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The Impact of Financial Stability on Financial Inclusion: Evidence from Pakistan

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	Abstract
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Keywords:	Financial Inclusion; Pakistan; Financial Stability; Economic Development; Consumer Price Index; Financial Literacy

1. Introduction

Financial stability and financial inclusion are two similar concepts that are said to be essential in developing a sustainable economy. Financial stability can be defined as the ability of a financial system to operate regularly, tolerance to shocks, and reserves and the ability of the financial system to provide its main services such as credit, savings and payments provision. Instead, the fact of ensuring that all people and businesses particularly those of underserved and ignored organisations have access to financially appropriate and inexpensive financial services is known as financial inclusion. They are critical in achieving financial expansion, poverty reduction, and the improvement of social fairness, especially in developing economies with large proportions of their population unable to access the formal banking system (Arun & Kamath, 2023).

Financial inclusion has gained prominence amongst governments, policymakers, and international organizations in the past few decades since it is perceived to have a positive impact on economic empowerment, financial resilience, and social harmony of individuals and societies. Formal financial services deliver the capability of saving, investment, insurance against risks, and participation in economic activities (Hassan et al., 2021). To achieve financial inclusion, however, a stable financial environment must be established. Lack of financial stability, i.e., financial crises or failures of any financial institutions, economic recession, or even systemic crisis, may jeopardize the accessibility and trustworthiness of the financial services, especially for vulnerable consumers, low-income groups, and rural areas, who are the most likely to suffer from exclusion. Successful financial inclusion is usually considered to be the result of financial stability. Without stability, consumers lack assurance about the trustworthiness of financial institutions, and as a result, only a few people are willing to use the formal financial sector. One of the main impediments to enhancing financial inclusion, which, according to Demircuc-Kunt et al. (2018) and Ozili (2023), can hardly be overcome in rural areas and in those territories where the risk of financial instability is particularly high, is the absence of trust in financial institutions. When the economy fluctuates, people are usually forced to resort to alternative money cultures, which may include less reliable and more exploitative modalities of financial culture.

The emergence of digital financial services has further strengthened the interdependence between financial inclusion and financial stability. The availability of mobile banking, digital wallets, and peer-to-peer lending facilities provided the means to alter access to financial services by the underserved populations. Nonetheless, all the opportunities of digital finance can be revealed in a stable financial life. Hassan et al. (2021) cite financial stability as essential to developing secure digital financial infrastructures, which is important to augment the involvement of marginalized groups in digital finance. Regulation of digital platforms embedded in the financial system requires stability to stimulate the confidence necessary for providing security, transparency, and fair practices. Financial stability in developing economies, where access to financial services is limited, is crucial for extending financial services to rural and low-income populations. According to Pazarbasioglu (2017), the more stabilized financial systems become, the more potentially positive the outcome of the implementation of the inclusive financial policy is likely to be, which will expand the accessibility and affordability of financial services in the country. In turn, the financial crisis will widen the gap between the less and more included layers, creating greater barriers for marginalized groups to access available financial tools.

Also, the financial stability boosts the capacity of the credit providers, the financial institutions providing the insurance products, and the financial institutions availing the savings schemes to the underserved groups. That kind of access to formal financial services is particularly relevant in improving the economic resilience of low-income populations. Zohar (2017) suggests that stable financial system conditions help financial institutions to more accurately support low-cost lending and services to small businesses, entrepreneurs, and persons who have a hard time accessing finance. That is why it is more likely that economic inclusion may be guided as well as business opportunities are developed, which, in turn, makes the groundwork of a broader-based economic growth feasible. The other critical element that increases the growth of the proportion of financially included individuals is the incorporation of financial stability and consumer protection. The consumer protection regimes assist in protecting vulnerable populations against financial products that are not transparent, fair, and safe by ensuring that the financial institutions deliver financial products in a transparent, equitable, and secure manner. According to Bauer et al. (2012) and Arun & Kamath (2023), great care should be taken to protect consumers against fraud, predatory lending, and exploitation. With good consumer protection legislation like Know Your Customer (KYC) and Anti-Money Laundering (AML) regulations, more people have conviction in financial systems and, therefore, will flock to make use of them.

This connection between financial stability and financial inclusion extends to the overall expansion in the economy. Sound financial systems are beneficial in several ways, including the efficient allocation of resources, the accessibility of capital for organizations to conduct business, and the mitigated impact of economic shocks on vulnerable groups. Levine (2005) believes that financial stability will enable the savings to be mobilized efficiently and the resources allocated to the most effective uses, which will eventually enable sound economic growth and development to be inclusive.

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Concerning the topic of financial inclusion, the present paper seeks to discuss the importance of financial stability in encouraging financial inclusion. It will examine how the availability of financial services, especially to low-income readers, rural geographies, and marginalized communities, is affected by the issue of the stability of the financial system. The other important question that will be addressed in the paper is the role of financial stability in increasing the development of digital financial services, which have played a significant role in providing access to a broader range of financial products and services. Finally, the paper will highlight the relevance and significance of proper policy frameworks, regulations, and financial sector reforms in ensuring the development of a framework capable of leading to financial stability and enhancing financial inclusion.

The research study aims to enhance our understanding of financial systems necessary for creating economic opportunities for all by examining the relationship between financial stability and inclusion. In that way, it will also shed some light on the importance of financial stability to the achievement of sustainable economic development, a more egalitarian economy, and a less exclusive world economy.

2. Literature Review

Financial inclusion is now a significant concern in global economic policies, particularly because it can be the key to alleviating poverty and driving economic growth as well as empowering the underserved populations. Financial inclusion is defined as the use and access of formal financial services such as insurance, savings accounts, payment services, and credit. This aims to enable people, especially those in marginalized groups, to access the formal economy through financial products that meet their needs. The effectiveness of the financial inclusion efforts, however, strongly relies on the existing financial stability of the financial system. In this context, financial stability refers to the ability of the financial system to withstand shocks without causing systemic crises that interfere with the state of the economy. Financial stability and financial inclusion are related and complementary, affecting each other's effectiveness and results.

2.1. Financial Inclusion and the Role of Financial Stability

The literature has been keen to point out that an issue such as financial stability is a key facilitator of financial inclusion. When the financial system is sound, businesses and consumers have confidence in the financial institutions and will use formal financial services. Essential to financial inclusion is that trust is critical in low-income communities since there has been a reliance in the past on informal financial services, particularly because access to formal banking services was not available. According to Demirguc-Kunt et al. (2018), enhancing the use of formal financial services hinges on consumer confidence, which is bolstered by financial stability, particularly in regions where the adoption of formal financial services has stalled due to a lack of consumer trust in the financial system, stemming from the impact of various financial crises.

Financial system stability enables the provision of vehicle financial services, which are critical in life, namely, loaning, savings, and insurance. A sound financial system eliminates vulnerability to risks of economic interruptions, and so it is less likely to trigger mass failure of payments or loss of savings. Such a feeling of security encourages vulnerable groups to make transactions through the financial institutions, comfortably knowing that their money is safe and they can source essential financial products at any time. In places where the financial system has been more resilient, as identified by Pazarbasioglu (2017), there has already been much accelerated adoption of digital financial services, including mobile banking, which are indispensable to expanding access to finance.

2.2. The Relationship between Digital Finance and Financial Stability Relationship

With the advent of digital financial services, the scenario of financial inclusion has undergone a radical change. Digital wallets, peer-to-peer lending systems, and mobile money platforms have enabled individuals living in rural regions to access financial products without the need for physical bank branches and infrastructure. According to Hassan et al. (2021), the digital norm of the financial service has been especially critical in the sub-Saharan African region and South Asia, where traditional banking infrastructure is scarce. Nevertheless, financial stability lies at the core of the success of these digital platforms.

The question of financial viability assumes great importance in making it clear that financial services that come through in a digital context are secure and operating effectively. Without a robust financial environment, online platforms will be vulnerable to threats such as fraud, malicious cyber attacks, or the collapse of financial intermediaries. Ozili (2023) explains that rules and regulations are essential components of financial stability, especially in the digital financial environment, as they secure consumers and avoid abuse of the system. Stable regulatory frameworks facilitate an open system, ensure the security of consumer information, and promote innovation in the digital finance business, enhancing its level of sophistication. The novelty brought through blockchain technologies, which have gained ground to become the foundation of multiple digital financial systems, opens new opportunities to contribute to the advent of a higher level of financial stability and inclusion. Zohar (2017) points out that the decentralized nature and the transparency that is introduced via blockchain could potentially be exploited to minimize the risk factor of financial instability, such as fraud or



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misuse of funds. In addition to that, blockchain could enhance financial inclusion by providing secure and affordable financial services to underserved populations who lack access to traditional banking systems.

2.3. Contribution of Financial Crises to Financial Inclusion

Financial crises have proved to be one of the key factors that lead to reduced financial inclusion, since such crises kill consumer confidence and derail access to credit and financial services. The global financial crisis of 2008 and the Asian financial crisis of the late 1990s showed how vulnerable the global financial system is. Levine (2005) adds that financial stability serves to avoid the shifts in the economy that take place during financial crises, which in turn drive people back towards the informal realm of the finance system. Conversely, nations with sounder and more stable financial systems, such as Germany and Singapore, have been seen to have more resilient financial systems that, in turn, are far better equipped to sustain global economic downturns, hence displaying greater financial resilience.

Arun & Kamath (2023) point out that, in emerging economies, the risks of financial frailty are likely to increase the already existing gap between the not-so-wealthy and the wealthy due to the greater financial resilience of the wealthy individuals and businesses to overcome the vagaries of the financial crisis than the poor people who are more susceptible to remaining at the outer limit of the formal financial system. Furthermore, governments can devise policies in times of instability that prioritize macroeconomic stability over financial inclusion, resulting in marginalized groups having less access to the services they need. This motion highlights the importance of striking a balance between financial stability and the enforcement of inclusive financial frameworks. Although financial stability broadly can be regarded as a good driver toward financial inclusion, the two can have trade-offs. Klapper et al. (2020) warn that overly strict regulations seeking to achieve financial stability risk making financial service provision an expensive affair, particularly for small-scale financial institutions and startup fintechs. This level of higher price is capable of undermining the supply and affordability of financial services to low-income populations and rural residents; consequently, financial inclusion is slackened.

The issue is the equilibrium between financial inclusion and financial stability. According to the article by Hassan et al. (2021), policies and control mechanisms should be designed to attain both of these goals. One example is the introduction of regulatory sandboxes, which enable fintech companies to innovate while ensuring that the financial stability is not compromised. The sandboxes will provide a controlled environment to test new financial services and products that have not yet been scaled up. In this environment, veterans will be given precedence over those who pose a threat to the stability of the overall financial system. The institutional and governance systems play a significant role in promoting both financial inclusion and financial stability. Effective governance means that a financial institution is regulated transparently and accountably, and that the regulation safeguards the consumers and keeps the markets confident. Demircuc-Kunt et al. (2018) note that it is precisely financial institutions with high standards of governance that can cope with economic shocks, as well as provide services to underserved communities.

Financial instability and periods of instability in many developing countries often result from lax governance and poor regulatory agencies and policies, which deter many people from accessing formal financial services. Conversely, nations that possess strong regulatory establishments and take a responsible position towards financial transparency have been in a position to establish an atmosphere in which financial services are not only to be found but also deemed reliable, as seen in the success stories of India and Kenya.

2.4 Seminal Theories

Here are some of the seminal theories relevant to this study.

2.4.1 Institutional Theory

Institutional Theory is vital in realizing how the financial institutions and systems can create an effect on financial inclusion. The theory was initially introduced by both John W. Meyer and Brian Rowan (1977); its main point is that an external world influences organisational behaviour, but it is also influenced by cultural norms, formal laws, and procedures institutionalised in the organisation. In the sphere of finance and financial inclusion, this theory may be applied to elucidate the reactions of the financial institutions of banks, microfinance organizations, and digital finance providers regarding their policies and practices to regulatory environments, market forces, and other social forces.

By institutional theory, what translates to a great extent to the accessibility and credibility of financial services by people that did not have such effective access before is a kind of stability and quality of operations at a financial institution (the capacity to stay in line with regulatory schemes and keep their business intact).

Combined with the external legitimacy they offer through laws and regulatory systems, financial institutions in a regulated environment (with its strong consumer protection and integrity standards) are projected to be in a better situation to deliver services to the marginalised populations.

2.4.2 Trust Theory

The Trust Theory is crucial in understanding the relationship between financial integrity and financial inclusion. The key element in motivating users to participate in formal financial services is trust, particularly in areas with a history of exclusion from financial services. Rotter (1967) defines trust as the belief in the reliability and competence of other people (in this case, the financial institutions). Concerning financial inclusion, faith in financial systems may lead to superior participation and utilisation of financial products, particularly in cases where buyers feel that such systems are transparent and secure.

Financial integrity poses a concern for this theory, particularly in clarifying the cause-and-effect relationship between financial integrity in the behavioural dimension and trust in financial institutions among the general public. This covers factors such as pricing transparency, fairness of treatment, and anti-fraud measures being in place, among others, which help make people more willing to accept and utilize formal financial services. There can be pressure due to financial denial because of a lack of funds in institutions. Where the degree of corruption is high or transparency is non-existent in the formal banking system of the country, the problem of trust in the formal banking system can prove to be a setback to the financial inclusion process. Active regulations (e.g., AML/CFT laws) can be seen as a form of enhancing the integrity of financial institutions and as helping to facilitate increased trust and support for involvement in the formal sector.

2.4.3. Theory of Social Capital

The Social Capital Theory places significant emphasis on the importance of networks, trust, and relations to social inclusion and economic involvement. Reported by Robert Putnam (1995), social capital, as an aggregate of resources held in social networks, significantly contributes to the upward movement of access to information, opportunities, and resources for people. Social capital plays a crucial role in establishing an understanding of financial inclusion. Additionally, community relations and networks of trust have the potential to stimulate financial product and service adoption, particularly among underserved populations.

According to the social capital theory, community trust and networks can serve as intermediaries in diffusing financial services to the excluded groups. Financial inclusion does not only rely on the presence of financial products, but also on the ability of individuals and society to acquire and utilise the products in their social context. Where there is limited confidence in formal financial systems, like many underdeveloped economies, community-based projects (micro loans or peer-to-peer lending systems) could also be more successful at facilitating inclusion since the social capital and community confidence can be used within these projects.

2.5 Focus Theory

2.5.1 Behavioural Economics

Behavioural Economics is a field of study that focuses on how psychological, social, and emotional aspects influence economic decision-making, especially in situations where traditional economic models (which assume people make rational decisions) are inapplicable. Earlier studies in this field were carried out by Daniel Kahneman and Amos Tversky (1979), who emphasised the role of biases (loss aversion or hyperbolic discounting) in the financial choices of consumers. Behavioural biases often contribute to why marginalised groups do not access formal financial services, even when such services would be beneficial to them in terms of financial inclusion.

According to behavioural economics, consumers may not utilise financial services even when presented, and this is attributed to psychological barriers, including a lack of trust, fear of complexity, or inertia. This means that financial literacy campaigns and consumer protection systems should account for such behavioural barriers to financial services, so that active involvement in taking up services is encouraged. Individuals with low incomes may tend to overspend or fail to save, even when they could use savings accounts to do so. They need to design financial products that would accommodate these behaviours by applying nudge theory (auto-enroll individuals into savings programs) in order to support financial inclusion.

2.6 Hypothesis Development

2.6.1 Financial Stability and Financial Inclusion

Financial inclusion is the ability and opportunity of individuals or firms to access and use appropriate financial services. Among them are credit, savings, insurance, and payment services (World Bank, 2018). Financial inclusion is vital in economic evolution as it lowers the levels of poverty, enhances economic growth, and increases social equity (Demirguc-Kunt et al., 2018). Financial inclusion - the possibility of the most deprived groups to access formal financial services and finally integrate into the mainstream economy, such as people living in low-income households or rural areas (Khan, 2020).

New evidence suggests that access and usage are closely intertwined in the process of identifying the degree of financial inclusion. The exposure to financial services, i.e., the banking products, is known as access, and how people and businesses use the services is known as usage. The more people have access to financial services, the more

economically resilient they are, especially those who are now considered vulnerable part of the population (Demirguc-Kunt & Singer, 2017). However, it is still experiencing barriers in the form of unaffordable rates, geographical disadvantage, and financial illiteracy that repel the underserved community (Sarma, 2020).

The study has noted that financial inclusion is dependent on technological advancements, particularly the use of mobile banking. Digital financial services have enabled the easy accessibility of services by individuals, particularly in far-reaching areas, as the days when individuals are required to visit banks physically wane (Chauvet & Jacolin, 2017). Still, their use among the population depends on the component of trust in the financial community and digital literacy (Hassan et al., 2021). The ability of a financial system to maintain and continue its functions even in the face of severe shocks without any disruption at all is what is known as financial stability (World Bank, 2019). There is an urgent need for a healthy financial system that can create conditions under which individuals can trust financial services. Sound financial institutions will get a better chance to give access to credit and other opportunities and resources to the financially underserved group, and, consequently, financial inclusion (Raza et al., 2019). The systemic risks and crises that would have an anomalous effect on the vulnerable population are also prevented due to financial stability, and the financial exclusion is also reduced (Hannig & Jansen, 2010).

The existing research indicates the relationship between financial stability and financial inclusion. The article by Aslam et al. (2024) underlines the significance of stable banking systems in promoting financial accessibility, especially in low-income economies, since destabilization in the systems is usually associated with reduced credit expansion to the economically poor. The aspect of financial stability in the banking institutions also makes it possible to ensure that the SMEs and microfinance institutions thrive, as well as providing financial services to the underserved. The balance between stability and inclusion has nevertheless been emphasized. To illustrate, according to Khan (2011), a high rate of financial inclusion can occur, but unless carefully managed, it may necessitate relaxing lending standards, ultimately leading to financial imbalances. This is particularly evident in microfinance institutions (MFIs), where the risk of overdrawn accounts is high.

H1: An improvement in levels of financial stability positively influences the level of financial inclusion.

2.7 Conceptual Framework Model

The conceptual model presents an interrelated framework between the primary independent variable, financial stability, and financial inclusion.

Figure 1: Conceptual Model of Financial Inclusion

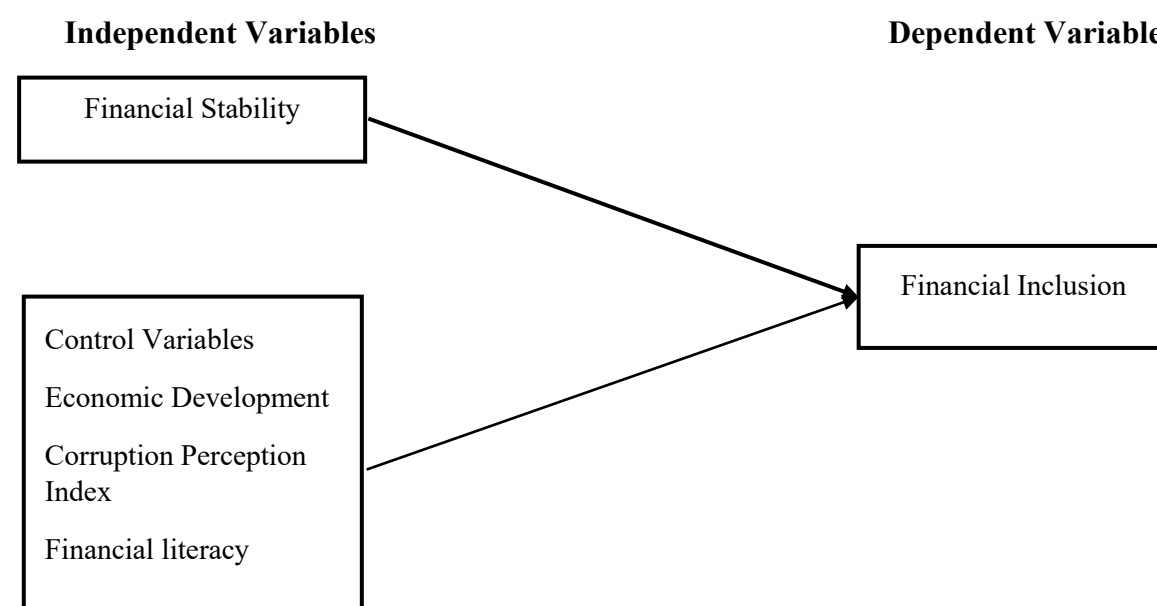


Figure 1: Association Between Dependent And Independent Variables.

3. METHODOLOGY

3.1 Research Design

This study's research philosophy is positivism. For this inquiry, the researcher used a logical method. The hypothesis is put to the test via deductive research. The current study is quantitative and based on a thorough literature review and discussion. Testing hypotheses and measuring variables systematically are made possible by quantitative techniques



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3.2 Data Type

Panel data is used in this investigation. The correlation between several dependent and independent variables is observed using this data format. Panel data were collected across a wide range of periods from many observations. Both cross-sectional and time-series data traits are included in the panel data. While the time-series component analyzes the same unit across time, the cross-sectional data show that observations are presented at a specific point in time across several units (companies or countries).

3.3 Data and Sample

Annual data at the national level were gathered from the World Bank database's Global Financial Development Indicators (GFDI), the IMF, World Development Indicators (WDI), and the State Bank of Pakistan. A similar set of criteria used in previous financial research (Elnahass et al., 2022; Trinh et al., 2020) was used to filter the sample. An imbalanced panel data set covering Pakistan from 2005 to 2024 makes up our final sample. We may examine the possible impact of the COVID pandemic (2020–2022) and the global financial crisis era of 2007–2009 by choosing the sample period of 2005–2022.

3.4 Variables

The selection of the dependent and independent variables was based on an examination of a large body of empirical research as well as a variety of financial inclusion theories and goals.

3.4.1 Dependent Variable

Financial inclusion is the dependent variable of the study. It is calculated from the following factors: the number of ATMs per 100,000 people, the number of commercial bank branches per 1,000 adults, the number of outstanding deposits, Branches of Commercial banks and the number of loans with commercial banks (Damane & Ho, 2024; Khan et al., 2024)

3.4.2 Independent Variables

The independent variables for this research study is financial stability.

The study used a special composite measure of financial stability rather than a variety of indices, which may provide contradictory findings. Some composite measures of financial stability have also been employed in earlier research (Elsayed et al., 2022; Nasreen et al., 2017). In accordance with Ozili & Iorember (2024), the researcher developed a novel financial stability index (FSI) in which the Z-score³ and the performing loans ratio are used as proxies for financial integrity. Numerous studies, like those by Lepetit and Strobel (2015), Podpiera and Weill (2008), and Ozili (2019), have used nonperforming loans (NPLs) as a crucial indicator of financial stability. One less than the NPL ratio (as a percentage) divided by 100 is the performing loans ratio. Suppose, for instance, that the NPL ratio is 5%. The percentage of performing loans must be $[1 - (5/100)]$, or 95 percent, or 0.95. Since it indicates that a significant portion of the loans in the financial sector performed successfully and did not default, higher performing loans ratio levels are indicative of stronger financial stability.

One widely used indicator of the banking industry's bankruptcy risk is the Z-score. Studies have used the Z-score to gauge financial stability. These investigations include those by Fiordelisi and Mare (2014), Lee and Hsieh (2013), and Ozili (2018). The Z score is calculated by dividing the standard deviation of return on assets by the sum of the equity to asset ratio (CAR) and return on assets ratio (ROA). Additionally, a higher Z-score suggests that the banking industry is more solvent. The better, the higher the Z-score. The "performing loans ratio" and the "Z-score" are then subjected to principal component analysis to produce the FSI index. High FSI variable values indicate greater financial stability.

3.4.3 Control Variable

The control variables included economic growth, the corruption perception index, and financial literacy level. The economic growth (GDP) is measured as the percentage of GDP increase, Zafar et al. (2023) Ashraf et al., (2024). The high growth in GDP might indicate substantial scale economies (Dhakal, Rahman, and Upadhyaya 2007; Ashraf et al., (2024) though, the high GDP per capita is an indication of a large market, which is beneficial to financial inclusion (Walsh & Yu, 2010; Jamal et al., (2024).

Financial inclusion is another field of research where the influence of CPI is mostly incorporated as a control concept in order to consider the corruption effects on the availability of financial services, Asongu & Nwachukwu (2016). In research on public policies, CPI has been utilized to understand the impact of corruption on institutional quality and performance in the publicly represented sector (Kaufmann et al., 2007). The CPI is derived based on the scores of 0-100 in which 0 demonstrates that a country is highly corrupt and 100 depicts that a country has very low corruption. Countries that are listed toward the 100s are considered to have less corruption with a high midpoint of 0 being placed on countries that are looked at to have more corruption in their civil service.



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Financial literacy level is calculated from a proxy of Account ownership at a financial institution and with a mobile-money-service provider (Atkinson & Messy, 2012; Lusardi & Mitchell, 2014; Lusardi & Mitchell, 2007; Abdallah et al., 2025). Data is collected from the World Bank (World Development Indicators).

Table 1: Variable Explanation and Source

Variable	Abbr	Definitions & Measurement	Source
Financial Inclusion	FIN	Financial inclusion is calculated based on several key indicators, including the number of ATMs per 100,000 people, the number of commercial bank branches per 1,000 adults, the total value of outstanding deposits, the number of Commercial bank branches, and the total value of loans with commercial banks.	IMF, SBP
Financial Stability	FS	The Z-score and the ratio of performing loans, which is based on the NPL ratio, make up the index. The principal component analysis is used to determine the index.	SBP
Economic Growth	EG	GDP growth (annual %)	WDI
Corruption Perception Index	CPI	The CPI is calculated from scores 0 to 100	WDI
Financial Literacy Level	FL	Financial literacy level is calculated from a proxy of Account ownership at a financial institution and with a mobile-money-service provider.	WDI

Source: Authors

3.5 Estimation of Econometric Model

Applying yearly data for Pakistan from 2005 to 2024, this study investigates the relationships among financial inclusion and financial stability. The control variables included economic growth, the corruption perception index, and financial literacy level. This study follows the following econometric model:

$$FIN=\alpha+\beta_1FS+\beta_2EG+\beta_3CPI+\beta_4FL+\varepsilon_{i,t} \dots\dots\dots (1)$$

Where financial inclusion is symbolized as FIN, FS represents financial stability, EG stands for economic growth, CPI represents corruption perception index, and FL represents Financial literacy level.

4. DATA ANALYSIS

4.1 Descriptive Statistics

The data is described differently using descriptive statistics. The mean, median, maximum, minimum, standard deviation, and complete observations make up this data set. To provide a succinct summary of the data, the researchers employ descriptive statistics.

4.1.1 Descriptive Statistics of Pakistan

Table 4.1 below displays the descriptive statistics used to determine the effect of financial stability on financial inclusion in Pakistan, a developing nation. Financial inclusion is the dependent variable. The independent variable is financial stability. Economic growth, corruption perception index, and financial literacy level are the control variables.

In this section, we present the descriptive statistics for the key variables used in the analysis. Descriptive statistics provide a summary of the data and highlight important characteristics such as central tendency (mean), variability (standard deviation), and the range of values (minimum and maximum) for each variable. The following table outlines these statistics for all relevant variables:

Table 2: Descriptive Summary of Pakistan

Variable	N	Mean	Maximum	Minimum	Std.Dev	Skewness	Kurtosis
FIN	20	9.312	.845	7.574	10.436	0.0339	-0.0410
FS	20	2.021	.146	1.759	2.225	0.0557,	-0.1020
ED	20	.667	.206	.017	.894	-0.0178,	-0.1621
CPI	20	.438	.041	.398	.477	0.1159,	0.2024
FL	20	1.753	.021	1.699	1.778	-0.0794,	-0.2424



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The descriptive statistics for Pakistan are shown in the table. FS is used for financial inclusion and is the dependent variable of the study. FS represents financial stability, the independent variable, while ED stands for economic development, CPI for the corruption perception index, and FL for the financial literacy level, which are the control variables.

4.3 Matrix of Correlations

The Matrix of correlations for calculating the financial inclusion impact on financial stability, financial integrity, and consumer protection of developing country Pakistan is shown in Table 4.2 below. Financial performance is the dependent variable. The independent variable is financial stability. Economic growth, corruption perception index, and financial literacy level are the control variables.

Table 3: Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)
FIN	1.000				
FS	-0.604	1.000			
ED	-0.389	0.159	1.000		
CPI	0.854	-0.611	0.808	1.000	
FL	0.833	-0.521	0.807	0.319	1.000

The Table represents the correlation Matrix of Pakistan. Variable explanations are shown in Table 1.

4.4 Variance Inflation Factor (VIF)

Multicollinearity among variables is also assessed using VIF analysis. According to the researcher, a VIF score of more than 10 may be a sign of a multicollinearity issue (Greene, 2003; Kennedy, 2003). The VIF summary for Pakistan is shown in the tables below. The findings demonstrated that all of the VIF values were less than 10, indicating that multicollinearity among the variables under consideration is not a problem. The findings made it possible for the researcher to use the information for additional analysis.

Table 4: Variance Inflation Factor (VIF)

Variable	VIF	1/VIF
FS	1.62	0.61845
ED	1.22	0.82127
CPI	1.17	0.85127
FL	1.04	0.96835
Mean VIF	1.34	

The VIF test findings for each independent variable used to analyze financial inclusion in Pakistan are shown in this table.

4.5 Regression Analysis

A multivariate analysis is employed in this study to examine the direct relationship between financial inclusion and financial stability in the developing country of Pakistan, as presented in Table 5 below. Financial inclusion is the dependent variable. The independent variable is financial stability. Economic growth, corruption perception index, and financial literacy level are the control variables.

The regression model 1 examines the association between Financial Inclusion (FIN) and Financial Stability, Economic Development (ED), Corruption Perception Index (CPI), and Financial Literacy Level (FL) variables. The purpose of this model is to identify the determinants of financial inclusion and assess the strength of these relationships using statistical techniques.

Table 5: Regression Analysis

FIN	Coef.	St.Err.	p-value
FS	0*	0	.078
ED	-.026	.037	.493
CPI	.28**	.529	.06



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FL	24.682***	4.474	0.0000
Constant	-35.036***	7.418	0.0000
R-square	0.94	No. of obs	20
F-test	33.859	Prob > F	0.000***

*This table presents the regression analysis for financial inclusion. Financial inclusion is a dependent variable. FS is an independent variable, ED, CPI, and FL are control variables. *, **, *** represents statistically significant at 10%, 5% and 1% respectively.*

The coefficient for Financial Stability is 0. The p-value (0.078) suggests that the relationship between financial stability and financial inclusion is marginally significant at the 5% level. The negative coefficient for Economic Development (-0.026) suggests that, although there is a slight negative relationship with financial inclusion, it is not statistically significant, as the p-value (0.493) is well above the typical significance threshold of 0.05. The positive coefficient for the CPI (0.28) indicates that as perceptions of corruption increase, financial inclusion also increases. However, this relationship is only marginally significant, with a p-value (0.06), which is just above the 0.05 threshold for statistical significance.

Financial Literacy shows a very strong positive relationship with financial inclusion, with a statistically significant coefficient of 24.682. The p-value of 0.0000 confirms that this variable has a highly significant impact on financial inclusion. The coefficient suggests that as financial literacy increases, financial inclusion increases significantly. The constant term is statistically significant with a p-value of 0.0000. This suggests that when all independent variables are zero, financial inclusion would be very negative. However, this finding might not have practical significance since financial inclusion cannot realistically be negative. The R-squared value of 0.94 indicates that the model explains 94% of the variability in financial inclusion, which is very high and suggests a good fit for the model.

The F-test value of 33.859 and its corresponding p-value (0.000) suggest that the overall regression model is statistically significant. This means that the independent variables, as a whole, significantly explain the variation in financial inclusion.

4.6 Discussion of Regression Results

This regression analysis explores the relationship between financial inclusion (FIN) and a set of explanatory variables: Financial Services (FS), Economic Development (ED), Corruption Perception Index (CPI), and Financial Literacy (FL). The dependent variable is financial inclusion, a key component of inclusive growth and sustainable economic policy. The model demonstrates strong explanatory power ($R^2 = 0.94$), suggesting that these variables account for 94% of the variance in financial inclusion across the sample. Despite the small coefficient, FS is statistically significant, implying that access to financial services marginally improves financial inclusion. This supports the access theory of financial inclusion, which posits that physical and digital availability of financial institutions is a precursor to usage (Beck & De la Torre, 2007). The result resonates with recent findings from the World Bank Global Findex 2021, which highlight that proximity to financial institutions or digital banking platforms increases account ownership and usage, especially in Sub-Saharan Africa and South Asia. However, the low coefficient may suggest the presence of non-price barriers (e.g., lack of trust, cultural norms) that limit uptake even when services are available.

Surprisingly, the coefficient for economic development (ED) is negative and statistically insignificant, indicating that macroeconomic growth does not automatically translate into greater financial inclusion. This contradicts classical economic assumptions that economic growth leads to financial deepening and inclusion (McKinnon, 1973; Shaw, 1973). The result also aligns with Piketty's (2014) thesis on growing inequality, where growth disproportionately benefits elites, leaving marginalized groups excluded from the formal financial system.

The CPI's positive and marginally significant coefficient indicates that moderate inflation may stimulate financial inclusion. This may occur because inflation prompts individuals to use formal financial instruments (e.g., savings, mobile wallets) to protect purchasing power and store value. This aligns with portfolio theory in financial behavior, where rising inflation risk encourages formal saving (Levine, 2005; Allen et al., 2016). This is the most powerful and statistically significant variable in the model, indicating that financial literacy is a critical driver of financial inclusion. The behavioral finance theory supports this discovery, arguing that individual financial behavior is determined by perceptions, biases, and heuristics (Thaler & Sunstein, 2008). Financial literacy augments the ability of people to comprehend, find, and use financial services in a responsible manner (Lusardi & Mitchell, 2020).

The significant value of negative constant shows that, in the absence of the changes in FS, ED, CPI or FL the bottom level of financial inclusion is very low. This is indicative of institutional bias and emphasizes the need to include practical, extensive multi-faceted approaches to financial inclusion.



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5. Conclusion

The paper examines the factors that determine financial inclusion in Pakistan on an annual basis and on a national level between 2005 and 2024, which is extracted based on reliable sources like the Global Financial Development Indicators (GFDI), World Development Indicators (WDI), and the State Bank of Pakistan. The study uses a regression model where financial inclusion is the dependent variable, whereby the explanatory variables are financial services, economic development, consumer price index and financial literacy. With an imbalanced panel data set spanning almost two decades, the study comprehends structural changes in Pakistan's financial sector, including the impacts of global shocks such as the 2007-2009 global financial crisis and the COVID-19 pandemic (2020-2022).

It shows that financial literacy is the greatest determinant of financial inclusion. This fact underscores the importance of knowledge and awareness regarding access to and utilization of formal financial markets by people. There is also a statistically significant association between financial stability and consumer price index (CPI) though they are rather low-influencing factors. Surprisingly, the effect of economic development is not much in terms of the association, meaning that economic growth does not ensure financial inclusion proportionately. Such a finding is consistent with the current literature that focuses on defining policy interventions aimed at equity. The analysis contributes to the growing body of evidence that financial inclusion should be pursued through economic growth, as well as by implementing specific policies that emphasize education, access, affordability, and trust-building. Such insights are of great concern to policy-makers who may want to develop robust and inclusive financial systems, which can resist external shocks at the same time to foster sustainable development.

Future research should expand on these findings by incorporating disaggregated data (e.g., by gender, region, or income level), addressing potential endogeneity concerns, and exploring non-linear modeling approaches to capture better the complexity of financial inclusion dynamics in emerging economies like Pakistan.

5.1 Limitations

Despite the valuable insights offered by the regression analysis, this study has several limitations that warrant cautious interpretation of the results:

1. The analysis is based on only 20 observations, which limits the generalizability and robustness of the findings. A small sample size increases the risk of statistical noise, reduces power, and may exaggerate the effect of outliers.
2. Key variables such as financial inclusion and economic development may exhibit bi-directional causality, which is not captured in this static model. For example, greater financial inclusion may also spur economic growth. Additionally, important variables like income inequality, institutional quality, or digital infrastructure are not included.
3. The study does not differentiate results by gender, urban-rural divide, or regional economic disparities, all of which are known to affect financial inclusion significantly.

5.2 Future Research Directions

To build on the findings of this study and address its limitations, future research should consider the following directions:

1. Employing larger, multi-country, or panel data can improve the robustness of results and enable dynamic analysis (e.g., fixed effects, lag structures). This will allow exploration of causal relationships over time.
2. To address endogeneity issues, future studies should consider instrumental variable (IV) techniques or structural equation modeling (SEM) to clarify the direction and strength of causality between financial inclusion and other variables.
3. Future models should include digital infrastructure (e.g., mobile money, fintech penetration) and behavioral variables like trust in financial institutions, perceived risk, or financial self-efficacy, which have become increasingly relevant.
4. Disaggregating data by age, gender, education level, employment status, or geographic location would offer more nuanced insights and support more targeted policy interventions.

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