

## RESEARCH ARTICLE

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# Knowledge Application and Fintech Innovation as Drivers of Pakistani Bank Performance: The Role of Organizational Culture

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## Abstract

This study investigates the impact of knowledge application and fintech innovation on the performance of banks in Pakistan, considering the moderating role of organizational culture. Utilizing a quantitative research approach, data were collected from 230 bank employees via a 23 item-structured survey instrument. The results reveal that Knowledge Application significantly influences fintech innovation and both knowledge application and fintech innovation positively affect bank performance. Organizational culture significantly moderates the relationship between knowledge application and fintech innovation, amplifying its impact. The mediation analysis confirms that fintech innovation mediates the relationship between knowledge application and bank performance across different levels of organizational culture, supporting the proposed moderated mediation hypothesis.

These findings underscore the importance of integrating knowledge application and embracing fintech innovations to enhance banking performance, while also highlighting the complex role of organizational culture in these dynamics. The study contributes to the understanding of how banks can leverage these factors to achieve better performance outcomes in the context of a developing economy like Pakistan.

**Key Words:** Knowledge Application, Fintech Innovation, Organizational Culture, Bank Performance

## 1. Introduction

Organizational culture is a paramount force that consists of values, beliefs, and norms that influence the management of knowledge and the implementation of innovations in banks. The strong organizational culture may facilitate the learning environment that is crucial to innovation and the effective application of knowledge, which are all central to the improvement of bank performance (Aftab et al., 2022)

Knowledge application is the process of using the knowledge acquired internally as well as from outside sources in an organization to facilitate achievement of organizational goals (Shin, Holden, & Schmidt, 2001). Boateng and Agyemang (2015) defined Knowledge application as the processes that take place within an organization that can help to apply and utilize knowledge in order improve the operation of the organization, to create new products and services and to build new knowledge assets. Hence, knowledge application is not only the process of accumulating knowledge but also sharing and using it in problem-solving activities (Shin et al., 2001).

Fintech innovations therefore can be defined as the application of technology to the provision of financial services to the consumer. This comprises of mobile money, paying bills online, the use of block chain, and employing artificial intelligence (Puschmann, 2017). In the context of the Pakistani banking industry, there is a high importance of fintech innovation because the structure of the banking sector has changed, and the performance needs to be improved for customers' requirements and competitive challenges. By integrating fintech solutions, one is likely to notice enhanced productivity, decreased expenses, better clients' satisfaction, and also the opportunities to generate extra income (Anwar & Khan, 2022)

Performance can be measured in terms of profitability, efficiency, customers' satisfaction and the size of market share. Knowledge application and

incorporation of fintech solutions can influence these performance indicators. Appropriate KM practices help the banks in decision making, improving operations, and in creation of new value-added products and services (Gloet & Marchant, 2006). Fintech advancements offer fresh approaches to the provision of services, ways to build clients' satisfaction, and ways to minimize expenditures (Chen, 2019). Thus, when a bank is able to apply its knowledge and implement the use of fintech within a suitable environment, significant increases in performance are likely (Porter & Heppelmann, 2014).

This research is based on the socio-technical theory which clearly defines how social and technical aspects coexist and influence each other in an organization. This theory is quite helpful when analyzing modern-day tendencies of fintech development and the application of newly gained knowledge. Therefore, it stresses the need to factor both the human and technological aspects when one is in the process of improving the organizational performance (Castro, 2020). According to socio-technical theory, a balance has to be made between system and people in an organization so that the level of technician can be enhanced. Therefore, this approach can be useful for understanding how knowledge application and innovation explained could enhance the performance in the banking sector as well as other organizations that operate in a highly uncertain environment (Trist & Bamforth, 1951).

Previous research work has addressed these elements in isolation and has not captured the synergistic effect, much less so in the context of the Pakistani banking system. For instance, Iqbal et al., (2021) examined the part of knowledge application while lacks fintech as a mediator and organizational culture as a moderator. As it stands, their works or rather limited angles which they give when studying, fail to consider how this knowledge can be applied better with the help of fintech or how culture may help or hinder such a process. Therefore, this research seeks to fill this gap by disentangling the relationships between

knowledge application and application, fintech innovation, and organizational culture in the context of the Pakistani banking industry.

This study questions whether knowledge use influences fintech innovation adoption and implementation by Pakistani banks, whether innovation with this purpose improves performance, the approaches banks utilize for integration of fintech, and how organizational culture acts as a moderator between the relationship between knowledge use, fintech adoption, and performance. Therefore, the objectives are to evaluate the performance influence of knowledge application, determine its fintech innovation role, test the moderating role of organizational culture, and analyze organizational culture, knowledge dynamics, and fintech innovation's joint drivers of bank performance and competitiveness.

This research will provide practical findings of organizational culture impact on the success of knowledge management as well as the application of fintech solutions. This understanding is important for banks that want to fully unlock the potential of the knowledge resources and technologies in enhancing performance. Secondly, the knowledge generated by this research is supposed to contribute to the formulation of sound strategies meant to be implemented in the banking industry. Thus, by showing the moderating role of the organizational culture, the study will offer precise recommendations on how the culture of banks should be changed and developed to support the knowledge management and innovation.

## **2. Literature Review**

The literature review chapter presents an analysis of the theoretical framework and prior research upon which this study is based, to examine the complex interconnectivity of knowledge application, fintech advancement, organizational culture, and the performance of the bank under consideration.

### ***Knowledge Application***

It is the process by which an organization makes optimal use of the knowledge resources that are available to it so as to improve on its activities, choices, and results. This refers to the process through which learned information is incorporated into firms' operations and used to grow and come up with things like new products, ways through which processes can be improved and so on (Nonaka and Takeuchi, 1995). It goes beyond the possession or archiving of information by outlining how organizations apply that information to gain competitive edge (Grant, 1996).

Prominent among the aspects of knowledge application is the relationship between the knowledge amassed by an organization and its strategic goals. Therefore, the ability to effectively integrate internal and external knowledge resources is essential (Shahzad et al., 2022). While internal knowledge refers to the knowledge held by employees, institutional memory, and the organization's processes, the external knowledge may refer to the knowledge of the organization's customers, changes in the market or new trends within the industry and new developments (Zack, 1999).

Thus, the application of acquired knowledge can bring about outstanding results in dynamic businesses, especially the banking business. The application process thus enables organizations to design and framework suitable and usable knowledge processes to enhance operation functionality, support decision-making and create new visions and solutions which meet market needs. Especially in banking, the use of knowledge is paramount in sustaining competitiveness, compliance to rules and laws and addressing issues of technology (Elliott et al., 2022)

Furthermore, the role of knowledge application is based on the fact that it can facilitate organizational learning and improvement. Whether knowledge is used to improve its holders' understanding or to fine-tune practice, organizations can correct and adapt their structures and approaches, or try new solutions. The

result of this process of application and evaluation of knowledge, which is then further developed leads to the constant learning and consequently changes within the organization that is operating in the unpredictable business environment (Rupcic, 2023).

### *Knowledge Application and Bank Performance*

The interaction of knowledge application and bank performance has attracted increased interest in the literature and in practice. Knowledge application may be defined as the use of knowledge resources, internal as well as external to the organization, to improve the decision-making process, the business processes and also to support innovation. In the banking sector competition is high and technological changes are dynamic, thus efficiency in applying knowledge can greatly contribute to performance gain (Shahzad et al., 2022).

Knowledge application is regarded as the process by which banks turn the gathered knowledge into practical measures that lead to enhancement of performance, creativity and competitiveness. Elhassan (2021) asserts that it refers to the process of utilizing the context-specific knowledge extending from experiences of the bank's employees, the data acquired through analyses or the market knowledge and incorporating it into the respective organizational/strategic or operational activities. It can apply knowledge from enhancing customer relations to management operations and creating a new financial product. When done effectively the application of knowledge may directly impact the end performance of a bank by improving its capacity to adapt to its environment, cut on its operating expenses, and offer competitive products and services to its clients (Al-Abdullat & Dababneh, 2018).

Knowledge deployment is particularly important in the banking industry as these organization must develop superior services and achieve optimal performance. In Banks, knowledge integration makes them perform better in the market because by incorporating knowledge into their operation they can

develop new products and services, which address the market needs while at the same time enhancing operational efficiency (Grant, 1996). For instance, through the process of market analysis and customer insight, a bank can offer new products and services that meet customers' new demands thus improving customer loyalty.

Therefore, the banking sector knowledge is one of the most important drivers of innovation, and is also of paramount importance to the sustainability of a competitive edge. Effectively, knowledge application helps banks that apply the knowledge to enhance their performances in terms of overall efficiency and cost cutting as well as the timely creation of new resources for enhanced revenues. For instance, the knowledge creation drives technologies including; artificial intelligence (AI) and machine learning- helping banks to automate tasks, minimizing on human errors as well as enhancing the customers' experience. However, as indicated in the above analysis, several firms especially banks encounter some problems in the application of their knowledge resources. organizational culture for example, can have a big influence as to whether knowledge is put to use. It could also be argued that where the culture of the organization supports the sharing of knowledge and collaborative working, knowledge application is more likely to be successful where as a culture that is inherently resistive to change is counterproductive where knowledge application is required. Also, technological incongruity may hamper the application of the knowledge especially in environments where technologically outdated systems are still used and this is prevalent in banks.

The last one is the mismatch between knowledge application and strategic goals & objectives. Although many banks admit that it is relevant to apply knowledge, they might find it difficult to integrate the concept of knowledge management into a number of strategic aims. Such a mismatch may lead to little room for innovation and enhancements of performance outcomes (Anwar &

Khan, 2022). All in all, knowledge application is a decisive factor affecting the performance of banks, which helps the banks to manage Knowledge Resources to improve understanding, innovation and value creation of banking decisions and to increase organizational effectiveness. Hence, lengthy and lasting performance improvements and business success in knowledge application business fields is likely to be experienced by the banks that have invested in the knowledge application practices.

*H<sub>1</sub>: Knowledge application has a positive effect on bank performance.*

### ***Knowledge Application and Fintech Innovation***

Fintech innovation refers to the utilization of technology to design and create more efficient financial service delivery system. They include M-banking/mobile payment; method of payment for goods and services using mobile phone, block chain technology which provides more efficient, accessible and secure ways of providing/banking financial services. The element of innovation in the FinTech industry, however, relies on the effectiveness of the knowledge application by the banks. In organizations that pay attention to knowledge application practices, it is easier for banks to develop innovative, effective and efficient fintech products that address the client's needs and thus improve service delivery (Gomber et al., 2018).

According to Zahra and George (2002) the effective utilization of knowledge contributes to the creation of opportunities and enhance competitive advantages. This is more so the case in the banking sector where competition is cut throat and technological changes are ever recurring. The banks that can successfully apply the knowledge are more likely to pose unique solutions in fintech and satisfy the customer needs as well as improve their competitive advantage.

The conceptual link between the knowledge application and the fintech innovation highlights the importance of how banks in the application of their

knowledge assets to enhance the provision of the Fintech innovations that are valued in the market. Knowledge application is the process of applying knowledge resources within an organization to enhance decision-making, enhance value addition processes and discovery of innovation. In the banking industry context, fintech means developing new ideas and implementing them in banks to improve services and increase consumers' satisfaction. When knowledge is properly applied, it enhances the competitiveness of banks to lead fintech resulting in enhanced performance and efficiency.

Furthermore, the use of Fintech innovative solutions gives a competitive edge to the banks as it increases efficiency, productivity, and service delivery while lowering operational expenses. According to the study by Gomber et al. (2018), banks that have been able to incorporate fintech in the production process are able to cut the time and improve the security of transactions while at the same time offering better services to customers. All these changes are not only favorable to the customer but directly affects the efficiency of the bank as well.

In conclusion the relationship between knowledge application and the fintech innovation as a means of establishing how banks harness their knowledge resources to facilitate implementation of technology innovation. Knowledge application acts as an innovation source in fintech; by providing banks with efficient and customer-oriented services and products. When they use it efficiently banks will be in a position to make better returns, increase efficiency in their operations, and perhaps offer better services than other competitors in the market. The use of knowledge application to support fintech innovations is found to remain relevant for advancing banking services as it transforms and becomes more sophisticated in the future.

*H<sub>2</sub>: Knowledge application positively influences fintech innovation.*

### ***Fintech Innovation and Bank's Financial Performance***

The adaptation of fintech solutions has left a profound effect on banking systems

in regards to their performance or overall functioning. Fintech refers to the integration of new technologies in the delivery of financial products and services with the aim of increasing efficiency and profitability of operations of banks among other gains. They can identify the main impacts of technologies in the context of fintech seen today, such as mobile banking, blockchain, and payment systems to automate the financial process and make it more secure.

Fintech innovations enable the operations of the banking systems to be more flexible than the conventional methods that are time-consuming and expensive. For instance, new generation payment systems and mobile banking applications have driven down transaction costs and opened doors to transaction services to customers and this translate into efficiency in service provision (Shin & Lee, 2021). Such technological solutions help banks to get to the previously non- or hardly served customers and to generate new sources of income.

In addition, current studies have provided evidence that proves that fintech innovations reduce the operating expense while at the same time increasing overall performance in aspects of customer satisfaction and competitive advantage (Philippon, 2016). Through improving efficiency and reducing the transaction cost, the financial performance of the banks can be enhanced by still captivating customer demands and providing relevant services more efficiently. Thus, it has been found that leaders in the fintech industry are likely to realize better returns on investments and incremental growth in the market share because of their capability to create and respond to new opportunities for value creation in a given market (Puschmann, 2017).

Altogether, it is possible to determine that fintech innovations not only enhance the banking activity but also help to increase the performance of the bank. Thus, by increasing organizational effectiveness, decreasing expenses, and optimizing the clients' satisfaction, fintech is one of the major factors defining the financial performance of the contemporary banking sectors.

*H<sub>3</sub>: Fintech innovation has a positive effect on bank performance.*

### ***Knowledge Application, Fintech Innovation, and Bank Performance***

As it can be seen, the role of application of knowledge is significantly influenced by fintech innovation, and has a strong association with bank performances. In organizations, specifically business ones such banks, knowledge application as a concept refers to the utilization of tacit knowledge thereby proactively incorporating it into improved processes, better decisions, and even improved goods and services (Baba et al., 2023). While the term Fintech refers to the technology used to advance financial services where new ways are created to carry out financial services in as an efficient manner as possible to both the banks and its clientele it can also mean the enhanced methods that enhance financial services.

Of importance is the moderating role played by fintech innovation in converting knowledge application into real performance gains for the banks. When knowledge is appropriately utilized, the processes contribute to the production of insights and strategies that enable development of fintech. Such innovations result in optimization of banking procedures, improvement of customers services and cutting down of expenses. This means that the application of knowledge within a bank does not guarantee enhanced performance but is attained when the bank deploys these new technologies in order to enhance its viability in today's ever dynamic financial sector (Alegre & Chiva, 2013)

Overall, in the banking sector, fintech serves as the intermediary that transforms knowledge application into market relevant outcomes thus enhancing performance. According to Haddad and Hornuf (2019), the ability of a bank to innovate through fintech is what makes it possible to transform the real applied knowledge into associated innovative significant financial services products. These innovations help to satisfy the clients, increase the productivity

and to remain competitive in the market for the banks. Fintech innovation is therefore important in helping the bank tap on the knowledge resources in a manner that boosts the performance.

*H<sub>4</sub>: Fintech innovation mediates the relationship between knowledge application and bank performance.*

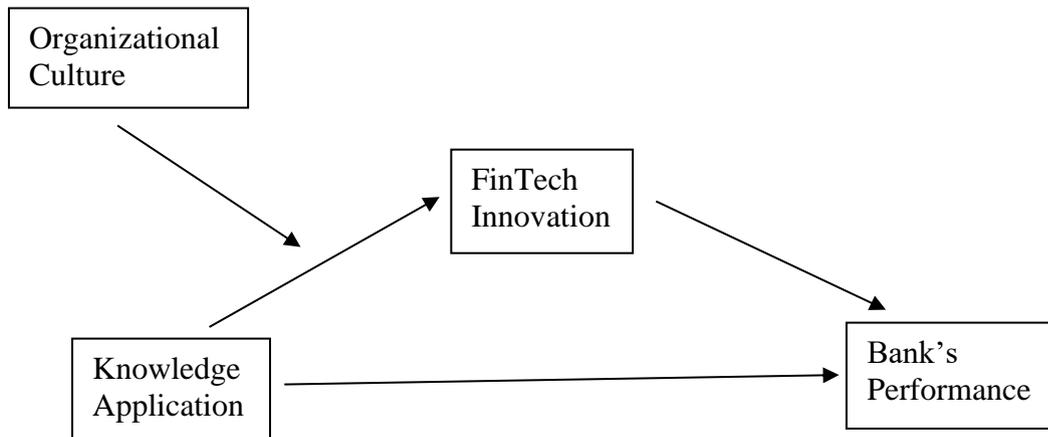
### ***Organizational Culture, Knowledge Application, Fintech Innovation and Bank Performance***

The notion of organizational culture thus plays a moderating function where it helps depict the extent to which knowledge can be utilized in a bank concerning fintech to greater performance. Therefore, organizational culture refers to the supersystem of values, beliefs and practices that defines the ways in which the members of an organization behave and make decisions. An appropriate culture can strongly support knowledge application as well as accelerate the development of innovations (Aftab et al., 2022).

Elia, Stefanelli, & Ferilli (2023) have also supported these findings explaining that banking and financial services is one of the sectors where fin tech innovations are critical, and therefore, an organization has to adopt a supportive culture in the organization in order to support such innovative changes. The adoption of a new fintech solution affects the various operations in an organization which includes changes in processes, training and customer engagement which depends on the organizational culture in place (Bahl & Singh, 2022). In special, when the culture nurtures the bank's strategic objectives related to innovation and knowledge management, it is possible to integrate the fintech solutions in the practices of the organization in a way that will lead to enhanced performance.

*H<sub>5</sub>: Organizational culture moderates the relationship between knowledge application and fintech innovation, thereby influencing bank performance.*

### *Theoretical Framework*



*Figure 1: Theoretical Framework*

### **3. Methodology**

The method used in this study is described in this chapter, with the purpose of identifying and explaining the complex interconnection between knowledge management, organizational culture, fintech, and financial performance in the context of the Pakistani banking system. The research design adopted in this study is quantitative research since it can quantify the strength of the variables' associations and is amenable to statistical testing. The quantitative approach is useful in gathering and analyzing numerical data enabling the testing of hypotheses and the setting up of generative trends. Therefore, the survey method is appropriate since it will ensure that a systematic data collection process is conducted to allow the researcher to test the statistical significance of the relationships of Knowledge application, organizational culture, Fintech innovation and Bank performance.

The selection of this population is based on their direct involvement with or knowledge of knowledge management practices, organizational culture, and fintech innovation within their organizations. This diverse representation ensures that the findings are reflective of the broader banking sector and its varied perspectives.

The data collection method for this study involved the use of quantitative

surveys administered through Google Forms. A structured questionnaire consisting of 23 items was designed to measure various aspects of knowledge application, fintech innovation, organizational culture, and bank performance. The survey was distributed to 230 bank employees, who were selected based on their relevance to the study. The survey method was chosen for its efficiency in reaching a large number of respondents and its ability to produce quantitative data that can be analyzed statistically.

**Table 1:**

**Measurement of Variables**

	<b>Constructs</b>	<b>Items</b>	<b>Sources</b>
1	Knowledge Application	6	(Sadew & Purnasari, 2021)
2	Fintech Innovation	5	(Jawed & Siddiqui, 2021)
3	Organizational Culture	3	(Ghafoori, 2024)
4	Bank Performance	9	(Wu, Straub, & Liang, 2015)

#### **4. Results and Analysis**

This section discusses the collected data for this study, linking knowledge application, organizational culture, fintech innovation and bank performance in the context of the Pakistani banking industry.

##### ***Reliability Analysis of Constructs***

Table 2 presents the results of the reliability analysis for the constructs measured in this study. Reliability was assessed using Cronbach's alpha to ensure the internal consistency of the 23-item structured survey administered to 230 bank employees in Pakistan. Cronbach's alpha values above 0.7 indicate acceptable reliability, with higher values reflecting stronger consistency (Nunnally, 1978).

**Table 2:****Reliability Analysis**

Variables	No. of Items	Cronbach's alpha
KA	6	.829
FI	5	.760
OC	3	.910
BP	9	.850

Here KA= Knowledge Application FI= Fintech Innovation OC= Organizational Culture BP= Bank Performance

Table 2 shows that in the present research Cronbach Alpha co-efficient has yielded high values. It would be pertinent to note that "Knowledge Acquisition" (KA) was rated at an average of .829, The framework is called "Financial Innovation" or FI. 760, "Organizational Culture" (OC). 910, and "Business Performance" (BP). 850. For all the tests conducted below, we observe that all computed test values are greater than the acceptable threshold of. The alpha coefficient of the respective scale of items range as follows: scale 1 = 0.7, scale 2 = 0.8, scale 3 = 0.9, scale 4 = 0.9 and scale 5 = 0.7. All the above results show that the items contained in each of the above scale are reasonably reliable and suitable for further analysis in measuring the above variables. These results support the validity and accuracy of all the measurements undertaken in the course of the consideration of the study.

**Correlation Analysis****Table 3:****Correlation Analysis**

Variables	KA	FI	OC	BP
KA	1			
FI	.424**	1		
OC	.345**	.354**	1	
BP	.437**	.463**	.481**	1

\*\*Correlation is significant at 0.01 level Here KA= Knowledge Application FI= Fintech Innovation OC= Organizational Culture BP= Bank Performance

The correlation results show the nature of the relationship between the various variables in the study as follows. There is a significant and positive relationship between Knowledge Application and all other variables which means enhance levels of Knowledge Application led to high Fintech Innovation, sound Organizational Culture and sound Bank Performance. In other words, the relationship between KA and FI is moderately to highly related to ( $r = 0.424$ ). In the same way the positive correlation between KA and OC ( $r = 0.345$ ) and between KA and BP ( $r = 0.437$ ) suggested that, as Knowledge Application rise, so does the Organizational Culture and Bank Performance.

It is also suggested that Fintech Innovation has the positive relationship with both Organizational Culture and Bank Performance with coefficient values of .354 and 0.463, respectively. This suggest that increased Fintech Innovation leads to great Organizational Culture as well as high bank Performance These results are consistent with Aftab et al. (2022) which suggest that this process is particularly relevant in Pakistan's banking sector, where rapid digitalization demands effective knowledge utilization. Last of all, the result has shown that Organizational culture has moderate to strongly positive relationship with the Bank Performance, with correlation coefficient of 0.481, indicating that favorable Organizational Culture to enhance the performance of the banks.

### ***Regression Analysis***

To analyze the impact of knowledge application through fintech innovation for the improvement of the performance of Pakistani banks under the influence of organizational culture, regression analysis was conducted. The results are presented in the Table 4, show that there is a positive effect of fintech innovation on bank performance, however; organizational culture partially mediate the relationship urging the need to establish a culture that will support Fintech growth.

**Table 4:****Regression Analysis**

Hypothesis	Path	B	p	LLCI	ULC	Status
					I	
H <sub>1</sub>	KA → BP	0.5810	0.0000	0.4430	0.8321	Supported
H <sub>2</sub>	FI → BP	0.0836	0.0000	0.0881	0.9679	Supported
H <sub>3</sub>	KA → FI	0.7019	0.0000	0.1330	0.7890	Supported
H <sub>4</sub>	KA → FI → BP (Mediation)	0.0539	0.0000	0.1903	0.3682	Supported
H <sub>5</sub>	KA × OC → BP (Moderation)	0.0390	0.0000	0.0513	0.0752	Supported

Here KA= Knowledge Application FI= Fintech Innovation OC= Organizational Culture  
BP= Bank Performance

The regression analysis supports all the hypotheses. H<sub>1</sub> confirms that knowledge application has a significant positive impact on bank performance (B = 0.5810, p < 0.001). H<sub>2</sub> shows that fintech innovation also significantly contributes to bank performance (B = 0.0836, p < 0.001), though its effect size is smaller than that of knowledge application. H<sub>3</sub> indicates that knowledge application strongly influences fintech innovation (B = 0.7019, p < 0.001). The mediation effect in H<sub>4</sub> shows that fintech innovation mediates the relationship between knowledge application and bank performance, with an indirect effect of 0.0539 (p < 0.001). Finally, H<sub>5</sub> supports the hypothesis that organizational culture moderates the relationship between knowledge application and bank performance (B = 0.0390, p < 0.001). This finding is in accordance with socio-technical theory (Castro, 2020), which states that organizational performance is maximized when social systems (such as culture) and technical systems (such as knowledge application processes) are balanced. A culture that promotes openness and flexibility, according to Aftab et al. (2022), allows for effective use of knowledge, which

allows the banks to enact innovative solutions that maximize operational efficiency and market competitiveness.

### *Discussion*

Hypothesis testing findings reveal that knowledge application has a significant and positive effect on fintech innovation, which further improves bank performance. This confirms the hypothesis that knowledge application is positively related to bank performance through the mediating effect of fintech innovation. Such outcomes imply that enhancing an organization's capacity to utilize both internal and external knowledge resources can spur innovation in fintech solutions, ultimately enhancing operational efficiency, customer satisfaction, and overall financial performance (Baba et al., 2023). This resonates with the resource-based view (RBV) approach, which highlights harnessing distinctive organizational abilities like successful application of knowledge as a basis for sustainable competitive advantage in changing contexts like the banking industry.

In addition, the suggested hypothesis for the moderating influence of organizational culture between the knowledge application–fintech innovation relationship is theoretically grounded by socio-technical systems theory. This theory suggests that high-performance stems from the compatibility of social structures (e.g., organizational culture) and technical competence (e.g., fintech innovation) (Castro, 2020). The findings reveal that both fintech innovation and knowledge application exhibit significant and positive associations with bank performance, resonating with earlier research emphasizing the complementarities between innovation cultures and efficient application of knowledge management practices in delivering superior business results (Aftab et al., 2022). This alignment with existing theory highlights the need to create a supporting culture in conjunction with technical innovation to unlock the performance potential of banks within the changing fintech environment.

## 5. Conclusion

This paper confirms Knowledge Application to have a highly positive correlation with Fintech Innovation. It will be found that the knowledge improvement and application of it is positively associated with banks that introduce and also incorporate new fintech solutions. This finding supports the assumption of the current study that the application of knowledge is essential for the promotion of innovation. Those banks that are willing to spend capital on knowledge management and training of employees have a better chance in developing new financial technologies and putting them into the market, thus improving their competitive advantage.

Positive impact of Knowledge Application on Bank Performance indicates the strategic use of Knowledge to attain better performance results. In the studies achieving knowledge application in the banks, bring about better key performance indicators among them being return on investment as well as customer satisfaction levels (Al-Dmour et al., 2020). This shows the need to promote the implementation of knowledge management as a way of improving on the performance of the organization.

Similar to all the other variables, Fintech Innovation also has a positive influence on the performance of the Banks. This implies that, the implementation of innovative financial technologies improves performance results among the banking industry. Ghafoori (2024) postulates that through the application of the fintech, the following benefits are likely to be accrued to banks that embrace the innovation; Efficiency gains Customer satisfaction and presumably better returns. To affirm the research hypotheses, the study accepts Fintech Innovation as a moderator between Knowledge Application and Bank Performance.

### *Implications of the Study*

The study's findings have several practical implications for banks and policymakers: The study's findings have several practical implications for banks

and policymakers:

Knowledge management has to be at the core of banks' development strategies as organizations have to improve processes of creating, sharing and applying new and valuable knowledge. Many employees understand a lot but cannot actually apply it; through training and knowledge-sharing programs, performance will improve and there will be self-actualization, leading to innovation.

Moreover, the management of the banks should always assess and innovate based on new understandings and technology. It sometimes could be advisable for banks to keep abreast with the trends and new technologies in the banking sector. Also, the government should look at the issue of offering incentives to such banks in the area of knowledge management and innovations in the fintech sector. This could be in form of incentives such as tax credits, funding or acknowledgement packages for effective change and other positive performances.

### *Limitations of the Study*

While this study provides valuable insights, it has several limitations: While this study provides valuable insights, it has several limitations:

The study was done with data collected from 230 bank employees in Pakistan thus restricting the generality of the results to other regions or countries. The outcome derived from the current study may not be generalized to other regions because of differences in the banking environment and culture. As it was stated, the research aimed at the investigation of the impact of the Organizational Culture but the absence of moderation impacts implies the existence of other contextual factors that could be more essential. The findings of the present research suggest that future studies should try to include any additional characteristics to enhance the exhaustiveness of the investigation.

### **Directions for Future Research**

Future research could build on this study by exploring several avenues: Future research could build on this study by exploring several avenues. Using qualitative research approach, like interviews or case studies, might provide further understanding of the effect of knowledge application, as well as the advancement in fintech on the performance of the banks. Such an approach could identify potential predictors and furnish a deeper insight into the research outcomes of the study.

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