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Pathways to Prosperity: Unpacking Financial Inclusion's Influence on Bank Performance and Risk

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Abstract: *Financial inclusion is a crucial phenomenon in the current period of development since it drives economic progress in all countries. This article seeks to determine the impact of financial inclusion on banks' performance and risk. This research paper aims to ascertain the impact of financial inclusion on banks' profitability and risk. The study spanned a duration of five years, including from 2018 to 2022, and focused on Pakistani commercial listed banks. A systematic investigation was conducted by gathering data on variables from official websites and financial reports. Regression analysis was used to analyze the data. The findings indicate that the bank's profitability is positively influenced by financial inclusion, but at the same time, it also raises the bank's risk. This suggests that policy synergies are necessary to expedite both financial inclusion and sustainability. However, it is crucial to address the intricate issue of financial inefficiency and the absence of genuine paperwork that arises when financial inclusion expands.*

Key Words: Financial Inclusion, Listed Commercial Banks, Bank's Profitability, Bank's Risk, Operational Efficiency

Introduction

The underlying pillars for the growth of an economy are robust establishment and stabilization of financial organizations. For the elevation of economic growth, it is necessary to consider the population, especially involving the participation of financially weak segments of society. Here comes a significant concept called Financial Inclusion (Rao & Bhatnagar, 2012). The notion of financial inclusion helps for better economic conditions. Financial inclusion denotes the availability and access of financial services and products to all members of society. Financial Inclusion is a concept that arises after the awareness of financial exclusion and its relation to poverty. Financial inclusion is a route that makes it easier to access and make available recognized financial services to the entire economy. Economic development has been deduced from financial inclusion as the accessibility to financial services is improved, which, in turn, forms a basis for the local economy in developing countries (Omar & Inaba, 2020). On top of that, financial inclusion is an indispensable instrument in alleviating poverty, which is connected to prosperity in developing countries (Chavriya et al., 2024; Vo et al., 2021).

Banks are the backbone of financial inclusion, giving them access to formal financial services, an essential requirement for economic progress. Banking institutions essentially guide financial inclusion. The banks' dedication to making inclusive financial systems is their development goal, and it stabilizes them (Ahamed & Mallick, 2019a).

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In the context of developing economies, banks' imperative role and commitment to enhancing financial inclusivity are crucial for attaining socioeconomic equity through equitable wealth distribution. Endeavors carried out by national monetary authorities and governmental bodies, exemplified by those observed in India, play a pivotal role in advancing financial inclusivity through the augmentation of banking accessibility, the extension of ATM infrastructures, and the implementation of diverse programs (Akter et al., 2021). Furthermore, embracing electronic financial services, encompassing mobile banking, emerges as a noteworthy catalyst for financial inclusivity, particularly within developing nations. Through the utilization of technology and inventive solutions, banks can effectively connect with underserved populations and familiarize them with formal financial services, consequently fostering economic advancement (Ayayi & Dout, 2024).

Financial inclusion in Pakistan presents a multifaceted challenge involving interactions with diverse segments of the economy. A confluence of elements such as agricultural advancement, economic progression, governmental strategies, socioeconomic factors, and the integration of mobile banking innovations shapes the realm of financial inclusion in Pakistan (Mansoor, 2023). Through a holistic approach to these dimensions, Pakistan has the potential to advance substantially in enhancing financial inclusion and fostering broader economic well-being. However, the current state of Pakistan is not very promising. Studies have emphasized that the level of financial inclusion in Pakistan is still relatively low, characterized by a notable proportion of adults who do not have bank accounts and a considerable percentage of individuals with accounts that are not utilized. This highlights the necessity for coordinated endeavors to tackle obstacles to financial accessibility and encourage engagement in formal financial services (Mahmood et al., 2022).

Although the positive impact of financial inclusion on economic prosperity is an established phenomenon, this can also lead to stricter competition among banks (Chauvet & Jacolin, 2017). On the other hand, literature has shown a diverse opinion about the impact of financial inclusions on bank risk, particularly in the case of developing countries (Chauvet & Jacolin, 2017; Chen et al., 2018; Frotan & Imran, 2023; Mehrotra & Yetman, 2015).

This research paper aims to measure and determine the level of the relationship between banks' performance and financial inclusion in Pakistani commercial banks. More specifically, it endeavors to comprehend the influence of broadening the availability of financial services on the financial viability of banks, particularly in terms of profitability, as well as its impact on risk exposure and risk management strategies. The goals encompass examining the association between financial inclusion and crucial profitability metrics, recognizing the consequences of financial inclusion efforts on credit risk and overall risk profiles, and assessing the contribution of financial inclusion to augmenting customer base and income diversification.

This study has many implications. After knowing the correlation between financial inclusion and risk, banking institutions can enhance their evaluation and supervision mechanisms by incorporating financial inclusion indicators into their frameworks. Furthermore, the analysis could help create specialized financial instruments for marginalized demographics, ultimately expanding market presence and fostering client commitment.

The rest of the papers are as follows: section two portrays the review of related literature, followed by methodology in Section three. Section four shows the results and discussion. The last section explains the conclusion of the study.

Literature Review

According to previous research, financial inclusion is the core way for the economy to attain inclusive growth. Also, financial inclusion is not only an economic and socioeconomic model. Financial inclusion is paramount in reducing poverty as it facilitates individuals' access to financial services, empowering them to make informed financial decisions, engage in economic activities, and manage unforeseen financial setbacks. It is widely acknowledged as a tool that contributes to promoting inclusive and sustainable economic growth, generating employment opportunities, and establishing economic parity in developing nations (Emara & Mohieldin, 2020)

Financial inclusion also gets more value for endorsing economic growth by carrying a vast unbanked population due to less financial literacy toward the formal financial system. Many researchers also conclude that financial inclusion is related to banking constancy and economic development (Boachie et al., 2021). Mobilization and circulation of monetary units are fundamental needs for the development of every economy. When attaining inclusive growth, financial inclusion is a significant policy concern for an emerging nation. (Joseph & Varghese, 2014) identify that there is an insignificant result of people with access to bank products and services is very limited, and also financial inclusion leads peoples towards social safety that protect them from economic shock, which is why there is a need for a formal financial system for increasing financial literacy and financial consulting to focus on financial inclusion.

To achieve financial inclusion, banks increase their networks through ATMs, no branches, and other sources of electronic terminals. They aim to attract customers by offering direct or indirect credit or facilitating services. Also, their goals affect banks' profitability as well as risk (Marcelin et al., 2022). In other words, the association between profitability and bank risk is direct because earning more profit will also increase bank risk (Shihadeh, 2020).

Since the day it was coined, financial inclusion has remained the research interest. The circulation supply of approved loans on usage, banking diffusion, and no ATMS or branches is used as a variable. The reason behind financial inclusion is to reduce poverty, as the World Bank suggested. The research concludes that financial inclusion significantly impacts bank performance (Vo & Nguyen, 2021).

The existing study attempts to know about the influence of financial inclusion on bank profitability in Pakistan. Prior studies have valid evidence that financial inclusion plays a role in banks generating profit and more revenue (Dash et al., 2023; Kumar et al., 2022). Increasing the services that banks offer and the number of products allowed banks to increase or attract more customers through different segments and increase their market share. Hence, the showing study assumes that increasing their customer and increasing individual customers will be predicted to increase the banks' performance in terms of profitability. Thus, increasing the financial inclusion system will impact the country's economy and bank profitability (Issaka Jajah et al., 2022). The research also assembled a hypothesis grounded on the earlier findings and the discussion beyond them:

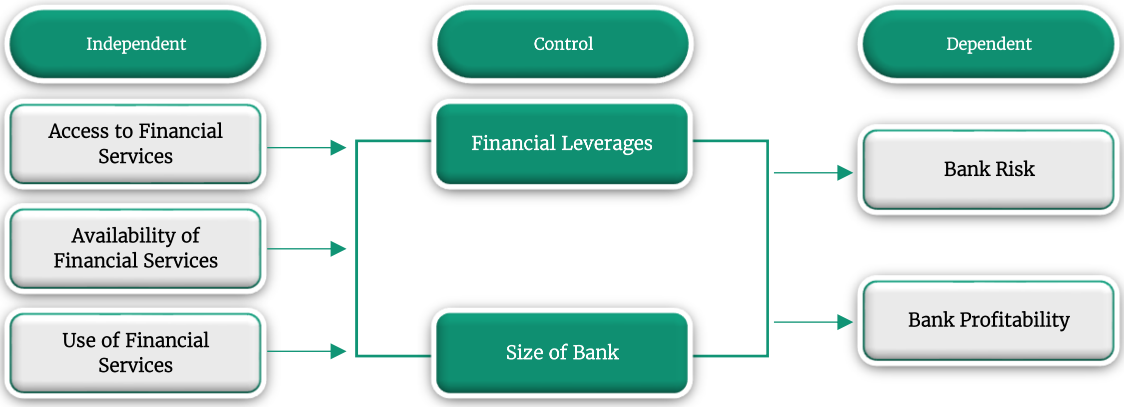
H1: *Financial inclusion positively and significantly impacts bank profitability*

The literature available implies that financial inclusion plays a critical role in bolstering bank stability through the enhancement of deposits, fortification of resilience, mitigation of risks, and contribution to the overall stability of the financial system (Banna & Alam, 2021; Danisman & Tarazi, 2020.; Wang & Luo, 2022). Scholarly investigation suggests that financial inclusion can ensure bank stability by enhancing deposits, reinforcing bank resilience, and mitigating risks within the banking sector (Banna & Alam, 2021; Saha et al., 2023). Studies have pointed out that financial inclusion can result in a premium market value for financial institutions, risk mitigation, and financial system stability enhancement (Ahamed & Mallick, 2019b; Hakimi et al., 2022; Nguyen & Du, 2022). Based on research, this study also hypothesized that

H2: *Financial inclusion positively and significantly influences banks' risk.*

Figure 1

Theoretical model



Methodology

Data

To analyze the impact of Financial Inclusion on banks' stability and profitability, this research has taken a sample of commercial banks listed on the Pakistan Stock Exchange (PSX) and regulated by the State Bank of Pakistan (SBP). However, the foreign and specialized banks were excluded from the sample because of the difference in their regulations. The final sample consists of 25 banks, including public sector and domestic private banks. This research used panel data for five years (05), i.e., from 2018 to 2022. The data was extracted from the financial statement analysis issued by the State Bank of Pakistan or the bank's annual reports.

Variables

This research aims to determine the correlation between firms' profitability and stability with financial inclusion. The research also uses financial leverage and bank size as the control variables, as these may affect the profitability and stability of the banks despite the change in financial Inclusion.

Tobin Q is used to gauge profitability. It is a well-established proxy to assess the firm's performance and profitability. Tobin's Q encompasses more than just evaluating profitability; it also pertains to assessing firm value and market performance (Alomari & Aladi, 2024; Bhattacharyya & Khan, 2023; Nepali, 2023).

Non-performing loans to shareholder equity measured bank risk. It is a financial ratio predominantly used in the banking and financial sectors to evaluate the credit risk of a financial institution compared to its equity base. It measures a bank's capability to shield its possible losses from bank risk (Cucinelli, 2015)

Financial Inclusion is a multidimensional variable and encompasses different elements (Helmy, 2024). This research has used three proxies to determine the level of financial inclusion, which includes Access to Financial Services (AFS), availability of financial Services (SFS), and Use of Financial Services (UFS).

Access to financial services (AFS) is vital for the obtainability of inclusive financial system services. It is reflected through the number of branches available by banks, as branches promote financial inclusion by providing geographic accessibility, especially in underserved or rustic areas, and progress geographic convenience to banking facilities. Furthermore, bank branches also facilitate customer interaction for those people who are not familiar with digital banking (Athanasius Fomum & Opperman, 2023).

Secondly, the availability of financial services (SFS) ensures the availability of financial services and the delivery of appropriate adequate credit that is requisite by targeted communities based on poorer sections and low-income streamers. Ultimately, affordable access to banking services and lower charges on debit cards will contribute to this by inspiring more extensive acceptance of banking facilities among earlier underserved populaces (Mhlanga, 2021). Also, the charges for these services are inexpensive (Dienillah et al., 2018).

Thirdly, the Use of Financial Services (UFS) measures the force that remains ambitious through the under-banked or marginally-banked idea (Kempson et al., 2004). Some countries have a smooth banking industry, but numerous customers do not mark usage of these services even though they own bank accounts.

Model

This research uses the regression model to test the financial inclusion indicator's impact on profitability and bank risk for Pakistani commercial banks. Regression analysis is a crucial statistical technique implemented across diverse disciplines, including management sciences, environmental science, and social studies, and it is aimed at examining correlations among variables and forecasting outcomes through the analysis of empirical data. (Brooks, 2008; Gujarati, 2012). Before employing regression, an Augmented Ducky Filler test was done to check the stationary of data. The concept of stationarity plays a fundamental role in financial analysis by guaranteeing that the statistical characteristics of the data persist consistently with time (Brooks, 2008). The primary regression equation is as follows:

$Y_{it} = \alpha + \beta X_{it} + \mu_{it}$ ---------------- eq (i)

Y shows the dependent variable; *i* represents the component; t represents time; X represents the independent variable, while μ shows the random error term (Gujarati, 2012). This research tests the financial inclusion indicator impact on profitability and bank risk of Pakistani commercial banks by using the multilinear regression model as follows:

$$TQ_t = \alpha_0 + \beta_1 AFS_{it} + \beta_2 SFS_{it} + \beta_3 UFS_{it} + \beta_5 L_{it} + \beta_6 S_{it} + \mu_{it} \quad \text{------------------eq (ii)}$$

$$NPL_t = \alpha_0 + \beta_1 AFS_{it} + \beta_2 SFS_{it} + \beta_3 UFS_{it} + \beta_5 L_{it} + \beta_6 S_{it} + \mu_{it} \quad \text{---------------- eq (iii)}$$

In the above equation, TQ represents the dependent variable, which is profitability, where NPL shows Non-performing Loans which assess bank risk, AFS represents the availability of financial services, SFS shows access to financial services, UFS indicates uses of financial services, L signifies the financial leverage, and it plays a role of the control variable, S represents the size of commercial banks in Pakistan, and it also plays a role of control variable and lastly, its express error term.

The panel time data is used, which involves the features of cross-sectional and time series data in a method described explicitly by reflection of the individual and time factor throughout the regression estimation. This research follows both descriptive statistics and regression analysis to reach some conclusions.

Results

This study investigates the effects of financial inclusion on the performance and bank risk of commercial banks in Pakistan from 2018-2022. Before the regression analysis, a stationary test was performed on the model's variables to identify stability through the Augmented Dickey-Fuller (ADF) test, as unstable time series data might clue toward incorrect results of the regression. Table I shows the results of the unit root test. All variables remained unstationary on level, except profit. However, variables are stationary at the 1^{st} difference.

Table 1

Unit root test results (ADF)

	Level	1^{st} difference
PROFIT	0.0312	-
BR	0.1434	0.028
AFS	0.9994	0
SFS	1	0.0018
UFS	0.8969	0.001
SIZE	0.9637	0.001
FL	0.9103	0.0392

To further evaluate the appropriateness of the data for regression analysis, multicollinearity, a high correlation between predictor variables, was assessed because multicollinearity can cause biased coefficient estimations and erroneous predictions in regression models(O'Brien, 2007). Table II shows the results of Pearson's correlation. None of the variables shows a correlation greater than 0.7. Hence, the regression equation can depict unbiased results.

Table 2

Correlation Matrix

	PROFIT	BR	AFS	SFS	UFS	SIZE	FL
PROFIT	1						
BR	0.0509	1					
AFS	0.2469	0.1018	1				
SFS	0.0753	0.1221	0.2036	1			
UFS	0.2048	0.0500	0.2863	0.0571	1		
SIZE	0.0723	0.2166	0.2494	0.0394	0.4116	1	
FL	0.3094	0.5778	0.0436	0.0516	0.1140	0.21388	1

Multivariate Analysis

Tables III and IV show the regression analysis of financial Inclusion with Bank Profitability and Bank risk, respectively.

In Table III, Bank Profitability, which Tobin's Q gauges, is taken as the dependent variable, whereas Financial Inclusion as denoted by three variables (AFS, SFS, UFS), bank Size (Size), and Financial Leverage (FL) are taken as independent variables. Results show that Access to Financial Services (AFS) and Use of Financial Services (UFS) are positively weakly significant with a p-value of 0.0504 and 0.0934, respectively. In contrast, Financial leverage is strongly and weakly significant, with a p-value of 0.0004. The results denote that bank profitability increases as the financial inclusion practiced by the banks increases. At the same time, an increase in financial leverage negatively impacts banks' profitability.

The relationship between Bank risk and Financial Inclusion in Pakistan can be observed in Table IV, where Non-performing loan, a risk proxy, is taken as the dependent variable. Regression results show that access to financial services (AFS) is weakly positively significant to bank risk (p-value 0.046), which implies that access to financial services may increase the bank risk exposure. However, the other two dimensions of financial inclusion, including the availability and use of financial services, remained uncorrelated with bank risk in Pakistan. However, results show an enormously significant impact of financial leverage and bank size on bank risk. With a coefficient of -0.051342, bank size is negatively related, showing that an increase in the size of a bank decreases the risk. On the other hand, financial leverage is positively related, implying that the higher the leverage, the riskier the bank would be.

Table 3

Financial inclusion and banks' profitability

Variable	Coefficient	Prob.
C	-0.088086	0.1948
AFS	0.00184	0.0504
SFS	8.24E-05	0.6576
UFS	0.772942	0.0934
SIZE	0.074083	0.8273
FL	-0.002408	0.0004
R-squared	0.196427	
Adjusted R-squared	0.153684	

Table 4

Financial inclusion and banks' risk

Variable	Coefficient	Prob.
C	0.001439	0.5074
AFS	6.01E-05	0.0461
SFS	5.67E-06	0.3422
UFS	-0.002185	0.8815
SIZE	-0.051342	0.000
FL	0.000183	0.000
R-squared	0.488399	
Adjusted R-squared	0.461186	

Discussion

In today's development era, financial inclusion is a significant phenomenon that leads to financial inclusiveness and inclusive economic growth in a country (Ozili et al., 2023). This paper attempts to identify the part of Financial Inclusion in the Banking Industry. The study was conducted off Pakistani commercial banks by collecting the data for the variables from valid data sources, as mentioned in the above section. The data is analyzed through regression analysis. Findings reveal that the number of branches has significantly impacted return on equity, a determinant of a bank's profitability. These results supported previous research papers (Chen et al., 2018; Kumar et al., 2022; Shihadeh & Liu, 2019). At the same time, the Bank Charges and deposit size are weakly significant to the bank's profitability, similar to the prior research study (Kumar et al., 2022). While the size is weakly significant, Financial leverage showed significance concerning the bank's profitability.

The second dependent variable, bank risk, which is proxied by non-performing loans, is significantly impacted by the number of branches and ATM charges. These outcomes support prior research studies (Hakimi et al., 2022; Shihadeh & Liu, 2019). While the usage of financial services is weakly significant in terms of bank risk, this finding is similar to the previous research article (Pham & Doan, 2020).

Conclusion

To summarise, this study highlights the crucial importance of financial inclusion in promoting economic advancement, namely by influencing the performance and risk of banks. The analysis of Pakistani commercial listed banks over five years has uncovered an intricate correlation between financial inclusion, profitability, and risk. Financial inclusion has a favorable impact on the profitability of banks, but it also brings up extra risk considerations. This emphasizes the significance of policy synergies that aim to promote both financial inclusion and sustainability simultaneously. Furthermore, it is crucial to tackle problems such as financial inefficiency and the absence of authentic documentation as financial inclusion continues to grow. To achieve comprehensive economic growth, policymakers, regulators, and banking institutions must work together to find a middle ground between increasing financial access and reducing potential risks. This collaboration will result in inclusive and robust financial systems.

Moving forward, policymakers and financial institutions should prioritize designing customer-friendly banking practices and products to promote financial inclusion while mitigating bank risk. Additionally, efforts to encourage investment in financial products and streamline documentation processes are crucial for enhancing financial inclusion and bolstering bank profitability and stability. Understanding the interplay between financial inclusion, bank performance, and risk is essential for advancing the economic landscape and ensuring Pakistan's banking sector's resilience.

Limitations

This research paper included two dependent variables and one independent variable, with a data period of five years. Future studies can be done on large data sizes. A comparative analysis can also be conducted by comparing financial inclusion in conventional and Islamic banks. Meanwhile, future researchers may use the same methodology for this research paper for the state-wise study in Pakistan, which may accentuate the significance of several factors of financial inclusion by examining the bank's services. This will encourage banks to maintain relevant and precise strategies to elevate Financial Inclusion in the states. Furthermore, future research can also study consumer perceptions towards financial inclusion and financial literacy.

References

Ahamed, M. M., & Mallick, S. K. (2019a). Is financial inclusion good for bank stability? International evidence. *Journal of Economic Behavior & Organization*, *157*, 403–427. https://doi.org/10.1016/j.jebo.2017.07.027

Ahamed, M. M., & Mallick, S. K. (2019b). Is financial inclusion good for bank stability? International evidence. *Journal of Economic Behavior & Organization*, *157*, 403–427. https://doi.org/10.1016/j.jebo.2017.07.027

Akter, U., Anwar, S. M. R., Mustafa, R., & Ali, Z. (2021). Revisiting the Impact of Mobile Banking in Financial Inclusion Among the Developing Countries. *International Journal of Financial Research*, *12*(2), 62. https://doi.org/10.5430/ijfr.v12n2p62

Alomari, M., & Aladi, I. (2024). Financial inclusion and market-based performance: Empirical evidence from Syrian banks. *Journal of Financial Economic Policy*, *16*(1), 60–79. https://doi.org/10.1108/JFEP-05-2023-0114

Anthanasius Fomum, T., & Opperman, P. (2023). Financial inclusion and performance of MSMEs in Eswatini. *International Journal of Social Economics*, *50*(11), 1551–1567. https://doi.org/10.1108/IJSE-10-2020-0689

Ayayi, A. G., & Dout, H. (2024). The dynamics of the financial inclusion index for developing countries: Lessons learned. *Journal of Financial Economic Policy*, *16*(3), 383–403. https://doi.org/10.1108/JFEP-01-2023-0029

Banna, H., & Alam, M. R. (2021). Impact of digital financial inclusion on ASEAN banking stability: Implications for the post-Covid-19 era. *Studies in Economics and Finance*, *38*(2), 504–523. https://doi.org/10.1108/SEF-09-2020-0388

Bhattacharyya, A., & Khan, M. (2023). Financial inclusion, corporate social responsibility, and firm performance – analysis of interactive relationship. *Meditari Accountancy Research*, *31*(2), 417–440. https://doi.org/10.1108/MEDAR-12-2020-1121

Boachie, R., Aawaar, G., & Domeher, D. (2021). Relationship between financial inclusion, banking stability, and economic growth: A dynamic panel approach. *Journal of Economic and Administrative Sciences*, *39*(3), 655–670. https://doi.org/10.1108/JEAS-05-2021-0084

Brooks, C. (2008). *Introductory Econometrics for Finance* (2nd ed.). Cambridge University Press. https://doi.org/10.1017/CBO9780511841644

Chauvet, L., & Jacolin, L. (2017). Financial Inclusion, Bank Concentration, and Firm Performance. *World Development*, *97*, 1–13. https://doi.org/10.1016/j.worlddev.2017.03.018

Chavriya, S., Sharma, G. D., & Mahendru, M. (2024). Financial inclusion as a tool for sustainable macroeconomic growth: An integrative analysis. *Annals of Public and Cooperative Economics*, *95*(2), 527–551. https://doi.org/10.1111/apce.12427

Chen, F.-W., Feng, Y., & Wang, W. (2018). Impacts of Financial Inclusion on Non-Performing Loans of Commercial Banks: Evidence from China. *Sustainability*, *10*(9), Article 9. https://doi.org/10.3390/su10093084

Cucinelli, D. (2015). The Impact of Non-performing Loans on Bank Lending Behavior: Evidence from the Italian Banking Sector. *Eurasian Journal of Business and Economics*, *8*(16), 59–71. https://doi.org/10.17015/ejbe.2015.016.04

Danisman, G. O., & Tarazi, A. (2020). Financial inclusion and bank stability: evidence from Europe. *European Journal of Finance*, *26*(18), 1842–1855. https://doi.org/10.1080/1351847x.2020.1782958

Dash, S. R., Sethi, M., & Swain, R. K. (2023). Financial condition, working capital policy, and profitability: Evidence from Indian companies. *Journal of Indian Business Research*, *15*(3), 318–355. https://doi.org/10.1108/JIBR-12-2020-0378

Dienillah, A. A., Anggraeni, L., & Sahara, S. (2018). Impact of Financial Inclusion on Financial Stability Based on Income Group Countries. *Buletin Ekonomi Moneter Dan Perbankan*, *20*(4), 397–410. https://doi.org/10.21098/bemp.v20i4.859

Emara, N., & Mohieldin, M. (2020). Financial inclusion and extreme poverty in the MENA region: A gap analysis approach. *Review of Economics and Political Science*, *5*(3), 207–230. https://doi.org/10.1108/REPS-03-2020-0041

Frotan, Z., & Imran, M. (2023). Impact of Finacial Inclusion on Banks Credit Risk in Afghanistan: Empirical Evidence from Afghanistan's Banking Sector. *Kardan Journal of Economics and Management Sciences*,6(1), 1-16. https://doi.org/10.31841/KJEMS.2023.132

Gujarati, D. N. (2012). *Econometrics by example* (Nachdr.). Palgrave Macmillan.

Hakimi, A., Boussaada, R., & Karmani, M. (2022). Are financial inclusion and bank stability friends or enemies? Evidence from MENA banks. *Applied Economics*, *54*(21), 2473–2489. https://doi.org/10.1080/00036846.2021.1992342

Helmy, A. (2024). The Mutual Interdependence between Financial Inclusion and Human Development and Their Effects on Economic Development. Comparative Study between Egypt and The BRICS Countries. *Arab Journal of Administration,* 44(2), 319-33 6. https://doi.org/10.21608/aja.2021.65317.1057

Issaka Jajah, Y., Anarfo, E. B., & Aveh, F. K. (2022). Financial inclusion and bank profitability in SUB-SAHARAN Africa. *International Journal of Finance & Economics*, 27(1), 32–44. https://doi.org/10.1002/ijfe.2135

Joseph, J., & Varghese, T. (2014). Role of Financial Inclusion in the Development of Indian Economy. *Journal of Economics and Sustainable Development*, *5*, 6-11. https://core.ac.uk/reader/234646410

Kempson, E., Atkinson, A., & Pilley, O. (2004). *Policy Level Response to Financial Exclusion in Developed Economies: Lessons for Developing Countries*. University of Bristol.

Kumar, V., Thrikawala, S., & Acharya, S. (2022). Financial inclusion and bank profitability: Evidence from a developed market. *Global Finance Journal*, *53*, 100609. https://doi.org/10.1016/j.gfj.2021.100609

Mahmood, S., Shuhui, W., Aslam, S., & Ahmed, T. (2022). The Financial Inclusion Development and Its Impacts on Disposable Income. *SAGE Open*, *12*(2), 215824402210933. https://doi.org/10.1177/21582440221093369

Mansoor, I. (2023). Socioeconomic Factors of Mobile Money in Pakistan. *Global Economics Science, 4*(2), 49–58. https://doi.org/10.37256/ges.4220231366

Marcelin, I., Sun, W., Teclezion, M., & Junarsin, E. (2022). Financial inclusion and bank risk-taking: The effect of information sharing. *Finance Research Letters*, *50*, 103182. https://doi.org/10.1016/j.frl.2022.103182

Mehrotra, A. N., & Yetman, J. (2015). Financial Inclusion—Issues for Central Banks. *BIS Quarterly Review*, 83-96. https://www.bis.org/publ/qtrpdf/r_qt1503h.pdf

Mhlanga, D. (2021). Financial Inclusion in Emerging Economies: The Application of Machine Learning and Artificial Intelligence in Credit Risk Assessment. *International Journal of Financial Studies*, *9*(3), 39. https://doi.org/10.3390/ijfs9030039

Nepali, S. R. (2023). Does Corporate Governance Matter for Bank Performance and Risk-taking?: Insights from the Nepalese Banking Industry. *Finance & Economics Review*, 4(2), 47–60. https://doi.org/10.38157/fer.v4i2.491

Nguyen, T. D., & Du, Q. L. T. (2022). The effect of financial inclusion on bank stability: Evidence from ASEAN. *Cogent Economics & Finance*, *10*(1), 2040126. https://doi.org/10.1080/23322039.2022.2040126

O'Brien, R. M. (2007). A Caution Regarding Rules of Thumb for Variance Inflation Factors. *Quality & Quantity*, *41*(5), 673–690. https://doi.org/10.1007/s11135-006-9018-6

Omar, M. A., & Inaba, K. (2020). Does financial inclusion reduce poverty and income inequality in developing countries? A panel data analysis. *Journal of Economic Structures*, *9*(1), 37. https://doi.org/10.1186/s40008-020-00214-4

Ozili, P. K., Ademiju, A., & Rachid, S. (2023). Impact of financial inclusion on economic growth: Review of existing literature and directions for future research. *International Journal of Social Economics*, *50*(8), 1105–1122. https://doi.org/10.1108/IJSE-05-2022-0339

Pham, M. H., & Doan, T. P. L. (2020). The Impact of Financial Inclusion on Financial Stability in Asian Countries. *The Journal of Asian Finance, Economics and Business*, 7(6), 47–59. https://doi.org/10.13106/JAFEB.2020.VOL7.NO6.047

Rao, N. S., & Bhatnagar, M. H. (2012). Financial Inclusion: Issues and Prospects. *Pacific Business Review International, 5*(3), 84-96. http://www.pbr.co.in/2012/2012_month/Sep/8.pdf

Saha, S. K., Qin, J., & Inaba, K. (2023). The impact of financial inclusion on economic growth in developing countries. *Journal of Accounting, Business and Finance Research*, *16*(1), 12–29. https://doi.org/10.55217/102.v16i1.607

Shihadeh, F. (2020). The influence of financial inclusion on banks' performance and risk: New evidence from MENAP. *Banks and Bank Systems*, *15*(1), 59–71. https://doi.org/10.21511/bbs.15(1).2020.07

Shihadeh, F., & Liu, B. (2019). Does Financial Inclusion Influence the Banks Risk and Performance? Evidence from Global Prospects. *Academy of Accounting and Financial Studies Journal*, *23*(3). 1-12. https://www.abacademies.org/abstract

Vo, D. H., & Nguyen, N. T. (2021). Does financial inclusion improve bank performance in the Asian region? *Asian-Pacific Economic Literature*, *35*(2), 123–135. https://doi.org/10.1111/apel.12330

Vo, D. H., Nguyen, N. T., & Thi-Hong Van, L. (2021). Financial inclusion and stability in the Asian region using bank-level data. *Borsa Istanbul Review*, *21*(1), 36–43. https://doi.org/10.1016/j.bir.2020.06.003

Wang, R., & Luo, H. (Robin). (2022). How does financial inclusion affect bank stability in emerging economies? *Emerging Markets Review*, *51*, 100876. https://doi.org/10.1016/j.ememar.2021.100876