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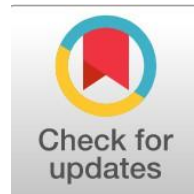
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Electronic Banking Portals and Their Impact on Efficiency Through Financial Literacy

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Abstract

General Background: Digital transformation has reshaped the banking industry through the expansion of electronic banking portals that facilitate online financial transactions and remote banking services. **Specific Background:** Electronic banking portals support banking operations by reducing transaction delays, lowering operational costs, improving service speed, and increasing customer satisfaction, while financial literacy determines users' ability to utilize these digital services effectively. **Knowledge Gap:** Previous studies have not sufficiently explained how financial literacy mediates the relationship between electronic banking portals and banking efficiency, particularly within commercial banks in Iraq. **Aims:** This study aims to examine the relationship between electronic banking portals, financial literacy, and banking efficiency, as well as to investigate the mediating role of financial literacy in strengthening operational and financial performance. **Results:** Using a descriptive-analytical methodology and an econometric model based on 100 valid questionnaires collected from customers and bank employees, the findings reveal statistically significant positive relationships between electronic banking portals, financial literacy, and efficiency. The results indicate that electronic banking portals improve operational performance, service quality, and transaction management, while financial literacy strengthens users' confidence, informed financial decision-making, and adoption of digital banking services. **Novelty:** This study integrates financial literacy as a mediating variable in evaluating the relationship between electronic banking portals and banking efficiency within the context of digital banking transformation. **Implications:** The study highlights the importance of strengthening financial literacy programs, improving cybersecurity systems, investing in digital infrastructure, and developing user-friendly banking interfaces to support sustainable banking efficiency and digital financial service adoption.

Highlights:

- Electronic banking portals support faster banking operations and lower transaction costs.
- Financial literacy strengthens customer confidence and digital banking utilization.
- Banking efficiency improves through integrated digital services and secure transaction systems.

Keywords: Electronic Banking Portals, Banking Efficiency, Financial Literacy, Digital Transformation, Digital Financial Services

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Introduction:

Due to the rapid evolution of information and communication technologies over the last two decades, the banking industry has changed profoundly. Services provided through banks are no longer limited to traditional branches, particularly not in the physical world, and mainly operate through digital media, primarily online banking portals. These portals are one of the most important functions of digitalization for banking, comprising one of the most significant components of digital transformation in terms of integration and electronic platforms, as they support customers performing a larger and expanded range of banking transactions remotely in an area which no longer requires traditional bank access, such as transferring money, paying bills, account management, and balance inquiries. The role of online banking portals has received increasing focus as a strategic enabler to increase the operational and financial effectiveness of banking. On the level of operations, these e-portals help alleviate dependence on manual activities, cut down on the cost of service as well as transaction delays, and promote bank efficiency. Financially, they facilitate transactions, raise income, reduce operational mistakes, and increase the number of transactions, therefore achieving the desired profitability and financial health. Benefits that result from technological infrastructure are not only present, but rather need appropriate levels of financial literacy among users. Financial literacy is a factor that determines how individuals and institutions as clients benefit from electronic banking. It demonstrates the users' understanding of the information, benefits, and drawbacks of these services and their ability to make strategic smart banking choices using them. Hence, financial literacy arises as an intervening variable that mediates the association between the use of electronic banking portals and levels of efficiency. The limited understanding of finances can hamper the use of electronic portals, which leads to poor use or avoidance of e-banking portals and consequently results in diminishing returns on investment in banking efficiencies in the system. In contrast, enhanced financial literacy leads to improved trust in electronic services, adoption rates, and better operational usage, which in turn positively influences overall banking performance. The importance of an analysis of the effect of electronic banking portals on effectiveness with regard to financial literacy is highlighted due to its demonstration of the dynamic interplay between the technological and behavioural aspects of today's banking. This article will also provide information on how to harness the potential of digital advancements in the banking industry by improving individuals' financial literacy so that they can be efficient, and hence financially stable in a competitive and evolving banking sector.

Section One / Study Methodology

First: The Problem Statement of the Study

The banking industry has undergone a radical transformation over the past few decades due to the rapid growth of technology and the increasing popularity of electronic banking gateways. Mobile banking, online banking, ATMs, and online customer service platforms have redefined banking systems aimed at operational efficiency, access to banking services, and customer satisfaction. Meanwhile, the use of electronic banking gateways has brought new operational complications — service quality, cybersecurity, and customer confidence in the use of complex technological systems. However, some studies did not adequately explore how digital banking channels contribute to operational excellence, which is commonly defined as an optimal operational effectiveness state in which efficiency, agility, and customer attention are essential. The mediating role of financial literacy in this situation is also largely neglected. The problem is that there are very few empirical findings explaining how electronic banking gateways increase efficiency through financial literacy mediation. This study intends to test whether digital banking tools using financial literacy can improve the functional capabilities and the performance of banks through using such tools. This will be even further critical in this ever more competitive banking environment, allowing banks to position themselves better in the competitive landscape, especially in the digital age. Hence, these fundamental problems are also best answered by considering the below questions:

What role do online banking portals play in banking services?

Do online banking portals facilitate operational excellence?

Do banking environment customers and employees have financial literacy?

Is there a relationship between financial literacy and the use of online banking portals?

Does financial literacy facilitate the effect of online banking portals on efficiency?

Second: Study Objectives

1. This research will argue how electronic banking portals lead to bank efficiency.
2. The present study intends to examine the correlation between financial literacy and the use of electronic banking portals.
3. Through this study financial literacy will serve as a baseline against which the efficiency and effectiveness of electronic banking portals are demonstrated.
4. This investigation aims to measure the role of electronic banking portals in efficiency indicators.
5. This study aims at assessing customers' and employees' level of financial literacy and the association it has with the extent of their utilization of electronic banking portals.

Third: Study Significance

In today's financial sector, assessment of electronic banking portals and their efficiency effects using financial literacy is of critical significance. In light of this paradigm shift, with banking systems recently evolving to embrace technology-oriented solutions, it is well worth considering how electronic banking portals impact operational efficiencies in the banking sector. Online banking, mobile applications, ATMs, and electronic payment services as digital service delivery channels have fundamentally changed how banks serve their customers and how they operate their internal business. This shift not only makes it more convenient to serve individuals with simplified service, but it also promotes competitive market-based innovation and reduces transaction costs. Operationally, such gateways are also a driver of more effective banks and thus the speed and accuracy of service they can offer to customers is greatly improved through a reduced degree of human error. These changes add more value to the operational effectiveness (for instance in terms of efficiency, quality and dependability) as well as feed into a never-ending quest of continuous improvement of banking operations. Additionally, digital processes enable banks to implement data-driven decision-making and monitoring of financial performance in real time thereby being more responsive to changing market needs. But the adoption of digital banking depends on banking staff and customers' internet culture. Thus, a healthy financial literacy culture fosters thoughtful decision-making, secure digital tools and higher levels of trust in the use of digital services. Employees who are digitally/financially trained, have the knowledge and the ability to better adapt to technological change, improve service delivery, as well as knowledge of security and compliance to new standards. Similarly, more financially educated consumers are well-equipped to use digital technology efficiently, thus enhancing the operational efficiency of the banking industry. Research on the connection between online banking portals and efficiency and financial literacy is of interest to both banking policy-makers and researchers. This is where financial literacy ensures success as it helps you recognize the driving factors of your digital transformation, enhances your operational plans, and creates a knowledge-based financial ecosystem. And, lastly, this research helps towards having a sustainable and robust banking system for the purpose of the innovation-based financial behavior where the aim is for excellence.

Fourth: Study Hypotheses

1. Online banking portals have a significant positive impact on financial literacy in banks.
2. Financial literacy has a significant positive impact on efficiency in banks.
3. Online banking portals have a significant positive impact on efficiency in banks.
4. Online banking portals have a significant positive impact on efficiency when financial literacy is present in banks.

Fifth: Study Limitations

Subjects: The research is centered on electronic banking portals and their impact on bank efficiency through enhancing customer financial literacy. Geographical limitation: The research has only confined the study to commercial banks in Iraq in the sense that data collection and analysis is only conducted in this market. Time Domain: The study period includes data gathering and analysis in the range of September 2025-March 2026 which is the time frame for the researcher for covering the study variables. Study sample: The study is confined to a limited sample of bank customers and banks' staff, including those who use digital banking systems and those with basic or advanced levels of financial knowledge. (120) questionnaires were provided to different groups of the sample for the purpose of the analysis and results. (104) questionnaires were administered and (4) questionnaires were excluded because of errors in their completion, yielding a final sample of (100) questionnaires. Conceptual boundaries: The study narrows in on customer usage of electronic banking portals, efficiency of the bank, and the awareness level of consumers regarding financial issues, while not including other external factors that would impact bank performance.

Section Two / Theoretical Framework

First: Electronic Banking Portals

1. The Concept of Online Banking Portals

These are internet-based platforms designed for customized financial services through high connection service and banking transaction facilities to ensure customer access of account and also the bank and the customer interaction. They also offer all sorts of services such as money transfer, billing, etc. and have immediate access to financial data via computers or tablets which are completely accessible end to end. These avenues are crucial to improving the end-users' digital experience and for providing more control of their day-to-day bank transactions. These services must be secure and simple to use, which are also required through strong emphasis on customer experience and trust. (Gallegos & et al., 2025:18) Online banking portals are one of the important tools that enhance the online presence of financial institutions as customers gain an integrated means to perform their banking transactions by using the Internet quickly and securely. It is these advanced portals that provide high speeds and the accuracy of the information for better user experience and accessibility of banking services for users anywhere, anytime. For instance, online banking portals are divided into several categories, such as public portals, where all customers receive universal service, and private portals that target specific segments (corporations, high net worth clients) to offer customized services. They ensure the security of transactions by following various verifications and data guarding frameworks, following local and international information security legislations. The e-banking portals

differ in their flexibility and their customization ability to meet customers' requirements, and in continuous development of their functions (Venkatesh & et al., 2003:19). They provide various types of services, including account viewing, fund transfers, bill payments, and even investment management. Several portals provide evaluation and analytics tools to assist customers to make financial decisions on an informed basis through the tools, in addition to user-friendly portals that provide an easy to use, accessible to all user profiles. In terms of regulation and security factors, the portals take great and strict safety precautions to ensure that their databases are secure and data is kept secret, to prevent information from being hacked and used in cyberattacks, and to safeguard data protection for all users of the e-commerce of the internet banking system. These systems are regularly updated to address technological and legislative trends that support compliance with international standards and offer improved verification and authentication capabilities. (Batista & Teles, 2019:126)

2. Types of Electronic Banking Portals

Electronic banking portals are digital interfaces which allow customers to manage their accounts and carry out financial transactions via the internet or smart devices. Depending upon the access method and the services furnished by them, these kinds of portals can be broadly categorized as (Venkatesh & et al., 2003:66):

a. The Access Method

Internet Banking Portals are the most common and can be accessed via a web browser. They permit: (Suri & Jack, 2016:132)

- Viewing balances
- Transferring funds
- Paying bills

E.g., via their websites, official bank portals

Mobile Banking Apps are applications that have been installed on smartphones. They feature: (Erol & Elia, 2016:43)

- Ease of use
- Instant notifications
- Advanced services like QR code payments

SMS Banking Portals are dependent on sending commands in text messages. They are great options in poor internet connectivity areas.

ATM Interfaces provide banking features through an ATM, e.g., (Pousttchi & Dehnert, 2018:72)

- Withdrawals and deposits
- Money transfers
- Balance inquiries

B. By Service Type

Retail Banking Portals were designed for individuals and feature as follows (Mallat, 2017:55):

- Personal account management
- Credit cards
- Loans

Corporate Banking Portals are for businesses and they offer: (Mallat, 2017:57)

- Payroll management
- Group payments
- Cash management

Online stores use Payment Gateways to accept payments, such as:

- Card payments

- E-wallets

C. According to the technology employed:

Cloud-based portals offer: (Mols, 2018:81)

- Fast access
- Reduced operating costs

Blockchain-based portals are those that are: (Tan, M., & Teo, 2020:111)

- High security
- Transaction transparency

They are particularly good for international transfers.

D. Advanced portals (modern portals):

APIs are used to connect banks and third-party applications in open banking portals.

Decentralized finance (DeFi) platforms enable financial services such as:

- Lending
- Trading

They rely on cryptocurrencies.

Second: Financial Literacy

Financial literacy forms one of the basic underpinnings and affects in person financial behaviours and attitudes given the economic challenges of the twenty-first century. It is focused on understanding basic concepts and principles about how to use information and knowledge to better manage your personal financial resources. It's also manifested in people's capacity – if the financial plans and practices we employ to make informed choices, the ways that we think about the future and how risk is managed – to safeguard financial health and self-growth. The concept is also linked to many factors -- namely, the amount of financial awareness, life experience or learning, content exposure to education and media, and skill to implement knowledge in practical situations. In this context, it is apparent that financial literacy involves not only abstract concepts, but also the exercise of practical abilities and creative agility in interpreting market dynamics and the evolution of the global economy. It is regarded as an important contributor to the development of self-confidence as well as the implementation of ethical financial behaviours, including the use of strategic planning, sustainable saving, prudent investing, and successful debt management. An insight into the challenges that hinder the establishment of this culture, such as diverse attitudes, unequal access to resources; and influences from digital media, is to determine suitable approaches to spread it with educational and awareness campaigns that resonate with the social and human aspirations, including in-situ knowledge and understanding of how to adapt. Thus, establishing a strong base of financial literacy is important to enable people to keep up with economic changes, survive, and grow sustainable, financially, and to raise people's awareness of the value of responsibility in the financial world and at home.

1. The Concept of Financial Literacy

Financial literacy is one of the most important aspects of a person's understanding and control of his or her finances. Financial literacy comprises three dimensions and has since, largely, been characterized into basic, intermediate, and advanced levels. Basic financial literacy is that at a foundational level, even simple financial concepts are difficult to grasp, and individuals remain unaware of the principles of saving, wise spending, or the importance of budgeting. Most of those considered as intermediate financial literacy are beginning to understand basic concepts and can apply them to daily life like managing expenses in a balanced way, using limited financial resources. Advanced financial literacy involves the skills to understand economic and financial concepts, the ability to plan for the future financially, as well as the knowledge about how the financial markets, by influencing individual choices, impact the process (Al-Atawneh, 2024: 68). Financial literacy level is a significant predictor of financial behavior as increased literacy improves risk management skills, lowers the risk of over-debt, and fosters a sound investment decision-making process among individuals. Further, awareness levels vary considerably based on age, educational level, work experience, and media knowledge. Hence, targeted mechanisms must be implemented and ongoing improvement of cognitive skills. Enhancing financial literacy directly contributes to the financial stability of both individuals and families and reduces areas of financial risk while increasing awareness of the significance of general economic literacy (Al-Suwaih, 2023: 4). As a result, the dimension of financial literacy plays an essential role in determining training needs and provides guidelines in implementing policies and programs to match the cognitive capacities of different age and social groups (Thuranira & et al., 2017: 98).

2. The Importance of Financial Literacy

Financial literacy is one more thing most necessary in modern times because it makes a real difference to the quality of life and economic stability of an individual. The relevance of the subject is shown by a number of interconnected aspects (Mujahidah and Santosa, 2022: 49).

a. Improving Income Management. People with financial literacy help in balancing their income out by arranging a good proportion between needs such as housing and food and wants such as entertainment.

b. Make Right Financial Choices. Anyone who is financially literate can examine various financial options better: saving, investing, borrowing; and thus avoids making poor choices, for instance falling into unnecessary debt.

c. Encouraging Saving and Investing. Financial literacy helps to create a saving and investing mindset for the future that can be used to address emergencies in life or to satisfy long-term desires related to owning a home and pursuing retirement.

d. Alleviating Financial Hazards. A good grasp of financial things avoids financial emergencies, bankruptcy or even financial fraud—particularly in a world where people are increasingly turning to digital financial services.

e. The greater the consciousness one has about money management, the greater the potential of having a better chance to become financially self-sufficient, that is, to be able to look after his/her own material well, or be able to fulfill his/her needs independent of others.

f. Promoting the Soundness of Society. As people become more financially literate, the amount of unplanned debt declines and savings and investment rates rise, which also helps the economy overall.

Third: Efficiency

Efficiency is one of the key components of operational excellence and defines the banking industry. Efficiency is a bank's capacity to optimally use assets to provide services and reduce costs, by further improving procedures and work technology. This affects performance/work productivity levels directly. Efficiency is crucial to operational excellence – cutting costs, but also being able to serve as a customer's best friend quickly and efficiently. Other important concepts related to this concept are operations management, risk management, continuous improvement and digital technologies. Management of operations concerns organizing and coordinating activities and services to maximize output and maximize end-user value. Risk management is part of the process of ensuring operational consistency and compliance with regulations, given the existing security and regulatory environment. Continuous improvement, in terms of phases, (the Sigma and Lean), is not only concerned with reducing waste, but also with constant development of quality performance. Efficiency then can be regarded as one of the primary building blocks of operational excellence in this environment. This benefits through modern management tools and techniques, as well as technology development and innovation, in order to build competitive edge and sustainability in the banking industry. In preparing efficiency reports and evaluating return on operations performance in banks, proper and systemic measures that are able to evaluate operational performance and measure if the overall objectives can be accomplished need to be used. This work begins with the definition of Key Performance Indicators (KPIs) directly related to operational productivity, enabling to measure both the quantifiable and intangible KPIs in order to determine the extent to which the desired outcomes are realised. They are employed to systematically gather and manage data to develop a clear representation of performance level, and provide information for the analysis of strength and limitations of banking systems. (Annamaria & Olivia, 2023:36). Reporting is a significant step in increasing transparency and improving decision-making methods, since it shares information for the review of operational standards and to recognize potential areas of improvement. Such reports employ sophisticated analytical procedures to ensure data accuracy and reliability, playing an important role in an objective and transparent return on operations (ROI) analysis process. Quantitative tools and statistical techniques are utilised to search for trends and patterns and allow management to identify issues related to operational efficiency in real-time. In terms of ROI measurement, the bank's performance can be assessed by the use of dedicated variables related to operational flexibility, service cost and use of resources that help to assess how well the institution realized its economic and technical strategies. Value creation through the measurement of ROI is such an important tool for its evaluation that can help us to see if certain operations have any direct impact by being able to increase the contribution of production and reduce the cost of operation, in order to be more competitive, financial performance of the bank and the sustainability of the bank. (Bruner, 2016:26). Modern systems and technologies of data collection and processing that help to achieve decision towards effectiveness and efficiency are also employed, from performance management system to big data analytics applications. Reporting is very important for continuous improvement and continuous assessment of progress, helping to monitor for gaps in performance, analysis of the gaps in performance, and corrective action. Thus, banks ensure long-term operational excellence means this enhances their ability to react to shifting conditions in the market, and increase their efficiency and the added value they can offer to both consumer and shareholder when they are changing. (Oliveira et al., 2016:21)

Fourth topic / The practical aspect

First: Questionnaire Analysis. Analyzing a questionnaire is an important part that needs to be done accurately and professionally through choosing a method and technique to get reliable, credible results and can only be done by a researcher who has had thorough and detailed knowledge and is good at studying a variety of data. This is started with the data source as such to understand what type of variables are being collected, and what kind of measurements will be obtained. This calls for matching appropriate statistics to each data kind in order to extract meaningful and relevant information. Data collection is conducted with a sound questionnaire, with appropriate questions that provide the necessary

information to support this analysis. In addition, the data will be formulated in a format to meet that statistical and qualitative analysis needs, avoiding errors or biases that can influence the findings. Then we apply a variety of targeted analytical strategies - quantitative and qualitative. Statistics are used to interpret data and give a more or less understandable description of the results; variance analysis is used to test hypothesis, to explore relationship between variables (including statistical significance), and modeling the data in order to generate interpretation of the results.

Questionnaire Responses. This researcher distributed (120) questionnaires to different segments of the population for analysis and for obtaining results. (104) questionnaires were collected. Four (4) were excluded because of errors in their completion, leading to an overall count of (100) questionnaires.

Table (1) Questionnaire Form Answers.

S.D	Mean	Total	completely disagree	disagree	somewhat agree	agree	completely agree	NO.Q	variable
0.1830	3.92	100	0	1	33	39	27	X11	Electronic banking portals X
0.2997	4.61	100	0	0	11	17	72	X12	
0.3195	4.67	100	0	0	9	15	76	X13	
0.3927	4.88	100	0	0	2	8	90	X14	
0.3501	4.76	100	0	0	6	12	82	X15	
0.1797	3.98	100	0	1	31	37	31	M11	Financial literacy M
0.3870	4.85	100	0	1	2	8	89	M12	
0.1995	4.22	100	0	0	24	30	46	M13	
0.2255	3.71	100	0	0	41	47	12	M14	
0.2902	4.58	100	0	0	12	18	70	M15	
0.2628	4.49	100	0	0	15	21	64	Y21	Efficiency Y
0.2303	4.37	100	0	0	19	25	56	Y22	
0.2232	4.34	100	0	0	20	26	54	Y23	
0.2164	4.31	100	0	0	21	27	52	Y24	
0.1883	4.13	100	0	0	27	33	40	Y25	

Questionnaire responses. a. • Answer to the question (I conduct my banking transactions regularly through the electronic banking portal.) (X11) found the arithmetic mean for the items of the question to be (3.92) which is greater than the hypothetical arithmetic mean of (3). It means a high level of awareness among the sample at the question itself. Moreover, the low standard deviation (less than 1) of the study, in fact, shows the uniformity of the participants' opinions (more significantly, the no difference in response was very low). • Question Results (The E-Banking Portal Interface is clear and user-friendly.) (X12) demonstrated that all items of the question had an arithmetic mean that was (4.61), which is above the hypothetical arithmetic mean (3). That speaks to the sample's high knowledge concerning the question. Moreover, the low standard deviation (less than 1) shows the homogeneity of the participants' opinions and no significant variation among the answers. • Answer to the question ("I feel assured using the Internet banking service for personal financial transactions") (X13) stated that the arithmetic mean indicates that the answers to all items were (4.67), which is significantly higher than (3) is supposed, demonstrating that participants were very conscious of the issue. Additionally, low sample standard deviation less than 1 suggests a homogeneity between participants and some variability is absent from the responses. • For the question (I can act for most banking services (transfer, payment, inquiry, account management) in online portal) (X14), the arithmetic mean for all items was (4.88), which was higher than the hypothetical arithmetic mean (3), indicating how aware participants were of the question. Low standard deviation of (less than 1) also reveals a homogenization amongst the participants and no great variation in responses. For the question I think the online banking portal is a good means to reach the bank (X15), it was reported the arithmetic mean for each item in the question was (4.76), which is in excess of the imagined arithmetic mean (3), which is consistent with high level of participant knowledge in the question. In addition, the low standard deviation (< 1) means that opinions of the participants are uniform and that response does not differ significantly. A. Answers to questions on the mediating variable, Financial Awareness (M). • What the question produced (I track my monthly expenses to see where my money goes.) (M11) showed that the arithmetic mean of all items to the question was (3.98) which is above the hypothetical arithmetic mean of (3). It shows that the participants are very knowledgeable of the subject matter of the question. The standard deviation (less than 1) also reveals the homogeneity of what the participants think and lack of variability in their responses. • Question results (I make a Personal/Family Budget and follow it regularly); (M12) indicated that the arithmetic mean of all items of question was (4.85), higher than the hypothetical arithmetic mean (3) This reflects the level of knowledge among the questionnaire respondents is that, they are fully informed in the question. A low standard deviation (lower than 1), also reflects the homogeneity in participants opinions, without significant shifts in the responses. Question 1 (M13) "I have sufficient knowledge of basic financial conceptualizes such as interest, saving and investing" indicated the mean score at each item was 4.22, which was on average higher than 3 (hypothetical). This shows the participants to understand the question well as well in their opinion. Also, a low standard deviation (less than 1) indicates a commonness of thought of the data, an overall homogeneity and low variation in terms of respondents' answers. • Question results of (I make a distinction between different financial products, current accounts, savings accounts, loans etc.) (M14) and that arithmetic mean for all items was (3.71) which was above the

assumed arithmetic mean with (3), suggesting high understandings from the answers among the participants on question. The low standard deviation (less than 1) also shows that the respondents expressed monolithic views and that the answer was uniform. • Resulting from question (I read or follow financial news to learn about economic and market developments) (M15), arithmetic mean of each item was (4.58) which was higher than the arithmetic mean of hypothetical (3), meaning many subjects had a high level of grasp of the question. The low standard deviation (less than 1) also points to homogeneity of opinions among the respondents as well as a lack of substantial variation according to respondents. a. The question of dependent variable, efficiency (Y):

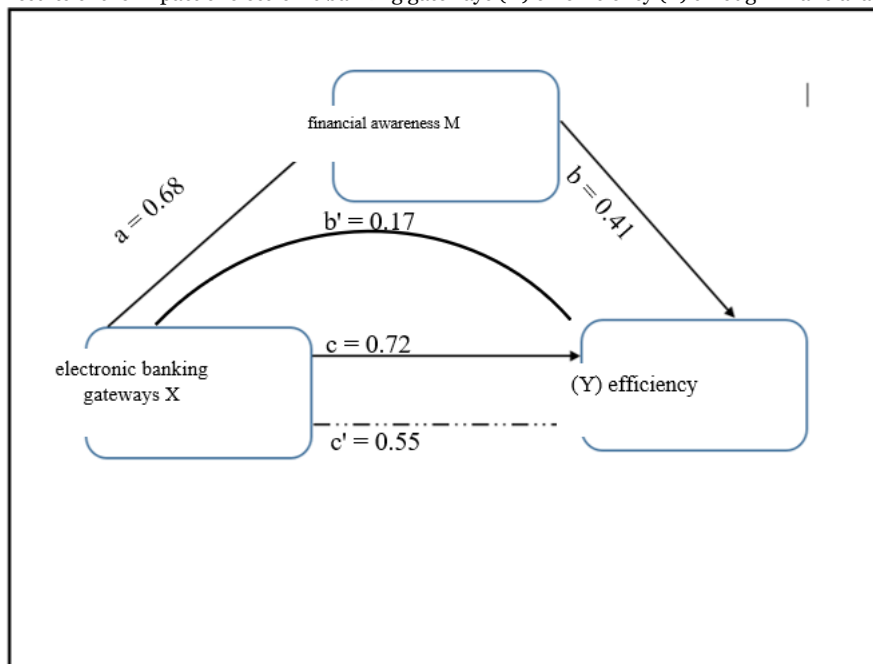
Table (2) Results of the impact of electronic banking gateways (X) on efficiency (Y) through financial awareness (M)

Decision	Y2		M1		Var	Path
	p-v	R ²	p-v	R ²		
The existence of the impact of electronic banking gateways (X) on efficiency (Y) through financial awareness (M)	-	-	0.000	0.68	X1	a
	0.000	0.41	-	-	M1	b
	0.001	0.72	-	-	X1	c
	0.000	0.55	-	-	X1,M1	c'
	-	0.17	-	-	a+b	b'

Based on the above table it is evident that:

1. Path (a) indicates that electronic banking gateways (X1) are positively related to financial awareness (M1) as a mediating variable. P-value (0.000) < 5% – indicating that the effect of the independent variable on the mediating variable is statistically significant.
2. Path (b) shows that the effect of financial awareness (M1) is positively correlated with the dependent variable efficiency (Y2). The p-value (0.000) is less than the hypothetical significance value of 5%, indicating that the mediating variable has a statistically significant effect on the dependent variable.
3. Path (c) showed that electronic banking gateways (X1) positively affect the dependent variable, efficiency (Y2). The p-value (0.001) is less than the hypothetical significance value of 5%, indicating a statistically significant effect on the dependent variable. This represents the overall effect of the independent variable on the dependent variable.
4. Path (c') revealed that electronic banking gateways (X1) induced a positive influence on the dependent variable, efficiency (Y2), in the presence of the mediating variable, financial awareness (M1). The p-value (0.000) is less than the hypothetical significance value of 5%, which means the positive effect of the independent variable on the dependent variable with the mediating variable is statistically significant. That is, it is the direct influence of the independent variable on the dependent variable.
5. Path (b'): Path (a) and (b) effects were shown by the dependent variable with an outcome of (0.17), which is the independent variable's indirect impact on the dependent variable.
6. Decision: There is a direct effect of electronic banking gateways (X1) on efficiency (Y2) through financial awareness (M1). Finally, the results of the above table are detailed in figure (1).

Figure (1) Results of the impact of electronic banking gateways (X) on efficiency (Y) through financial awareness (M)



Section Four: Conclusions and Recommendations.

First: Conclusions .

From theoretical as well as applied perspectives, this subsection discusses findings that suggest some conclusions. Based on these results, a number of main conclusions can be deduced:

1. The study confirms that by adopting electronic banking portals the overall effectiveness of banking operations and customer satisfaction in a constantly changing environment is enhanced.
2. A radical change in the model of the financial service delivery has been effected by accelerated technology advancement and ongoing dependence on digital services. Digital channels are able to serve the customer in a flexible and convenient manner.
3. The interaction of different digital channels and the ability to create new tools (like AI and modern payment technologies) of the service and solution are very important in promoting better service levels and personalized services by using customer data and its analysis.
4. As technology plays an ever more important role, security issues arise, but it forces to make the cost-effective investment on cybersecurity and identity management systems and establish regulatory frameworks for them to maintain performance, effectiveness and to fight fraud.
5. A critical function of ensuring sustainable growth and performance of digital transformation in measuring the business is to use key performance indicators (KPIs).
6. A successful digital strategy is to engage in successful change management, aimed at improving internal capabilities and improving both employee and customer experience; Thus, it encompasses processes that enable both employee and customer satisfaction. It can accelerate delivery of services, which can now be customized to the organization, enhance data management and use data for decision-making.
7. Rapid technology shifts, the adoption of smart banking services and financial technology has taken online banking portals one day up another. What follows is a further development of technology-based online banking portals, with the advancement in technology in every bank sector leading to increased efficiency and effectiveness for delivering banking technology-driven service offerings.

Second: Recommendations.

This section considers recommendations introduced by the study, drawing upon conclusion of the preceding part. These conclusions are provided as follows:

1. The research proposes to investigate the impact of electronic banking portals on financial literacy. The accessibility of personal banking channels has the added benefit of sensitizing people to financial theory so that they make more sound financial judgments.
2. This study suggests assessing the level of financial and cognitive knowledge to know to what extent the user benefited from the digital services. More importantly, digital and financial literacy skills are the foundation of improved confidence with which to use electronic platforms, and reduce the level of hesitation and uncertainties regarding these platforms.
3. Researchers should pay attention to the way digital channels interact on continuous basis; that is a sign of good financial behavior; especially in saving and investing as awareness of hazards (that is, the things we have to take into account and avoid) improves, while learning to deal with these hazards better.
4. The gaps in financial literacy are important to investigate as those gaps restrict broader use of digital services. This requires activities to develop financial education and digital literacy especially for the less well educated populations.
5. The research suggests emphasizing the need to promote the design of vocational training to enhance digital proficiency and financial literacy. This will create the opportunity for people to capitalize on digital banking media and facilitate a sturdy and viable financial behavior climate.
6. For scholars, it became very important for investment and financial literacy to reinforce financial literacy, as it is a crucial step for the efficient implementation of digital channels. It also helps achieve financial stability and reduces the risk of frivolous transactions — which will satisfy the banking sector and public aspirations to the banking space and world around it, being a more transparent, efficient, and effective banking system in a banking setting.
7. The study highlights the need to maximize the effective use of digital banking channels as a core to operational excellence for banks. Increased efficiency and substantial cost reduction are key outcomes from these mechanisms. At the operationalization point, on the operational front, the procedures have been made easier and processes and the financial transaction of such transactions has been smoother in the digital realm, with decreased time spent in processing, human error, cost of operations and improved overall performance. Results of the impact of electronic banking gateways (X) on efficiency (Y) through financial awareness (M)

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