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Role of financial inclusion in enhancing financial efficiency among migrant workers in Indian perspective

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Abstract
Financial inclusion is the process of ensuring that every individual, especially the underserved and unbanked, has access to essential financial goods and services in a timely, cheap, and appropriate way. Migrant workers frequently confront specific obstacles as a result of their nomadic lifestyles, lack of legal identity, and low financial capacity. Migrant workers are commonly excluded from regular financial services, making it difficult to save safely, obtain credit, and manage risks with insurance, and transfer remittances effectively. The objective of this research was to investigate the role that financial accessibility plays in improving migrant workers' financial efficacy from an Indian perspective. A total of 375 migrant workers participated in this study across various urban areas in India. A structured survey questionnaire will assess demographic factors, access to financial services, usage patterns, and financial literacy levels. This study addresses factors with housing and infrastructure, financial literacy, economic impact, and cultural aspects that can be more present in underprivileged and rural areas. The data and hypothesis were analyzed using statistical methods, including descriptive statistics, ANOVA, and regression analysis, which could be utilized to identify correlations between economic inclusion and financial efficiency factors. The data was analyzed using SPSS software. The results demonstrated the economic impact is significantly improving the individual financial efficiency. The findings suggest that enhancing access to financial services not only improves individual financial efficiency but also contributes to economic stability and growth. This study emphasizes how financial inclusion empowers migratory workers by enhancing their financial security, contributing to overall economic growth, and allowing for greater economic planning.
Keywords: Financial Inclusion, Financial Efficiency, Migrant Workers, Indian, Statistical Methods

1. Introduction

Finance is one of the important tools used in managing the environmental and socioeconomic growth of a country. Inclusive finance encourages technology innovation and production in large quantities, which helps open the door for inexpensive green energy and supports environmental health. Comprehensive finance refers to the situation where a range of financial goods and services, including insurance and loans, are provided to businesses and people sustainably and ethically [1]. It is common knowledge that increased financial accessibility makes it possible for consumers and companies to finance environmentally friendly technologies. It also refers to enhanced developments in green technologies, which pave the way for studies on sources of clean energy. The most crucial first step in reversing the state of the natural world is the advancement of renewable energy technologies [2]. The core of the environmental evaluation of sustainable growth is reflected in the environmental footprint, which assesses the environmental effects of humans and the ability of the environment's bio-system to withstand these effects. It serves as a crucial indicator for the objectives of sustainable growth. Second, an inclination to absorb waste is one of the most crucial components of ecological viability [3]. Accordingly, knowing what motivates financial inclusion as well as the national-level measures that can affect them is extremely important to decision-makers. Therefore, the advancement of financial inclusion is greatly aided by the necessary understanding of financial expertise that includes monetary knowledge, which enhances one's ability to plan, save, and handle financial setbacks [4]. Knowledge and transaction expenses become the norm in a world when communication is far from perfect. To set it simply, financiers are organizations that direct savings toward investors, expanding the pool of capital available to interested parties. Any economy's investment process has been largely shaped by the emergence of the above mentioned intermediaries, who also serve as a vital financial mechanism that links financial matters progress to economic expansion [5]. These advancements enable financial institutions to effectively distribute resources, support trade, hedging, diversification, and risk pooling, encourage and aggregate savings, assess investments, physical activity, corporate authority and administration, and support trade in products and services. The influence of the financial sector on economic growth makes it significant. One can trace the relationship between investment in finance and the expansion of the economy [6]. Households can develop human capital, save more money, and balance their consumption. By granting organizations access to the banking credit lines required to financially manage their long-term expenditures or liquidity needs, banks enable organizations to grow, create jobs, and branch growth in the economy [7]. The improved human society and increased financial inclusion of households through remittances can boost entrepreneurship and the formal economy, as money transfers enable households to invest in business ventures.

Remaining of the study: The following study is divided into the following stages section 2 related works; section 3 presents the hypothesis framework; section 4 covers the methodology; section 5 presents the results section; section 6 displays the discussion and section 7 presents the conclusion.

2. Related work

The influence of economic prosperity on human growth in India is measured. All three despite enjoying enormous economic progress, South Asian countries yet lag regarding the goal of reducing the prevalence of inequity, poverty, and unemployment. Research [8] found that having money has a positive effect on human growth, particularly on financial status, average lifespan, and school achievement. The report made the case that appropriate regulations must be put in place to strengthen the banking system [9]. The findings indicate that the impact of banking inclusion rises with higher quantiles, suggesting that governments with greater carbon dioxide emissions levels already experience higher levels of commercial inclusion than do nations with lower levels of environmental footprints. A goal [10] examined in global governance was economic integration; individuals who possess this ability can make prudent financial choices, improve their happiness, and become economically educated. By gathering research at the nexus of monetary inclusion and knowledge of finances, this study employed a visualization, scientometric, and subject matter analysis. The connection between financial accessibility, management, and economic expansion in the Middle East and North Africa (MENA) area was examined analytically in this research [11]. The MENA region's economic development was positively and statistically impacted by financial accessibility, as measured by the families' access to finance index. The data also demonstrated that the influence of firms' access to finance is only much bigger when solid organizations are available.

Recent research has acknowledged that while microfinance organizations have done a good job of operating micro-financing economically; the intention of raising the living standards of underprivileged clientele hasn't always been achieved. The article [12] gathered for this theme issue adds fresh factual perspectives to the conversation, highlighting a variety of societal divisions and inequality issues plaguing emerging nations. The research was to look at how money accessibility affects innovation in a few chosen African nations [13]. Using information from conducting business, World Bank Business ownership, Worldwide Financial Statistics, and World Bank Developmental Indicators, the research investigated the effects of monetary inclusion on innovation in thirteen specific African nations. The findings indicate that economic prosperity significantly and favorably influences manufacturing in Africa. They comprehensively analyzed the expanding empirical data about individual characteristics as demographics [14]. In addition to paying more, women have a greater probability of being turned down and denied official credit. Immigrants, persons of color, individuals with disabilities, and non-Whites were additionally more likely to be excluded from the official credit systems. These results show striking similarities between industrialized and developing nations.

3. Hypothesis framework

Migrant workers often face financial challenges, such as lack of formal identification, limited financial knowledge, and lack of access to traditional financial institutions. Economic equality aims to reduce these differences by providing equal access to essential financial resources like credit, insurance, and investments, as shown in Figure 1.

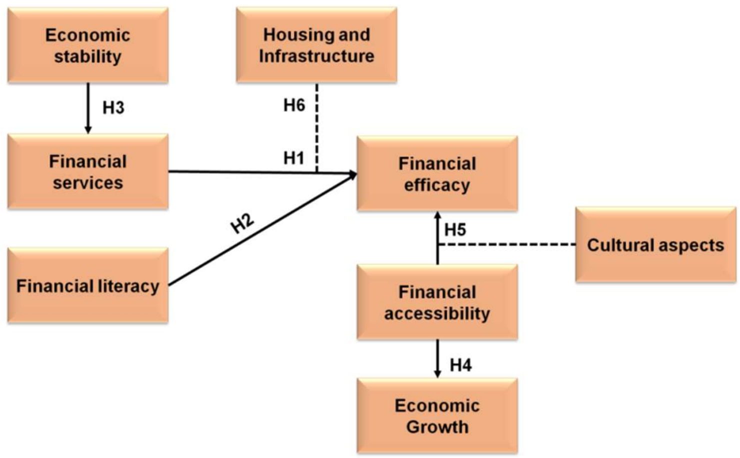

Figure 1: Hypothesis framework

H1: **Increasing the availability of financial services positively affects the financial efficiency of migrant workers.**

Expansion of access to financial services helps them to be more financially literate, save prudently, make appropriate decisions, and have credit access. Financial stability and health will improve with the usage of services such as protection, loans, and retirement savings.

H2: **A better understanding of the financial literacy among immigrant professionals translates into increased financial efficiency.**

Migrant workers with better financial efficacy have better financial education; it is more effective in helping them make the right decisions to save, spend, and manage. It reduces risks, enhances service utilization, and thus improves their financial well-being-that would ensure their long-term macroeconomic viability and resilience.

H3: **More access to economic stability significantly increases the stability of the financial service for migrant workers.**

With access to financial services, migrant workers can improve their liquidity in their finances and therefore use their finances more skillfully. Income offers protection against disasters, loans, and deposit accounts; thus, it reduces poverty-related shocks and allows prudent expenditure decisions.

H4: Better access to finance accessibility the economic growth of migrant workers.

Accessible finance can help the migrant workers manage their finances, invest in opportunities, and contribute to their economic development. It helps them gain a feasible source of income; reduce risk, and promote spending, investment, and more comprehensive economic activities through granting credit, savings, and insurance options.

H5: There exists a substantial moderation of the cultural aspects between migrant professionals' financial efficacy and financial accessibility.

Cultural attitude, values, and behavior significantly affect how migrant workers use their funds and consequently have a strong moderation impact on their economic effectiveness. Such cultures, which nurture informal banking culture, are also likely to decrease their reliance on official financial institutions.

H6: The quality of the housing and infrastructure influences the financial efficacy of migrant people in that it has impacts on the efficiency of services that comprise their financial services.

Migrant living and economic conditions significantly impact access to financial services, impacting their economic effectiveness. Poor living conditions, limited transportation, unstable electricity supply, and poor internet connectivity can hinder proper utilization.

4. Methodology

The technique is focused on an in-depth evaluation of the migrant workers' perceptions and financial practices in urban cities. This research involves a standardized survey questionnaire that collects quantitative data on a range of demographic characteristics and participant knowledge levels and usage patterns as well as access to investments. This study employs statistical techniques including regression analysis, ANOVA, and descriptive statistics to identify correlations between financial effectiveness and monetary inclusion.

4.1 Data collection

There are 375 migrant workers spread across different Indian urban centers. It seeks to assess the impact of financial inclusion in enhancing their financial performance. With this, participants discussed their experience with financial organizations and the challenges they face. Data were gathered based on the considerations that focus on access to financial services, usage patterns, and levels of financial literacy.

Table 1: Demographic information about participants

Demographic Factor	Category	Frequency (n=375)	Percentage (%)
Access to Financial Services	No Access	120	32
	Limited Access	150	40
	Full Access	105	28
Usage Patterns	Infrequent User	90	24
	Moderate User	150	40
	Frequent User	135	36
Financial Literacy Levels	Low Literacy	100	26.7
	Moderate Literacy	175	46.6
	High Literacy	100	26.7

The demographic table reveals a high financial inclusion gap among migrant workers, with only 28.0% accessing their accounts through devices. 32.0% have no access to bank services, and 40.0% have restricted access. Migrant workers use monetary services moderately 40%, while 24.0% use them infrequently and frequent user contain 36%. Financial literacy ratings indicate a lack of literacy for 26.7% and medium literacy for 46.6%, and high contain 26.7%, indicating a need for specific education programs. These challenges negatively affect migrant workers' reliability and profitability, as shown in Table 1 and Figure 2.

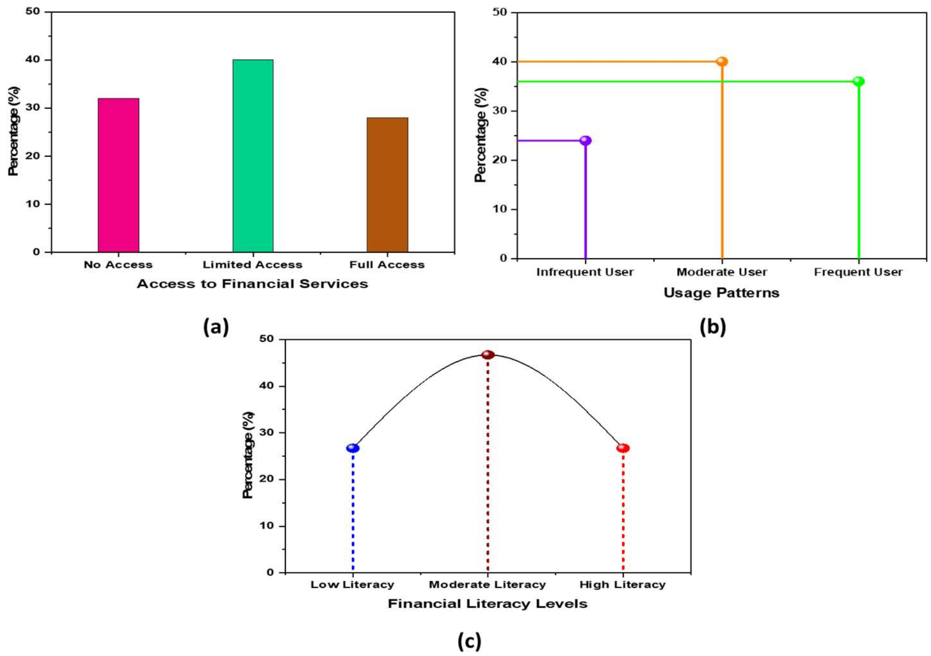

Figure 2: (a) Outcome of the access to financial services, (b) outcome of the usage patterns, and (c) outcome of the financial literacy levels

4.2 Questionnaire

The purpose of this questionnaire was to collect important data regarding migrant professionals' economic security, level of literacy, and accessibility to, use of, and comprehension of financial institutions. The results will help comprehend how financial inclusion strengthens the economic efficacy of this susceptible group and provide them with more power.

- **Economic stability**

1. How confident is the individual in the current financial situation?
2. Have any financial emergencies impacted stability in the last year?

- **Housing and infrastructure**

1. How would the quality of housing in current living situation be rated?
2. How accessible are basic amenities (water, electricity, and internet) in area?

- **Financial services**

1. Which of the following financial services are accessible?
2. How often are financial services utilized?

- **Financial literacy**

1. How would one rate their understanding of financial terms (e.g., interest rates, savings)?
2. Has there been participation in any financial literacy programs or workshops?

- **Financial efficacy**

1. How effectively does one feel they can manage financial resources?
2. Is there a budget that is followed regularly?

- **Financial accessibility**

1. How easy is it to access financial services in this area?
2. What barriers exist in accessing financial services?

- **Economic growth**

1. How does financial inclusion impact the economic growth of community?
2. Have there been any observed improvements in financial situation since gaining access to financial services?

- **Cultural aspects**

1. How do cultural beliefs influence decisions regarding savings and investments?
2. Do conventional beliefs or conventions have an impact on financial practices in community?

4.3 Statistical analysis

This study will use SPSS software for statistical analysis, focusing on spending patterns, financial knowledge, and accessibility to resources. Inferential statistics, specifically ANOVA, will investigate financial efficacy among different demographics. Regression modeling and correlation will determine associations between economic efficacy and financial wellness characteristics, guiding future initiatives and assistance mechanisms.

5. Results

This study found that migrant workers in India experience improved financial efficiency and security due to better access to financial resources. This is positively related to increased access to finance and knowledge. The findings suggest the need for targeted financial inclusion strategies for this susceptible group, using statistical methods like descriptive statistics, ANOVA, and regression analysis and correlation.

5.1 Descriptive statistic

Descriptive statistics helps the investigators and the managers understand patterns and trends through data representations that are clear and concise, which aids in making informed decisions. This test would provide measures of central trend and variability that will give an overview of the information as well as display how migrant workers view banking services and knowledge and their financial condition.

Table 2: Evaluation of Descriptive statistic

Variable	Mean	Standard Deviation	Minimum	Maximum	Sample Size (n)
Economic Stability	3.45	0.85	1	5	375
Housing and Infrastructure	3.2	0.9	1	5	375
Financial Services	2.85	1.05	1	5	375
Financial Literacy	3.1	0.95	1	5	375
Financial Efficacy	3.55	0.8	1	5	375
Financial Accessibility	3.4	0.75	1	5	375
Economic Growth	3.50	0.70	1	5	375
Cultural Aspects	3.3	0.85	1	5	375

The descriptive statistics in Table 2 summarizes the concise view that migrant workers hold regarding the issues important to their financial situation and the health of the economy in general. A positive opinion on most of the aspects ranging from 2.85 to 3.55 average ratings has been found. However, the mean for financial products and services stood, which suggests that there is yet further development needed, not just in terms of usability but also on quality. The standard deviations, which range from 0.70 to 1.05, show how different participants' perspectives were, especially in the financial services industry, where responses were more variable. The data reveals that financial availability, knowledge, and cultural factors significantly influence the prosperity and development potential of migrant workers, highlighting areas that could benefit from targeted measures and policy assistance.

5.2 ANOVA test table

To identify important areas for assistance, an ANOVA was used to assess whether there are significant variations between financial effectiveness across distinct populations characterized by various characteristics such as financial security and residential situations.

Table 3: Evaluation of ANOVA

Source of Variation	The sum of Squares (SS)	Degrees of Freedom (df)	P-Value	F-Value	Mean Square (MS)
Economic Stability	75.2	1	0.0006	12.45	75.2
Housing and Infrastructure	50.3	1	0.003	8.6	50.3
Financial Services	68.4	1	0.0014	11	68.4
Financial Literacy	90.1	1	0.0003	14.1	90.1
Financial Efficacy	60.8	1	0.002	9.8	60.8
Financial Accessibility	85.6	1	0.0005	13.5	85.6
Economic Growth	95.4	1	0.0002	15	95.4
Cultural Aspects	55.2	1	0.004	8.9	55.2
Total	581	7	-	-	-
Within Groups	280	367	-	-	0.763
Total	861	374	-	-	-

The ANOVA test in Table 3 provides a comprehensive summary of factors affecting migrant workers' financial efficacy, including economic stability, housing and infrastructure, financial services, financial literacy, financial accessibility, economic growth, and cultural aspects. The variance attributable to each component is shown by its SS, while the average deviation is displayed by the MS values. The significance of each factor's impact is indicated by comparing its MS to the error term's MS using the F-value. Readings below 0.05 indicate that the relevant factor significantly impacts financial efficacy, while the P-value further demonstrates statistical importance. The chart highlights the critical areas for improving migrant workers' financial security.

5.3 Regression analysis table

This analysis evaluated the connection between economic effectiveness and financial inclusion characteristics, evaluating the extent to which indicators such as knowledge of finances and service accessibility can account for variation across financial success and indicating important areas for policy development.

Table 4: Evaluation of Regression analysis

Variable	Coefficient (β)	Standard Error	t-value	p-value	R^2
Constant	1.5	0.2	7.5	0	-
Economic Stability	0.35	0.05	7	0	-
Housing and Infrastructure	0.25	0.06	4.17	0	-
Financial Services	0.3	0.05	6	0	-
Financial Literacy	0.2	0.07	2.86	0.004	-
Financial Efficacy	0.4	0.05	8	0	-
Financial Accessibility	0.3	0.05	6	0	-
Economic Growth	0.28	0.06	4.67	0	-
Cultural Aspects	0.15	0.05	3	0.003	-
R^2 (Adjusted)	-	-	-	-	0.78

Table 4 represents the regression study that reveals financial services, economic stability ($\beta = 0.35$), financial services ($\beta = 0.30$), housing, and infrastructure ($\beta = 0.25$), and financial literacy significantly improve the financial effectiveness of migrant workers. Economic growth and financial accessibility ($\beta = 0.30$) are also crucial for financial results. Cultural aspects also influence financial behaviors (β = 0.15). The model's adjusted R^2 value is 0.78, indicating that financial literacy plays a significant role in enhancing the financial security of migrant laborers. This study highlights the importance of facilitating access to services, housing, and infrastructure, as well as removing obstacles to financial service availability.

5.4 Correlation analysis table

Correlation analysis reveals factors influencing financial efficiency, economic expansion, financial institutions, and societal variables affecting migrant workers' economic well-being.

Table 5: Evaluation of Correlation analysis

Factors	Economic Stability	Housing and Infrastructure	Financial Services	Financial Literacy	Financial Efficacy	Financial Accessibility	Economic Growth	Cultural Aspects
Economic Stability	1	0.6	0.5	0.55	0.65	0.7	0.75	0.4
Housing and Infrastructure	0.6	1	0.45	0.5	0.55	0.6	0.65	0.35
Financial Services	0.5	0.45	1	0.7	0.8	0.75	0.7	0.3
Financial Literacy	0.55	0.5	0.7	1	0.85	0.6	0.65	0.5
Financial Efficacy	0.65	0.55	0.8	0.85	1	0.65	0.7	0.4
Financial Accessibility	0.7	0.6	0.75	0.6	0.65	1	0.68	0.45
Economic Growth	0.75	0.65	0.7	0.65	0.7	0.68	1	0.5
Cultural Aspects	0.4	0.35	0.3	0.5	0.4	0.45	0.5	1

Table 5 denotes the correlation analysis that reveals economic growth (0.75), financial access (0.70), financial efficiency (0.80), housing and infrastructure, and cultural characteristics all have interrelations affecting migrant workers' financial condition. Economic growth and access significantly improve overall economic conditions (0.65), while financial efficiency is linked to financial services and knowledge (0.80) and financial knowledge (0.85). Housing and infrastructure also contribute to financial well-being, while cultural characteristics have weaker linkages. An integrated approach is needed to address these interrelated issues.

5.5 Path analysis

Path analysis is a method that extends traditional multivariate regression by examining the relationships between variables like housing, finances, and financial knowledge on financial effectiveness in migrant laborers.

Table 6: Evaluation of path analysis

Path	Coefficient (β)	Standard Error	t-value	p-value	Hypothesis Support
Financial Services → Financial Efficacy	0.3	0.05	6	0	Supported
Financial Literacy → Financial Efficacy	0.2	0.07	2.86	0.004	Supported
Economic Stability → Financial Services	0.35	0.05	7	0	Supported
Financial Accessibility → Economic Growth	0.28	0.06	4.67	0.0002	Supported
Financial Accessibility → Financial Efficacy	0.3	0.05	6	0	Supported
Housing and Infrastructure →Financial	0.25	0.06	4.17	0	Supported

Service Financial Efficacy					
Cultural Aspects → Financial Accessibility →Financial Efficacy	0.15	0.05	3	0.003	Supported

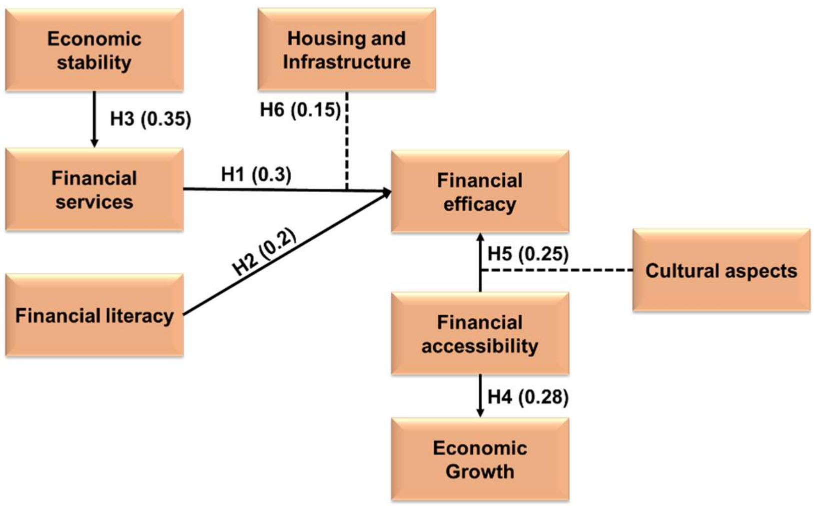

Figure 3: Path of the hypothesis

Table 6 and Figure 3 present the path results of an analysis that examines the relationship between multiple characteristics and the implications for financial efficiency for migrants. The pathways are as follows and each is represented by each row, with the intensity and direction of the relationship depicted by the β coefficients. All the routes are supported and improvement in these characteristics help increase the financial efficiency of migrant workers by a large amount of percentage, and bring into light the interconnected effects of several factors that foster good financial health.

6. Discussion

The key findings of this study are very important interactions between several elements influencing the financial effectiveness of migrant workers in India, which highlights the need for savings and literacy. Overall, in respect of their assessments regarding their financial status, the respondents scored positive with a mean score on financial efficacy at 3.55, but there is room for improvement in financial services that scored a mean score at 2.85. From the ANOVA, two most influential effects of variables are seen to impact financial performance: access to finance and economic stability. Then regression analysis explained that migrant workers' enhanced economic results depended on better financial knowledge, economic stability, and more access to financial resources. More importantly, the high correlation between economic development, access to finance, and financial effectiveness indicates that strengthening financial services and training strategies would go a long way in helping this vulnerable group.

7. Conclusion

To access the financial services, infrastructure and financial literacy highly facilitates a high economic stability and issues of efficacy about the migrant workers. Financial inclusion enhances their ability in resource management also while advancing economic growth and the financial soundness of an individual. The results therefore highlight the necessity of tailoring financial inclusion programs to respond to specific challenges migrant workers face and thus provide an enabling environment for them to achieve higher levels of financial stability and security in Indian cities. Even future studies can probe into the long-run effects of financial integration on the level of living of migrant workers in India. Another potential avenue of exploration is through the examination of electronic and technological financial services, which could be access to finance. Related research studies could evaluate cultural and regional differences that have effects on the delivery and impact of economic inclusion initiatives.

Reference

1. Hua, X. and Huang, Y., 2021. Understanding China's fintech sector: development, impacts and risks. *The European Journal of Finance*, *27*(4-5), pp.321-333. https://doi.org/10.1080/1351847X.2020.1811131
2. Cihak, M.M. and Sahay, M.R., 2020. *Finance and inequality*. International Monetary Fund.https://doi.org/10.1016/j.jbusres.2021.10.003
3. Yang, L. and Ni, M., 2022. Is financial development beneficial to improve the efficiency of green development? Evidence from the "Belt and Road" countries. *Energy Economics*, *105*, p.105734.https://doi.org/10.1016/j.eneco.2021.105734
4. Zhang, L., Saydaliev, H.B. and Ma, X., 2022. Do green finance investment and technological innovation improve renewable energy efficiency and sustainable development goals? *Renewable Energy*, *193*, pp.991-1000.https://doi.org/10.1016/j.renene.2022.04.161
5. Saqib, N., Ozturk, I. and Usman, M., 2023. Investigating the implications of technological innovations, financial inclusion, and renewable energy in diminishing ecological footprint levels in emerging economies. *Geoscience Frontiers*, *14*(6), p.101667.https://doi.org/10.1016/j.gsf.2023.101667
6. Li, J. and Li, B., 2022. Digital inclusive finance and urban innovation: Evidence from China. *of Development Economics*, *26*(2), pp.1010-1034.https://doi.org/10.1111/rode.12846
7. Yu, N. and Wang, Y., 2021. Can digital inclusive finance narrow the Chinese urban-rural income gap? The perspective of the regional urban-rural income structure. *Sustainability*, *13*(11), p.6427. https://doi.org/10.3390/su13116427
8. Chowdhury, E.K. and Chowdhury, R., 2024. Role of financial inclusion in human development: Evidence from Bangladesh, India and Pakistan. *Journal of the Knowledge Economy*, *15*(1), pp.3329-3354. https://doi.org/10.1007/s13132-023-01366-x
9. Singh, A.K., Raza, S.A., Nakonieczny, J. and Shahzad, U., 2023. Role of financial inclusion, green innovation, and energy efficiency for environmental performance? Evidence from developed and emerging economies in the lens of sustainable development. *Structural Change and Economic Dynamics*, *64*, pp.213-224. https://doi.org/10.1016/j.strueco.2022.12.008
10. Khan, F., Siddiqui, M.A. and Imtiaz, S., 2022. Role of financial literacy in achieving financial inclusion: A, synthesis and research agenda. *Cogent Business & Management*, *9*(1), p.2034236. https://doi.org/10.1080/23311975.2022.2034236
11. Emara, N. and El Said, A., 2021. Financial inclusion and economic growth: The role of governance in selected MENA countries. *International of Economics & Finance*, *75*, pp.34-54. https://doi.org/10.1016/j.iref.2021.03.014
12. Milana, C. and Ashta, A., 2020. Microfinance and financial inclusion: Challenges and opportunities. *Strategic Change*, *29*(3), pp.257-266. https://doi.org/10.1002/jsc.2339
13. Ajide, F.M., 2020. Financial inclusion in Africa: does it promote entrepreneurship? *Journal of Financial Economic Policy*, *12*(4), pp.687-706. https://doi.org/10.1108/JFEP-08-2019-0159
14. Kara, A., Zhou, H. and Zhou, Y., 2021. Achieving the United Nations' sustainable development goals through financial inclusion: A systematic literature of access to finance across the globe. *International of Financial Analysis*, *77*, p.101833. https://doi.org/10.1016/j.irfa.2021.101833