

Socio-economic status of latex harvesters in the smallholder rubber (*Hevea brasiliensis*) sector in Kegalle district, Sri Lanka: A case study

Gunarathna, P.K.K.S.

Rubber Research Institute
Sri Lanka
kapila.s.gunarathne@gmail.com

Jayasundara, K.

Rubber Research Institute
Sri Lanka
kalani.jayasundara@gmail.com

Wijesuriya, W.

Rubber Research Institute
Sri Lanka
wijesuriyawasana@gmail.com

Rathnayaka, S.

Rubber Research Institute
Sri Lanka
shanakadrathnayaka@gmail.com

Dissanayake, A.

Rubber Research Institute
Sri Lanka
anurapd@gmail.com

ABSTRACT

The Latex Harvesters (LH) play a crucial role in the smallholder rubber sector. This study was carried out to assess the income level and critical socio-economic status of LH. A stratified random sample of 296 LH is drawn in Kegalle district during 2020 (October–December), and a questionnaire survey was carried out employing equal numbers from both categories of LH who harvest their own rubber lands (LH_{own}) and those who are hired by landowners (LH_{hired}). Descriptive statistics, a two-sample *t*-test, and Wilcoxon rank-sum test were used to analyse. The level of overall job satisfaction was significantly higher in LH_{own} compared to LH_{hired} category. The LH_{hired} were paid an average daily wage of 560 LKR/day with a range of 375–680 LKR/day. The monthly income of the households of LH_{own} category was 45,281 LKR which was significantly different from that of LH_{hired} category (LKR 30,504). Everyone in the LH_{hired} category and four persons in the LH_{own} category were involved in side jobs to earn money to meet the living expenses of their households. In terms of assets, LH_{own} had its own houses, whilst 16% of LH_{hired} did not own the houses. Nearly 81% of the households of LH_{own} possessed either a motor bicycle or a three-wheeler for their transport, whereas only 51% of households of LH_{hired} possessed the same. Expenses for various purposes except for loans of LH_{own} were significantly higher than that of LH_{hired} . Hence, this study recommended paying attention to the LH, focusing on morale development and recommending a reasonable wage rate to uplift their income status, as retaining them in the rubber industry is essential for the sustainability of the rubber sector.

Keywords: Latex harvesters, Rubber, Socio-economic status.

INTRODUCTION

The rubber (*Hevea brasiliensis*) industry in Sri Lanka is one of the primary sources of earning foreign exchange and contributing to employment opportunities significantly (CBSL, 2020). In the Sri Lankan context, smallholders are considered as the most dynamic segment of

the rubber sector as it represents 68% of the total rubber extent, and there are nearly 200,000 smallholders in the country (MPI, 2019). Rubber is a plantation crop, of which its mature period is suitable for harvesting after reaching the harvestable girth and is preceded by an immature period. Latex Harvesters (LH) are the people who extract (harvesting/tapping) latex from the rubber plant (RRISL, 2001). Harvesting rubber is a highly skilled task, and the LH have to be adequately trained to perform harvesting to get the best returns and to protect the rubber tree from getting an optimum economic result over the total lifespan of the tree. The scarcity of LH was a burning issue in the smallholder rubber sector (Gunarathne *et al*, 2016). The position of an individual or a group within a hierarchical social structure known as Socio-Economic Status (SES) influences LH access to and control over desired resources, including knowledge, money, power and prestige. There are four types of univariate measures; income, wealth, educational attainment and poverty, which are used to assess the SES under the money-metric (monetary) approach (Bollen *et al*, 2001). In this study, the level of income and expenditures focused on measuring the SES. Although latex harvesting is not a white-collar job, it can be considered the backbone of the rubber industry as latex extraction is the initial step of the manufacturing cycle of rubber products (Gunarathne *et al*, 2016). Therefore, it is necessary to investigate their income level to boost their livelihoods to develop a sustainable rubber sector. There were no planned studies undertaken so far to assess the income level of LH in the smallholder rubber sector. The primary objective of this study is to assess the income level and expenditure pattern of the LH to fill the research gap. Such findings are helpful to the policymakers to develop the community of LH for better performance in the rubber sector.

METHODOLOGY

The study was carried out in Kegalle district (7.25° N, 80.35° E) in 2020. A stratified random sampling technique was employed. The sample size was 296 LH including equal numbers from both categories of LH who harvested their own rubber lands with an extent 1 acre (LH_{own}) and LH who were hired by land owners (LH_{hired}). A pre-tested questionnaire was used to collect data from the respondents. The monthly av-

erage household income, expenditure and assets were measured. Job Satisfaction (JS) was measured under a five-point Likert scale; very unsatisfactory, unsatisfactory, neutral, satisfactory and very satisfactory. Marks were allocated from 0 to 4, for very unsatisfactory to very satisfactory, respectively. The average score for JS was measured. A two-sample *t*-test and Wilcoxon Rank Sum test were used in comparing the socio-economic variables of the two types of LH.

RESULTS AND DISCUSSIONS

Socio-economic key variables

Female LH of both own (63%) and hired (65%) categories were dominated, with a female: male ratio of nearly 2:1. About 98% of LH were married in both categories. Table 2 shows the age structure of the LH. The age of LH varied from 19 to 79 years. The majority of LH_{own} and LH_{hired} belonged to the age category of 46-55 years. Nearly 9% of the respondents was above 65 years in categories of LH_{own} and LH_{hired}, while only 30% was found below 35 years. However, the young age (<35 years) category was not prominent in the study area, and it differs from the study carried out in Moneragala district. The most of younger generation (<35 years) in Moneragala is employed as LH due to a lack of job opportunities (Wijesuriya et al, 2008). The attraction of the younger generation must be directed to the smallholder rubber sector, mainly as LH, so that the sustainability of rubber farming is ensured.

No one obtained higher education (diploma and degree level), and 1% of LH_{own} and 2% of LH_{hired} had not attended schools. Further, only 3% of LH_{own} and LH_{hired} had attended tertiary level education (GCE A/L). The number of family members in a family was 3-4 in both LH_{own} and LH_{hired}, while 5% of LH_{own} and 9% of LH_{hired} families consisted of more than six members. All the respondents' children attended the formal education system while children's drop out a level of education varied from primary level (Grade 5) to graduate. The LH in all rubber growing areas in the country have more (>2) memberships in different types of micro-finance organizations and agriculture-based NGOs. All the LH (own and hired) were members of at least one of the NGOs at the village level in the study area (Munasinghe et al, 2019). The majority of LH_{own} (53%) and LH_{hired} (58%) have achieved more than ten years of work experience as a latex harvester with an average of 6.5 years. The working experience of LH varies with the rubber growing area studied by Dissanayake et al (2014). The average number of working days per week was four days.

Job satisfaction

The JS is defined as the worker's appraisal of the degree to which the work environment fulfils the individual's need and a positive feeling about individual's job resulting from an evaluation of its characteristics (Robbins and Judge, 2007). Figure 1 shows the level of job

satisfaction of LH.

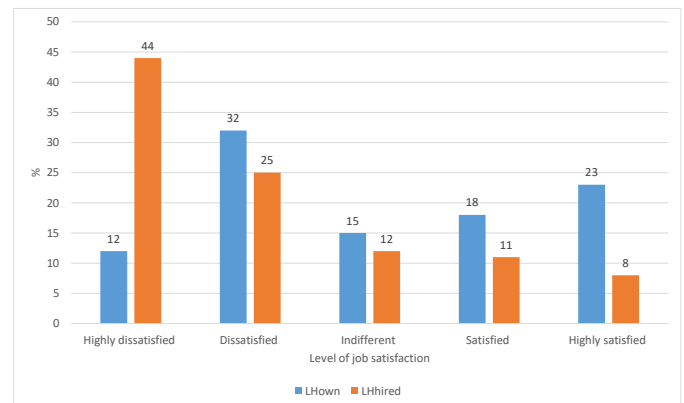


Figure 1: Level of job satisfaction of latex harvesters

About 4% of the LH_{hired} category have reported their job as 'unsatisfactory', whilst 12% stated it is 'satisfactory'. Tapping is considered as a job of low social status, especially in the case of the younger generation. The JS of LH_{hired} mainly was dependent on salary and social prestige (Gunarathne et al, 2016). Since the overall JS level is significantly higher according to the Wilcoxon Rank Sum test ($W=49169$, $p<0.001$) in LH_{own} (71%) compared to LH_{hired} category (14%). However, the JS of both categories should be maintained at a high level for the sustainability of rubber farming.

Household income and assets

The LH_{hired} were paid under two main categories; namely, monetary (96%) and non-monetary (4%) paying system as 50% sharing of the rubber production, 58% of LH_{hired} were paid on a daily basis whereas about 38% of them on a monthly basis. The non-monetary benefit was transformed into a monetary value varied from LKR 200-850, with a mean of 75 LKR/day. The LH got a daily income as wages ranging from LKR 375-680, and the mean was LKR 560. Dissanayake et al., 2014 highlighted that LH were not satisfied with their wage rates. Household income refers to income received either in cash (monetary income) or in any kind (non-monetary income) by all the residents in a household. This includes wages and salaries and all the income generated by other sources such as agricultural and non-agricultural activities, other monetary receipts (social protection transfers), and returns from the business. The average household income of LH_{own} per month varied from LKR 17,890 to 78,200, and the mean was LKR 45,281. The monthly average household income of LH_{hired} varied from LKR 12,350-50,000, giving a mean of LKR 30,504, which is significantly lower than that of LH_{own} ($t= 25.42$, $p<0.001$). The percentage share of monthly income from latex harvesting to the monthly total household income was 26-50% for LH_{hired}, while only 7% of families had more than 76%. Everyone in the LH_{hired} category and 96% in the LH_{own} category were involved in activities other

Table 1: Age structure of the latex harvesters

Age structure of the farmers (years)	LH _{own}	LH _{hired}
<35	30	30
36–45	18	21
46–55	38	36
56–65	05	04
>65	09	09

Table 2: The comparison of the household expenditure of latex harvesters

Type of expenditure	LH _{own}	LH _{hired}	t-value
Clothing textiles and foot wear	580.00	250.00	36.00**
Communication	650.00	420.00	25.42*
Consumer goods and services	250.00	120.00	25.42**
Cultural activities and entertainments	1500.00	500.00	47.41**
Education for children	13584.30	11591.52	10.44***
Electricity	550.00	400.00	31.66*
Food and beverages	23500.00	18500.00	38.22***
Health expenses	800.00	400.00	59.42***
Household durables goods	1250.00	650.00	31.66**
Loans	600.00	1500.00	7.61**
Non-durable goods and services	150.00	100.00	41.66*
Overall expenses	46654.30	33991.60	26.59**
Personal care	600.00	250.00	46.22**
Savings	750.00	610.08	47.41***
Transport	1890.00	950.00	25.42**

*p < 0.05 **p < 0.01 ***p < 0.001

than latex harvesting, which contributed to household income. Results also revealed that LH possessed the assets such as a house with land, motor bicycle and three-wheeler. Everyone of LH_{own} category (100%) and nearly half of LH_{hired} category (56%) had their own house with a cement floor. But, LH in Ampara district had got own house with a cement floor (65%) (Munasinghe *et al*, 2019). The households in LH_{own} category had either a motor bicycle (67%) or a three-wheeler (14%), while only 47% and 8% of LH_{hired} category had the same, respectively.

Household expenditure

Nearly 30% of the total expenditure was made for food by both groups of households. LH_{own} (30%) and LH_{hired} (38%) of total expenditure spent for the education of their children. These results were aligned with the studies in Moneragala and Ampara districts (Munasinghe *et al*, 2019). All of LH tried to educate their children, expecting to find a white-collar job for them. The contribution for savings from monthly income was only 3% in LH_{own} and 2% in LH_{hired}, including payment for debts and seettu (i.e. money lending). Net savings by LH were comparatively low with other expenditure types (Munasinghe *et al*, 2019).

Expenses for food and beverages, education, clothing textiles and footwear, electricity, communication, transport, cultural activities and entertainments, personal care, health expenses, savings, consumer goods and ser-

vices, household durables goods and overall expenses were significantly higher in LH_{own} except for loans than those of LH_{hired} (Table 2). However, overall expenses of both types of LH were lower than expenditure. About 4% of the LH engaged in other income avenues because the rubber harvesting was not sufficient to cover the living expenses. Dissanayake *et al*, 2014 highlighted that most LH engaged in agricultural and non-agricultural jobs to enhance household income. The monthly household expenditure of both types of LH was higher than the monthly household income.

CONCLUSION

Income and expenditure of LH_{hired} were comparatively lower than LH_{own}. Therefore, attention should be paid to uplift the income status of LH_{own} in order to retain them in the rubber industry for the sustainability of the smallholder rubber sector.

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