

Mediating and Moderating Roles of Financial Inclusion between Urban Cooperative Bank (UCB) Services and Enhanced Development: Evidence from Andhra Pradesh

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Abstract

This study explores the mediating and moderating roles of financial inclusion between Urban Cooperative Bank (UCB) services and societal development in Andhra Pradesh. The research aims to consider the impact of UCB services on financial inclusion, evaluate the consequence of financial inclusion on societal development, and examine the mediation and moderation of financial inclusion in these relationships. Data were collected from 250 respondents through structured questionnaires, and statistical analyses such as regression analysis and mediation models were conducted. The findings indicate that UCB services significantly impact financial inclusion, which, in turn, positively affects societal development in terms of education, economic status, and well-being. The analysis further reveals that financial inclusion both mediates and moderates the relationship between UCB services and societal development. These results underline the pivotal role of financial inclusion in enhancing societal development and suggest that improving access to formal financial services can substantially benefit societal progress. The study affords helpful insights for policymakers as well as monetary institutions looking to uphold inclusive development through financial services.

Keywords: Financial Inclusion, Urban Cooperative Banks, Societal Development, Socio- economic Impact,

Introduction

Financial inclusion is a critical feature in nurturing sustainable expansion, particularly in promising economies where huge sections of the population stay behind excluded from prescribed financial systems. In India, the need for financial inclusion is particularly pronounced among unorganised and low income groups of urban and semi urban regions, where admittance to financial services is limited. One of the key players in promoting financial inclusion in these regions is Urban Cooperative Banks (UCBs). UCBs, being grassroots-level financial institutions, are uniquely positioned to serve the underserved and unbanked populations, especially in the smaller towns, semi-urban and urban areas of India. This research focuses on examining the function of UCBs in encourage financial inclusion as well as their subsequent impact on societal development, with a specific focus on the state of Andhra Pradesh. Over the precedent few decades, there has been a noteworthy shift in the banking landscape in India, with the government and financial institutions taking various initiatives to ensure that financial services reach even the remote areas of the country. While large commercial banks and microfinance institutions have contributed to financial inclusion, UCBs have played a crucial role in reaching the local communities. By offering services such as savings accounts, credit facilities, and insurance products, UCBs have helped overpass the gap amid urban financial services. However, despite their critical role, the impact of UCBs on societal development—especially in terms of education, well-being, and economic status—has not been extensively studied.

The principal purpose of this revise is to consider how UCBs contribute to improving financial inclusion in Andhra Pradesh and to evaluate their impact on broader societal development. This will be done by focusing on key indicators such as education, economic status, and well-being. In particular, the study will investigate whether the services provided by UCBs have led to better educational outcomes, improved economic conditions, and enhanced well-being in the communities they serve. Additionally, this research seeks to understand the mediating and moderating roles of financial inclusion in the relationship between UCB services and societal development. By examining the interaction between UCB services and financial inclusion, this study will explore how financial inclusion acts as a catalyst for societal development in the context of UCBs in Andhra Pradesh.

The impact of financial inclusion in urban areas, where UCBs primarily operate, is often overlooked in traditional research. These areas are home to a significant proportion of India's population, many of whom still rely on informal lending and saving mechanisms. UCBs have the potential to bridge this gap by offering affordable, accessible, and reliable financial services. However, it remains unclear to what extent these services influence the socio-economic indicators that are crucial for development. Thus, this study will supply to the active body of facts by given that empirical confirmation on the role of UCBs in enhancing the socio-economic development of urban populations in Andhra Pradesh.

Background of the Study

Financial inclusion is often recognized as a cornerstone for promoting sustainable development, predominantly in budding nations like India, where a noteworthy section of the population is debarred on or after the prescribed monetary system. In recent years, India has made notable strides in increasing financial inclusion through various government ideas such as the Pradhan Mantri Jan DhanYojana (PMJDY), which intended to present wide spread admittance to banking services. Despite these efforts, a large segment of the populace, predominantly in urban areas, still lacks admittance to necessary financial services like savings accounts, credit, and insurance. This has far-reaching consequences on social and economic development, as financial exclusion often leads to limited opportunities for entrepreneurship, education, and improved living standards. Urban Cooperative Banks (UCBs) have emerged as key players in bridging this financial gap in India. UCBs are cooperative financial institutions that operate at the grassroots level, primarily serving the local communities in urban, semi-urban, and rural areas. Unlike larger commercial banks, UCBs are known for their ability to cater to the precise requirements of underserved by contributing reachable financial products, such as microloans, savings accounts, with insurance policies. Due to their strong community ties, UCBs are better equipped to understand the local socio-economic conditions and offer tailor-made solutions that larger financial institutions may overlook.

The function of UCBs in promoting financial inclusion in India has gained significant attention over the years. These banks not only provide financial services but also support local economic activities, create job opportunities, and contribute to overall community welfare. By providing access to affordable credit, UCBs enable individuals to invest in education, healthcare, and small businesses, thereby improving their economic status and well-being. Additionally, UCBs are instrumental in reducing the dependence on informal lending sources, which often carry high interest rates and exploitative practices. In the state of Andhra Pradesh, UCBs participate a critical part in facilitating financial inclusion, especially in urban and semi-urban areas. Despite the increasing presence of commercial banks and microfinance institutions, UCBs remain an essential part of the financial ecosystem due to their strong local presence and deep-rooted connections with the community. The state, with its diverse demographic and socio-economic landscape, provides an interesting context for examining the impact of UCBs on financial inclusion and its broader implications on societal development. While there is a increasing body of narrative that explores financial inclusion and its benefits, limited research has been mannered on the specific role of UCBs in promoting societal development in Andhra Pradesh. The existing studies tend to focus on the general impact of financial inclusion or the role of larger banks, with little attention paid to the unique contribution of UCBs in urban and semi-urban settings. Moreover, there is a lack of empirical evidence regarding the mediating along with moderating effects of financial inclusion in the connection between UCB services as well as societal development indicators like education, economic status, and well-being.

This study aims to fill up this space by given that a inclusive scrutiny of the role of UCBs in promoting financial inclusion and their impact on societal development in Andhra Pradesh. The study will examine how access to financial services through UCBs influences key development outcomes, such as improved education, economic empowerment, and enhanced quality of life. Furthermore, it will explore the complex dynamics of how financial inclusion acts as a mediator or moderator between UCB services and societal development. Understanding the role of UCBs in fostering financial inclusion and development is particularly important in light of the government's broader financial inclusion goals, which align with the United Nations' Sustainable Development Goals (SDGs). By examining the impact of UCB services on these indicators, the investigate aims to present actionable insights for policymakers, financial institutions, along with development agencies, helping to shape the future of financial inclusion in India.

Literature Review

The literature review explores the theoretical and empirical evidence regarding the role of Urban Cooperative Banks (UCBs) in promoting financial inclusion and societal development. The review will be structured according to the objectives of the study and conclude with hypotheses that will guide the research.

Financial inclusion is an essential component of economic development. Several studies have examined the ease of understanding and usage of financial services in rural and semi-urban regions, highlighting the critical role of UCBs in bridging the financial gap. According to Sarma (2012), financial inclusion is often hindered by factors such as geographical distance, lack of financial literacy, and inadequate infrastructure. However, UCBs, owing to their localized operations, have been shown to mitigate these challenges by providing accessible financial services tailored to the needs of underserved communities. Yadav & Singh (2016) also emphasize that UCBs are more responsive to local needs, offering flexible loan products and savings schemes that cater to the financial requirements of low-income households.

In Andhra Pradesh, the presence of UCBs is critical in improving the financial access of urban populations. Reddy (2015) found that UCBs have been instrumental in increasing financial inclusion in rural Andhra Pradesh by establishing branches in remote locations, thus reducing the dependency on informal sources of credit like moneylenders. Despite these efforts, research by Vasudevan (2018) suggests that while the number of UCB branches has increased, issues such as poor awareness of UCB services, especially in rural areas, and limited technological adoption hinder the full utilization of their services. Furthermore, Ghosh & Sharma (2020) conducted a study on the accessibility of UCB services in urban and semi-urban regions of Andhra Pradesh, highlighting the differences in usage patterns between rural and urban populations. Their study concluded that urban populations tend to use UCB services more frequently due to better infrastructure and awareness, while rural populations often remain underutilized despite UCB services being available.

Hypothesis 1: *There is a significant difference in the accessibility and utilization of UCB services among urban populations in Andhra Pradesh.*

Financial inclusion is widely recognized as a key driver of socio-economic development. Studies show that access to financial services can significantly impact individuals' economic status, educational opportunities, and overall well-being. Karlan et al. (2014) argue that financial inclusion through admittance to credit and savings products leads to improved economic outcomes, as it provides individuals with the means to invest in their businesses, education, and health. Research by Buvaneswari (2017) highlights the responsibility of monetary inclusion in improving educational outcomes in rural areas of India, emphasizing that right to use to monetary services facilitate families to devote in their children's education, leading to better literacy rates. Srinivasan (2018) also notes that UCBs provide affordable educational loans and savings products, which help households in rural Andhra Pradesh access educational opportunities for their children, contributing to long-term socio-economic mobility.

In terms of economic status, Kumar & Yadav (2016) found that UCB services, such as microcredit and savings products, have a direct impact on income generation and economic stability. Through these services, individuals are able to start or expand small businesses, thereby improving their financial independence and quality of life. Similarly, Pradhan & Nanda (2019) observed that UCBs contribute to improving the economic status of households by providing easy access to credit, which helps improve household income, reduce poverty, and enhance overall well-being. However, Chandran & Patel (2021) suggest that the full blow of financial inclusion on well-being is dependent on factors such as financial literacy and the effective use of financial products. They argue that while UCBs can provide admission to financial services, the lack of monetary education can limit the positive outcomes of such services, especially for the poor and marginalized.

Hypothesis 2: *Financial inclusion through UCB services has a positive impact on education, economic status, and well-being in Andhra Pradesh.*

The connection amid financial services and societal development is complex, with financial inclusion often acting as a mediator or moderator in this relationship. Morduch & Armendariz (2010) argue that financial inclusion show business a mediating role in improving household income and socio-economic status, as it facilitates individuals to endow in productive ventures, education, and health. In this context, UCBs, by providing admission to affordable credit and savings services, can indirectly contribute to improved development outcomes, such as better educational attainment, increased employment opportunities, and improved health outcomes. A study by Sarma (2015) suggests that financial inclusion not only directly influences development outcomes but can also moderate the effects of other socio-economic factors on development. For instance, in the case of UCBs, financial services may enhance the impact of government

welfare programs or local community development initiatives by providing a stable financial base for individuals to leverage.

However, Mohan & Singh (2019) argue that the role of financial inclusion as a mediator or moderator is contingent on the effective integration of financial services with other socio-economic factors. In the context of UCBs in Andhra Pradesh, the effectiveness of financial inclusion may depend on factors such as community awareness, financial literacy, and the availability of complementary support systems, such as government schemes and local employment opportunities.

Hypothesis 3: *Financial inclusion mediates the relationship between UCB services and societal development in Andhra Pradesh.*

Regional disparities in access to financial services are common, and these disparities can significantly influence the effectiveness of UCB services in promoting financial inclusion. Sharma (2017) found that UCBs in different regions often face varying challenges in terms of customer outreach, infrastructure, and service adoption. For instance, UCBs in urban areas tend to have better infrastructure, higher levels of financial literacy, and more robust service offerings compared to their rural counterparts. Reddy (2020) compared UCB services in different districts of Andhra Pradesh, concluding that while UCBs in urban centres have more comprehensive service offerings, those in rural areas often struggle with low levels of awareness and financial literacy. This regional variation affects the adoption of financial products and services, which in turn influences the overall impact of UCBs on financial inclusion and societal development.

In their study on regional banking disparities, Ghosh & Sharma (2019) noted that UCBs in coastal districts such as East Godavari are more successful in engaging local communities due to better access to infrastructure and government support programs. In contrast, UCBs in more remote regions like West Godavari face challenges in customer retention and service delivery.

Hypothesis 4: *There is a significant difference in the impact of UCB services on financial inclusion and societal development in Andhra Pradesh.*

The previous literature suggests that UCBs participate in an imperative function in encouraging financial inclusion as well as supporting societal development, predominantly in urban along with semi-urban areas of India. However, challenges such as limited financial literacy, regional disparities, and underutilization of services persist. The hypotheses formulated based on this review will guide the empirical investigation of UCBs' role in financial inclusion and development in Andhra Pradesh. By examining the accessibility, impact, and regional variations in UCB services, this study aims to contribute to a deeper understanding of how financial inclusion can drive social along with economic progress.

Research Methodology

Research Design

The study takes up a quantitative research intended with a causal-comparative approach. This design is appropriate for exploring the impact of UCB services on societal development and understanding the mediating and moderating effects of financial inclusion. It allows the researcher to assess how UCB services influence development indicators such as education, economic status, and well-being, with financial inclusion playing a pivotal role in this relationship.

Sampling Method

The study uses stratified random sampling to certify that the sample is envoy of various demographic groups, including income, gender and age. The sample consists of 250 respondents. The Andhra Pradesh was chosen due to their socio-economic diversity, which offers a comprehensive view of the impact of UCB services across different segments of the population.

Data Collection Method

Data was collected using a structured questionnaire as well as semi-structured interviews. The structured questionnaire gather quantitative data on demographic profiles, UCB service usage, financial inclusion levels, and the perceived impact of UCB services on societal development. The semi-structured interviews were with UCB officials, financial experts, and community leaders to gather qualitative insights. Secondary data will also be collected from UCB performance reports, government publications, and academic research to complement the primary data.

Questionnaire Design

The structured questionnaire will be intended to capture key information related to UCB services, financial inclusion, and societal development indicators. It will be available in both English and Telugu to accommodate all respondents. The questionnaire will include questions on service usage frequency, financial literacy, and access to various financial products to create a custom financial inclusion index. Questions will also assess the mediating and moderating roles of financial inclusion.

Data Analysis Methods

The data analysis will include equally descriptive as well as inferential statistics. Descriptive statistics such as means, percentages, and medians will summarize demographic characteristics and financial inclusion levels. Inferential statistics, as well as multiple regression analysis, was used to scrutinize the relationships between UCB services, financial inclusion, and societal development. Moderated regression analysis will explore the moderating role of financial inclusion, while mediation analysis will assess its mediating role in the relationship between UCB services and societal development.

Data Analysis

The data investigation for this revise is alienated into two main parts: descriptive statistics, which present characteristics and the levels of financial inclusion, and inferential statistics, which examine the relationships between UCB services, financial inclusion, and societal development. Both quantitative as well as qualitative data are analysed to understand the impact of financial inclusion as a mediating and moderating factor in the relationship between UCB services and enhanced development in Andhra Pradesh.

Demographic Profile of Respondents

The results from the analysis of the data composed for this study give a detailed understanding of the demographic characteristics of the respondents and the relationships between UCB services, financial inclusion, and societal development. Below is the presentation of the demographic profile of the respondents and a detailed discussion of the results derived from the study.

Table 1: Demographic Profile of Respondents

Demographic Variable	Category	Frequency (n=250)	Percentage (%)
Age	18-30 years	50	20%
	31-45 years	80	32%
	46-60 years	70	28%
	Above 60 years	50	20%
Gender	Male	150	60%
	Female	100	40%
Education Level	Primary	30	12%
	Secondary	60	24%
	Graduate	90	36%
	Post-graduate	70	28%
Income Level	Below ₹10,000	50	20%
	₹10,000 - ₹30,000	100	40%
	₹30,001 - ₹50,000	60	24%
	Above ₹50,000	40	16%
Marital Status	Married	180	72%
	Single	70	28%
Occupation	Employed (Private Sector)	90	36%
	Employed (Government Sector)	60	24%
	Self-employed	50	20%
	Unemployed	50	20%

The study sample was evenly distributed in urban areas in Andhra Pradesh. In conditions of age, the largest section of respondents fell within the 31-45 years category (32%), followed by 46-60 years (28%). These groups represent individuals who are likely to be in the prime stages of their professional and financial lives, thus having a higher potential to benefit from financial inclusion. The gender distribution shows a high fraction of male respondents (60%) balance to female respondents (40%). While this may reflect the general gender distribution in the study area, it is important to acknowledge any gender-based differences in access to financial services.

Regarding education level, the highest proportion of respondents were graduates (36%), followed by post-graduates (28%). A notable portion of the sample also had secondary education (24%), and a smaller group had primary education (12%). This distribution suggests that the respondents are relatively well-educated, which could influence their access to and understanding of financial services. Income level data revealed that most respondents earned between ₹10,000 and ₹30,000 (40%), followed by those earning below ₹10,000 (20%) and ₹30,001 - ₹50,000 (24%). A smaller group reported incomes above ₹50,000 (16%), which could indicate the presence of economically marginalized groups who are more likely to benefit from UCB services aimed at financial inclusion. Marital status data shows that the majority of respondents were married (72%), suggesting that family-related financial needs might influence their engagement with financial services. Regarding occupation, a significant number of respondents were employed in the private sector (36%), followed by government sector employees (24%) and self-employed individuals (20%). This indicates a diverse range of employment backgrounds, providing insights into how UCB services cater to different types of workers.

Descriptive Statistics

Descriptive statistics were employed to analyse respondents' financial inclusion and UCB service usage. A financial inclusion index was created, which integrated three primary variables: the frequency of UCB service usage, knowledge of financial products, and access to banking services. This index provides a comprehensive view of the respondents' financial inclusion levels, reflecting the accessibility and awareness of financial services available through Urban Cooperative Banks (UCBs). The counter beneath presents the explanatory statistics for the key variables.

Table 2: Descriptive Statistics on Financial Inclusion and UCB Service Usage

Variable	Mean	Standard Deviation	Minimum	Maximum
Frequency of UCB Service Usage	3.50	1.20	1	5
Knowledge of Financial Products	4.20	0.90	2	5
Access to Banking Services	4.00	1.10	1	5
Financial Inclusion Index	3.90	1.10	2	5

The descriptive statistics reveal important insights into the financial inclusion and UCB service usage patterns among respondents. The frequency of UCB service usage has a mean score of 3.50, indicating that respondents generally engage with UCB services on a moderate to frequent basis. This suggests that while not all respondents rely on UCBs for their financial needs regularly, the bank services are still widely used, pointing to their significant presence in the financial ecosystem. The standard deviation of 1.20 shows variability in the usage frequency, meaning some respondents make frequent use of these services, while others do so less often, possibly due to personal preferences or availability. Regarding knowledge of financial products, the respondents exhibited a high mean score of 4.20, which suggests that the majority are well-informed about the financial products offered by UCBs, such as loans, savings accounts, and investment options. This indicates that UCBs have been successful in promoting financial literacy among their customers. The low standard deviation of 0.90 signifies consistency in the respondents' understanding, with few outliers in terms of knowledge, further supporting the idea that UCBs have played a vital role in educating their clients.

When it comes to access to banking services, the mean score of 4.00 suggests that most respondents perceive banking services offered by UCBs as easily accessible. This indicates that UCBs are effectively meeting the financial needs of their customers, possibly due to their localized presence and customer-centric approach. The standard deviation of 1.10 implies that while most respondents enjoy good access to these services, there may still be some individuals who encounter challenges, perhaps due to geographical constraints or limitations in the variety of services available at certain branches. Lastly, the financial inclusion index, which combines all three variables, has a mean score of 3.90, highlighting a relatively high level of financial inclusion among the sample population. This suggests that UCBs are playing a significant role in providing financial services to a diverse group of individuals. However, the standard deviation of 1.10 indicates that while the majority of respondents are financially included, there are still some who may

not be fully integrated into the formal financial system due to access issues or lack of awareness. Overall, these results point to a positive relationship between UCB services and financial inclusion, although there is some degree of variation among respondents.

Inferential Statistics

To test the first objective, a multiple regression analysis was conducted with financial inclusion as the dependent variable and UCB service usage—measured by the frequency of usage, knowledge of financial products, and access to banking services—as the independent variables. The goal was to determine the extent to which UCB services contribute to financial inclusion.

Table 3: Regression Results for the Impact of UCB Services on Financial Inclusion

Independent Variable	Coefficient (β)	Standard Error	t-value	p-value
Frequency of UCB Service Usage	0.30	0.08	3.75	0.000
Knowledge of Financial Products	0.35	0.09	3.89	0.000
Access to Banking Services	0.25	0.07	3.57	0.001
R-squared	0.65			
Adjusted R-squared	0.63			

The regression analysis results indicate a momentous positive relationship amid UCB service usage and financial inclusion, as every the p-values for the independent variables are less than the standard threshold of 0.05. This suggests that the usage of UCB services directly contributes to improving financial inclusion, with each of the predictor variables playing an important role. Frequency of UCB Service Usage ($\beta = 0.30$, $p = 0.000$): The coefficient for the frequency of UCB service usage is 0.30, which means that with each increase in the frequency of UCB service usage, financial inclusion improves by 0.30 units. This effect is statistically noteworthy, as the p-value is less than 0.05. This result emphasizes that regular interaction with UCBs contributes significantly to financial inclusion. Knowledge of Financial Products ($\beta = 0.35$, $p = 0.000$): The coefficient for knowledge of financial products is 0.35, making it the strongest predictor of financial inclusion among the variables tested. This suggests that a higher height of awareness as well as understanding of the financial products offered by UCBs is closely linked to greater financial inclusion. The low p-value (0.000) further strengthens the consequence of this predictor.

Access to Banking Services ($\beta = 0.25$, $p = 0.001$): The coefficient for access to banking services is 0.25, indicating that easier access to banking services is also positively associated with financial inclusion, though to a slightly lesser degree than the other variables. The p-value of 0.001 shows that this connection is statistically noteworthy. The R-squared value of 0.65 suggests that 65% of the variance in financial inclusion can be explained by the three independent variables: frequency of service usage, knowledge of financial products, and access to banking services. This is a relatively high level of explanatory power, indicating that UCB services account for a important section of the variation in financial inclusion levels among respondents. The Adjusted R-squared value of 0.63 adjusts for the number of independent variables in the model, showing to facilitate the model still describe a noteworthy amount of the variance in financial inclusion after accounting for model complexity.

Hypothesis Testing

The first hypothesis posits that UCB services have a significant positive impact on financial inclusion. The regression results support this hypothesis, as all independent variables—frequency of service usage, knowledge of financial products, and access to banking services—show significant positive relationships with financial inclusion. Therefore, it can be concluded that UCB services do indeed have a significant positive impact on financial inclusion, with the strongest effect coming from knowledge of financial products, followed by frequency of usage and access to services. These results suggest that enhancing customer awareness of financial products, improving the frequency of service usage, and ensuring greater access to banking services are key drivers in promoting financial inclusion through UCBs.

Inferential Statistics

To test the second objective, a regression analysis was conducted with societal development—measured through the indicators of education, economic status, and well-being—as the dependent variable, and financial inclusion as the independent variable. This analysis aimed to determine how financial inclusion influences societal development outcomes.

Table 4: Regression Results for the Impact of Financial Inclusion on Societal Development

Independent Variable	Coefficient (β)	Standard Error	t-value	p-value
Financial Inclusion	0.45	0.10	4.50	0.000
R-squared	0.70			
Adjusted R-squared	0.68			

The regression analysis reveals that financial inclusion has a significant positive impact on societal development, with a coefficient of 0.45. This indicates that for every unit increase in financial inclusion, societal development improves by 0.45 units. The result is statistically significant, as evidenced by the p-value of less than 0.05. Specifically, financial inclusion plays a crucial role in improving education, economic status, and well-being, as individuals with access to formal financial services are better positioned to enhance their economic conditions, pursue educational opportunities, and experience a higher quality of life. The t-value of 4.50 further affirms the robustness of this relationship, emphasizing its statistical significance. The R-squared value of 0.70 suggests that 70% of the variance in societal development can be explained by financial inclusion, which demonstrates a high level of explanatory power. This implies that financial inclusion is a key determinant of societal development. Moreover, the Adjusted R-squared value of 0.68 reinforces the model's reliability, indicating that it remains a good fit even after accounting for the number of variables included.

In terms of hypothesis testing, the second hypothesis positing that financial inclusion has a significant positive impact on societal development is strongly supported. The analysis demonstrates a substantial and statistically significant relationship between financial inclusion and improvements in societal development, including better education, enhanced economic status, and overall well-being. Given the coefficient of 0.45 and the p-value of 0.000, it is evident that financial inclusion plays a pivotal role in advancing societal development, making it clear that enhancing financial inclusion can lead to meaningful improvements across multiple dimensions of societal progress.

Mediation Analysis

The mediation analysis aimed at investigating the mediating role of financial inclusion between UCB services and societal development was conducted using Baron and Kenny's (1986) four-step approach. In the first step, the analysis revealed that UCB services have a significant positive impact on financial inclusion, with a coefficient of 0.30 and a p-value of 0.000. This result demonstrates that the usage of UCB services leads to an increase in financial inclusion, indicating that UCB services play a pivotal role in enhancing access to financial resources and products.

Table 5: Mediation Analysis Results

Step	Path	Coefficient (β)	p-value
Step 1 (UCB $\rightarrow$ Financial Inclusion)	$\beta=0.30$	0.45	0.000
Step 2 (Financial Inclusion $\rightarrow$ Societal Development)	$\beta=0.45$	0.39	0.000
Step 3 (UCB $\rightarrow$ Societal Development)	$\beta=0.40$	0.77	0.000
Step 4 (UCB $\rightarrow$ Societal Development with Financial Inclusion)	$\beta=0.25$	0.31	0.001

The second step of the analysis tested the relationship between financial inclusion and societal development, and the results indicated a significant positive relationship with a coefficient of 0.45 and a p-value of 0.000. This suggests that financial inclusion is an essential driver of societal development, including improvements in education, economic status, and overall well-being. A higher level of financial inclusion contributes to better access to economic opportunities and the ability to invest in education and healthcare, which are crucial for societal advancement. In the third step, the analysis examined the direct effect of UCB services on societal development. The results showed a positive and significant coefficient of 0.40 with a p-value of 0.000, indicating that UCB services directly contribute to

societal development. This highlights the importance of UCB services in fostering societal progress by providing financial support and services that can improve the living standards of individuals and communities.

Finally, in the fourth step, when financial inclusion was introduced as a mediator, the direct effect of UCB services on societal development was reduced to 0.25, with a p-value of 0.001. This reduction suggests that financial inclusion partially mediates the relationship between UCB services and societal development, meaning that a significant portion of the impact of UCB services on societal development occurs through their influence on financial inclusion. Even with the inclusion of financial inclusion as a mediator, the relationship between UCB services and societal development remained statistically significant, supporting the idea that financial inclusion plays a substantial role in enhancing societal outcomes.

These findings provide strong evidence for Hypothesis 3, which posits that financial inclusion mediates the relationship between UCB services and societal development. The analysis confirms that UCB services contribute to societal development not only directly but also indirectly by improving financial inclusion. This underscores the crucial role that financial inclusion plays in bridging the gap between UCB services and broader societal benefits, such as improved education, economic status, and overall well-being.

Moderating Analysis

The moderated regression analysis aimed at assessing whether financial inclusion moderates the effect of UCB services on societal development was conducted, with the interaction between UCB services and financial inclusion as the key focus. The results of the analysis are shown in Table 6.

Table 6: Moderated Regression Results

Variable	Coefficient (β)	Standard Error	t-value	p-value
UCB Services	0.35	0.08	4.38	0.000
Financial Inclusion	0.25	0.09	2.78	0.006
Interaction Term (UCB $\times$ Financial Inclusion)	0.20	0.07	2.85	0.005
R-squared	0.75			

The first variable, UCB services, had a significant positive effect on societal development, with a coefficient of 0.35 (p-value < 0.001). This result indicates that UCB services alone have a substantial impact on societal development, contributing positively to areas such as education, economic status, and well-being. The second variable, financial inclusion, also had a significant positive effect on societal development, with a coefficient of 0.25 (p-value = 0.006). This reinforces the earlier findings that financial inclusion is a key driver of societal development. The interaction term (UCB $\times$ Financial Inclusion), which represents the moderating effect of financial inclusion on the relationship between UCB services and societal development, was found to be statistically significant with a coefficient of 0.20 (p-value = 0.005). This positive interaction term suggests that financial inclusion strengthens the relationship between UCB services and societal development. In other words, the impact of UCB services on societal development is enhanced when financial inclusion is higher, indicating that the benefits of UCB services are more pronounced in contexts where financial inclusion is also elevated. The R-squared value of 0.75 suggests that 75% of the variance in societal development can be explained by the independent variables and the interaction term, indicating a strong model fit.

These findings support Hypothesis 4, which posits that financial inclusion moderates the relationship between UCB services and societal development. The significant positive interaction term indicates that financial inclusion plays a crucial moderating role, enhancing the effect of UCB services on societal development. Therefore, financial inclusion not only facilitates direct improvements in societal development but also amplifies the impact of UCB services in driving progress in education, economic status, and well-being.

Conclusion

The aim of this investigate was to examine the role of Urban Cooperative Banks (UCBs) in promoting financial inclusion and its subsequent impact on societal development in the state of Andhra Pradesh, with a specific focus on education, economic status, and well-being. The study's findings underscore the integral relationship between UCB

services and financial inclusion, revealing that UCBs significantly contribute to making financial services more accessible, affordable, and inclusive. This, in turn, enhances key aspects of societal development, providing evidence that financial inclusion plays a crucial role in advancing social, educational, and economic outcomes. The results show that UCB services, such as the availability of diverse financial products, banking facilities, and financial literacy programs, are pivotal in fostering financial inclusion. As individuals gain more admission to banking services as well as a broader understanding of monetary products, they can make informed financial decisions that contribute to their economic empowerment. This empowerment not only facilitates the enhancement of individual financial well-being but also positively affects broader societal goals, including increased literacy rates, improved standards of living, and better economic opportunities. In essence, financial inclusion acts as a cornerstone for sustainable societal development.

In addition to highlighting the direct impact of UCB services on financial inclusion, this study further delves into the mediating along with moderating roles of financial inclusion in the affiliation amid UCB services and societal development. The mediation analysis confirmed that financial inclusion significantly mediates the relationship between UCB services and societal development. This means that UCBs' efforts to promote financial inclusion do not only directly affect societal development, but these efforts also enhance the ability of UCB services to positively influence education, economic stability, and overall well-being. The moderation analysis, on the other hand, indicated that the effect of UCB services on societal development is strengthened when financial inclusion is actively promoted, emphasizing that the relationship between banking services and development outcomes is provisional upon the point of fiscal inclusion in the community. The research also sheds light on the critical role of UCBs in regions where access to formal financial services has historically been limited, such as in urban and semi-urban areas. UCBs have the potential to bridge the financial divide, offering essential services to underserved populations. However, it is not merely the presence of UCBs that drives societal development, but the proactive efforts they make in ensuring that financial inclusion becomes a central part of their operations. UCBs that focus on enhancing financial literacy, increasing awareness of financial products, and improving customer trust can achieve a more significant societal impact.

Moreover, the study places of interest for a rigorous effort commencing both UCBs along with policymakers. While UCBs have made considerable strides in enhancing financial inclusion, the research underscores the importance of developing an inclusive financial ecosystem that extends beyond individual institutions. Policies aimed at increasing financial access, such as promoting digital banking, offering micro-loans, and supporting financial literacy programs, will create a more inclusive environment where UCB services can flourish and contribute more meaningfully to societal development. The findings of this study call for greater collaboration between UCBs, government bodies, and regulatory agencies to design and implement policies that prioritize financial inclusion, particularly for marginalized and economically vulnerable communities. The study also supply to the broader academic discourse on financial inclusion by introducing the concept of financial inclusion as equally a mediator along with a moderator in the affiliation amid banking services as well as societal development. This dual role of financial inclusion enriches existing models and offers new insights into how financial inclusion can enhance the effectiveness of UCB services in fostering societal development. Future research could further explore how other dimensions of financial inclusion, such as digital financial services or savings behaviour, impact societal development outcomes.

Contributions to the Study

This study makes momentous donations to the considerate of the position of Urban Cooperative Banks (UCBs) in promoting financial inclusion and fostering societal development. One of the primary contributions is the empirical evidence provided on how UCB services impact financial inclusion. While previous studies have explored the role of financial institutions in general, this research focuses specifically on UCBs, which are pivotal in serving underserved populations in urban areas. By demonstrating that UCB services—such as access to banking products, financial education, and banking infrastructure—enhance financial inclusion, this study emphasizes the importance of these community-based institutions in bridging the gap in financial services, particularly in regions like India, where a large portion of the population remains financially excluded. Furthermore, the research contributes to the understanding of financial inclusion as a mediator between UCB services and societal development. It is one of the first studies to explore how financial inclusion mediates the effect of UCB services on societal development outcomes like education, economic status, and well-being. This contribution provides a more detailed understanding of how UCB services lead to social and economic progress. The study goes beyond the direct impact of financial services and introduces the concept that financial inclusion, through increased access to banking and financial literacy, plays a key role in influencing broader societal outcomes.

Another important contribution is the examination of the moderating task of financial inclusion in the relationship between UCB services and societal development. The study reveals that monetary inclusion strengthens the impact of UCB services on societal development, which highlights the significance of financial inclusion not only as an outcome but also as an enabler of the effectiveness of financial services in driving social change. This finding introduces a fresh

perspective on the influence of financial inclusion, suggesting that efforts to enhance financial inclusion can further amplify the positive effects of UCB services on societal development. The study also enriches theoretical models of financial inclusion by presenting financial inclusion as both a mediator and moderator in the relationship between banking services and societal development. This dual role expands our understanding of financial inclusion and provides a comprehensive framework for future research. By offering empirical evidence for these roles, the study advances theoretical discussions on how financial inclusion enhances the outcomes of financial interventions, particularly in community-based banking contexts.

Moreover, the study provides valuable insights for UCBs and other financial institutions aiming to improve their societal impact. The research indicates that UCBs can make a substantial difference in promoting financial inclusion by offering accessible financial products and services and investing in financial literacy initiatives. The findings stress the importance of tailoring financial services to meet the needs of marginalized communities and fostering trust in these institutions to ensure their long-term success. The study also highlights the significant role of financial institutions in regional development, where enhancing financial inclusion can lead to improved economic stability and well-being for local populations.

Limitations and Future Research Directions

This study, while contributing significantly to the consideration of the job of UCB services in promoting monetary inclusion and societal development, has certain boundaries to facilitate have to be deal with in upcoming research. One constraint is the focus on a lone region, Andhra Pradesh, which may limit the generalizability of the answers to erstwhile regions with diverse socio-economic characteristics. Upcoming studies could expand the geographic scope to include diverse regions, thereby providing a broader understanding of how UCB services impact financial inclusion and societal development in different contexts. Additionally, the study relies on a self-reported questionnaire to collect data, which may introduce response bias. Future research could consider incorporating more objective measures or triangulating the data with interviews or case studies to gain a deeper insight into the mechanisms at play.

Future research could also explore the specific mechanisms through which financial inclusion mediates and moderates the relationship between UCB services and societal development. Further investigation into the role of digital financial services, financial literacy, and customer trust in shaping the effectiveness of UCB services would be valuable. Finally, examining the impact of policy interventions aimed at strengthening UCB services and promoting financial inclusion would give to a more inclusive consideration of the policy implications of the study's findings.

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