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The role of financial accounting technology in improving customer relationship management in Jordanian banks



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ABSTRACT

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Keywords

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This study aims to investigate the role of financial accounting technology in improving customer relationship management (CRM) in Jordanian banks. The study used a questionnaire survey based on previous relevant literature to obtain the necessary data. Using a quantitative analysis method, a random sample of 113 employees working in Jordanian banks was selected. The bootstrapping method was used to investigate the connection between financial accounting technology and CRM. To comprehend the significance levels, the path coefficients, T-values, and p-values are the most typical outcomes in the structural model. The direct effects showed that financial accounting technology, including innovation, flexibility and transparency, had a significant positive effect on CRM. In line with the results, relying on financial accounting technology in banking transactions enables the creation of global electronic markets that contribute to economic growth, and banks' use of financial accounting technology can provide high-quality services for customers. The outcome of this study lays the groundwork for future research to advance the knowledge in this field.

Contribution/Originality: This study contributes to the growth of a new model that connects financial accounting technology and customer relationship management through innovation, flexibility and transparency, and it adds many topics related to financial accounting technology in improving customer relationship management in Jordanian banks. Additionally, this paper focuses on Jordanian banks, which very few studies on this subject have covered to date.

1. INTRODUCTION

Financial accounting technology helps companies, banks, business owners, and customers manage their finances and accounting more efficiently. Technology sometimes advances unexpectedly quickly, and across the globe we are seeing great innovations in the area of financial accounting technology. Banks have been forced to innovate as a result of the disruption that financial accounting technology is causing to the fundamental financial services they provide (Jarrah, Jarrah, Almomani, AlJarrah, & Al-Rashdan, 2023). Customers may have easier access to superior services as a result, and the regulatory bodies now face greater risks as a result of these developments.

Financial sectors worldwide have been subjected to changes imposed by the modern trend of digitization (Al-Zaqeba, Jarah, Ineizeh, Almatarneh, & Jarrah, 2022). In recent decades, there have been major changes in the banking and financial sectors. Financial accounting technology is formed by combining financial services and information technology (Hidayat, Alam, & Helmi, 2020). Generally speaking, a bank that makes money by offering financial services based on technology is considered to be in the financial accounting technology industry (Alqudah et al., 2023). Markets have benefited from significant improvements in every aspect of technological operation, including computer hardware and software capabilities, telecommunication speed and efficiency, mobile access, and so much more. Therefore, financial accounting technology has become more prominent since digital diversion began to take over (Prawirasasra, 2018). Buying behavior depends on the environment in which it happens (Mensah & Amenuvor, 2021). Also, consumers experience annoyance and financial expenditure as a result of switching financial service providers, with little to no long-term advantages (Chen, Kumara, & Sivakumar, 2021), and when purchasing financial products, customers are more likely to change their buying patterns (Purohit & Jain, 2021). In light of this, providers of banking services are less confident in their ability to cross-sell expensive, additional items to their current customers or rely on the traditional banker–customer relationship (Hailat, Jarah, Al-Jarrah, & Almatarneh, 2023). Because it includes a diverse range of pre- and post-purchase behaviors, purchasing behavior is regarded as a very complicated phenomenon (Kumar et al., 2022). Therefore, financial accounting technology stems from the fact that it is built on innovation and can provide clients with more varied and flexible financial services than the ones provided by the traditional model (Abad-Segura, González-Zamar, López-Meneses, & Vázquez-Cano, 2020). Service provision is currently offered through a new class of financial services or products through the internet, which has emerged as a result of the financial accounting technology industry's recent rapid progress (Almutairi & Albloshi, 2022). Financial accounting technology is a business that primarily uses technology to earn income by offering consumers financial service (Al-Khawaja, Yamin, & Alshehadeh, 2023). To address complex issues, such as information searching, supply chain management, and shifting customer demand that creates uncertainty across the supply chain, a variety of financial accounting technology tools may be used. For a long time, a fundamental aspect of marketing research has been the determination of the nature of client purchasing behavior (Al-Zaqeba, Ineizeh, Jarah, Hamour, & Zeyad, 2022). For banks to be able to anticipate consumer reactions to their marketing methods and influence those reactions when required, they must have a thorough understanding of the needs and motivations of their customers (Abu-Khashabah, 2022). Consumer behavior comprises the actions that individuals or groups take while deciding what to purchase to meet their needs (Mehralian, 2022). Furthermore, the users of online-based services now have it simpler thanks to the advancement of financial accounting technology. Customer satisfaction and customer value are other important elements to consider (Harris, Rini, & Sembiring, 2022).

Banking is considered to be one of the biggest sectors that contributes to the evolution of the financial sector in Jordan. Banks in Jordan were subject to the revolutionizing stride of digitization, and they steadily introduced new technologies and innovative tools into the financial services system. This study looks at the role of financial accounting technology in improving customer relationship management in Jordanian banks.

2. LITERATURE REVIEW

The world witnessed a technological revolution that affected all sectors, and this contributed to the development of a group of financial tools that led to the development of the banking industry. The global spread of technology has become an essential part of human life, and this has prompted banks to take advantage of this feature and employ financial innovation. Therefore, increasing access to financial services, emerging financial accounting technology, and advancements in existing financial services assist significantly in the growth of entrepreneurship in poor nations (Hutapea, 2020). The introduction and growth of novel financial infrastructure and services may enhance entrepreneurship, production, investment, and economic growth (Adam, 2021). Banks

must respond strategically to these changes in an era where client retention and the capacity to cross-sell items to current customers are critical to profitability (Al Zobi & Jarah, 2023). Bank service providers must consequently make an effort to comprehend their clients better to impact and predict their purchasing patterns (Agarwal & Sahu, 2022). As a result, this study describes a model that may be used to analyze customer behavior when they buy a variety of financial goods. The potential insights that these data can provide to banks looking to identify critical phases that will increase client retention and profitability are then considered (Lok & Dunn, 2022).

Financial accounting technology is an effective instrument in financial infrastructure for improving and streamlining the provision of financial services to a broader audience (Jarrah, Zaqeeba, Al-Jarrah, Al Badarin, & Almatarneh, 2023). Software programs and other technologies are intended to enhance and automate conventional financial services. The results of the study by Gautam et al. (2022) suggest that people in India's urban and rural areas should benefit from financial accounting technology and be inspired to acquire digital literacy. Yasav (2015) concluded that, over the past few years, digital technology has altered the retail scene, and all signs point to this trend continuing. Consumers surveys, which show how much digital technologies have been incorporated into the purchasing process, provide proof of this (Carswell & De Neve, 2022). By focusing on a seamless digital experience, a business can satisfy customers in this new environment by being responsive and forward-thinking.

In the last 10 years, financial accounting technology has significantly impacted the industry (Łasak, 2022) and have been significant changes in how financial institutions throughout the world deliver goods and services to customers due to the unpredictability of economic processes and the rising number of acquisitions and consolidations within the banking and finance sectors (Tung & Carlson, 2015). The consumer is the most fundamental component of every commercial business, and their basic conduct is important to the success of both a marketing campaign and financial prosperity (Wongsansukcharoen, 2022). Consumer purchasing patterns, on the other hand, can vary substantially. For a long time, corporations and academics have been investigating consumer purchasing behavior (Rustagi & Prakash, 2022), but the intricacy of the buying process has made it extremely difficult to predict and manage trends (Nam, Dutt, Chathoth, & Khan, 2021).

The global financial industry has faced challenges from technological innovation and digitalization. According to Łasak (2022), financial accounting technology is critical for improving the financial status in emerging countries and promoting greater finances for businesses. The efficacy of supporting small and midsize enterprises (SMEs) in emerging countries is significantly improved by financial accounting technology and the companies built on it. Akinwale and Kyari (2022) discovered that banks should use social media, television, and radio to inform the public about advancements in financial accounting technology. Regulatory agencies must implement processes to further inspire confidence and trust among end users.

Website design, personalized warnings, and effective content are some of the resources available to companies (Alhayan & Almutairi, 2022). These solutions can be seamlessly included to draw in new customers and increase the loyalty of existing customers (Makrides, Vrontis, & Christofi, 2020). Ariffin, Mohan, and Goh (2018) examined consumer behavior in the financial services industry. The results of the study have shown that the type of financial product acquired has an impact on customers' purchasing decisions. This has improved our understanding of how customers make choices when presented with various financial products, but perhaps more importantly, it has brought distribution routes into sharper focus. Enomate and Audu (2021) noted that while information and communications technology (ICT) use can lower costs, the impact on profitability is still unknown because of the potential effects caused by persistent demand for highly skilled labor, problems with clients' rising expectations for service delivery, the dependability of the plan, and competition in the financial services industry (Susanto et al., 2021).

Almatarneh, Ineizeh, Jarah, and Al-Zaqeba (2022) identified a connection between corporate social responsibility (CSR), accounting, and supply chain management. Jarah, Jarrah, and Al-Zaqeba (2022) found that internal audits had an impact on creative accounting in banks. According to Harris et al. (2022), service quality has

an impact on client satisfaction, and financial accounting technology has a positive impact on customer loyalty. A study by Tassiello, Tillotson, and Rome (2021) focused on contrasting technology with consumer behavior. The paper's conclusion stated that despite the allure of high-tech innovations, which sometimes foster the belief that "if we build it, they will come," direct marketers must constantly keep the customer in mind. The truth is that financial marketers have traditionally created cutting-edge product infrastructures that have failed in terms of customer acceptability, such as debit cards (Jarrah et al., 2022). Marketers must see the establishment and upkeep of relationships with customers as a process of education and as the cornerstone of keeping the customer in mind (Metawa, Dogan, & Taskin, 2022).

Jerene and Sharma (2020) concluded that customer attention, subjective norms, and perceived utility all affected bank customers' intentions to use financial accounting technology favorably. The internet and high-speed information technologies have aided these organizations' success by permitting constant connection between their initiatives in various regions throughout the world (Jarrah & Almatarneh, 2021). According to research, there is an importance between internal audit and supply chain management (Jarrah, AL Jarrah, Al-Zaqeba, & Al-Jarrah, 2022). Furthermore, the findings of Almatarneh, Jarrah, and Jarrah (2022) revealed a strong link between management accounting and performance.

According to the conclusions of a study by Peong, Peong, and Kui (2021), trust, social influences, and cyber security and privacy breaches are the most critical factors influencing bank customers' choice to utilize fintech services in Malaysia. According to Raharjo et al. (2022), micro, small and medium enterprises (MSMEs) can use financial accounting technology to facilitate transactions, such as payment techniques for buying and selling products, making digital storage of funds practical and fast, and making it easier to access funding and business capital. According to Sa'diyah and Pratika (2022), perceived relevance, forgiveness, and utilitarian incentive, all have a significant influence on the millennial generation's willingness to invest. Moreover, perceived relevance and forgiveness have an impact on utilitarian motivation. Based on previous findings and research gaps, this study investigates the role of financial accounting technology in improving customer relationship management in Jordanian banks. If banks can use financial information to gain a better sense of their customers' financial situations, they can improve customer relationship management because dependability and integrity are required for all stakeholders in a bank to make educated decisions concerning clients.

3. METHODOLOGY

The research population comprises all Jordanian banks. To establish the study sample size, a standardized table was created. Using a quantitative analysis method, a random sample of 113 employees working in Jordanian banks was selected. Figure 1 presents the research framework for the hypothesized relationships of the study's construct, where financial accounting technology is assumed to have a significant effect on customer relationship management. The three independent variables measured based on previous studies are innovation (Guerola-Navarro, Oltra-Badenes, Gil-Gomez, & Fernández, 2021), flexibility (Lostakova & Pecinova, 2014), and transparency (Portes, N'goala, & Cases, 2020), while the dependent variable of customer relationship management (CRM) is measured based on the study by AlQershi, Mokhtar, and Abas (2020).

The hypotheses are summarized as follows:

H1: Innovation has a positive significant effect on customer relationship management.

H2: Flexibility has a positive significant effect on customer relationship management.

H3: Transparency has a positive significant effect on customer relationship management.

It is important to obtain the required number of responses with various sample characteristics from a wide range of Jordanian banks in order to accurately represent the target demographic. The study used a survey questionnaire design based on previous relevant literature to obtain the necessary data. A five-point scale, from strongly agree to strongly disagree, was used. Previous studies used the qualitative descriptive approach using the

SPSS program. But in this study, a data analysis strategy leveraging the partial least squares (PLS-SEM) method was used with the SmartPLS 3 program. Furthermore, this study uses the measurement model and the structural model, which are commonly used to assess the dependability of the research model and test the hypotheses (Hair, Risher, Sarstedt, & Ringle, 2019).

4. THEORETICAL FRAMEWORK

Based on the above literature review, the following theoretical framework was developed:

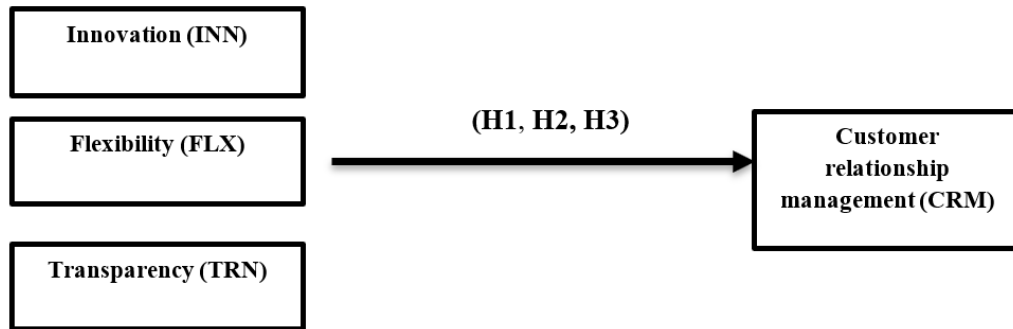


Figure 1. Theoretical framework.

5. RESULTS

The analysis was conducted in two parts. The structural model was used to test the hypotheses, and the measurement model was used to evaluate the validity and reliability of the created variable. Table 1 and Figure 2 provide a summary of the results of the measurement model. Innovation was measured using six indicators, and the mean values ranged from 3.75 to 4.04. Flexibility was also measured using six indicators, and the mean values ranged from 3.70 to 4.04. Transparency was measured using five indicators, and the mean values ranged from 3.73 to 3.87. The dependent variable was measured using nine indicators, with mean values ranging from 3.81 to 4.10.

Table 1. Measurement model assessment results.

Variable	Item	Mean	SD	FL	Cronbach's α	CR	AVE
Innovation	INN1	3.77	1.035	0.666	0.837	0.880	0.552
	INN2	3.89	1.012	0.814			
	INN3	4.02	1.026	0.806			
	INN4	3.75	1.146	0.708			
	INN5	4.04	0.935	0.708			
	INN6	3.81	1.109	0.744			
Flexibility	FLX1	3.70	1.076	0.597	0.835	0.880	0.554
	FLX2	3.81	1.184	0.626			
	FLX3	3.96	0.990	0.842			
	FLX4	4.04	0.963	0.791			
	FLX5	3.84	1.023	0.831			
	FLX6	3.92	0.974	0.743			
Transparency	TRN1	3.83	1.026	0.795	0.897	0.924	0.709
	TRN2	3.83	1.060	0.849			
	TRN3	3.73	1.157	0.847			
	TRN4	3.87	1.013	0.876			
	TRN5	3.81	0.999	0.842			
Customer relationship management	CRM1	4.02	0.866	0.746	0.875	0.901	0.505
	CRM2	4.10	0.876	0.796			
	CRM3	3.90	0.963	0.704			
	CRM4	3.86	1.025	0.670			
	CRM5	4.05	0.990	0.836			
	CRM6	3.81	1.093	0.590			
	CRM7	4.03	0.934	0.657			
	CRM8	3.86	1.051	0.606			
	CRM9	4.09	0.886	0.753			

To attain a strong indication of validity, the factor loading values should be greater than 0.7; however, the lowest acceptable value was 0.4, and any indications with a factor loading below 0.4 should be disregarded. CRM6 had a value of 0.590, and TRN6 had a value of 0.876. According to Afthanorhan, Awang, and Aimran (2020), additional reliability and validity indicators include Cronbach's alpha, average variance extracted (AVE), and composite reliability (CR). Table 1 displays the study's outcomes, which were favorable and above the low cut-off points (AVE > 0.50, CR > 0.70, and Cronbach's alpha > 0.7). The results of the measurement model verified all hypothesized assumptions and confirmed the validity and reliability of the constructs.

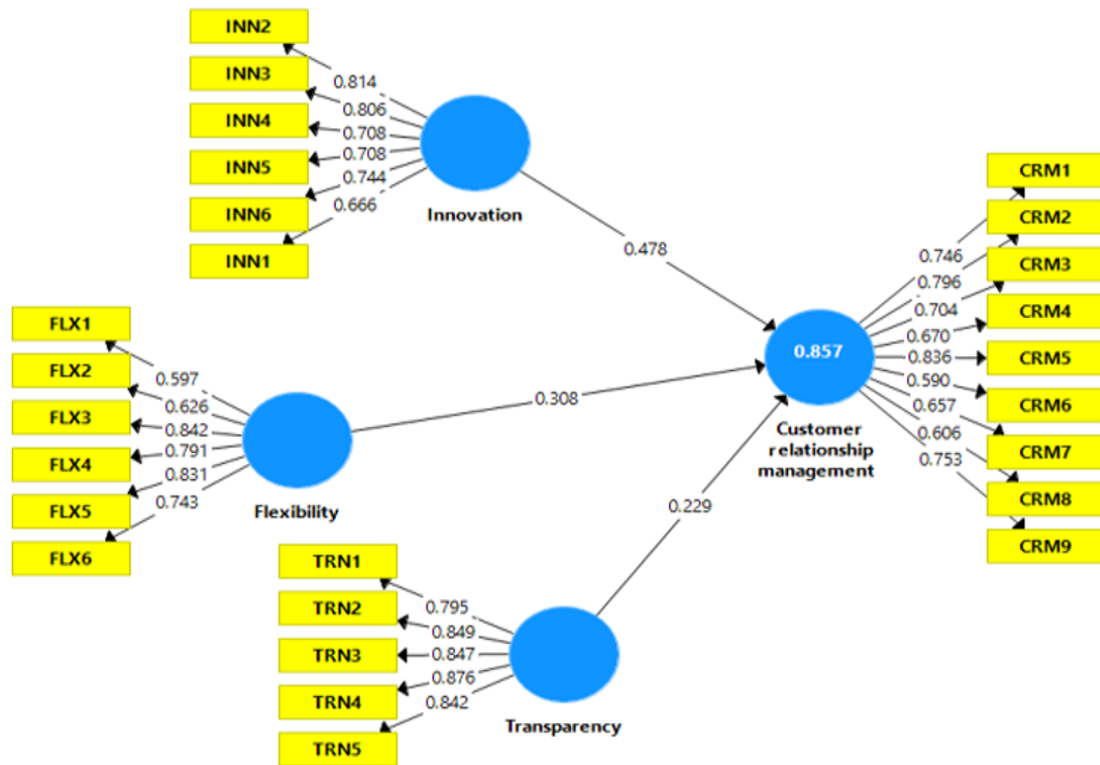


Figure 2. Measurement model.

Table 2. HTMT ratio analysis.

	Customer relationship management	Flexibility	Innovation
Flexibility	0.891		
Innovation	0.869	0.863	
Transparency	0.852	0.859	0.713

Discriminant validity was checked to determine the correlations between the research variables. Heterotrait-Monotrait (HTMT) was used to interpret the key outcomes from the analysis, which are shown in Table 2, to explain the issues of variable correlations. The HTMT results were all below 0.90, which satisfies the criteria for the HTMT discriminant validity (Kline, 2015).

Table 3. Hypothesis testing.

Path hypothesis	Path coefficient	T-value	P-value	Decision
H1 Innovation -> Customer relationship management	0.478	5.411	0.000	Supported
H2 Flexibility -> Customer relationship management	0.308	6.311	0.000	Supported
H3 Transparency -> Customer relationship management	0.229	4.709	0.000	Supported

The bootstrapping method was applied to investigate the link between financial accounting technology and customer relationship management. The path coefficients, T-values, and p-values are the most commonly used outcomes in structural models to understand the levels (Hair, Matthews, Matthews, & Sarstedt, 2017). According to the direct effect results shown in Table 3 and Figure 3, innovation, flexibility, and transparency had a substantial beneficial influence on customer relationship management ($p \leq 0.05$).

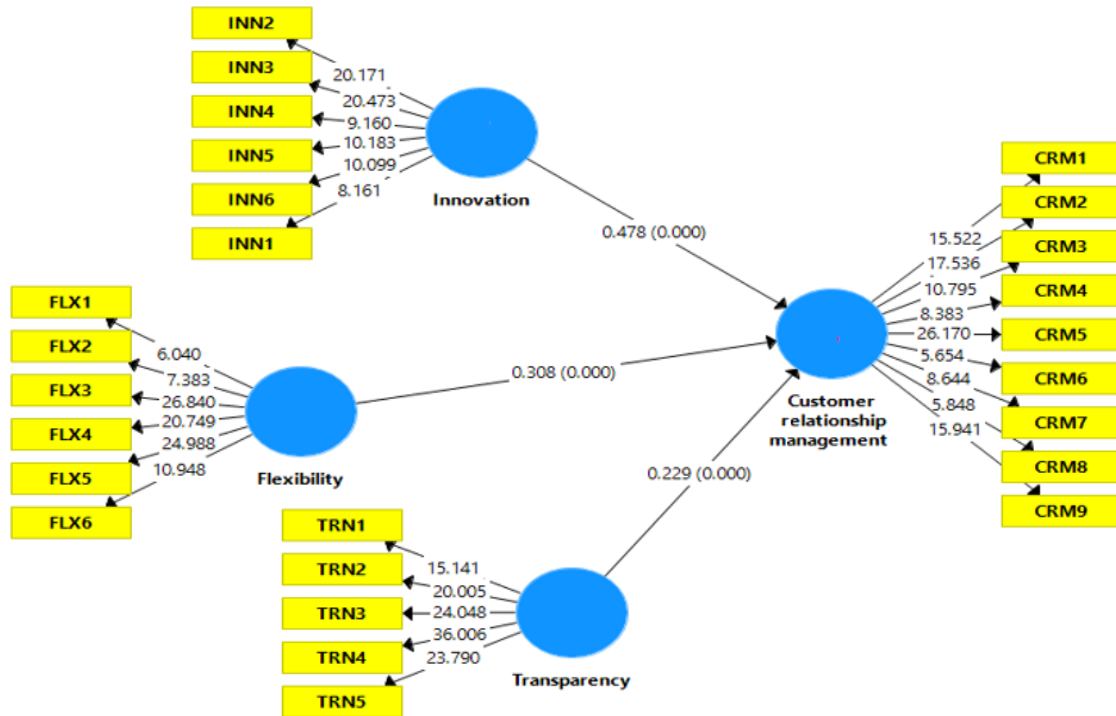


Figure 3. Structural model.

Table 4. Coefficient of determination (R^2), effect size (F^2), and the predictive relevance (Q^2).

Variable	F^2
Innovation	0.563
Flexibility	0.160
Transparency	0.153
R^2 for customer relationship management	0.857
Q^2 for customer relationship management	0.409

Table 4 presents the values for the coefficient of determination (R^2), effect size (F^2), and the predictive relevance (Q^2).

The PLS technique was used to analyze the coefficient of determination and the effect size. According to Hair et al. (2019), the recommended F^2 values are $F^2 \geq 0.02$, $F^2 \geq 0.15$, and $F^2 \geq 0.35$, which correspond to modest, medium, and high impact sizes, respectively. Innovation had an F^2 value of 0.563, which was the strongest variable and the largest predictor of CRM. The R^2 value of 0.857 means that financial accounting technology explains 85.7% of the variance in customer relationship management. The predictive relevance (Q^2) uses a blinding technique, which expresses whether a model is predictively relevant or not (> 0 is a positive result). The model in this study has predictive power, as shown by the Q^2 score of 0.409.

6. DISCUSSION AND CONCLUSIONS

Financial accounting technology is a major component in the financial and banking sectors, creating a more diverse environment for innovative financial services (Aldegheisem & Alzamil, 2022; Wongsansukcharoen, 2022). Furthermore, the use of new technologies, as well as collaboration between financial technology businesses and

banks, can increase system-wide financial strength while reducing externalities and competition (Varma, Nijjer, Sood, Grima, & Rupeika-Apoga, 2022). Financial technology has gained prominence in global financial markets and in business and is now widely used to improve financial sector activities (Metawa et al., 2022). Furthermore, the advancement of information technology will make it simpler for business owners to operate. Harris et al. (2022) found that financial technology has a positive influence on satisfaction through client loyalty. Financial technology adoption implies a shift to a customer-centric mindset for enterprises. Hutapea (2020) found that financial technology information systems have an influence on customer satisfaction. Therefore, the aim of this study was to determine the role of financial accounting technology in improving customer relationship management in Jordanian banks. Jordanian banks were all represented in the contemporary research community. For this study, a random sample of 113 workers in Jordanian banks was selected utilizing quantitative research. The results reported a direct impact, demonstrating that financial accounting technology, including innovation, flexibility, and openness, had a considerable beneficial impact on customer relationship management. It was concluded that the financial accounting technology used in banking transactions enables the formation of global electronic marketplaces that contribute to economic growth, and banks' use of financial accounting technology may offer consumers high-quality banking services to customers.

7. IMPLICATIONS

This study covers a wide range of financial accounting technology-related subjects and how customer relationship management can be improved in Jordanian banks. It also contributes to the growth of a new model that connects financial accounting technology and customer relationship management through innovation, flexibility, and transparency. The goal of the research is to create fresh data that will expand the theoretical understanding of the many factors and the function that financial accounting technology will play in improving customer relationship management. It is anticipated that the results will aid bank departments by offering recommendations on the importance of financial accounting technology for the improvement of customer relationship management in Jordanian banks.

8. LIMITATIONS AND FUTURE RESEARCH

Despite offering several important contributions, this study has major shortcomings. The sample comprised just 113 respondents to focus on the function of financial accounting technology in boosting customer relationship management and to preserve a balanced viewpoint on the diagnostic usefulness of the sample in Jordanian banks. Furthermore, the present study proposes that banks fully utilize financial accounting technology to gain diverse funding channels through innovative financial accounting technology products and services, such as equity and accounts receivable. Furthermore, banks in the mature stage should address their technical weaknesses and encourage the integration of financial technology developments and technological innovation. This study provides the groundwork for future research to advance the knowledge in this field.

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Institutional Review Board Statement: The Ethical Committee of the Amman Arab University, Jordan has granted approval for this study.

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Data Availability Statement: Upon reasonable request, the supporting data for this study can be provided by the corresponding author.

Competing Interests: The authors claim to have no conflicts of interest.

Authors' Contributions: All authors contributed equally to the study's design. The published version of the work has been reviewed and approved by all authors.

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