

Rubber Plantation Labours in Kanniyakumari District - An Economic Study

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Abstract: *Rubber is one of the essential roles of horticultural crops in India. It has a commercial value and it assumes impotent from the point of view in employers working condition. The specific objectives of the study are as follows (i) To study the living and working condition of the rubber plantation in Kanniyakumari district. (ii) To analyze their level of income and expenditure. (iii) To give suggestion for improving the status and working condition of rubber plantation. The required information for the present study has been collected both from Primary and Secondary data. The information has been collected from the respondents through the separate interview schedule for the rubber plantation labour. The Secondary data required for the study were collected from the various books, Rubber the various articles published in Newspapers, and Magazine. The Samples were selected by Convenience Sampling Technique. The Total number were samples were collected 90 Respondents. The study was conducted among the select rubber plantation labours in Kanniyakumari district. The interview schedule has been used for collection of primary data from the rubber plantation labours employed in the factory. The analysis was done by the use of Excel and SPSS. The various statistically tools applied to analysis the primary data were presented analysis ANOVA analysis to arrive at required from the study. For effective analysis and easy understanding, the data were tabulated.*

Keywords: Rubber Plantation Labours, Kanniyakumari District, ANOVA Analysis..

I. INTRODUCTION

Rubber has playing a vital role in the plantation crops of India. Rubber is an elastic substance made from sticky; milky white liquid called latex extracted from the bark of the rubber tree (*Hevea Brasiliensis*) through a process called tapping. Rubber is a Brazil native crop introduced in India by the British; however, cultivation in commercial scale were initiated as early as 1873. It plays a vital role in the National Economy. In the early years rubber was grown only in Kerala and Kanyakumari District in Tamil Nadu, which are the traditional rubber growing areas of the country. But currently, Rubber is also grown in Tripura, Assam, Meghalaya, Mizoram, Manipur, Goa, Coastal Karnataka, Orissa, Andhra Pradesh, Madhya Pradesh and West Bengal. India is the sixth largest producer and consumer of natural rubber (Binitha, 2018). This paper seeks to examine. the living and working condition of the rubber plantation and to analyze their level of income and expenditure Kanniyakumari district. This district accounts for 98 percentage of rubber production. It has suitable soil and climate for the cultivation of rubber trees. Out of 91807 hectares of total crop area, rubber is cultivated in 19500 hectares. There are 126 small scale rubber-based industries registered under the (Selvia, 2012) District Industries Centre (DIC). They provide employment to 1874 people. Rubber is being cultivated in three taluks of the District: Kalkulam Taluk - 180 rubber estates, Thovalai Taluk - 13 rubber estates, Vilavancode Taluk - 230 rubber estates according to Rubber Board, Marthandam. (Binitha, 2018) According to department of Economics and Statistics of Kanyakumari District there are 41 registered rubber estates with 7373.126 hectares of land in which there are 1998 male labourers and 988 female labourers. Land coverage under rubber plantation in Kanyakumari District is 27407 hectares. (District Statistical Handbook, 2015). This paper seeks to study the living and working condition of the rubber plantation and to analyze their level of income and expenditure in Kanyakumari district.

II. STATEMENT OF THE PROBLEM

Rubber is one of the important horticultural crops in India. It has a commercial value and it assumes impotent from the point of view in employers working condition. The percent work “Workers work contribution in rubber plantation” is an attempt to study the living and working condition of the rubber plantation, analyze their level of income and expenditure and give suggestion for improving the status and working condition of rubber plantationin kanniyakumari district.

II. OBJECTIVE OF THE STUDY

The specific objectives of the study areas follows

1. To study the living and working condition of the rubber plantation in Kanniyakumari district.
2. To analyze their level of income and expenditure.
3. To give suggestion for improving the status and working condition of rubber plantation.

IV. RESEARCH METHODOLOGY

The required information for the present study has been collected both from Primary and Secondary data. The information has been collected from the respondents through the separate interview schedule for the rubber plantation labour. The Secondary data required for the study were collected from the various books, Rubber the various articles published in Newspapers, and Magazine.

V. SAMPLE DESIGN

The Samples were selected by Convenience Sampling Technique. The Total number were samples were collected 90 Respondents. The study was conducted among the select rubber plantation labours in Kanniyakumari district.

VI. COLLECTION OF DATA

The interview schedule has been used for collection of primary data from the rubber plantation labours employed in the factory.

VII. STATISTICAL TOOLS OF ANALYSIS

The analysis was done by the use of Excel and SPSS. The various statistically tools applied to analysis the primary data were presented analysis ANOVA analysis to arrive at required from the study. For effective analysis and easy understanding, the data were tabulated.

VIII. RUBBER PLANTATION LABOURS IN KANNIYAKUMARI DISTRICT

The data analysis required for the study was collected from the primary data. Primary data were collected directly with the help of interview schedule from the rubber plantation labours in Kanniyakumari district. The sample was selected by administering convenience sampling technique. The total number of samples was 90 and was selected among the rubber industry in rural area. The present study socio-economic conditions of sample rubber workers like, age, educational status, marital status, sources of income size of family accommodation monthly income number of days employed per year type of saving nature of work are analyzed. The various statistically tools applied to analysis the primary data were presented analysis ANOVA analysis to arrive at required from the study. For effective analysis and easy understanding, the data were tabulated.

Table 1.1: Age Of The Rubber Workers

No	Particulars	Rubber Workers	Percent
1	Up to 20 year	13	14.4
2	21 year to 40 year	47	52.2
3	41 year to 60 year	24	26.7

4	Above 61 year	6	6.7
Total		90	100.0

Source: Primary data

Table No.1.1 gives details about the age-wise classifications of rubber workers. Working in rubber plantation labours work out of 90 respondents studied only 13 (14.4 per cent) of them belongs to the age between Up to 20 year in rubber plantation labours, than 47 (52.2 per cent) respondents belong to the age group among 21 year to 40 year in rubber plantation labours, and 24 (26.7 per cent) respondents belong to the age group between 41 year to 60 year and additional, the period of old people above Above 61 year age are only 6.7 per cent of rubber plantation labours.

Table 1.2: Educational Status Of The Rubber Workers

S. No	Particulars	Rubber Workers	Percent
1	illiterate	0	0.0
2	Primary	18	20.0
3	Higher/Secondary	41	45.6
4	Degree/ Technical	28	31.1
5	Post Graduate	3	3.3
Total		90	100.0

Source: Primary data

The Table No.1.2 shows that the educational status of the sample rubber workers in the study area. The rubber plantation labours are 20.0 per cent of primary level education, 45.6 per cent of the rubber workers are Higher/Secondary level 31.1 per cent of the rubber workers are Degree/ Technical and 3.3 per cent of the Post Graduate holders among the total sample in rubber workers.

Table 1.3: Marital Status Wise Of The Rubber Workers

S. No	Particulars	Rubber Workers	Percent
1	Married	77	85.6
2	Un married	10	11.1
3	Divorce	0	0.0
4	Widow	3	3.3
Total		90	100.0

Source: Primary data

The Table No.1.3 shows that the gender married rubber workers are 85.6 per cent of the rubber plantation labour and 11.1 per cent of the labours are un-married in rubber plantation labours, 3.3 per cent labour are widow worker in rubber plantation.

Table 1.4: Sources Of Income Of The Rubber Workers

S. No	Particulars	Rubber Workers	Percent
1	Rubber	61	67.8
2	Other Agri crops	23	25.6
3	Employment	6	6.7
Total		90	100.0

Source: Primary data

Table No.1.4 states that the various steps of income distribution of the sample respondents in the study area. The rubber plantation labours are 67.8 per cent of the workers earn income in rubber, but 25.6 per cent of the labour earns income in Other Agri crops and other than 6.7 per cent labours are earn income in employment.

Table 1.5: Size Of Family Classification Of The Rubber Workers

S. No	Particulars	Rubber Workers	Percent
1	1 member to 3 members	16	17.8
2	4 members to 6 members	55	61.1
3	Above 6 members	19	21.1
Total		90	100.0

Source: Primary data

The above Table No.1.5 reveals that the 17.8 percent of labour size of family 1 member to 3 members and 61.1 percent of the plantation labour family size 4 members to 6 members and 21.1 percent of labour size of family Above 6 members.

Table 1.6: Accommodation classification Of The Rubber Workers

S. No	Particulars	Rubber Workers	Percent
1	Owned House	61	67.8
2	Rented House	29	32.2
Total		90	100.0

Source: Primary Data

The above Table No.1.6 shows that almost 67.8 percent of the labours in the plantations live in their Owned House. Whereas the 32.2 percent of labours stay in Rented House.

Table 1.7: Monthly Income Of The Rubber Workers

S. No	Particulars	No. of Respondents	Percentage
1	Less than ₹.7000	3	3.3
2	₹.7000 - ₹.10000	9	10.0
3	₹.10000 - ₹.13000	51	56.7
4	₹.13000 - ₹.15000	21	23.3
5	Above ₹.15000	6	6.7
Total		90	100.0

Source: Primary Data

Table No.1.7 implies that the various steps of income groups, 3.3 per cent of rubber plantation labours earn less than ₹7000. It is significant to note that 10 per cent of rubber plantations labours earn between ₹7000 - ₹10000, 56.7 per cent of labours earn an income in the range of ₹10000 - ₹13000, 23.3 per cent are in ₹13000 – 15000 and 6.7 percent are having Above ₹15000.

Table 1.8: Monthly Family Expenditure Of The Rubber Workers

S. No	Particulars	Rubber Workers	Percent
1	Below ₹.5000	24	26.7
2	₹.5000 - ₹.10000	41	45.6
3	₹.10000 - ₹.15000	17	18.9
4	Above ₹.15000	8	8.9
Total		90	100.0

Source: Primary Data

It is understood from Table No.1.6 that the rubber workers who spend a monthly expenditure of ₹.5000 - ₹.10000, Below ₹.5000, ₹.10000 - ₹.15000 and Above ₹.15000 constitute the highest, average and the lowest percentages of

45.6, 26.7, 18.9 and 8.9 respectively. Hence, 41 rubber workers (45.6 per cent) spend a monthly family expenditure of ₹.5000 - ₹.10000 which is the maximum.

Table 1.9: Number Of Days Employed Per Year Of The Rubber Workers

S. No	Particulars	Rubber Workers	Percent
1	Up to 100 days	5	5.6
2	100 to 200 days	20	22.2
3	200 to 300 days	65	72.2
Total		90	100.0

Source: Primary Data

From Table No.1.8 it is found that the number of days employed per year classification of the rubber workers in 5.6 per cent of units of rubber plantation labours working in Up to 100 days per year, whereas in 22.2 per cent units of the labours working in 100 to 200 days per year. Around 72.2 per cent of units labours working in 200 to 300 days per year.

Table 1.10: Type Of Saving Of The Rubber Workers

S. No	Particulars	Rubber Workers	Percent
1	Chit Fund	7	7.8
2	Post Office/Bank Deposit	35	38.9
3	Insurance	9	10.0
4	Gold Investments	27	30.0
5	No Savings	12	13.3
Total		90	100.0

Source: Primary Data

The above Table No.1.9 shows that the 7.8 percent of the labours save their Chit Fund, 38.9 percent of the labour save their salary in Post Office/Bank Deposit, 10.0 percent of the labour save their salary in Insurance, 30.0 per cent of the labour save their Gold Investments, 13.3 per cent of labour save they are in No Savings.

Table 1.11: Nature Of Work Of The Rubber Workers

S. No	Particulars	Rubber Workers	Percent
1	Tapping	62	68.9
2	Field work	28	31.1
Total		90	100.0

Source: Primary Data

The above Table No.1.10 shows that 68.9 percent of the labours nature of work at Tapping, and 31.1 percent of the labours nature of work at Field work.

Table 1.12: The Estimated Result Of Anova

Model	Sum of Square	Degrees of freedom	Mean Square	F-Value	Significant
Regression	9.604	1	9.604	23.047	-000 ^a
Residual	40.836	98	.417		
Total	50.440	99			
Regression	12.229	2	6.115	15.522	-000 ^b
Residual	38.211	98	.394		
Total	50.440	99			
Regression	14.746	3	4.915	13.220	-000 ^c
Residual	35.694	96	.372		
Total	50.440	99			

Source: Calculated By Researcher

From Table No.1.12 it is found that an analysis the variance of age observed F ratio is compared with the theoretical F value with $V_1=K-1=1$ and $V_2=N-K=98$ degrees of freedom (at the 95 per cent level of significant). From the F tables we find $F_{0.05} = 3.92$. Given that $F^* > F_{0.05}$ we reject the null hypothesis and we accept that the regression is significant marital status factor of the variation in age dependent variable in rubber plantation labour and F value with $V_1=K-1=1$ and $V_2=N-K=98$ degrees of freedom (at the 99 per cent level of significant). The F tables we find $F_{0.01} = 6.85$. Given that $F^* > F_{0.01}$ we reject the null hypothesis and we accept that the regression is significant marital status factor of the variation in age dependent variable in rubber plantation labour.

Table 1.13: The Estimated Result Of Co-Efficient

Model	Unstandardies Co-efficient		Standardized Co-efficient	t value	Significant
	B	Standard Error	Beta		
Constant	3.143	.179		17.536	.000
Marital status	-.680	.142	-.436	-4.801	.000
Constant	3.683	.272		13.520	.000
Marital status	-.654	.138	-.419	-4.734	.000
Education status	-.187	.072	-.229	-2.582	.011
Constant	3.430	.282		12.166	.000
Marital status	-.674	.134	-.433	-5.016	.000
Education status	-.216	.071	-.265	-3.038	.003
Working hours	.187	.072	.227	2.602	.011

Source: Calculated By Researcher

Table 1.14: Correlationanalysis

Model	Beta In	t value	Significant	Partial Correlation	Collinearity Statistics
Education status	-0.229	-2.582	0.011	-0.254	0.995
Sources of income	0.035	0.380	0.705	0.039	0.988
Si	0.159	1.763	0.081	0.176	0.996

Source: Calculated By Researcher

Table 1.15: Analysis Table

Model	Unstandardized Coefficients		Standardized Coefficients	t value	Significant
	B	Beta	Beta		
(Constant)	3.143	0.179	-0.436	17.536	.000
Q4	-0.680	0.142		0.000	.000
(Constant)	3.683	0.272	-0.419	0.000	.000
Q4	-0.654	0.138	-0.229	0.000	.011
Q5	-0.187	0.072	-0.433	0.011	.000
Q4	-0.674	0.134	-0.265	0.000	.003
Q5	-0.216	0.071	0.282	0.003	0.013
(Constant)	3.430	0.056	0.211	12.166	12.166

Source: Calculated By Researcher

Table 1.16: Excluded Variables

Model	Beta In	t value	Significant	Partial Correlation	Collinearity Statistics
					Tolerance
Q5	-.229 ^a	-2.582	.011	-.254	.995
Q6	.035 ^a	.380	.705	.039	.988

Q7	.159 ^a	1.763	.081	.176	.996
Q10	.185 ^a	2.059	.042	.205	.995
Q6	.073 ^b	.813	.418	.083	.963
Q7	.147 ^b	1.669	.098	.168	.992
Q10	.227 ^b	2.602	.011	.257	.970
Q6	.033 ^c	.368	.713	.038	.931
Q7	.094 ^c	1.046	.298	.107	.922

- Predictors in the Model: (Constant), Q4
- Predictors in the Model: (Constant), Q4, Q5
- Predictors in the Model: (Constant), Q4, Q5, Q10
- Dependent Variable: Age

IX. MAJOR FINDINGS

The findings based on the analysis and interpretations of the study are given below:

- 52.2 per cent of rubber plantation labours are in the age group of 21 year to 40 year.
- 45.6 per cent of rubber plantation labours are Higher/Secondary.
- 85.6 per cent of rubber plantation labours are Married.
- 67.8 per cent of the rubber plantation labours earn income in rubber.
- 61.1 percent of the rubber plantation labours family size.
- 67.8 per cent of the rubber plantation labours live in their Owned House.
- 56.7 per cent of rubber plantation labours earn an income in the range of ₹.10000 - ₹.13000.
- 45.6 per cent of rubber plantation labours spend a monthly family expenditure of ₹.5000 - ₹.10000.
- 72.2 per cent of unit's labours working in 200 to 300 days per year.
- 38.9 per cent of the rubber plantation labours save their salary in Post Office/Bank Deposit.
- 68.9 per cent of the rubber plantation labours nature of work at Tapping.

X. CONCLUSION

The present study brings to the social conditions such as the Age, Educational Status, Marital Status, Sources of Income, Size of Family, Accommodation, Monthly Income, Monthly Family Expenditure, Number of Days Employed Per Year, Type of Saving and Nature of Work. Most of the employees have no other tasks leaving apart the plantation work. The region surrounding still remains underdeveloped so the employees have no other sources of employment to improve their lifestyle. The present wage structure is not adequate to run their family. They are leading life in poor condition and also not able to provide proper education facilities to their children. Only things they appreciate is that they have free water facilities, accidental benefit, maternity benefit, rest shelter facilities, education facilities with which overall they are moderately satisfied as a whole. The government and Rubber Board take care and make more steps to boost and protect rubber producers by considering their contributions to the country and society.

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