

Financial Technology and its Role in Enhancing Digital Services in the Jordanian Commercial Banks

التكنولوجيا المالية ودورها في تعزيز الخدمات الرقمية في البنوك التجارية الأردنية

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Abstract

The current study examines financial technology and its role in enhancing digital services in Jordanian commercial banks. The study used a descriptive and analytical technique. The target population for this research is all employees of the Jordanian commercial banks listed on the Amman Stock Exchange, which number (14). The researchers were able to collect (213) questionnaires. The results showed that there is a statistically significant impact at the level of ($\alpha \leq 0.05$), FinTech: (credit service, investment management services, payment services, financial market support services) in enhancing digital services. The study suggests that Jordanian banks should invest in financial technology models to reshape traditional financial and banking services. This involves building centers for financial innovation and creating new banking products. Cooperation between traditional banks and financial technology companies is necessary to enhance work in financial technology platforms through the open banking application programming interface.

Keywords: Fintech, Credit Service, Investment Management Services, Payment Services, Financial Market Support Services, Digital Services.

1. Introduction

The adoption of cashless transactions is steadily increasing as the global market expands and the financial sector advances. Consequently, more and more individuals are transitioning from using physical currency to embracing cashless payment methods. The cashless system is not only essential but also imperative in today's society (Pazarbasioglu et al., 2020). Financial technology, sometimes known as FinTech, encompasses businesses that leverage technology to improve and streamline financial services and procedures. The phrase pertains to a wide-ranging and swiftly expanding industry that caters to both consumers and companies. FinTech involves structuring and utilizing data to create economic value and generate income, as stated by Leong & Sung (2018). The FinTech encompasses all the technical advancements in the financial industry, namely those that enhance the financial services provided to clients and optimize their investment strategies. Given the well-established financial sector's growth in recent decades, it provides an excellent environment for advancements in the field of financial technology (Kim et al., 2015).

According to Musa et al. (2019). The Central Bank of Jordan's successful implementation of the e-Fawateercom platform exemplifies the significance of efficiently utilizing creative and technical instruments in the financial industry (Alshehadeh et al., 2022), (Al-Dmour, 2017). The implementation of FinTech tools was proposed as a response to the global financial crisis in 2008, with the aim of modernizing the conventional financial industry (Wullweber, 2020). Several companies in Jordan have focused on the development of FinTech tools. MadfooatCom and Green Wallet have successfully developed unique financial solution technologies that enhance the use of digital financial services (Ayoush et al., 2020).

According to Vovk et al. (2021), Financial services and consumer loans may migrate towards bank-FinTech cooperation. Due to banking developments, credit services may appeal to customers. In these settings, banks' digital technology innovation capabilities and desire influence competitiveness and profitability. During pandemic uncertainty, banks and FinTech firms collaborate to promote competitiveness and financial stability. The high cost and short life of banking innovations, low bank readiness for the transformation of banking business processes and business areas, insufficient development of the banking services market compared to leading countries, and lack of legal norms regulating such interaction hinder bank-FinTech interaction. Accordingly, the current study examines financial technology and its role in enhancing digital services in Jordanian commercial banks.

While existing studies explore the impact of financial technology (FinTech) on enhancing digital services in the financial sector globally, there is limited research that specifically examines the unique challenges and opportunities faced by Jordanian commercial banks in adopting FinTech solutions. This study fills that gap by focusing on how various FinTech services—such as credit, payment, and investment management—affect the digital service landscape within Jordan's banking sector.

2. Literature review

2.1 FinTech

According to Dorfleitner et al. (2017), "FinTech" refers to businesses or individuals that work in the financial technology industry. As Yusuf (2005) points out, financial technology is a subfield of ICT that enables organizations to disseminate financial services more efficiently and at a lower cost via the use of various forms of electronic communication. The word "fintech" encompasses any business that enters this industry with the goal of providing clients with cutting-edge technical solutions. According to Gomber et al. (2018), these new businesses aim to gain market share by undercutting more established competitors in the financial services industry.

According to the summary of the National Strategy for Financial Inclusion published by the Central Bank in 2017. The low financial inclusion rates in Jordan can be attributed to the extensive availability of banking channels in various locations. Consequently, financial technology has emerged as a crucial tool to integrate those who are financially excluded. The banking process plays a crucial role in promoting financial inclusion, as it is a key factor in increasing capital accumulation and investment volume. This, in turn, leads to improved economic growth. The banking sector is one of the fundamental pillars of the economy, as it plays a significant role in financing investments. Thus, Jordanian banks are enhancing their performance by incorporating financial technology into the banking services they offer to customers. This strategy aims to attract a significant portion of the funds that are currently kept outside the banking sector, encouraging their entry into the economic cycle and fostering contributions to the development process (Alshehadeh & Al-Khawaja, 2022).

The Central Bank and financial sector authorities play a significant role in promoting financial innovations in Jordan. The Ministry of Finance actively contributes to the expansion of the fintech industry. The Jordanian government is very supportive of the expansion of fintech, which has been given high priority as one of the key national development objectives. The banking industry is seeing more competition as fintech companies with quick development and expansion enter the market. Fintech has been depicted by the media as a revolutionary and disruptive force, equipped with digital tools that transform existing financial institutions and remove barriers (World Economic Forum, 2017). In order to stay competitive with fintech businesses, which have already had a significant impact on the financial industry, every financial institution must explore opportunities to use and engage in fintech. In 2020, Jordan was positioned as the sixth highest among Arab nations in terms of the quantity of fintech enterprises operating under its legal authority (Karaki & Al-Kasasbeh, 2024).

Based on the findings of Thakor (2019), the Basel Committee on Banking Supervision and Control endeavored to categorize financial technology in accordance with the advances it has for the following industries:

2.2 Credit services

Credit services in the FinTech sector have significantly transformed how financial institutions manage and offer credit. Traditionally, credit services relied heavily on in-person interactions and rigid criteria for creditworthiness, such as income levels and employment history. However, the integration of FinTech has allowed for more dynamic and personalized credit offerings.

FinTech credit services include mobile banking solutions, credit card services, peer-to-peer lending platforms, and digital credit scoring systems. These platforms use advanced algorithms, machine learning, and big data to assess risk more accurately, making credit more accessible, especially to underserved populations. Research by Bartkevičiūtė et al. (2018) emphasizes that FinTech solutions in credit services can evaluate a broader range of factors, such as social media activity, e-commerce purchases, and other non-traditional data, to provide better credit scoring for individuals and businesses who may have been excluded from traditional credit markets.

Moreover, credit services in FinTech play a crucial role in reducing the cost of borrowing and increasing speed and transparency in loan approval processes. For example, mobile loan applications can approve loans within minutes compared to the days or weeks required by traditional banks. This flexibility makes FinTech credit services highly appealing to consumers seeking immediate financial assistance, and it has become essential for small and medium-sized enterprises (SMEs) in developing economies, including Jordan.

2.3 Payment services

Payment services represent one of the most disrupted and advanced areas in FinTech. The transition from cash-based transactions to digital and mobile payments has drastically altered the financial landscape. According to Jocevski et al. (2020), mobile payment services provide a multi-sided platform that enables the efficient transfer of funds between users through digital wallets, peer-to-peer platforms, and contactless payment methods. These platforms use blockchain technology, artificial intelligence, and enhanced cybersecurity to ensure the safety and speed of transactions.

FinTech payment services such as digital wallets (e.g., Apple Pay, Google Wallet), mobile payment platforms (e.g., Venmo, PayPal), and cryptocurrency payments (e.g., Bitcoin) have revolutionized global commerce by making payments faster, safer, and more convenient. Moreover, FinTech allows users to track their transactions in real-time, manage multiple currencies, and make cross-border transactions with significantly lower fees compared to traditional banking systems.

In Jordan, the adoption of payment services like eFawateercom is crucial in enhancing the efficiency of digital transactions, reducing operational costs, and encouraging cashless transactions. This aligns with the global push towards financial inclusion, where mobile payments become accessible even in regions with limited banking infrastructure.

2.4 Investment management services

Financial market support services encompass the technological infrastructure that supports financial transactions and market activities. These include data analytics, cloud computing, artificial intelligence, cybersecurity, mobile applications, and distributed ledger technologies (DLT) such as blockchain. These technologies provide vital tools for improving transparency, reducing transaction costs, and increasing the overall efficiency of financial markets.

One of the critical aspects of financial market support services is cloud computing, which allows financial institutions to store and process large amounts of data more efficiently, leading to improved decision-making. Similarly, big data analytics allows for more accurate forecasting, risk

assessment, and fraud detection. Artificial intelligence can be used to automate trading, providing better liquidity and efficiency in financial markets.

In the Jordanian context, financial market support services are integral to fostering a robust financial ecosystem. As FinTech firms develop more sophisticated tools for data analysis and risk management, banks in Jordan can improve their competitiveness by providing real-time services and enhancing customer satisfaction. Moreover, the implementation of blockchain technology in these services can ensure secure, transparent, and tamper-proof transactions, which are crucial in reducing fraud and improving regulatory compliance.

By advancing these areas—credit services, payment services, and financial market support services—FinTech firms are reshaping the Jordanian banking sector, making it more responsive, efficient, and inclusive. (Staszkievicz & Staszkievicz, 2015).

2.5 Financial market support services

Including data portals, data applications, information security, cloud computing, mobile applications, and artificial intelligence. Financial transactions progressed from barter to modern e-commerce. The banking, financial services, and insurance (BFSI) business has grown rapidly as human civilization and technology have advanced. Before digital, all transactions and business intelligence included too many humans. Digital transactions were clean and transparent, but created a lot of data. These digital footprints may now be rigorously analyzed using analytics to make smart business choices (Ravi & Kamaruddin, 2017).

2.6 The Rise of the Cashless System in Jordanian Banks

A cashless system refers to the exchange of money through digital means without the involvement of physical currency, such as cash or checks. Instead, financial transactions are conducted using digital payment systems like mobile wallets, bank transfers, or credit and debit cards. This system aligns with global trends aimed at improving the efficiency, security, and convenience of transactions.

The shift towards a cashless system is a prominent feature in the global financial landscape, driven largely by the adoption of financial technology (FinTech). Cashless systems, which allow transactions without the need for physical money, are becoming a key part of enhancing digital services, especially in Jordanian commercial banks.

In today's rapidly evolving digital economy, cashless transactions play a pivotal role. They provide several benefits, including: Convenience, Security, Cost-efficiency, Financial Inclusion. In Jordan, the adoption of cashless systems has been significantly boosted by innovations in FinTech, particularly in the areas of payment services. For example, platforms like eFawateercom have made it easier for users to pay bills and manage transactions without the need for cash, thus enhancing digital financial services across the banking sector.

2.7 Digital Payment Methods in Jordan

Several FinTech innovations have transformed the way payments are made in Jordan:

- **Mobile wallets:** Platforms like MadfooatCom allow users to make payments and store money digitally, reducing reliance on cash.
- **Online banking:** Most Jordanian banks now offer online banking services that support cashless transfers, bill payments, and fund management.
- **Contactless payments:** The rise of contactless payment methods using credit or debit cards, as well as mobile-based platforms like Apple Pay and Google Wallet, allows users to complete transactions with ease and speed.

For banks, the cashless system reduces operational costs related to handling cash and enhances the efficiency of financial services. It also enables them to expand their customer base by providing services to individuals who previously may have avoided traditional banking due to the limitations of cash-based systems.

For customers, it simplifies everyday financial activities, allowing them to make payments, transfer funds, or manage accounts anytime and anywhere, contributing to the wider digital transformation of the economy.

3.Hypotheses development

FinTech is a term derived from the combination of "financial" and "technology," and it pertains to enterprises that offer financial services by utilizing innovative web platforms or mobile applications. "They provide users with enhanced authority over their financial assets and facilitate novel modes of economic and financial engagement, thereby diminishing obstacles (non-monetary expenses, such as time lags in executing financial transactions) and transaction expenses"(Yahaya & Ahmad, 2019).

FinTech is continuously revolutionizing the manner in which consumers engage with their products, with some ones experiencing significant growth and influence: FinTech, as described by Awotunde et al. (2021), refers to the use of personal finance apps that can be installed on computers or mobile phones. These apps are designed to assist individuals organize their expenses and effectively manage their budgets. Electronic payments refer to the use of digital methods, such as digital wallets, drafts, and transfers, to make purchases and payments in a convenient and secure manner. Cryptocurrencies are virtual assets that serve as a form of payment. (Alshehadeh et al., 2023)

The financial services industry is currently experiencing a period of disruptive innovation, primarily driven by automation and the connection provided by social media. This is fundamentally altering the way small businesses access financial goods and services. Brătășanu (2017) states that the entry of new companies into the financial services industry has led to changes in competitive forces. These new competitors are reshaping the way financial products are offered to clients by utilizing data management and digital platforms. Digital tools have significantly influenced traditional business models, resulting in a new approach to the financial services market. This approach is characterized by its speed, efficiency, and focus on customer needs. It has also transformed the client experience from face-to-face encounters to online automated interactions. The data indicates that the complete automation of client interaction, along with the implementation of powerful predictive analytics and machine learning technologies, would result in enhanced customer experience and more efficiency in the risk management process.

Abbasi & Weigand (2017) state that FinTech services are increasingly expanding and replacing traditional banking services by utilizing innovative technologies to suit the complicated needs and problems of globalization. These varied digital solutions assist service providers in enhancing their company's performance and maintaining competitiveness in the market. Additionally, it aids in expanding market share to enhance profitability and enhance financial standing. Popova's (2021) findings rely on the utilization of conventional Cost-Benefit and Total Cost of Ownership assessments. These findings encompass the creation of cost and income functions, the computation of the Benefit/Cost ratio, and the identification of the efficiency sources of a FinTech company in comparison to a traditional bank. Thus, the operations of a FinTech company in the realm of digital banking have gained economic support, thereby reducing the disparity between the intuitive understanding of the need for implementing intelligent solutions in practice and the economic justification for this undertaking. In addition, Dharmadasa (2021) has analyzed two important banking practices: (a) credit, deposits, capital raising, and payment services, and (b) clearing and settlement services. This research was conducted due to the rise of two major FinTech services: peer-to-peer (P2P) lending and digital wallet and cryptocurrencies. The analysis also found that the increasing use of smartphones is leading to a shift from physical wallets to digital wallets, which has the potential to disrupt traditional financial procedures. (Al-jabra et al., 2023) Visconti-Caparrós & Campos-Blázquez (2022) examined established banks' defensive strategy to dominate Spain's new mobile instant payment ecosystem. The findings reveal that Bizum's DBE is enabling traditional Spanish banks create digital value that many users are quickly adopting. This study's main contribution is a detailed explanation of how a successful DBE creation and development strategy can 1) protect incumbents from digital disruptive actors and 2) quickly change consumer behavior due to the superior value produced as a new solution to that need.

Al-Khawaja et al. (2023) was found that the perception of the COVID_19 pandemic has a significant positive impact on Fintech in the Jordanian banking sector and that the perception of the COVID_19 pandemic has a significant positive impact on the dimensions of Fintech in Jordan. This study contributed to determining the extent to which electronic banking services reduce customer visits to branches according to social distancing. Abdul-Rahim et al. (2022) investigated if perceived risks and benefits affect FinTech service acceptance, whether COVID-19 fear affects uptake, and whether FinTech uptake enhances sustainability. Their study found that perceived benefits impact financial technology adoption more than perceived hazards. Fear of COVID-19 totally mediates FinTech adoption and projected advantages. This study suggests that FinTech adoption models should incorporate customer sentiment like dread to maximize its benefits and hazards. This creates FinTech natives who understand how FinTech affects economic, social, and environmental sustainability.

Therefore, this study stands out as one of the limited number of studies conducted in Jordan that examines financial technology in terms of its various aspects (credit service, investment management services, payment services, financial market support services) and its role on improving digital services. The study population of Jordanian commercial banks is of great significance due to its representation of a crucial element of the Jordanian economy. One can derive advantages from prior research by linking its conclusions with the outcomes of the present study. According to the above, the following hypotheses can be reached:

H1: There is a positive role for fintech in enhancing digital services.

H1.1: There is a positive role for credit services in enhancing digital services.

H1.2: There is a positive role for payment services in enhancing digital services.

H1.3: There is a positive role for investment management services in enhancing digital services.

H1.4: There is a positive role for financial market support services in enhancing digital services.

4. Research Methodology

The study used a descriptive and analytical technique to collect information, test hypotheses, and respond to research questions about the current status of the study subject. The target population's views, opinions, demographics, conditions, and procedures were all assessed using the analytical descriptive technique.

The target population for this research is all employees of the Jordanian commercial banks listed on the Amman Stock Exchange, which number (14). To achieve the goal of this study, an electronic questionnaire was sent to all bank employees via email. The researchers were able to collect (213) questionnaires, all of which were valid for the purposes of statistical analysis. The majority of participants were male workers, with bachelor's and master's degrees, and with work experience between 5-10 years.

In addition, two different sources were used to obtain the information needed to complete the study objectives. The use of secondary sources began with the use of theoretical and scientific literature. These sources played a crucial role in helping researchers gather the information they needed to build the study's theoretical framework, refine its objectives, and review key findings. In addition, it was of great importance in developing the study hypotheses. Books, dissertations, scientific research articles, peer-reviewed journals, and published academic works. In the Table (1) the study showed distribution of the questionnaire to the study sample for each Commercial bank.

4.1 Reliability Test

To ensure that the questionnaire's items were adequate and consistent, the Cronbach's Alpha value was determined. The value is statistically acceptable if the result is more than 0.70, and the closer it is to one (or 100%), the more reliable the search tool will be (Sekaran and Bougie, 2016). Cronbach Alpha ranges from 0.946 to 0.914, as seen in Table (2). To put it another way, the study tool is reliable, and the data it generates is accurate and trustworthy for assessing variables. Since

all independent and validated variable dimensions are greater than 70%, reliability has been taken into account.

4.2 Hypothesis Testing

The First Main Hypothesis

To test the first main hypothesis, Multi linear regression analysis was performed.

The first main hypothesis of the study was as follows: "There is a statistically significant impact at the level of ($\alpha \leq 0.05$) FinTech in enhancing digital services".

Table 1. distribution of the questionnaire to the study sample for each Commercial bank.

Commercial Bank	Number of Questionnaires Distributed	Number of Questionnaires Collected
Arab Bank	30	28
Jordan Ahli Bank	20	19
Jordan Islamic Bank	15	14
Housing Bank for Trade and Finance	25	23
Bank of Jordan	18	17
Cairo Amman Bank	22	20
Capital Bank of Jordan	16	15
Jordan Kuwait Bank	17	16
Al Rajhi Bank	12	11
Societe Generale Jordan	13	12
National Bank of Jordan	14	13
Bank al Etihad	19	18
Islamic International Arab Bank	21	20
Arab Jordan Investment Bank	17	16

Table 2. Cronbach's Alpha Coefficient

	Number of items	alpha Cronbach
Credit Services	5	0.946
Payment Services	5	0.935
Investment Management Services	5	0.933
Financial Market Support Services	5	0.925
FinTech	20	0.914
Enhancing Digital Services	10	0.925

The correlation coefficient ($R = 0.823$) shows that FinTech in enhancing digital services. Table (3) shows that the effect of the independent variable (FinTech) on enhancing digital services. is statistically significant, with a calculated value of F (135.196) and a level of significance ($\text{sig} = 0.000$) less than 0.05. The coefficient of determination ($R^2 = 0.678$) shows that variation in quantitative methods can account for 67.8% of the variation in (enhancing digital services).

Table (3) shows the values of the regression coefficients for the sub-dimensions of the variable (FinTech). It is clear from the table that the value of B in the dimension of credit services reached (0.184), which indicates that an increase in credit services by one unit leads to Reducing enhancing digital services by (18.4%) units, and the T value calculated in this dimension was (4.010) and at a significance level (0.000) which is less than 0.05, which indicates the presence of a positive moral effect at a significance level ($\alpha \leq 0.05$) credit services in enhancing digital services.

Table 3. Results of Testing the Impact main hypothesis

D.V	Model Summery		ANOVA		Coefficients				
	R	R ²	F	Sig F*	variable	B	standard error	T	Sig T*
Enhancing Digital Services	0.823	0.678	135.196	0.000	Credit Services	0.184	0.046	4.010	0.000
					Payment Services	0.410	0.044	9.372	0.000
					Investment Management Services	0.154	0.054	2.844	0.005
					Financial Market Support Services	0.229	0.054	4.274	0.000

*The effect is statistically significant at the level ($\alpha \leq 0.05$)

It is clear from the table that the value of B in the payment services dimension reached (0.410), which indicates that an increase in payment services by one unit leads to a reduction in enhancing digital services by (41.0%) units, and the value of T calculated in this dimension was (9.372) with a significance level of (0.000). which is less than 0.05, which indicates the presence of a positive moral effect at the significance level ($\alpha \leq 0.05$) payment services in enhancing digital services.

It is clear from the table that the value of B at the investment management services dimension reached (0.154), which indicates that an increase in investment management service by one unit leads to a reduction in enhancing digital services by (15.4%) units, and the value of T calculated at this dimension reached (2.844) at a level of significance. (0.005) which is less than 0.05, which indicates the presence of a positive moral effect at the significance level ($\alpha \leq 0.05$) investment management services in enhancing digital services.

It is clear from the table that the value of B at financial market support services reached (0.229), which indicates that an increase in financial market support services by one unit leads to a reduction in enhancing digital services by (22.9%) units, and the value of T calculated at this dimension reached (4.274) at a level of significance. (0.000) which is less than 0.05, which indicates the presence of a positive moral effect at the significance level of ($\alpha \leq 0.05$) financial market support services in enhancing digital services.

To test the sub-hypotheses, simple linear regression analysis was performed.

H1.1: There is a positive role for credit services in enhancing digital services.

H1.2: There is a positive role for payment services in enhancing digital services.

H1.3: There is a positive role for investment management services in enhancing digital services.

H1.4: There is a positive role for financial market support services in enhancing digital services.

It is clear from Table (4) that there is a strong, positive correlation between credit services in enhancing digital services, where the value of the correlation coefficient reached (0.554), and the value of the coefficient of determination reached ($R^2 = 0.307$), which indicates that credit services have explained an amount of (30.7%) of the change in enhancing digital services. The table also shows the significance of the model, as the calculated F value reached (115.218) with a significance level of (0.000) which is less than 0.05, and this indicates the presence of a statistically significant effect on credit services in enhancing digital services. At a significance level ($\alpha \leq 0.05$).

Table 4. Impact test results H1.1, H1.2, H1.3 and H1.4

I.V	Model Summery		ANOVA		Coefficients			
	R	R ²	F	Sig F*	B	standard error	T	Sig T*
Credit Services	0.554	0.307	115.218	0.000	0.571	0.061	10.734	0.000
Payment Services	0.729	0.531	59.370	0.000	0.701	0.049	17.170	0.000
Investment Management Services	0.616	0.379	158.887	0.000	0.639	0.052	12.605	0.000
Financial Market Support Services	0.701	0.491	250.802	0.000	0.638	0.040	15.837	0.000

*The effect is statistically significant at the level ($\alpha \leq 0.05$)

There is a positive association between the establishment of payment services in enhancing digital services, as indicated by the second dimension's R-value of 0.729. After adjusting for all other factors, the coefficient of determination results in ($R^2 = 0.531$), which indicates that the (Payment Services) domain accounted for (53.1%) of the variance in (enhancing digital services). Furthermore, the value of (F) reached (59.370) at the level of confidence (sig = 0.000), demonstrating the significance of the regression at the level of significance ($\alpha \leq 0.05$), was demonstrated.

There is a positive association between investment management services in enhancing digital services, as indicated by the second dimension's R-value of (0.616). After adjusting for all other factors, the coefficient of determination results in ($R^2 = 0.379$), which indicates that the (investment management services) domain accounted for (37.9%) of the variance in (enhancing digital services). Furthermore, the value of (F) reached (158.887) at the level of confidence (sig = 0.000), demonstrating the significance of the regression at the level of significance ($\alpha \leq 0.05$), was demonstrated.

There is a positive association between financial market support services in enhancing digital services, as indicated by the second dimension's R-value of (0.701). After adjusting for all other factors, the coefficient of determination results in ($R^2 = 0.491$), which indicates that the (financial market support services) domain accounted for (49.1%) of the variance in (enhancing digital services). Furthermore, the value of (F) reached (250.802) at the level of confidence (sig = 0.000), demonstrating the significance of the regression at the level of significance ($\alpha \leq 0.05$), was demonstrated.

5. Discussion

The results showed that there is a statistically significant impact at the level of ($\alpha \leq 0.05$) FinTech in enhancing digital services. The coefficient of determination ($R^2 = 0.678$) shows that variation in quantitative methods can account for 67.8% of the variation in (enhancing digital services). In addition, there is a strong, positive correlation between credit services in enhancing digital services, which indicates that credit services have explained an amount of (30.7%) of the change in enhancing digital services. While there is a positive association between the establishment of payment services in enhancing digital services, which indicates that the (Payment Services) domain accounted for (53.1%) of the variance in (enhancing digital services). There is a positive association between investment management services in enhancing digital services, which indicates that the (investment management services) domain accounted for (37.9%) of the variance in (enhancing digital services). In addition, there is a positive association between financial market support services in enhancing digital services, which indicates that the (financial market support services) domain accounted for (49.1%) of the variance in (enhancing digital

services).

These findings align with several studies that highlight the transformative impact of FinTech on consumer interactions with financial services. Awotunde et al. (2021) emphasize that FinTech is reshaping consumer engagement by offering innovative tools such as personal finance apps that assist in budgeting and expense management, while also promoting the widespread use of electronic payments for secure and efficient transactions. Cryptocurrencies have emerged as an alternative payment method, further broadening the spectrum of financial products. Brăţăşanu (2017) adds that the financial services industry is undergoing significant disruption, driven by automation and social media, which are altering competitive dynamics and redefining how financial products are delivered to clients. Dharmadasa (2021) supports this view by noting the rise of FinTech services like peer-to-peer lending and digital wallets, which are gradually replacing physical wallets and revolutionizing traditional financial processes. This shift is particularly evident in the growing reliance on digital solutions for everyday financial activities. Moreover, studies by Abdul-Rahim et al. (2022) and Jebril et al. (2024) indicate that perceived benefits, such as convenience and security, play a more significant role in driving FinTech adoption than perceived risks. Additionally, Hussain et al. (2023) the COVID-19 pandemic has amplified the adoption of FinTech solutions, with fear of the virus acting as a mediator that enhances the perceived advantages of these digital services.

6. Conclusion

FinTech, or financial technology, is a kind of digital technology that improves digital services by easing the process of lending and borrowing money, evaluating risks, and formulation of credit regulations that are correct. In addition to that, it offers individualized credit services to both individuals and small and medium-sized businesses. In order to facilitate digital trading and portfolio management, investment management services provide digital investment advice as well as novel financial products. Among the payment options that are available are digital payment methods that are both safe and quick, such as mobile payments and electronic wallets. These techniques simplify international transactions and save expenses. Distributed ledger technology, automated trading systems, and sophisticated market data analysis are some of the ways that financial market support services work to promote market transparency. Financial technology, in general, improves efficiency, financial inclusion, and user experience, which ultimately results in increased access to financial resources, decreased expenses, and more innovation within the financial industry. The study suggests that Jordanian banks should invest in financial technology models to reshape traditional financial and banking services. This involves building centers for financial innovation and creating new banking products. Cooperation between traditional banks and financial technology companies is necessary to enhance work in financial technology platforms through the open banking application programming interface. Modern digital technologies such as artificial intelligence, cloud computing, and blockchain technology can enhance supervision and regulation processes. Key recommendations for Jordanian banks include developing advanced data analysis systems for credit services, launching digital platforms for fast loans and credit facilities, and collaborating with financial technology companies to develop innovative solutions. Investment management services should also be improved by developing digital investment advisory systems, using artificial intelligence and machine learning technologies for data analysis and strategy development. Payment services should be developed using digital wallets and mobile payments, and blockchain technologies for secure and transparent cross-border payment systems. Financial market support services should use distributed ledger technology for transparency and efficiency in trading and settlement operations. Cooperation with regulatory authorities is also essential to develop the technological infrastructure of Jordanian financial markets.

7. Recommendations:

The findings of this study clearly demonstrate the significant impact of financial technology

(FinTech) on enhancing digital services within Jordanian commercial banks. These results suggest several key actions for Jordanian banks to maximize the benefits of FinTech:

1. **Investment in FinTech Models:** Jordanian banks should actively invest in modern FinTech solutions to reshape traditional banking services. This could include building centers for financial innovation, developing new digital banking products, and creating a supportive infrastructure that encourages innovation in financial services.
2. **Collaboration with FinTech Companies:** Banks should enhance collaboration with FinTech firms, particularly through the use of open banking APIs, to foster innovation. Such partnerships can drive the development of digital platforms that offer enhanced services such as mobile payments, digital wallets, and automated credit systems, benefiting both banks and their customers.
3. **Advancement in Credit Services:** Banks are encouraged to develop advanced data analysis systems for credit services. By leveraging big data, artificial intelligence, and machine learning, banks can offer more personalized credit services, improve risk management, and expand their reach to underserved segments of the population.
4. **Enhancement of Payment Services:** Digital payment methods, including mobile payments and electronic wallets, should be expanded. These systems not only simplify international transactions but also reduce costs. Banks should consider adopting blockchain technology to ensure secure, transparent, and efficient cross-border payment systems.
5. **Improvement of Investment Management Services:** Banks should focus on improving digital investment advisory systems by integrating AI and machine learning technologies for better data analysis and strategic decision-making. This will help attract more customers by offering innovative investment products and improving portfolio management services.
6. **Strengthening Financial Market Support Services:** Financial market support services can be enhanced through the use of distributed ledger technology to increase transparency and efficiency in trading and settlement operations. Jordanian banks should also focus on adopting advanced analytics and automated trading systems to remain competitive in the evolving financial landscape.
7. **Regulatory Cooperation:** Banks must work closely with regulatory authorities to develop and adapt the technological infrastructure that supports Jordanian financial markets. Ensuring compliance with international standards will foster growth, security, and trust in the banking system.

By taking these steps, Jordanian banks will be better positioned to navigate the digital transformation and enhance the overall quality of financial services offered to their customers.

Declaration

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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