

Assessing the Impact of Organizational Readiness and Digital Financial Innovation on Financial Resilience: Evidence from Banking Sector of an Emerging Economy

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Abstract. Commercial banks in Pakistan are confronted by increasing market volatility, regulatory challenges, and rapid technological changes. Each of these is a financial stability and adaptiveness forgoer, and further explanation is needed regarding how organizational readiness and digital financial innovation will enhance financial resilience. Therefore, the study aims to examine the impact of Organizational Readiness (OR) on Financial Resilience (FR) in the commercial banks of Pakistan. Additionally, the study investigate the mediating role of Digital Financial Innovation (DFI) between OR, and FR for the target population. In order to achieve the aims of the study, the data was collected from managerial employees of commercial banks in Pakistan using self-administrative surveys. The researcher used Partial Least Squares (PLS) method of Structural Equation Modelling (SEM) for testing the hypothesis of the study. The findings indicate that OR (change valences, change efficacy, and contextual factors) has a substantial influence on FR. In Pakistan's banking sector, DFI mediates between OR and FR. The study concludes that organizational readiness comprising change valences, change efficacy, and contextual factors makes a significant addition towards financial resiliency improvement in commercial banks of Pakistan. This study further portrays that the proposed relationship mediates with the inclusion of digital financial innovation, which underpins the decisive role of technology in bridging organizational readiness and financial stability in the evolving financial environment. The findings provide theoretical implications as per Organizational Readiness theory as well as practical implications for the banking sector of Pakistan. The findings are specific to the financial industry in Pakistan. For greater generalizability, future research might conduct cross-national studies.

Key words: Organizational Readiness, Digital Financial Innovation, Financial Resilience, Banking Sector, Pakistan

1 Introduction

Financial innovations in the digital world seem to be universal. Banks have always relied on technological advancements to boost productivity and customer satisfaction. There is an issue

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of growing financial fragility within Pakistan's commercial banking sector (Ali et al., 2021). The market volatility, regulatory pressures, and rapid technological changes have brought questions about the banks' resilience to financial shocks in Pakistan (Zaman et al., 2024).

Despite the importance of financial resilience, there is scant literature on how organizational readiness such as factors of change valence, change efficacy, and contextual ones can enhance financial stability in that respect. Furthermore, the role of digital financial innovation in mediating the relationship suffers from neglect in several emerging economies around the world, for example, Pakistan. With the rapid digital transformation of the banking sector at large, it is befitting that the research focus on how technology could help banks strengthen their organizational preparedness to adapt and maintain financial resilience. This research has, therefore, attempted to fill these gaps by surveying the interplay of organization readiness, digital innovation, and financial resilience in the case of commercial banks of Pakistan.

The banking industry has adopted Digital Financial Innovation (DFI) swiftly. Banks must undergo a digital shift for the successful implementation of DFIs. There has been limited investigation into the development of DFIs in banks to date. The term "digital financial innovation" (DFI) refers to the use of digital technology to develop economic solutions that are advantageous to enterprises (Hussain and Papastathopoulos, 2022). DFI encompasses a variety of essential and emergent technologies and ideas, including blockchains, big data analytics, social networks, near-field communications, peer-to-peer technologies, crowdfunding, the internet, and artificial intelligence (Al-Dmour et al., 2021). The term DFI is defined as the capacity of a company to compare the quality, features, uniqueness, applicability, and creativity of its DFIs to those of its competitors (Hussain and Papastathopoulos, 2022).

Businesses expect DFI to improve customer experiences, profitability, financial performance, market value, financial inclusion, social entrepreneurship crowdfunding, and risk management during COVID-19 (Barnes, 2020). Nonetheless, it is essential to acknowledge that DFI poses risk to all stakeholders (Longworth, 2020). Companies, particularly those transitioning to digital technologies, are especially vulnerable in the ever-changing digital landscape (Kingiri and Fu, 2020). Organizations must be flexible to adapt to changes. Empirical research on DFI is scarce, stressing the need for greater practical study (Unsal and Rayfield, 2019).

Change management, which is dependent upon organizational readiness, provides the essential foundation for determining an organization's readiness for DFI (Sun and You, 2023). Organizational readiness is essential for maximizing DFI's benefits (Jun et al., 2021). Surprisingly, Hussain and Papastathopoulos (2022), discovered that despite DFI's prevalence, usability, and ease of deployment (Gruin and Knaack, 2020). Organizations still struggle to completely benefit from it. This lack of digital transformation readiness is especially dangerous in developing nations (Unsal and Rayfield, 2019). Urgent empirical research is required to comprehend the significance of DFI in enabling digital transformation (Unsal and Rayfield, 2019).

The researchers' decision to concentrate on DFI and organizational preparation is influenced by pragmatic factors. Due to a lack of preparedness, the COVID-19 pandemic has caused significant financial volatility, particularly in companies in impoverished nations such as Pakistan (Rasheed et al., 2023). Moreover, in the post-COVID environment, the success of the Pakistani service sector will rely heavily on secure, dependable, and seamless financial transactions as well as superior customer service (Kumari and Ahmed, 2022).

This research seeks to establish the connection between OR theory and DFI in the banking industry of Pakistan. Bank management can effectively implement DFI by understanding the significance of preparedness in terms of resources, information technology, strategic thinking, and partnerships. Using DFI data and insights, bank management can make proactive, well-

informed decisions, thereby reducing or eliminating risks. Understanding the connection between OR and FR ultimately enables bank management to make timely decisions for long-term success.

This research builds on the increasing number of studies on financial resilience by applying the [Weiner \(2020\)](#), in a specific commercial banks' context in Pakistan. While there has been some research that examines organizational readiness in different contexts, few studies exist related to the banking industry, especially in an emerging market country like Pakistan. This study seeks to identify the existing gap in assessing the degree to which organizational readiness can influence financial stability, given rapid financial changes, by investigating change valence and change efficacy and their impact on contextual factors affecting financial resilience. In addition, adding in the mediating variable of digital financial innovation provides fresh understanding of how technology can enhance the relationship between organizational readiness and financial resilience in an area that has received scant attention from the literature. This research also covers the significant contextual deficit by focusing on commercial banks in Pakistan, an emerging economy in which financial institutions are subject to particular challenges associated with regulatory pressures, technological changes, and market fluctuations. Much of the past research has been conducted in Western and developed economies; thus, the literature has a gap in terms of how these dynamics play out in the emerging market. Given the focus on Pakistan, valuable insights have been given to policy-makers, financial managers, and academics into how organizational readiness linked with digital financial innovation may afford opportunities to improve financial resilience in a challenging and fluid financial environment. These contributions not only extend the theoretical framework of organizational readiness but also give practical solutions for strengthening financial resilience in commercial banks within similar economic contexts.

2 Empirical Studies and Hypothesis Development

To accomplish business objectives, companies should be prepared for challenging transition. The pertinent literature provides multiple perspectives on this topic. This literature review focuses on key concepts such as "readiness," "change valence," "efficacy in implementing change," "contextual factors," "financial resilience," and "digital financial innovation." These concepts are indispensable to the successful implementation of organizational transformation, especially in the context of digital financial innovation. According to [Uren and Edwards \(2023\)](#), "Readiness" refers to the psychological state in which all members of an organization are completely committed to the new path and confident in their ability to make it work. Similarly, according to [Uren and Edwards \(2023\)](#), readiness is "a shared psychological state in which members feel committed to change and confident in their capacities to do so." The purpose of this theory is to summarize the challenges of implementing organizational transformation due to structural and psychological ambiguity. The organizational readiness theory lacks empirical validation in operations and innovation management despite its pervasive application. Commitment to change, also known as "change valence," is essential for a successful digital transformation. Successful digital transformation requires a motivated and empowered workforce [AL-Khatib \(2023\)](#), which includes staff transfers, technology adoption, collaborative working, and member cooperation. A profound commitment to these changes is essential for a successful transition ([Saqib and Satar, 2021](#)). Similarly, [Lokuge et al. \(2019\)](#), represents workers' willingness to embrace change and contribute innovative ideas. According to [Fouad \(2024\)](#), a deficiency in

organizational commitment can result in unrealized ideas and failed initiatives. Employee engagement is enhanced by managerial support, transparency, and access to specialized technologies (Armenakis et al., 1993). Based on the above literature evidences, the researchers expect positive effect of change valence on DFI in the banking sector of Pakistan. Therefore, the following hypothesis is required to test:

H1: Change valence enhances the company's DFI.

Effective change implementation requires reconfiguring financial, technological, human, and data resources for rapid and efficient change (AL-Khatib, 2023). It considers ways to reorganize financial, technological, human, and data resources to bring about change quickly and efficiently. Resource readiness is the evaluation of the adaptability of all assets, including human, financial, physical, and technological, to novel situations (Mishra and Tripathi, 2021). In addition, businesses must restructure their resources in order to capitalize on digital developments. The effectiveness of transformation is contingent on resources, IT, and cognitive preparation (Lokuge et al., 2019). IT readiness takes infrastructure availability, stability, and adaptability into account, which correlates with improved business results (Lokuge et al., 2019). In addition, institutional resources include office space, instruction, and computers (Datta, 2024). IT readiness necessitates a comprehensive transformation framework that takes workforce skills into account (Tejeiro Koller et al., 2017). It is crucial to emphasize infrastructure needs and analytical skills. Additional aspects of IT readiness include the structure's stability and adaptability (Addae-Boateng and Dzisi, 2016). Based on the above literature evidences, the researchers expect positive effect of change efficacy on DFI in the banking sector of Pakistan. Therefore, the following hypothesis is required to test:

H2: Change Efficacy positively affects DFI.

The contextual factors include strategic readiness, and partnership readiness. The capacity of a company to foster innovation is contingent on several variables, including its environment. For example, strategic readiness play an essential role in innovation implementation. Likewise, strategic readiness helps to enhance the digitalization in an organization (Saqib and Satar, 2021). Moreover, strategic readiness boost the innovative activities in a firm (Pudjiarti and Hutomo, 2020). Similarly, partnership encourages trustworthiness and candor in relationships that enhances innovative culture in an organization (Khin and Ho, 2019). Furthermore, partnership readiness helps to improve innovative activities in a business (Khin and Ho, 2019). Therefore, researchers postulate the following 3rd hypotheses:

H3: Contextual factors positively affect the firm's digital financial innovation.

Organizational resilience is the capacity to endure adversity, which acquired importance during the COVID-19 pandemic (Addae-Boateng and Dzisi, 2016). Financial resilience is the capacity of a business to endure and prosper in the face of both gradual and abrupt change (Yang and Al-Sayed, 2022). This is possible by implementing prudent economic measures to reduce budget deficits. In today's global economy, technological advancements are crucial to the success of enterprises (Mishra and Tripathi, 2021). It is generally accepted that a company's financial stability and adaptability are enhanced by its capacity to manage risks (Ferreira and Coelho, 2020). Companies are deemed financially robust if their financial systems are able to rapidly adapt to changing market conditions (Wang et al., 2022). As a result, the robustness

of a financial system is a measure of its resilience in the face of financial risk and uncertainty. [Nkundabanyanga et al. \(2020\)](#), investigated the connection between technological intensity, research and development, and financial robustness in businesses. However, research on the relationship between DFI and financial stability is insufficient hence, we hypothesized that:

H4: DFI has a positive impact on the firm's financial robustness.

The complicated nature of modern financial systems has made financial readiness a more central factor in determining financial resilience. Financial readiness denotes people's readiness for various financial challenges and opportunities ([Sreenivasan and Suresh, 2023](#)). DFI, such as mobile banking or other fintech services, could better allow people to manage scarce financial resources more effectively ([Murinde et al., 2022](#)). Therefore, bridging the gap between readiness and robustness is essential to understand using DFI as mediator. Furthermore, it not only promotes better access to financial products but also enhances the capability for better decision-making and thus fosters better financial outcomes ([Murinde et al., 2022](#)). Additionally, with the use of technology, an individual can build financial agility that cushions the risks that can destroy their financial stability. On this basis, DFI serves only as an intermediary to establish how financial readiness translates into financial resilience.

H5: DFI has mediating effect between financial readiness and financial robustness.

The innovative use of digital technology enables the company to better deal with prospective threats and adapt its business practices in response to unanticipated events ([Francalanza et al., 2017](#)). The adaptability of a company alludes to its ability to remain intact throughout its life cycle ([Ortega and Serna, 2020](#)). COVID-19 disruptions have posed unique obstacles for business survival, prompting organizations to rapidly adopt new operational and strategic channels ([Maldonado-Guzmán et al., 2021](#)). Similarly, [Gruin and Knaack \(2020\)](#), state that the service sector has shown remarkable adaptability. Moreover, businesses that conduct financial transactions online can maintain a constant cash flow and reduce costs. Digital financial technologies facilitate the real-time movement of data and transactions, enhancing the efficacy of the financial system and reducing information asymmetries ([Horsch and Richter, 2017](#); [Tinta, 2022](#)). Digital technologies are known for their adaptability and flexibility, allowing for swift changes and enhancing responses. Based on the above discussion from literature review regarding the impact of digital financial innovation on financial adaptability, we expect to test the following hypothesis:

H6: DFI improves a company's financial adaptability.

Digital financial innovation, such as online banking, robo-advisors, and fintech apps, could empower individuals through timely information and analytics to make better choices with greater adaptability ([Murinde et al., 2022](#)). Furthermore, it allows people to be more flexible in financial planning and thus speedily respond to economic fluctuations ([Hussain and Papasathopoulos, 2022](#)). Hence, it increases financial resiliency. Second, the digital channels which facilitate access to diversified financial resources with ease, and also it allows one to adjust strategies more appropriately given the volatile conditions ([Zaman et al., 2024](#)). In this way, understanding the mediating role of digital financial innovation becomes important in linking the financial readiness to adapt.

H7: DFI has mediating effect between financial readiness and financial adaptability.

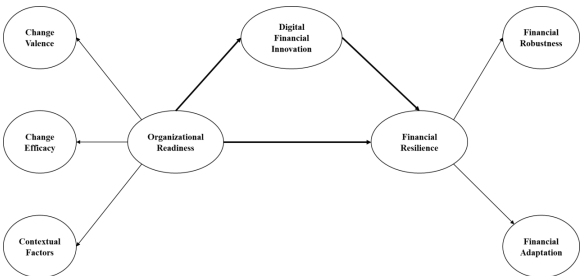


Figure 1: Theoretical Framework

3 Methodology

The purpose of this study is to investigate the influence of organizational readiness on DFI in Pakistan’s commercial banks. Furthermore, the study also investigates the mediating role of DFI for the impact of Organizational readiness on financial resilience. The researcher selected positivism as the research philosophy and employed a quantitative methodology. The target audience is comprised of managerial personnel from prominent commercial banks such as Allied Bank (ABL), Bank of Punjab (BOP), Bank of Khyber (BOK), Bank Al-Habib (BAHL), Habib Bank (HBL), MCB Bank, National Bank (NBP), and United Bank (UBL). The unit of analysis consists of these institutions’ finance-savvy operational managerial employees and finance managers.

A three-part, self-administered survey questionnaire was utilized for data collection. The first section gathered demographic information, including participants’ gender, age, level of education, years of work experience, and position. Change valence, change efficacy (resource readiness with four items and IT readiness with four items), and contextual factors (strategic readiness with four items and partnership readiness with four items) were addressed in the second section using the measures adopted from (Walker et al., 2020). The third section highlighted digital financial innovation (seven items) adopted from Mishra and Tripathi (2021). financial resiliency (five items) adopted from Salignac et al. (2019), and financial adaptation (four items) adopted from Serido et al. (2014) The total questionnaire contained 36 item statements, with data collected from 341 out of 360 intended respondents (response rate 95%) using purposive sampling.

The hypothesized relationships were analyzed using Structural Equation Modeling (SEM) with Partial Least Squares (PLS) and Smart PLS software. SEM PLS was chosen due to its suitability for the relatively small sample size, its capacity to handle complex models with latent variables and observed indicators, its emphasis on making predictions and identifying novel relationships, and its resistance to violations of normality assumptions.

4 Data Analysis

4.1 Demographic Profile

Respondent demographics are in Table 4.1. 79.57% of responders were male. The table also shows that the majority of respondents were financial officers (49.56%), aged 31–40 (55.42%), and had a Master (55.13%) degree.

Table 4.1: Frequency Analysis

Variable	Frequency	Percent
Gender		
<i>Male</i>	271	79.47
<i>Female</i>	70	20.53
Age of Respondents		
<i>22-30 Years</i>	71	20.82
<i>31-40 Years</i>	189	55.42
<i>41-50 Years</i>	29	8.50
<i>Above 51</i>	52	15.42
Qualification of Respondents		
<i>Graduation</i>	18	5.27
<i>Master</i>	188	55.13
<i>Others</i>	135	39.60
Experience		
<i>Less than 10 years</i>	108	31.67
<i>11-15</i>	158	46.33
<i>16 years and above</i>	75	22.00
Position		
Operational Manager	144	42.22
Finance officer	169	49.56
Others	28	8.22

4.2 Measurement Model

Table 4.2 shows that all variables in this investigation had standardized factor loadings greater than or close to 0.60, meeting convergent validity standards. Additionally, those factors with loading value less than 0.60 were excluded. For data multicollinearity analysis, the researcher estimated variance inflation factors (VIF). According to [Hair et al. \(2011\)](#), multicollinearity is acceptable if the estimated value of VIF is less than five. Our model variables computed VIFs were all smaller than the threshold level. The constructs have a Cronbach alpha (CA) greater than 0.70., as per the guidelines. In addition, table 4.2 revealed that composite re-

liability (CR) greater than 0.70. Furthermore, the AVEs obtained for all constructs ranged 0.50, indicating reliability and validity.

Table 4.2: Reliability Analysis

Construct	F-items	FA	VIF	AVE	CA	CR
Change Valence						
	CV1	0.800	2.186	0.571	0.772	0.841
	CV2	0.788	1.333			
	CV3	0.854	2.608			
	CV4	0.775	1.794			
Resource Readiness						
	RR1	0.703	1.734	0.552	0.778	0.761
	RR2	0.722	1.932			
	RR3	0.800	1.595			
	RR4	0.770	1.536			
IT-Readiness						
	IT1	0.715	2.787	0.541	0.788	0.781
	IT2	0.707	2.133			
	IT3	0.876	1.616			
Strategic Readiness						
	SR2	0.652	1.847	0.53	0.937	0.933
	SR3	0.674	1.666			
	SR4	0.744	1.426			
Partnership Readiness						
	PR1	0.760	1.768			
	PR2	0.764	1.926			
	PR3	0.619	1.416			
Digital Financial Innovation						
	DF1	0.692	1.945	0.692	0.709	0.792
	DF3	0.784	1.702			
	DF5	0.733	2.314			
	DF6	0.813	2.204			
	DF7	0.692	1.934			
Financial Robustness						
	FR2	0.609	2.08	0.558	0.754	0.83
	FR4	0.689	2.267			
	FR5	0.738	2.015			
Financial Adaptability						
	FA1	0.704	1.617	0.547	0.914	0.923
	FA2	0.695	1.394			
	FA3	0.667	2.59			
	FA4	0.728	2.17			

Using [Fornell and Larcker \(1981\)](#) technique, the discriminant validity was evaluated. The square root of each AVE in the diagonal was compared to the respective correlation coefficients for each construct in the rows and columns. The estimated AVE square root (indicated diagonally in bold) is greater than as compared to respective correlation coefficients for each construct in the row and column. Therefore, this measuring model's discriminant validity can be accepted, which supports the discriminant validity between the constructs.

Table 4.3: Discriminant Validity_ Fornell Larcker Criterion

	CV	DFI	FA	FR	IT	PR	RR	SR
CV	0.686							
DFI	0.292	0.541						
FA	0.257	0.387	0.497					
FR	0.267	0.363	0.347	0.477				
IT	0.285	0.155	0.445	0.176	0.364			
PR	0.304	0.282	0.335	0.246	0.315	0.313		
RR	0.269	0.329	0.233	0.291	0.234	0.319	0.727	
SR	0.247	0.374	0.136	0.176	0.191	0.263	0.477	0.733

Where: CV= Change Valence, DFI = Digital Financial Innovation, FA = Financial Adaptability, FR = Financial Robustness, IT = Information Technology Readiness, PR = Partnership Readiness, RR = Resource Readiness, and SR = Strategic Readiness.

4.3 Structural Model

The researchers assessed the predicted structural relationships among variables. Our results demonstrate that all measures of organizational readiness have a significant impact on both dimensions of financial resilience (Financial adoptability and financial robustness). In addition, the direct impact of digital financial innovation as a mediator has a significant and favorable impact on both aspects of financial resilience. Furthermore, the table demonstrates that digital financial innovation strongly mediates all aspects of financial readiness and financial resilience.

Table 4.4: Testing of Hypothesis

Relationship	Coefficients	T-Value	Sig Value	Decision
Direct Effect				
CV-FA	0.327	18.238	0.000	H ₁ Accepted
CV-FR	-0.038	2.595	0.027	H ₁ Accepted
IT-Readiness- FA	0.334	11.781	0.000	H ₂ Accepted
IT- Readiness- FR	0.053	2.711	0.022	H ₂ Accepted
RR-FA	0.343	13.345	0.000	H ₂ Accepted
RR-FR	-0.136	4.163	0.002	H ₂ Accepted
SR-FA	0.038	3.624	0.005	H ₃ Accepted
SR-FR	0.789	29.76	0.000	H ₃ Accepted
PR-FA	0.303	11.953	0.000	H ₃ Accepted
PR-FR	0.048	2.452	0.034	H ₃ Accepted
DFI-FA	0.027	2.44	0.035	H ₄ Accepted
DFI-FR	0.102	3.549	0.005	H ₄ Accepted
Mediation Analysis				
CV-> DFI -> FA	0.007	1.504	0.013	H ₇ Accepted
IT.R-> DFI -> FA	0.004	1.397	0.013	H ₇ Accepted
PR -> DFI -> FA	0.004	1.825	0.018	H ₇ Accepted
RR -> DFI -> FA	0.004	2.102	0.051	H ₇ Accepted
SR -> DFI -> FA	0.006	2.277	0.046	H ₇ Accepted
CV -> DFI -> FR	0.025	2.707	0.022	H ₆ Accepted
IT.R -> DFI -> FR	0.014	1.872	0.041	H ₆ Accepted
PR -> DFI -> FR	0.015	2.551	0.029	H ₆ Accepted
RR -> DFI -> FR	0.014	4.35	0.001	H ₆ Accepted
SR -> DFI -> FR	0.024	2.558	0.028	H ₆ Accepted

Where: CV= Change Valence, DFI = Digital Financial Innovation, FA = Financial Adaptability, FR = Financial Robustness, IT = Information Technology Readiness, PR = Partnership Readiness, RR = Resource Readiness, and SR = Strategic Readiness.

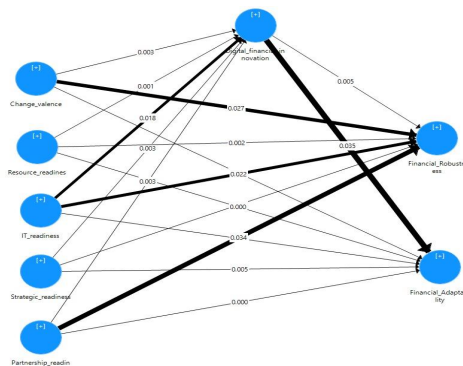


Figure 2: Structural Equational Model Results

Table 4.5 present the conclusive results and indicated that there is a significant and positive relationship of Digital Financial Innovation on financial resilience. Further, the study indicated that Organizational Readiness has significant and positive relationship with Digital Financial Innovation. Lastly, the results indicated that Organizational Readiness has significant and positive relationship with financial resilience. The table also indicated that digital financial innovation is significantly mediate between organizational readiness and financial resilience.

Table 4.5: Conclusive Model

Relationship	Coefficient	T-Value	Sig Value
Direct Effect			
DFI -> FR	0.321	5.983	0.000
OR -> DFI	0.524	19.238	0.000
OR -> FR	0.225	4.88	0.000
Mediation Effect			
OR -> DFI -> FR	0.168	0.173	0.032

Where: DFI = Digital Financial Innovation, FR = Financial Resilience, OR = Organizational Readiness

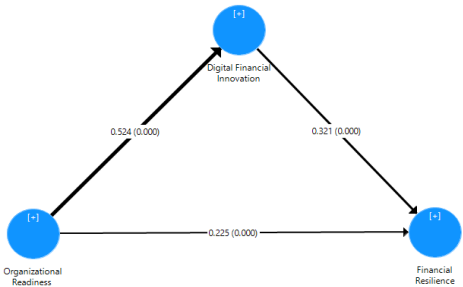


Figure 3: Structural Equational Modeling

5 Discussion and Conclusion

The study found that change valence strongly impacts banking sector's DFI. This transformation may involve technology adoption, collaboration, and organization-wide coordination. A firm commitment to these improvements ensures success. As the study progressed, another important result was the association between change-efficacy and DFI. Businesses must restructure their resources to take advantage of recent technology advances in this digital age. In the context of digital transformation, current study findings validate the readiness theory (MACHADO et al., 2024). Preparing for new IT requires a comprehensive strategy that considers employee skills. According to Verhoef and Bijmolt (2019), digital transformation requires infrastructure and analytical capability. In addition, they claimed that change effectiveness is a necessity for digital transformation (Mancha and Shankaranarayanan, 2021).

Contextual factors affect DFI, according to this study. DFI benefits greatly from contextual considerations. Contextual factors are also crucial to organizational behavior and creativity (Hussain and Papastathopoulos, 2022). Strategic planning helps companies plan for and profit from digital transformation. However, the readiness of a collaboration depends on open and honest communication amongst all supply chain participants. Information disclosure promotes commercial honesty. Digital change requires strategic and interpersonal preparation. Because to its invention, digital financial innovation can adapt to risks and unexpected conditions. These real-time solutions reduce information asymmetry and improve financial system efficiency. Digital technology's flexibility allows organizations to adapt and respond faster. Energizing features may provide a corporation an edge.

Digital technology's financial effects on businesses are well-documented (in terms of profitability, cost, and return on assets). Fintech startups have improved financial efficiency (Sreenivasan and Suresh, 2023). Rizvi et al. (2018) analyzed the financial and operational success of digital financial innovation in terms of availability, security, and efficiency. The study's findings match global studies. The most paradoxical result is that change is affecting Pakistan's digital financial innovation and flexibility. Change's valence has no impact on digital financial innovation, researchers claimed (Hussain and Papastathopoulos, 2022).

The study makes a very valuable theoretical contribution by confirming the applicability of Organizational Readiness Theory in financial resilience within commercial banking. This proves that organizational readiness, in manifest forms such as change valence and change efficacy along with contextual factors, is among the most imperative facets responsible for shaping financial resiliency. These further cements the statement that those institutions ready for change can respond to challenges at a financial capacity. The study extends this theory by showing the mediating role of digital financial innovation, which underlines that technology can make an organization even more adaptive to financial stressors. Such a model, with digital innovation embedded within, extends the relevance of the theory to modern, technology-driven financial environments. These findings usefully explore how readiness for change in organizations can serve as a catalyst to help build financial resilience, especially in emerging markets like Pakistan.

The study provides worthwhile practical implications for commercial banks in Pakistan. First, the higher the level of organizational readiness on clear change valences, higher change efficacy, and supportive contextual factors, the higher the likelihood a bank would increase its financial sustainability. This calls for developing a proactive and well-prepared workforce that would welcome any change. The mediating role played by digital financial innovation thus points to investment in advanced financial technologies, such as fintech solutions, by banks in order to bridge the gap between readiness and resilience. Hence, banks will cope better and

with more operational flexibility against exogenous financial stresses. Policymakers take up the call through the findings to develop an enabling environment that can stimulate the market-oriented technological adoption within the sector. The implication in this study makes it clear that organizational readiness and technological innovation are needed together to ensure that commercial banks, in the future, will remain stable and avoid shocking failures that are likely to happen in a financial world that is increasingly digital.

The study has some limitations, even though it provides some useful insights. First of all, only commercial banks in Pakistan were surveyed. Given these limitations, the generalization of findings to other industries or countries with different economic contexts and organizational cultures is minimal. Perhaps further research could be usefully extended to other industries, such as insurance or telecommunications, or pursued in other emerging markets in order to better understand how their firms adapt to situations of organizational readiness and financial resilience. Second, the less than deep development of the underlying mechanisms of how digital innovation in finance influences financial resilience reduces the useful value of quantitative research designs. It is legitimate to foresee further studies using a mixed-methods approach that reinforces qualitative data with quantitative findings. Furthermore, the cross-sectional nature of the current research provides just a glimpse of such relationships; as such, it is recommended a longitudinal study should be pursued in this regard to ascertain how such dynamics potentially evolve over time. Lastly, this research focused on the few constructs that determine financial resilience. Future studies may assess other mediators or moderators, such as policies or leadership styles, which may provide even more detail in an understanding of mechanisms lying beneath resilience processes.

References

- Addae-Boateng, S. and Dzisi, S. G. (2016). Innovation enhancement in family business smes in ghana. *International Journal of Innovation Science*, 8(4):388–403.
- Al-Dmour, R., AlShaar, F., Al-Dmour, H., Masa'Deh, R., and Alshurideh, M. (2021). The effect of service recovery justices strategies on online customer engagement via the role of “customer satisfaction” during the covid-19 pandemic: An empirical study. *The effect of coronavirus disease (COVID-19) on business intelligence*, pages 325–346.
- AL-Khatib, A. w. (2023). The impact of dynamic capabilities on circular economy: the mediating effect of the industrial internet of things. *Journal of Manufacturing Technology Management*, 34(6):873–895.
- Ali, M., Raza, S. A., Khamis, B., Puah, C. H., and Amin, H. (2021). How perceived risk, benefit and trust determine user fintech adoption: a new dimension for islamic finance. *foresight*, 23(4):403–420.
- Armenakis, A. A., Harris, S. G., and Mossholder, K. W. (1993). Creating readiness for organizational change. *Human relations*, 46(6):681–703.
- Barnes, S. J. (2020). Information management research and practice in the post-covid-19 world. *International Journal of Information Management*, 55:102175.
- Datta, D. B. (2024). Impact of business environment, entrepreneurial orientation and innovation capability on the success of handicraft enterprises in west bengal, india. *Asian Journal of Management*, 15(2):93–98.
- Ferreira, J. and Coelho, A. (2020). Dynamic capabilities, innovation and branding capabilities and their impact on competitive advantage and sme’s performance in portugal: the moderating effects of entrepreneurial orientation. *International Journal of Innovation Science*, 12(3):255–286.
- Fornell, C. and Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1):39–50.

- Fouad, B. (2024). Innovation accounting's impact on organizational performance and strategic decision-making-a quantitative study of performance metrics, challenges and opportunities.
- Francalanza, E., Borg, J., and Constantinescu, C. (2017). Development and evaluation of a knowledge-based decision-making approach for designing changeable manufacturing systems. *CIRP Journal of Manufacturing Science and Technology*, 16:81–101.
- Gruin, J. and Knaack, P. (2020). Not just another shadow bank: Chinese authoritarian capitalism and the 'developmental' promise of digital financial innovation. *New political economy*, 25(3):370–387.
- Hair, J. F., Ringle, C. M., and Sarstedt, M. (2011). Pls-sem: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2):139–152.
- Horsch, A. and Richter, S. (2017). Climate change driving financial innovation: The case of green bonds. *Journal of Structured Finance*, 23(1):79.
- Hussain, M. and Papastathopoulos, A. (2022). Organizational readiness for digital financial innovation and financial resilience. *International journal of production economics*, 243:108326.
- Jun, J., Ojemeni, M. M., Kalamani, R., Tong, J., and Crecelius, M. L. (2021). Relationship between nurse burnout, patient and organizational outcomes: Systematic review. *International journal of nursing studies*, 119:103933.
- Khin, S. and Ho, T. C. (2019). Digital technology, digital capability and organizational performance: A mediating role of digital innovation. *International Journal of Innovation Science*, 11(2):177–195.
- Kingiri, A. N. and Fu, X. (2020). Understanding the diffusion and adoption of digital finance innovation in emerging economies: M-pesa money mobile transfer service in kenya. *Innovation and Development*.
- Kumari, A. and Ahmed, N. (2022). The implication of e-commerce: Emerging markets in post-covid era. *Pakistan Journal of Multidisciplinary Innovation*, 1(1):26–36.
- Lokuge, S., Sedera, D., Grover, V., and Dongming, X. (2019). Organizational readiness for digital innovation: Development and empirical calibration of a construct. *Information & management*, 56(3):445–461.
- MACHADO, M. J., BRASÃO, A., and MARQUES, M. I. (2024). Business: Theory & practice.
- Maldonado-Guzmán, G., Garza-Reyes, J. A., and Pinzón-Castro, Y. (2021). Eco-innovation and the circular economy in the automotive industry. *Benchmarking: An International Journal*, 28(2):621–635.
- Mancha, R. and Shankaranarayanan, G. (2021). Making a digital innovator: antecedents of innovativeness with digital technologies. *Information Technology & People*, 34(1):318–335.
- Mishra, S. and Tripathi, A. R. (2021). Ai business model: an integrative business approach. *Journal of Innovation and Entrepreneurship*, 10(1):18.
- Murinde, V., Rizopoulos, E., and Zachariadis, M. (2022). The impact of the fintech revolution on the future of banking: Opportunities and risks. *International review of financial analysis*, 81:102103.
- Nkundabanyanga, S. K., Mugumya, E., Nalukenge, I., Muhwezi, M., and Najjemba, G. M. (2020). Firm characteristics, innovation, financial resilience and survival of financial institutions. *Journal of Accounting in Emerging Economies*, 10(1):48–73.
- Ortega, A. M. and Serna, M. (2020). Determinants of innovation performance of organizations in a regional innovation system from a developing country. *International Journal of Innovation Science*, 12(3):345–362.
- Pudjiarti, E. S. and Hutomo, P. T. P. (2020). Innovative work behaviour: An integrative investigation of person-job fit, person-organization fit, and person-group fit. *Business: Theory and Practice*, 21(1):39–47.
- Rasheed, S., Adeneye, Y., and Kosnin, R. (2023). Sovereign wealth fund investments and financial performance of target firms: The disciplinary role of debt in political agenda theory. *Heliyon*, 9(5).

- Rizvi, S. K. A., Naqvi, B., and Tanveer, F. (2018). Is pakistan ready to embrace fintech innovation?
- Salignac, F., Marjolin, A., Reeve, R., and Muir, K. (2019). Conceptualizing and measuring financial resilience: A multidimensional framework. *Social Indicators Research*, 145:17–38.
- Saqib, N. and Satar, M. S. (2021). Exploring business model innovation for competitive advantage: a lesson from an emerging market. *International Journal of Innovation Science*, 13(4):477–491.
- Serido, J., Shim, S., Xiao, J. J., Tang, C., and Card, N. A. (2014). Financial adaptation among college students: Helping students cope with financial strain. *Journal of College Student Development*, 55(3):310–316.
- Sreenivasan, A. and Suresh, M. (2023). Exploring the contribution of sustainable entrepreneurship towards sustainable development goals: A bibliometric analysis. *Green Technologies and Sustainability*, page 100038.
- Sun, Y. and You, X. (2023). Do digital inclusive finance, innovation, and entrepreneurship activities stimulate vitality of the urban economy? empirical evidence from the yangtze river delta, china. *Technology in Society*, 72:102200.
- Tejeiro Koller, M. R., Morcillo Ortega, P., Rodríguez Antón, J. M., and Rubio Andrada, L. (2017). Corporate culture and long-term survival of spanish innovative firms. *International Journal of Innovation Science*, 9(4):335–354.
- Tinta, A. A. (2022). Financial development, ecological transition, and economic growth in sub-saharan african countries: the performing role of the quality of institutions and human capital. *Environmental Science and Pollution Research*, 29(25):37617–37632.
- Unsal, O. and Rayfield, B. (2019). Trends in financial innovation: Evidence from fintech firms. In *Disruptive Innovation in Business and Finance in the Digital World*, volume 20, pages 15–25. Emerald Publishing Limited.
- Uren, V. and Edwards, J. S. (2023). Technology readiness and the organizational journey towards ai adoption: An empirical study. *International Journal of Information Management*, 68:102588.
- Verhoef, P. C. and Bijmolt, T. H. (2019). Marketing perspectives on digital business models: A framework and overview of the special issue.
- Walker, P. G., Whittaker, C., Watson, O. J., Baguelin, M., Winskill, P., Hamlet, A., Djafaara, B. A., Cucunubá, Z., Olivera Mesa, D., Green, W., et al. (2020). The impact of covid-19 and strategies for mitigation and suppression in low-and middle-income countries. *Science*, 369(6502):413–422.
- Wang, Z., Li, M., Lu, J., and Cheng, X. (2022). Business innovation based on artificial intelligence and blockchain technology. *Information Processing & Management*, 59(1):102759.
- Weiner, B. J. (2020). A theory of organizational readiness for change. In *Handbook on implementation science*, pages 215–232. Edward Elgar Publishing.
- Yang, J. and Al-Sayed, R. (2022). Barriers to radical innovation in research institutions in china. *International Journal of Innovation Science*, 14(2):247–281.
- Zaman, S., Ahmed, H., Shakil, M. H., Rafiq, M., and Ali, F. (2024). Navigating ambitions: unveiling entrepreneurial intentions in family business through social cognitive theory. *Kybernetes*.