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AN ANALYTICAL STUDY ON THE CHALLENGES IN AGRICULTURAL AND ALLIED ACTIVITIES FACED BY THE BADAGA WOMEN FARMERS WITH SPECIAL REFERENCE TO NILGIRIS DISTRICT

Dr. Hemasrikumar, A.C. Asha

Associate Professor and Head, Ph.D. Research Scholar

PG & Research Department of Economics,

Providence College for Women, Coonoor

Introduction

Around 70% of the population in India works in the agricultural sector, it is India's primary industry. In developing nations, agriculture serves as a growth and poverty-reduction catalyst. In developing nations, agriculture is a common occupation for women. In agricultural development and related activities such as primary crop production, livestock production, horticulture, post-harvesting activities, etc., women play a key role. Due to their unequal access to productive resources, women farmers are much less able to increase production. Rural women confront barriers that prohibit them from adopting new technologies or achieving economies of scale due to their restricted access to productive resources (including Land, Credit, Inputs, Transport, Extension Services, Storage, and Technical Assistance). In order to bring the effort or the contribution of women farmers in agriculture to the economy we have to find out the various constraints faced by them.

Badaga is one of the non-tribal OBC communities in the Nilgiris Districts of Tamil Nadu whose major occupation is agriculture. Due to the impact of knowledge and education, they are able to expand their socio-economic status to a better living standard. The Badagas are primarily farmers, but there are also schoolteachers, clerks, public works contractors, bricklayers, painters, carpenters, sawyers, tailors, gardeners, forest guards, barbers, washermen, and scavengers in their community. The Badaga women are also talented and active to engage in economic activity, especially in agriculture. So here we are going to analyse the challenges faced by the Badaga farm women while contributing their hardships and efforts in agriculture and its allied sectors.

Significance of the study

Gender discrimination occurs in all industries, including agriculture. All aspects of farming are handled by women, although they are not categorized as farmers. All agricultural tasks, including planting, sowing, weeding, harvesting, storage, etc., are sweated out by the workers, but only the men make decisions. Women now have the least access to the resources needed to transition from a subsistence to a market-oriented economy. The difficulty is in providing grants to ensure food security and advance sustainable development while using a gender-sensitive strategy. Regardless of gender, everyone should have equal access to resources and the opportunity to participate in decision-making. To achieve this, first, we have to address the problems or the constraints faced by the women farmers in the agriculture and allied sectors so that we could find out applicable solutions for their upliftment.

Objectives Of the Study

- To find out the various constraints faced by the Badaga farm women in Nilgiris District
- To analyse the constraints faced by the Badaga women farmers in Nilgiris District

Area of Study

The data have been collected from the pre-structured interview schedule by covering Badaga farm women in the Nilgiris district. For this, I have covered visited three taluks where Badaga communities settled within the Nilgiris district where we had covered 700 samples for the purpose of data collection.

Analysis of the Results

For analysis of the challenges faced by the Badaga farm women we have classified the constraints into four groups, they are Extension, Economic, Personal, and Infrastructure constraints. To analyse among these constraints which require more prominence among the Badaga women farmers while engaged in agriculture and allied activities. Under Practical constraints, we, have considered five variables namely non-availability of adequate inputs on time, weak extension service in remote places, lack of adequate training facilities, more administrative formalities, and inadequate technical support from officials. Under financial constraints, we have taken four variables namely, the difficulty in loan repayment, insufficient credit facilities, less subsidies available from programmes and non-availability of timely credit. For personal constraints we selected lack of self - motivation, illiteracy, indebtedness, and suppression due to the dependable nature of women as variables and finally, the infrastructural constraints we selected non - availability of hospital facilities, lack of well-constructed houses, and lack of marketing facilities have selected for analysis. For precise understanding we are going to analyse whether the selected variables are far enough to analyse the constraints faced by the farm women from the selected community or not.

Table 1
KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**0.563**
Bartlett's Test of Sphericity	Approx. Chi-Square	13424.374
	df	120
	Sig.	.000

Source: Primary data

KMO is an index that defines sampling adequacy. The KMO test value is 0.563 which is more than 0.4, and can be considered acceptable and valid to conduct data reduction technique. The significance level of Barlett's test 0.000 is < 0.001 which shows that there is a high level of correlation between variables, which makes it adequate to apply factor analysis.

Table 2
Communalities

Communalities		
Factors	**Initial**	**Extraction**
lack of self -motivation	1.000	.780
Illiteracy	1.000	.869
indebtedness	1.000	.702
suppression due to the dependable nature of women	1.000	.789
non availability of adequate inputs on time	1.000	.895
inadequate technical support from officials	1.000	.871
weak extension service in remote places	1.000	.903
lack of adequate training facilities	1.000	.868
more administrative formalities	1.000	.929
difficulty in loan repayment	1.000	.765
insufficient credit facilities	1.000	.917
subsidies availability in programmes are less	1.000	.951
Non-availability of timely credit	1.000	.903
non - availability of hospital facilities	1.000	.867
lack of well-constructed houses	1.000	.926
lack of marketing facilities	1.000	.777
Extraction Method: Principal Component Analysis.		

Source: Primary data

Every variable in the commonality initially is expected to share 100% variance. Hence initially every item is having value 1.00 which means 100% variance shared by each item. The extraction value is ranging from 0.951to 0.702 which shows that the maximum variance share of the item after extractions is 95.1% and the minimum variance share of the item is 70.2%.

Table 3

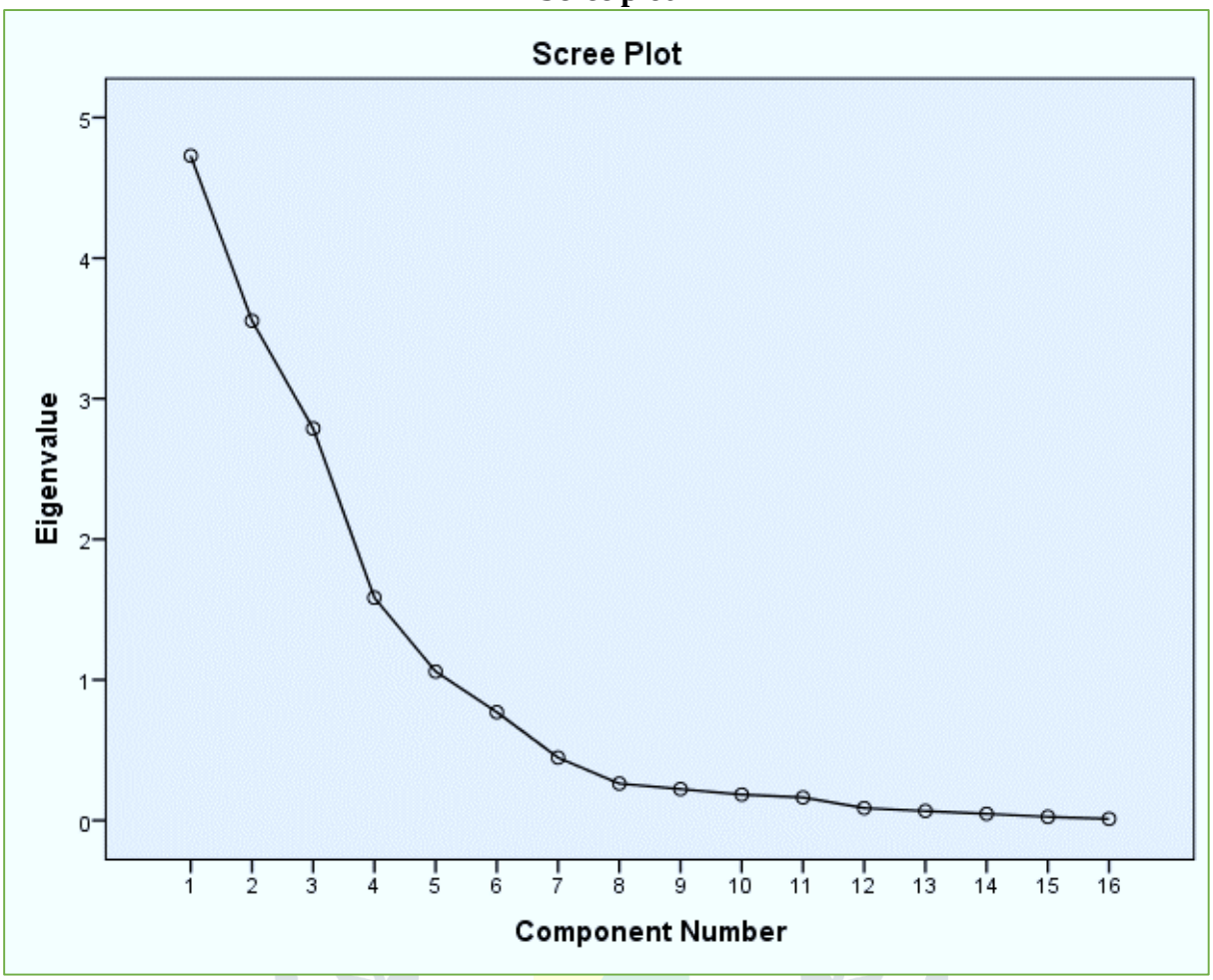
Total Variance Explained									
Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**4.728**	29.550	29.550	4.728	29.550	29.550	3.521	22.008	22.008
2	**3.554**	22.214	51.764	3.554	22.214	51.764	3.119	19.496	41.505
3	**2.788**	17.422	69.187	2.788	17.422	69.187	2.718	16.990	58.495
4	**1.584**	9.902	79.089	1.584	9.902	79.089	2.284	14.276	72.771
5	**1.059**	6.618	85.707	1.059	6.618	85.707	2.070	12.936	85.707
6	.770	4.811	90.518						
7	.447	2.791	93.309						
8	.262	1.636	94.945						
9	.223	1.391	96.336						
10	.184	1.150	97.486						
11	.163	1.019	98.505						
12	.088	.550	99.055						
13	.067	.418	99.473						
14	.047	.295	99.768						
15	.026	.160	99.928						
16	.011	.072	100.000						
Extraction Method: Principal Component Analysis.									

Source: Primary data

Total variance contributed by first component is 4.728, by second component 3.554, by third component 2.788, by fourth component 1.584 and by the fifth component by 1.059. The Eigen value for a given factor measures the variance in all the variables which is accounted for 1 by that factor. It is also clear that there are total five components having Eigen values greater than 1 from given set of variables. Eigen value for factor 1 is 4.728, for factor 2 is 3.554, for factor 3 is 2.788, for factor 4 is 1.584, and for the factor 5 is 1.059.

Figure 1

Scree plot



Source: Primary data

The scree plots show the components as the X axis and the corresponding Eigenvalues as the Y axis. The first five components are considered whose Eigen values are 4.728, 3.554, 2.788, 1.584 and 1.059. Hence 4.728 is the maximum Eigen value hence this factor is most significant followed by other factors. Since all these factors are having Eigen value greater than 1 and sharing maximum variance hence, they are essential in the present study.

Table 4

Rotated Component Matrix

Rotated Component Matrix[a]					
	Component				
	1	2	3	4	5
subsidies availability in programmes are less	**.957**				
insufficient credit facilities	**.930**				
Non-availability of timely credit	.897				
difficulty in loan repayment	.738		.410		
Non-availability of adequate inputs on time		**.927**			

illiteracy		.860			
lack of self-motivation		.808			
weak extension service in remote places		.787			-.502
lack of adequate training facilities			**.901**		
more administrative formalities			.867		
indebtedness			.751		
lack of well-constructed houses				.883	
lack of marketing facilities				.781	
non - availability of hospital facilities				.636	.545
inadequate technical support from officials					-.805
suppression due to the dependable nature of women					.771
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 7 iterations.					

Source: Primary data

Based on above table 4 we can conclude the factors which take the relevant variables which are found to be relevant to study the constraints faced by the Badaga women farmers in the agriculture and allied activities. As per the total variance explained, we have extracted five main factors to explain each variable. The dark highlighted variable is extracted from the constraints as its values is negative which means it is irrelevant to the challenges faced by the Badaga women farmers in the study area. The values of components which are bolded show that they are strong variables where it can consider as the basic and major challenges faced by the Badaga farm women in the agriculture and allied activities.

Factor 1

In table 5 we have explained the first factor in terms of financial constraints. For that we got four variables, they are less availability of subsidies, insufficient credit facilities, non-availability of timely credit, and difficulty in loan repayment.

Table 5

Factor 1

Factor 1	Variables	Rotated loading	% of Variance	Eigen Value
Financial constraints	**subsidies availability in programmes are less**	**.957**	**29.550**	**4.728**
	insufficient credit facilities	**.930**		
	Non-availability of timely credit	**.897**		
	difficulty in loan repayment	**.738**		

Source: Primary data

The Eigenvalue of factor 1 is 4.728 with 29.550% of the variance. The variables are related to financial constraints. Factor 1 has very high significant loading on the variable subsidies availability in programmes are less (0.957), insufficient credit facilities (0.930), non-availability of timely credit (0.897) and difficulty in loan repayment (0.738).

Factor 2

In table 6 we have explained the second factor in terms of financial constraints. For that we got four variables, they are Non-availability of adequate inputs on time, illiteracy, lack of self-motivation and weak extension service in remote places.

Table 6
Factor 2

Factor 2	Variables	Rotated loading	% of Variance	Eigen Value
Personal constraints/ Physical Constraints	**Non-availability of adequate inputs on time**	.927	22.214	3.554
	illiteracy	.860		
	lack of self-motivation	.808		
	weak extension service in remote places	.787		

Source: Primary data

The Eigenvalue of factor 2 is 4.728 with 29.550% of variance. The variables are related to financial constraints. Factor 1 has a very high significant loading on the variable non-availability of adequate inputs on time (0.927), illiteracy (0.860), lack of self-motivation (0.808) and weak extension service in remote places (0.787).

Factor 3

In table 7 we have explained the third factor in terms of practical constraints. For that we got four variables, they are lack of adequate training facilities, more administrative formalities and indebtedness.

Table 7
Factor 3

Factor 3	Variables	Rotated loading	% of Variance	Eigen Value
Practical constraints	**lack of adequate training facilities**	0.901	17.422	2.788
	more administrative formalities	0.867		
	indebtedness	0.751		

Source: Primary data

The Eigenvalue of factor 3 is 2.788 with 17.422% of the variance. The variables are related to financial constraints. Factor 1 has a significant loading on the variable lack of adequate training facilities (0.901), more administrative formalities (0.867), and indebtedness (0.751).

Factor 4

In table 8 we have explained the fourth factor in terms of Infrastructure constraints. For that we got three variables, the lack of well-constructed houses, the lack of marketing facilities and non – availability of hospital facilities.

Table 8
Factor 4

Factor 4	Variables	Rotated loading	% of Variance	Eigen Value
Infrastructure constraints	**lack of well-constructed houses**	0.883	9.902	**1.584**
	lack of marketing facilities	0.781		
	non - availability of hospital facilities	0.636		

Source: Primary data

The Eigenvalue of factor 4 is 1.584 with 9.902 % of the variance. The variables are related to financial constraints. Factor 4 has a significant loading on the variable lack of well-constructed houses (0.883), lack of marketing facilities (0.781), and non - availability of hospital facilities (0.636).

Factor 5

In table 9 we have explained the fourth factor in terms of mental constraints. For that we got three variables, the lack of well-constructed houses, lack of marketing facilities and non - availability of hospital facilities.

Table 9
Factor 5

Factor 5	Variables	Rotated loading	% of Variance	Eigen Value
Mental Constraints	suppression due to the dependable nature of women	0.771	6.618	1.059

Source: Primary data

The Eigenvalue of factor 5 is 1.059 with 6.618 % of the variance. The variables are related to financial constraints. Factor 5 has a significant loading on the variable suppression due to the dependable nature of women (0.771).

Conclusion

- According to the primary data analysis it has found that out of four constraints are there to understand the main elements of challenges faced by the Badaga farm women in the study area.

- In total we have considered 16 problems they are less availability of subsidies from programmes,
- insufficient credit facilities, non-availability of timely credit, difficulty in loan repayment
- Non-availability of adequate inputs on time, illiteracy, lack of self-motivation, weak extension service in remote places, lack of adequate training facilities, more administrative formalities, indebtedness, lack of well-constructed

houses, lack of marketing facilities, non - availability of hospital facilities, inadequate technical support from officials, and suppression due to the dependable nature of women.

- Of these sixteen problems we have run the analysis to compress these variables into suitable factors so that we have arrived at fifteen variables which are relevant to consider as the challenges in agriculture and allied activities.

- Less availability of subsidies from programmes, insufficient credit facilities, non-availability of adequate inputs on time, and lack of adequate training facilities are major issues faced by the women farmers which hindered them to do farming activities as their main source of the day-to-day life.

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