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Financial Technology (Fintech) Innovation and Sustainable Business Performance: Assessing the Contribution of Knowledge Management

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This study is aimed to investigate the impact of knowledge management of firm sustainability with the mediation of Fintech innovation. The data for this study is gathered from banking sector of Pakistan. ***.*** *Researchers employed convenience sampling to approach companies and their participants on the basis of accessibility and availability. The respondents of populations are current employees of banks and picked when fulfill the requirements such as easy accessibility, volunteer willingness & availability at certain time frame. The data is collected through structured questionnaire, all the items of scale are based on 5-point Likert scale to measure the response 1= strongly disagree to 5= strongly agree. The 275 questionnaires were sending to bank and 260 were returned. The result indicates a strong relationship exists between effective knowledge management and the sustainability of a company. Furthermore, the findings indicated that there is significant mediating effect of financial innovation between knowledge management and firm sustainability. The implementation of KM in the context of technologies, including fintech Innovation, is likely to benefit the organizations and financial institutions such as banks to take steps in the path of development and profitable growth. As the results reveal, it is suggested that managers and decision-makers of banks active in the banking industry of Pakistan, officials should be appointed for strategies and knowledge activities and create specific positions to manage measures related to KM in the official structure of banks. Furthermore, it is suggested to increase the efficiency of the organization's financial performance, maintaining the business sustainability and improve the services provided by banks*

Keywords: Knowledge Management, Firm Sustainability, Fintech innovation, Banking sector.

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Introduction

The field of knowledge management has emerged as a nascent discipline and is now in the process of building its theoretical framework. Grounded in the insights and understanding that experience provides that Knowledge management serve as a crucial role by acting as a coordinating mechanism to increase the transformation of resources into capabilities. Knowledge, technology and innovation are the central concerns of the research on the firm sustainability (Knight and Cavusgil, 2004; Orenga-Rogla & Chalmeta, 2019; Machado et al., 2022). The Knowledge constitutes the compelling resource for the innovative organizations (Al-Dmour et al., 2022). Knowledge management practices can be apply to enhance the different forms of value depend on the organization's purpose such as performance, productivity and sustainability (Vrontis et al., 2021; Safaee & Yadegari 2022). Furthermore, the use of knowledge management principles in organizational processes ensures their efficacy and added value in a changing context. (Oilva et al., 2019). In order to achieve Organizational success over long term, the knowledge management should be effectively and efficiently managed. Experts have researched that, the company's competitive advantages are stimulated by effective knowledge management (Adams & Lamont, 2003; Halawi et al., 2005; Dzenopoljac et al., 2018; Safaee & Yadegari 2022). In addition, some scholars noted that all administrative personal should indulge in knowledge management process such as knowledge sharing, generating and application (Oliva et al., 2019).

Knowledge management is a process in which organization collect, share, create, apply or dispose knowledge in order to generate and increase value (Oliva, 2014; Nonaka, 1994; Machado et al.; 2022) and in achieving organizational goals (Santoro et al., 2019; Vrontis et al., 2019; Oliva et al., 2019). The implementation of knowledge management practices in the organization constitutes a significant driver of innovation (Inkinen, 2016) which can contemplate as a firm's performance measure. Acquiring knowledge is a crucial factor for organization in order to adapt consistency in the changing environment. (jorna et al., 2009). The technology and innovation is desirable element in the wealth creation and achieving competiveness since it is outworn in competing based on replicating others or on the basis of financial capital (Al-Domur 2022). The advent of latest technologies and incremental innovations indicates alarming situations for organizations and serves to develop new capabilities in order to avoid unwanted business practices and to get business value successfully (Foumani & Chirani, 2012; Massa & Tucci 2013; Safaee & Yadegari 2022).

However, there are several factors which constitute in business performance and its sustainability such as knowledge management (Machado et al., 2022). The business structures and activities had prominence over last four generations due to their nature which have been subjected to the significant changes occurring in their environment (Martins et al., 2019). Now a day's organization is an alliance of productive assets such as financial resources and human resources working together in order to achieve the organization goals effectively (kusi et al., 2020). Moreover, the continuous process of learning of organizations will help them to tackle the

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market fluctuations and variations and remain financial sustainable (Chiabrishvili & Zaim, 2018; Machado et al.; 2022).

Furthermore, ensuring the sustainability of a corporation is a crucial concern for businesses as it helps mitigate risks, navigate unpredictable circumstances, and maintain stability in dynamic marketplaces. (Martins et al., 2019). Rincon-Roldan, F., & Lopez-Cabrales, A. (2021) defined sustainability is a mother lode of organizational and technological innovations that yield both bottom-line and top-line returns" refers to a rich source of new ideas and advancements in both the structure and technology of an organization, which result in financial benefits both in terms of cost savings and revenue generation. Hence, in addition to managerial sensitivity, there exists a significant need for ongoing learning and knowledge management. (Chiabrishvili & Zaim, 2018) to attain long-term viability for the organization. This perspective asserts a beneficial correlation between knowledge management and organizational sustainability. Every organization must strive for sustainability in order to ensure its long-term efficacy. Linking sustainable issues to financial choices and main value drivers may enhance the firm's performance and decision-making process. This may assist corporations in enhancing the factors that motivate enterprises to develop and allocate resources towards sustainability plans. (Al Muhairi & Nobanee, 2019). However, technology also plays a very significant part in attaining firm’s sustainability. The proliferation of digitization, particularly in the realm of financial technology (Fintech), has significantly enhanced the flexibility and efficiency of financial services. The primary advantage of fintech is in its potential to achieve cost savings via the use of digital technologies. (Demir et al., 2021).

The increased use of technology is a reference to the industry that is using knowledge management effectively, which is perfect for my research. Banks are recognizing the importance of knowledge management as a crucial element for gaining a competitive edge. However, the rapid technological advancements in the financial services sector present unprecedented challenges, resulting in a decrease in the value provided to clients through technology and innovation. Therefore, it is necessary to replace existing technologies with the latest ones that offer greater benefits, accessibility, affordability, and value for customers. (Safaee & Yadegari 2022). The financial technology called as FinTech is not a new concept (Razzaque and Hamdan, 2020). Fintech, as defined by the Financial Stability Board, encompasses advancements in technology and inventions. The Federal Security Service (FSB) in the year 2019. Fintech refers to the use of advanced technologies such as Artificial Intelligence, Blockchain, Cloud computing, and Big Data analysis, together known as ABCD, to improve financial services and banking operations. This includes activities such as loan management, payments, money transfer, and electronic banking.. (Wang et al., 2021). According to Acar and Çıtak (2019) and W'ojcik and Ioannou (2020), the words "advanced" and "competitive" have always been linked with FinTech in the banking sector. Recent work by Gai et al. (2018) The term "FinTech" refers to the modernization of financial services via the integration of various forms of information technology. P2P lending, distributed ledger technology, and third-party payment processing are a few more examples of financial technology's many uses (Acar and Çıtak, 2019). Researchers have also recently highlighted the fact that the current trend in the fintech business is in line with

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sustainability's primary tenetsSustainable financing via crowdsourcing and microfinance are examples of the fintech industry's contributions to company sustainability, according to Moro-Visconti et al. (2020). Financial technology (fintech) is the backbone of sustainable economic development. (Alberti and Belfanti, 2021, Grashof et al., 2021). While pervious researches have focused only on the relationship between Fintech and firm performance, this research will focus on the relationship between the impact of knowledge management, fintech and firm sustainability because by utilizing advance fintech innovation and benefiting from strong KM system, generates many benefits for the business including financial sustainability and help in achieving a completive advantage.

In management and business studies, Knowledge management have broader consideration and supported by various social science theories such as resource based theory, social capital theory, knowledge based view etc. (Razzaque & Hamdan, 2020). Therefore, it is not surprising that it also contributed in financial sector and bringing it to the fore for its relevance in the society along with daily lives of people. The purpose of the Knowledge management is to achieve the organization goals through sharing, creating and application of knowledge and use of innovational capabilities (Battisti et al., 2022). First and foremost, the aim of this study is to explore the impact of Knowledge management on firm sustainability through Fintech. As innovation and technologies bankrolled the financial service sector, which provide support and improves the firm performance and sustainability (Safaee & Yadegari 2022; Al-Dmour et al., 2022). However, there are several studies discuss the knowledge management and innovation and technology usage in firm performance but no study conducted to seek the role Fintech in relationship of KM and Firm sustainability in Pakistan.

The gap of this study has been founded in Machado et al., (2022) their review article “Knowledge management and digital transformation for industry 4.0: a structured literature review” Where future direction is given to explore this study. This study recommends that the knowledge management has been discussed in different perspectives regarding technological advancement but it didn’t discuss in the perspective of business sustainability. There is also no study in shows the linkage between KM and firm sustainability via fintech innovation. This paper will seek following research questions

- Dose Knowledge Management effect the firm sustainability in banks
- Dose Knowledge Management influence Fintech Innovation on the banking sector
- Dose Fintech innovation influence the sustainability of the firms
- Dose Fintech innovation mediates the relationship between Knowledge management and sustainability of the firms?

The first chapter of the study will examine the pertinent ideas and literature on knowledge management, financial technology innovation, and corporate sustainability. It will provide compelling arguments to establish the basis for the proposed model. The second chapter

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will focus on the technique used and provide the statistical results. The third chapter will consist of a comprehensive analysis and a conclusive summary. Additionally, we will delve into the practical consequences, constraints, and potential avenues for future study.

Literature Review

Theory and Hypothesis Development:

The social technical system theory provides good theoretical lens for this research as it suggests that, the performance and design of any firm can be improved through both social and technical aspects (Cooper & Foster, 1971; Walker et al., 2008; Totorella et al., 202 organizations are made up of people who use technology for producing valuable p services to their customers (Bednar & Welch, 2020). The compatibility betwee technical system is the key to meet customer’s needs and to get competitive advanta company by updating the technology through knowledge sharing systems (Grant, 1991). In order to support the relationship between knowledge management (Muddaha et al., 2018) and firm sustainability via Fintech innovation as a mediator variable, the other theories also assist such as knowledge-based theory (Grant, 1996) and financial innovation theory (Silber, 1993). The knowledge-based view suggests that, the knowledge is an intangible asset resource of the business which is essential for the firm to achieve a competitive edge by managing the knowledge efficiently (Chopra et al., 2021), while financial innovation theory says that for improving the firm performance and firm sustainability of financial sector, the usage of Fintech innovation is compulsory for efficiently delivering the services (Al-Dmour et al., 2022). Thus, the organization should take benefits from technological advancement by improving KM practices and maintain them as their core competences for firm sustainability and performance (Bishop, 2018). This research will primarily be focused on Fintech by developing model for seeking the impact of knowledge management on firm sustainability via Fintech in financial sector. The theoretical framework presented below:

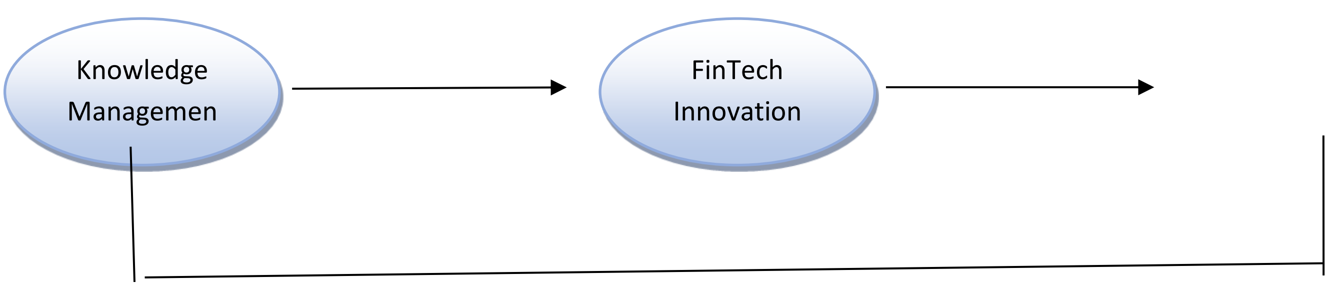

Figure 1. Theoretical Framework

Knowledge Management and Fintech

Knowledge management (KM) is now more important than ever as a key asset for companies to gain a competitive advantage due to the fast development of new technologies and digital communication (Bazrkar, 2020). However, studies show that the way information is

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shared may be affected by how a company's technology, methods, and people work together. (Hashemi et al, 2018). Managers of knowledge-based firms also employ information technology as a driving force and a critical component in the growth and success of knowledge management and in overcoming challenges. (Haddadi Harandi et al, 2019). A system that can facilitate the practice of Knowledge Management (KM), which is the art of producing wealth and value via the utilization of intellectual and knowledge-based assets, is necessary. (Castaneda et al., 2018). Given its comprehensive perspective, KM focuses on addressing the issue of information management in relation to the absence of producers. Hence, Knowledge Management (KM) encompasses the processes of effective communication, experiential learning from the environment, and the accumulation of knowledge. Its impact extends to the success of emerging technologies across several domains, such as new financial technology. (Oliva & Kotab, 2019). Furthermore, Grant's (1996) knowledge-based perspective theory emphasizes that institutions must effectively manage their own knowledge in order to achieve better performance and competitive advantage. An intangible asset resource is a crucial strength that, when properly used, may significantly contribute to long-term sustainable competitiveness. Fintech is an emerging financial sector that utilizes innovation and advanced techniques to enhance financial services by offering innovative solutions tailored to specific company situations. (Safaee & Yadegari 2022). The research hypothesis is suggested as follows:

H1: Knowledge management positive related to Fintech Innovation

Fintech and firm sustainability

The emergence of artificial intelligence and blockchain as enabling technologies has opened up a plethora of options for entrepreneurial entrance and innovation in the field of financial technology (Fintech) (Berman et al., 2021). Entrepreneurial entrance is the process of creating new firms, whereas Fintech innovation encompasses the development and advancement of novel financial instruments, technology, institutions, and markets (Lerner and Tufano 2011). Despite the introduction of significant technological developments such as automated teller machines (ATMs) and online banking services, the financial sector was not seen as being creative (Hornuf et al. 2020). However, after the global financial crisis in 2008, there was a notable change as a result of the rise of FinTech innovations. These advancements have fundamentally revolutionized the manner in which new entrants and incumbent corporations cooperate and vie, necessitating regulators to adapt and evolve in response (Berman et al. 2021).

However, the term "Fintech" is used in the context of digital and technical advancements. Fintech encompasses cutting-edge technology used in pioneering financial goods and services, becoming one of the most significant emerging sectors in recent years (Chen et al., 2021). It encompasses digital advancements and contemporary technologies aimed at enhancing, advancing, and mechanizing financial services. Fintech is used to facilitate and bolster the management of economic activity for corporations, investors, and consumers via the utilization of specialist apps and software (Al-Dmour et al., 2022). To be more precise, it encompasses novel applications, procedures, commodities, and more financial services. These services are mostly or exclusively provided online by several independent service providers, sometimes

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including at least one authorized bank or insurance firm. These services are mostly or solely provided on the internet, "simultaneously by numerous autonomous service providers, often including at least one authorized bank or insurance firm (Wang et al., 2020). The offered financial services include a range of activities such as providing investment advice via automated advising, making credit judgments, facilitating asset trading, dealing with digital currencies, enabling automatic transactions, settling payments, facilitating crowd funding, and facilitating person-to-person transactions.

Fintech is a transformative force for rapidly advancing economies worldwide (Luo et al. (2022). find that application of the technologies in fintech has created efficiency at both customized and regional level. Fintech has not displaced conventional finance, but it has effectively addressed several intricate problems that previously hindered the availability of financial goods to the underprivileged people. The integration of fintech capabilities with conventional finance procedures has enhanced cash flow and facilitated positive development, particularly in the midst of the COVID-19 epidemic (Zhang et al. 2022). W´ojcik and Ioannou, (2020) in their research investigated the importance of fintech advancements that facilitated a faster recovery of economic aftershocks generated by COVID-19 pandemics. Furthermore, the financial service industry is bolstered by innovation and technology, which contribute to enhancing business performance and sustainability (Suryono et al, 2020).

However, in order to go on with their operations and preserve a competitive edge, firms must be able to quickly address changes in technology (Luo et al., 2022). As nations move toward industrialization and technological advancement, managers are trying to provide more banking services in order to attain financial sustainability. One of the most significant shifts in the banking sector has resulted from the development of innovative financial technology; these developments also affect how transactions and financial reporting are conducted, which has a knock-on effect on the whole banking system (Buckley et al, 2019). Additionally, a new age in technology-driven financial services is being born with the promise of developing financial technologies (Najaf et al., 2022). The integration of technology in banks and financial institutions is expected to revolutionize the banking ecosystem, resulting in enhanced client benefits. This transformation is predicted to lead to improved service quality, enhanced financial performance, and sustained business viability for banks. Thus, the study hypothesis is formulated as follows:

H2: Fintech Innovation has positive impact on Firm sustainability

KM and Firm sustainability

In the context of sustainability, the implementation of Knowledge Management leads to a shift in the organization's stance, where the emphasis on social and environmental responsibility becomes as significant as economic viability. Kilometers (KM) may serve as the foundation for implementing sustainable development strategies. Consequently, companies must increasingly depend on their resources that generate knowledge. Within the framework of sustainability, KM is seen as a novel development paradigm that seeks to improve adherence to the principles of

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economic, environmental, and social sustainability (Martins V.W.B et al., 2019; Chopra et al., 2021). As per the company's updated standards on adhering to sustainability rules, each sustainable effort gains significant importance as it has the potential to bring about enduring changes in the involved community and engage many stakeholders with diverse expectations (Kivila et al., 2017).

Sustainability encompasses the use of resources in a manner that fulfills the requirements of the current generation while safeguarding the capacity of future generations to fulfill their own requirements. Business sustainability, as defined by Labuschagne et al. (2005), involves the execution of business strategies and initiatives that meet the present needs of the organization and its stakeholders, while also protecting, preserving, and enhancing the human and natural resources that will be needed in the future. Elkington (1994) establishes the "triple bottom line," which revolves around the organization's need to ensure an appropriate balance among the economic, social, and environmental factors (Wagner, 2010). Organizations are increasingly acknowledging their obligations and duties not just to their shareholders but also to the wider society, including the three P's of 'people, plant, and prosperity'. The phrase "sustainability revolution" denotes an increased emphasis on the long-term consequences. Given this perspective, we argue that economic sustainability is intricately linked to both economic prosperity and financial efficacy. (Chopra et al., 2021). Hence, the objective of a company's sustainability is to generate long-term value for all stakeholders by capitalizing on opportunities and effectively mitigating risks associated with its economic operations.

The most successful firms today are the ones that actively develop or get new knowledge and then use that knowledge to enhance their operations. Nevertheless, the firms used innovative and imaginative methods to alter their structure and performance, which is expected to enable them to successfully and suitably handle their knowledge (Ferraris et al, 2019). Productivity, profitability, cost reduction, and ideal quality are not achieved by businesses that depend just on increasing capital, machinery, and labor, according to research. Instead, companies that thrive in today's cutthroat and sometimes uncertain economic climate are those that attract and retain a large pool of highly trained workers who are able to put their knowledge to good use (Abbas & Kumari, 2021). Additionally, KM, which involves the creation, acquisition, maintenance, sharing, and use of intellectual capital, contributes to the improvement and enhancement of both financial and non-financial performance in businesses (Battisti et al, 2022). Knowledge management (KM) is expected to enhance several aspects of organizational performance, allowing companies and organizations to operate more efficiently and achieve long-term profitability. Thus, the study hypothesis is formulated as follows:

H3: The Knowledge Management is positive related to Firm sustainability.

Businesses and communities alike may reap the long-term advantages of knowledge management (KM) via more efficient use of information, intellectual, and human resources (Di Vaio et al, 2021). As Fintech innovation becomes a crucial component of banking and banks confront growing competition from non-banking firms, they are losing market share and are now competing outside financial services (Arias-Pérez & Cepeda-Cardona, 2022). In addition, banks

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face the main problem of getting their customers to use financial technology in a way that streamlines and speeds up banking operations, increases efficiency through more transparency and decreases consumer risk perception (Suryono et al, 2020). In order for banks to effectively manage knowledge inside their organization and enhance their performance via knowledge management (KM), it is necessary to establish networks that facilitate the transfer and distribution of knowledge within the business. Moreover, research indicates that contemporary financial technologies are very suitable for facilitating the exchange of knowledge (Don-Serge, 2019). Knowledge management (KM) involves the effective handling and use of information inside a company, benefiting both its workers and stakeholders. In addition to surviving in today's economic climate, many organizations may achieve durable competitive advantages by using Knowledge Management (KM) with fintech innovation.

H4: The Knowledge Management has a positive significant effect on firm's sustainability via Fintech innovation.

Research Methodology

The study is based on positivism research philosophy as it is suitable and appropriate for quantitative research. The quantitative approach enhances the reliability, generalizability and productivity of the results which leads towards general inferences regarding population based on findings **(**Bojarskyte, 2017). The data for this study is gathered from banking sector of Pakistan**.** We employed convenience sampling to approach companies and their participants on the basis of accessibility and availability. The respondents of populations are current employees of banks and picked when fully the requirements such as easy accessibility, volunteer willingness & availability at certain time frame. The data is collected through structured questionnaire, all the items of scale are based on 5-point Likert scale to measure the response 1= strongly disagree to 5= strongly agree. The 275 questionnaires were sending to bank and 260 were returned. Due to missing information and repetitive answers to questions, 10 questionnaires were removed from returned surveys. As consequences 250 responses or a response rate of 90% consider for data analysis. Different techniques used to measure the results and test the hypothesis of the study. The adopted questionnaire utilized in this study is broken up into two sections: the first section includes questions on participant demographics and the second section asks about independent and outcome variables. To evaluate the relationship between variables and hypothesis, SEM using the PLS approach was used. Moreover, the researcher analyzed the direct and indirect relationship between variables in Structural Model

Measures:

In order to compare the different layouts, the research variables were measured using approved scales. The Likert scale, with its five points, is used to distribute all the variables. ranging from (1) "strongly disagree" to (5) "strongly agree". However, the questionnaire was compiled based on the research literature and the questionnaires used concerning KM, Firm sustainability, and Fintech innovation. "Knowledge management" questionnaire with 10 items adapted from Huang & Li (2009) and Obeidat et al. (2016) with a Cronbach's alpha of 0.90;

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Fintech innovation the mediating variable was measured using a 5-point scale developed by Girniene (2013) adopted by Leon and Bolisani (2016), and Al-Dmour, et al. (2020). The Dependent variable firm sustainability measured in the context of economic sustainability and by 8 items scale developed by Gallardo-V_azquez et al. (2014), and used by Roldan F.R. and Cabrales A. F. (2021).

Results

Demographic analysis

Table 1: Frequency Analysis

Variable	Frequency	Percent
Gender		
Male	201	55.1
Female	164	44.9
Age of Respondents		
20-30	172	47.1
31-40	132	36.2
41-50	53	14.5
51-above	8	2.2
Education		
Bachelor Degree	36	9.9
Master	133	36.4
MS	101	27.7
Doctorate	59	16.2
Diploma	36	9.9
Experience		
< 10 years	150	41.1
11 – 15 years	131	35.9

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> 16 -25 years	67	18.4

The responder demographic is shown in Table 4.1. It seems that male. (55.1%) make up the bulk of the responders, according to the results. Further, the table demonstrate that majority of the respondents age was 20 to 30 years (47.1%) having majorly qualification of Master (36.4%). The results also demonstrated that most of the respondents have experience less than 10 years (41.1%).

Reliability Analysis

Anderson and Gerbing (1988) used a two-stage data analysis to assess the measurement and structural models. The researcher assessed the appropriateness of the measuring model's conformity. Prior to drawing any inferences about the connection between constructs, it is essential to first confirm the dependability and accuracy of the measurements used to evaluate these notions. (Albort-Morant et al., 2018). Table 2 demonstrates that the reflecting constructs had a build reliability above 0.70. The citation is from Nunnally and Bernstein's work published

Tabel 2: Reliability Analysis

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Fintech Innovation	0.809	0.819	0.856	0.533
Firm Sustainability	0.768	0.78	0.833	0.591
Knowledge Management	0.738	0.741	0.803	0.593

in 1994. In addition, according to table 2, the values of (Rho A) and C-A exceed the permitted threshold of .70. The calculated Average Variance Extracted (AVE) values for all constructs exceed 5, suggesting a strong degree of dependability and convergence of the measurement models.

Hypothesis Testing

The structural equation model analysis presents both direct and indirect effects among the studied variables. In the direct effects, Fintech Innovation significantly influences Firm Sustainability (0.398), showcasing a strong and positive relationship with a substantial T statistic of 10.311. Similarly, Knowledge Management also notably impacts both Fintech Innovation (0.355) and Firm Sustainability (0.265), exhibiting significant relationships with T statistics of 7.127 and 5.757, respectively. These findings highlight the influential roles of both Fintech Innovation and Knowledge Management in shaping Firm Sustainability. Moreover, the indirect effect analysis reveals that Knowledge Management has a significant indirect influence on Firm Sustainability through its impact on Fintech Innovation (indirect effect: 0.141). These results collectively underscore the interconnectedness of these variables, indicating that Knowledge

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Management not only directly influences Firm Sustainability but also exerts an indirect influence

Table 3: Structural Equational Model

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
			Direct Effect		
FI -> FS	0.398	0.404	0.039	10.311	0
KM -> FI	0.355	0.352	0.05	7.127	0
KM -> FS	0.265	0.262	0.046	5.757	0
			Indirect Effect		
KM -> FI -> FS	0.141	0.142	0.026	5.397	0

mediated through Fintech Innovation.

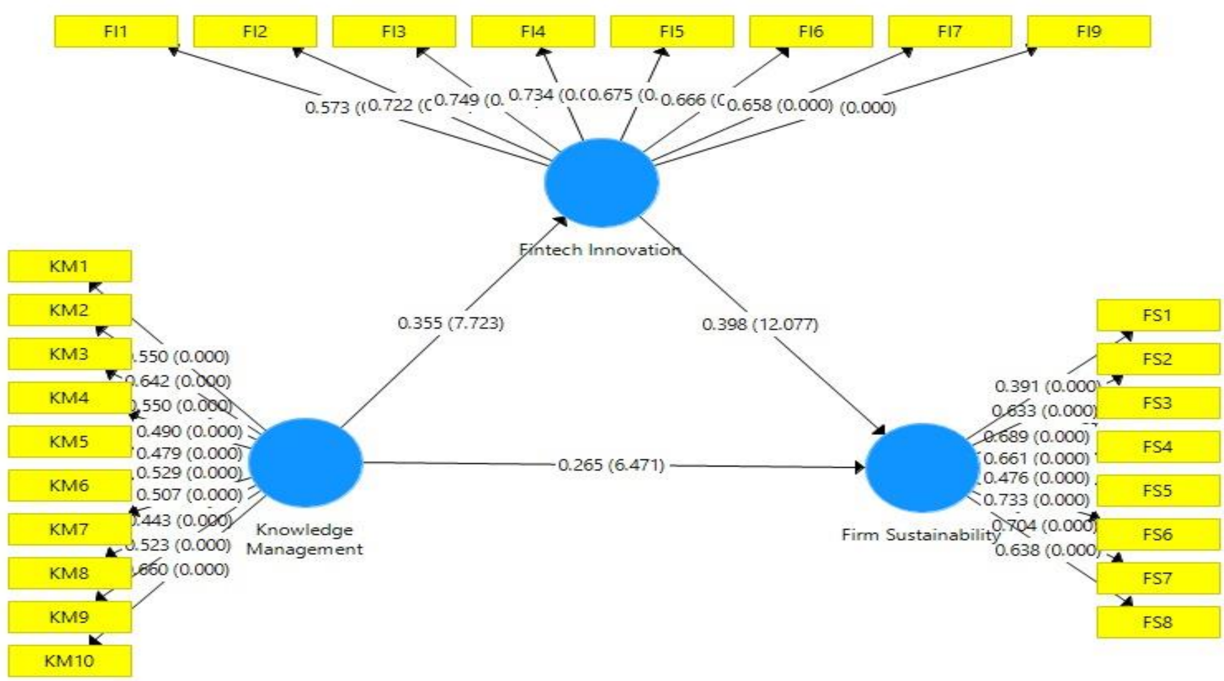

Figure 2: Structural Equational Model

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Conclusion

The significance of Knowledge Management (KM) is often highlighted in management studies as a fundamental factor in enhancing organizational performance, sustainability, and gaining a competitive edge. Nevertheless, the report indicates that many firms still do not effectively use this resource. The structure of knowledge is a valuable resource in contemporary businesses, particularly in the financial services sector. Financial services firms must engage in knowledge management (KM) to effectively oversee their knowledge resources, ensuring the attainment and sustenance of competitive advantage, lasting client connections, and long-term profitability. When a service-based corporation, like a bank in this situation, has the necessary knowledge, it is probable that they would use this knowledge to decrease their overall expenses and make efforts to enhance the financial stability of the company. Furthermore, prior research indicates that banks require significant and influential factors to enhance their capabilities and facilitate their development. These factors include transparency, user-friendliness, perceived profitability, and minimal perceived risk, which can be achieved through the adoption of Fintech innovation. As Internet banking services become more widespread, customers will inevitably receive a significant amount of information about their financial transactions through databases like websites. Hence, via the use of knowledge management concepts and the utilization of contemporary financial technology, the bank has the potential to enhance its financial performance and guarantee its long-term sustainability. The need to research and handle the issue is emphasized by the rapid advancement of financial technology and the necessity to adapt in order to prosper in today's fiercely competitive landscape, while also satisfying customer demands in banking services. However, the banking system is a sector that directly impacts the economic advancement of the country as a result of change and transition. Furthermore, deficiencies in this field not only affect the customers of the banking system but also have consequences for the economy of the country. This research aims to investigate the influence of knowledge management (KM) and the adoption of financial technology (fintech) innovation on the long-term sustainability of banks in the banking industry of Pakistan. Therefore, to accomplish the research goal and investigate the main question of the study, four hypotheses were generated and then analyzed.

An analysis is conducted in H1 to assess the influence of knowledge management (KM) on fintech innovation in banks. The results showed that knowledge management (KM) positively and significantly affects the effectiveness of financial technology innovation in the institutions under study. Hence, it can be said that the acquisition and integration of information have a positive influence on the effectiveness and productivity of these technologies in the banking industry. The findings demonstrate that the outcomes of H2 align with the findings of Al-Dmour et al (2021) and Raudeliuniene et al (2021). However, Section 2 focuses on the impact of implementing Fintech innovation on the long-term viability of the institutions. The results indicated a substantial and advantageous influence of fintech innovation on the company's long-term sustainability and resilience. Hence, it can be contended that obtaining support from the bank's senior management in implementing these technologies, coupled with appropriate financial investment in leveraging financial technological advancements, is expected to have a

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positive effect on the growth of banking service sales volume, an expansion in market share, and the attainment of sustainable profitability.

In H3, we investigated the impact of knowledge management (KM) on the long-term viability of banks. The findings indicated that Knowledge Management (KM) has a favorable and statistically significant impact on the long-term viability of the banks. Therefore, it can be concluded that the use, acquisition, and integration of knowledge have a beneficial impact on the long-term viability of banks. This implies that the higher the level of knowledge management inside an organization, the greater the sustainability of the company. Hypothesis 4 (H4) examines the function of Fintech Innovation in mediating the link between Knowledge Management (KM) and the sustainability performance of banks. The findings indicated that the use of financial technology, namely Fintech, has a large and favorable impact on the sustainability of the organization via knowledge management. Therefore, H4 is deemed acceptable. Applying fintech innovation to build KM principles is expected to positively impact the bank's performance and sustainability. Given that fintech innovation is the integration of finance and technology, its advantages are used within the framework of KM culture in banks. By reducing expenses, banks will be able to achieve ongoing improvement in financial performance and sustainability.

Practical Implications

As Knowledge Management (KM) is strategically designed and implemented with intelligence and precision, it has the potential to improve an organization's ability to achieve its goals, increase productivity, optimize performance, and facilitate ongoing growth. Nevertheless, the use of Knowledge Management (KM) in the domain of technology, particularly in the realm of financial technology (fintech) innovation, is anticipated to provide benefits to organizations and financial institutions, including banks, by streamlining advancement and creating profitable expansion. It is recommended that managers and decision-makers in the banking industry of Pakistan appoint people who are accountable for formulating plans and knowledge-based initiatives. Furthermore, it is advisable to develop specific roles within the official framework of banks to supervise measures related to knowledge management. Furthermore, it is advisable to improve the effectiveness of the organization's financial performance, maintain corporate sustainability, and boost the quality of services provided by banks. The prioritization of KM deployment should be determined by two crucial factors: the velocity of service innovation and the quality of service innovation. To improve financial performance and sustainability, bank managers should promote the incorporation of diverse technologies such as cloud computing, service and process outsourcing, robotic process automation (RPA), advanced analytics, digital transformation, blockchain, smart contracts, artificial intelligence, and the Internet of Things (IoT). By using this approach, organizations may attain long-term profitability by reducing costs and saving time in the delivery of customer service. The introduction of financial technology has a substantial influence on many activities, operations, and functions within the capital market. Banks may provide customers the choice to participate in online, mobile, algorithmic, and robotic transactions, while also giving them immediate access and analysis of financial markets.

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Furthermore, by establishing links with many payment gateways, banks may effectively integrate the flow of liquidity across financial markets, therefore promoting their main goal of improving the long-term sustainability of enterprises.

Limitation and Future Research

The conclusions of the study are limited by the unique sample size of banks in the Pakistani banking industry, since the research was exploratory in nature. It should be emphasized that altering the size or location of the sample population may lead to varying outcomes. Moreover, the variation in perspectives among the people in the statistical sample about the questionnaire items might potentially affect the conclusions. The essay centered on the examination of banks operating in the dynamic banking industry of Pakistan. Therefore, the results are restricted to these specific banks and cannot be generalized to include other institutions and businesses. Therefore, it is advisable for future research to examine the issue in other corporations and organizations that focus on providing services. Furthermore, the research investigated the influence of implementing knowledge management (KM) and financial technology (fintech) innovation on the financial viability of the organization. However, more work is necessary to evaluate the influence of other sustainability factors, namely social sustainability and environmental sustainability. Moreover, the research might be broadened to include significant features and characteristics such as diverse leadership styles, types of innovation strategies, and organizational culture.

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