

A Study on the Impact of Financial Inclusion on Rural Development in Odisha

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Abstract

Financial inclusion (FI) stands out as a prominent issue, involving the active participation of the Reserve Bank of India and scholars. India is diligently embracing optimal approaches to bolster financial inclusion as a significant portion of rural households continue to face limited access, underscoring the critical significance of addressing this matter in rural India. Odisha is a state in India with a significant proportion of its population living in rural areas. By promoting financial access and literacy, FI can contribute significantly to inclusive development in the state. Financial Inclusion is of paramount importance for Odisha's socio-economic development. Although extensive literature explores the global ramifications of financial inclusion concerning socio-economic development and women's empowerment, there is a noticeable gap in research when it comes to the Indian context, particularly in the state of Odisha. Therefore, the primary objective of this study is to offer a comprehensive understanding of the role of FI in driving rural development within the state of Odisha. The outcomes of this study substantiate the concept that FI encompasses efforts to engage a significant segment of the populace in the trajectory of rural development through the provision of a wide array of financial services. The integration of FI in Odisha has the potential to make a considerable impact on rural development, ultimately leading to elevated living standards for its inhabitants. By extending access to formal financial services, the state can empower its residents and pave the path toward a more inclusive and prosperous society.

Keywords: Financial Inclusion Economic Development, Social Empowerment, Women Empowerment, Rural Development.

Introduction

Rural development has emerged as a pressing global concern, particularly in countries like India, where a substantial portion of the rural population faces economic uncertainty (Jayakumari, 2015). The overarching objective of rural development is to enhance the quality of life for rural inhabitants by combating poverty through self-employment and wage employment initiatives. This is achieved by providing essential community infrastructure, including access to clean drinking water, electricity, roads, healthcare facilities, and education. One important aspect that underpins successful rural development is financial inclusion. It acts as a lubricant, facilitating progress and development (Christabell and Vimal, 2012). Through FI, millions of impoverished rural households gain access to vital financial services (Levine, 1997). These services have become the cornerstone of growth and development initiatives. FI refers to the process of ensuring that every individual in an economy has convenient access to and can effectively utilize the official financial system (Sarma, 2008). It is a pivotal instrument for promoting inclusive growth and alleviating poverty (Simatele & Maciko, 2022). In today's economy, access to formal financial services significantly influences an individual's social and economic status, as well as the progress of their organization or country (Anand & Kuldip, 2013). Recent macroeconomic evidence strongly supports the notion that access to financial services, particularly through well-developed financial systems, plays a crucial role in driving socio-economic empowerment and overall economic development (Sharma, 2010). FI goes beyond simply offering a wide range of financial services to rural

communities; it entails providing them with knowledge and understanding of these services, how they can be utilized, and offering guidance and counseling on effective money management. It also involves raising awareness about the existence of various financial schemes and facilities accessible to them (Singh, 2022).

FI is a significant concern, engaging Indian officials, the Reserve Bank of India, and global researchers. It's not just an issue in India but a global challenge. India is adopting best practices to enhance financial inclusion, yet a major chunk of rural households still lack access, highlighting its importance in rural areas. A transformative shift in the rural finance paradigm hinges on the belief that rural communities are indeed "bankable." By ensuring their FI, the substantial economic potential of rural areas can be unleashed, leading to holistic rural development (Devaki, 2008). This study aims to explore the role of FI in empowering women and fostering socio-economic development in Odisha, a predominantly rural state characterized by a large population residing in remote and economically disadvantaged areas. By focusing on FI initiatives, this research seeks to uncover the significant positive impacts on rural communities in Odisha. The article starts with an introductory overview, providing context for the research. It is followed by an extensive literature review that delves into the influence of FI on economic development, social empowerment, and women's empowerment, leading to rural development in selected districts of Odisha. As one of India's states with a significant population below the poverty line, Odisha can benefit from FI by providing marginalized communities access to banking services, enabling them to establish businesses, invest in education, and lift themselves out of poverty. The subsequent section outlines the study's objectives and presents a detailed description of the framework that forms the foundation of the proposed testing model. The research methodology is then elucidated, and the results are analyzed using structural equation modeling (SEM).

At the end, the article thoroughly discusses the findings derived from the study. It also acknowledges any limitations encountered during the research process and offers practical implications for managers to consider. By understanding the potential of FI in empowering women and driving rural development, this study contributes to the advancement of knowledge in this important area.

Review of Literatures

Access to financial services plays a crucial role in achieving inclusive growth and development in rural areas of any country. It is particularly important for enhancing the living conditions of impoverished farmers and other vulnerable sections of the community (Bongomin et al. 2018). Ensuring access to financial services for the poor and other underserved sections, especially those residing in rural areas, remains a significant challenge faced by every country today (Abraham, 2018). An inclusive financial system reduces reliance on exploitative informal credit sources, leading to improved efficiency and overall welfare (Sarma and Pais, 2011). Claessens et al. (2000) revealed that the advancement of financial institutions and the diversification of financing channels are instrumental in alleviating rural poverty, promoting balanced urban and rural development, and fostering economic growth in rural areas. Moreover, their findings align with the assertion made by Davis et al. (1998) that improvements in rural financial systems can positively impact the income of rural people. Mahjabeen (2008) discovered that all-encompassing progress in financial development has the potential to substantially elevate the earnings of various societal groups, with a particular emphasis on individuals residing in rural areas.

Access to financial services not only fosters self-confidence and social inclusion but also empowers individuals economically. According to a study conducted by Zins and Weill (2016), individuals who are economically disadvantaged and residing in rural areas face higher chances of exclusion from financial markets. Simatele and Maciko (2022) revealed that transaction costs act as a significant barrier to the utilization of financial services. However, advancements in technology offer a potential solution to reduce these costs, leading to significantly lower expenses associated with providing financial services to consumers in rural areas (Simatele et al., 2021).

In India, a substantial portion of the rural population remains disconnected from formal financial institutions. The level of FI is lower for individuals residing in rural areas, limiting their access to financial services and opportunities (Cicchello et al., 2021). Financial institutions have gained recognition as an effective tool for poverty reduction and

rural development because they enable beneficiaries to make informed decisions regarding long-term consumption and investments. Moreover, access to financial institutions facilitates active participation in productive activities and decision-making processes, equipping individuals to cope with unforeseen short-term shocks (Bika et al., 2022; Lal, 2018). The integration of these financial services has the potential to bring about significant positive changes in the lives of underserved communities. By bridging the financial gap and enhancing financial inclusion, this approach promotes sustainable development and helps create a more equitable and prosperous society. For impoverished rural communities, financial services play a critical role in shielding them from income shocks and offering accessibility to remittances, thereby improving their resilience and livelihoods (Simatele & Maciko, 2022). FI thus serves as a crucial catalyst for economic development and poverty reduction, contributing to a more equitable and prosperous society. Financial institutions must go the extra mile to ensure that everyone can easily access credit and other financial services to improve their economic and social well-being (Lal, 2017). FI creates a pathway to educational and investment prospects for every individual by establishing a robust financial system (Rewilak, 2017). It enables people to obtain bank loans, and facilitate secure payments (Mader, 2018). Moreover, effective and well-operating financial systems foster the emergence of new enterprises and bolster the growth of existing businesses, while empowering marginalized groups and vulnerable segments to actively participate in the financial system (Hendriks, 2019). Numerous studies highlight the positive correlation between expanding access to financial services and fostering economic growth and development (Sarma and Pais, 2011; Ghosh, 2013). As a result, FI has become a prominent objective on the national agendas of many developing countries as they recognize the vital role of the financial sector in poverty reduction and economic advancement (Shaf & Medabesh, 2012; Park & Mercado, 2015).

In conclusion, the research studies highlighted in this review highlight the positive impact of FI on rural development. They emphasize the crucial role played by financial intermediaries in driving economic progress, reducing unemployment, encouraging investments, and promoting equal opportunities. While the existing body of literature primarily focuses on the global implications of FI on socio-economic development and women's empowerment, there is a noticeable lack of research specifically addressing the Indian context, with limited studies conducted in the state of Odisha. Therefore, there is an urgent need for further research to enhance the current knowledge in this area. This study aims to bridge this research gap and provide valuable insights into the correlation between FI and the economic empowerment of individuals in the Indian context. By examining the impact of FI initiatives in Odisha, this research endeavors to contribute to a deeper understanding of how FI can positively transform the lives of people in rural communities and drive overall economic development. By exploring this relationship, it seeks to contribute to a deeper understanding of the subject and uncover meaningful implications for policy and practice in the realm of FI.

Hypothesis Development

Women empowerment

Multiple research studies have consistently emphasized the significant role of FI in promoting women's empowerment, expanding financial access, reducing inequalities, creating entrepreneurial opportunities, and improving the overall quality of life. The works of Bhatia and Singh (2019) and Hendriks (2019) underline the empowerment benefits that FI brings to women. Morsy (2020) highlighted how FI enhances access to financial services for individuals. Kairiza et al. (2017) demonstrated how FI can create opportunities for women in entrepreneurship. Churchill and Marisetty (2020) focused on the broader impact of FI on improving the overall quality of life. In a study conducted by Pal et al. (2022), the findings revealed that women's empowerment through FI is significantly influenced by three key factors: their earning status, their involvement in financial decision-making within the household, and their status as recipients of social welfare schemes.

Economic Development

Lal's (2021) extensive research has highlighted the crucial role of FI in propelling economic development within marginalized communities. The study emphasizes the direct and noteworthy influence that access to financial services and credit can have on fostering growth and prosperity among disadvantaged populations. In their study, Erlando et al. (2020) revealed a statistically significant connection between FI and economic growth, with evidence indicating that FI positively stimulates economic development. FI bestows power upon low-income households, granting them the capability to engage actively in economic advancement and capitalize on entrepreneurial prospects. Sharma (2016) and Lenka & Sharma (2017) have underscored the positive impact of FI on economic development. The findings highlight the importance of inclusive financial policies and practices in fostering economic prosperity, as greater access to financial services empowers individuals and businesses to participate more actively in economic activities, invest in productive ventures, and contribute to the overall growth and development of the economy. Meanwhile, Nizam et al. (2020) undertook an analysis of the effects of FI on economic growth, and their results indicated the existence of a threshold effect of FI on economic growth. FI thus plays a pivotal role in driving economic growth, and empowering communities by providing them with access to a comprehensive range of financial services (Kim et al., 2018; Michael and Sharon, 2014).

Social Empowerment

Financial institutions act as catalysts for the economic and social growth of individuals and the overall progress of an economy (Banerjee & Francis, 2014; Kapoor & Singh, 2014; Padma & Gopiseti, 2013) by providing access to financial services. This access to financial services has far-reaching effects, such as fostering financial empowerment, promoting social inclusion, and building self-confidence, especially among rural populations, particularly women. These transformations ultimately lead to the economic development of these communities (Kelkar, 2010; Uma et al., 2013; Paramasivan & Ganeshkumar, 2013). Recent research by Nandru et al. (2021) emphasizes that providing rural families, including farmers, with access to banking services and products can significantly boost farm revenues through increased agricultural productivity. In summary, FI acts as a catalyst for economic growth, social progress, and overall development, positively impacting individuals and entire communities alike.

FI and Rural Development

FI is a vital and transformative mechanism for improving the socio-economic condition of rural communities, especially those who are underprivileged, have low skills, and are women (Divya, 2014; Uma et al., 2013; Paramasivan and Ganeshkumar, 2013). Moreover, access to financial services empowers individuals in rural areas by enabling them to obtain farming equipment and subsequently enhancing agricultural output (Abraham, 2018). FI plays a vital role in facilitating rural development by providing essential financial services to the rural population. Bridging the gap in FI holds the key to unlocking the vast economic potential of rural areas, leading to holistic and sustainable development in these regions (Christabell and Vimal, 2012; Devaki, 2008). It provides essential financial services to millions of financially underserved rural households (Levine, 1997). These services have become pivotal in fueling growth and development initiatives.

Based on a comprehensive analysis of both theoretical frameworks and empirical evidence, the following hypotheses can be reasonably proposed.

H1: FI has significant effect on social empowerment

H2: FI has significant effect on economic development

H3: FI has significant effect on women empowerment

H4: Social empowerment, economic development and women empowerment significantly affects rural development

Research Methodology

The central objective of this research is to comprehend the connection between FI and rural development in Odisha, focusing on social empowerment, women's empowerment, and economic advancement. Due to the impracticability of encompassing all individuals within the study, a deliberate strategy was employed. Four districts (Cuttack, Khordha, Kendrapara, and Jagatsinghpur) with a literacy rate exceeding 85% were meticulously chosen for inclusion. For the collection of primary data, a purposive sampling technique was employed by the researcher. A comprehensive questionnaire consisting of 30 items was formulated, drawing inspiration from previous research endeavors. The selection of these items was informed by an examination of relevant literature in the field. The identification of key constructs and variables was based on insights gleaned from existing empirical studies. Before the main survey, a pilot test involving 70 participants was conducted. Participants in this study were encouraged to highlight any aspects that appeared unclear or confusing and to provide their perspectives to enhance the questionnaire's comprehensibility and pertinence. The insights garnered from these valuable interactions were incorporated by the researchers to enhance the refinement of the questionnaire. Feedback from this pilot test led to minor refinements in the survey instrument, ensuring its appropriateness and efficacy for the subsequent comprehensive survey. To assess the adequacy of the study's sample size, guidance from prominent researchers in the field was taken into account. Nunnally (1967) suggested a minimum of 10 observations for each item or parameter being tested. Following these recommendations, a sample size of at least 300 was deemed appropriate for this study. Considering the large geographical area and the high number of required responses, data was collected from 800 individuals with the assistance of volunteers. A total of 800 questionnaires were randomly distributed to individuals in the four selected districts to gather primary data on how rural development is achieved through financial inclusion in Odisha. Out of the 800 distributed questionnaires, 750 were returned, and after rigorous screening, 734 were considered valid for the final analysis. The sample size and response rate met the acceptable standards set by previous studies (Cochran, 1977), ensuring the research's robustness and reliability. In this study, our objective is to investigate the proposed relationships using previously validated and empirically tested scales from existing research. A total of 30 measurement variables have been carefully selected from the literature for this investigation. Specifically, we have integrated measurement items related to "FI" from the studies conducted by Bongomin et al. (2016) and Nandru and Rentala (2019). Furthermore, the measurement scale items for "Social Empowerment" and "Economic Development" have been adopted from the work of Niyaz et al. (2018) and Michael & Bustelo (1986), respectively. Additionally, the measurement scale items pertaining to "women empowerment" have been sourced from the studies by Hendriks (2019) and "rural development" from the studies by Lal (2018). To collect data, the researcher utilized a five-point scale, enabling participants to rate each of the 30 measurement items based on their level of agreement. The scale ranged from "strongly agree" (5) to "strongly disagree" (1). This rating system was chosen to effectively capture respondents' perspectives and responses.

Data-analysis procedures

In this investigation, structural equation modeling (SEM) is employed to delve into the complex interconnections among variables, yielding comprehensive outcomes for the examination of theoretical constructs. SEM presents scholars with the capacity to concurrently evaluate numerous intricate hypotheses by scrutinizing the impact of diverse independent and dependent factors within a meticulously organized framework (Anderson and Gerbing, 1988; Byrne, 2010).

Scale Reliability

Researchers have used the coefficient alpha method to evaluate the internal consistency of a scale and determine how well its items measure the same underlying constructs (Sekaran, 2010). In this study, the scales' reliability is considered satisfactory if the Cronbach's coefficient alpha value for each tool (shown in Table 1) exceeds the recommended threshold of 0.60, as suggested by Hair et al. (2010).

Table No- 1: Reliability

Constructs	N	Alpha
Social Empowerment	5	0.967
Economic Development	5	0.963
Women Empowerment	5	0.871
Financial Inclusion	5	0.884
Rural Development	5	0.949

Calculated by the researchers

Convergent validity

Three measures are employed to establish the validity of the study: Composite reliability (CR), Factor loadings, and Average Variance Explained (AVE). The values for AVE and CR are computed and can be found in Table No. 2, indicating that they exceed the recommended thresholds of 0.7 for CR and 0.5 for AVE. Additionally, $CR > AVE$, and the factor loadings (C.R. > 1.96) are significant and surpass 0.50, as suggested by Hair et al. (2010).

Table No- 2: Convergent validity

Variables	Estimate	AVE	CR
F5	0.853	0.77	0.88
F4	0.788		
F3	0.749		
F2	0.788		
F1	0.682		
S5	0.937	0.92	0.96
S4	0.923		
S3	0.906		
S2	0.933		
S1	0.931		
W5	0.705	0.76	0.87
W4	0.805		
W3	0.832		
W2	0.828		
W1	0.651		
E5	0.932	0.91	0.96
E4	0.878		
E3	0.965		
E2	0.93		
E1	0.866		
R1	0.816	0.88	0.95
R2	0.879		
R3	0.894		

R4	0.943		
R5	0.872		

Calculated by the researchers

Discriminant Validity

The examination of the sample data affirms the presence of discriminant validity, as shown in Table No. 3. Here, it is observed that the square root of AVE ($\sqrt{\text{AVE}}$) surpasses the correlation coefficients among distinct constructs, in accordance with the findings of Hair et al. (2011).

Table No- 3: Discriminant validity

	$\sqrt{\text{AVE}}$	Social Empowerment	Economic Development	Women Empowerment	Financial Inclusion	Rural Development
Social Empowerment	0.877 0.95	1	.107	.365	.297	.275
Economic Development	0.95	.107	1	.165	.425	.324
Women Empowerment	0.76	.365	.165	1	.341	.259
Financial Inclusion	0.877 0.85	.297	.425	.341	1	.388
Rural Development	0.93 0.91	.275	.324	.259	.388	1

Source: Calculated by the researchers

Measurement Model

Following the guidelines proposed by Schreiber et al. (2006), separate models were estimated to determine the goodness-of-fit indices for each latent construct. The results, presented in Table-4, demonstrate satisfactory model fit indices.

Table No-4: Model fit

Fit Index	Value
CMIN/DF	2.912
GFI	0.923
AGFI	0.903
CFI	0.972
RMSEA	0.051
P-CLOSE	0.331

Source: Calculated by the researchers

Hypothesis Testing

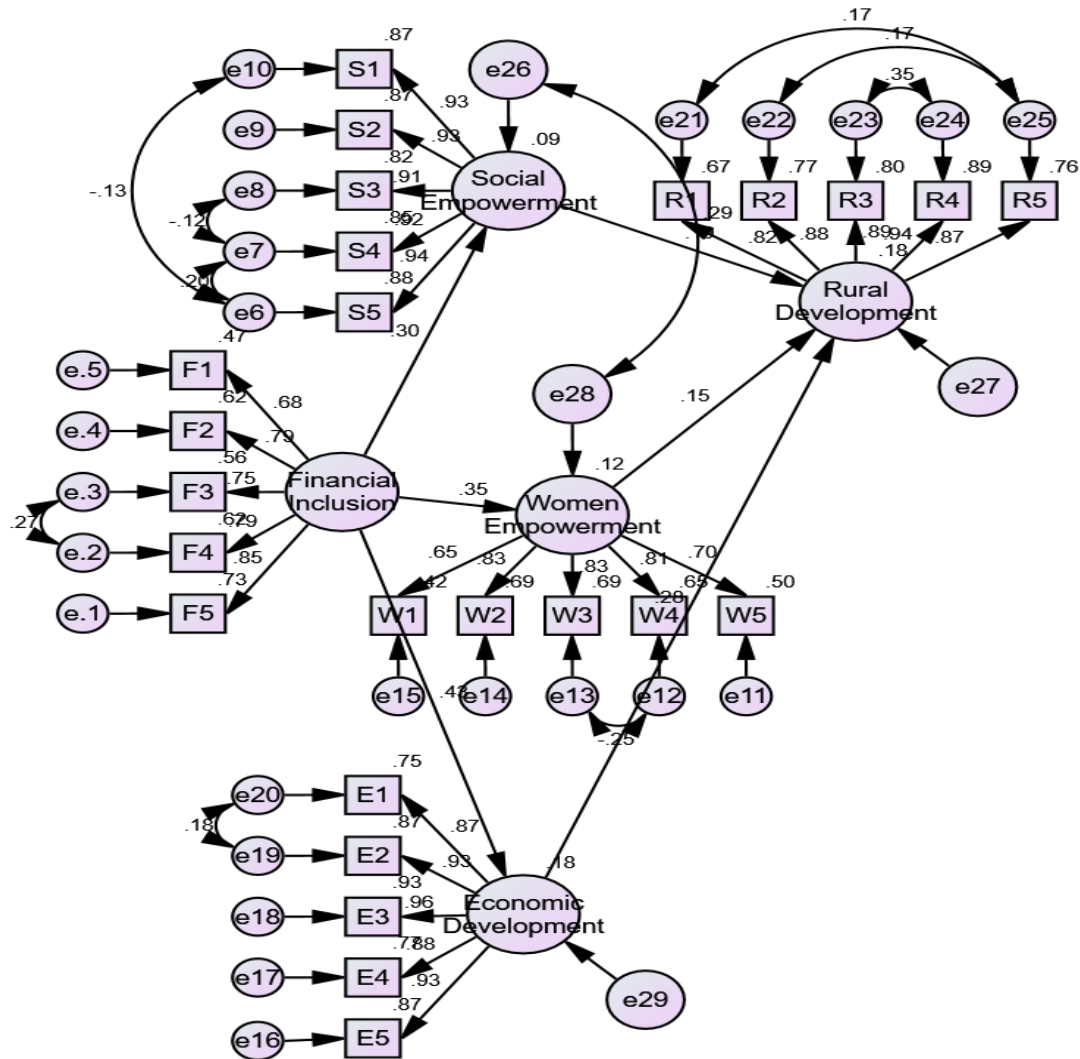
Path analysis (depicted in Figure 1) was conducted to test the formulated hypotheses. The regression weights and critical ratios, detailed in Table No. 5, shed light on the strengths of the connections between variables. The findings reveal that Women Empowerment ($p < 0.05$), Social Empowerment ($p < 0.05$), and Economic development ($p < 0.05$) positively and significantly influenced by Financial Inclusion (FI). Similarly, FI ($***p < 0.05$) demonstrates a robust impact on with rural development. Hence, hypotheses H1, H2, H3, and H4 are affirmed (refer to Table No. 5).

Table No- 5: Regression Weights

Variable		Variable	Estimate	S.E.	C.R.	P
Women_Empowerment	<---	Financial_Inclusion	.290	.035	8.187	***
Social_Empowerment	<---	Financial_Inclusion	.334	.044	7.585	***
Economic_Development	<---	Financial_Inclusion	.466	.042	11.084	***
Rural_Development	<---	Social_Empowerment	.164	.033	4.928	***
Rural_Development	<---	Women_Empowerment	.170	.047	3.647	***
Rural_Development	<---	Economic_Development	.248	.032	7.661	***
F5	<---	Financial_Inclusion	1.000			
F4	<---	Financial_Inclusion	.926	.039	23.775	***
F3	<---	Financial_Inclusion	.861	.039	22.131	***
F2	<---	Financial_Inclusion	.914	.038	24.176	***
F1	<---	Financial_Inclusion	.802	.040	19.940	***
S5	<---	Social_Empowerment	1.000			
S4	<---	Social_Empowerment	.986	.019	51.541	***
S3	<---	Social_Empowerment	.969	.023	42.908	***
S2	<---	Social_Empowerment	.992	.021	47.584	***
S1	<---	Social_Empowerment	.985	.022	45.216	***
W5	<---	Women_Empowerment	1.000			
W4	<---	Women_Empowerment	1.156	.060	19.382	***
W3	<---	Women_Empowerment	1.174	.059	20.010	***
W2	<---	Women_Empowerment	1.159	.056	20.813	***
W1	<---	Women_Empowerment	.905	.055	16.564	***
E5	<---	Economic_Development	1.000			
E4	<---	Economic_Development	.949	.024	39.485	***
E3	<---	Economic_Development	1.034	.019	54.697	***
E2	<---	Economic_Development	1.003	.021	47.497	***
E1	<---	Economic_Development	.934	.025	37.925	***
R1	<---	Rural_Development	1.000			
R2	<---	Rural_Development	1.081	.037	28.880	***
R3	<---	Rural_Development	1.097	.039	28.056	***
R4	<---	Rural_Development	1.155	.038	30.534	***
R5	<---	Rural_Development	1.077	.034	31.302	

Source: Calculated by the researchers

Figure No-1: Path Diagram



Findings and Discussion

The research findings underscore the evident impact of social empowerment, women's empowerment, and economic development on Financial Inclusion (FI), as well as the influence of FI on rural development. Among these factors, FI emerges as the most influential determinant in driving Economic Development, a conclusion supported by previous studies by Kim et al. (2018), Michael and Sharon (2014), Sharma (2016), Lenka & Sharma (2017), Nizam et al. (2020), Erlando et al. (2020), and Lal (2021). Thus, FI assumes a central role in propelling economic expansion, alleviating poverty, and empowering individuals and communities through comprehensive access to financial services. The second most critical factor influenced by FI is Social Empowerment, supported by research conducted by Singh (2019), Hendriks (2019), and Pal et al. (2022). FI significantly contributes to fostering women's empowerment by providing them with greater access to financial resources and opportunities. Facilitating access to financial services

and credit, FI also creates entrepreneurial opportunities for individuals, encouraging economic growth and self-sufficiency. The positive impact of FI on various aspects of economic and social well-being leads to an improvement in the overall quality of life, particularly within rural populations. The third most significant factor influenced by FI is women's Empowerment, as supported by research conducted by Singh (2019), Hendriks (2019), Churchill and Marisetty (2020), and Pal et al. (2022). The provision of financial services through FI fosters financial empowerment, promotes social inclusion, and nurtures self-confidence, especially in rural areas. The research findings also highlight the evident impact of FI on Rural Development, corroborated by research conducted by Christabell and Vimal (2012) and Devaki (2008). FI plays a vital role in facilitating rural development by providing essential financial services to the rural population. Closing the gap in FI is essential to unlocking the vast economic potential of rural areas and leading to holistic and sustainable development in these regions.

FI has a profound influence on rural development, significantly shaping the economic, social, and overall well-being of rural communities. It fosters economic growth in rural areas by providing access to financial services, credit, and savings opportunities. This empowers individuals and businesses to invest in productive ventures, expand their economic activities, and create job opportunities, thereby stimulating local economic development.

Conclusion

Having access to financial services allows rural communities to build resilience against economic shocks and natural disasters. Savings and insurance options offered through FI help individuals and communities better cope with emergencies and recover faster from adverse events. FI often goes hand in hand with financial literacy programs. Educating rural residents about financial management, savings, and investment empowers them to make informed decisions, leading to improved financial well-being. The growth of financial institutions in rural areas can also contribute to the development of physical infrastructure, such as improved roads, communication networks, and transportation facilities, supporting overall rural development.

FI has a transformative impact on rural development by fostering economic progress, reducing poverty, promoting social equity, and empowering rural communities to build a more prosperous and sustainable future. It enables rural people to access essential services such as healthcare, education, and insurance. By facilitating financial transactions and mobile banking services, FI bridges the gap in accessing critical services, particularly in remote areas. It plays a vital role in reducing poverty in rural communities. By enabling access to financial resources and services, FI allows households to better manage their finances, cope with unexpected expenses, and invest in income-generating activities, thereby lifting people out of poverty. It also promotes social inclusion in rural communities by ensuring that all members, including women, youth, and marginalized groups, have equal access to financial services and opportunities. This empowers individuals and strengthens social cohesion within rural societies. By providing financial services to aspiring entrepreneurs, FI also supports the establishment and growth of small businesses and microenterprises, which are crucial drivers of rural development.

Managerial Implications

With a notable portion of its population dwelling in poverty, Odisha needs to be financially inclusive to drive its socio-economic development. FI can play a pivotal role in reducing poverty, advancing gender equality, fostering agricultural growth, promoting entrepreneurship, and facilitating inclusive development throughout the state. By addressing these aspects, FI has the potential to make a transformative impact on the lives of Odisha's populace and propel the state towards comprehensive and sustainable development. FI can support agricultural development by offering farmers access to credit, insurance, and savings facilities, enabling them to adopt modern farming techniques, purchase better inputs, and mitigate the risks associated with agriculture. FI fosters entrepreneurship and the growth of micro, small, and medium-sized enterprises (MSMEs). Access to financial services helps aspiring entrepreneurs in Odisha, start and expands their businesses, contributing to local economic development and employment generation.

Scope for further research and Limitations

The research has generated valuable insights with implications for both theoretical understanding and practical management. However, it is essential to acknowledge and address its limitations. To enhance the understanding of the subject matter, further expansion of the study could explore the impact of FI on area development and the political empowerment of rural communities in Odisha. Additionally, integrating an examination of financial literacy into the research could provide valuable insights into how it mediates the relationship between FI and rural development. Caution must be exercised when extrapolating the findings of this study to other states, given that the analysis exclusively centered on individuals from Odisha. To address this constraint and validate the proposed relationships, conducting supplementary studies across a range of states while integrating distinct constructs could yield advantages. This approach would offer a more comprehensive grasp of the subject matter and extend the applicability of the study's outcomes.

References

1. Abraham, T. W. (2018). Estimating the effects of financial access on poor farmers in rural Northern Nigeria. *Financial Innovation*, 4(1), 1–20. <https://doi.org/10.1186/s40854-018-0112-2>
2. Alhassan T. F., Guryanov S. A., and Kouadio A. J., (2021). The impact of mobile money, remittances, and financial development on innovative growth in sub-Saharan Africa, *Econ. Reg.*, 8(4), 363–384, doi.org/10.17059/EKON.REG.2021-1-21
3. Anand, S. K., & Kuldip, S. C. (2013). A theoretical and quantitative analysis of financial inclusion and economic growth. *Management and Labour Studies*, 38(1 and 2), 103–133. <https://doi.org/10.1177/0258042X13498009>
4. Anderson, J. and Gerbing, D. (1988) Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*, 103, 411–423. <http://dx.doi.org/10.1037/0033-2909.103.3.411>
5. Arif, I., Afshan, S., & Sharif, A. (2016). Resistance to mobile banking adoption in a developing country: evidence from modified TAM. *Journal of Finance and Economics Research*, 1(1), 25–42. <https://doi.org/10.20547/jfer1601104>
6. Azimi M. N., (2020). Hypothesizing resurgence of financial inclusion to reduce poverty in Afghanistan, *Journal of Business management and Revolution*, 1(1), 10–13, doi.org/10.37357/1068/jbmr/1.1.02
7. Azimi M. N. (2022). New insights into the impact of financial inclusion on economic growth: A global perspective. *PloS one*, 17(11), e0277730. <https://doi.org/10.1371/journal.pone.0277730>
8. Banerjee, S. & Francis, G. (2014). Financial inclusion and social development. *International Journal of Scientific Research and Management*, 13-18.
9. Bika, Z., Subalova, M., & Locke, C. (2022). Microfinance and small business development in a transitional economy: Insights from borrowers' relations with microfinance organisations in Kazakhstan. *The Journal of Development Studies*, 58(1), 183-203
10. Beck, T., Demirguc-Kunt, A. and Levine, R. (2007), Finance, inequality and the poor, *Journal of Economic Growth*, 12(1), 27-49
11. Bhatia, S. and Singh, S. (2019), Empowering women through financial inclusion: A study of urban Slum, *Vikalpa*, 44(4), 182-197, [doi: 10.1177/0256090919897809](https://doi.org/10.1177/0256090919897809)
12. Byrne, B. M. (2010). *Structural Equation Modeling with Amos Basic Concepts, Applications, and Programming* (2nd ed.). New York Taylor and Francis Group.
13. Cicchiello, A.F., Kazemikhasragh, A., Monferrá, S. & Giron, A. (2021). Financial inclusion and development in the least developed countries in Asia and Africa. *Journal of Innovation and Entrepreneurship* 10, 49 <https://doi.org/10.1186/s13731-021-00190-4>

14. Christabell, P.J. and Vimal, R.A. (2012), Financial inclusion in rural India: the role of microfinance as a tool, *IOSR Journal of Humanities and Social Science*, 2(5), 21-25.
15. Churchill, S.A. and Marisetty, V.B. (2020), Financial inclusion and poverty: a tale of forty-five thousand households, *Applied Economics*, 52(16), 1777-1788, doi: 10.1080/00036846.2019.1678732
16. Chibango, C. (2014). Revolution Mobile Money: An Opportunity for Financial Inclusion in Africa. *The International Journal of Humanities & Social Studies* 2, 59, 67.
17. Cochran, W.G. (1963) Sampling Technique. 2nd Edition, John Wiley and Sons Inc., New York.
18. Claessens, S., Djankov, S., & Lang, L. H. (2000). The separation of ownership and control in East Asian corporations. *Journal of financial Economics*, 58(1-2), 81-112.
19. Cull, R., & Morduch, J. (2018). Microfinance and economic development. In *Handbook of finance and development* (550- 572). Edward Elgar Publishing
20. Davis, J. R., Gaburici, A., & Hare, P. G. (1998). What's wrong with Romanian rural finance? Understanding the determinants of private farmers' access to credit. *Understanding the Determinants of Private Farmers' Access to Credit Centre for Economic Reform and Transformation, Heriot-Watt University Discussion Paper*, (98/08).
21. Devaki, M. (2008), Financial inclusion, *Journal of Indian Institute of Banking and Finance*, 30-33.
22. Divya, K. (2014), Banks on wheels for financial inclusion: A case study, *International Journal of Research in Computer Applications and Management*, 4 (9), 36-40
23. Dupas. P. & Robinson, J.(2013). Why Don't the Poor Save More? Evidence from Health Savings Experiments† *American Economic Review*, 103(4): 1138–1171 <http://dx.doi.org/10.1257/aer.103.4.1138>
24. Erlando A., Riyanto F. D., and Masakazu S., (2020). Financial inclusion, economic growth, and poverty alleviation: evidence from eastern Indonesia, *Helicon*, 6(10). <https://doi.org/10.1016/j.helicon.2020.e05235> PMID: 33088971
25. Ghosh, J. (2013). Microfinance and the challenge of financial inclusion for development. *Cambridge journal of economics*, 37(6), 1203–1219.
26. Hair, J.F., Tatham, R.L., Anderson, R.E., & Black, W. (2010). *Multivariate Data Analysis*, vol. 7, Pearson Prentice Hall.
27. Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011). PLS-SEM: indeed a silver bullet, *The Journal of Marketing Theory and Practice*, 19(2), pp. 139-152.
28. Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010) *Multivariate Data Analysis*. 7th Edition, Pearson, New York. - References - Scientific Research Publishing.
29. Hendriks, S. (2019), The role of financial inclusion in driving women's economic empowerment, *Development in Practice*, 29(8), 1029-1038, doi: 10.1080/09614524.2019.1660308
30. Holloway, K., Z. Niazi, and R. Rouse.(2017). *Women's Economic Empowerment Through Financial Inclusion: A Review of Existing Evidence and Remaining Knowledge Gaps*. New Haven, CT: Innovations for Poverty Action.
31. Jayakumari, A.G. (2015), Financial inclusion: an Indian outlook, *Research Journal of Social Science & Management*, 4(11) 1-5.
32. Kairiza, T., Kiprono, P. and Magadzire, V. (2017), Gender differences in financial inclusion amongst entrepreneurs in Zimbabwe, *Small Business Economics*, 48(1), 259-272
33. Kapoor, P. & Singh, A. (2014). Study on financial services to excluded sectors through financial inclusion. *International Journal of Application or Innovation in Engineering & Management*, 3(2), 363-372.
34. Kelkar, V. (2010), "Financial inclusion for inclusive growth", *ASCI Journal of Management*, 39(1), 55-68.
35. Kim, D. W., Yu, J. S., & Hassan, M. K. (2018). Financial inclusion and economic growth in OIC countries. *Research in International Business and Finance*, 43, 1–14.

36. Lal, T. (2021), Impact of financial inclusion on economic development of marginalized communities through the mediation of social and economic empowerment, *International Journal of Social Economics*, Vol. 48 No. 12, pp. 1768-1793. <https://doi.org/10.1108/IJSE-12-2020-0830>
37. Lal, T.(2018). Measuring impact of financial inclusion on rural development through cooperatives, *International Journal of Social Economics*, 0306-8293, <https://doi.org/10.1108/IJSE-02-2018-0057>
38. Lenka S. K. and Sharma R. (2017). Does Financial Inclusion Spur Economic Growth in India?, *Journal of Developing Areas*, 51(1), 215–228, 2017, <https://doi.org/10.1353/jda.2017.0069>
39. Lenka, K. S., & Sharma, R. (2017). Does financial inclusion spur economic growth in India? *The Journal of Developing Area*, 51(3), 215–228
40. Levine, R. (1997), Financial development and economic growth: views and agenda, *Journal of Economic Literature*, 35(2), 688-726.
41. Mader, P. (2018). Contesting financial inclusion. *Development and Change*, 49(2), 461–483.
42. Mahjabeen, R. (2008). Microfinancing in Bangladesh: Impact on households, consumption and welfare. *Journal of Policy modeling*, 30(6), 1083-1092.
43. Misra, P.C. (2007), Impact of microfinance: towards achieving poverty alleviation, *Indian Journal of Social Sciences*, 5(9), 87-92
44. Micheal, O. B., & Sharon, O. O. (2014). Financial system, financial inclusion and economic development in Nigeria. *International Journal of Management Sciences*, 2(3), 139–148.
45. Michael, C., & Bustelo, E. (1986). Social indicators and development. *Project Appraisal*, 1(4), 266–268. <https://doi.org/10.1080/02688867.1986.9726580>
46. Memon, A., Akram, W., Abbas, G., Chandio, A. A., Adeel, S., & Yasmin, I. (2022). Financial Sustainability of Microfinance Institutions and Macroeconomic Factors: A Case of South Asia. *South Asian Journal of Macroeconomics and Public Finance*, 11(1), 116-142
47. Morsy, H. (2020), Access to finance – mind the gender gap, *Quarterly Review of Economics and Finance*, Vol. 78, 12-21, doi: 10.1016/j.qref.2020.02.005
48. Nayak, R.K. (2012), Financial inclusion through cooperative banks: a feasible option for inclusive growth, *Indore Management Journal*, 4(3), 9-17.
49. Nagaraja, S. (2013), Financial inclusion and rural development, *Global Research Analysis*, 2(7), 188-189.
50. Ndebbio, J. (2004), Financial deepening, economic growth and development: evidence from selected African countries, Research Paper No. 142, *African Economic Research Consortium*, Nairobi
51. Nizam R., Karim Z. A., Rahman A. A., and Sarmidi T., (2020). Financial inclusiveness and economic growth: new evidence using a threshold regression analysis, *Economic research-ekonomska istrazivanja*, 33(1), 1465– 1484, <https://doi.org/10.1080/1331677X.2020.1748508>
52. Niyaz, Siddiq, A. (2018). Socio - economic indicators for the development of rural muslim communities: A meta - analysis from India. *International Journal of Management Studies*, 5(2(3)), 17–33. [https://doi.org/10.18843/ijms/v5i2\(3\)/03](https://doi.org/10.18843/ijms/v5i2(3)/03)
53. Nunnally, J. C., & Bernstein, I. H. (1967). Psychometric theory. McGraw-Hill Series in Psychology. McGraw-Hill
54. Padma, A., & Gopiseti, R. (2013). Financial inclusion - A way forward to rural development. *International Journal of Advanced Research and Innovations*, 1(5), 133-142.
55. Pal, M., Gupta, H. and Joshi, Y.C. (2022), Social and economic empowerment of women through financial inclusion: empirical evidence from India, *Equality, Diversity and Inclusion*, 41(2), 294-305. <https://doi.org/10.1108/EDI-04-2021-0113>
56. Paramasivan, C. and Ganeshkumar, V. (2013), Overview of financial inclusion in India, *International Journal of Management and Development Studies*, 2(3), 45-49.

57. Park, C. Y., & Mercado, R. (2015). Financial inclusion, poverty, and income inequality in developing Asia. *Asian Development Bank Economics Working Paper Series*, (426).
58. Sarma, M. and Pais, J. (2011), Financial inclusion and development, *Journal of International Development*, 23(1), 613-628, <https://doi.org/10.1002/jid.1698>.
59. Sarma, M. (2008). Index of financial inclusion (No. 215). Working paper.
60. Sekaran, U. (2010). *Research Methods for Business: A Skill-Building Approach* (Fourth). John Wiley & Sons Ltd.
61. Schumpeter J. A., (1934). *Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Harvard University Press.
62. Schreiber, J. B., Stage, F. K., King, J., Nora, A., & Barlow, E. A. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review, *The Journal of Educational Research*, 99(6), 323–337.
63. Shahulhameedu M., (2014). Financial Inclusion—Issues in Measurement and Analysis, *International Journal of Current Research and Academic Review*, 2(2), 116–124
64. Sharma, D. (2016). Nexus between financial inclusion and economic growth: Evidence from the emerging Indian economy. *Journal of Financial Economic Policy*, 8(1), 13–36
65. Sharma, D. (2016). Nexus between financial inclusion and economic growth: Evidence from the emerging Indian economy. *Journal of Financial Economic Policy*, 8(1), 13–36.
66. Sharma, A. & Kukreja, S. (2013). An analytical study: relevance of financial inclusion for developing nations. *Research Inventy: International Journal of Engineering and Science*, 2(6), 15-20.
67. Singh, A. and Tandon, P. (2012), Financial inclusion in India: an analysis, *International Journal of Marketing, Financial Services & Management Research*, 1(6), 41-54.
68. Singh, S. (2022). A study on Financial Inclusion for Rural Development in India with reference to Tourism Sectors. *RESEARCH REVIEW International Journal of Multidisciplinary*, 7(2), 33–39. <https://doi.org/10.31305/rrijm.2022.v07.i02.006>
69. Simatele, M., & Maciko, L. (2022). Financial inclusion in Rural South Africa: A qualitative approach. *Journal of Risk and Financial Management*, 15(9), 376. <https://doi.org/10.3390/jrfm15090376>
70. Simatele, M. C, Dube, Z, & Khumalo, S. (2021). How digital finance affects poverty: The transmission mechanism view. In (Ed.), *Financial inclusion: basic theories and empirical evidence from African countries*. <https://doi.org/10.4102/aosis.2021.BK255>
71. Sharma, M. (2010), Index of financial inclusion, available at: <http://202.41.10.25/Academics> (accessed 27 September 2014).
72. Raza M. S., Tang J., Rubab S., and Wen X., (2019). Determining the nexus between financial inclusion and economic development in Pakistan, *Journal of Money Laundering Control*, 22(2), 195–209, <https://doi.org/10.1108/JMLC-12-2017-0068>
73. Thathsarani, U., Wei, J., & Samaraweera, G. (2021). Financial Inclusion's Role in Economic Growth and Human Capital in South Asia: An Econometric Approach. *Sustainability*, 13(8), 4303. doi:10.3390/su13084303
74. Uma, H.R., Rupa, K.N. and Madhu, G.R. (2013), Impact of bank led financial inclusion model on the socio-economic status of Saral saving account holders, *Paripex Indian Journal of Research*, 2(9), 50-52
75. Wun, N. S. L. P., Nusari, M., & Ameen, A. (2019). Effect of microfinance on socio-economic development of rural community in Myanmar. *International Journal of Management and Human Science*, 3(3), 26-31
76. Zins, A., & Weill, L. (2016). The determinants of financial inclusion in Africa. *Review of Development Finance*, 6 (1), 46–57. <https://doi.org/10.1016/j.rdf.2016.05.001>