

Exploring the Relationship between Financial Literacy, Banking Services and Economic Growth: An Empirical Study in Karnataka

Philomena Sylvia R. Rosario*, Manikya A. Bidikar**, Smita Nadiger***, Gangadhar S. Sheeri****

Abstract

This empirical study investigates the intricate relationship between financial literacy and economic growth in the context of Karnataka, India. The objectives of the research are to examine the extent to which financial literacy levels impact economic growth in the region, identify key factors influencing financial literacy and provide insights for policymakers and stakeholders to enhance financial education programs. The study employs quantitative research methods and utilises statistical tools such as regression analysis to analyse the data collected through surveys and secondary sources. The methodology involves assessing financial literacy levels among different demographic groups, correlating these levels with economic indicators and exploring the mediating factors that contribute to the observed relationships. Preliminary findings indicate a significant positive correlation between higher financial literacy levels and economic growth. The research aims to contribute valuable insights to policymakers, educators and financial institutions, guiding the design of targeted financial literacy initiatives that can potentially fuel economic development in Karnataka.

Keywords: Financial Literacy, Economic Growth, Financial Education, Financial Inclusion

Introduction

Financial literacy is the capacity to understand and use numerous financial concepts and instruments. It includes

information and abilities for managing personal finances, such as budgeting, saving, investing, borrowing and understanding financial hazards. Financial literacy is closely tied to retirement planning and retirement wealth accumulation. But a lot of people frequently have a terrible lack of understanding of fundamental finance and economics, which can cause them to make costly and frequently permanent errors (Lusardi & Mitchell, 2011). Financial literacy is also the combination of consumers' or investors' understanding of financial products and concepts, as well as their ability and confidence to appreciate financial risks and opportunities, make informed decisions, know where to go for help and take other effective actions to improve their financial well-being (Abdullah & Chong, 2014).

Developments in education sector have proven to have a positive impact on a society's economic growth, as increasing individuals' educational levels improves human capital, which increases worker productivity and translates into an increase in economic output (Paşa et al., 2022). Financial education refers to learning the fundamental ideas of finance, which allows households to make financial decisions to limit the risks posed by changes in economic situations and circumstances. This is to state that financial education is about knowing how to manage money in order to reduce financial vulnerability by not overspending or incurring debt (Paşa et al., 2022). There is on-going disagreement over the importance of financial literacy, the scope of the issue and the most effective solutions. This disagreement develops for a variety of reasons:

* III Sem MBA, KLE Institute of Management Studies & Research, Hubli, Karnataka, India.

** III Sem MBA, KLE Institute of Management studies & Research, Hubli, Karnataka, India.

*** Assistant Professor, KLE Institute of Management studies & Research, Hubli, Karnataka, India.
Email: smita.21nadiger@gmail.com

**** Assistant Professor, KLE Institute of Management Studies & Research, Hubli, Karnataka, India.

First, there are significant knowledge gaps about the fundamental links between literacy. Few research have successfully shown causal linkages between financial education, literacy and economic behaviour (Hung et al., 2009). The primary objective of this study is to explore and analyse the relationship between financial literacy and economic growth, with a focus on Karnataka, India. The study's empirical research aims to uncover the impact of financial literacy on various indicators of regional economic growth, providing valuable insights for policymakers, educators and stakeholders looking to improve financial literacy initiatives and foster long-term economic development. Banking services are critical in places such as Karnataka for supporting economic development and financial inclusion. With a broad economy that includes agriculture, technology and manufacturing, Karnataka's banking sector provides a lifeline for both individuals and businesses. Accessible financial services help farmers access loans for agricultural purposes, entrepreneurs fund start-ups and households manage their savings and investments. Furthermore, the growing number of digital banking platforms has transformed access to financial services, particularly in rural areas, by enabling quick transactions and increasing financial literacy. As Karnataka continues to develop as a hub of innovation and trade, strong banking services are critical to driving its growth and guaranteeing equal access to financial resources across diverse communities. Economic growth is the rise in the production of products and services within an economy over a given time period. It is generally assessed as an increase in Gross Domestic Product (GDP), which is the total value of all products and services generated inside a country's borders. Economic growth is an important indication of a country's success and progress, indicating increases in living standards, job possibilities and overall well-being. Technological improvements, infrastructural investments, innovation, education and solid fiscal policies all help to drive economic growth. The use of quantitative research is to assess the direct influence of banking services on economic growth parameters such as GDP, employment rates and investment levels in Karnataka. This study will look into how increasing access to banking services, particularly in rural and underserved areas of Karnataka, connects with increased economic growth and development.

Objectives of the Study

- Determine the extent to which financial literacy levels influence economic growth in Karnataka.

- Identify important factors impacting financial literacy levels in the region.
- To understand the mediating factors that influences the relationship between financial literacy and economic growth in Karnataka.

Literature Review

Financial Literacy

The ability of consumers to make informed financial decisions improves their ability to develop sound personal finance. Recent research has revealed that financial literacy is a significant predictor of household financial behaviour. Improving financial literacy can also be a key component of initiatives to raise savings rates and lending to the poorest and most vulnerable consumers (Klapper et al., 2013). Financial education is a strategy for increasing individuals' Financial Literacy (FL) levels. Furthermore, individuals should learn how to preserve their personal resources and respond to ever-changing economic circumstances, thereby contributing to their country's economic success. In this aspect, employees are finding it more difficult than ever before to maintain a consistent working income (Klapper et al., 2013). Financial behaviour and the financial attitude of individuals help determine their financial decisions in terms of financial management, personal financial budgeting or how individuals decide investment strategies. Prior research demonstrates that financial attitude positively affects financial literacy, financial planning and a higher tendency to save (Gerth et al., 2021). Financial literacy has become increasingly important for several reasons, including increases in requirements for individual retirement planning, the greater availability of financial products to the general public, the development of the gig economy and advances in financial technology (Callis et al., 2023). Financial literacy is an essential skill for making savvy financial decisions, understanding the world around us and being a good citizen. Changes in the pension system, the increasing complexity of financial instruments (including new instruments such as crypto assets), inflation and increased risks (from the war in Ukraine to climate change) are some of the reasons behind the increasingly urgent need for individuals to have the knowledge and skills that will increase their financial resilience and well-being (Lusardi & Messy, 2023).

Moreover, financial literacy creates resilience against financial traps such as debt and fraud, as well as a culture of saving and investing for long-term success. In an increasingly complicated financial landscape, improving financial literacy is critical for promoting financial well-being and maintaining inclusive economic growth.

Banking Services

Today, essentially all banking services are computerised for reasons of speed, accuracy and economy. Individual users of retail bank services created and self-provided computerised versions of these services before banks or other types of service producers offered them (Oliveira & Von Hippel, 2011). The net banking, thus, now is more of a norm rather than an exception in many developed countries due to the fact that it is the cheapest way of providing banking services. In real Internet banking, any query or transaction is performed online at any time, without the need to visit a branch. Internet banking is becoming more of a “need to have” than a “nice to have” service (Vyas, 2012). The digital age and the introduction of financial technology have made it possible to access a wide range of financial products and services with the click of a mouse. However, little study has been conducted to date on the relationship between the use of these new technology and financial literacy. This study studies the level and antecedents of financial literacy, as well as its impact on i-banking behaviour (Andreou & Anyfantaki, 2021). Banks have no choice but the digital transformation to survive in the competition. One of the components of digital transformation is the transformation of banking products and services (Hanafizadeh & Amin, 2023). Financial inclusion involves providing suitable products and services to meet transactional, payment, savings, credit and insurance needs. While India has progressed in financial inclusion, challenges persist in low-income regions and among marginalised groups (Kumar, 2023).

Economic Growth

Economic growth is an issue that, as Robert Lucas (1988, p. 5) points out: “Once one starts to think about [economic growth], it is hard to think about anything else” (Xepapadeas, 2005). A long-term positive shock in financial development boosts the economy (coefficient value 1.08 at 5% significance level) and negative shock hampers the economic performance (coefficient value -1.09 at 5% significance level). The asymmetric causality

test result confirms bi-directional causality between technological development and economic growth and unidirectional causality from negative economic growth to negative technological development and bi-directional causality between economic growth and financial development, unidirectional negative financial development to economic growth (Hanafizadeh & Amin, 2023). In general terms that the variables such as money supply, gross capital, domestic or monetary sectorial loans given by the banks to the private sector or the financial development index variable that is composed of combination of some of these is used to represent the financial development; total foreign trade, export, import or the trade openness as their rate to GDP is used to represent foreign trade, and the GDP variable is used to represent economic growth (Öncel et al., 2024).

Financial Literacy to Banking Services

Electronic banking technology has expanded in recent years and the availability of a diverse variety of products has resulted in increased customer adoption. These technologies include direct deposit, computer banking, stored value cards and debit cards. Banks and other financial organisations have worked hard to develop and implement these technologies because they have the potential to improve efficiency, reduce costs and attract new consumers. Consumers are drawn to these technologies because they provide convenience, increased simplicity of use and in some cases, cost savings (Anguelov et al. 2004). Electronic banking, in particular, has evolved at an amazing pace. From 1995 to 2003, e-banking expanded eightfold (Servon & Kaestner, 2008). Knowledge regarding financial services is one of the most influential forces to promote inclusive finance. It also has a significant contribution to developing financial communication capabilities (Hasan et al., 2021).

Banking Services to Economic growth

To gain a better understanding of how credit facilities affect business expansion and employment creation in Karnataka by investigating the relationship between access to banking and economic growth. However, there are differences over how financial sector growth should be sequenced in developing nations, specifically the relative importance of domestic banks and capital markets and when developing the banking sector, the

relative relevance of large and small banks (Zhuang et al., 2009). Policies on financial inclusion have attracted great attention from scholars, policymakers and regulators, as financial inclusion has theoretically been acknowledged to have positive effect on economic growth. A stronger relationship is found for countries with low income and a lower degree of financial inclusion (Van et al., 2021). Financial inclusiveness plays important role in the economy as it facilitates positive wealth creation and sustainable economic growth. The significance of financial inclusion in promoting economic growth is theoretically and empirically recognised. The provision of adequate and affordable financial services such as savings, credits and payment to the underserved could increase business opportunities, expand investments and significantly contribute to economic growth (Ifediora et al., 2022).

Financial Literacy to Banking Services to Economic Growth

Banking sector openness may directly increase growth by improving the quality of financial services and increasing the availability of funds or indirectly by improving the efficiency of financial intermediaries, both of which may lower financing costs, thereby increasing capital accumulation and economic growth (Bayraktar & Wang, 2008). Despite a substantial amount of research

on financial literacy, an in-depth examination of the relationship between financial literacy and consumer use of digital financial services such as i-banking remains a significant gap in the literature (Andreou & Anyfantaki, 2021). In finance, the emergence of new financial technologies (Fintech), such as electronic money, mobile money, digital banking, crowdfunding platforms and distributed ledger technology, is changing the financial landscape in unprecedented ways. Mobile money refers to the financial services provided through mobile phones, allowing for the transfer, making and receiving of payments (Mashamba & Gani, 2023). For better financial inclusion and participation, the government should play a proactive role in ensuring essential awareness about new banking products and services. Financial inclusion encompasses the accessibility to a range of financial services, including formal bank accounts, savings options, credit facilities, insurance, pensions and mobile payment services (Musa et al., 2024).

The study, which links financial literacy, banking services and economic growth in Karnataka, seeks to explore how higher levels of financial literacy contribute to increasing use of banking services, hence supporting economic growth. By examining the relationship between financial literacy and banking service uptake, we hope to find processes by which improved financial literacy leads to increased involvement with banking goods and services.

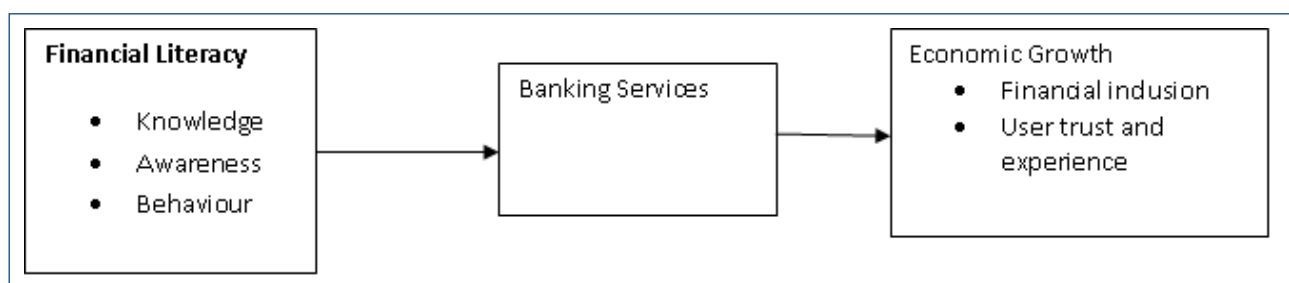


Fig. 1: Proposed Conceptual Model

Hypothesis:

H1: Financial literacy positively influence on Banking services.

H2: Banking services positively influence on Economic Growth.

H3: Financial Literacy positively influence on Economic Growth.

Based on the above theoretical model the following measurement items were developed as shown in Table 1.

Table 1: Measurement Instrument

<i>Constructs</i>	<i>Variables</i>	<i>Code</i>	<i>Items</i>
Financial Literacy	(Knowledge, Awareness & Behaviour)	FL1	We are able to routinely review our financial performance.
		FL2	Every month, my company creates income statements.
		FL3	This company's management is able to calculate the cost of its loan capital.
		FL4	The company is aware of the paperwork needed to obtain a bank loan in order to meet our financial obligations.
		FL5	I understand the advantages and disadvantages of obtaining credit.
		FL6	The company can accurately compute interest rates and loan payments.
		FL7	We possess the necessary abilities to evaluate the company's financial prospects. We are adept at reducing losses by reducing bad debts.
		FL8	Our expertise lies on reducing losses through the reduction of bad debts.
Banking Services	Efficiency		Banking services are easy to use, efficient and well organized.
	Privacy and security	BS1	Banking service provides protection of personal and financial data and enables secure transactions.
	System availability	BS2	Consumers can access and carry out banking services when needed with no availability issues.
	Fulfilment	BS3	Banking services are delivered as promised and fulfil consumer demands and expectations.
Economic Growth (EG)		EG1	I actively seek out opportunities to integrate fintech solutions into my daily financial routines.
		EG2	The adoption of fintech is an integral part of staying current with technological trends.
		EG3	I consider technology adoption to be a key factor in optimizing my financial interactions and decisions.

Research Design

The research methodology used for studying the FL is survey method where customers of financial Institutions (Banks) are respondents who respond to the standardised questionnaires. These questionnaires used the above mentioned measurement items about the factors such as FL that impacts on Banking Performance and influences the economic growth. Surveys through questionnaires provide quantitative data that would be analysed using Smart PLS. A structured questionnaire was used that covered all the aspects of Fintech adoption, usage patterns, user perceptions and satisfaction using Likert scales, multiple-choice questions, to capture quantitative data. The survey was distributed online, targeting individuals who use or have experienced with Banking services and who wanted have banking services.

Data Collection and Data Analysis

The research utilised a standardised questionnaire to collect data, engaging 300 investors in the survey.

Statistical methods, including descriptive statistics, Pearson's correlation and Cronbach alpha, were applied for data analysis and the study employed Smart PLS3 in the model-building process to establish a comprehensive understanding of the relationships among variables, conducting multiple phases of data evaluation as outlined by Nadiger et al. (2023). Variables and the financial literacy were examined by analysing descriptive statistical findings obtained from 300 surveys, as highlighted by Hiremath et al. (2023).

Results and Discussion

There is a strong positive correlation of 0.884 between Banking Services and Economic Growth. This suggests that as the utilisation of banking services increases, there is a concurrent positive impact on economic growth, and vice versa. There is a very strong positive correlation of 0.915 between banking services and FL. This implies that higher levels of financial literacy are associated with increased utilisation of banking services and conversely, a greater use of banking services is associated with higher

FL. There is a very strong positive correlation of 0.913 between economic growth and FL. This indicates that as

FL levels rise, there is a corresponding positive impact on economic growth and vice versa.

Table 2: Pearson Correlation

	<i>BANKING SERVICES</i>	<i>EECONOMIC GROWTH</i>	<i>FINANCIAL LITERACY</i>
<i>BANKING SERVICES</i>	1	0.884	0.915
<i>EECONOMIC GROWTH</i>	0.884	1	0.913
<i>FINANCIAL LITERACY</i>	0.915	0.913	1

Scale Reliability and Validity-Findings

High Cronbach's alpha (0.947) indicates a strong internal consistency among items measuring Banking Services. Both forms of composite reliability (ρ_a and ρ_c) are high (0.951 and 0.966, respectively), suggesting that the measurement model for banking services is reliable. AVE of 0.904 indicates that a substantial proportion of the variance in the observed variables is captured by the underlying construct, supporting the convergent validity of the measurement model. Cronbach's alpha of 0.886 suggests good internal consistency for items measuring

economic growth. Both forms of composite reliability (ρ_a and ρ_c) are high (0.892 and 0.93, respectively), indicating a reliable measurement model. AVE of 0.815 signifies good convergent validity, implying that the observed variables effectively measure the underlying construct of economic growth. High Cronbach's alpha (0.952) suggests strong internal consistency for items related to FL. Both forms of composite reliability (ρ_a and ρ_c) are high (0.962 and 0.96, respectively), indicating a reliable measurement model. AVE of 0.749 indicates acceptable convergent validity, suggesting that the observed variables effectively represent the latent construct of FL.

Table 3: Validity and Reliability of the Scale

	<i>FACTOR LOADINGS</i>	<i>T Statistics (O/STDEV)</i>	<i>P Values</i>
BS1 <- BANKING SERVICES	0.939	47.873	0
BS2 <- BANKING SERVICES	0.967	84.881	0
BS3 <- BANKING SERVICES	0.946	45.39	0
EG1 <- EECONOMIC GROWTH	0.919	40.315	0
EG2 <- EECONOMIC GROWTH	0.856	14.776	0
EG3 <- EECONOMIC GROWTH	0.932	34.951	0
FL1 <- FINANCIAL LITERACY	0.737	10.323	0
FL2 <- FINANCIAL LITERACY	0.902	24.415	0
FL3 <- FINANCIAL LITERACY	0.94	47.625	0
FL4 <- FINANCIAL LITERACY	0.886	23.413	0
FL5 <- FINANCIAL LITERACY	0.887	37.219	0
FL6 <- FINANCIAL LITERACY	0.898	22.908	0
FL7 <- FINANCIAL LITERACY	0.795	13.896	0
FL8 <- FINANCIAL LITERACY	0.859	16.094	0

Table 4: Validity and Reliability of the Scale

	<i>Cronbach's Alpha</i>	<i>Composite Reliability (ρ_a)</i>	<i>Composite Reliability (ρ_c)</i>	<i>Average Variance Extracted (AVE)</i>
BANKING SERVICES	0.947	0.951	0.966	0.904
EECONOMIC GROWTH	0.886	0.892	0.93	0.815
FINANCIAL LITERACY	0.952	0.962	0.96	0.749

Test of the Structural Model

The researcher has examined and tested the fit of the structural model that represented the suggested model in Fig. 1.

Table 5: Hypothesis Testing

<i>Relationship</i>	<i>Original sample (O)</i>	<i>T statistics (O/STDEV)</i>	<i>P values</i>	<i>Results</i>
BANKING SERVICES -> EECONOMIC GROWTH	0.884	27.586	0	Accepted
FINANCIAL LITERACY -> BANKING SERVICES	0.915	36.822	0	Accepted

The coefficient of 0.884 suggests a positive relationship between Banking Services and economic growth. The high T statistics value (27.586) indicates that this relationship is statistically significant and the associated P value of 0 further supports the significance, suggesting a strong confidence in the observed association. Therefore, an increase in banking services is linked to a substantial positive impact on economic growth. The coefficient of 0.915 indicates a positive relationship between financial literacy and banking services. The very high T statistics value (36.822) suggests a highly significant association and the P value of 0 reinforces the statistical significance. This implies that an improvement in financial literacy is

strongly linked to an increase in the utilisation of banking services. The coefficient of 0.809 signifies a positive relationship between financial literacy and economic growth. The T statistics value of 17.24 indicates a statistically significant association, and the P value of 0 further supports this significance. This suggests that higher financial literacy is associated with increased economic growth, emphasising the potential economic benefits of improving financial knowledge. All three relationships are not only statistically significant but also display positive associations. This information is crucial for understanding the dynamics between financial literacy, banking services and economic growth in the analysed model.

Table 6: Total Effect

	<i>Original Sample (O)</i>	<i>T Statistics (O/STDEV)</i>	<i>P Values</i>
BANKING SERVICES -> EECONOMIC GROWTH	0.884	27.586	0
FINANCIAL LITERACY -> BANKING SERVICES	0.915	36.822	0
FINANCIAL LITERACY -> EECONOMIC GROWTH	0.809	17.24	0

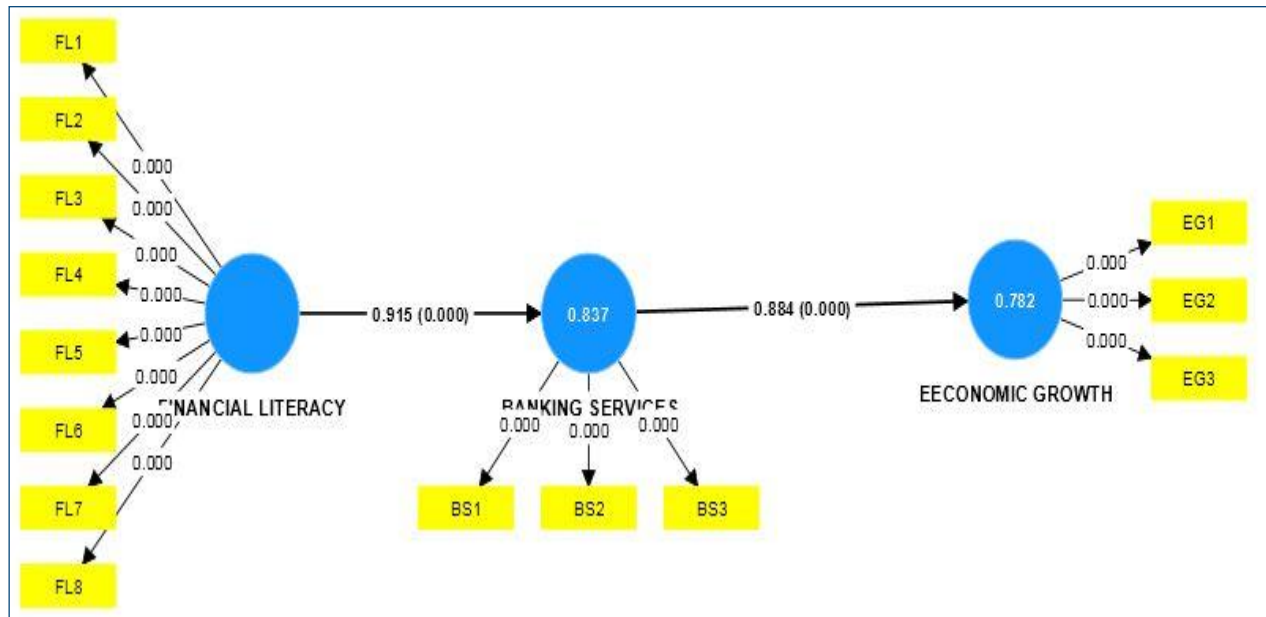
Mediating Effect among Constructs

The coefficient of 0.809 signifies the strength and direction of the indirect effect. In this context, it suggests a positive and substantial influence of financial literacy on economic growth through the channel of Banking Services. A higher coefficient implies a more pronounced impact. "As Financial Literacy increases, there is a substantial positive effect on Economic Growth and a significant portion of this impact is channelled through the utilization of Banking Services. This highlights the crucial role of

Banking Services as an intermediary factor in translating financial knowledge into economic development. Policies and initiatives that enhance financial literacy and promote access to banking services may contribute significantly to fostering economic growth."

Table 7: Specific Indirect Effect

	<i>Specific Indirect Effects</i>
FINANCIAL LITERACY -> BANKING SERVICES -> EECONOMIC GROWTH	0.809



Source: Authors own.

Fig. 2: Path Coefficient

The above figure illustrates the results, which indicate that the t value of FL for BS was greater than 1.96. The latter was significantly impacted by the former ($\beta = 0.915$, $t = 36.822$), BS for EG ($\beta = 0.884$, $t = 27.586$), FL for EG ($\beta = 0.809$, $t = 17.24$), indicating that hypothesis H1, H2, H3 and H4, were satisfied. An important mediating role for financial risk & attitude was seen in the interactions between FL and Sustainable Investment.

Discussion

Implications of the Findings

The findings of this study illuminate significant relationships among FL, banking services and economic growth. Strong positive correlations were identified, indicating that heightened financial literacy levels are associated with increased utilisation of banking services and positive impacts on economic growth. The study underscores the substantial influence of banking services on economic development, emphasising the pivotal role of improved accessibility and utilisation of financial services. The interconnectedness of these variables suggests a symbiotic relationship, where enhanced financial literacy contributes to greater engagement with banking services, subsequently fostering economic growth. Educational implications suggest that integrated programs

incorporating practical aspects of banking and financial management can elevate overall financial literacy, guiding educational institutions in better preparing individuals for active participation in the financial system. Policymakers can leverage these findings to develop targeted strategies aimed at promoting financial literacy and enhancing access to banking services, with the potential to stimulate economic development.

Practical Recommendations

To foster comprehensive financial well-being and stimulate economic development, it is recommended that both governments and financial institutions prioritise the advancement of financial literacy programs. These initiatives should not solely concentrate on enhancing financial knowledge but should also underscore the importance of actively engaging with banking services. Demonstrated by the robust positive correlation identified, endeavours to broaden the accessibility of banking services, especially in underserved regions, can substantially bolster economic growth. It is advisable to integrate practical banking and financial management components into educational curricula, creating a more holistic understanding of financial concepts. Strategic financial inclusion efforts, tailored to address specific demographic needs and barriers, can effectively rectify

discrepancies in access. Public awareness campaigns, spotlighting the advantages of financial literacy and active utilisation of banking services, hold the potential to instigate positive changes in behaviour. The synergy between financial and educational institutions is crucial for bridging the gap between theoretical knowledge and real-world financial practices. Consistent monitoring and evaluation mechanisms will guarantee the sustained effectiveness of these initiatives, with governmental policy support serving as an incentive for organisations contributing to enhanced financial literacy. Through the adoption of these recommendations, stakeholders can collaboratively contribute to the establishment of a society that is more financially literate and resilient economically.

Conclusion

The high values for Cronbach's alpha and composite reliability, along with acceptable AVE values, indicate that the measurement models for all three constructs are reliable and have good convergent validity. Researchers can have confidence in the internal consistency and reliability of the scales used to measure banking services, economic growth and financial literacy. The factor loadings, T statistics, and P values collectively indicate that the observed variables (items) are reliable indicators of their respective latent constructs (banking services, economic growth, and financial literacy). The high factor loadings and significant T statistics provide strong evidence for the validity of the measurement model. In summary, the correlation matrix shows strong positive associations between all pairs of constructs. This implies that improvements or increases in one variable (e.g., banking services, financial literacy) are likely to be accompanied by positive changes in the others (e.g., economic growth). The results suggest an interconnected relationship among banking services, economic growth and financial literacy in the analysed context.

References

- Abdullah, M. A., & Chong, R. (2014). Financial literacy: An exploratory review of the literature and future research. *Journal of Emerging Economies and Islamic Research*, 2(3), 32. doi:https://doi.org/10.24191/jeeir.v2i3.9631
- Andreou, P. C., & Anyfantaki, S. (2021). Financial literacy and its influence on internet banking behavior. *European Management Journal*, 39(5), 658-674. doi:https://doi.org/10.1016/j.emj.2020.12.001
- Bayraktar, N., & Wang, Y. (2008). Banking sector openness and economic growth. *The Journal of Applied Economic Research*, 2(2), 145-175. doi:https://doi.org/10.1177/097380100800200201
- Callis, Z., Gerrans, P., Walker, D. L., & Gignac, G. E. (2023). The association between intelligence and financial literacy: A conceptual and meta-analytic review. *Intelligence*, 100, 101781. doi:https://doi.org/10.1016/j.intell.2023.101781
- Gerth, F., Lopez, K., Reddy, K., Ramiah, V., Wallace, D., Muschert, G., Frino, A., & Jooste, L. (2021). The behavioural aspects of financial literacy. *Journal of Risk and Financial Management*, 14(9), 395. doi:https://doi.org/10.3390/jrfm14090395
- Hanafizadeh, P., & Amin, M. G. (2023). The transformative potential of banking service domains with the emergence of FinTechs. *Journal of Financial Services Marketing*, 28(3), 411-447. doi:https://doi.org/10.1057/s41264-022-00161-0
- Hasan, M., Le, T., & Hoque, A. (2021). How does financial literacy impact on inclusive finance? *Financial Innovation*, 7(1), 40. doi:https://doi.org/10.1186/s40854-021-00259-9
- Hung, A., Parker, A. M., & Yoong, J. (2009). Defining and measuring financial literacy. *SSRN Electronic Journal*. doi:https://doi.org/10.2139/ssrn.1498674
- Ifediora, C., Offor, K. O., Eze, E. F., Takon, S. M., Ageme, A. E., Ibe, G. I., & Onwumere, J. U. J. (2022). Financial inclusion and its impact on economic growth: Empirical evidence from sub-Saharan Africa. *Cogent Economics & Finance*, 10(1), 2060551. doi:https://doi.org/10.1080/23322039.2022.2060551
- Klapper, L., Lusardi, A., & Panos, G. A. (2013). Financial literacy and its consequences: Evidence from Russia during the financial crisis. *Journal of Banking & Finance*, 37(10), 3904-3923. doi:https://doi.org/10.1016/j.jbankfin.2013.07.014
- Kumar, I. (2023). Banking services and financial inclusion in India's poorest regions. *Journal of Banking Regulation*. doi:https://doi.org/10.1057/s41261-023-00224-9
- Lusardi, A., & Messy, F.-A. (2023). The importance of financial literacy and its impact on financial wellbeing. *Journal of Financial Literacy and Wellbeing*, 1(1), 1-11. doi:https://doi.org/10.1017/flw.2023.8

- Lusardi, A., & Mitchell, O. S. (2011). Financial literacy around the world: An overview. *Journal of Pension Economics and Finance*, 10(4), 497-508. doi:https://doi.org/10.1017/S1474747211000448
- Mashamba, T., & Gani, S. (2023). Fintech, bank funding, and economic growth in Sub-Saharan Africa. *Cogent Economics & Finance*, 11(1), 2225916. doi:https://doi.org/10.1080/23322039.2023.2225916
- Musa, H., Ahmad, N. H. B., & Nor, A. M. (2024). Extending the theory of planned behavior in financial inclusion participation model – Evidence from an emerging economy. *Cogent Economics & Finance*, 12(1), 2306536. doi:https://doi.org/10.1080/23322039.2024.2306536
- Oliveira, P., & Von Hippel, E. (2011). Users as service innovators: The case of banking services. *Research Policy*, 40(6), 806-818. doi:https://doi.org/10.1016/j.respol.2011.03.009
- Öncel, A., Saidmurodov, S., & Kutlar, A. (2024). Financial development, export and economic growth: Panel data evidence from commonwealth of independent states. *The Journal of International Trade & Economic Development*, 33(1), 29-56. doi:https://doi.org/10.1080/09638199.2022.2164045
- Paşa, A. T., Picatoste, X., & Gherghina, E. M. (2022). Financial literacy and economic growth: How Eastern Europe is doing? *Economics*, 16(1), 27-42. doi:https://doi.org/10.1515/econ-2022-0019
- Servon, L. J., & Kaestner, R. (2008). Consumer financial literacy and the impact of online banking on the financial behavior of lower-income bank customers. *Journal of Consumer Affairs*, 42(2), 271-305. doi:https://doi.org/10.1111/j.1745-6606.2008.00108.x
- Van, L. T.-H., Vo, A. T., Nguyen, N. T., & Vo, D. H. (2021). Financial inclusion and economic growth: An international evidence. *Emerging Markets Finance and Trade*, 57(1), 239-263. doi:https://doi.org/10.1080/1540496X.2019.1697672
- Vyas, S. D. (2012). *Impact of e-banking on traditional banking services*. doi:https://doi.org/10.48550/ARXIV.1209.2368
- Xepapadeas, A. (2005). Chapter 23 economic growth and the environment. In *Handbook of Environmental Economics* (vol. 3, pp. 1219-1271). Elsevier. doi:https://doi.org/10.1016/S1574-0099(05)03023-8
- Zhuang, J., Gunatilake, H. M., Niimi, Y., Khan, M. E., Jiang, Y., Hasan, R., Khor, N., Martin, A. L., Bracey, P., & Huang, B. (2009). Financial sector development, economic growth, and poverty reduction: A literature review. *SSRN Electronic Journal*. doi:https://doi.org/10.2139/ssrn.1617022
- Hiremath, S., Prashantha, C., Panda, A., & Hiremath, G. (2023). Digitisation and artificial intelligence in retailing sector - Key drivers. In P. Tyagi, S. Grima, K. Sood, B. Balamurugan, E. Özen, & T. Eleftherios (Eds.), *Contemporary Studies in Economic and Financial Analysis* (pp. 215-232). Emerald Publishing Limited. doi:https://doi.org/10.1108/S1569-37592023000110B014
- Nadiger, S., Pushparaj, K., Nimbagal, S., & Panda, A. (2023). *Honing Local enterprises and industrial alliances with the success of entrepreneurs: The mediating role of technology adoption and market competition*.