Financial Inclusion and Socio-Economic Development : The Mediating Role of Social Empowerment in Rural Odisha of India

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Abstract

Purpose : This study investigated the direct relationship between financial inclusion (FI) and socio-economic development (SED) of rural households in Odisha, India. Furthermore, the indirect relationship between financial inclusion and socio-economic development, with social empowerment (SE) as a mediating variable, was examined.

Methodology : Data for the primary survey were collected from 545 rural households in Odisha, India, using a structured questionnaire. The study conducted exploratory factor analysis, confirmatory factor analysis, and path analysis to investigate the interrelationships among financial inclusion, socio-economic development, and social empowerment of households in rural Odisha.

Findings : The primary research findings revealed that financial inclusion had a positive influence on the socio-economic development of rural households in Odisha, enhancing their access to formal banking and financial services. Another key finding was that social empowerment partially mediated the relationship between financial inclusion and socio-economic development. Furthermore, social empowerment contributed to the overall socio-economic well-being of these rural households and the rural economy by enlarging people's choices and capabilities.

Implications : This study underscored the importance of both direct and indirect pathways through which financial inclusion influences socio-economic development. The results would be helpful for the government, non-governmental organizations, and policymakers in guiding targeted interventions while preparing various financial inclusion and rural development programs. Financial institutions and financial service providers could use these insights to develop strategies that not only provide financial services to rural households but also design and support social empowerment initiatives.

Originality : This research contributed to the existing literature by examining the impact of financial inclusion on rural households in Odisha and emphasizing the mediating role of social empowerment as a catalyst. It also studied multiple dimensions of financial inclusion and socio-economic development to improve the socio-economic conditions of these households in rural Odisha, India.

Keywords : **financial inclusion, socio-economic development, social empowerment, rural households; Odisha**

JEL Classification Codes : G21, I32, I38, O16

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The progress of the Indian economy necessitates the sustainable development of both society and the nation as a whole (Sachs, 2015). A robust and dynamic monetary system is essential for achieving sustainable growth and development, which necessitates the involvement of all sectors of society (Abdullahi & Adeiza, 2019). Financial literacy and financial inclusion (FI) have played significant roles in inclusive and sustainable development, helping to reduce vulnerability to economic shocks, increase employment opportunities, and boost investment in human capital (Jha & Mohapatra, 2019; Pandey et al., 2022). FI refers to the economic supply of adequate financial intermediation to weaker sections of society, such as low-income individuals and vulnerable groups, who are unable to access basic banking and financial services (Barr, 2004). Financial inclusion enables this section of the population to utilize formal banking systems and other financial services, thereby allowing them to save money, obtain credit, and protect themselves through insurance.

FI is considered a catalyst for fostering the economic growth of rural households and the rural economy (Survase & Inumula, 2019). Households enjoy increased bargaining power through access to and use of financial products and services, which build their confidence levels and enhance their decision-making power within families and in society, resulting in socio-economic progress (Lal, 2021). Social empowerment (SE) through financial inclusion (FI) has a direct impact on socio-economic development (SED), transforming the lives of poor households, improving their life choices and capabilities, and enhancing their overall standard of living (Lal, 2021; Mondal, 2015; Patel & Patel, 2020). The study by Nandru and Rentala (2020) revealed that financial inclusion interventions have a positive and significant influence on the socio-economic status of tribal people.

Reports from the Odisha State Association of Financial Inclusion Institutions (OSAFII) highlighted that FI has been integral to societal development in Odisha. Despite several initiatives undertaken by the RBI, the Odisha Government, and NITI Aayog to promote inclusive growth among the weaker sections of society, the outcome has not been well validated for rural households in particular. Rural people in Odisha face numerous constraints, including issues related to a lack of financial literacy, inadequate financial services, high banking service costs, and excessive regulatory requirements, which hinder the benefits from reaching the last-mile citizens. Hence, the present study aims to investigate the impact of FI on the SED of rural households in Odisha, India.

Review of Literature

The process of providing affordable financial services to deprived sections of society is known as financial inclusion (Kapoor & Mohandas, 2023; Mishra, 2018; Prashar, 2017). In cross-country contexts, financial inclusion lessens income disparity and reduces poverty (Omar & Inaba, 2020). Financial inclusion, from the perspective of Nigerian rural households, has been considered a source of income and a basis for poverty alleviation among diverse income groups (Ibrahim et al., 2020). In this context, financial inclusion has a significant and favorable impact on sustainable development (Soyemi et al., 2020). The results support the notion that access to and use of financial services promote human development (Matekenya et al., 2021). The crucial determinants of financial inclusion are income, financial infrastructure, and employment opportunities (Kuri & Laha, 2011; Raichoudhury, 2020).

Financial inclusion has a direct impact on short-term and long-term aspects of human development (Arora & Kumar, 2021). From the perspective of street vendors, Nandru et al. (2021) found that financial inclusion is significantly dependent on accessibility, availability, utilization, and pricing. Furthermore, the results showed that financial inclusion benefits the marginalized sections of street vendors by providing them with adequate knowledge about banking services and value-added services through digital financial technology.

The implementation of the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme in India has played a significant and positive role in increasing access to banking services in Odisha (Behera, 2020). In a cross-country context, financial literacy also played a positive and significant role in sustainable entrepreneurship (Burchi et al., 2021).

Malik et al. (2022) found a positive association between financial inclusion and social sustainability in Asian countries. The supply-side factors, such as faith in financial institutions and the distance to banks, are the main hurdles to obtaining formal financial services (Khongwir & Sharmiladevi, 2023; Siddik et al., 2015; Tandon & Singh, 2021). Tran and Le (2021) found that financial inclusion plays a crucial role in reducing the poverty levels of rural households. The accessibility and application of banking services also have a significant impact on an individual's economic growth (Kaur & Pasricha, 2019).

Niazi and Malik (2019) examined the moderating role of financial literacy in shaping individual investment decisions. The results indicated that financial literacy may function as a moderator in the behavioral realm of investment decisions. Bongomin et al. (2016b) examined the relationship between financial literacy and financial inclusion of impoverished rural families in Uganda. The results revealed that the financial network strongly mediated the relationship between financial literacy and financial inclusion. Further, Bongomin et al. (2020) explored that financial intermediaries strongly mediate the association between financial inclusion and financial literacy.

Most research in this domain has been conducted outside the Indian context. Furthermore, most studies have established a relationship between financial literacy and financial inclusion. However, the effect of financial inclusion on the socio-economic development of households in rural areas of Odisha has not yet been the subject of any thorough and systematic study. To the best of the researchers' knowledge, no study has been conducted to assess how the mediating effect of social empowerment catalyzes the enhancement of socio-economic development in rural households of Odisha. This study is specifically designed to explore the direct and indirect relationships among financial inclusion (FI), socio-economic development (SED), and social empowerment (SE) of rural households in Odisha, India.

Theoretical Framework and Hypotheses Development

Financial inclusion is identified as the key factor influencing the economic progress of rural households (Survase & Inumula, 2019). It has been a prominent factor in the eradication of poverty for underprivileged and deprived sections of society, as well as in reducing income inequality among various income groups (Dogan et al., 2022; Ibrahim et al., 2020; Tran & Le, 2021). Having access to and using financial products and services gives households more negotiating power in society, boosts their self-esteem, and empowers them to make decisions both within and outside the family, which contributes to socio-economic development (Lal, 2019). Financial inclusion has played a decisive role in significantly enhancing the socio-economic development of rural households (Rastogi & Ragabiruntha, 2018). Therefore, it is hypothesized that:

- **H_1 :** FI is positively correlated with the SED of rural households.

New bank account holders raise awareness among society members about the benefits and facilities available to bank account holders (Chakraborty & Abraham, 2021). In a primary survey conducted in the Jammu district, Lal (2021) found that financial inclusion left a significant influence on the social empowerment of households. Pal et al. (2022) found that women with bank accounts in Gujarat increased their involvement in household-level financial decision-making, which catalyzed women's empowerment. Swamy (2014) indicated that financial inclusion played a catalyst for social empowerment among rural households. Therefore, it is hypothesized that:

- **H_2 :** FI is positively associated with SE of rural households.

The income level of poor rural households increases when women are empowered through financial inclusion (Swamy, 2014). The study by Lal (2021) revealed that social empowerment aided the socio-economic

development of rural households. Similarly, Chakraborty and Abraham (2021) found that social awareness encouraged others to open bank accounts and invest money in various forms, which contributed to capital accumulation and national wealth creation. Social empowerment alters the socio-economic life of poor households, enhancing their life choices and capabilities (Lal, 2021; Mondal, 2015). Hence, it is hypothesized that:

- **H_3 :** SE is positively related to the SED of rural households.

For inclusive growth, financial inclusion has been considered a critical mechanism (Ashoka & Aswathy, 2021; Kandpal, 2024; Kaur & Pasricha, 2019; Zauro et al., 2020). Lal (2021) explored the mediating relationship between economic empowerment and social empowerment, examining their impact on the socio-economic development of rural households through financial inclusion. Further, Pal et al. (2022) found that financial inclusion played a significant role in social empowerment among women and rural families. Hence, it is hypothesized that:

- **H_4 :** SE mediates the relationship between FI and SED in rural households.

Research Methodology

A cross-sectional research design was employed in this study, which collected the required information through a structured questionnaire using convenience sampling. Data were collected from primary sources in 2024, specifically through firsthand data gathered through door-to-door and face-to-face interactions with respondents. As suggested by Hair Jr. et al. (2017), the sample size is determined to be 10 times the number of variables used in this study, followed by a statistical reliability check of each question. The questionnaire used in this study consisted of close-ended questions, which provided participants with pre-defined options for their responses. For sampling selection, the researchers chose households from rural areas, specifically selecting the heads of these households as respondents. This approach ensured that the sample accurately represented the rural population, as household heads typically hold decision-making power and can provide comprehensive insights into various aspects of rural life. Two languages, Odia and English, were used to collect and record the required information for this study.

Demographic Profile Analysis

A demographic analysis was conducted based on a primary survey involving 545 rural households in the state of Odisha. Out of 545 respondents, 61% were female (331 individuals), and 39% male (214 individuals). Most respondents were aged 50 years or older (33%), reflecting traditional family structures. Other age groups (18 to 49 years) ranged from 4% to 25%, indicating a mix of young and middle-aged individuals as heads of the family. Occupation-related data included 41% in "others," 36% in "farming," 14% "self-employed," and 9% "housewives." A significant portion of the sample (91%) were married households, and only 9% were unmarried households. The income distribution (per annum) indicated that 38% of households earned between ₹50,000 and ₹1 lakh, 35% earned more than ₹1 lakh, and 27% earned below ₹50,000. Education levels showed that 29% of the sampled population had primary education, 30% had completed high school, and 41% fell into the "others" category. Participation in financial training was found to be low, with only 23% having undergone such training. Household sizes reflected traditional family structures, with 57% having five or fewer members, 39% having six to 10 members, and 4% having more than 10 members (refer to Table 1).

Table 1. ***Demographic Profile of the Respondents***

Demographic Variables	Frequency	(%)	Mean	*SD*	Minimum	Maximum
Gender			1.607	0.488	1.00	2.00
Male	214	39%				
Female	331	61%				
Total	**545**	**100%**				
Age			3.662	1.203	1.00	5.00
18 – 25 Years	21	4%				
26 – 33 years	92	17%				
34 – 41 Years	115	21%				
42 – 49 Years	139	25%				
Above 50 Years	178	33%				
Total	**545**	**100%**				
Occupation			2.609	1.333	1.00	4.00
Farmer	194	36%				
Housewife	50	9%				
Self-Employed	76	14%				
Others	225	41%				
Total	**545**	**100%**				
Marital Status			1.093	0.291	1.00	2.00
Married	494	91%				
Unmarried	51	9%				
Total	**545**	**100%**				
Income (Per Annum)			2.080	0.781	1.00	3.00
< ₹ 50,000	146	27%				
₹ 50,000 – ₹ 1,00,000	209	38%				
> ₹ 1,00,000	190	35%				
Total	**545**	**100%**				
Education			2.111	0.831	1.00	3.00
Primary	161	29%				
High School	162	30%				
Others	222	41%				
Total	**545**	**100%**				
Participated in Financial Training			1.765	0.424	1.00	2.00
Yes	128	23%				
No	417	77%				
Total	**545**	**100%**				
Household Size			1.466	0.574	1.00	3.00
5 or less	313	57%				
6 – 10	210	39%				
More than 10	22	4%				
Total	**545**	**100%**				

Table 2. ***Output from Factor Analysis from the Dimensions of Financial Inclusion***

Dimensions	Code	Variable	*M*	*SD*	*FL*	Eigen values	% VE	Communality	Alpha (α)
Socio-Economic Development *(SED)*						**4.250**	**15.180**		**0.889**
	SED1	FI helps in achieving economic development.	3.969	1.202	0.779			0.704	
	SED2	FI has brought the unbanked masses into the formal banking system.	3.905	1.213	0.704			0.620	
	SED3	FI helps in increasing family savings.	3.888	1.237	0.681			0.617	
	SED4	FI has increased access to education in society.	3.776	1.264	0.642			0.576	
	SED5	FI has increased productivity in the agriculture sector.	3.824	1.287	0.643			0.526	
	SED6	FI has increased the level of education in your area.	3.875	1.211	0.715			0.613	
	SED7	FI has enhanced your awareness of education.	3.796	1.192	0.668			0.565	
Financial Inclusion *(FI)*						**4.551**	**16.253**		**0.904**
	FI1	I understand the importance of bank account requirements for financial transactions.	2.794	1.562	0.877			0.414	
	FI2	I understand the importance of using ATM/Debit requirements for financial transactions.	3.328	1.615	0.844			0.746	
	FI3	I handle regular transactions, including deposits, borrowing, and other financial activities.	3.081	1.677	0.821			0.744	
	FI4	I understand the importance of using a credit card for financial transactions.	3.402	1.592	0.847			0.676	
	FI5	I am aware of other financial services, such as fixed deposits, Postal Life Insurance, and LIC, among others.	3.048	1.692	0.804			0.690	
	FI6	PMJDY is a valuable scheme for low-income individuals to achieve economic independence and confidence.	3.139	1.623	0.676			0.800	
	FI7	The PMJDY scheme benefits low-income individuals by preventing exploitation.	3.406	1.645	0.645			0.475	
Social Empowerment *(SE)*						**4.000**	**14.286**		**0.862**
	SE1	FI enhances my decision-making regarding my child's education.	4.035	1.338	0.691			0.632	
	SE2	FI has improved my health and household hygiene.	3.453	1.463	0.581			0.392	

SE3	FI enhances my decision-making when buying household items.	3.477	1.266	0.736	0.586
SE4	FI increases my awareness about health and hygiene.	3.439	1.337	0.695	0.602
SE5	FI increases my decision-making on medical treatment.	3.477	1.364	0.645	0.522
SE6	FI enhances my decision-making process when buying assets.	3.629	1.296	0.734	0.669
SE7	FI increases my social responsibility.	3.800	1.336	0.687	0.587

Scales Used

The present study employed three constructs—financial inclusion (FI), socio-economic development (SED), and social empowerment (SE)—to investigate the interrelationship among these variables.

The study drew on the existing literature, including Beck et al. (2008), Cihak et al. (2012), and Bongomin et al. (2016a, 2018), to measure the FI construct. Similarly, the SED construct was measured by adopting the prior studies by Lakshmi and Visalakshmi (2013), Lal (2019), and Rastogi and Ragabiruntha (2018). The studies by Banerjee and Francis (2014), Lal (2021), Narayan (2005), Paramasivan and Ganeshkumar (2013), and Uma et al. (2013) were used to measure the SE construct of the theoretical model.

In total, 21 questions were asked to the respondents to establish the interrelationship among the constructs used in this study (Table 2). Respondents' information was recorded using a 5-point Likert scale, ranging from "*strongly agree*" (5) to "*strongly disagree*" (1).

Analysis and Results

This section focuses on exploratory factor analysis (EFA), followed by confirmatory factor analysis (CFA) and path analysis, to investigate the interrelationship between FI, SE, and SED. In exploratory factor analysis, observed variables are identified as indicators of underlying factors through a reliability check. In confirmatory factor analysis, convergent validity and discriminant validity are assessed to verify the variance and covariance of the underlying factors for path analysis. In path analysis, the relationship between underlying factors is studied. IBM SPSS 27 and AMOS are used for data analysis.

Exploratory Factor Analysis (EFA)

Underlying factors (constructs) are identified using exploratory factor analysis through a set of observed variables. Eigenvalues indicate the variance contribution of each factor, with values greater than 1 suggesting a significant factor. Factor loadings indicate the strength of association between variables and factors, with loadings above 0.5 considered significant (Singh et al., 2010). Variance contribution captures the information by each factor used in the theoretical model. Communalities ranging from 0 to 1 indicated the shared variance of each variable with other variables through the factors. Higher percentages of variance explained and communalities denote a robust factor solution, whereas lower values suggested an inadequate model.

By using principal component analysis with varimax rotation (Table 2), three factors—FI, SED, and SE—are measured using seven observed variables for each. The eigenvalue and percentage of variance (%) for the SED factor are 4.250 and 15.180, respectively, thereby indicating the variance contribution of SED. The association between observed variables and SED factor is measured through factor loading ranging from 0.642 to 0.779, indicating a strong association. Communalities values range from 0.526 to 0.704, indicating robust factor selection, followed by internal consistency, as measured by Cronbach's alpha (0.889). The association between observed variables and SED indicates that awareness of education, formal banking, family savings, and economic progress has played a crucial role in driving socio-economic development.

The eigenvalue and percentage of variance (%) for the FI factor are 4.551 and 16.253, respectively, indicating the variance contribution of the FI factor. The association between the observed variables and factor FI is measured through factor loadings, which range from 0.645 to 0.877, revealing a significant and influential relationship. Communalities values ranged from 0.414 to 0.800, indicating robust factor selection, followed by internal consistency, as measured by Cronbach's alpha (0.904). The association between observed variables and FI validates that bank accounts, debit cards, and the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme played a

significant role in promoting financial inclusion among rural households. The eigenvalue and percentage of variance (%) for the SE factor are 4.000 and 14.286, respectively, indicating the variance contribution of the SE factor. The association between observed variables and factor SE is measured through factor loadings ranging from 0.581 to 0.736, revealing a fairly strong association. Communalities values ranged from 0.392 to 0.669, indicating robust factor selection, followed by internal consistency, as measured by Cronbach's alpha (0.862). It reveals that education of children, awareness about health, and social responsibility play a crucial role in driving social empowerment.

Confirmatory Factor Analysis (CFA)

Convergent validity, discriminant validity, and internal consistency are examined using the confirmatory factor analysis. Composite reliability (CR) and Cronbach's alpha (CA) are used to measure the internal consistency of the constructs. When the composite reliability value exceeds 0.70, and Cronbach's alpha value is greater than 0.70 for each construct, it indicates that internal consistency exists among the constructs (Table 3). The average variance extracted (AVE) of all constructs is found to be greater than the reference value, i.e., 0.50, as suggested by Hair Jr. et al. (2014), which ensures convergent validity (Table 3).

Further, the discriminant validity is assessed for each factor. The factor correlation value for all constructs should be less than the threshold value of 0.85 (Henseler et al., 2015). By using the Heterotrait-Monotrait (HTMT)

Table 3. ***Reliability and Validity***

Construct		Construct	Estimate	CR	AVE	Alpha
SE1	<---	*SE*	0.658	0.74	0.898	0.862
SE2	<---	*SE*	0.826			
SE3	<---	*SE*	0.699			
SE4	<---	*SE*	0.811			
SE5	<---	*SE*	0.795			
SE6	<---	*SE*	0.786			
SE7	<---	*SE*	0.646			
FI7	<---	*FI*	0.759	0.791	0.921	0.904
FI6	<---	*FI*	0.761			
FI5	<---	*FI*	0.757			
FI4	<---	*FI*	0.856			
FI3	<---	*FI*	0.794			
FI2	<---	*FI*	0.738			
FI1	<---	*FI*	0.874			
SED1	<---	*SED*	0.683	0.755	0.9194	0.889
SED2	<---	*SED*	0.864			
SED3	<---	*SED*	0.743			
SED4	<---	*SED*	0.849			
SED5	<---	*SED*	0.859			
SED6	<---	*SED*	0.83			
SED7	<---	*SED*	0.665			

Table 4. ***Factor Correlation Matrix/Discriminant Validity***

Constructs	√AVE	*SE*	*SED*	*FI*
SE	0.94	1		
SED	0.95	0.798	1	
FI	0.959	0.357	0.456	1

ratio of the factor correlation matrix, the study has found no problem with discriminant validity. Further, √AVE > correlation coefficients between constructs indicate that all constructs have adequate discriminant validity (Hair Jr. et al., 2014) (Table 4).

Path Analysis

In the path analysis, the relationship among three constructs—financial inclusion (FI), social empowerment (SE), and socio-economic development (SED)—is examined.

The first hypothesis (H_1) examined the relationship between financial independence (FI) and socio-economic development (SED). The path co-efficient of FI to SED (β = 0.485, SE = 0.051, CR = 9.517, $p < 0.001$) is statistically significant (Figure 1 & Table 5). It can be concluded that FI and SED are positively and directly connected, thereby supporting the H_1. This suggests that financial inclusion promotes socio-economic conditions, such as better education, improved infrastructure, and increased income levels, among rural households. Financial inclusion plays a crucial role in driving economic growth, particularly for the most disadvantaged sections of society.

Figure 1. ***Direct Effect of Path Analysis***

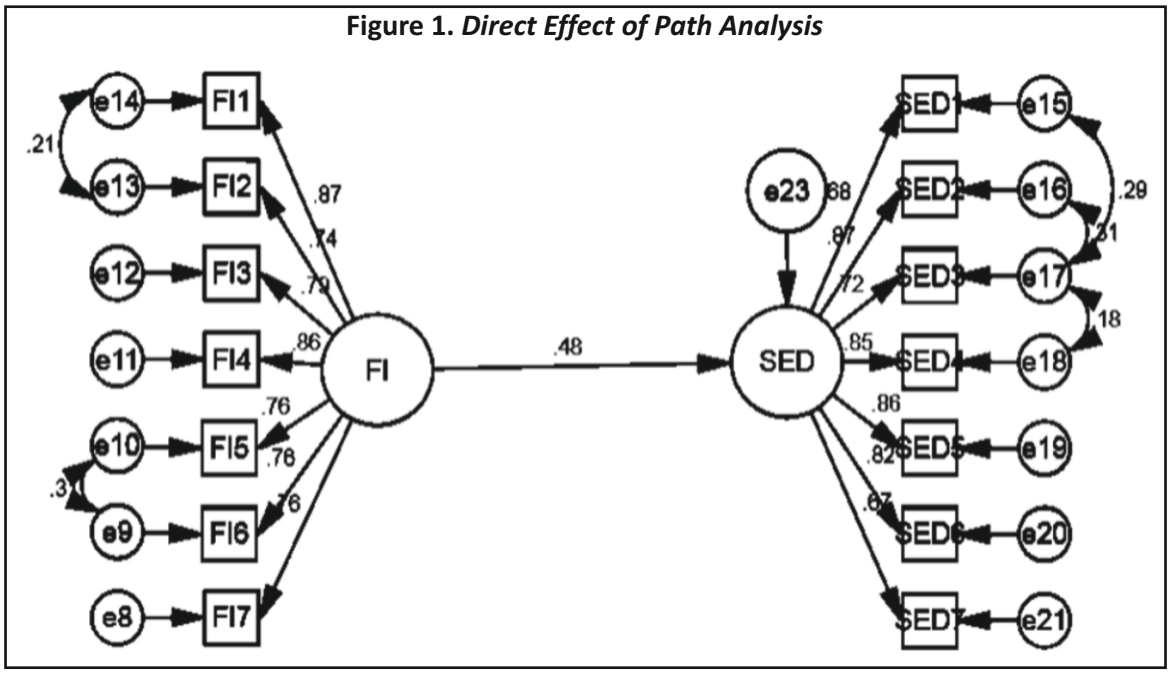


Table 5. ***Direct Effect of FI on SED***

Construct		Construct	Estimate	SE.	CR.	*p*
SED	<---	*FI*	0.485	0.051	9.517	***

Figure 2. ***Direct and Indirect Effects of Path Analysis***

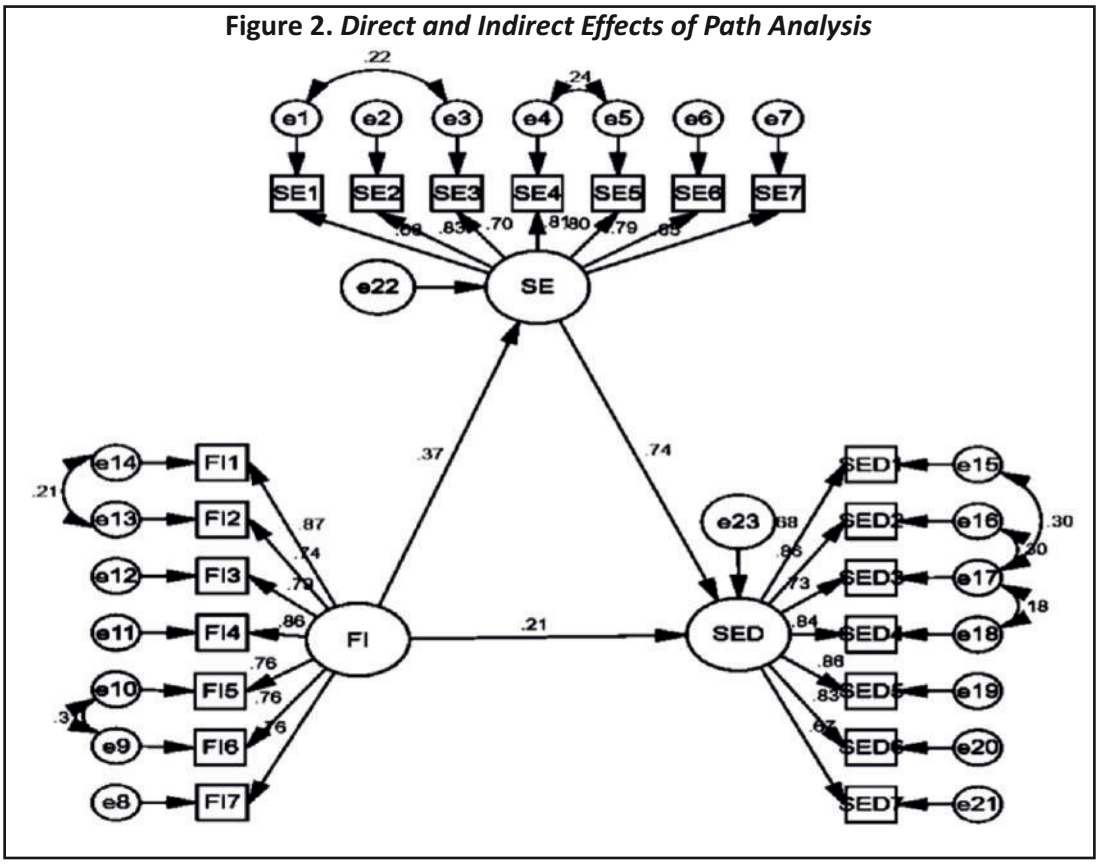


Table 6. ***SE Mediating FI-SED Linkage***

Construct		Construct	Estimate	SE.	CR.	*p*
SE	<---	*FI*	0.374	0.047	7.357	***
SED	<---	*FI*	0.206	0.036	5.770	***
SED	<---	*SE*	0.742	0.066	12.291	***

The second hypothesis (H_2) examined the directional relationship between FI and SE. The path co-efficient of FI to SE ($\beta = 0.374$, SE = 0.047, CR = 7.357, $p < 0.001$) is statistically significant (Figure 2 & Table 6). It can be concluded that FI and SE are positively and directly connected, thereby supporting the H_2. The results suggest that financial inclusion catalyzes empowering marginal rural households.

The third hypothesis (H_3) examined the directional relationship between SE and SED. The path coefficient of SE to SED ($\beta = 0.742$, SE = 0.066, CR = 12.291, $p < 0.001$) is statistically significant (Figure 2 & Table 6). Hence, H_3 is accepted as there is a direct and positive association between SE and SED. Therefore, social empowerment enhances the socio-economic development of rural households in Odisha.

The final and fourth hypothesis (H_4) examined the mediating role of SE between FI and SED relationship. The estimated value of FI on SED is 0.206, and the standard error (SE) of 0.036, followed by a critical ratio (CR) of 5.770, demonstrated the positive significant ($p < 0.001$) relationship between FI and SED (Figure 2 & Table 6). This indicated a partial mediation effect of FI on SED. The result supports the hypothesis, and hence, H_4 is accepted. The results suggest that financial inclusion plays a crucial role in transforming the socio-economic lives of rural households in Odisha. Furthermore, social empowerment contributes to the socio-economic well-being of these rural households and the rural economy by expanding people's choices and capabilities.

Discussion and Conclusion

This study examines the direct and indirect relationships among financial inclusion (FI), socio-economic development (SED), and social empowerment (SE), based on data collected from rural households in Odisha, India. In corroboration with prior findings by Chakraborty and Abraham (2021), Lal (2021), Nandru and Rentala (2020), Rastogi and Ragabiruntha (2018), and Survase and Inumula (2019), this study yields similar insights. The results indicate that financial inclusion plays a crucial role among rural households in Odisha, helping them integrate into the mainstream of society. The direct impact of financial inclusion on socio-economic development enhances the standard of living, access to formal education for their children, and economic progress of rural households. Furthermore, social empowerment plays a mediating role in enhancing the socio-economic well-being of these rural households, thereby improving their capabilities, social status, and economic conditions.

While comparing the present research with past studies, it is notable that past studies have predominantly focused on conventional perspectives and established findings concerning the relationship between financial inclusion and socio-economic development in general. However, the present research has focused primarily on rural Odisha, highlighting the importance of financial inclusion initiatives, which augment a better standard of living, open up new employment opportunities, and overall improve the well-being of rural people and the rural economy in particular.

Implications of the Study

The results of this study have various theoretical and practical implications for business leaders, managers, educators, researchers, policymakers, and governments. The study underscores the importance of both direct and indirect pathways through which financial inclusion influences socio-economic development and inclusive growth. Financial institutions and financial service providers can utilize the insights from this study to develop strategies and inclusive financial products that empower rural communities and marginalized groups within society, thereby achieving a greater social impact. Policymakers would gain valuable insights while developing policies for rural households, particularly those in marginal communities. The results would be helpful for the government and non-governmental organizations (NGOs) in guiding targeted interventions while preparing various financial inclusion initiatives. They will help integrate underprivileged populations into mainstream society. This study will facilitate research and academic discourse in the areas of inclusive growth, rural development, and rural finance, particularly.

Limitations of the Study and Scope for Further Research

The study has several limitations, including the potential for focusing on a specific section or segment of a region, which may limit the generalizability of the findings. Given the particular context, the results of this study are interpreted, which may restrict their broader applicability. This study has paved the way for future research to explore the complex relationships between financial inclusion, social empowerment, and socio-economic development. Further investigations could explore these interconnections across diverse contexts or geographical regions to validate and enrich the current findings.

Authors' Contribution

Dr. Ramesh Chandra Das conceptualized the idea and developed the research framework to undertake the

empirical study. Furthermore, Dr. Ramesh Chandra Das, Dr. Amiya Kumar Mohapatra, and Subhashree Khilar conducted a review of the literature to identify research gaps and then formalized the hypotheses. Dr. Ramesh Chandra Das and Subhashree Khilar collected and analyzed the data using suitable tools and techniques. Dr. Amiya Kumar Mohapatra, Dr. Ramesh Chandra Das, and Subhashree Khilar systematically analyzed the results and drafted the manuscript. Dr. Amiya Kumar Mohapatra concluded the research outcomes, along with the critical implications, and made the required revisions.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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