

# Revitalising socio-economic empowerment through cooperative banks: insights from India

Cooperatives  
and  
empowerment

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## Abstract

**Purpose** – This research aims to explore the significance of cooperative efforts in promoting financial participation to enhance the socio-economic empowerment of the rural Muslims.

**Design/methodology/approach** – The primary study with a structured questionnaire has been conducted taking a sample of 398 rural Muslim respondents from various rural regions of south India through proportionate stratified sampling techniques. Regression analysis, paired sample *t*-test and structural equation modelling (SEM) through statistical package for social sciences (SPSS) 26 & SPSS analysis of moment structures (AMOS) 23 software have been implemented to test the relationship.

**Findings** – The research outcome demonstrated a remarkable difference in the rural Muslim's socio-economic conditions before and after availing the loans from cooperatives. Consequently, an extension of cooperative efforts widens the scope of financial participation which again has positively enhanced rural Muslim's socio-economic empowerment.

**Practical implications** – This study will help various policymakers, academicians and communities to take necessary action for the upliftment of a particular community. The research further adds on to the existing research on the need and importance of cooperative efforts as an alternative finance for marginalised community in developing and emerging countries.

**Originality/value** – The result of this study is only confined to south India, posing a limitation for the study. Apart from the geographical restriction, the study solemnly covers the rural Muslim community extracting other sections of the society. Hence, for more generalisable pictures of the current results, further research is recommended from other stakeholders' perspectives.

**Keywords** Cooperative efforts, Financial participation, Socio-economic empowerment, Indian economy, Rural Muslim

**Paper type** Research paper

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## 1. Introduction

The necessity of socio-economic development of all sections of societies is now more important than ever as efforts are made to end poverty and strengthen rural communities on both social and economic levels. The majority of rural citizens in India struggle to obtain employment in this area (Jayakumari, 2015). The Muslim minority, which comprises about 17.22 crore individuals in this rural community, is the most disadvantaged population (Census Of India, 2011). Due to their poor economic standing, few employment opportunities, lack of access to family planning services, financial exclusion, difficulty obtaining formal financing, lack of a connection between madrasa education and modern education, economic hardship, attitudes towards girls' education and other factors, Muslims in India are at a disadvantage. The aforementioned elements have a direct bearing on the economic condition of a certain community. In this regard, Selim *et al.* (2020) claim that the Islamic value of enhancing one's socio-economic status by initiative and encouraging collaboration and progress is necessary. As a result, this collaboration and progress are made possible by active financial participation. Providing underprivileged people with financial services help to end poverty, foster employment and assist in the construction of appropriate infrastructure, such as electricity, housing, health care and other services which leads to socio-economic empowerment of a rural population (Satya & Pal, 2019). When it comes to financing options, the Muslim community prefer cooperative banks to nationalised banks and private banks (Niyaz & Siddiq, 2021). Cooperative banks have significantly influenced banking practices and credit availability for rural people in India. It is one of the fundamental institutions in rural India's financial system and this system has been running for more than a century (Chugunov *et al.*, 2016). Access to financial services through well-developed financial institutions, such as cooperative banks, is a crucial driver of socio-economic empowerment and economic development, according to macroeconomic research. This access fosters self-esteem, social inclusion, financial empowerment and, as a result, the social and economic empowerment of rural communities, particularly disadvantaged, underprivileged, low-skilled rural households and women (Divya, 2014).

Various research have been conducted to test the effectiveness of cooperative banks in rural development; numerous studies have pondered on the financial performance and also studies have been undertaken in the conceptual domain concerning cooperative banks. But, there are few empirical studies arguing the active role of cooperative banks in rural financial participation and their socio-economic development; moreover, pondering on the minorities, i.e. Muslim communities in India with regard to their financial participation and their socio-economic development has been lowly looked upon. In this regard, the present research primarily focuses on the importance of co-operative societies in enhancing their financial participation, which further determines the development of socio-economic empowerment amongst rural Muslim communities in India.

## 2. Related work and hypothesis formulation

### 2.1 Utilisation of cooperative efforts and socio-economic profile

Cooperatives have been widely researched and found to have a favourable influence on different elements of the financial well-being of individuals. According to research, cooperatives play an important role in increasing income, expenditure, savings and asset accumulation (McKillop, French, Quinn, Sobiech, & Wilson, 2020). They help rural development by encouraging entrepreneurship, offering job possibilities and allowing for self-employment, which results in greater income and general growth (Chaudhary, 2019). On the contrary, other researchers have discovered a negative association between cooperative utilization and income, with household savings impacted by average income levels and age distribution (Shilimi, 2021). An institutional theory emphasises how unequal access to institutional opportunities affects lower-income families' ability to save and accumulate wealth relative to their richer counterparts.

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Furthermore, research concentrating on women who receive cooperative microfinance loans show that these loans have a favourable influence on their property ownership, company capital, savings capacity and asset portfolio, leading to overall business growth (Kimaro, 2023). Whilst much study has been done on the impact of cooperatives, further studies especially targeting Muslim minorities are needed to understand their unique conditions. The following hypothesis has been developed based on the above considerations;

- H1.* There is a significant difference between the levels of income, level of expenditure, personal expenses, mode of saving, amount of savings, assets owned and property owned by rural Muslim communities before and after availing loan from cooperative banks

### *2.2 Financial participation through cooperative efforts*

Financial inclusion is described as the offering of financial services at no or minimal expense to significant sectors of the population, regardless of wealth or size (Hassouba, 2023). Since, the Indian economy has shifted its policy focus to the notion of inclusive growth (Jaiswal & Gupta, 2015), the role of cooperative societies tend to be significant which are locally administered to support numerous financial offerings such as deposits, loans, savings and other financial services to rural individuals and businesses (Coccoresse & Shaffer, 2021). Amongst these rural residents, the Muslim minority is one of the religious minorities that lag behind in several socio-economic metrics, including capital spending, employment, politics, higher education, etc. (Niyaz & Siddiq, 2018). Therefore, these collaborative efforts are essential in reversing this setback. All cooperative societies were discovered to have an important place in India's monetary system since they are an integral part of the multi-agency system for delivering rural credit. Cooperative banks have played a critical role in the country's socio-economic development by providing inexpensive institutional credit, especially to rural regions. In India, cooperatives, specifically Primary Agricultural Credit Societies (PACS), play an important role in increasing community financial involvement and socio-economic development. PACS, with a 100% rural penetration rate, meets the agricultural and non-agricultural requirements of the economically disadvantaged. The country has a huge network of cooperative banks, having 98,042 institutions as of March 2021, that provide formal financial services to people living in rural areas (RBI, 2021). Cooperatives are the second largest source of rural lending after commercial banks, and their growth has been stable throughout the years. Commercial banks hold the highest proportion of agricultural loans, next to cooperative banks and Regional Rural Banks (RRB). PACS has a remarkable footprint in rural finance, encompassing 96% of villages and providing an increase in loans. Cooperatives' financial profile indicates their influence, with increasing deposits, financing and outstanding loans. District Cooperative Central Banks (DCCBs) and State Cooperative Banks (SCBs) add to the rural financial system by providing access to banking services. In India, the cooperative sector is a critical driver of financial inclusion and rural development (NABARD, 2021). However, many rural residents continue to struggle with access to banking services. This requires offering access to a wide range of financial products and services, such as bank accounts, savings options, immediate credit, mortgages, transfers and payment services, advice on finances, entrepreneurial credit for low-income households and micro-insurance bundled with bank accounts (Divya, 2014; Lal, 2018). Previous research on financial participation through cooperative societies found that cooperative efforts have a greater impact on ensuring equitable access to credit, savings, transfers, investments and other financial services for all communities in society, particularly those in rural areas (Gaichuru, 2023; Lakshmi, 2021; Nteere, 2022; Ogochukwu Gabriella *et al.*, 2022; Sahoo *et al.*, 2020). Cooperative banks must prioritise financial inclusion to achieve

inclusive growth and reduce poverty at the grassroots level. Considering this background, the below hypothesis has been formulated for Muslim minorities;

*H2.* Higher the cooperative efforts, the higher will be the financial participation.

### *2.3 Socio-economic empowerment through financial participation*

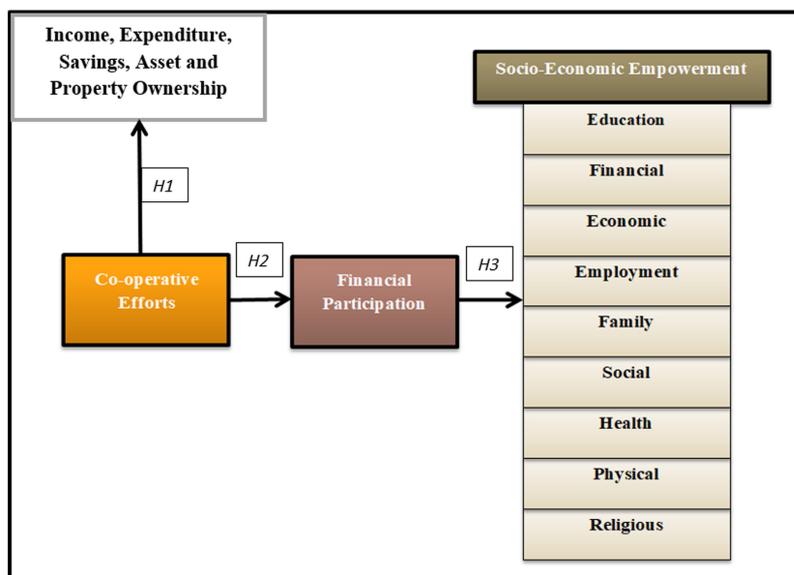
Financial participation of rural communities builds financial independence and self-relevancy for their overall enhancement (Coon & Leistriz, 2012; World Bank, 2022). In this regard, India is a place of 600000 and more cooperative societies with 97% rural area coverage consisting of 250 members extending over and above 70000 Crores for agricultural activities (Manju & Mohika, 2014). These cooperatives have the power to generate employment, reduce poverty and enable social engagement for overall empowerment (Lal, 2019). Various researchers strongly argue that financial participation not only eradicates poverty but also influences economic prosperity (Azimi, 2022; Khan, Haouas, Trinh, Badeeb, & Zhang, 2023; Omar & Inaba, 2020). Similarly, studies also argue that financial participation through cooperative efforts improves inclusive finance, reduces poverty, creates employment and improves the quality of life, all of which lead to socio-economic development and social integration. Socio-economic development, in the words of Behera (2016), is the process of boosting social welfare in order to exploit one's own potential to the fullest. The socio-economic development of rural communities implies appropriate consumption, housing and clothing, financial access, education, asset ownership, the growth of women and children, as well as other qualitative infrastructure (Sinha, 2012). Thus, it is evident that cooperative societies result in financial participation, which additionally adds to socio-economic empowerment (Divya, 2014; Lal, 2018).

There are various studies that have also examined the relevance of financial participation on the individual's socio-economic development (Niaz, 2022; Serrao, Sequeira, & Varambally, 2013) but the researchers have rarely reflected on analysing the relevance of cooperatives in the enhancement of financial participation which in turn may contribute to socio-economic development. Cooperative banks may empower rural people and promote active engagement in the financial system by increasing banking penetration and fostering quick financial inclusion (Divya, 2014; Lal, 2018). Financial inclusion has a direct beneficial influence on various dimensions of socio-economic empowerment, according to a study done by Panakaje, Rahiman, Parvin, Kulal, and Siddiq (2023). The study emphasised its positive benefits on educational achievement, financial well-being, economic growth, employment prospects and health outcomes. These findings highlight the critical significance of financial inclusion in boosting many dimensions of socio-economic empowerment (Lal, 2021). As a result, this study contributes to the current research focus of analysing the impact of cooperative efforts on financial involvement leading to the socio-economic growth of Muslim minorities. The above review exhibits the following hypothetical relationship;

*H3.* Higher the financial participation, the higher will be the socio-economic empowerment.

The discussion shows that there is a significant difference in the rural Muslim community's income levels, consumption patterns, personal costs, saving strategies, savings quantities, owned assets and properties before and after taking loans from cooperative banks. The rural Muslim community's socio-economic situations fluctuate significantly before and after receiving these loans. With more cooperative efforts, the amount of financial participation rises, resulting in greater socio-economic empowerment. Figure 1 is a conceptual model that depicts these hypothetical relationships.

Figure 1 depicts the effect of cooperative efforts on beneficiaries' income, spending, savings, asset and property ownership. Furthermore, cooperative activities contribute to



Source(s): Figure by authors

Figure 1.  
Conceptual framework

improved financial participation, which in turn improves socio-economic empowerment. Several academicians have suggested and evaluated models that split socio-economic empowerment into eight indicators: education, financial, economic, employment, family, social, health and physical. Religiousness is also seen as an indication of socio-economic empowerment in the context of the current study, which focuses on the Muslim minority in India. Notably, no prior study has included religiousness as a measure of socio-economic empowerment and the researcher hopes to fill this vacuum. As a result, in the current study, socio-economic empowerment is measured utilising these indicators as the criterion.

### 3. Methodology

#### 3.1 Measures

According to a model suggested by [Niyaz and Siddiq \(2018\)](#) and [Michael and Bustelo \(1986\)](#), socio-economic empowerment was broken down into eight indicators: education, financial, economic, employment, family, social, health and physical. Further, since the present study concentrates on the Muslim minorities in India, religiousness also has been considered as an indicator of socio-economic empowerment based on the researcher's observation. Based on this observation, researchers conducted focused group interviews amongst rural Muslim minorities in South Karnataka. The discussion conveyed the fact that their religious beliefs have some influence on their banking transactions, opportunities for women, social freedom and modern education system as the Sharia law is strongly followed by them, hence the religiousness as an indicator of socio-economic empowerment has been considered in the present study.

#### 3.2 Pretesting and instrument validation

Content validity: The tool was originally handed to five research academicians, who provided feedback on the questionnaire. Following that, five academicians with expertise in data analysis, banking, business and management, economics and psychology were asked to

assess the instrument and provide feedback. Following that, one cooperative bank manager from each region was asked to weigh in. Following that, three Mawlawis and five Masjid/Madarasa officials were asked to comment on the banking, religious element and development plan. Finally, two south Indian social activists were asked to examine the instrument and provide feedback. These comments were carefully considered and the factors in the questionnaire were amended, eliminated, or updated as needed.

Verifying the validity and reliability of the chosen constructs serves as the foundation for additional structured analysis to evaluate the link between them. Three constructs—cooperative efforts (10 items), financial participation (10 items) and socio-economic empowerment—have been identified based on the many connected works. The results of the validity and reliability checks of the chosen constructs and indicators were shown in [Table 1](#) for further study.

In order to avoid overlooking errors and to finalise the interview schedule and measurement scale, a pilot survey was conducted amongst 50 respondents from five states of south India. From each state, ten respondents were selected from rural areas. In the current study, the reliability coefficient varied from 0 to 1, with all components having a Cronbach alpha value of 0.7 or above, assuring the questionnaire's dependability.

In addition, validity testing is essential to ensure that a test accurately examines the specific trait it is designed to measure. The table also demonstrates that all of the metric constructs successfully demonstrated both convergent and discriminant validity, as proven by the fact that the average variance extracted (AVE) surpasses the maximum shared variance (MSV) in all situations ([Table 1](#)). Additionally, the mean values of the indicators were found to be above average, implying that respondents had a positive perception of all of the aforementioned features ([Table 1](#)).

According to the correlation matrix, all of the constructs and indicators in the research had extremely significant correlations with one another, with a  $p$  value of 0.01. Financial participation has a strong correlation to cooperative efforts ( $r = 0.596^{***}$ ), financial indicators to economic indicators ( $r = 0.542^{**}$ ), education to financial indicators ( $r = 0.718^{**}$ ), financial indicators to social indicators ( $r = 0.689^{**}$ ) and economic indicators to family indicators ( $r = 0.693^{**}$ ). Social and religious indicators ( $r = 0.690^{**}$ ), family and social indicators ( $r = 0.767^{**}$ ), social and employment indicators ( $r = 0.709^{**}$ ) and health and religious indicators ( $r = 0.548$ ) all have a substantial correlation. Finally, physical possessions are strongly associated with religious indicators ( $r = 0.755^{**}$ ).

### *3.3 Representative of sample and data collection*

The study focuses on rural Muslim population of south India, using the data collected from the top five most populous states. According to 2011 census statistics, these states included Tamilnadu, Karnataka, Kerala, Telangana and Andhra Pradesh, with a total Muslim population of 4,229,479, 7,893,065, 8,873,472 and 8,082,412 (including both Telangana and Andhra Pradesh). The sample size was calculated using the Taro Yamane formula, which yielded a minimum of 395 rural dwellings with a 5% alpha. In this study, 410 questionnaires were distributed and 398 samples were gathered, resulting in a 97% response rate. The sample population consisted of five states chosen for having the biggest Muslim population in south India. According to the 2011 census, the sample units were chosen using stratified sampling procedures from a total population of 25,13,22,872 in south India, which included 2,90,78,428 Muslims. In this case, we split the entire population into states (strata). We used proportional sampling within states to establish sample size and a practical sampling strategy to distribute questionnaires. A systematic questionnaire with standardised criteria was used to obtain primary data from rural Muslims. The data was acquired during the course of two years, from 2020 to 2021, with some data collected using Google Forms since it

Author	Variables	Coding	No. of items	Composite reliability	Reliability		Validity		Discriminant	M
					Cronbach's $\alpha$	AVE	MSV	Convergent		
Singh (2022), Niyaz and Siddiq (2021) and Observation	Cooperative Efforts	C1 to C10	10	0.832	0.812	0.720	0.713	AVE>0.5	MSV < AVE	3.85668
	Financial Participation	F1 to F10	10	0.852	0.822	0.872	0.781	AVE>0.5	MSV < AVE	3.6053
Demirci-Kunt & Klapper, 2013; The World Bank Annual Report 2013, (2013) and observation	Education	E1 to E5	5	0.842	0.832	0.710	0.631	AVE>0.5	MSV < AVE	3.9095
	Financial	F1 to F3	3	0.852	0.832	0.745	0.702	AVE>0.5	MSV < AVE	3.8643
Niyaz & Siddiq (2018), Michael & Bustelo (1986), Panakaje <i>et al.</i> (2023) and observation	Economic	Ec1 to Ec5	5	0.852	0.832	0.807	0.745	AVE>0.5	MSV < AVE	3.7915
	Employment	Em1 to Em3	3	0.872	0.852	0.835	0.702	AVE>0.5	MSV < AVE	4.0490
Family	Family	Fa1 to P4	4	0.882	0.872	0.724	0.694	AVE>0.5	MSV < AVE	3.8518
	Social Health	S1 to H4	5	0.874	0.864	0.716	0.686	AVE>0.5	MSV < AVE	3.8065
Physical	Physical	P1 to P4	4	0.807	0.787	0.760	0.657	AVE>0.5	MSV < AVE	3.9322
	Religiousness	R1 to R5	5	0.827	0.807	0.790	0.657	AVE>0.5	MSV < AVE	4.0075
				0.842	0.832	0.780	0.631	AVE>0.5	MSV < AVE	3.8417

Source(s): Table by authors

**Table 1.**  
Validity and reliability results

Cooperatives and empowerment

was not possible to collect the data due to the lockdown. In addition, rural Muslim respondents who had obtained a mortgage loan, a business loan, a personal loan, a home loan, or a land purchase loan were targeted. Cronbach alpha and composite reliability were used to assess the questionnaire's reliability and validity, whilst validity of content, correlation, validity based on convergence and validity based on discrimination were utilised to assess its validity. The numerous metrics employed in the study were based on current literature.

### *3.4 Assumption testing*

The present study verified the data with normality, homogeneity, linearity and multicollinearity assumptions. All these assumptions have been satisfied justifying the usage of SEM and other parametric tests.

### *3.5 Statistical tools and techniques applied*

The study also adopted paired *t*-test as an inferential statistic to compare the socio-economic condition of rural Muslim communities before and after availing cooperative loan using SPSS 23. Apart from the basic inferential statistics, to fulfil the research objectives, the study used Regression analysis, Paired sample *t*-test and SEM (Structural Equation Modelling) through SPSS 26 & SPSS AMOS 23 software to test the multivariable hypothesis.

## **4. Empirical analysis**

### *4.1 Demographical profile*

Age, educational level, sub-caste, type of household, economic condition and marital status were all considered under demographic characteristics. As per the percentage score, more than 50% of the rural Muslim population in the research region have completed high school or less. The majority of respondents (64.1%) are from joint families, whilst the remaining respondents (34.9%) are from nuclear families. This indicates that Muslims still engage in traditional lifestyles. The majority of respondents (82.2%) fall below the poverty line, with the remaining respondents above it. The respondents' demographic profiles show that only a few Muslim populations have access to advanced education and that the educational level of the community is still in need of improvement in rural areas. Though, it has increased over the previous ten years, Indian Muslims still contribute the least to the workforce compared to other minorities (Census Of India, 2011).

### *4.2 Descriptive statistics*

**Cooperative Efforts:** Since the mean value is 3.85679 and the standard deviation is 0.8865943, the majority of the factors generally indicate a good attitude towards co-operative efforts such as financial services, saving habits, financial security and opening a bank account. It has been established that respondents had a favourable degree of agreement on cooperative efforts based on mean and standard deviation (SD) 3.85679 and 0.8865943, respectively.

**Financial Participation:** The majority of the variables indicate a favourable attitude towards financial inclusion in terms of banking products such as E-payment/EFTs/NEFT/RTGs, E-lobby/E-deposit/E-passbook entry, Investment Advice, m-banking and loan facility, as their average of financial participation is 3.60528 and the SD is 0.938522. The results of mean and SD 3.60528 0.938522 demonstrate that respondents' levels of agreement with regard to financial involvement are favourable.

*4.2.1 Socio-economic empowerment:* Each indicator consists of a distinct collection of criteria that are tested using 48 items on a five-point Likert scale, with 1 meaning "strongly

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disagree” and 5 denoting “strongly agree.” The data indicated the average scores in rural Muslim communities for the nine socio-economic variables.

**Educational status:** Seven factors were used to measure the first indication, “Educational status,” resulted in a mean rating between 2.83 and 3.94. After obtaining loan from a cooperative bank, there is a positive mean difference in the education indicator with 0.24 when considering the entire educational indicator.

**Financial indicator:** After applying for a loan, the second indication, "Financial," which was examined using seven factors, revealed a mean rating between 3.36 and 3.90, with the mean value of every variable being above average. When evaluating the overall "Financial" indicator of the community, the schooling indicator, which has the highest contributing component amongst the rural Muslims' socio-economic indicators, has a positive mean difference of +0.59 after getting a loan from the cooperative bank.

**Economic indicator:** The third indicator describes the rural Muslim community's economic metrics. The statement the family's standard of living being excellent received the highest mean grade (3.85) for economic indicators.

**Employment Indicator:** There is a positive mean difference in employment indicator with +0.24 after obtaining loans from the cooperative bank when looking at the total employment indicators of rural Muslim communities.

**Family Status:** After receiving a loan, a certain community's average family status showed a mean rating between 3.58 and 3.91. The infant mortality rate (IMR) in my family is very low, which received the highest mean rating (3.91) for family indicators. There is a positive mean difference in family status indicator with +0.17 after obtaining loans from the cooperative bank when looking at the total family status indicators of rural Muslim communities.

**Social Position:** After taking a loan, the mean score on the social indicator ranged from 2.74 to 3.85. After obtaining loans from cooperative banks, the total social status indicators of the rural Muslim community show a positive mean difference of +0.29 points.

**Health Status:** It demonstrates that the health-related characteristics of the rural Muslim population are, on the whole, between neutral and positive. After obtaining loans from the cooperative bank, the rural Muslim community's social status indicator showed a positive mean difference of +0.20 when taking into account all health indicators.

**Physical Assets:** After taking a loan, the mean rating for physical asset indicators ranged from 3.57 to 3.93. There is a positive mean difference in the physical asset indicator with +0.30 after obtaining loans from cooperative banks when looking at the total physical asset indicators of the rural Muslim community.

**Religious Status:** After receiving a loan, the average rating for religious indicators ranged from 3.87 to 3.91. After obtaining loans from cooperative banks, the rural Muslim community's physical asset indicators showed a positive mean difference of +0.08 when taking into account their overall religion indicators.

After obtaining loans from cooperative banks, the average mean value of the 9 socio-economic indicators of the rural Muslim community is 3.80. Prior to taking out a loan, the rural Muslim community's overall indicators were 3.58, and after doing so, there was a positive mean change of 0.22. Financial metrics exhibit the biggest mean difference before and after a loan from cooperative banks when all indicators were considered.

#### *4.3 Testing of hypothesis*

The Paired *t*-test value (Table 2) and their significant difference in income, spending, personal costs, manner of savings, amount of savings, assets possessed and property owned before and following loan requests from cooperative banks are shown in Table 2. The result reveals

H1: There is a significant difference between the levels of income, level of expenditure, personal expenses, mode of saving, amount of savings, assets owned, and property owned by rural Muslim community before and after availing of loan from cooperative banks

Particulars	N	Mean	t Value	p value and inference
Level of income before availing loan from a cooperative bank	398	2.1935	17.705	P = 0.001**
Level of income after availing loan from cooperative bank	398	3.1156		H1: Accepted
Consumption expenditure before availing loan from cooperative bank	398	2.1784	18.902	P = 0.001**
Consumption expenditure after availing loan from cooperative bank	398	2.7789		H1: Accepted
Personal expenses before availing loan from cooperative bank	398	1.1206	8.068	P = 0.001**
Personal expenses after availing loan from cooperative bank	398	1.3392		H1: Accepted
Monthly savings before availing loan from cooperative bank	398	2.7337	8.867	P = 0.001**
Monthly savings after availing loan from cooperative bank	398	2.9774		H1: Accepted
Total family property before availing loan from cooperative bank	398	3.3342	30.177	P = 0.001**
Total family property after availing loan from cooperative bank	398	4.1935		H1: Accepted
Cents of land before availing loan from cooperative bank	398	2.6256	3.368	P = 0.001**
Cents of land after availing loan from cooperative bank	398	2.7839		H1: Accepted
Gold before availing loan from cooperative bank	398	2.0025	7.502	P = 0.000**
Gold after availing loan from cooperative bank	398	2.3291		H1: Accepted
Silver before availing loan from cooperative bank	398	1.0075	1.000	P = 0.318
Silver after availing loan from cooperative bank	398	1.0050		H1: Rejected

**Table 2.**

Paired *t*-test of income, expenditure and socio-economic conditions before and after availing of loan from cooperative banks

**Note(s):** \*\*Significance at 1% level

**Source(s):** Table by authors

a significant difference at the 1% level of significance because the p-values are less than 0.01, which is consistent with the descriptive statistics that show that the level of income, expense and other variables increased after obtaining a loan from cooperative banks. This result is in support of various other research which has argued that cooperatives play a crucial role in improving income, expenditure, savings levels and asset accumulation (Chaudhary, 2019; Kimaro, 2023; McKillop *et al.*, 2020; Shilimi, 2021). Hence H1 is accepted. This indicates the need for the expansion of cooperatives for the betterment of rural Muslims.

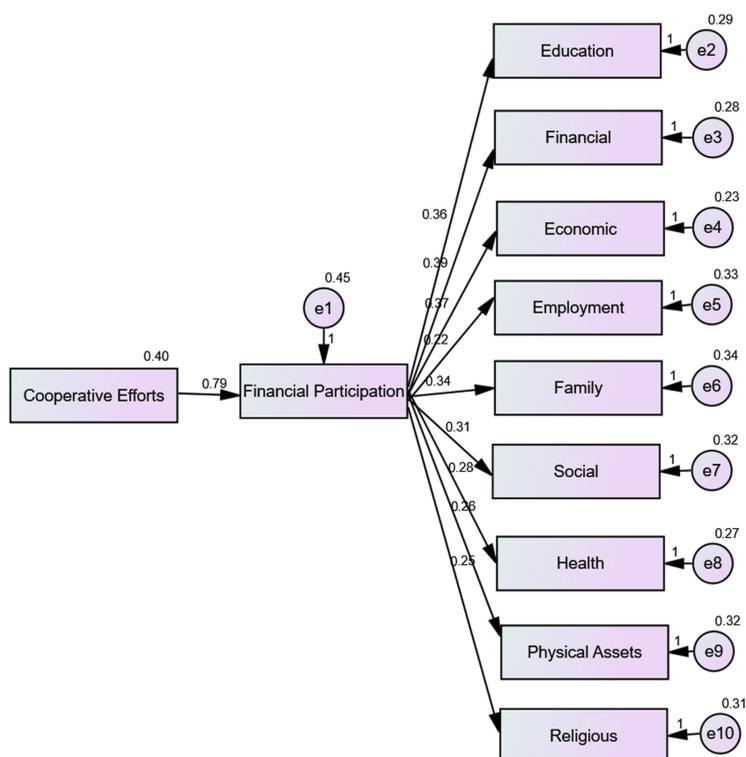
Moreover, financial participation and socio-economic empowerment have been evaluated based on the structural equation modelling (SEM) confirmatory aspects of cooperative efforts (Figure 2). Based on the minimum criteria listed below, the model's goodness of fit is evaluated.

According to the goodness of fit results, the model's chi-square value and degree of freedom tend to be 36.129 and 16 correspondingly. Regarding  $\chi^2$  significance, the resulting value is more than 0.05, or 0.089, in accordance with the advised criteria. The model showed significance with a value of 0.912 since the optimal range for goodness of fit index (GFI) and normed fit index (NFI) is above 0.90. It is obvious that the suggested model exhibits a strong match between cooperative efforts, financial participation and socio-economic empowerment because every value derived from it satisfies the minimal requirements imposed by the recommended value.

The table depicts the direct link between the dependent (DV) and independent variables (IV). The following hypotheses have been established and discussed in order to assess the favourable impacts of one variable on the other two:

H2: Higher the cooperative efforts, the higher will be the financial participation.

As per the above Table 3, as the estimated value is 0.785 with less than 0.01 alpha, cooperative efforts have a direct beneficial influence on financial participation indicating high



**Figure 2.** Structural equation modelling

Source(s): Figure by authors

financial participation as a result of more cooperative efforts. These findings are in line with the previous studies (Manjula, 2019; Ajai *et al.*, 2023). Therefore, H2 is accepted.

H3: Higher the financial participation, the higher will be the socio-economic empowerment.

The study attempted to measure socio-economic empowerment by keeping 9 sub-indicators. Table 3 explains the effect of financial participation on each indicator of socio-economic empowerment. As per the estimate and level of significance is concerned financial participation has highly significant optimistic effect on Education ( $E = 0.360$ ,  $P < 0.01^{**}$ ), Financial ( $E = 0.390$ ,  $P < 0.01^{**}$ ), Economical ( $E = 0.373$ ,  $<0.01^{**}$ ), Employment ( $E = 0.215$ ,  $<0.01^{**}$ ), Family ( $E = 0.215$ ,  $<0.01^{**}$ ), Social ( $E = 0.308$ ,  $<0.01^{**}$ ), Health ( $E = 0.284$ ,  $<0.01^{**}$ ), Physical Assets ( $E = 0.265$ ,  $<0.01^{**}$ ) and religious ( $E = 0.250$ ,  $<0.01^{**}$ ) indicators of socio-economic empowerment. Hence, higher financial participation contributes to high socio-economic empowerment, since p-value in all the indicators of socio-economic empowerment is below 0.01. As a result, the contribution of financial inclusion to socio-economic empowerment was found to be true for rural Muslim communities as proved earlier in the research conducted by Pal *et al.* (2022). Therefore, H3 holds true.

## 5. Discussion

The study investigated the role of cooperative efforts in increasing financial participation and the Muslim community's socio-economic empowerment. The findings from primary and secondary sources indicated that the community had a favourable impression of

DV	IV	S. Estimate	U. Estimate	S.E.	C.R.	P	Label
Financial Participation	<— Cooperative Efforts	0.596	0.785	0.053	14.783	***	Highly Significant
Education	<— Financial Participation	0.490	0.360	0.032	11.205	***	Highly Significant
Financial	<— Financial Participation	0.523	0.390	0.032	12.240	***	Highly Significant
Economical	<— Financial Participation	0.542	0.373	0.029	12.852	***	Highly Significant
Employment	<— Financial Participation	0.299	0.215	0.034	6.240	***	Highly Significant
Family	<— Financial Participation	0.441	0.341	0.035	9.798	***	Highly Significant
Social	<— Financial Participation	0.418	0.308	0.034	9.164	***	Highly Significant
Health	<— Financial Participation	0.413	0.284	0.031	9.032	***	Highly Significant
Physical Assets	<— Financial Participation	0.365	0.265	0.034	7.818	***	Highly Significant
Religious	<— Financial Participation	0.352	0.250	0.033	7.487	***	Highly Significant

**Table 3.**  
Direct effect

**Note(s):** Maximum likelihood estimates regression weights: (Group number 1 - Default model)

**Source(s):** Table by authors

cooperative banks. This perspective led to active engagement in a variety of financial products/services, including E-payment/EFTs/NEFT/RTGs, E-lobby/E-deposit/E-passbook entry, Investment Advice, m-banking and loans. Overall, cooperative efforts have had a favourable influence on the financial inclusion of the rural Muslim population. Considering this result it, can be stated that financial participation can be extensively achieved through cooperative efforts where [Divya \(2014\)](#) and [Lal \(2018\)](#) argued the economic prosperity of the nation through cooperative efforts as well as financial participation. In the comparison of all the socio-economic indicators, financial indicators showed the highest mean difference before and after availing the loan from cooperative banks. The results also demonstrate that cooperative efforts are the strongest influencers of financial participation ( $E = 0.785$ ), indicating that increased cooperative effort contributes to increased financial participation. Various researchers also affirmed that cooperative efforts have a greater influence on ensuring financial participation in all the communities in society especially rural sections of society ([Barot and Barot, 2015](#); [Bosire, Mugo, Owuor, Oluoch, & Kakiya, 2014](#); [Jayakumari, 2015](#); [Lal, 2018](#)). Moreover, the outcome of the study demonstrated a strong contribution of financial participation towards socio-economic empowerment ( $E = 0.309$ ) of the rural Muslim community; supporting which [Lal \(2018, 2019\)](#) also argued that financial participation is the major requirement to generate employment, reduce poverty, promote social integration and enhance the economic prosperity of the rural community to ensure them with adequate facilities. The overall development of the Muslim community showed there is a remarkable difference in socio-economic indicators, income level, expenditure, personal expenses, mode of savings, amount of savings, assets owned and property owned before and after availing loans from cooperative banks. Consequently, it is argued that the financial participation of rural Muslim communities through cooperative efforts has led to their socio-economic empowerment; [Paramasivan and Ganeshkumar \(2013\)](#) and [Lal \(2018\)](#)

further highlighted the important importance of collaborative efforts in community socio-economic development through fair financial access. Whilst the results of the study highlight the positive effect of loans on various variables related to the rural Muslim community's financial participation and socio-economic empowerment, it is important to recognise the potential negative aspects in practical applications, such as elevated indebtedness and financial stress if loans are not managed properly (Sweet, Nandi, Adam, & McDade, 2013). Responsible lending practices, financial literacy and monitoring procedures are required to minimise these risks and guarantee that loans contribute positively to community development.

Policy refinement and real-world application enhancements based on study findings can help the rural Muslim population achieve financial inclusion and socio-economic empowerment by strengthening cooperative banks, increasing financial literacy, improving credit access, embracing technology, creating community participation, encouraging collaboration and establishing effective monitoring and evaluation systems. These initiatives can improve cooperative bank capacity, empower citizens via knowledge and access to financial services, stimulate entrepreneurship, bridge the digital gap, assure community representation and build evidence-based methods.

## 6. Conclusion and implication

As the study outcome supported the alternative role of cooperative efforts in the financial participation growth and socio-economic empowerment, it is essential to boost the active involvement and performance of cooperatives. Despite the overwhelming prominence of cooperatives in India, the government has to give more importance to the financial viability of the cooperatives. They might have a bright future in India in the new era provided they are turned into member-owned independent organisations controlled by elected members' representatives, professionally managed and free of unwanted government supervision. Muslims are amongst the most marginalised social groups. Marginalisation, aggression and prejudice all contribute to and perpetuate low levels of achievement. Considering the performance of cooperative banks in the economy, cooperatives should make necessary changes to encompass the unbanked population in the country. Strategies should be formulated to identify the target group and focus on meeting their unfulfilled need for banking services. Cooperative performance at the national, state and district levels suggest economic progress and empowering marginalised individuals of communities as a defence against poor socio-economic situations. Cooperatives also help rural communities by reducing poverty, creating jobs, improving food security, empowering women and developing human capital. Still, cooperative banks also face challenges like non-accountability, lack of coordination amongst different cooperatives, no balanced growth, lack of funds, managerial problems, lack of government support, weak economic base, absence of common brands, losses and increasing non-performing assets (NPAs), lack of professionalism in management and excessive government control and political interference. When considering the role of cooperatives in the Muslim community's socio-economic development in south India, there is a difference in the rural Muslim community's socio-economic position before and after availing of financial services from cooperative banks. Cooperative banks, on the other hand, have a favourable influence on the socio-economic growth of south India's rural Muslim minority.

This research will assist politicians, academics and communities in taking the required steps to improve a specific community. The study also adds to the literature on the necessity for and value of collaborative efforts as an alternative source of income for the marginalised group in developing and emerging nations.

## 7. Future direction

Present study only highlights the positive impact of the loans on rural Muslim which acts as a major limitation of the study. Further research on loans in the context of the rural Muslim community would be valuable to explore the specific considerations and nuances within Islamic principles and teachings. Whilst loans are permissible in Islam, it is important to note that debt is generally discouraged and ethical guidelines exist to ensure responsible borrowing and lending practices. Conducting further research would allow for an in-depth examination of the principles of loan in Islam, including discussions on the concept of interest (riba), the conditions for permissible loans, the importance of fulfilling contractual obligations and the ethical dimensions of borrowing and lending. This research can provide insights and guidance for policymakers, financial institutions and the rural Muslim community on how to navigate loans in a manner that aligns with Islamic principles whilst addressing the financial needs and communities' socio-economic empowerment.

## References

- Ajai, M., Tiwari, K., & Agnihotri, M. N. (2023). Evaluating the role of cooperative banks in promoting financial inclusion in India. In *Peer Reviewed International Journal* ISSN. Available from: <https://bayancollegeijmr.com/index.php/ijmr>
- Azimi, M. N. (2022). New insights into the impact of financial inclusion on economic growth: A global perspective. *PLoS ONE*, 17, 11 November. doi: [10.1371/journal.pone.0277730](https://doi.org/10.1371/journal.pone.0277730).
- Barot, H., & Barot, J. (2015). Microfinance-the way of financial inclusion. *International Journal in Management & Social Science*, 3(6), 314–325.
- Behera, D. K. (2016). Measuring socio-economic progress in India: Issues and challenges. *Revista Galega de Economía*, 25(2), 117–132. doi: [10.15304/rge.25.2.3742](https://doi.org/10.15304/rge.25.2.3742).
- Bosire, M., Mugo, R., Owuor, G., Oluoch, W., & Kakiya, G. (2014). What are the factors that influence A wide interest rate band in micro-finance institutions in Kenya?. *5(7)*, 1–16.
- Census Of India (2011). *Census of India 2011 primary census abstract data highlights Karnataka series 30 directorate of census operations, Karnataka data product code: 29-007-2011-PCA data highlights primary census abstract-data highlights*. Karnataka: Directorate of Census Operations (pp. 1–86).
- Chaudhary, R. K. (2019). *Role of cooperative in income generating activities for rural development A case study of haripur municipality. Sarlahi District*. Central Department of Rural Development Tribhuvan University, Kathmandu. Available from: <http://elibrary.tucl.edu.np:8080/bitstream/123456789/2220/2/THESIS.pdf>
- Chugunov, A. V., Bolgov, R., Kabanov, Y., Kampis, G., Wimmer, M., Krzhizhanovskaya, V., & Boukhanovsky, A. V. (2016). Preface. *Communications in Computer and Information Science*, 674, V–VI. doi: [10.1007/978-3-319-49700-6](https://doi.org/10.1007/978-3-319-49700-6).
- Coccorese, P., & Shaffer, S. (2021). Cooperative banks and local economic growth. *Regional Studies*, 55(2), 307–321. doi: [10.1080/00343404.2020.1802003](https://doi.org/10.1080/00343404.2020.1802003).
- Coon, R. H., & Leistriz, J. (2012). Co-operative credit system at the district level. *Indian Cooperative Review*, 24(17), 81–92.
- Demircuc-Kunt, A., & Klapper, L. (2013). Measuring financial inclusion: Explaining variation in use of financial services across and within countries. *Brookings Papers on Economic Activity*, 279–340.
- 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.
- Gaichuru, E. M. (2023). *Financial innovations on financial performance of savings and credit cooperative societies in meru county*. Kenya.
- Hassouba, T. A. (2023). Financial inclusion in Egypt: The road ahead. *Review of Economics and Political Science, ahead-of-print*(ahead-of-print). doi: [10.1108/REPS-06-2022-0034](https://doi.org/10.1108/REPS-06-2022-0034).

- Jaiswal, K. A., & Gupta, S. (2015). The influence of marketing on consumption behavior at the bottom of the pyramid. *Journal of Consumer Marketing*, 32(2), 1–34.
- Jayakumari, A. G. (2015). Financial inclusion: An Indian outlook. *Research Journal of Social Science & Management*, 4(11), 1–5.
- Khan, Z., Haouas, I., Trinh, H. H., Badeeb, R. A., & Zhang, C. (2023). Financial inclusion and energy poverty nexus in the era of globalization: Role of composite risk index and energy investment in emerging economies. *Renewable Energy*, 204, 382–399. doi: [10.1016/j.renene.2022.12.122](https://doi.org/10.1016/j.renene.2022.12.122).
- Kimaro, P. J. (2023). Role of savings and credit Co-operative societies on women socio-economic empowerment: A case of brac microfinance institution in moshi municipality, kilimanjaro region, Tanzania. *Journal of Studies in Social Sciences and Humanities*, 9(1), 41–57.
- Lakshmi, A. J., & R. G. (2021). Financial inclusion by credit cooperatives in Kerala: Underpinning values vis-a-vis management structure. In *Contemporary Research In Finance* (pp. 115–121).
- Lal, T. (2018). Impact of financial inclusion on poverty alleviation through cooperative banks. *International Journal of Social Economics*, 45(5), 808–828. doi: [10.1108/IJSE-05-2017-0194](https://doi.org/10.1108/IJSE-05-2017-0194).
- Lal, T. (2019). Measuring impact of financial inclusion on rural development through cooperatives. *International Journal of Social Economics*, 46(3), 352–376. doi: [10.1108/IJSE-02-2018-0057](https://doi.org/10.1108/IJSE-02-2018-0057).
- 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*, 48(12), 1768–1793. doi: [10.1108/IJSE-12-2020-0830](https://doi.org/10.1108/IJSE-12-2020-0830).
- Manju, S., & Mohika, S. (2014). Cooperatives for financial inclusion in India: Concerns and challenges. In *9th ICA Asia Pacific Resgional Research Conference*.
- Manjula, K., & B. S. C. (2019). A study on the role of cooperative banks in financial inclusion in India. *Think India Journal*, 22(4), 4523.
- McKillop, D., French, D., Quinn, B., Sobiech, A. L., & Wilson, J. O. S. (2020). Cooperative financial institutions: A review of the literature. *International Review of Financial Analysis*, 71. doi: [10.1016/j.irfa.2020.101520](https://doi.org/10.1016/j.irfa.2020.101520).
- Michael, C., & Bustelo, E. (1986). Social indicators and development. *Project Appraisal*, 1(4), 266–268. doi: [10.1080/02688867.1986.9726580](https://doi.org/10.1080/02688867.1986.9726580).
- NABARD (2021). Annual report 2020-21 - national bank for agriculture and rural development (NABARD). doi: [10.52403/ijrr.20211211](https://doi.org/10.52403/ijrr.20211211).
- Niaz, M. U. (2022). Socio-economic development and sustainable development goals : A roadmap from vulnerability to sustainability through financial inclusion. *Economic Research-Ekonomiska Istraživanja*, 35(1), 3243–3275. doi: [10.1080/1331677X.2021.1989319](https://doi.org/10.1080/1331677X.2021.1989319).
- Niyaz, & Siddiq, A. (2018). Socio - economic indicators for the development of rural Muslim communities : A meta - analysis from India. *International Journal of Management Studies*, 2(3), 17–33. doi: [10.18843/ijms/v5i2\(3\)/03](https://doi.org/10.18843/ijms/v5i2(3)/03).
- Niyaz, & Siddiq, A. (2021). Awareness and utilization on cooperative banking services and schemes in rural area. *International Journal of Management, Technology, and Social Sciences*, 6(2), 108–120. doi: [10.47992/ijmts.2581.6012.0157](https://doi.org/10.47992/ijmts.2581.6012.0157).
- Nteere, N. N. (2022). Compliance effects of SASRA regulations on the financial performance of savings and credit cooperative societies in Kenya.
- Ogochukwu Gabriella, O., Enete Anselm Anibueze, P., Okoye Chukwuemeka Uzoma, P., Otum Ume, C., & Chukwuemeka Chiebonam, O. (2022). Assessment of the financial inclusion of farmers' cooperative societies in South east, Nigeria. doi: <https://orcid.org/0000-0002-9883-2109>
- Omar, M. A., & Inaba, K. (2020). Does financial inclusion reduce poverty and income inequality in developing countries? A panel data analysis. *Journal of Economic Structures*, 9(1), 37. doi: [10.1186/s40008-020-00214-4](https://doi.org/10.1186/s40008-020-00214-4).

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- Pal, M., Gupta, H., & Joshi, Y. C. (2022). Social and economic empowerment of women through financial inclusion: Empirical evidence from India. *Equality, Diversity and Inclusion: An International Journal*, 41(2), 294–305.
- Panakaje, N., Rahiman, H. U., Parvin, S. M. R., Kulal, A., & Siddiq, A. (2023). Socio-economic empowerment in rural India: Do financial inclusion and literacy matters?. *Cogent Social Sciences*, 9(1). doi: [10.1080/23311886.2023.2225829](https://doi.org/10.1080/23311886.2023.2225829).
- Paramasivan, C., & Ganeshkumar, V. (2013). Overview of financial inclusion in India. *International Journal of Management and Development Studies*, 2(3), 45–49.
- RBI (2021). Developments in co-operative banking. Available from: <https://rbi.org.in/scripts/PublicationsView.aspx?Id=20945>.
- Sahoo, A. K., Meher, S. K., Panda, T. C., Sahu, S., Begum, R., & Barik, N. C. (2020). Critical review on cooperative societies in agricultural development in India. *Current Journal of Applied Science and Technology*, 39(22), 114–121. doi:[10.9734/cjast/2020/v39i2230850](https://doi.org/10.9734/cjast/2020/v39i2230850).
- Satya, R. C., & Pal, R. (2019). Measuring financial inclusion: An axiomatic approach. *International Journal of Financial Studies*, 7(4), 40.
- Selim, M., & Farooq, M. O. (2020). Elimination of poverty by Islamic value based cooperative model. *11(5)*, 1121-1143. doi: [10.1108/JIABR-08-2018-0125](https://doi.org/10.1108/JIABR-08-2018-0125).
- Serrao, M. V., Sequeira, M. V. S. A. H., & Varambally, K. V. M. (2013). *Conceptual Framework to Investigate the Accessibility and Impact of Financial Inclusion* (9th ed., 2, pp. 47–49). Paripex - Indian Journal of Research.
- Shilimi, M. C. (2021). Examining challenges leading to low integration of savings and credit Co-operative societies (SACCOs) in national economies: A study of Zambia. *Open Journal of Business and Management*, 9(3), 1338–1366. doi: [10.4236/ojbm.2021.93073](https://doi.org/10.4236/ojbm.2021.93073).
- Singh (2022). Service quality measurement in cooperative banking sector. *International Journal of Innovative Science and Research Technology*, 7(8), 206–211.
- Sinha, A. (2012). *Financial inclusion and urban cooperative banks*. BIS central bankers' speeches: Transcript at the Launch of the Financial Inclusion Program of COSMOS Bank at Pune.
- Sweet, E., Nandi, A., Adam, E. K., & McDade, T. W. (2013). The high price of debt: Household financial debt and its impact on mental and physical health. *Social Science and Medicine*, 91, 94–100. doi: [10.1016/j.socscimed.2013.05.009](https://doi.org/10.1016/j.socscimed.2013.05.009).
- The World Bank Annual Report 2013 (2013). The World Bank. doi: [10.1596/978-0-8213-9937-8](https://doi.org/10.1596/978-0-8213-9937-8).
- World Bank (2022). Financial inclusion overview. Available from: <https://www.worldbank.org/en/topic/financialinclusion/overview>

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