

RESEARCH PAPER

Evaluating Financial Inclusion Trends in Pakistan: An Autoregressive Integrated Moving Average Forecasting and Box-Jenkins Q Test Validation

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ABSTRACT

This initiative aims to achieve income equalization within society, thereby fostering economic growth, alleviating poverty, and enhancing the stability of the financial system. Financial inclusion represents a concerted effort to remove both price and non-price barriers that hinder public access to formal financial institutions. To examine this dynamic, the study employs time series data on financial inclusion from 2006 to 2021 for Pakistan, obtained from the World Bank database. Utilizing the Box-Jenkins ARIMA methodology, the study forecasts financial inclusion trends for the period 2022–2030. The study reveals a notable upward trend in financial inclusion, with the financial inclusion index projected to rise from 0.99 in 2021 to 1.61 by 2030. The study recommends prioritizing nationwide financial literacy programs, particularly for marginalized groups, and promoting investment in financial infrastructure and fintech innovations to enhance financial inclusion and drive sustainable economic growth.

KEYWORDS ARIMA, Financial Inclusion, Forecast, Pakistan Introduction

Financial inclusion (FI) is a critical measure of the extent to which formal financial institutions contribute to societal well-being through their financial intermediation functions. The fundamental objective of FI is to dismantle barriers to accessing financial services, thereby allowing individuals to reap the benefits of financial services that can increase their income and ultimately help them escape poverty (Jejeniwa et al., 2024). According to Verma and Giri (2024), FI is an essential strategy for mitigating income inequality within a country. The positive effects of FI on individual income are expected to aggregate at the societal level, promoting overall economic growth, alleviating poverty, and strengthening the stability of the financial system. A substantial body of empirical research (Jejeniwa et al., 2024; Verma and Giri, 2024; Liu and Guo, 2023; Ozili, 2023; Ullah et al., 2023) reveals significant impact of FI on economic growth, poverty reduction, and financial system stability. Therefore, FI is a crucial step in ensuring that economic growth is inclusive and benefits all segments of society (Oanh, 2023).

In the context of Pakistan, the level of FI has been a significant concern. According to the Pakistan Financial Inclusion Survey, conducted by the State Bank of Pakistan (SBP) in 2018, the national FI index was recorded at 22.5%, an improvement from 15% in 2015. This increase reflects progress in expanding access to financial services across the country. Concurrently, the financial literacy index in Pakistan rose from 12.4% in 2015 to 18.3% in 2018. Despite these positive trends in FI, the pace of improvement in the FI index remains relatively modest. While there has been progress in expanding access to financial services, the rate of growth has not been as rapid as might be expected given the broader FI metrics. This suggests that there is a need for focused initiatives to accelerate the expansion and effectiveness of financial services across all sectors in Pakistan.

Ensuring equitable income distribution alongside developmental progress is crucial for a country's economic advancement. FI plays a vital role in this regard, as financial institutions serve as pivotal intermediaries in addressing income inequality through their financial services (Kousar et al., 2023; Huang et al., 2023). Recognizing the profound impact of FI on both microeconomic and macroeconomic scales highlights the necessity for more detailed forecasting studies extending to 2030. According to projections, by 2030, a significant portion of the global population will likely advance into the "middle class," creating substantial opportunities for financial institutions to expand their reach and improve service delivery (Afandi and A'yun, 2018). This research utilizes the "Autoregressive Integrated Moving Average (ARIMA)" methodology to forecast FI trends.

Forecasting trends in FI is pivotal for multiple reasons. Firstly, it equips policymakers and development agencies with the tools to plan and allocate resources effectively, particularly in addressing the shifting requirements for economic growth and social welfare. Analyzing patterns of FI fosters enhanced collaboration between the Pakistani government and international stakeholders, thereby facilitating the development of a supportive infrastructure for broader financial access. Moreover, the application of forecasting techniques is instrumental in assessing Pakistan's economic flexibility, which is crucial for informed decision-making aimed at fortifying financial stability. In essence, the forecasting of FI trends provides critical insights into the impact of financial services on economic development, enabling policymakers to engage with diverse stakeholders and channel resources into programs that promote sustainable advancement.

Literature Review

FI has become a crucial focus for governments globally due to its potential to significantly boost economic performance. The urgency of this issue was highlighted after the 2008 financial crisis, which had a disproportionate effect on marginalized groups in developing nations (Afandi and A'yun, 2018). The World Bank (2014) reports that over 50 countries have set specific goals to enhance FI. In 2010, the G-20 nations established "The Global Partnership for Financial Inclusion (GPFI)," which facilitates dialogue, policy advocacy, and coordination among both G-20 and non-G-20 countries (Kimenyi and Songwe, 2012). The critical role of financial institutions in improving individual welfare through financial services is emphasized by the findings of World Bank (2014), which reveal that around 2.5 billion people worldwide do not have access to formal financial accounts. This gap presents a significant opportunity to improve their economic well-being through better financial services. Nonetheless, access to these services is often hindered by various factors, including high costs, the distance of financial institutions from individuals, and regulatory barriers such as collateral requirements that many cannot meet (Ozili, 2023). To address these challenges, the G-20 Leaders' Summit in Toronto (2010) introduced nine innovative principles to advance FI: "leadership, innovation, diversity, empowerment, protection, cooperation, proportionality, knowledge and framework." These principles aim to provide a comprehensive approach to achieving FI goals tailored to the specific needs of each country. The ultimate goals of FI are to drive inclusive economic growth by alleviating poverty, improving income distribution, and strengthening financial system stability through the creation of a financial system accessible to all levels of society.

The existing literature on FI encompasses a wide array of studies that delve into different facets and methodologies pertinent to the field. Mohieldin et al. (2012) investigate the role of Islamic finance in enhancing FI during the period from 2010 to 2011. Their comparative research underscores that Islamic finance offers diverse instruments and innovative approaches capable of mitigating poverty and inequality, provided these mechanisms are fully embraced. Ali et al. (2015) analyzes the evolution of Islamic microfinance from 2004 to 2012, highlighting its progression beyond traditional models. Through a descriptive analysis, the study reveals that Islamic microfinance is advancing to simultaneously achieve social and financial inclusion. This development is supported by the

application of Islamic social tools, including Sadagah, waqf, and Zakah. In their study, Noreen et al. (2017) utilize ARIMA models to project trends in bank credit from 1983 to 2013. Their findings indicate that the ARIMA model (1,1,0) effectively forecasts public sector bank credit, predicting a value of 4,086,281 for 2014. Conversely, the ARIMA model (3,2,3) is deemed more suitable for forecasting private sector bank credit, with a projected value of 428,322.8 for the same year. Pasuhuk (2018) employs Ordinary Least Squares (OLS) regression to examine the impact of financial institutions on poverty reduction for the years 2007 to 2015. The results demonstrate a significant and negative correlation between the presence of banks and cooperatives and poverty levels, emphasizing the vital role that financial institutions play in poverty alleviation. Nabi et al. (2017) explore the effectiveness of Islamic microfinance in promoting FI and combating poverty. Through descriptive analysis, their research highlights that Islamic microfinance can be a potent tool in addressing poverty, utilizing innovative models grounded in zakat, sadaka, waqf, and commercial funds to cater to the needs of impoverished communities. Yakubu et al. (2017) identify the primary determinants of FI in Northern Ghana using discriminant analysis. Their study reveals that factors such as age, cost, capability, literacy, distance, and employment significantly influence FI, with an overall explanatory power of 72.4%. Afandi and A'yun (2018) examine Islamic FI from January 2014 to May 2018. An ARIMA model forecasts the levels of Islamic FI. Predictions up to December 2020 suggest a decline in Islamic Rural banks numbers to 27 banks, an increase in third-party funds to 1,680,558.79 million Rupiah, financing to 1,822,810.80 million Rupiah, assets to 2,299,250.44 million Rupiah, and non-performing loans to 12.48 percent. Collectively, these studies provide a comprehensive understanding of FI.

Material and Methods

This study utilized secondary data, specifically time series data spanning from 2006 to 2021. The dataset encompasses various variables, including "the number of ATMs per 100,000 adult populations, the number of bank branches per 100,000 populations, the proportion of the population with internet access, and mobile subscriptions per 100 individuals." These data were procured from the "World Development Indicators (WDI)" database and were utilized to construct the FI index.

ARIMA extends the ARMA model to accommodate time series data with integration. This integration addresses non-stationarity at the level of the data, rendering it stationary after differencing once or twice. As described by Winarno (2015), time series data suitable for ARIMA modelling possess an integration order, denoted as I(d). By differencing the data d times, it transforms into a stationary series, represented as I(0).

In the ARIMA model, the 'I' component represents the number of differencing operations needed to make data stationary. The autoregressive process (p), AR(p), indicates that the current value of an outcome is influenced by its past values and an error term. The parameter p determines how much past values impact the present value, while the AR(p) also includes the error term of current period to adjust for deviations from predictions. Thus, AR(p) expression is:

$$y_t = \mu + \delta_1 y_{t-1} + \delta_2 y_{t-2} + \dots + \delta_p y_{t-p} + u_t = u + \sum \delta_i y_{t-i} + u_t - \dots - \dots - (1)$$

In the process of MA(q), the score of u_t is influenced by a weighted sum of white noise errors from the previous q periods along with the present error term. Such errors are uncorrelated, maintaining a zero mean and constant variance. As the process is essentially a combination of past errors, it is stationary and resembles a white noise process with fluctuations in both negative and positive directions. The MA(q) is expressed as:

$$y_t = u_t + \gamma_1 u_{t-1} + \gamma_2 u_{t-2} + \dots + \gamma_q u_{t-q} = u_t + \sum \gamma_i u_{t-i} - \dots - \dots - (2)$$

In the process of AR, maintaining stationarity necessitates that the characteristic root falls within the unit circle, meaning it must be less than one. If this condition is not met, the process is deemed non-stationary. A coefficient of less than one is crucial for ensuring both stability and stationarity. The "ARIMA (p, d, q) model" integrates AR and MA components, where (d) denotes the number of differencing operations required to transform a non-stationary series into a stationary one, and 'I' is the order of integration. The ARMA (p, d, q) is written as:

$$y_t = \mu + \delta_1 y_{t-1} + \delta_2 y_{t-2} + \dots + \delta_p y_{t-p} + u_t + \gamma_1 u_{t-1} + \gamma_2 u_{t-2} + \dots + \gamma_q u_{t-q} - \dots - \dots - (3)$$

Hence, Equation 3 represents the condition for invertibility in both the AR and MA processes, indicating that these processes can be transformed into invertible forms.

The ARIMA model, also known as the Box-Jenkins methodology, is a technique that relies on historical data for analysis and does not incorporate external variables, differentiating it from regression analysis, which typically involves theoretical considerations (Winarno, 2015). The process for determining the optimal ARIMA model, denoted as (p, d, q), involves several stages: (i) identification, which includes selecting the appropriate values for p, d, q based on the "partial autocorrelation coefficient (PACF) and autocorrelation coefficient (ACF); (ii) Parameter estimation, which is performed using software tools such as EViews; (iii) Residual diagnostics, where the residuals should ideally exhibit white noise properties; if not, the model should be refined to find the best fit; and (iv) Forecasting, which involves generating predictions using the chosen ARIMA model.

Results and Discussion

To estimate FI from 2022 to 2030, it is essential to analyze the FI trends observed between 2006 and 2021 (Figure 1). During this period, FI in Pakistan exhibited a consistent upward trend from 2006 to 2014, followed by a slight decline in 2015. However, the trend recovered and continued to rise steadily through 2021. This overall upward trend indicates growing financial access, despite a brief decline.



Figure 1: Financial Inclusion Pattern from 2006 to 2021

The first stage in the forecasting process involves assessing the stationarity of the time series. If the series is stationary at its level, an ARMA model is applicable; however, if stationarity is achieved after differencing, then an ARIMA model is used. The augmented Dickey–Fuller (ADF) test is employed to evaluate stationarity. As shown in Table 1, the level

series did not pass the test at the 0.05 significance level, indicating non-stationarity. However, after first differencing, the series became significant, suggesting that an ARIMA model is suitable for further analysis.

Table 1						
Unit Root Test						
Variable Particular t-stat. p-value Sig. Level Remarks						
Financial	At Level	-3.0810	0.3677	0.05	Non-Stationary	
Inclusion	1 st Difference	-3.0988	0.0229	0.05	Stationary	
In the next step, the we exceed correlegrame using the first differenced data to						

In the next step, the we created correlograms using the first-differenced data to explore various ARIMA model configurations based on the patterns of the ACF and PACF. These plots were essential for identifying potential AR and MA components. Two configurations were considered, AR(1) and MA(1) as well as AR(2) and MA(1), as shown in Figure 2. We pointed out that selecting an ARIMA model involves balancing model fit with simplicity.

The final step in the process involves comparing the different models identified earlier to select the most appropriate one. This evaluation, detailed in Table 2, involved regressing the current FI values on various lagged terms. The model that provided the

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob			
		1 0.729	0.729	10.205	0.001			
I		2 0.520	-0.024	15.776	0.000			
		3 0.375	0.008	18.888	0.000			
		4 0.243	-0.058	20.308	0.000			
		5 0.114	-0.086	20.650	0.001			
		6 -0.003	-0.087	20.651	0.002			
		7 -0.089	-0.050	20.902	0.004			
		8 -0.180	-0.113	22.065	0.005			
		9 -0.238	-0.047	24.386	0.004			
		40 0.247	0.450	00 400	0 004			
	Figure 2: Correlogram Output							
		12 -0.373	-0.071	46.577	0.000			

highest R², along with the lowest SIC and AIC, was deemed optimal. Ultimately, the analysis identified an ARIMA (2, 1, 1) model as the most suitable and stable for forecasting FI.

In the third phase, a comparative evaluation was conducted between two models: Model-1 AR(1) MA(1) and Model-2 AR(2) MA(1), to identify the most appropriate model. A comprehensive diagnostic assessment was performed on the chosen model, followed by an evaluation of its forecasting performance to ensure the results were unbiased. The study utilized several metrics, such as R², AIC, SIC, and HQC, to compare the models. The optimal model is characterized by a high R² value and low AIC, SIC, and HQC scores. Model-2 AR(2) MA(1) emerged as the most suitable and reliable model for prediction, as it exhibited a higher R² and lower AIC, SIC, and HQC scores compared to Model-1 AR(1) MA(1) (Cook, 2019; De Araújo Morais et al., 2022). As a result, Model-2 AR(2) MA(1) was selected as the preferred model for forecasting FI, with the comparison details presented in Table 2, with Figure 3 displays forecasted results for Model-2 AR(2) MA(1).

Table 2						
Analysis of ARIMA Models Outputs						
Model 1: AR (1) MA (1)						
Variable	Coefficient	Std. Error	t-Statistic	Prob.		
С	0.0639	0.0151	4.2220	0.0014		
AR (1)	0.8249	0.8564	0.9633	0.3561		
MA (1)	-1	21142.28	-4.73E-05	0.9999		
SIGMASQ	0.0018	0.8792	0.0021	0.9983		
R-squared	0.2943	Mean dependen	t var	0.0667		
Adjusted R-squared	0.2526	S.D. dependent	var	0.0471		
S.E. of regression	0.0506	Akaike info crite	erion (AIC)	2.8475		
Sum squared resid	0.0281	Schwarz criterio	on (SIC)	2.6586		
Log likelihood	25.3562	Hannan-Quinn d	criterion (HQC)	2.8495		
F-statistic	8.3821	Durbin-Watson stat 2.0778		2.0778		
Prob(F-statistic)	0.0014					
	Model 2	2: AR (1) MA (2)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.		
С	0.0679	0.0139	4.8736	0.0005		
AR (1)	0.3640	0.2981	1.2212	0.2475		
MA (2)	-0.1803	0.3913	-0.4609	0.6538		
SIGMASQ	0.0018	0.0006	3.1250	0.0097		
R-squared	0.4288	Mean dependen	t var	0.0667		
Adjusted R-squared	0.3687	S.D. dependent	var	0.0471		
S.E. of regression	0.0496	Akaike info crite	erion (AIC)	2.5351		
Sum squared resid	0.0270	Schwarz criterio	on (SIC)	2.5463		
Log likelihood	26.0131	Hannan-Quinn d	criterion (HQC)	2.6371		
F-statistic	11.5424	Durbin-Watson	stat	2.6933		
Prob(F-statistic)	0.0000					





ARIMA models excel at capturing the inherent uncertainty in time series forecasting, often reducing the necessity for extensive sensitivity analysis (Jamil, 2020). These models are particularly effective at addressing temporal dependencies, trends, and seasonality, making them highly suitable for forecasting complex time-series data. Due to their straightforward yet robust nature, ARIMA models can adapt to changes in data with minimal sensitivity analysis. Although sensitivity analysis remains useful in cases of ambiguous data,

ARIMA models typically account for underlying uncertainties without requiring additional examination. Diagnostic tools are used to verify the accuracy and stability of ARIMA models.

To ensure the robustness of the chosen ARIMA model, three diagnostic tests were performed. *Diagnostic Test 1:* The first test aimed to determine if the residuals follow a white noise process, with the H_0 suggesting the presence of white noise. The "Ljung–Box Q

Auto	correl	ation	Par	tial Cor	relation		AC	PAC	Q-Stat	Prob
I	d	I		ı d	I	1	-0.043	-0.043	0.0340	
Ι	d	Ι		ı (I	2	-0.046	-0.048	0.0763	
Ι		Ι		ı 🗖	I	3	-0.095	-0.099	0.2676	0.605
Ι	l I	Ι		ı (I	4	-0.028	-0.040	0.2855	0.867
Ι		Ι		ı þ	I	5	0.072	0.060	0.4178	0.937
Ι	þ	Ι		ı)	I	6	0.035	0.030	0.4532	0.978
Ι		Ι		I 🗖	I	7	-0.237	-0.238	2.2452	0.814
Ι		Ι		I 🗖	I	8	-0.231	-0.259	4.1846	0.652
Ι		Ι		· 1	I	9	0.111	0.076	4.7048	0.696
Ι		Ι		I 🗖	I	10	-0.097	-0.166	5.1875	0.737
Ι	þ	Ι		ı [I	11	0.033	-0.064	5.2565	0.811
Ι	ſ	Ι		I	Ι	12	-0.020	-0.013	5.2903	0.871

Figure 4: Correlogram Q Statistics Output



Figure 5: Stationarity and Invertibility Output of ARIMA

statistics" (Figure 4) were used for this purpose, and none of the values surpassed the dotted lines for autocorrelation or partial correlation, with all p-values exceeding the 0.05 threshold. This result means that we cannot reject H_0 , confirming that the residuals indeed represent white noise. Therefore, the residuals are stable, making the ARIMA model suitable for further analysis. *Diagnostic Test 2:* The second diagnostic test focused on verifying

whether the estimated ARMA process is covariance stationary, meaning that all AR roots must be within the unit circle. *Diagnostic Test 3:* The third diagnostic test checked the invertibility of the ARMA process, which requires all MA roots to fall inside the unit circle as well. Figure 5 illustrates that both the AR and MA roots (dots) are situated within the unit circle, confirming that the ARMA process is both stationary and invertible. As all diagnostic requirements are met, the ARIMA model is considered appropriate for forecasting.

Table 3

Results of Financial Inclusion Forecast						
Year	Financial Inclusion Forecast	Year	Financial Inclusion Forecast			
2006	0.0001	2019	0.8615			
2007	0.1759	2020	0.9231			
2008	0.3257	2021	0.9998			
2009	0.3622	2022	1.0725			
2010	0.3874	2023	1.1401			
2011	0.4345	2024	1.2079			
2012	0.4938	2025	1.2759			
2013	0.5511	2026	1.3438			
2014	0.6109	2027	1.4118			
2015	0.5846	2028	1.4798			
2016	0.6644	2029	1.5478			
2017	0.7246	2030	1.6158			
2018	0.7880					

Following the thorough process of model selection, comparison, and diagnostic testing, the final phase involved conducting the forecasting analysis. The results, illustrated in Figures 6a and 6b, indicate a consistent and notable increase in FI in Pakistan over the next decade. The FI index, which was recorded at 0.99 in 2021, is projected to rise significantly to 1.61 by 2030 (see Table 3). This anticipated growth path suggests that current initiatives in Pakistan are effectively establishing a solid foundation for the future expansion of FI. For policymakers, this projection presents a crucial opportunity to harness this positive momentum by implementing strategies that not only maintain but also accelerate this growth. By concentrating on pre-growth activities, improving financial literacy, and encouraging investments in productive sectors, policymakers can help ensure that the projected increase translates into meaningful economic benefits for the broader population.

The forecasted rise in FI emphasizes the favorable impact of ongoing financial reforms and policy measures in Pakistan. The expected increase in the FI index from 0.99 to 1.61 by 2030 highlights the country's progress in making financial services more accessible to previously underserved populations. This growth is particularly significant in the context of Pakistan, where FI plays a critical role in fostering economic development, reducing poverty, and promoting social equity. By expanding access to financial services, more individuals and businesses can participate in the formal economy, thereby driving economic activity, narrowing income disparities, and enhancing social stability. However, to fully realize these benefits, policymakers must focus on overcoming the obstacles to FI, such as low levels of financial literacy, limited access to digital financial services, and inadequate infrastructure in rural areas. Efforts aimed at raising financial awareness and promoting investment in key productive sectors will be essential in maximizing the positive effects of increased FI, ensuring that the projected growth equitably benefits all segments of society.



Figure 6a: Graph of Forecast Results: Dot Plot



Figure 6b: Graph of Forecast Results: Pie

Despite their widespread application in time series forecasting, ARIMA models are not fully equipped to capture all potential uncertainties affecting future forecasting. Notably, ARIMA models lack the ability to generate confidence intervals for their forecasts (Roth et al., 2021), which constrains the assessment of forecast reliability. The accuracy of predictions from ARIMA models is subject to various influencing factors, including economic fluctuations and unforeseen events such as geopolitical crises. A comprehensive understanding of the risks and limitations inherent in these forecasts is essential for evaluating their validity. Economic volatility and geopolitical disturbances, for example, can substantially alter forecast outcomes (Dogan et al., 2021). By acknowledging these sources of uncertainty, decision-makers can better navigate potential risks and develop effective contingency plans, thus achieving a more realistic and informed perspective on projected results. Table 3 provides an illustration of the forecasted annual FI scores, highlighting the influence of these variables on financial forecasting.

Conclusion

FI has increasingly become a focal point for economic policy in developing countries, recognized for its potential to drive broad-based economic growth and reduce poverty. In Pakistan, significant efforts have been made over the past years to extend financial services to a wider population, particularly through the expansion of digital financial platforms. The study reveals a notable upward trend in FI, with the FI index projected to rise from 0.99 in 2021 to 1.61 by 2030. This anticipated growth reflects the effectiveness of ongoing financial reforms and emphasizes the crucial role that FI plays in stimulating economic development, alleviating poverty, and promoting social equity. However, the analysis also highlights persistent challenges, such as low financial literacy, inadequate infrastructure in rural areas, and limited investment in critical sectors, which continue to impede progress. To fully harness the benefits of increasing FI, the study advocates for a comprehensive policy approach. This includes boosting financial literacy across diverse demographic groups, especially in underserved areas, and fostering a regulatory environment that promotes private sector investment in innovative financial technologies. By tackling these challenges and promoting a more inclusive financial system, Pakistan can ensure that the benefits of greater FI are equitably distributed, contributing to sustainable economic growth, reducing income disparities, and enhancing social stability. A holistic strategy is crucial for translating this projected growth into significant economic and social benefits for all segments of the population, thereby supporting the development of a more equitable economy.

The study acknowledges certain limitations, as it only concentrates predominantly on FI as the primary variable, the analysis may neglect other significant elements that impact the wider financial landscape. The ARIMA model employed in the study, though suitable for short to medium term predictions, exhibits reduced accuracy over extended time frames, thereby raising concerns about the dependability of forecasts up to 2030. Additionally, the model's dependence on historical data presupposes that past trends will persist, potentially overlooking unforeseen economic fluctuations, policy shifts, or technological innovations that could substantially influence the future of FI. Moreover, the study does not account for qualitative aspects which could also critically affect FI outcomes. These limitations highlight the need for a more robust approach in future research, incorporating a broader spectrum of variables and methodologies to improve the robustness and precision of FI predictions.

Recommendations

The anticipated growth in FI in Pakistan over the coming decade demands a carefully crafted policy approach to not only sustain this progress but also to enhance it further. A critical component of this strategy should involve concentrated efforts to improve financial literacy across the population. Although the trend towards greater FI is positive, inadequate financial literacy continues to pose a significant challenge, particularly in rural and marginalized communities. Policymakers should therefore prioritize the implementation of nationwide educational initiatives tailored to different demographic groups, with a strong focus on women, youth, and disadvantaged populations. These initiatives should aim to increase knowledge and understanding of financial products and

services, empowering individuals to make informed financial decisions and fully engage with the formal financial system. Moreover, incorporating financial literacy into the national education curriculum could provide a sustainable foundation for financial awareness, equipping future generations with the skills necessary to navigate an increasingly digitalized financial environment.

To fully leverage the expected rise in FI, it is essential for policymakers to promote investment in the productive sectors of the economy. Policies that specifically target the expansion of financial infrastructure, particularly in underdeveloped and rural areas, are vital. This includes enhancing access to digital financial services, which has the potential to bridge the gap between urban and rural areas, as well as addressing infrastructural shortcomings that currently limit the delivery of financial services. Furthermore, the creation of a regulatory framework that encourages private sector investment in fintech and other innovative financial solutions is critical for further advancing FI. By fostering a competitive and inclusive financial ecosystem, Pakistan can ensure that the benefits of increased FI are shared widely, thereby driving sustainable economic growth and promoting social equity. This strategy will not only strengthen FI but also contribute to broader economic development and poverty reduction, ultimately supporting the emergence of a more robust and equitable society.

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