



Economic Analysis of Rural Women Participation in Farm and Non-Farm Activities in District Sukkur, Sindh, Pakistan

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Abstract

The study aimed to bring forth the significant economic roles of rural women in agricultural and non-agricultural employments that are largely neglected. The study was conducted in District Sukkur, Sindh, Pakistan, using a multistage random sample of 180 rural farm and non-farm households to collect data. The information was analyzed using tabular and statistical techniques. Findings revealed that 35.00% of the respondents were in the 41–50 age group and that a majority 42.0% had agricultural experience. The study found that female participation is markedly higher in farm activities 38.00% of women were involved in vegetable and fruit production, while 20.00% managed livestock and poultry. As in specific farm activities, women have contributed substantially to decision-making in home gardening 44.00%, in livestock rearing 26.00%, but in crop cultivation 9.00%. Annually, rural women contribution involves Rs. 80,000, with their earnings containing 22.50% which is total



household income. The analysis report also identified severe challenges such as low salary, lack of capital, insufficient training of their, physical limitation of restriction, and adverse social attitudes. Recommendations include improving support services (input supply, credit facilities, extension services, and targeted training) and implementing collaborative programs involving governmental and non-governmental organizations.

Keywords: Rural Women; Women Participation; Farm activities; non-farm activities

1. Introduction

The agricultural sector plays a crucial role in Pakistan's economy, as it not only provides a means to reduce poverty but also serves as a source of industrial by-products. It contributes 19.2% to the country's GDP and remains the largest employer, providing jobs to 38.5% of the total labor force (GOP, 2022). Among other major crops such as wheat, rice, sugarcane, and maize which constitute 11.69% of agriculture value addition and 2.24% of GDP, there has been a growth of 1.65% due to an increase in the production of fodder, vegetables, and fruits (GOP 2024).

Rural women play an important role in agricultural production, with a participation rate of about 43%. In addition to a separate seed cotton ginning plant, they also participate in many activities, such as farm weeding, collection of grass, mowing, and cotton sliver picking. They also help in preparing mixed solutions for the chair. The participation of women in all animal-related activities, such as cutting grass, milk processing, feeding and grazing, is significant. Women predominate in livestock production and management activities (Yasmin, 2003). Women account for 25% of all household workers in agricultural households and 75% of part-time workers, though their role in farm decision-making has yet to be determined. About 2,600,000 women collect cotton from Pakistan's 9 largest cotton-growing areas (ESCAP, 1997). From an ordinary farmhouse, women are still busy planting and harvesting in two breeding seasons. In some regions, especially in southern Pakistan, the husband may marry more than one woman to provide additional agricultural labor (PARC, 2008).

The key issue of living standards in low-income developing countries remains to be resolved. In many developing countries, such as Pakistan, microfinance has been used as a tool to improve the living standards of poor families (Akram and Hussain 2011). Farmers in rural

areas require more convenience than those in urban areas. Therefore, in rural areas, there is a focus on modern technology to increase the yield of agricultural crops (Rani et al., 2017). Eighty percent of all economically active women are employed in various sub-sectors, including agriculture. This includes 33% of the agricultural labor force and 48% of self-employed farmers. More than 50% of Pakistan's population and 42% of the workforce live in rural areas. Animal husbandry is very important to Pakistan's agriculture and is regarded as the second sub-sector of the agricultural sector. It accounts for 58% of agriculture and more than 19.03% of Pakistan's GDP (GOP, 2020).

The participation rate of women in cotton, rice, beans, and vegetables is particularly high. Food processing and storage are areas where the participation rate of women is much higher than that of men. The official labor force participation rate of rural women ranges from 4% to 5% (Mumtaz 2002). Developing rural women, especially poor women, always try to work in a variety of tasks, have little leisure time, and possess less control over production resources, including their income and labor. They have been neglected due to a complex mix of social, economic, cultural, and political factors, which have adversely affected their social status and economic participation. In the economics of developing countries, the role of women is largely ignored or underestimated. Pakistan is no exception in this regard (Shah, 2002).

In Pakistan, more than 20,000 women die each year due to pregnancy and childbirth complications, mostly due to delays in access to toilet facilities. Women form almost half of the total population, and their role is very important (Faridi et al., 2009). Women with more education may be more willing to interact with medical staff, which may lead to better access to modern birth control sources than uneducated women. The study conducted by Asghar et al. (2009) highlights the trend of young women living independently from their parents and forming their own families. However, well-educated women tend to live in joint families, which is different from the traditional shift towards nuclear families. Government welfare programs should prioritize sub-nuclear female-headed households to improve the socio-economic status of these families. The study also found that the presence of children in the early age group reduced female labor force participation. Therefore, the promotion of women's education is crucial to create better employment opportunities (Faridi et al., 2009).

Due to a gap in the existing literature, the present study aimed to investigate the participation of women in both farm and non-farm activities and to analyze the challenges they face by assessing the extent of involvement of rural women in these activities, estimating their contribution to household income, and examining the problems hindering their participation.

2. Materials and Methods

An appropriate research method was adopted that enabled the collection of reliable information for analysis and decision-making.

2.1 Research Design and Sampling

The study was carried out in both urban and rural areas of District Sukkur Sindh, Pakistan. The researchers utilized a multistage random sampling technique to select the study population. Initially, five villages were selected using a simple random sampling technique. Subsequently, married women between the ages of 15 to 49 years, who had at least one child, were interviewed from the selected households in both urban and rural areas.

A total of 180 married women were included in the study, and a carefully constructed interviewing schedule was used to collect data in accordance with the research objectives and conceptual framework.

2.2 Data Collection, Processing and Analysis

Survey questionnaires were prepared by drawing inferences from census schedules and other gender-based studies after pre-testing. The questionnaire contains a comprehensive list of social, cultural, economic, and demographic variables.

The data collected were input into the computer for analysis. The encoded data were analyzed using MS Excel. Statistical methods such as mean value and frequency distribution were used to analyze, draw conclusions, explain research results, and propose improvement measures.

2.3 Estimation of Average

Average was calculated by applying following formula:

$$\text{Average} = \frac{\sum X_i}{n}$$

Where;

$\sum X_i/n$ Sum of independent variables

n = number of observations in data

2.4 Total Cost of Production

Total cost of production was estimated by using the following formula:

$$TC = TFC + TVC$$

Net Returns

Net returns were estimated by using the following formula:

$$NR = T1 - TC$$

2.5 Input-Output and Cost Benefit Ratio

The input-output ratio was estimated by using the following formula:

$$IO_R = \frac{TI}{TC}$$

Where

IOR = Input-output Ratio

The cost-benefit ratio was estimated by using the following formula:

$$CBR = \frac{NR}{TC}$$

TC

Where *CBR* = Cost benefit ratio

3. Results

Table 3.1 Age distribution of respondents in the study area

Age	No. of Respondents	Percentage
21–30 years	32	17.78
31–40 years	40	22.22
41–50 years	60	33.33
More than 50	48	26.67
Total	180	100.00

Table 3.1 shows the correlation between the age of respondents and the percentage of respondents in each age group. The 21–30 years group comprised 17.78% of households. In the 31–40 age group, 22.22% of respondents were recorded. In the 41–50 age group, 33.33% of respondents were recorded, while farmers over 50 years old accounted for 26.67% of respondents.

Table 3.2 Educational level distribution of respondents in the study area

Education Level	No. of Respondents	Percentage
Illiterate	36	20.00
Primary	42	23.33
Middle	64	35.56
Matriculation	20	11.11
College / University	18	10.00
Total	180	100.00

Table 3.2 shows that in the study area, 20.00% of the respondents are illiterate, about 23.33% are at the primary level; 35.56% of the respondents are at the secondary level, and 11.11% and 10.00% of the respondents are at the matriculation and college/university levels, respectively.

Table 3.3 Distribution of agricultural experience of respondents in the study area

Farming Experience	No. of Respondents	Percentage
Up to 10 years	70	38.89
11–20 years	30	16.67
21–30 years	50	27.78
Above 30 years	30	16.67
Total	180	100.00

Table 3.3 lists respondents with varying years of experience. Among them, 38.89% have up to 10 years of experience; 16.67% have 11–20 years, 27.78% have 21–30 years, and 16.67% have more than 30 years of experience.

Table 3.4 Rural women participation in farm and non-farm activities

Activity	No. of Respondents	Percentage
Rice production	15	8.33
Maize production	18	10.00
Wheat production	12	6.67
Vegetable and fruit production	70	38.89
Taking care of livestock and poultry	36	20.00
Other	29	16.11
Total	180	100.00

Non-Farm Activities

Activity	No. of Respondents	Percentage
Selling miscellaneous things	36	20.00
Daily labor	45	25.00
Rice processing	30	16.67
Maize processing	30	16.67
Vocational skills	20	11.11
Other	19	10.56
Total	180	100.00

Table 3.4 shows the distribution of total time devoted by women for different farm and non-farm activities. It reveals that 38.89% were involved in vegetable and fruit production, while 20.00% were taking care of livestock and poultry. In non-farm activities, 25.00% were involved in daily labor and 20.00% in selling miscellaneous items, while the remaining participated in other activities.

Table 3.5 Source of income of rural women

Source	Rs.	Percentage
Crops	35,000	43.75
Livestock and poultry	6,000	7.50
Vegetable and fruits	7,500	9.38
Selling miscellaneous things	20,000	25.00
Daily labor	6,500	8.13
Other	5,000	6.25
Total Income	80,000	100.00

Table 3.5 reveals that women from income households contributed 43.75% from crops, 25.00% from selling miscellaneous items, and 9.38% from vegetable and fruit

Table 3.6 Contribution of rural women to total family income

Category	Average Annual Family Income (Rs.)	Earnings of Women (Rs.)	Percent Contribution
Rural Women	80,000	18,000	22.50

Table 3.6 it is observed that the income households contributed annually Rs. 80,000 with the women’s earnings contributing 22.50% to the total income.

Table 3.7 Problems faced by rural women’s participation in farm and non-activities

Problem	Number	Percentage
Low salary	48	26.67
Low efficiency	18	10.00
Lack of training	30	16.67
Lack of capital	54	30.00
Physical weakness	12	6.67
Social problems	18	10.00

Table 3.7 reveals that the most severe problems faced by the women were low salary and lack of capital; lack of training, physical weakness, and social problems were also reported as significant constraints.

4. Discussion

The findings of this study reveal the central position rural women in District Sukkur occupy in farm as well as non-farm activities. The statistics reveal that women are significantly engaged in a vast array of farm activities cultivation of vegetables and fruits and rearing cattle as well as non-agriculture activities such as daily labor and peddling miscellaneous goods. Their income, 22.50% of household earnings, brings into focus the crucial role they play in household economies and the whole rural socio-economic system.

Our findings are in line with earlier studies defining rural women's multi-dimensional contribution to Pakistan's agrarian economy. For instance, research carried out by Yasmin (2003) and Shah (2002) indicates that though women participate widely in farm work, they tend to be limited by low remuneration, limited capital, and little access to training schemes. These limitations not only curtail their productivity but also hinder their participation in voice in intra-household and community concerns (Saeed & Malik, 2021).

The age distribution and different degrees of experience in agriculture among the respondents indicate that most rural women have useful practical experience. Yet, the absence of formal education in this study may restrict their exposure to new agriculture methods and innovative approaches, as confirmed by Khan and Iqbal (2018).

The constraints that have been found in the current study low pay, lack of capital, poor training, physical barriers, and negative social attitudes are indicative of more profound, structural problems to rural women empowerment. These constraints have also been found in other Pakistani studies (Bano & Hussain, 2020; Mahmood & Ali, 2020).

Addressing these issues would involve collective efforts to enhance credit access, offer specific skill development courses, and enhance extension services. These would enable extension of women's productivity and enhance their participation in family and community decision-making.

5. Conclusion and Recommendations

The study found that 17.78% of households were in the 21–30 age group, 22.22% in the 31–40 group, 33.33% in the 41–50 group, and 26.67% above 50 years. In the study area, 20.00% of respondents were illiterate, about 23.33% had primary education, 35.56% had secondary education, and 11.11% and 10.00% had matriculation and college/university education, respectively. In result the farming experience, shows the 38.89% had up to 10 years, 16.67% had 11–20 years and 27.78% had 21–30 years, and 16.67% had over 30 years of experience. These results tell us that 38.89% of rural women were connected to vegetable and fruit production, although 20.00% were involved in taking care of other like livestock and poultry. In non-farm activities, 25.00% were engaged in daily labor and 20.00% in selling miscellaneous items. Crop production contributes 43.75% of household income, with rural women's earnings accounting for 22.50% of the total income. The study also highlights that

low salary, lack of capital, inadequate training, physical weakness, and adverse social attitudes are the main constraints.

Respondents suggested that social attitudes must be changed, salaries increased, and credit provided at lower interest rates. They also recommended offering facilities for skill development training and making inputs like seeds, fertilizers, irrigation, and pesticides available at reasonable prices. A collaborative program between governmental and non-governmental organizations is recommended to address these issues in an integrated manner.

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