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## Government Welfare Schemes and Economic Agency of Rural Women: A Micro-Level Empirical Assessment from Coimbatore, Tamil Nadu

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### Abstract

Women's economic empowerment constitutes a central pillar of inclusive rural development in India. Despite extensive welfare interventions, empirical evidence at the micro level remains limited regarding their direct contribution to women's economic agency. This study examines the effectiveness of selected government welfare schemes in enhancing the economic agency of rural women in Coimbatore district, Tamil Nadu. Primary data were collected from 300 rural women through a structured questionnaire using stratified random sampling. Economic agency was operationalized through income levels, savings behavior, entrepreneurial engagement, and a composite Decision-Making Power Index (DPI). Descriptive statistics, correlation analysis, chi-square tests, and multiple regression models were employed for analysis. The findings indicate that participation in welfare schemes significantly improves monthly income ( $\beta = 0.31, p < 0.01$ ) and decision-making power ( $\beta = 0.28, p < 0.01$ ). Scheme beneficiaries demonstrated higher entrepreneurial participation compared to non-beneficiaries. The study concludes that government welfare schemes play a significant role in strengthening economic agency among rural women, though improvements in accessibility and financial literacy are essential for sustained impact.

**Keywords:** Economic agency, rural women, welfare schemes, empowerment, Coimbatore, financial inclusion.

### Introduction

Economic agency refers to the capacity of individuals to make strategic economic decisions, control productive resources, and participate actively in income-generating activities. In rural India, women's agency has historically been constrained by socio-cultural norms, limited financial access, and restricted ownership of assets. To address these structural inequalities, the Government of India has implemented multiple welfare programs aimed at financial inclusion, employment generation, and entrepreneurship promotion. Schemes such as the Mahatma Gandhi National Rural Employment Guarantee Act, National Rural Livelihood Mission, Pradhan Mantri MUDRA Yojana, and Pradhan Mantri Jan Dhan Yojana have been designed to enhance rural livelihoods and promote women's financial autonomy.

Coimbatore district presents a dynamic rural economy characterized by agriculture, small-scale industries, and strong self-help group networks. While macro-level evaluations report positive outcomes of welfare schemes, localized empirical assessments remain insufficient. This study seeks to examine whether participation in government welfare schemes translates into measurable improvements in economic agency among rural women in Coimbatore district.

## Review of Literature

Theoretical perspectives on women's empowerment emphasize access to resources, agency, and achievements as core dimensions of development. Naila Kabeer (1999) conceptualized empowerment as the process through which individuals gain the ability to make strategic life choices, highlighting resources, agency, and achievements as interrelated components. Similarly, Amartya Sen (1999), through the Capability Approach, argued that access to economic opportunities and institutional support expands individuals' substantive freedoms, thereby strengthening agency. Bina Agarwal (1997) further emphasized that access to assets and income enhances women's intra-household bargaining power and economic autonomy.

Empirical studies indicate that welfare schemes contribute to income security and financial inclusion among rural women. Dreze and Khera (2009) found that participation under the Mahatma Gandhi National Rural Employment Guarantee Act significantly improved wage security and female labour participation. Deininger and Liu (2013) reported that involvement in the National Rural Livelihood Mission and Self-Help Groups enhanced access to credit, consumption stability, and asset accumulation. Studies by Pitt and Khandker (1998) demonstrated that microcredit access positively influenced women's income and household expenditure patterns. Furthermore, Sahay et al. (2015) observed that financial inclusion initiatives such as the Pradhan Mantri Jan Dhan Yojana improved savings behaviour and financial resilience among women beneficiaries.

Participation in Self-Help Groups has also been linked to enhanced financial literacy, entrepreneurial confidence, and collective action. Swain and Varghese (2009) found that SHG membership significantly increased women's self-confidence and decision-making authority. However, Goetz and Gupta (1996) cautioned that access to credit does not always translate into control over income due to prevailing patriarchal norms. Khera (2011) identified bureaucratic delays and administrative inefficiencies as constraints in welfare implementation, while Banerjee et al. (2015) emphasized that lack of financial literacy may limit effective utilization of formal banking services.

Despite extensive scholarship on individual schemes and empowerment outcomes, few studies have quantitatively examined the integrated relationship between welfare scheme participation and measurable economic agency at the district level using multivariate statistical techniques. Most existing research relies on descriptive or qualitative approaches. Therefore, a significant empirical gap exists in modelling how welfare participation influences income, savings behaviour, entrepreneurial engagement, and decision-making power simultaneously. The present study addresses this gap by employing regression, correlation, and association analysis to provide micro-level evidence from Coimbatore district, Tamil Nadu.

## Research Gap

Although extensive literature examines women's empowerment and the impact of individual welfare schemes such as the Mahatma Gandhi National Rural Employment Guarantee Act

and the National Rural Livelihood Mission, most studies focus either on single-scheme evaluations or rely predominantly on descriptive and qualitative approaches. There is limited micro-level empirical research that integrates multiple government welfare schemes within a unified analytical framework to measure their combined effect on women's economic agency. Moreover, few studies quantitatively operationalize economic agency through composite indices such as decision-making power, income, savings behaviour, and entrepreneurial engagement using multivariate statistical techniques. District-specific evidence from Tamil Nadu, particularly Coimbatore, remains sparse despite its strong self-help group networks and welfare penetration. Therefore, a significant research gap exists in empirically modelling the relationship between welfare scheme participation and measurable economic agency at the grassroots level, which the present study seeks to address

### Research Objectives

The study aims to:

1. To examine the level and pattern of participation of rural women in selected government welfare schemes in Coimbatore district.
2. To measure the level of economic agency of rural women using indicators such as income, savings behaviour, entrepreneurial engagement, and Decision-Making Power Index (DPI).
3. To analyse the impact of welfare scheme participation on economic agency indicators of rural women.
4. To determine whether socio-economic factors (age, education, household size, SHG membership) influence economic agency.

### Research Methodology

The study adopts a descriptive and analytical research design. Primary data were collected from 300 rural women across six taluks in Coimbatore district using stratified random sampling. Both beneficiaries and non-beneficiaries of government welfare schemes were included to facilitate comparative analysis.

In this study, **welfare scheme participation** (beneficiary vs. non-beneficiary) constitutes the primary **independent variable**. The **dependent variables** representing economic agency include **monthly income, savings behaviour (number of months savings maintained annually), Decision-Making Power Index (DPI), and entrepreneurial engagement**. In the regression models, additional socio-economic variables such as age, education, and household size were included as control variables to examine their influence on the dependent variables.

Economic agency was operationalized through three core indicators: monthly income (continuous variable), savings behaviour (quantitative measure), and a Decision-Making Power Index (DPI). The DPI was constructed using ten Likert-scale items related to

household financial decisions. Reliability testing yielded a Cronbach's alpha value of 0.82, indicating acceptable internal consistency.

Data were analyzed using SPSS. Descriptive statistics were used to summarize socio-economic characteristics. Independent sample t-tests examined mean differences between beneficiaries and non-beneficiaries. Pearson correlation analysis assessed relationships among income, savings, and decision-making power. Multiple regression analysis evaluated the predictive effect of welfare scheme participation (independent variable) on income and decision-making power (dependent variables). Chi-square testing determined the association between welfare participation and entrepreneurial engagement.

### **Hypotheses**

Based on empowerment theory and prior empirical evidence, the following hypotheses are formulated:

**H1:** There is a significant difference in monthly income between beneficiaries and non-beneficiaries of welfare schemes.

**H2:** Welfare scheme participation has a significant positive effect on women's savings behaviour.

**H3:** Welfare scheme participation significantly enhances women's decision-making power.

**H4:** There is a significant association between welfare scheme participation and entrepreneurial engagement.

**H5:** Socio-economic factors such as education and SHG membership significantly influence economic agency.

### **Statement of the Problem**

Women's economic empowerment remains a central objective of inclusive rural development in India. Despite multiple policy interventions aimed at financial inclusion, employment generation, and entrepreneurship development, rural women continue to face structural constraints such as limited asset ownership, restricted mobility, informal employment vulnerability, and socio-cultural barriers. These constraints significantly reduce their economic agency — defined as the ability to make strategic financial decisions, control income, and engage in productive activities.

The Government of India has introduced several welfare schemes, including:

- Mahatma Gandhi National Rural Employment Guarantee Act
- National Rural Livelihood Mission
- Pradhan Mantri Jan Dhan Yojana
- Pradhan Mantri MUDRA Yojana

These schemes aim to enhance women's income, savings, credit access, and entrepreneurial participation. While macro-level evaluations and policy reports suggest positive impacts, there is limited micro-level empirical evidence assessing whether these interventions actually translate into measurable improvements in women's economic agency at the district level. In Tamil Nadu, particularly in Coimbatore district, strong Self-Help Group networks and welfare penetration offer a unique context to examine whether scheme participation leads to:

- Increased income levels
- Improved savings behaviour
- Greater entrepreneurial engagement
- Enhanced decision-making authority within households

However, the direct and statistically measurable relationship between welfare scheme participation and economic agency remains insufficiently examined at the grassroots level. Therefore, the core problem addressed in this study is:

**Do government welfare schemes significantly enhance the economic agency of rural women at the micro level, and to what extent can such empowerment be empirically measured through income, savings behaviour, entrepreneurial engagement, and decision-making power?**

### *Data Analysis and Interpretation*

#### **Objective 1: Participation Level**

Out of the 300 respondents surveyed, 195 women (65%) are beneficiaries of welfare schemes, while 105 women (35%) are non-beneficiaries. The high proportion of beneficiaries indicates strong penetration and accessibility of welfare programs among rural women in Coimbatore district. Additionally, 72% of the respondents are members of Self-Help Groups (SHGs), which highlights the significant role of grassroots institutions in promoting awareness and facilitating access to government schemes. The strong presence of SHGs suggests that these groups act as effective support systems, helping rural women connect with welfare initiatives and improve their economic participation.

#### **Objective 2: Measurement of Economic Agency**

##### **Indicators and Mean Values**

<b>Indicator</b>	<b>Beneficiaries</b>	<b>Non-Beneficiaries</b>
Monthly Income (₹)	9,180	7,360
Savings (Months/Year)	5.2	3.1
Decision-Making Index	7.4	5.9
Entrepreneurial Engagement	28%	15%

### Interpretation

The data indicates that beneficiaries of government welfare schemes have better economic outcomes than non-beneficiaries. Beneficiaries earn a higher **average monthly income (9,180)** compared to **7,360** for non-beneficiaries and also show stronger **saving behavior (5.2 months vs. 3.1 months)**. Their **decision-making index (7.4)** is higher than that of non-beneficiaries (**5.9**), suggesting greater participation in household and financial decisions. Additionally, **28% of beneficiaries** are engaged in entrepreneurial activities compared to **15% of non-beneficiaries**. Overall, the results indicate that participation in welfare schemes positively influences income, savings, decision-making power, and entrepreneurial engagement.

### Objective 3: Impact of Welfare Participation

In this analysis, welfare scheme participation is treated as the independent variable, where beneficiaries are coded as 1 and non-beneficiaries as 0. The effect of this variable is assessed on several dependent variables, namely monthly income, savings behaviour, decision-making power index, and entrepreneurial engagement. These indicators are used to measure the extent to which participation in welfare schemes contributes to improving the financial stability, autonomy, and entrepreneurial involvement of rural women. By comparing beneficiaries and non-beneficiaries across these variables, the study evaluates how government welfare schemes influence the economic and social empowerment of women.

### Independent Sample t-Test Results

Variable	t-value	p-value	Result
Monthly Income	4.21	0.000	Significant
Savings Behaviour	3.12	0.002	Significant
Decision-Making Power	3.89	0.000	Significant

### Interpretation

The analysis shows that welfare scheme participation has a significant impact on rural women's economic empowerment. The t-value for monthly income (4.21) with a p-value of 0.000 indicates a significant increase in income among beneficiaries. Similarly, savings behaviour ( $t = 3.12$ ,  $p = 0.002$ ) is statistically significant, suggesting that beneficiaries save more than non-beneficiaries. The decision-making power index ( $t = 3.89$ ,  $p = 0.000$ ) also shows a significant improvement among beneficiaries. Overall, the results confirm that participation in welfare schemes significantly improves income, savings behaviour, and decision-making power of rural women.

### Correlation Analysis

Variables	Correlation (r)
Income & Decision Power	0.47**
Income & Savings	0.35**
Savings & Decision Power	0.29*

(\*\*Significant at 1%; \*Significant at 5%)

## Interpretation

The correlation results show positive relationships among the variables. Income and decision-making power ( $r = 0.47$ ) have a moderate positive correlation, indicating that higher income is associated with greater decision-making power. Income and savings ( $r = 0.35$ ) also show a positive relationship, suggesting that increased income leads to higher savings. Similarly, savings and decision-making power ( $r = 0.29$ ) indicate that women with better savings tend to have more involvement in decision-making. Overall, the results suggest that improvements in income and savings are associated with greater empowerment of rural women.

## Multiple Regression Results

### Model 1: Dependent Variable – Monthly Income

Predictor	Beta	p-value
Welfare Participation	0.31	0.000
Education	0.29	0.000
Household Size	-0.18	0.017

$$R^2 = 0.34$$

## Interpretation

The regression results indicate that welfare participation ( $\beta = 0.31$ ,  $p = 0.000$ ) has a positive and significant effect on women's empowerment, showing that beneficiaries experience higher economic empowerment. Education ( $\beta = 0.29$ ,  $p = 0.000$ ) also has a significant positive influence, suggesting that higher educational levels improve women's economic and decision-making capacity. In contrast, household size ( $\beta = -0.18$ ,  $p = 0.017$ ) shows a negative but significant relationship, indicating that larger households may reduce women's economic empowerment due to greater financial responsibilities. Overall, welfare participation and education positively contribute to empowerment, while larger household size has a limiting effect.

### Model 2: Dependent Variable – Decision-Making Power

Predictor	Beta	p-value
Welfare Participation	0.28	0.000
Savings	0.19	0.016
Education	0.22	0.002

$$R^2 = 0.30$$

## Interpretation

The regression results show that welfare participation ( $\beta = 0.28$ ,  $p = 0.000$ ) has a positive and highly significant influence on women's economic empowerment, indicating that beneficiaries experience improved outcomes compared to non-beneficiaries. Education ( $\beta = 0.22$ ,  $p = 0.002$ ) also has a positive and significant effect, suggesting that higher educational levels enhance women's ability to make economic and financial decisions. Similarly, savings ( $\beta = 0.19$ ,  $p = 0.016$ ) shows a positive and significant relationship, indicating that increased savings contribute to greater financial stability and empowerment. Overall, the results suggest that welfare participation, education, and savings positively influence the economic empowerment of rural women.

## Chi-Square Test for Entrepreneurship

Test Statistics	Value
Chi-square ( $\chi^2$ )	10.24
p-value	0.001
Result	H4 Supported

## Interpretation

The chi-square test result shows a  $\chi^2$  value of **10.24 with a p-value of 0.001**, which is less than the 0.05 significance level. This indicates that there is a statistically significant relationship between welfare scheme participation and entrepreneurial engagement among rural women. Therefore, the hypothesis **H4 is supported**, suggesting that participation in welfare schemes positively influences women's involvement in entrepreneurial activities.

## Findings of the study

The findings of the study clearly demonstrate that government welfare schemes play a significant role in strengthening the economic agency of rural women in Coimbatore district. The comparative analysis between beneficiaries and non-beneficiaries reveals that women who participate in welfare schemes report higher monthly income, improved savings behaviour, greater entrepreneurial engagement, and stronger decision-making authority within households. The independent sample t-test confirms statistically significant differences in income, savings, and Decision-Making Power Index between the two groups, indicating that welfare participation contributes to measurable economic improvement.

The correlation analysis further establishes a positive relationship between income, savings, and decision-making power, suggesting that financial gains translate into enhanced intra-household bargaining strength. The multiple regression results reinforce this conclusion, as welfare scheme participation emerges as a significant predictor of monthly income ( $\beta = 0.31$ ,  $p < 0.01$ ) and decision-making power ( $\beta = 0.28$ ,  $p < 0.01$ ), even after controlling for socio-economic factors such as education and household size. Additionally, the chi-square analysis

confirms a significant association between welfare participation and entrepreneurial activity, indicating that beneficiaries are more likely to initiate income-generating enterprises.

Overall, the empirical evidence supports the theoretical propositions of empowerment and capability expansion by demonstrating that welfare schemes function not merely as income support mechanisms but as structural instruments enhancing women's financial autonomy and agency. However, while the results show moderate explanatory power ( $R^2$  values of 0.30–0.34), they also indicate that other socio-economic and cultural factors influence empowerment outcomes. Thus, government welfare schemes significantly contribute to strengthening economic agency among rural women, but sustained empowerment requires complementary interventions such as financial literacy enhancement, awareness programs, and institutional support mechanisms.

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