the respondents answered yes to this question except for only one respondent who said no.

- 10.Is the mobile banking of your bank a major factor that lets you recommend the bank to your friends and relatives?
- All the respondents answered yes to this question.
- 11. What are the phases that you have gone through in adopting the mobile banking application of your bank?
- Some of the respondents called the bank customer service via their hotline, they requested to be registered in the M-banking services, and they asked the users to download the application and fill out a request form. They generated the username and the initial password for the customers and sent it via a text message and sent them the details on how to change their password and use the application. They also sent them a link with the services that could be held through the application without the need to go physically to the bank.
- Some of the respondents said that they downloaded the app and wrote their details such as the card number without the need to go to the bank.
- Some of the respondents said that they had to visit the branch to request a mobile banking application form and fill it out to be effectively applied.
- 12.Do you recommend it to other customers or help other customers in improving their awareness and adoption of mobile banking?

- All the respondents answered yes to this question as they always do that with their friends and family when they tell them how much they struggle with the process of going to the bank and spending the whole day there.
- 13. What is the impact of mobile banking on your overall customer trust?
- Most of the respondents said that M-banking is safer and more trusted than dealing with people. They highly trust using the platform.
- Moreover, at the beginning of the development of the M-banking application a few years back, the respondents were afraid as they were not experienced in dealing with the technological aspects of money transactions, they were afraid that they might do something wrong or a technical error could happen and they could lose their money, but that did not last long as the application always provides help and display a reference number for each step and send text messages if any error occurred. Also, the respondents praised the role of the customer care unit as it is always available via email, and they find it very responsive when they face technical errors.
- 14. What is the impact of mobile banking on your overall customer experience?
- M-banking is one of the main factors that encouraged them to switch all their financial services requests online in a fast

cashless way. The M-banking application saved a lot of time as a lot of services can be done with just a few clicks. The respondents said that it was a positive experience, especially when the COVID-19 virus spread out and there was a country lockdown, the customers were able to conduct their banking transactions through the application without the need to go to the bank.

- 15. What is the impact of mobile banking on your overall customer retention?
- Most of the respondents believe that M-banking contributes to their positive experience for the bank and as a result they will retain the bank, and they have a high level of trust in the products and services that they offer.
 - 16. Are you willing to continue to deal with the bank?
 - All the respondents answered yes to this question.

2. Research Problem & Research Question

Since the banking sector in Egypt is characterized by rapid technological advancements and increased competition, a critical gap exists in understanding how the adoption of mobile banking application technology influences customer retention strategies within the operating banks in Egypt. Moreover, since the Technology Acceptance Model (TAM) has been widely applied to predict technology adoption behaviors and after reviewing the various modifications to the model, the researcher believes that

there is a pressing need to apply a modified model of TAM to assess the impact of mobile banking technology on customer retention within the context of the Egyptian banking industry. This research aims to bridge the gap by investigating the relationship between TAM and customer retention levels in operating banks in Egypt. As a result, this research aims to answer the following question: RQ1: Do the attitudes toward using m-banking, perceived ease of use, perceived usefulness, trust, and customer experience of mobile banking improve customer retention levels in operating banks in Egypt?

3. Research Gap

3.1Academic Gap

The banking sector has witnessed a huge transformation in the digitalization of customer banking services through M-banking applications. The positive response of the Egyptian market towards the reliance on the M-banking is noteworthy according to the Central Bank of Egypt (CBE, 2022).

Considering the previous literature, some of the research studies have chosen to focus on the initial adoption of m-banking (Maqbool 2018; Mullan, Bradley, & Loane, 2017) and the motivations toward m-banking without focusing on the post-adoption or retention perspective (Lawler, 1990; Siyal et al., 2019). Based on the exploratory study questions and the secondary data analysis, there is a research gap in investigating

the relationship between attitudes towards using M-banking PEOU, PU, customer trust, and customer experience with the customer retention levels in banks operating in Egypt. Also, the previous studies show that most studies have either focused on the intentional use of technology-based products or services or frequent use based on TAM and other information system models. This research study aims to adopt a different integrated approach that has not been used previously in the banking context in Egypt.

3.2 Practical Gap

Based on relationship marketing, it is essential for business firms, particularly the services sector, to understand and comprehend the key drivers of customer retention. The popularity of customer retention has attracted both academicians as well as business professionals (Kumar and Ayodeji, 2021; Mostafa & Mahmoud, 2020; Prentice and Nguyen 2020). The aggressive competition in the banking sector has increased in the last few years and to remain in the competition. Therefore, customer retention strategies not only retain customers but also have become a novel approach for building loyalty and promoting sales of additional products and services. Even though substantial benefits of customer relations are well identified and established, however, there has been limited empirical research on how retention is

practiced by financial organizations such as the banking sector in Egypt.

4. Research Objectives

RO1: To examine the relationship between customers' attitudes towards using M-banking and customer retention in banks operating in Egypt.

RO2: To examine the relationship between customers' perceived ease of use of M-banking and customer retention in banks operating in Egypt.

RO3: To examine the relationship between customer perceived usefulness of M-banking and customer retention in banks operating in Egypt.

RO4: To examine the relationship between customer trust and customer retention in banks operating in Egypt.

RO5: To examine the relationship between customer experience and customer retention in banks operating in Egypt.

5. Conceptual Model & Hypotheses

5.1 Research Variables

The Independent Variables (I.V):

- Attitude towards Using
- Perceived Ease of Use (PEOU)

- Perceived Usefulness (PU)
- Customer Trust
- Customer Experience (CX)

The Dependent Variable (D.V):

• Customer Retention (CR)

5.2 Proposed Research Model

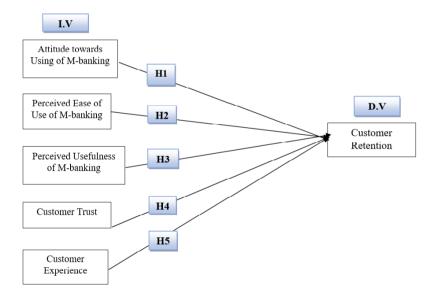


Figure 1: Proposed Research Model

5.3Hypotheses Development

H1: There is a significant positive relationship between attitude towards using M-banking and customer retention.

H2: There is a significant positive relationship between perceived ease of use of M-banking and customer retention.

H3: There is a significant positive relationship between the perceived usefulness of M-banking and customer retention.

H4: There is a significant positive relationship between customer trust and customer retention.

H5: There is a significant positive relationship between customer experience and customer retention.

6. Research Significance

The research significance and contribution are classified into two categories, first, it contributes to the previous theoretical foundation by aiming to fill the gap in the previous literature and empirical studies. Second, it contributes to the managerial implication by providing valid implications and insights to business marketers and policymakers in the banking sector in Egypt.

This research study aims to measure the customer retention levels of operating banks in Egypt through the employment of a modified TAM model. The popularity of customer retention has attracted both academicians as well as business professionals as customer retention strategies not only retain customers but also become a novel approach for building loyalty and promoting sales of additional products and services.

The banking industry is the backbone of global economies. The banking sector plays a significant role in the economic growth and development of Egypt. Technology has reshaped the ways, banking is applied, and it gave banking a new aspect by moving it from manual ledgers to digitalized and systemized processes which brought more efficiency, convenience, and time savings. The researcher decides to apply a modified version of the TAM to measure the customer retention levels in some operating banks in Egypt.

Even though substantial benefits of customer retention are well established, however, there has been limited empirical research on how retention is practiced by financial organizations such as the operating banks in Egypt. That is the motive for the researcher to conduct this study.

7. Conclusive Output and Future Empiricism

This study explored the factors influencing customer retention in Egyptian banks, specifically focusing on the role of mobile banking (M-banking) applications. Through in-depth interviews with 30 M-banking users across various age groups and banks in Egypt, several key findings emerged. The majority of respondents actively use M-banking for various transactions,

bill fund including payments, transfers. and account management, often multiple times per week. They appreciate the convenience, speed, accessibility, and security features of Mbanking, particularly the one-time password (OTP) system. These positive experiences with M-banking significantly contribute to their overall customer experience and trust in the bank. Importantly, the study found a strong correlation between positive M-banking experiences and customer retention. Respondents indicated that M-banking is a major factor in their decision to remain with their current bank and recommend it to others.

While the study reveals the positive impact of M-banking on also highlights retention. it some areas improvement. Occasional application downtime, delays in data updates, and mandatory password changes were identified as pain points. Furthermore, while most respondents praised service responsiveness, some reported negative customer experiences with traditional banking channels, such as long queues and complicated procedures. These findings suggest that while M-banking enhances customer experience, banks must also address issues in their traditional services to ensure a consistently positive customer journey.

The study offers practical implications for Egyptian banks, highlighting the importance of investing in robust and userfriendly M-banking platforms to enhance customer experience and drive retention. Future research could explore several avenues. First, a quantitative study with a larger sample size could validate the findings of this qualitative study and provide more generalizable insights. Second, the research could investigate the specific features of M-banking applications that are most influential in driving customer retention. Third, comparative studies across different banks in Egypt could identify best practices and areas for improvement. Fourth, research could examine the long-term impact of M-banking on customer behavior, such as increased product adoption or changes in transaction patterns. Finally, future studies could explore the interplay between M-banking and other digital banking channels, as well as the evolving role of traditional banking services in the digital age. This would provide a more holistic understanding of customer behavior and inform strategies for building long-term customer relationships in the rapidly evolving banking context.

8. References

A. De Keyser, K.N. Lemon, P. Klaus, T.L. Keiningham (2015), A framework for understanding and managing customer experience, Marketing Science Institute Working Paper Series, 85 (1), pp. 15-121

Alzaidi, A. A. (2018), "Impact of Artificial Intelligence on Performance of Banking Industry in the Middle East", *International Journal of Computer Science and Network Security*, VOL.18 No.10 (140-149).

Alzubi, M. M., M. M. Al-Dubai & M. M. Farea (2018) Using the technology acceptance model in understanding citizens' behavioral intention to use m-marketing among Jordanian citizens. Journal of Business and Retail Management Research, 12.

C. Prentice, M. Nguyen (2020), "Engaging and retaining customers with AI and employee service" p. 102-186

Central Bank of Egypt. (2023). Central Bank of Egypt. Retrieved from https://www.cbe.org.eg/en/

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13, 319-340.

Jamall, A. (2017) Middle East Region: Industries - Banking & Capital Markets - PwC Middle East.Available at: https://www.pwc.com/m1/en/industries/banking-capitalmarkets.html (Accessed: 6th of June 2022)

K.N. Lemon, P.C. Verhoef, "Understanding customer experience throughout the customer journey" J. Market., 80 (6) (2016), pp. 69-96

Kazi, A. K. (2013) An empirical study of factors influencing adoption of Internet banking among students of higher education: Evidence from Pakistan. The Journal of Internet Banking and Commerce, 18, 1-13.

L. Becker, E. Jaakkola (2020), Customer Experience: fundamental premises and implications for research, J. Acad. Market. Sci., 48 (2020), pp. 630-648

M. Younis Metlo, Nazar Hussain, Ghulam Saqib, Kamran Phulpoto and Sanaullah Abro (2021), Impact of Mobile Banking on Customers' Satisfaction, International Journal of Management, 12(1), 2021, pp. 1263-1271. http://www.iaeme.com/IJM/issues.asp?JType=IJM&VType=12&IType=1

Manning, J. (2018) How AI Is Disrupting the Banking Industry, International Banker. Available at: https://internationalbanker.com/banking/how-ai-isdisrupting-the-banking-industry/ (Accessed: 6 June 2022)

Maqbool, A. (2018), "Review of The Technology Acceptance Model (TAM) in Internet banking and Mobile banking", International Journal of Information Communication Technology and Digital Convergence. Vol. 3, No. 1, pp. 23-41

Mohammad A. A. & Samar M. (2010) "The Influence of Technology Acceptance Model (TAM) Factors on Students' E-satisfaction and E-retention within the Context of UAE E-learning" Journal of Education, Business and Society: Contemporary Middle Eastern Issues Vol. 3 No. 4, pp. 299-314

Mohammadi, H. (2015). A study of mobile banking loyalty in Iran.

Mostafa, R., Mahmoud, M. (2020); "The effects of customer equity and religious motivation on customer retention and switching intention A study of the Egyptian banking sector", Journal of Islamic Marketing Vol. 11 No. 6, 2020 pp. 1873-1891

Noonan, L. (2018) AI in banking: the reality behind the hype | Financial Times. Available at: https://www.ft.com/content/b497a134-2d21-11e8-a34a7e7563b0b0f4 (Accessed: 6th of June 2022)

P.C. Verhoef, K.N. Lemon, A. Parasuraman, A. Roggeveen, M. Tsiros, L.A. Schlesinger (2009), "Customer experience creation: determinants, dynamics and management strategies" Journal of Retailing, pp. 31-41

Punamaraju, R. (2018) How Artificial Intelligence Is Changing The Banking Sector - CXOtoday.com, CXOtoday. Available at: http://www.cxotoday.com/story/impact-ofartificial-intelligence-on-the-banking-sector/ (Accessed: 6 June 2022).

Sharma, S. K., Govindaluri, S. M., Al-Muharrami, S., & Tarhini, A. (2017). A multi-analytical model for mobile banking adoption: A developing country perspective. Review of International Business and Strategy, 27, 133-148.

Siyal, A. W., Ding, D., & Siyal, S. (2019). M-banking barriers in Pakistan: A customer perspective of adoption and continuity intention. Data Technologies and Applications, 53, 58-84.

V. Kumar, O.G. Ayodeji (2021), "E-retail factors for customer activation and retention: an empirical study from Indian e-commerce customers", Journal of Retailing Consumer Services

Venkatesh, V., M. G. Morris, G. B. Davis & F. D. Davis (2003) User acceptance of information technology: Toward a unified view. MIS Quarterly, 425-478.

Viswanath Venkatesh, Fred D. Davis (2000), "A theoretical extension of the technology acceptance model: four longitudinal field studies" p. 186-204