Does the Weavers' Cooperative Society Yield Higher Income to the Handloom Weavers? Evidence from Odisha

Ashish Kumar Meher

Assistant Professor, Department of Economics, School of Humanities and Social Sciences, Manipal University Jaipur, Jaipur-303007, Rajasthan, India
ashish.meher@jaipur.manipal.edu

T. K. Venkatachalapathy

Assistant Professor, Department of Economics, School of Social Sciences and Humanities, Central University of Tamil Nadu, Thiruvarur-610005, Tamil Nadu, India
venkatachalapathy@cutn.ac.in

Prasant Kumar Panda

Professor, Department of Economics, School of Management, Pondicherry University, Kalapet-605014, Puducherry, India
pkpanda.eco@pondiuni.ac.in

Abstract

The study aims to analyse whether the Weavers' Cooperative Society (WCS) fetches higher income for the weavers as compared to the other two systems of production-marketing such as independent weavers and working under a Master Weaver (MW)/Middleman (MM). It also seeks to examine the social and demographic factors that influence the handloom weavers to join a cooperative society in Odisha. Primary data collected from 435 handloom weaving households shows that the master weaver system of production-marketing is dominant in the study area. The results of one-way ANOVA revealed that the independent weavers earn the highest income, whereas the weavers working under MW/MM receive the lowest. Though the WCS, in comparison to the master weaver system, yields higher income to the weavers, fewer workers are employed under the cooperative society for various reasons. The results of binary logistic regression analysis tell us that the skill and marital status of the weaver are the significant factors affecting the handloom weavers to work under a WCS. Government policies should aim to strengthen cooperative societies with adequate training facilities to enhance the skill of the handloom weavers.

Keywords: Weavers Cooperative Society, Handloom Weavers, Production-Marketing System, Income Variation

1. Introduction

International Cooperative Alliance (1995) defines the cooperative organization as "an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise." Cooperatives provide a distinctive mechanism for attaining several economic goals in a growing competitive economy worldwide, irrespective of the size, type, purpose, and geographical location. These goals aim to achieve an economy of scale and size, improve bargaining power, product differentiation, access and broaden marketing opportunities, improve service and product quality, provide financial securities, and increase the income of its members (RBCDS, 1995). A cooperative becomes a desired and socially favourable form of the institution due to its role in preventing exploitation, decreasing inequalities, enhancing social status, gender equality, and assisting in framing an equitable society with a consistent focus on protecting the environment and helping the development process sustainably (Taimni, 1997). Cooperatives have a pertinent role in economic development because they are attributed to being participatory, democratic, versatile, and community-based (Gertler, 2001). In order to be successful and effective, cooperatives, on the one hand, must intensify feasibility and enhance their ability to serve their members and remain an economically plausible, inventive,

and vehement social organization on the other (Dogarawa, 2010).

Cooperative mode of production and marketing is generally found in agriculture and in some informal community-based household occupations such as handloom weaving. Handloom weaving in India and particularly in Odisha has been a family occupation for ages and has been sustained by the transfer of skill from one generation to another. After agriculture, the handloom industry is termed the highest provider of employment to the rural and semi-urban masses in the informal sector of the economy. As per the report of the fourth National Handloom Census of India 2019-20, the handloom industry in Odisha employs 1.18 lakh workers working in 47,625 looms and spread over 63,223 weaver households in the state. It also assumes immense importance in terms of output and export apart from employment generation. As far as the production-marketing system is concerned, the handloom weavers in Odisha are organized into three major systems such as working independently, working under an MW/MM, and being employed under the WCS.

The independent weavers invest their own capital for the procurement of raw materials from the open market, carry out the production work with the help of mostly family labour, and market their finished products. As this system involves dynamics of raw material price and market uncertainties, the weavers receive higher returns in terms of income from weaving work. Working

under an MW/MM is similar to that of putting out system, which is a typical capitalist mode of production. In this system, the MW/MM provides raw materials and the required design to be woven and collects the finished products at a pre-determined wage or price of the products. Generally, the weavers in this system do the weaving work with their own fixed capital, viz., loom, work shed, and other accessories. As the weavers do not bear any risks of marketing, their wage/income is significantly lower than the independent weavers. The MW/MM in this system enjoys a major share of profits as they act as organizers of production-marketing. The WCS mode of production is also similar to working under an MW/MM in the sense that the weavers depend on the WCS for raw materials and marketing. However, the wages under this system are higher than the MW/MM system as the cooperative societies are mostly not-profit government organizations formed to serve the interest of the weavers. Along with this, the WCS also provides bonuses, incentives, and other benefits of government welfare measures to member weavers. According to Meher (1995), among these three systems of production, a cooperative form of production is found to be the least exploitative for the weavers. The wages are lower, and the incidence of poverty is high among the weavers working under master weavers (Dev et al., 2008).

The 4th National Handloom Census 2019-20 reports that most of the handloom workers in Odisha (69%) are independent, followed by those working under MW/MM (21%) and WCS (10%) (see Figure 1). The report also points out that 99 per cent of the weaver households earn below Rs.10000 per month from handloom-related activities. Though most of the workers are working independently, they earn a very low income which makes it difficult for their survival. This gives rise to the following research questions: Why are very few workers working under the WCS system? Does the WCS fetch higher income to the weavers? What influences the handloom weavers to work under a WCS? Given this background and the research questions, the objectives of the present study are

i. To analyse the income differentiation among the weavers working under different production-marketing systems to see whether the WCS is beneficial to the weavers in terms of income.
ii. To investigate the socio-demographic factors that affect the handloom weavers to work under a WCS.

2. Literature Review

Cooperatives are especially perceived as the major tools for fair employment creation and for providing income through resource mobilization (Somavia, 2002). In Nigeria, cooperatives provide services for local needs, livelihood and generate a community sense based on social cohesion. Cooperative societies congregate people to accumulate their own resources together to meet individual requirements that could

not be settled by individuals with finite economic dimensions (Hussain, 2014). Cooperatives generate social protection at various levels to make more capital formation and reduced underemployment. It is also justified that when proper effectiveness is emphasized, it will promote cooperatives through the market and sustainable economic conditions (Ezakie, 2014). Cooperative societies play a significant role in facilitating Small and Medium Enterprises (SMEs) in the Osun State of Nigeria. It is encouraging to note that cooperative societies help in advancing micro credits to its members to invest in the area of developing and expanding enterprises and hence should be encouraged to enhance individual prosperity in the Osun State (Adekunle et al., 2021).

The cooperative institutions are highly effective in discharging the benefits of government welfare schemes in West Bengal, India. For the efficient outreach of the welfare schemes, education and distance from the cooperative institution are found to be the significant variables. Cooperative societies have more responsibility for the welfare of weaving members (Bhowmik, 2021). The erratic merger of cooperatives, control deployed by master weavers, and native power groups have made dormant to the handloom cooperative societies in India. The politicization of cooperatives, corruption, and mismanagement, along with maximum control of the government's flow of credit to cooperatives and excessive bureaucratization of the cooperative

structure, has destroyed the working capacity of handloom cooperatives. It is found that within the cooperative society, market-motivated production system, the readiness of the weavers to accept new techniques and designs into the production process has worked out (Dharmaraju P., 2006).

Dev et al. (2008) revealed that the growth performance of cooperatives in Andhra Pradesh determines the growth of other institutions like master weavers, middlemen, and independent weavers. The number of idle members and idle looms in cooperatives has increased over time due to poor performance and management problems of the apex society, i.e., APCO. Politicization, lack of autonomy in functioning, lack of infrastructure facilities, mismanagement of funds, weavers alienation in decision making, financial and management problem and lack of skill development programs, hostile input and output market conditions, non-availability of inputs like yarn and dyes and their rising cost are the major factors responsible for the poor performance of these institutions.

The handloom Weavers' Cooperative Societies in Tamil Nadu are facing acute problems like input related weavers related and marketing related which are obstructing the smooth functioning of the WCS (Kumudha & Rizwana, 2013). According to Divya, Gopika, and Krishna (2020), handloom weavers are not satisfied with what benefits they receive from weaving cooperative society. The weaving community did not receive proper income from their

occupation, and also the government provided meager welfare programs through the cooperative society. Most of the government textile policies are not reaching the marginal weavers in Tamil Nadu. High production costs, lack of advanced technology utilization, huge competition from power loom, and poor awareness of the weavers are the major reasons for the handloom cooperative mechanism getting stagnated (Olive et al., 2021).

There is a practical impact of cooperative societies on the social lifestyle of the handloom weavers in Western Orissa. The member weavers of the cooperative societies, as compared to non-members, are better off in terms of participation in a cultural organization, education of their children with a higher amount spent on education, and expecting a government job for their children. This may be because of less awareness among the non-member weavers and frustration towards the occupation among the member weavers (Mishra, 1994). Meher (1997) opined that cooperative societies, in addition to increasing production and mobilizing underutilized resources, also have been expected to increase social justice and equality of opportunities to reinforce social solidarity. But in the case of weavers' cooperatives in Orissa, it is perceived that the governmental agencies associated with the co-operativization have become more targets oriented than looking into the actual management aspect. The co-operativization has perpetuated and sharpened the trend of socioeconomic inequality among rural people instead of reducing it. Under the present social and economic setup, in the absence of proper monitoring, increasing the co-operativization measures will lead to the eruption of unintended consequences like the enrichment of the rich and powerful at the cost of the poor and weak.

Mohanty and Acharya (2003), analysing the Sambalpuri Bastralaya Handloom Cooperative Society LTD situated in the Bargarh district of Odisha, mentioned that the society is facing financial problems due to huge debt-servicing costs, delays in the release of the dues on Market Development Assistance (MDA), cloth dues, interest subsidy, etc. The marketing problems of society include the high price of handloom fabrics because of high labour costs and the rise in the cost of raw materials. Society is also facing stiff competition due to imitation by the power loom and mill sector, where printed cloth of the same designs is available at a very lower price. Society is suffering from managerial problems like overstaffing due to political influence, absence of sound control and financial management system, frequent misappropriation of funds, shortage of stock, etc.

The above literature worldwide discusses the advantages of cooperative society, reasons for the failure of cooperative societies, and the prevailing difficulties experienced by the WCS in India. There is sparse literature examining the pattern of income generation among the handloom weavers working under different production-marketing systems. Such studies in India and particularly in

Odisha, are rare. Also, studies related to factors affecting the weavers to join a cooperative society are scarce. Therefore, in this context, the present study is an attempt to fill up the above research gap.

3. Data and Methodology

Data used in this study is primary in nature and has been collected through field surveys. Odisha state is purposively selected for the study, and within the Odisha state, district, blocks, and villages are chosen using the multistage sampling method where the criteria of selection is the highest concentration of weavers. Within the villages, the sample respondents were identified through a random sampling technique. Yamane's (1976) simplified formula was used to determine the minimum sample size, and hence 435 active handloom weaving households were surveyed across the villages and blocks. A proportional sampling technique was employed to select the households in each village and block based on their population size. A pre-tested structured interview schedule was administered to the weaver respondents. It contained questions on socioeconomic and demographic variables along with information on their production-marketing system and awareness and outreach of government welfare schemes. The head of the household or main worker was chosen for the detailed interview to collect the required information. The field study was conducted in the months of September, October, and November 2021. Raw data was processed in Ms-Excel, and SPSS software was used to carry out the econometric analysis. A one-way ANOVA was employed to analyse the income variation among the weaver groups, and a binary logistic regression was used to investigate the socio-demographic factors affecting the handloom weavers to work under a WCS.

The binary logistic regression measures the relationship between a binary response variable and one or more explanatory variables. It uses explanatory variables to predict the probability that the response variable takes on a given value. Therefore to analyse the determinants of whether a weaver is working under the WSC or not, a logistic regression equation of the following form is used.

$$Y = \log[p/(1-p)] = \alpha + \beta_1 (X_1) + \beta_2 (X_2) + \beta_3 (X_3) + \beta_4 (X_4) + \beta_5 (X_5) + \beta_6 (X_6)$$

where,

Y = binary response variable, which takes the value 1 if the respondent is a member of WCS, 0 otherwise

p = response probability to be modeled

α = intercept

$\beta_1, \beta_2, \ldots \beta_6$ = regression coefficients

X_1 = age in years

X_2 = experience in years

X_3 = skill, it is a dichotomous variable which takes the value 1 if the weaver is skilled, 0 otherwise

X_4 = marital status, it is a dichotomous variable which takes the value 1 if the weaver is married, 0 otherwise

X_5 = education, it is a categorical variable of level six

X_6 = social category, it is a categorical variable of level three

4. Results and Discussion

The primary study collected from 435 handloom weaving households in Odisha shows that the majority of the handloom weavers are working under an MW/MM, followed by working independently and employed under WCS (Figure 2). The least number of weavers working under cooperative societies can be accentuated to the unsuccessfulness of the WCS in fulfilling its intended goals. It is also observed from the field that most of the primary cooperative societies are not functioning well due to irregularity in supplying raw materials to the workers with delayed payment of wages. On the other hand, the master weavers or middlemen are very active in the study area to attract the weavers by providing advance payment and regular work throughout the year. Little more than a quarter of the weavers are independent due to having a strong capital base and information regarding marketing uncertainties. However, there is a significant variation in the income of the handloom weavers in these three systems of production and marketing. The mean variation in the income of the weavers working under different production-marketing systems is investigated through one-way ANOVA. Here, we hypothesize that there is no significant difference in the monthly income of the weavers working across the production-marketing systems. The results of the one-way ANOVA test are summarized in Table 1, which indicates that the monthly income of the handloom weavers in these three systems of production differs significantly ($F_{2, 432}$= 109.935, $p <$ .001). The handloom weavers working independently have the highest mean income, followed by weavers working under WCS and MW/MM.

As Levene's statistics was significant, equal variance was not assumed. In order to check for individual differences between the systems of production, post hoc comparisons were performed using Dunnett's T3. The test results suggest that the average monthly income of the weavers working independently (M= 16913.33, SD= 4358.91) is significantly different from the weavers working under MW/MM (M= 10766.20, SD= 3297.63). Similarly, the independent weavers' mean level of income differed significantly from the monthly income of the weavers employed under WCS (M= 13630.35, SD= 5988.68). The mean variances in income were significant at 0.05 level. However, there was no significant difference between the monthly income of the handloom weavers working under MW/MM and WCS.

It is perceived from the above results that independent weavers earn higher incomes than those working under the other two systems. In the independent system, no intermediaries are involved in the production-marketing, and hence the weavers receive higher profit which also involves their remuneration for capital investment and higher risk bearing associated with market uncertainties. However, being an independent weaver requires financial resources, which most

of them still need to possess, and hence they depend on the other two systems of production-marketing. Among these two, the weavers employed under WCS earn a comparatively higher income than those under MW/MM though the variation in income is statistically insignificant. Still, it is observed from Figure 2 that most of the weavers are working under MW/MM with the lowest wage and income.

From the field study, it is revealed that though the MW/MM provide lower wages, the weavers get regular work and payment, and hence they prefer to work under an MW/MM. On the other hand, the WCS in the study area is mostly dormant with the uncertainty of work and wages, which prevents the weavers from joining a WCS though it procures them higher wage income. At the same time, it is also perceived that the awareness and outreach of government welfare schemes are higher among the weavers who are members of a WCS. However, the study tries to explore if there are any other socio-demographic factors that influence the handloom weavers to work under a WCS. To test this, a binomial logistic regression is employed where the dependent variable is whether a weaver is working under WCS or not. A set of independent socio-demographic variables is taken to analyse their effect on the dependent variable. The independent variables are age, experience, education, skill, marital status, and social category. It is hypothesized that as the age and experience of the weaver increase, the intention to work under WCS will increase to get higher wages and other welfare benefits. The WCS maintains a minimum quality of its products which can be produced by skilled weavers, and hence it is hypothesized that weavers with higher education and skill tend to work under WCS. In the study area, a person is referred to be skilled in handloom weaving if he/she knows the tie-dye (ikat) work which is intrinsic to handloom fabrics. With the workers getting married, their occupational responsibility will increase, and hence they may become more conscious about their wages and income. A better understanding of the benefits of working under a WCS might enable them to join a WCS. Handloom weaving is a caste occupation in the study area, and hence it is necessary to check if the social status of the weavers also influences them to work under a WCS. The results of the logistic regression analysis are presented in Table 2.

It shows that the regression model was statistically significant with a Chi-square value of 26.304, $p < .05$. The model explained 15.5 per cent (Nagelkerke R^2) of the variation in whether a handloom weaver is working under WCS or not. Though the R^2 value is less, we can accept it as the data source is primary in nature. The model correctly classified 93.6 per cent of the cases with an H-L test statistic of 0.884 (>0.05). From the regression results, it is noted that skill and marital status appeared to be significant in affecting the weavers to work under a WCS. A skilled weaver has 0.187 times more likeliness to be employed under a WCS.

Similarly, when a weaver is married, his/her likeliness to work under a WCS increases by 3.882 times. All other social and demographic factors did not emerge to be significant, as seen from the table. It is inferred from this result that the weavers need to acquire skills in tie-dye work to work under the WCS system of production-marketing, as the WCS are known for producing quality products that are export-oriented. The married weavers might be more aware of the benefits of working under a WCS as the government welfare schemes are mostly implemented through the primary cooperative societies, and hence they prefer to join a WCS.

5. Conclusion and Policy Suggestions

This study was carried out to examine whether the WCS is benefitting the handloom weavers financially and to identify the potential factors that affect the weavers to work under a WCS. Primary data collected from 435 active handloom weaving households in the Bargarh district of Odisha shows that MW/MM is the dominant form of production-marketing system, followed by being independent weavers and working under WCS. Checking the income variation in these three production-marketing systems reveals that there is a significant difference in income earned by the handloom weavers in different systems of production and marketing. Independent weavers earn the highest income, followed by weavers working under WCS and MW/MM. From among these two later systems of production-marketing, WCS is procuring higher income for the weavers. However, the least number of weavers are employed under this system, which broadly points to the unsuccessfulness of the cooperative societies in the study area. From the field survey, it was apprehended that most of the WCS are sick due to mismanagement, corruption, and politicization by the authority, and hence they have failed to look after the interest of the handloom weavers. The study also aimed to analyse the socio-demographic factors that influence the handloom weavers to work under a WCS unfolds that skill and marital status of the weavers are significant in affecting the weavers to join a WCS. The other factors, such as age, experience, education, and social category of the weavers, did not emerge to be significant.

This altogether exhibits that it is more of working conditions and activeness of the primary weavers' cooperative societies, which attract the handloom weavers to work under it rather than other socio-demographic factors. Therefore, it is high time to renovate these WCS with constant government intervention and support. Stringent measures should be taken to look into the operation and management activities within the WCS. Weavers' friendly and honest staff should be placed in the WCS to serve the need and purpose of the handloom weavers. Strict action should be taken against corrupt officials in delivering the rights and benefits of the weaver beneficiaries. Apart from this, as the regression results indicated skill and marital status of the weavers affecting them to join a WCS, a deliberate course

of action should be undertaken to train the weavers in tie-dye (ikat) and weaving work. Constant awareness about government assistance for the handloom weavers and the benefits of working under a WCS should be created to bring these poor and marginalized weavers into the cooperative fold. Persistent support from the government in terms of increased budgetary allocation will improve the economic and social status of the handloom weavers and will provide them with a better livelihood.

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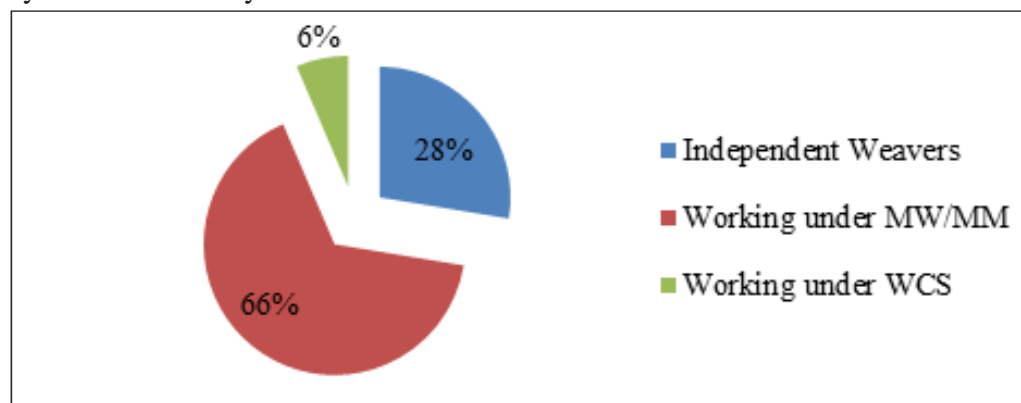
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Figure 1: Distribution of handloom weavers in different production-marketing systems in Odisha
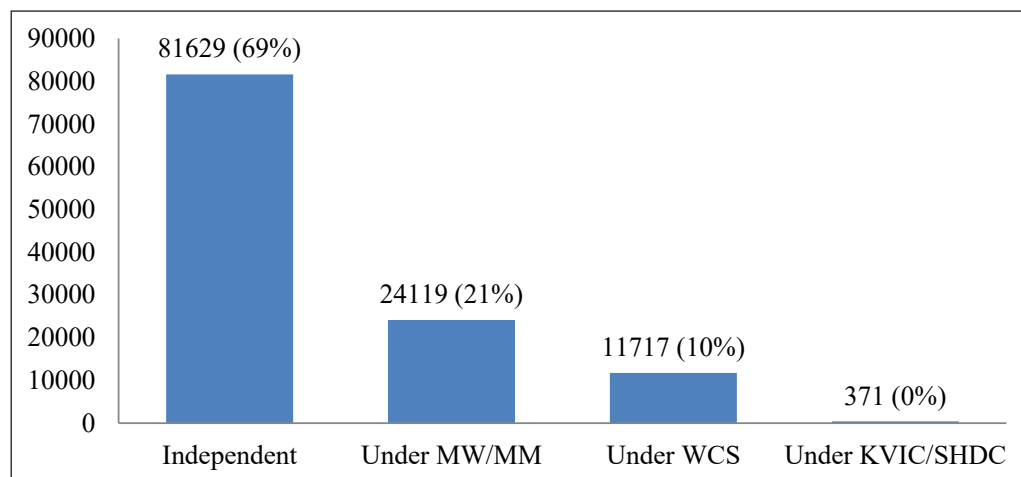
Source: 4th National Handloom Census, 2019-20

Figure 2: Distribution of handloom weavers in different production-marketing systems in the study area

Source: Primary Survey, 2021

Table 1: Results of one-way ANOVA analysis

Systems of Production	Mean	Std. Deviation	Test of Homogeneity of Variances		ANOVA	
			Levene's Statistics	Sig.	F	Sig.
Independent	16913.33	4358.91	8.739	.000	109.935	.000

Under MW/ MM	10766.20	3297.63				
Under WCS	13630.35	5988.68				
Group Differences						
Systems of Production	Mean Difference		Sig.	95% Confidence Interval (LL-UL)		
Independent-Under MW/MM	6147.13		.000	5079.76		7214.49
Independent-Under WCS	3282.97		.029	276.58		6289.36

Source: Authors' own calculation from primary data, 2021

Table 2: Odds ratio calculated from logistic regression analysis

Predictors	Odds Ratio
Age (in years)	0.979
Experience (in years)	1.046
Skill (skilled vs. unskilled)	0.187*
Marital Status (married vs. non-married)	3.882**
Education (no education)	0.000
Education (primary)	0.441
Education (upper primary)	0.681
Education (secondary)	0.192
Education (higher secondary)	0.496
Social Category (SC)	0.000
Social Category (ST)	2.563
χ^2 (11)	26.304 ($p < .05$)
Nagelkerke R^2	0.155

Source: Authors' own calculation from primary data, 2021

Note: *significant at 5% level (p < .05), **significant at 10% level (p < .10)