Pollster j. acad.res. 10 (01) 18-40, 2023
© Pollster Journal of Academic Research, Pollster Publications
ISSN: 2411-2259, 2023, Vol (10), Issue (01)
www.pollsterpub.com

Building Financial Resilience through Digital and Financial Literacy

Muhammad Fahad Saif Khan[1]*

[1] Department of Islamic and Conventional Banking (DICB), Institute of Business, Management and Administrative Sciences (IBMAS), the Islamia University of Bahawalpur (IUB), Bahawalpur, Pakistan. Email: fahad_saif_khan@hotmail.com

*Correspondence: fahad_saif_khan@hotmail.com

Abstract

This study is aimed at the critical role of digital and financial literacy in enhancing financial resilience with a specific focus on the context of Pakistan. The research objectives include examining the effects of digital literacy, financial literacy, and financial inclusion on financial resilience in line with exploring the moderating influence of Value-Based Intermediation (VBI) on these relationships. The comprehensive literature review delves into the intricate dynamics of financial resilience, financial literacy, digital literacy, and its impact on financial inclusion, shedding light on the growing demand for digital literacy and the significance of Value-Based Intermediation. The findings of the study underscore the pivotal significance of financial literacy in augmenting financial resilience, revealing that individuals with higher levels of financial literacy demonstrate greater financial resilience. Similarly, the study highlighted the positive impact of digital literacy on financial resilience, emphasizing the role of digital literacy in facilitating efficient financial management employing digital financial services and tools. Moreover, this research weighs into the existing body of knowledge by evolving a multidimensional measure for digital literacy and evaluating the corollaries and impacts of financial literacy. The study's cross-national approach provides valuable insights into countries with varying national policies regarding financial inclusion, financial literacy, and digital literacy, offering implications for policymakers and financial institutions. In conclusion, the study emphasizes the significance of digital and financial literacy in fortifying financial resilience in Pakistan. The findings hold substantial implications for policymakers, financial institutions, and individuals, advocating for targeted efforts to enhance digital and financial literacy in the country to foster greater financial resilience and well-being.
Keywords: Financial Resilience, Financial Literacy, Financial Inclusion, Financial Institutions.

INTRODUCTION

In recent years, the concept of financial inclusion has experienced significant growth in terms of establishing global monetary stability. This objective may be accomplished through increasing one's resilience and limiting one's exposure to danger. The bulk of government efforts aimed at promoting financial inclusion have expanded and now seek to increase living standards as well as develop more financially secure and tolerant societies. This claim has been made by a number of academics. Almost 1.7 billion individuals are still unable to use traditional financial services. More than 75% of people globally lack access to legitimate financial institutions, with the bulk of those people living in impoverished nations. Countries with a low birth rate and a high infant mortality rate are disproportionately affected by this problem. If more individuals had access to financial institutions, the number of people who could save money, acquire loans, purchase assets, and protect themselves from

risk would rise. Women, those living in economically disadvantaged regions, and those with lesser incomes are among society's most vulnerable populations. As a result, boosting people's ability to react correctly to threats has quickly emerged as a top worldwide priority.

What precisely do we mean when we speak about "building financial resilience"? In the financial sector, insecurity and stability go hand in hand. Understanding the vulnerabilities that emerge from risk exposure and a lack of resources suitable for the risk being taken is the first step toward developing fiscal resilience (Boachie & Adu-Darko, 2022). Some families may be less prepared to cope with adversity as a consequence of unexpected shocks such as a family member's sickness or death, job loss, the occurrence of a natural catastrophe, crop failure, or animal loss. Any of these factors may impair a family's capacity to prepare for and react to disaster. In an ideal world, families would be able to meet unexpected expenses by drawing on savings, borrowing, getting payouts from insurance plans, or receiving presents from well-wishers. On the other hand, owing to low savings rates and inefficiencies in the insurance and loan sectors, certain populations have difficulties creating a buffer against these risks. To attain this goal, increasing access to resources, such as fairly priced and well-planned financial services, is expected to make it easier to acquire the tools needed to create resilience in the face of economic shocks. Yet, only a small percentage of families have fair access to existing economic possibilities. Economically disadvantaged groups are the most susceptible because they are compelled to depend on coping techniques that typically result in long-term financial insecurity and poor developmental consequences, generating several obstacles to financial inclusion. As a result, economically disadvantaged people are the most susceptible. People who are economically disadvantaged are more vulnerable to damage because they encounter more difficulties in gaining access to formal financial institutions (Stephens et al., 2019). Using extreme measures such as fasting, liquidating valuables, or accruing unsustainable amounts of debt are examples of significant types of coping mechanisms. Participation in the financial system boosts a low-income family's ability to respond to changing circumstances and reduces the negative consequences of shocks (Agbodjan et al., 2022).

Demand for digital financial services, often known as DFS, has increased in recent years. They are widely regarded as one of the most effective means of increasing people's access to banking services and encouraging a higher number of people to utilize the accounts they have. Despite the fact that more than 67 percent of the world's population possesses a mobile phone, DFS has witnessed substantial growth in many developing nations as a direct consequence of the rise in mobile phone users. This has been the most significant element in DFS's spectacular ascent in numerous regions (Quang, 2022). More specifically, Pakistan has seen a rapid "leapfrogging" away from traditional financial institutions (such as banks and ATMs) and toward DFS. This is known as a "leapfrog." Individuals all around the globe may now use their mobile devices to access and carry out a range of digital financial operations, owing to the so-called "digital financial revolution" (Martzoukou et al., 2020).

In comparison to many affluent nations, Pakistan has traditionally had low levels of financial literacy. Only 13% of Pakistani adults, according to a 2017 World Bank report, held a bank account. It has been difficult because of the low degree of financial inclusion. However, in recent years, there has been a rising focus on enhancing financial inclusion and literacy. To reach unbanked communities, the government has established financial inclusion efforts, including mobile banking services, in partnership with private sector organizations. As more people in Pakistan have access to the internet and mobile devices, there has also been a growth in digital literacy, especially among younger generations. The increase of digital literacy has been aided by government and private sector initiatives, while there are still difficulties in reaching distant and neglected communities.

In the modern economy, it is crucial that everyone has access to regulated financial services. People may invest, borrow, and save thanks to it. People without access to regulated financial services sometimes have little choice but to cooperate with dishonest lenders who lock them into debt at rates they cannot pay. In the worst circumstances, these loans enslave emerging nations to debt. Individuals and national economies benefit from financial inclusion. It promotes economic expansion and aids in the broader economic documentation.

There hasn't been a lot of research done on the true effect that digital literacy has on financial behavior, particularly when contrasted to and combined with financial literacy. This research is significant because it is one of the first to look at the relationship between people's degrees of digital and financial literacy and their ability to modify their personal financial conditions. We utilize data from the Intermedia Financial Inclusion Insights (FII) surveys, which were conducted in seven different countries and looked at the impact of a range of financial habits on resilience in the face of hardship.

The G20 leaders agreed on the "G20 High-level Guidelines for Digital Financial Inclusion" in 2016. Governments can develop plans for leveraging digital technology to boost financial inclusion activities by starting with these ideas as a starting point and using them as a guide. The G20 leaders committed to follow these principles in 2016. Each of the eight guiding principles described in the G20 Communiqué is followed by a list of proposed activities that individual nations might take to put that concept into action.

There is a scarcity of research on the specific mechanisms that lead to the increase of financial literacy and financial resilience. A number of studies have shown a positive relationship between financial literacy and financial resilience; however, little research has been done on the particular processes through which financial literacy increases resilience. It is unclear, for example, whether improving one's financial literacy increases one's financial resilience through increasing access to diverse financial resources, improving one's ability for financial planning and decision-making, or by some other process (Musa et al., 2022). Finally, objectives of the study are as follows;

1. To examine the effect of digital literacy on financial resilience
2. To examine the effect of financial literacy on financial resilience
3. To examine the effect of financial Inclusion on financial resilience
4. To examine the moderating effect of Value-Based Intermediation (VBI) on relationship of digital literacy and financial resilience
5. To examine the moderating effect of Value-Based Intermediation (VBI) on relationship of financial literacy and financial resilience
6. To examine the moderating effect of Value-Based Intermediation (VBI) on relationship of financial Inclusion and financial resilience

LITERATURE REVIEW

The notion of financial inclusion has evolved into a strong foundation for the development of global financial stability. This is done through increasing resilience and decreasing risk exposure. Women, rural residents, and those with lower incomes are among the most susceptible categories (Soni et al., 2017). As a consequence, building people's resilience to environmental, social, and economic risks has swiftly risen to the top of the global priority list. What precisely does "develop financial resilience" imply? One of the first steps in developing financial resilience is being aware of the vulnerabilities that arise as a result of risk exposure and a lack of sufficient resources (Consearo, 2021). Some families may be less equipped to cope with adversity as a consequence of unexpected shocks such as a family member's illness or death, job loss, the occurrence of a natural disaster, crop failure, or animal loss. Families in an ideal world would be able to rely on their savings, loans, insurance payments, and gifts from friends and relatives. Not all families, however, have equal access to financial services. Economically disadvantaged groups are particularly susceptible because they must depend on coping techniques that might lead to long-term financial insecurity and poor developmental effects. Low-income people are especially susceptible since they must overcome several obstacles before they can get access to the financial system (Rickard, 2022). Extreme activities include cutting down on meals, selling things, and accruing unsustainable debt. Becoming financially active in the economy is one of the most important things low-income families can do to lessen their vulnerability and boost their capacity to adapt to change (Kiburu & Mungai, 2022).

Nowadays, a range of measures are being used to enhance the performance of national financial inclusion initiatives and, as a consequence, create increased financial resilience. In addition to opening bank accounts, current initiatives promote the use of a wide variety of financial services. Some of these goods may include: The ability of an individual to receive and utilize financial services is contingent on learning personal finance management knowledge, information, skills, attitudes, and behaviors. This is due to a lack of information, skills, attitudes, and behaviors required to engage in and benefit from these programs. As a consequence, almost all national initiatives aimed at boosting access to financial services incorporate financial education.

Financial Resilience and Financial Literacy

The fourth quarter of 2008 saw GDP declines in numerous countries, including Brazil, China, India, the US of America, Russia, Germany, and the United Kingdom; this prompted central banks across the world to pump massive amounts of money into the global financial system to keep it afloat (Mishra et al., 2022).

While small investors were being courted as part of broader initiatives to increase financial inclusion, more work needed to be done in this area to help people of all financial standings make informed decisions. One of the most essential lessons learned from the recent economic crisis is that a country's financial institutions serve as the very backbone of its economy and must be safeguarded at all costs. Therefore, the organizations in charge of economic growth are now focusing on making their changes a reality.

International policymakers are starting to worry about the pervasive lack of financial literacy and its evident and important connection to poverty (Kayongo et al., 2021). Adults' lack of access to basic financial services was shown to have a substantial impact on a country's economic development and prosperity, as it discouraged formal savings and contributed to lower levels of income inequality. One of the inferences made from this finding was that (Flanding et al., 2018). Because of this, the World Bank and its 34 governmental and private sector partners developed a lofty goal plan for financial inclusion, dubbed "Universal Financial Access 2020." (Shohel et al., 2021). This is what prompted the UN to create its Sustainable Development Goals (SDGs) (UN SDG). The World Bank's UFA 2020 strategy called for more access to financial services for consumers so that they may save more money and engage in other financially healthy behaviors. If people had easier entry into the banking system, this might have been accomplished.

There is also a growing body of literature that demonstrates the connection between other demand side features, such as socioeconomic and demographic factors, and financial inclusion in various regions throughout the world. Multiple articles have referenced this study (Nedungadi et al., 2018; Yip et al., 2022). Some of these studies have emphasized marital status and other socioeconomic factors as contributors to financial inclusion, while others have focused on consumption, income, social capital, health, education, and race. To confirm the importance of income and education in account ownership, researchers analyzed data from 123 countries, and discovered the importance of family education in financial inclusion. Data from 143 countries were utilized to conclude that national and regional income disparities affect people's access to financial services.

Does Financial Inclusion Lead to Resilience?

The present body of research suggests four key paths via which financial inclusion through a range of financial service solutions might strengthen resilience. To begin, clients may employ financial services to assist them in making profitable investments in the face of risk. People are constrained to low-risk, low-reward hobbies that are less likely to improve their future income and wealth in the absence of safety nets such as bank accounts, loans,

and insurance. Households may utilize their savings or loans to make long-term investments in their companies, farms, education, and health to offset the consequences of future shocks (Boachie et al., 2022). These families may be less vulnerable to future shocks if they invest in high-risk, high-reward investments (Stephens et al., 2019). Second, investing in steps that reduce vulnerability may strengthen a community. Several scholars have advocated the concept of savings as informal insurance to encourage individuals to adjust their risk preferences and pursue risk-reducing investments (Agbodjan et al., 2022). Households may reduce their sensitivity to shocks by investing credit or savings in risk-reducing technologies for use in business or agriculture. Tools for agricultural development and company management are two examples of such technologies (Mbeteh & Pellegrini, 2022).

The third option for increasing resilience is to utilize financial services to better prepare for shocks. Individuals may self-insure by generating a financial cushion that can calm consumption in the event of a shock by having access to low-cost liquid savings accounts. Finally, if something awful does happen, financial services may be employed to deal with the fallout. People from marginalized areas may be pushed to use less-than-ideal coping techniques when they lack access to mainstream financial resources, as previously indicated. DFS can drastically lower transaction costs in both time and money. It may also widen one's social network, which may be depended on for assistance during times of distress (Martzoukou et al., 2020).

However, financial services such as savings accounts, credit cards, insurance policies, and internet payment systems, according to the new article, may boost resilience (Ozili, 2022). However, further research is needed to uncover the processes through which financial inclusion promotes resilience and to identify the policy levers required to eliminate the impediments that are now impeding the path to financial resilience. This will help us understand the link between financial inclusion and resilience better. Demand for financial services is low in developing countries and among marginalized individuals for a variety of reasons, including social inequality, informational biases, transaction costs, and liquidity constraints (Wilson, 2022). This study seeks to address a knowledge vacuum by investigating the relationship between digital and financial literacy and resilience-building practices, the latter of which has gotten less attention so far. "Digital and financial literacy" refers to the ability to grasp and handle one's financial situation as well as one's digital footprint.

Financial Literacy and the Road to Financial Resilience

According to research, those who understand personal finance have healthy financial habits. These same studies, however, have shown that financial literacy is low globally and that there are large inequalities within demographics, particularly among economically disadvantaged groups (Webber & Scott, 2013). Almost all of these research examined people's views and behaviors about savings, investments, and retirement planning by analyzing microdata collected from individuals in the US or Europe. Several studies have been conducted on borrowing behavior (Smith et al., 2020). In different nations, financial literacy may have varied impacts on social inclusion, and one research (Musa et al., 2022) used macro-level data to investigate these possibilities.

Researcher explored the relevance of financial literacy in the Lao People's Democratic Republic, which has a low-income economy. They observed that, even after correcting for the predicted endogeneity of financial literacy, people's proclivity to save money and ability to participate in the financial system were positively and substantially influenced by their degree of financial literacy. In addition, a recent study conducted by the OECD and the Institute for Financial Education (INFE) examines the financial literacy levels of the Asia-Pacific Economic Cooperation (APEC) member countries (APEC). The study emphasized the need to include other forms of financial education inside DFS (Consearo, 2021).

However, to make intelligent financial choices and build good financial practices, one must have the necessary information and talents. This need is central to all definitions of "sound financial practices." Researchers have often utilized a performance-based method to assess a person's financial literacy. To that purpose, surveys using this method often ask participants to choose the best answer from a list of options or to indicate whether a particular statement is true or false (Kiburu et al., 2022). These conventional modes of evaluation have long been respected for their capacity to give an impartial assessment of a person's cognitive financial capability. Despite its broad acceptance as the gold standard for testing financial literacy, various flaws have been revealed. These issues are caused by potential errors and question-specific sensitivity (Reddy et al., 2023). Self-evaluations of respondents' financial literacy and competence have also been employed in studies. Here's an example sentence: Objective measurements are not always the best choice, particularly when comparing measures based on exams to those based on respondents' estimates of their financial literacy and expertise. Subjective financial literacy and competency measurements (Faugoo & Onaga, 2022). Regardless, it has been shown that both established and self-reported indicators are connected with solid financial behaviors. However, this combination has only been employed in a few studies. In response, we contribute to the research on financial literacy and inclusion by investigating the interaction between real and self-reported levels of financial literacy and their effect on consumer choices using a two-part measure (Misra et al., 2021).

The Growing Need for Digital Literacy

The introduction of DFS has underlined the need for digital literacy. In contrast to the relevance of financial literacy, the value of digital literacy has not been investigated as fully, if at all, via rigorous investigation. The key emphases of current research on the factors and heterogeneities associated with the adoption of DFS have been financial literacy (Biche & Wolf, 2022) and risk preferences. Researchers estimated a structural equation model (SEM) utilizing a formative construct using partial least squares (Xiao et al., 2022). They discovered a link between financial literacy, the usage of digital financial product platforms, and financial inclusion. Furthermore, it was shown that the use of digital financial products moderates the association between internet use and financial inclusion, as well as the relationship between financial literacy and financial inclusion. As a result, the authors concluded that educating individuals on how to manage their money wisely is an excellent strategy to advance the aims of financial inclusion, lessen the risks associated with it, and increase the use of DFS.

Despite the study's small sample size (only 218) from various sections of the People's Republic of China, data from this line of research highlights the necessity for financial literacy to be broadened to include digital literacy (Goyal et al., 2021).

There is a critical paucity of research that precisely investigates how digital literacy influences financial choices. Few research, however, has utilized survey data to investigate the effects of DFS, especially mobile money, on the livelihoods and well-being of families in underdeveloped nations. Access to and usage of mobile money services may reduce the severity of poverty in the face of negative income shocks or natural disasters, as well as smoothing out expenditures. Several studies that looked at the influence of DFS on savers' activities found that mobile money users were more inclined to save, made more transfers, and utilized less non-formal channels to save. The usage of mobile money has also resulted in a significant increase in monetary payments (Kakinuma, 2022). Although the most study has shown that using mobile money reduces the chance of being poor or saving money, two new studies find the contrary to be true. Several pieces of research have been conducted to examine the positive influence of mobile money on formal and informal kinds of borrowing (Nedungadi et al., 2018; Yip et al., 2022).

Digital Literacy and Financial Resilience

A fresh approach is used to examine a different aspect of the company's financial health. The primary issue of McKnight and Rucci's research was the availability of financial reserves (2020). According to authors, having enough savings is a good sign of financial resilience, even though it is just one of the components of financial resilience identified by Salignac et al. Despite the fact that, as Salignac et al. point out, having a good emergency fund is just one of the elements that contribute to financial stability (2019). This is due to the fact that people who have built up a significant emergency fund are less likely to go into debt in order to get by during difficult times. We asked participants what percentage of their income was left over after paying all of their expenses and taxes to see whether they were saving enough money. The answer might fall into one of five possible categories. The following ranges are available: less than 5%, between 5% and 10%, between 10% and 20%, between 20% and 35%, between 35% and 50%, and more than 50%. It is often assumed that those with greater financial resources are better able to recover from losses.

Possible explanations for these observations. Researchers in these studies argued that demographic and socioeconomic characteristics, as well as prior experience with monetary and technological systems, may explain their findings. A common seven-question exam is used to measure a person's financial literacy. Money's buying power over time, loan interest, the distinction between simple and compound interest, the link between risk and return, and the method of hedging one's bets are all issues that might be investigated. Respondents may pick one of the prepared responses or input "I don't know" as an answer throughout the response method. Each correctly answered question will be worth one point. The final test score might range from zero to seven on a seven-point scale. A 0-2 score shows a lack of financial understanding; a 3-4 score suggests some financial knowledge; and a 5-7 score indicates a high level of financial knowledge.

Ownership of financial goods and usage of banking services may both be used to assess a population's degree of financial inclusion. Consumers' dependence on the financial system may be classified into three categories, based on whether they get their goods and services from a single institution, many institutions, or no banks at all. The reference group is made up of the products and services of many firms. In conducting a research of their levels of financial product holdings, it is critical to ask respondents whether they have any type of bank account, loan account, credit or debit card, insurance or takaful product, investment product, or retirement product. A weak product holding would consist of two things, a moderate product holding would consist of three to four items, and a strong product holding would consist of five or more items.

During the research, several forms of socio-demographic information were used as controls. Males and women are both included in the study, albeit males are counted as one and females as zero for statistical reasons. There are six age groups to select from: Those under the age of 24, those between the ages of 25 and 29, those between the ages of 30 and 39, those between the ages of 40 and 49, those between the ages of 50 and 59, and those above the age of 60.

Value Based Intermediation

Value-Based Intermediation (VBI) is a financial approach that aligns banking and financial practices with ethical, social, and environmental values, aiming to create a positive impact on society while maintaining financial profitability. Value-based intermediation (VBI) is an approach to banking and finance that seeks to align financial activities with social, environmental, and ethical values, while also pursuing financial returns. In other words, VBI aims to integrate non-financial considerations, such as environmental and social impact, into financial decision-making. In a VBI framework, financial institutions focus on creating economic value without compromising ethical considerations. In terms of current study, it is reported in Figure 1 along with the hypotheses.

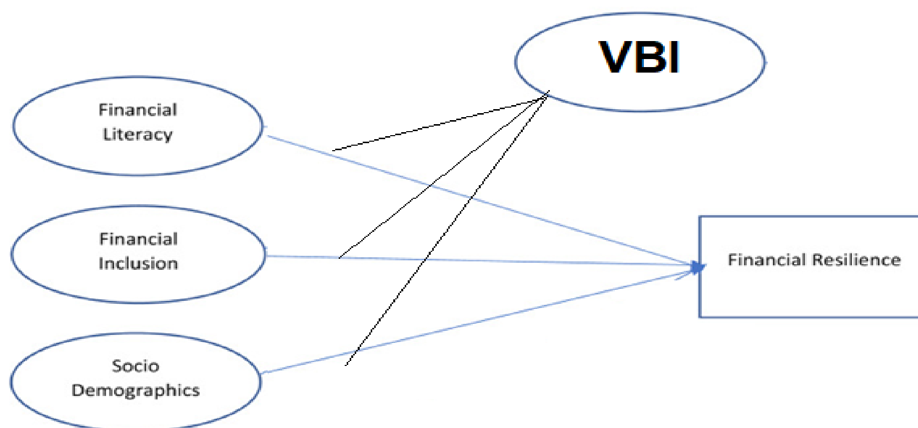

Figure: 1 Conceptual framework.

H1: *Digital literacy has a significant on financial resilience.*
H2: *Financial literacy has a significant on financial resilience.*
H3: Financial Inclusion has a significant on financial resilience
H4: *Value-Based Intermediation (VBI) has a significant moderating on relationship of digital literacy and financial resilience.*
H5: *Value-Based Intermediation (VBI) has a significant moderating on relationship of financial literacy and financial resilience.*
H6: *Value-Based Intermediation (VBI) To examine the moderating effect of Value relationship of financial Inclusion and financial resilience.*

METHODOLOGY

This study will use a cross-sectional research design to collect data from a single point in time. A questionnaire survey will be used to collect data from a sample of individuals. The study will use a probability sampling technique to ensure that the sample is representative of the target population. The target population will be individuals aged 18 and above, living in urban areas, and with basic financial literacy. The sample size will be determined using a power analysis to ensure that it is sufficient to achieve the research objectives. Sample size is 300 respondents.

Factors that are dependent on one another The concept of financial resilience is alive and well because it considers an individual's ability to recover after receiving a negative financial shock. Longitudinal data are required in practice to record people' financial condition at the time of the shock and to evaluate their abilities to deal with it in the years that follow. Measures are given in Table 1.

Table 1: Measures.

Variable Name	Measuring Scale	Author/Source
Digital Literacy	Likert Scale (1-5)	Anderson, T. et al. (2011)
Financial Literacy	Composite Score	Lusardi, A. & Mitchell, O.S. (2011)
Financial Inclusion	Binary (1/0), Index, or Score	World Bank (Global Findex Database)
Value-Based Intermediation (VBI)	Likert Scale (1-5)	Hamdan, A. & Mahfouz, T. (2017)
Financial Resilience	Composite Score or Index	Gudmunson, C. et al. (2012)

Such an analysis requires a large expenditure of both time and money. As a result, cross-sectional analysis is often employed to investigate people's economic resilience. The OECD recommends that five key factors of a company's financial soundness be considered. Table 1 lists the survey questions used to assess each component of financial resilience. The first component, known as Resil 1, is focused with financial

Pollster j. acad.res. 10 (01) 18-40, 2023
© Pollster Journal of Academic Research, Pollster Publications
ISSN: 2411-2259, 2023, Vol (10), Issue (01)
www.pollsterpub.com

management. This component addresses issues related to financial planning and budget management.

DATA ANALYSIS

Depending on the questions used, the individual's raw score for Overall Resilience might range from 13 to 53 points. The grading scale does not remain consistent throughout all of the many components. To obtain a general indication of how well respondents fared on each subscale, divide their scores on that subscale by the overall value of the subscale, then multiply by 53. This offers us an idea of how respondents performed on each subscale. (the greatest possible overall resilience score). Total Resilience may be calculated by summing the weighted scores for each of the five criteria in question. As a result, we assumed that each constituent contributes the same amount to the system's ability to withstand the impacts of financial shocks. The weighted components of the financial resilience factor may have a broad range of values, ranging from 2.12 to 10.6, with 10.6 being the average. Based on these values, the score for each component is classified as low, medium, or high. The range has been divided into three unique sections for this particular goal. A score of 2.12 to 4.95 is assigned a low (0) value, a score of 4.96 to 7.79 is assigned a medium (1) value, and a score of 7.8 to 10.6 is assigned a high (2) value. (2). Meanwhile, the possible values for the weighted value of Overall Resilience range from 13.22 to 53. The total resilience score may be given to one of three levels based on these elements: low, medium, or high. Those with scores between 13.22 and 26.48 are regarded to have a low (0) level of resilience, while those with scores between 26.49 and 39.75 are considered to have a medium (1) level, and those with scores between 39.76 and 53 are thought to have a high (2) level of resilience (2).

The table 2 below depicts how respondents were classified into three groups for overall resilience and five categories for specific components. Twenty-five point three seven percent of those polled had poor overall resilience, putting them in a vulnerable economic situation. A bit more than half of the sample falls into the moderate category for overall resilience, indicating a fair level of financial stability. On the other side, 23.54% of people received exceptionally high ratings on Overall Resilience, which might be interpreted as a solid financial situation. When it comes to the factors that determine a company's capacity to endure economic shocks, just 18.77% of respondents fall into the low category for Resil 1. This is a substantially lower proportion than the general proportion of responses. People with a Resil 1 score in the medium range account for 42.1% of the population, while those with a score in the high range account for 39.13% of the sample. This demonstrates that people who are good at retaining control of their financial circumstances have nearly double the chance of success as those who are not. Moreover, the survey indicated that 50.15 percent of respondents had a good understanding of their financial status (Resil 2). Just 15.67% of those polled claimed to being awful at budgeting, while 34.18% reported to being somewhat above average in this area. According to the data, more over half (48.18%) of respondents are bad in this area, almost half

(50.85%) are average, and just 4.33% are excellent (Resil 3: Financial security) (Resil 3: Financial security). The great majority of respondents, 52.3%, are seen to have a modest capacity to deal with the stress produced by their present financial circumstances (Resil 4). Just 10.9 percent of respondents reported being unable to deal with financial stress adequately, indicating that 36.8 percent are more than competent in this area. As a result of this, we can reasonably conclude that the vast majority of respondents (51.97 percent) have good financial literacy (Resil 5). One-quarter of respondents (22.98 percent) are classified as having poor financial planning skills, while two-fifths (25.04 percent) are rated as having intermediate financial planning skills.

Table 2: Distributions of dependent variables.

	Count of respondents	**Percentage of total sample**
	Total resilience	
Low	861	25.37
Medium	1734	51.09
High	799	23.54
	Resil 1	
Low	637	18.77
Medium	1429	42.1
High	1328	39.13
	Resil 2	
Low	532	15.67
Medium	1160	34.18
High	1702	50.15
	Resil 3	
Low	1521	44.81
Medium	1726	50.85
High	147	4.33
	Resil 4	
Low	370	10.9
Medium	1775	52.3
High	1249	36.8
	Resil 5	
Low	780	22.98
Medium	850	25.04
High	**1764**	**51.97**

A second study is undertaken using a different approach to measure the organization's financial soundness. Authors' research focused on access to

savings. While having appropriate savings is just one of the components of financial resilience defined by authors suggest that having adequate savings is a good indicator of financial resilience in and of itself (2019). This is due to the fact that individuals who have enough money are better positioned to weather bad times without falling into excessive debt. We asked respondents how much of their after-tax income they could put away in savings to see whether they were saving enough. The answer might fall into one of five possible categories. The ranges are as follows: less than 5%, between 5% and 10%, 10% to 20%, 20% to 35%, 35% to 50%, and more than 50%. Many people believe that those who have gathered more riches are more resilient.

Explanatory variables included familiarity with money and technology, as well as demographic and social characteristics. An individual's understanding of personal finance is assessed using seven questions. Time value of money, loan interest, calculating simple interest, calculating compound interest, risk and return, and risk diversification are all examples of possible questions. When asked during the response process, respondents may choose one of the prepared responses or type "I don't know." You will get one point if you correctly answer a question. As a result, the ultimate financial literacy score might range from 0 to 7. If you score between 0 and 2, you have inadequate financial literacy; if you score between 3 and 4, you have intermediate financial literacy; and if you score between 5 and 7, you have high financial literacy.

The amount of financial inclusion is measured using two variables: ownership of financial goods and usage of bank services. Consumers' dependence on the banking system may be classified into three categories: utilizing goods and services from a single institution, using products and services from many institutions, or using no banks at all. The reference group is made up of products and services from various firms. It is critical to determine if respondents have a bank account, a loan account, a credit or debit card, an insurance or takaful product, investment products, or a retirement product before examining their levels of financial product holdings. A person's product holding is considered weak if they only possess two items, moderate if they own three to four items, and strong if they own five or six items.

During the study, several socio-demographic factors were included as control variables. The study includes both genders; men are assigned a value of 1, while girls are assigned a value of 0. There are six unique age categories to pick from: those under the age of 24, those between the ages of 25 and 29, those between the ages of 30 and 39, those between the ages of 40 and 49, those between the ages of 50 and 59, and those above the age of 60. The comparison group in this research is comprised of people aged 0 to 24. Respondents' educational levels are classified as follows: those with no or just a basic education, those with secondary schooling, those with postsecondary vocational training, and those with university education. Table 3 shows the age of respondents, Table 4 shows gender and Table 5 shows education.

Pollster j. acad.res. 10 (01) 18-40, 2023
© Pollster Journal of Academic Research, Pollster Publications
ISSN: 2411-2259, 2023, Vol (10), Issue (01)
www.pollsterpub.com

Table 3: Age of Respondents.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Less than 24 years	65	21.7	21.7	21.7
	25–29 years	66	22.0	22.0	43.7
	30–39 years	48	16.0	16.0	59.7
	40–49 years	73	24.3	24.3	84.0
	50–59 years	29	9.7	9.7	93.7
	60 years and older	19	6.3	6.3	100.0
	Total	**300**	**100.0**	**100.0**	

Table 4: Gender of Respondents.

		Frequency	Percent	Valid Percent	Cumulative Percent
	Male	150	50.0	50.0	50.0
	Female	150	50.0	50.0	100.0
	Total	**300**	**100.0**	**100.0**	

Table 5: Education of Respondents.

		Frequency	Percent	Valid Percent	Cumulative Percent
	No Formal Education	78	26.0	26.0	26.0
	Secondary Education	78	26.0	26.0	52.0
	Vocational Education	60	20.0	20.0	72.0
	University Education	84	28.0	28.0	100.0
	Total	**300**	**100.0**	**100.0**	

Correlation is given in Table 6 and regression is given Table 7. The correlations provided suggest that there is a positive and statistically significant relationship between financial resilience and financial literacy ($r = 0.715$, $p < 0.01$) and between financial resilience and digital literacy ($r = 0.902$, $p < 0.01$). A correlation coefficient of 0.715 between financial resilience and financial literacy suggests a strong positive relationship between the two variables. This indicates that individuals with higher levels of financial literacy are more likely to have greater financial resilience. This relationship makes sense because having financial literacy can lead to a better understanding of financial concepts and tools, which can help individuals make better financial decisions and be more prepared for financial shocks.

Similarly, a correlation coefficient of 0.902 between financial resilience and digital literacy suggests a very strong positive relationship between the two variables. This indicates that individuals with higher levels of digital literacy are more likely to have greater financial resilience. This relationship can be explained by the fact that digital technologies have become increasingly important in financial transactions and

Pollster j. acad.res. 10 (01) 18-40, 2023
© Pollster Journal of Academic Research, Pollster Publications
ISSN: 2411-2259, 2023, Vol (10), Issue (01)
www.pollsterpub.com

management. Therefore, individuals with higher levels of digital literacy may be better able to access financial tools and resources, which can contribute to greater financial resilience. Overall, these correlations suggest that digital and financial literacy are important factors to consider when exploring financial resilience, given in table 6.

Table 6: Correlations.

	Financial Inclusion	**VBI**	**Financial Literacy**	**Digital Literacy**	**Financial Resilience**	
Financial Inclusion	1					
VBI	.644**	1				
Financial Literacy	0.712	.754**	1			
Digital Literacy	.644**	0.598	.902**	1		
Financial Resilience	.715**	.902**	0.504	0.853	1	
Sig Value	0.000	0.000	0.000	0.000	0.000	
Sample	300	300	300			
****. Correlation is significant at the 0.01 level (2-tailed).**						

Table 7: Regression.

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.919[a]	.844	.843	.21287
a. Predictors: (Constant), Digital Literacy, Financial Literacy, Financial Inclusion, VBI				

The standard error of the estimate of .21287 is a measure of the variability in the dependent variable that is not explained by the independent variable(s) in the model. A lower standard error of the estimate indicates a better fit of the regression model. Overall, these statistics suggest that the regression model has a strong fit and that the independent variable(s) included in the model (not specified in the information provided) are highly predictive of the dependent variable. However, without further information on the specific variables included in the model, it is difficult to draw any further conclusions. ANOVA is given in Table 8.

Table 8: ANOVA.

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	72.998	2	36.499	805.492	.000[b]
	Residual	13.458	297	.045		
	Total	86.456	299			
a. Dependent Variable: Financial Resilience						
b. Predictors: (Constant), Digital Literacy, Financial Literacy, Financial Inclusion, VBI						

The Anova table suggests that all the results are significant in f statistics as $p < 0.05$.

Table 9: Beta Coefficients.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	**(Constant)**	0.324	0.076		4.269	0.000
	Financial Literacy	0.195	0.025	0.229	7.648	0.000
	Digital Literacy	0.720	0.029	0.755	25.234	0.000
	Financial Inclusion	0.809	-0.004		33.349	0.000
2	**(Constant)**	1.007	-0.027	1.281	43.831	0.000
	Financial Literacy x VBI	1.205	-0.051	1.807	54.314	0.000
	Digital Literacy x VBI	1.403	-0.074		64.796	0.000
	Financial Inclusion x VBI	1.601	-0.098	2.333	75.279	0.000
a. Dependent Variable: Financial Resilience						

Based on the provided information, the regression model shows that financial literacy (Beta = .229, t-value = 7.648, $p < .001$) and digital literacy (Beta = .755, t-value = 25.234, $p < .001$) are both statistically significant predictors of financial resilience, the dependent variable. The standardized regression coefficients (Beta) suggest that digital literacy has a stronger effect on financial resilience (Beta = .755) than financial literacy (Beta = .229). This means that a one-unit increase in digital literacy is associated with a greater increase in financial resilience compared to a one-unit increase in financial literacy, as shown in table 9.

The high t-values and significant p-values indicate that the effects of both digital and financial literacy on financial resilience are not due to chance. Therefore, individuals with higher levels of digital and financial literacy are more likely to exhibit greater financial resilience than those with lower levels of literacy, all else being equal. Table 10 shows t-test *Paired Samples Statistics.*

Table 10: T-Test Paired Samples Statistics.

		Mean	**N**	**Std. Deviation**	**Std. Error Mean**
Pair 1	Financial Literacy	3.1813	300	.63191	.03648
	Financial Resilience	3.3158	300	.53773	.03105
Pair 2	Digital Literacy	3.2956	300	.56372	.03255
	Financial Resilience	**3.3158**	**300**	**.53773**	**.03105**

The information provided includes descriptive statistics for four variables: financial literacy, financial resilience, digital literacy, and financial resilience again (which appears to be a duplicate). For financial literacy, the mean is 3.1813, the sample size (N) is 300, the standard deviation is .63191, and the standard error of the mean is .03648. For financial resilience, the mean is 3.3158, the sample size (N) is 300, the standard deviation is .53773, and the standard error of the mean is .03105. For digital literacy, the mean is 3.2956, the sample size (N) is 300, the standard deviation is .56372, and the standard error of the mean is .03255.

These descriptive statistics provide information about the central tendency (mean), variability (standard deviation), and precision (standard error of the mean) of the variables in the sample. It appears that financial resilience has the lowest standard deviation, which means that the responses are less varied for this variable compared to the other two. However, further analysis would be needed to interpret the significance of these descriptive statistics in relation to the research question. Table 11 shows *Paired Samples Correlations.*

Table 11: Paired Samples Correlations.

		N	Correlation	Sig.
Pair 1	Financial Literacy & Financial Resilience	300	.715	.000
Pair 2	**Digital Literacy & Financial Resilience**	**300**	**.902**	**.000**

The correlations provided suggest that there is a positive and statistically significant relationship between financial resilience and financial literacy ($r = 0.715$, $p < 0.01$) and between financial resilience and digital literacy ($r = 0.902$, $p < 0.01$). All the results are significant as t statistics are significant at $p < .05$. Table 12 shows *T-Test One-Sample Statistics.* Table 13 shows One Sample Test.

Table 12: T-Test One-Sample Statistics.

	N	Mean	Std. Deviation	Std. Error Mean
Financial Literacy	300	3.1813	.63191	.03648
Digital Literacy	300	3.2956	.56372	.03255
Financial Resilience	**300**	**3.3158**	**.53773**	**.03105**

Table 13: One Sample Test.

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Financial Literacy	87.199	299	.000	3.18131	3.1095	3.2531
Digital Literacy	101.257	299	.000	3.29556	3.2315	3.3596
Financial Resilience	**106.805**	**299**	**.000**	**3.31581**	**3.2547**	**3.3769**

DISCUSSION

Several researchers, constructed similar models and observed that their IV coefficients were substantially bigger than the OLS estimations. Larger estimates may result because dummy endogenous financial inclusion elements are less clearly described in IV estimation. This is especially true if there is a wide range of ideas among the participants. Our regression findings have been weighted to remove or reduce as much uncertainty as possible.

Finally, we demonstrated that both digital and financial literacy play critical roles in promoting economic variety and stability. All of the models showed positive and statistically significant results. In terms of saving and borrowing behaviors, however, the marginal benefits of digital literacy much surpassed those of financial literacy. Here is a table that summarizes these results. Financial literacy was more crucial for crisis preparedness, but digital literacy was more important for insurance decision-making. The findings show to the relevance of digital literacy, if not more so than financial literacy, in supporting resilience-building financial habits in the setting of DFS. This is because digital literacy is expected to play a role in the spread of DFS.

We have contributed to the current body of knowledge by developing a multidimensional measure for digital literacy. This assessment, one of the first of its kind, assesses one's knowledge and proficiency with mobile phone and mobile money apps. We also evaluated the consequences, as well as the impacts of financial literacy, which is seldom researched in its whole. We observed strong and favorable links between digital literacy and certain financial behaviors that promote resilience. In comparison, the connections between financial literacy and these behaviors were less. As an extra bonus, we calculated how much money may be saved by increasing resilience methodically. Rather than restricting ourselves to bank-facilitated savings, we investigated a broad range of formal and informal saving, borrowing, and risk-management methods. Furthermore, the cross-national approach we used has important implications because it provides valuable insights across countries with varying national policies regarding financial inclusion, financial literacy, and digital literacy, as well as countries at various stages of developing and implementing DFS strategies. These countries' policies on financial inclusion, financial literacy, and digital literacy differ.

Since national strategies for financial inclusion and literacy tend to concentrate on economically disadvantaged individuals, it was critical to investigate how a person's level of digital and financial literacy influences their potential to engage in financially resilient behaviors. The influence of financial literacy on people's ability to save was thoroughly examined. According to our findings, traditional financial literacy programs aimed at increasing financial involvement among vulnerable populations such as the poor, those living in rural areas, and women might benefit from a component that promotes digital literacy.

Moreover, the impacts of digital and financial literacy were often less significant for disadvantaged populations than for less vulnerable competitors. These discrepancies demonstrated that, despite the significance of these abilities, programs teaching digital and financial literacy are not the sole way to promote financial inclusion and financial resilience. A broad variety of public policy measures and procedures will need to be applied all at once in order to eliminate the many remaining obstacles to people's access to financial services. Overcoming political, legal, and regulatory barriers; strengthening financial and technological infrastructure; increasing public awareness of DFS; and eliminating economic and social injustice are all possible approaches (Detmering et al., 2015). With these multiple initiatives, it is feasible to implement digital and financial literacy programs aimed precisely at the most disadvantaged groups.

According to the findings of this research, there is insufficient information to draw solid conclusions about the influence of digital and financial literacy on promoting financial inclusion. The major causes for this are issues with the research approach and a lack of data. Our work addresses these issues by adding a battery of robustness tests, but our findings may still be susceptible in the same ways that other studies have indicated. Many definitional concerns with the phrases "resilience-building habits" and "digital and financial literacy" have already been briefly addressed. Our research involves the development of multidimensional indices for both digital and financial literacy, as well as the comparison of these indices to a variety of behaviors. Our measurements were constrained by the data and may still be insufficient, but our findings were consistent across many metrics.

To address the danger of endogeneity, we adopted a two-stage instrumental variable strategy. We expected that as people gained literacy, their behaviors would change. Learning by doing is a strategy that allows individuals to develop their general financial and digital abilities by participating in particular financial activities since moderated by VBI (Patricia, 2003). As a result, a scenario of reverse causation may arise, and there may be variables influencing not just financial literacy but also digital literacy and spending patterns. Despite the cross-sectional nature of the data and the restricted number of possible instrumental factors, we were able to perform endogeneity tests. In the case of endogeneity, we determined that the findings are more likely to be underestimated than overestimated.

Last but not least, the passage of time might affect one's digital and financial literacy, which in turn can affect one's resiliency-building practices. The emergence of cheaper and more powerful telephones is one example of how technical advancement may impact people's perceptions of risk and technology. Further selection and endogeneity difficulties may occur as a result of the possible relationship between time-varying household heterogeneity and specific financial services since moderated by VBI. It would have been ideal to use panel data to account for the aforementioned trends in order to better understand how people's financial resilience varies before, during, and after an actual shock. Long-term data, however, that contains information on both digital and financial literacy, as well as resilient habits, is very uncommon.

Despite these and other limitations, our study is one of the first to take such a broad approach, and it lays the framework for future research. It is also one of the rare studies that takes such a broad approach. These results have far-reaching implications for inclusive finance and financial literacy, particularly for nations pursuing a dual strategy to enhancing family financial resilience via digital and financial literacy since moderated by VBI. Researchers, educators, and other stakeholders will be forced to rethink current definitions of financial literacy as national financial inclusion programs increasingly concentrate on fintech and digital banking. This is due to advances in fintech and digital finance pushing the need to broaden access to traditional banking services. Moreover, there will be a constant need to (re)define what it means to be "digitally financially literate" as more and more families use digital devices to complete both simple and more complex monetary transactions.

The capacity of consumers to withstand economic crises is a major determinant of a country's economic strength. Consumers that are financially resilient not only survive misfortune, but typically emerge stronger than before. As a result, researching the characteristics that lead to higher financial resilience will not only add to current knowledge, but will also benefit consumers and policymakers. Despite the country's burgeoning economy and rising quality of living, Pakistan has a high level of consumer debt. It's probable that in current economy, consumers are more vulnerable. As a result, it is critical to understand what factors influence Pakistan financial stability. The 2018 OECD (INFE) Financial Literacy national survey is being used to complete the task. More specifically, the respondents' overall financial resilience as well as their competency with the OECD's five pillars of financial resilience are examined (Mishra et al., 2022).

Studies found that residents in Bangladesh who have access to both savings and credit accounts are better equipped to weather financial shocks. People in the MENA area are less likely to be in financial trouble in the case of an emergency if they have a personal or joint bank account. Increased ownership of financial instruments is connected with greater financial stability (Mahomed, 2022). The findings also show that a person's capacity to withstand financial stress is influenced by a variety of socio-demographic factors. Men have been proven in studies to be less resilient than females. Numerous research, like those by (Kayongo et al., 2021), suggest that women are less capable than men of weathering economic storms. This contradicts the findings of those investigations. Notwithstanding this, authors find that there is no substantial difference in financial risk exposure between men and women in Pakistan. Elderly folks are better off financially than younger ones. Younger generations are less financially resilient than older generations (Flanding et al., 2018).

A person's ethnic group and financial management skills are determined by a variety of circumstances. Participants in the research who did not identify as Chinese or Indian had a lower level of financial resilience than Malay individuals. Additionally, there are ethnic differences in the characteristics that lead to financial security. Researchers reached a similar conclusion, noting that different groups of Pakistan are more or less vulnerable to financial instability depending on their moral upbringing. Financial resilience in the US differed by race and ethnicity (Shohel et al., 2021).

IMPLICATIONS

This research adds to the existing knowledge by examining what factors impact financial stability from the viewpoint of a developing country. People who have handled their money properly are less likely to need public help in the case of a negative shock, contributing to improved financial stability. That is why policymakers must take action to strengthen families' finances. As seen by the outcomes of this research and the conclusions drawn from the past studies, actions should contain parts of both financial education and financial inclusion. As Pakistan financial industry has grown, a broader range of financial goods and services, many of which have complicated lexical and structural constraints, has become available. While this is excellent news for consumers since they now have more product options, consumers still need to be educated about money concerns to reap the full benefits of greater financial inclusion while avoiding the downsides, such as large debt burdens

One strategy that has been advocated is to incorporate financial education in school curricula, along with making essential information widely available and understandable. It is critical that these methods be implemented properly if one wants to ensure that customers have the kind of proactive financial behavior that will enable them to continue when circumstances are rough. As a result of this study, Pakistan may do better in terms of the degree to which its populace engages in the financial system. Banking institutions could capitalize on this opportunity by increasing their product and service marketing initiatives. This, however, must be supported by the display of relevant information in a manner that streamlines the consumer's decision-making process. Overall, the data suggest that Pakistan financial resilience differs according to their demographic factors.

REFERENCES

Agbodjan, E. D., Couchoro, M., & Lankoande, G. (2022). The Change Dynamics of Tontine in Senegal. In *Transforming Africa* (pp. 217-234). Emerald Publishing Limited.

Biche, L., & Wolf, C. (2022). Exploring Leadership Competences in Informal Savings Groups in Sub-Saharan Africa. In *Transforming Africa: How Savings Groups Foster Financial Inclusion, Resilience and Economic Development* (pp. 33-43). Emerald Publishing Limited.

Boachie, C., & Adu-Darko, E. A. (2022). Ghana: Susu, village savings and loans, credit union, rotating savings system. In *Transforming Africa* (pp. 135-149). Emerald Publishing Limited.

Consearo, L. (2021). Economic substantiality: Skills in the UK labour market. In *The Sustainability Debate: Policies, Gender and the Media* (pp. 35-56). Emerald Publishing Limited.

Detmering, R., Johnson, A. M., Sproles, C., McClellan, S., & Linares, R. H. (2015). Library instruction and information literacy 2014. *Reference Services Review, 43*(4), 533-642.

Faugoo, D., & Onaga, A. I. (2022). Establishing a Resilient, Economically Prosperous and Inclusive World by Overcoming the Gender Digital Divide in the New Normal. In *Responsible Management of Shifts in Work Modes–Values for a Post Pandemic Future, Volume 1* (pp. 115-129). Emerald Publishing Limited.

Flanding, J. P., Grabman, G. M., & Cox, S. Q. (2018). Playbook to digital-era change leadership. In *The Technology Takers: Leading Change in the Digital Era* (pp. 61-160). Emerald Publishing Limited.

Goyal, K., Kumar, S., Rao, P., Colombage, S., & Sharma, A. (2021). Financial distress and COVID-19: evidence from working individuals in India. *Qualitative Research in Financial Markets, 13*(4), 503-528.

Kakinuma, Y. (2022). Financial literacy and quality of life: a moderated mediation approach of fintech adoption and leisure. *International Journal of Social Economics, 49*(12), 1713-1726.

Kayongo, S., Tom, M., & Mathiassen, L. (2021). Organizing and orchestrating microfinance initiatives: a contextual inquiry. *International Journal of Social Economics, 48*(2), 221-239.

Kiburu, L., & Mungai, E. (2022). Equity bank: repositioning as a fintech. *Emerald Emerging Markets Case Studies, 12*(4), 1-37.

Mahomed, Z. (2022). Modelling effective zakat management for the 'stans' of Central Asia and establishing pandemic resilience. In *In Towards a Post-Covid Global Financial System: Lessons in Social Responsibility from Islamic Finance* (pp. 143-159). Emerald Publishing Limited.

Martzoukou, K., Fulton, C., Kostagiolas, P., & Lavranos, C. (2020). A study of higher education students' self-perceived digital competences for learning and everyday life online participation. *Journal of Documentation, 76*(6), 1413-1458.

Mbeteh, A., & Pellegrini, M. M. (2022). A contextualised framework of entrepreneurial competencies in Sierra Leone. In *Entrepreneurship education in Africa: A contextual model for competencies and pedagogies in developing countries* (pp. 63-87). Emerald Publishing Limited.

Mishra, R., Singh, R. K., & Song, M. (2022). Managing tensions in resilience development: a paradox theory perspective on the role of digital transformation. *Journal of Enterprise Information Management*, 1-25.

Misra, R., Goel, P., & Srivastava, S. (2021). Examining drivers and deterrents of individuals' investment intentions: a qualitative multistage analysis. *Qualitative Research in Financial Markets, 13*(5), 608-631.

Musa, S. F. P. D., Besar, M. H. A. H., & Anshari, M. (2022). COVID-19, local food system and digitalisation of the agri-food sector. *Journal of Indian Business Research, 15*(1), 125-140.

Nedungadi, P. P., Menon, R., Gutjahr, G., Erickson, L., & Raman, R. (2018). Towards an inclusive digital literacy framework for digital India. *Education+ Training, 60*(6), 516-528.

Ozili, P. K. (2022). Can central bank digital currency increase financial inclusion? Arguments for and against. In *Big data analytics in the insurance market* (pp. 241-249). Emerald Publishing Limited.

Patricia, L. W. (2003). Management and the management of information, knowledge-based and library services 2002. *Library Management, 24*(3), 126-159.

Quang, N. M. (2022). A method for measuring women climate vulnerability: a case study in Vietnam's Mekong Delta. *International Journal of Climate Change Strategies and Management, 14*(2), 101-124.

Reddy, P., Chaudhary, K., Sharma, B., & Hussein, S. (2023). Essaying the design, development and validation processes of a new digital literacy scale. *Online Information Review, 47*(2), 371-397.

Rickard, K. (2022). Enhancing Women's Empowerment through Savings Groups. In *Transforming Africa: How Savings Groups Foster Financial Inclusion, Resilience and Economic Development* (pp. 45-58). Emerald Publishing Limited.

Shohel, M. M. C., Ashrafuzzaman, M., Alam, A. S., Mahmud, A., Ahsan, M. S., & Islam, M. T. (2021). Preparedness of students for future teaching and learning in higher education: A Bangladeshi perspective. In *New Student Literacies amid COVID-19: International Case Studies* (pp. 29-56). Emerald Publishing Limited.

Smith, C. A., Keselman, A., Wilson, A. J., & Midón, M. N. (2020). Consumer health literacy, the National Library of Medicine, and the public library: Bridging the gaps. In *Roles and Responsibilities of Libraries in Increasing Consumer Health Literacy and Reducing Health Disparities* (pp. 21-40). Emerald Publishing Limited.

Soni, V., Dey, P. K., Anand, R., Malhotra, C., & Banwet, D. K. (2017). Digitizing grey portions of e-governance. *Transforming Government: People, Process and Policy, 11*(3), 419-455.

Stephens, M., bin Khalifa, S. S. b. S., Nahyan, A., & Schroeder, C. M. (2019). Perspective—Future Disruptive Governments: Catching up with Technological Advancements and New Horizons. In *Future Governments* (Vol. 7, pp. 1-39). Emerald Publishing Limited.

Webber, C. F., & Scott, S. (2013). Chapter 5 Principles for Principal Preparation. In *Understanding the principalship: An international guide to principal preparation* (pp. 95-122). Emerald Group Publishing Limited.

Wilson, M. (2022). Case Studies. In *Storytelling (Arts for Health)* (pp. 41-118). Emerald Publishing Limited, Leeds.

Xiao, J. J., Huang, J., Goyal, K., & Kumar, S. (2022). Financial capability: a systematic conceptual review, extension and synthesis. *International Journal of Bank Marketing, 40*(7), 1680-1717.

Yip, J., Roldan, W., Gonzalez, C., Pina, L. R., Ruiz, M., & Vanegas, P. (2022). Youth invisible work: the sociocultural and collaborative processes of online search and brokering between adolescents and English-language learning families. *Information and Learning Sciences, 123*(7/8), 330-350.