

REDRESSING RURAL POOR AND UNEMPLOYMENT THROUGH TRADITIONAL CABBAGE FARMING PRACTICE IN MANIPUR

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ABSTRACT

The present study was initiated to determine the cabbage cultivators' socio-economic characteristics vis-a-vis their relationship with familial income from cabbage cultivation and to identify the existing production and marketing practices. The study was conducted at Senapati, a hill district in the State of Manipur. Of the total six blocks of the district, three blocks, namely, Tadubi, Paomata and Purul has been chosen purposively as cabbage farming in the district are mostly confined in these areas. Eight villages were selected from the three blocks in convenience to the researchers. A total of 110 completed questionnaires could be collected randomly from respondents who held the major responsibility of cabbage farming activity in the family from each of the 110 sample households of the eight villages. The data was administered using SPSS English Version 21.0 for analysis. Linear regression was used to find out whether age, educational level, initial capital investment, area of cultivation and cost of labour are a useful predictor of familial income or not. Regression analysis results shows that initial capital investment, area of cultivation and cost of labour are useful predictors of familial income from cabbage cultivation whereas age of the respondents and educational level are not a useful predictors of familial income from cabbage cultivation for the villagers.

Keywords: Cabbage cultivators, Familial income, and Marketing practices

INTRODUCTION

“Poverty breeds poverty” is an unclear syndrome. The two problems – poverty and unemployment are closely related and reinforce each other's. Self-employment offers a constructive solution to these exploded stigmas of our society. Farming is one impetus to foster self-employment. Traditional farming practice is a holistic approach which takes care of all the components of the system. It is nature-based and organic in nature, environment friendly and sustainable, ensuring not only the requirements of the present but also ensure the conservation of resources of future. Organic foods are better in taste, flavour and nutritional contents and also free from all chemical residues; hence do not pose any threat to

health of human and animals. The rate at which the nature is being exploited and destroyed through unhealthy practices prompts to venture traditional agriculture. Farming on sizeable plots of land provides gainful occupation to farmers. Manipur is gifted with various kinds of ecological conditions for raising different kinds of fruit and vegetables. This resource – rich State with its expanses of fertile farmland and a huge talent pool could turn into one prosperous region. Yet, owing to its unique challenges, given the issues related to poverty and unemployment, poor infrastructure and connectivity, low economic development and others, the village cultivators are left with the limited option of the traditional or the conventional system of farming. Agriculture and its allied activities constitute the single largest source of livelihood of the people. Cabbage has been growing as one of the major crop in the hilly districts of Manipur, for reasons, others apart that it has economic advantages and offers large employment opportunities. Cabbage is a popular vegetable because of its adaptability to a wide range of climatic conditions and soil, ease of production and storage, and its food value. Another advantage of cabbage farming is that it can be grown on uneven and undulating land. Topographically, 90 percent of the State is represented by hilly region (Govt.of Manipur, 2011), which likewise justifies cabbage farming activity. In view with the prospects of agricultural farming in Manipur a study was initiated among cabbage cultivators at Senapati district, a lush green corner in Manipur, a small State in North East India, a State endowed with rich cultural, heritage, sports, and unique biodiversity, forests, rivers, and other resources. This research in particular, identified the cabbage cultivators' socio-economic characteristics vis-a-vis their relationship with familial income and the overall social and economic empowerment generated through cabbage cultivation. The study also looked into the prevailing production and marketing system.

OBJECTIVES OF THE STUDY

The broad objectives for which the research has been undertaken is

- To determine the respondents' socio-demographic and economic characteristics.
- To bring in light the relationship of familial income with socio-demographic and economic conditions of the cabbage cultivators.

HYPOTHESIS

Based on the above objectives the hypothesis is proposed for testing:

Null Hypothesis (H₀): Age, educational level, initial capital investment, cost of labour and area of cultivated land are not a useful predictor of familial income

Alternative Hypothesis (H₁): Age, educational level, initial capital investment, cost of labour and area of cultivated land are a useful predictor of familial income

Instrument for Data Collection

The questionnaire for collection of primary data was segregated into four parts; Part A consists of six questions in relation to respondents' demographic profile, 12 questions associated to Socio-Economic conditions of the respondents formed Part B, 12 questions in connection with production and 4 question with marketing composed the Part C and D. Additional information was also extracted through personal interaction with the cultivators.

The respondents were free to provide insights, opinions, and comments that are relevant to the area of research topic that was deemed informative for the researcher.

Sample and Data Collection

The study was conducted at Senapati, a hill district in the state of Manipur. According to 2011 Census Report, Senapati District had a population of 3,54,942 of which male and female were 1,83,081 and 1,71,891 respectively. 97.90% population of Senapati district lives in rural areas of villages. The population of Senapati district constituted 13.04 percent of Manipur population. Out of the total six blocks, three blocks, namely, Tadubi, Paomata and Purul has been chosen purposively as cabbage farming in the district are mostly confined in these areas. Eight villages were selected from the three blocks for the convenient of the researchers. From Tadubi block; Kaibi, Shajouba and Liyai villages were selected. From Paomata block; Tungham, Tungjoy, Liyai and Phuba villages were selected and lastly from Purul block, Purul and Phaibung Khunou villages were selected. A total of 110 respondents who held the major responsibility of cabbage farming activity in the family were randomly selected from each of the 110 sample households of the eight villages. Villagers were approached for data collection on all of the week days except on Sundays, and only in the morning and evening hours because most adult villagers were not available during day time as they had all gone to their fields or for other related schedules and the villages had a deserted look during these hours of the days. 5 years were taken as the reference period, that is, 2008-12, and the data were collected in the first half of the second part of 2013.

METHOD OF DATA ANALYSIS

Initially the data gathered were codified and then administered using SPSS English Version 21.0 for data analysis. The categorical distributions of the socio-demographic and economic characteristics were presented in a tabular format and Mean and S.D is calculated. Finally conclusions are derived by calculating Multiple Regression analysis to predict the relationship between familial income from cabbage cultivation and the other independent variables like age, educational level, initial capital investment, cost of labour and area of cultivated land of the respondents.

RESULTS AND DISCUSSION

This section was stressed on data analysis, presentation, and interpretation. The data analysis and interpretation were on the research queries as well as research objectives; the presentation is divided in to four parts. The first part was presented the respondents socio-demographic profile, the second part deals with economic profile, the third part deals with hypothesis testing and the fourth part presents findings and conclusion.

Socio-Demographic Profile

The first objective of this study was to determine the respondents' socio-demographic and economic characteristics. Table 1 exhibits the socio-demographic profile of the respondents. A total of 88 male and 22 female were included in the study. The minimum age of the participants was 25 years while the maximum was 84 years, with a mean age of 45 (SD \pm 10.75). Most of the respondents were above 41 years. Quite many of the respondents, that is, 71.8% (39.1% and 32.7% respectively) had received elementary and secondary education while just 2.7% had a higher education and 24.5% are illiterate. Eighty seven (79.1%)

participants were married, while 11 (10%) were never married and 12 (10.9%) were either divorced or widowed or separated. Most of the participants (93.7%) were living in nuclear family and remaining (6.3%) were living in joint and extended family.

Table 1. Socio - Demographic Profile of Study Participants

Variables	Group	Male N=88(%)	Female N=22(%)	Total N==110(%)
Age group (yrs.)	30 and below	11(12.5)	2(9)	13(11.8)
	31 - 40	20(22.8)	8(36.4)	28(25.4)
	41 – 50	29(32.9)	8(36.4)	37(33.6)
	51 and above	28(31.8)	4(18.2)	32(29.2)
Education	Illiterate	24(27.3)	4(18.2)	28(24.5)
	Elementary	32(36.3)	11(50)	43(39.1)
	Secondary	29(32.9)	7(31.8)	36(32.7)
	Graduate and above	3(3.5)	0(0)	3(2.7)
Marital Status	Single	7(7.9)	4(18.2)	11(10)
	Married	79(89.9)	8(36.3)	87(79.1)
	Divorced/widowed	2(2.2)	10(45.5)	12(10.9)
Type of family	Joint	2(2.2)	2(9)	4(3.6)
	Extended	2(2.2)	1(4.5)	3(2.7)
	Nuclear	84(95.6)	19(86.5)	103(93.7)

Source: Field Survey

Economic Profile

The economic characteristics of respondents shown in Table 2 revealed that 88 (80%) participants started venturing their cabbage farming activity from their own capital whereas a meagre margin of 20% initiated with loans from others. The mean initial capital investment was Rs. 13602 (SD ± Rs. 11,284), with Rs. 1,000 being the least and Rs. 70,000 the maximum. The lands under cabbage cultivation were comparatively small with 30% of the cultivator below 1 acre, 53.6% in between 2-5 acre and 16.4% above 5 acre. The costs of labour ranges from Rs. 1,000 – 10,000 (50%), Rs. 11,000 – 20,000 (20.9%), Rs. 21,000 – 30,000 (13.6%), and Rs. 30,000 – 50,000 (15.5%). The minimum familial income from cabbage cultivation was Rs. 6,000 while the maximum was Rs. 2,50,000 with the mean income of Rs. 55,004 (SD ± Rs. 42,509). Apart from cabbage cultivation 74 (67.3%) participants were engaged in agriculture and allied activities during off seasons, 15 (13.6%) in handloom and handicraft, 11 (10%) were engaged in petty businesses and 10 (9.1%) participants in timber trade.

Table 2. Economic profile of study participants

Variables	Group	Male N=88(%)	Female N=22(%)	Total N=110(%)
Sources of Capital	Owned	67(76.2)	21(95.5)	88(80)
	Loan from others	21(23.8)	1(4.5)	22(20)
Initial capital investment (Rs.)	1,000 – 10,000	41(46.6)	16(72.7)	57(51.8)
	10,001 – 20,000	31(35.2)	3(13.6)	34(30.9)
	20,001 – 30,000	13(14.7)	1(4.5)	14(12.8)
	Above 30,001	3(3.5)	2(9)	5(4.5)
Area of cultivation	1 acre and below	19(21.5)	14(63.7)	33(30)
	2 – 5 acres	52(59.2)	7(31.8)	59(53.6)
	5 acres and above	17(19.3)	1(4.5)	18(16.4)
Cost of labour (Rs.)	1,000 – 10,000	39(44.3)	16(72.8)	55(50)
	10,001 – 20,000	23(26.3)	0	23(20.9)
	20,001 – 30,000	13(14.7)	2(9)	15(13.6)
	Above 30,001	13(14.7)	4(18.2)	17(15.5)
Income (Rs.)	6,000 – 20,000	19(21.6)	14(63.8)	33(30)
	20,001 – 30,000	11(12.5)	1(4.5)	12(10.9)
	30,001 – 50,000	14(15.9)	3(13.7)	17(15.5)
	50,001 – 1,00,00	33(37.5)	2(9)	35(31.8)
	Above 1,00,001	11(12.5)	2(9)	13(11.8)
Off season occupation	Agriculture & allied	59(67.2)	15(68.2)	74(67.3)
	Handloom/handicraft	9(10.2)	6((27.3)	15(13.6)
	Business	10(11.3)	1(4.5)	11(10)
	Timber trade	10(11.3)	0	10(9.1)

Source: Field Survey

Multiple Regression Analysis

The hypothesis was tested with the multiple regression analysis to determine the relationship between familial income from cabbage cultivation and the other independent variables like age, educational level, initial capital investment, cost of labour and area of cultivated land of the participants. The equation below shows the regression equation for predicting the dependent variable from the independent variables:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5$$

Where,

Y= Familial income from cabbage cultivation

a = Constant

b₁ to b₅ = Represents co-efficient for the representative variables

X₁ = Age of the respondents

X₂ = Educational level of the respondents

X_3 = Initial capital of the respondents

X_4 = Area of cultivation

X_5 = Cost of labour

Table 3. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.901 ^a	.813	.804	18837.764

Note: a. Predictors: (Constant), Cost of labour, Age of the respondent, Educational level, Area of cultivation, Initial capital investment.

Source: Computed from primary data

This model summary shows that the equation is highly fit and described the relationship between dependent and independent variable significantly. The coefficient of determination is 0.813; therefore, about 81% of the variation in the dependent data is explained by the independent data. The regression equation appears to be very useful for making predictions since the value of r^2 is close to 1.

Table 4. ANOVA results

ANOVA ^a					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	160066667491.709	5	32013333498.342	90.214	.000 ^b
Residual	36905580235.563	104	354861348.419		
Total	196972247727.273	109			

Note: a. Dependent Variable: Familial Income from cabbage cultivation, b. Predictors: (Constant), Cost of labour, Age of the respondent, Educational level, Area of cultivation, Initial capital investment.

Source: Computed from primary data

The ANOVA table also shows very positive and significant relationship among the variables with F value of 90.214 and significant level of 0.000, hence from this table, it can be concluded that the model is valid and quite accepted with the existing variables.

Table 5. Regression coefficient results (Coefficients^a)

Model	Unstandardized	Coefficient	Std.	t	Sig.
	B	Std. Error			
Constant	48.268	9312.55		0.005	0.996
Age of Respondent	-123.089	182.457	-0.31	-0.675	0.501
Educational Level	626.451	509.981	0.061	1.228	0.222
Initial Capital investment	0.891	0.319	0.236	2.792	0.006
Area of Cultivation	4435.999	125.335	0.182	3.525	0.001
Cost of Labour	1.924	0.302	0.561	6.380	0.000

Note: a-Dependent Variable: Familial income from cabbage cultivation

Source: Computed from primary data

Multiple regression was used to find out whether age, educational level, initial capital investment, area of cultivation and cost of labour are a useful predictor of familial income or not. Stepwise regression analysis results indicated that variation of familial income can influence the independent variables at about 81% ($R^2 = 0.813$). Regression coefficients of the variables are shown in Table 5. Their relationships may be expressed as:

$$Y = 48.268 - 123.089(\text{Age of the respondents}) + 626.451(\text{Educational level of the respondents}) + 0.891(\text{Initial capital of the respondents}) + 4435.999 (\text{Area of cultivation}) + 1.924(\text{Cost of labour})$$

At the alpha = 0.05 level of significance, the p-value of X_3 , X_4 , X_5 are ≤ 0.05 , thus there exists enough evidence to conclude that initial capital investment, area of cultivation and cost of labour were useful predictors of familial income from cabbage cultivation for the cultivators. So, reject the null hypothesis at 5% level of significant and accept the alternative hypothesis.

CONCLUSION

The study revealed that familial income has an impact on promotion of agricultural activity and its volume of production thereto. A summary of the regression analysis indicated that about 81% of the variation in the dependent data is explained by the independent data. Regression analysis result shows that initial capital investment, area of cultivation and cost of labour were useful predictors of familial income from cabbage cultivation for cultivators whereas age and educational level of the respondents were not a useful predictors of familial income from cabbage cultivation for the villagers. The cross tabulation table shows contrasting results between male and female cultivators' where most of the male participants belong to the married category whereas the female participants were either divorced or widowed or separated. Endowed with adaptable climatic conditions for growing food crops and fruits coupled with availability of abundant human resources the state of Manipur offers a suitable platform for agricultural farming.

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