

A study on the emerging labour relations in the rubber plantations of Tripura

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Abstract

Background: Tripura is the second largest Natural Rubber (NR) growing state in the country with plantations under both private and public sector. Studies have shown it as a viable economic proposition and NR is often considered as an engine of growth for the state economy. However, the global nature of the product and its associated market linkage are inducing new production relations, hitherto unknown, in the state.

Objective: The present study is an attempt to examine the nuances of the labour market in terms of employment relations, contractual arrangements and asset base of the workers in Tripura.

Methods: The study is based on cross sectional data, collected through primary survey using structured schedule from labourers of both public sector farms as well as private sector farms. Descriptive statistical tools and graphical representations are used for analysis and in order to understand the economic strength of the workers, an asset ownership index has been constructed using the monthly income as an input weight. Also a one-way ANOVA has been used to measure the differences in mean income of workers group, if any.

Findings: The study observes that the workers in the sector subsist at bare minimum level. Interestingly, the share workers have a marginally higher income than their compatriots. The score of asset index is also highest for the share worker among the workers.

Application/Improvement: The study found out that the existing labour relations have been undergoing a change with the emergence of a revenue sharing mechanism mainly in the TTAADC areas, which are mostly ST dominated and non-tribal workers are not available.

Keywords: labour, Share, Rubber Plantation.

1. Introduction

Tripura, one of the smallest sisters of the north eastern region of India, is characterised by low levels of industrialisation, poor infrastructure, unemployment and inflated population. The government both the union and state, has been in quest for sustainable economic activities which can effectively create employment and income opportunities. Rubber plantations were considered as such a way out. Historically, NR plantation was initiated as a part of afforestation by the state Forest department in 1963. In span of 50 years, the state has emerged as the 2nd largest rubber growing region of India with 83280 hectares of plantation, 46986 hectares of tappable area and 56380 tonnes of production in 2016-17 [1]. Tripura leads among the non-traditional rubber growing zone of India. This vital ingredient of modern civilisation has been regarded as one of the engines of growth and development of the state. It may be noted that the NR crop requires a specific agro-climatic condition for cultivation limiting its production to a few geo-specific pockets in the world, whereas demand for it accrues across the world. Additionally, the crop also requires an uninterrupted supply of skilled workers for long periods for economic viability and it may be noted that labour is regarded as the most important component of NR production accounting for more than 70% of the lifetime expenditure of a plantation unit [2, 3]. India has a very unique place in the world market being the 4th largest consumer and 4th largest producer of NR. In recent years, land saturation in the traditional zone Kerala has forced expansion of crop to other parts of the country including the North-East where potentials worth 650000 hectares have been identified by the National Bureau of Soil Survey and Land Use Planning, of which 200000 ha is in Assam and 100000 ha in Tripura [4]. Rubber Plantations in the Tripura had been prioritised by the state government as an effective means of rehabilitation of landless shifting cultivators since the 1970s.

State agencies like Tripura Forest Development and Plantation Corporation Ltd (TFDPCL) and the Tripura Rehabilitation Plantation Corporation Ltd. (TRPCL) introduced the beneficiary model of rubber plantations with active support from the Rubber Board. The activities of the Rubber Board in the state received a great impetus following the introduction of the Cash Subsidy scheme and operation of the scheme of Accelerated Rubber Development in the North-East. The initiation of the much acclaimed 'Tripura Block Plantation Project' by the Rubber Board in collaboration of the Department of Tribal Welfare, Govt. of Tripura with sponsorship from the World Bank in 1992-93 gave further fillip to the growth process. All these government projects attempted to tap the labour latent in the beneficiary households and promoted family farms. On the contrary, market dynamics in later periods led to the growth of rubber plantations under private ownership, which unlike the government programmes depended on hired labour. The boom in the NR sector saw huge investments in rubber plantation sector and the first decade of 21st century saw large number of private small holdings being set up in the state. These farms are often the handiwork of people involved in other economic activity and are synonymous with investment capital. These farms depend on hired labour and have been instrumental in raising the demand for labour in the rural parts of the state in recent years. As a result, in Tripura we have various categories of rubber farms now- a) Public Sector units – owned and managed by TFDPC using hired labour; b) Private farms- using hired labourers; c) Private Family small holdings & d) Beneficiary farms- using family labour.

Labour issues in agriculture have been a popular subject but specific studies on labour issues on NR plantation have not been very substantial and whatever little have been, are mostly concentrated within the framework of the traditional rubber growing zone of India, Kerala. In rubber smallholdings of Kerala, diminishing size of operational holding has led to reduced tapping task in a unit forcing the tapper to attach himself to more than one grower. Piece rate wage payment system has been in practice and the wage received by the workers are often lower than other comparable activities leading to withdrawal of skilled and experienced labourers from the market [5,6]. The labour contracts in practice were mostly informal and personal in nature and were generally for one year and without any legal bindings. There also exists an inter-linkage between the growers and tappers regarding the wage payment system. Weekly advances were the most common means of wage payment and the amount of wages were a function of tapping task, level of skill, experience of tappers, years of service with particular growers and reputation of the tapper in the locality. It is however observed that during price volatility of NR, growers adopted cost saving mechanisms by cutting down hired labourers as well as tapping days. As a result, the workers subsisted at bare minimum and worked mostly on the basis of weekly advances which made them voluntarily tied to the growers [7]. Owing to the fall in the real wages, the master tapper often withdrew from tapping and the entire task of tapping depended on the assistant which often affected productivity [8]. It has been further observed that in Kerala, for the period from 1980-81 to 2007-08, real farm income grew at a higher rate than that of wages indicating greater appropriation by the growers/owners [9]. The sector has also failed to attract the younger age labourer due to the entry barriers like early working hours and social stigma that is attached to the job and labour shortage in the rubber plantation sector of Kerala has evolved over the years owing to the loopholes in the policy options that were initiated by [10]. Efforts of introducing labourers from the North East region into to the plantations of Kerala has helped but in a very minimal way [11].

Moreover, implementation of various poverty alleviation and employment guarantee programmes like MGNREGS has often led to worker scarcity in plantations [12]. It is true that literatures mostly confined to the traditional zone and the dynamics of rubber cultivation in Tripura is quite different from that of Kerala. There are significant differences in productivity [13], agro-climatic conditions, cultural practices, relation of production and alike. The well-coordinated efforts of the various rubber augmenting agencies like Rubber Board, Tripura Forest Development and Plantation Corporation Limited (TFDPC) and Tripura Rehabilitation Plantation Corporation Limited (TRPC) have shown remarkable results in the socio-economic welfare of the targeted beneficiaries, particularly the scheduled tribes [14] [15]. The booming prices of NR in the international as well as domestic market had led to a growing interest of the private investors which caused a shift from the traditional agrarian economy based on food crop production to cash crop cultivation [16]. Labourers in the rubber farms of Tripura have been in the sector mostly due to limited alternative opportunities and subsist on bare minimum [17]. However, with the ongoing slump in the rubber economy since 2013, the rubber plantation sector in the country has been going through a transition and Tripura is no exception.

New modes of production relations are emerging [18,19], whereby the labourer, instead of being paid wages it is being remunerated with a share of the output. This phenomenon is akin to the system of share cropping in traditional agriculture. As per this, the labourers (rubber tappers) and the owners generally share the output, be it latex or sheets. However, literatures on the labour issues of plantation in the non-traditional region are limited and more concerned about the general economic underpinnings like production, productivity and profitability [20-22]. The present study is an attempt to fill the existing void.

2. Objectives and Methodology

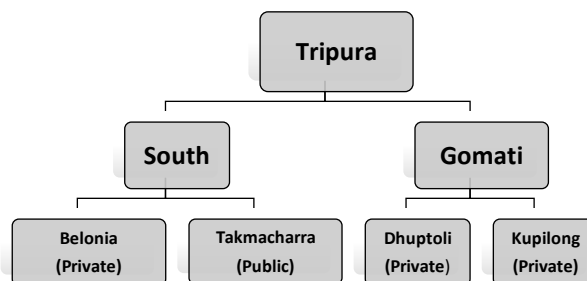
The broad objective of the paper is to explore the various dimensions of the labour relations in the rubber plantation sector of Tripura and the specific objectives of the study are as follows-

1. To study the employment relations of the labourers working in the different plantations of Tripura.
2. To explore the contractual arrangements of the labourers in the different rubber plantation system in Tripura.
3. To study the asset base of labourers working in the plantation sectors.

In order to fulfil the stated objectives a field survey was conducted in the most prominent rubber growing region of the state using a structured questionnaire, the erstwhile South Tripura district. The sample consisted of representatives of the workers of the public sector farms as well as from private farms. In order to draw the samples, we have used [23] technique of ‘randomising the population rather than randomising the sample’ in order to find out only workers without any kind of rubber plantation ownership either on private capacities or as beneficiaries of the government projects. Necessary statistical tools and graphical representations are used to analyse the primary data. A Single factor ANOVA has been done to check the differences in annual income, if any, of the three categories of workers. To understand the asset base of the tappers, an asset ownership index [24,25] has been estimated. The information on the ownership of the seven assets (land, cow, goat, pig, poultry, mobile, bicycle) has been considered. The possession of an asset is recorded as 1 and 0 for otherwise. The correlation between the monthly income of the tappers and ownership of these assets were taken as weights to obtain the asset index as below-

Asset ownership index = $[(r1*land) + (r2*cow) + (r3*goat) + (r4*pig) + (r5*poultry) + (r6*mobile) + (r7*bicycle)]/7$, Where r1, r2, r3, r4, r5, r6, r7 are the value of the correlation between monthly income and the possession of the respective assets. Further, the asset index was normalised using the formula- (Observed value – Minimum value) / (Maximum value – Minimum Value); here the first five assets listed above are considered as production asset and the last two as consumption assets. Further, production and consumption asset index has been similarly constructed. The value of the index ranges between 0 and 1.

3. Sampling frame



South Tripura district (recently bifurcated into Gomati and South Tripura) has a very unique association with rubber plantation in the state. Historically this district was among the place where trial exploration of rubber cultivation was initiated. Tripura Forest Development and Plantation Corporation (TFDPC), the largest public sector rubber plantation unit in India has 52 rubber plantation centres across the state of which we have considered Takmacherra in Bokafa RD block under South Tripura district. It is one of the earliest rubber plantation centres of TFDPC, started in 1977 with 45 hectares of land.

The centre at present has 410.70 hectares of land under crop where 84 tappers were employed for tapping. The sample of private rubber plantation has been drawn from Belonia, Dhuptoli and Kupilong. Belonia is the district town and the head quarter of South Tripura district. However, the peri-urban areas have sizeable rubber plantations. Dhuptoli village, presently in Gomati district falls within the ambit of the Tripura Tribal Areas Autonomous District Council (TTADC) and is largely inhabited by the tribal populace. Rubber plantation in the locality started in 1990s to rehabilitate the former shifting cultivators through the beneficiary model using family labourers. However, in course of time many private rubber plantations have come up in the area using hired labourers. Kupilong village is also part of the Gomati district and has a mixed population. It is around 10kms from the district headquarters Udaipur and has large areas under rubber plantations under private ownership. The region witnessed insurgency problems in the 1990s and early 2000s, as a result the plantations and the local economy suffered. However, law and order has improved in the last 10 years and plantations have blossomed. This study is structured into four sections including this Introduction. Analysis of Data is presented in the second section, while the third segment provides a Discussion followed by concluding remarks in the last part.

4. Results and Data Analysis

1. Profile of rubber plantation workers

The rubber plantation workers are mostly male as observed and among the total 125 respondents, only two workers are female. Most of the sample respondents, 85.6 %, belong to the Scheduled Tribes households, practice Hinduism (73.6%) and are holders of the BPL ration card (52.99%). It is further observed that all the share worker households belong to ST category and are predominantly Hindus and belong to the BPL section of the society.

Table 1. Basic statistics of sample households (in Numbers)

		WW	SW	PSW	Aggregate
1	Gender				
1a	Male	82(100)	12(100)	29(93.54)	123(98.40)
1b	Female			2(6.45)	2(1.60)
	Total	82(100)	12(100)	31(100)	125(100)
2	Community				
2a	ST	69(84.15)	12(100)	26(83.87)	107(85.60)
2b	SC	3(3.66)		2(6.45)	5(4)
2c	OBC	3(3.66)		1(3.23)	4(3.20)
2d	Others	7(8.54)		2(6.45)	9(7.20)
	Total	82(100)	12(100)	31(100)	125(100)
3	Ration Card				
3a	APL	23(28.05)	3(25.0)	18(58.06)	44(35.2)
3b	BPL	45(54.88)	7(58.33)	10(32.26)	62(46.6)
3c	Antodyay	10(12.20)	1(8.33)		11(8.80)
3d	No Response	4(4.88)	1(8.33)	3(9.68)	8(6.40)
	Total	82(100)	12(100)	31(100)	125(100)
4	Religion				
4a	Hinduism	54(65.85)	7(58.33)	31(100)	92(73.60)
4b	Islam	2(2.44)			2(1.60)
4c	Christian	26(31.71)	5(41.67)		31(24.80)
	Total	82(100)	12(100)	31(100)	125(100)
5	Age				
5a	Mean	27.3	26.91	37.03	29.2
5b	Max	53	35	52	53
5	Min	16	19	22	16
6	Average Family Size	4.47	4.58	4.03	4.4
7	Average Earning Members/ HH	2.05	2.33	1.77	2

Source: Primary Survey, 2016

Figures in parentheses indicate percentages

Notes: WW-Wage worker, SW-Share worker, PSW-Public sector worker

The average age of the rubber plantation tappers for public workers is much higher than the wage workers and share workers respectively. The oldest person of rubber worker is a wage worker (53 years) alike the youngest worker who is 16 years old. The average family size of the rubber worker's household is 4.4, with the largest number coming from share workers (4.58) as compared to the wage workers (4.47) and public workers (4.03). The largest family among the respondents have eight members and the smallest family has two members only. Share worker households, have an average of 2.33 earning members which are highest among the sample representatives while the wage workers (2.05) and public sector workers (1.77) follow.

2. Working Profile & Conditions

From Table 1 and 2, we find that 48 % of the rubber workers have been working in rubber plantation for a period above 1 year but less than 5 years. Among the share workers, nearly 67 % of sample belongs to this category, followed by wage workers, accounting for 62 % while only 3 % of public sector workers fall in this least experienced category. The work experience of 6-10 years catered to 23.20 % of the workers while 11-15 years accounted for 12 %. Interestingly for 16 years and above we have slightly higher representatives than the previous category, 16.80 %, owing to large number of public sector workers who have been working under for quite some time. In this context, we may note that the most experienced workers are from Takmachhera, TFDPC centre, as wage earners. However, the share workers are the least experienced among the lot and it is interesting to note that we have a share worker with more than 11 years of experience, however not all of that has been as a share worker.

Table 2. Work Experience (in Years)

Experience	WW	SW	PSW	Aggregate
1 to 5	51(62.20)	8(66.67)	1(3.23)	60(48)
6 to 10	19(23.17)	3(25)	7(22.58)	29(23.20)
11 to 15	8(9.76)	1(8.33)	6(19.35)	15(12)
16 and above	4(4.88)		17(54.84)	21(16.80)
Total	82(100)	12(100)	31(100)	125(100)

Source: Primary Survey, 2016

Notes: Figures in parentheses indicate percentage

Notes: WW-Wage worker, SW-Share worker, PSW-Public sector worker

The more than 58 % of the respondents have received training in rubber plantation activities though at different time periods. The proportion of trained workers is highest among the public workers where almost 81 % are trained while only 56 % wage workers and 17 % share worker are trained. It should be noted that training of the workers is a positive function of the rubber productivity as well as enhancing worker's skill. Table 3 shows the source and duration of training of the rubber plantation workers in the state. It can be seen that 45.21 % of workers have been trained by the Rubber Board, while 34.25 % of workers learnt the skills of tapping from TFDPC and 19.18 % have acquired the skill from private initiative.

Table 3. Source and duration of Training (in Numbers)

1	Source of Training	WW	SW	PSW	Aggregate
1	Rubber Board	29(63.04)	2(100)	2(8)	33(45.21)
1a	TFDPC/TRPC	2(4.35)		23(92)	25(34.25)
1b	Private	14(30.43)			14(19.18)
1c	NGO	1(2.17)			1(1.37)
	Total	46(100)	2(100)	25(100)	73(100)
2	Duration of Training				
2a	≤ 7 days	7(15.22)			7(9.72)
2b	8 to 15 days	8(17.39)	1(50)		9(12.50)
2c	16 to 30 days	27(58.70)	1(50)	18(75)	46(63.89)
2d	Above 30 days	4(8.70)		6(25)	10(13.89)
	Total	46(100)	2(100)	24(100)*	72(100)

Source: Primary Survey, 2016

Figures in parentheses indicate percentage;

Notes: WW-Wage worker, SW-Share worker, PSW-Public sector worker

1 Public sector workers did not inform

The table further shows that more than 50 % of the workers had 16 to 30 days of training while 13.89 % got training for above 30 days and 12.50 % of the workers have learnt their skill for a time span of 8 to 15 days. Apart from that among the wage workers more than 50 % of them have learnt the skills of tapping from the Rubber Board while 90 % of the public workers learn the skills from either TFDPC or from TRPC, the two most prominent public rubber plantation units in the state. The two share workers who have learn skills also learnt from Rubber Board

Table 4 shows the reasons and the motivation that induced them to work as rubber tapper. It can be seen from the table that more than 70 % of the workers have reported that lack of alternative work cajoled them to join in the present work, while 20.80 % of the workers have the view that greater leisure time in the work persuaded them to enter in the current vocation. The remaining 7.20 % stated that regularity of work, wages and benefits encouraged them to join as rubber tapper. The workers also mentioned that family members and friends (31.20%) have helped them for the current vocation followed by their self-initiatives (27.20%). The plantation owners (24%), neighbours and villagers (12%) and trade union (5.60%) have also been of help for the remaining in selecting this current vocation. Lack of alternative work has been the prominent cause for all these categories of workers. Interestingly, self-initiative has been the greatest motivator for joining rubber plantation for public sector workers, while for share workers, it is the plantation owners who coaxed them to be a shareholder and join plantation activities. On the other hand, it was family and friends who had the greatest contribution in encouraging the private workers foray into this field.

Table 4. Reasons and sources of support for working as tapper (in Numbers)

	Causes and Sources	WW	SW	PSW	Aggregate
1	Reasons for taking the current job				
1a	No alternative job	54(65.85)	6(50)	30(96.77)	90(72)
1b	For Regular work, wages and Benefits	5(6.10)	3(25)	1(3.23)	9(7.20)
1c	More leisure time	23(28.05)	3(25)		26(20.80)
	Total	82(100)	12(100)	31(100)	125(100)
2	Persons/ institutions provide help to join				
2a	Family members & Friends	36(43.90)	3(25)		39(31.20)
2b	Self-initiative	10(12.20)	1(8.33)	23(74.19)	34(27.20)
2c	Neighbours & Villagers	12(14.63)	3(25)		15(12)
2d	Plantation owners	24(29.27)	5(41.67)	1(3.23)	30(24)
2e	Trade Union			7(22.58)	7(5.60)
	Total	82(100)	12(100)	31(100)	125(100)

Source: Primary Survey, 2016

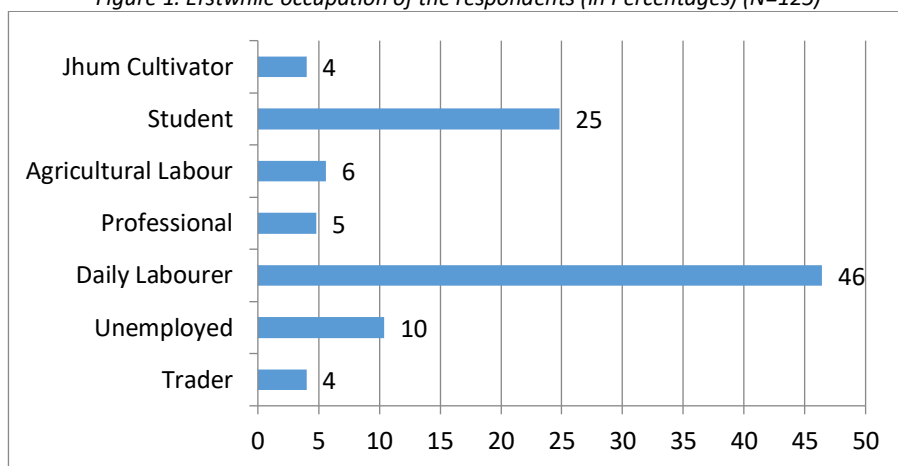
Figures in parentheses indicate percentage

Notes: WW-Wage worker, SW-Share worker, PSW-Public sector worker

Figure 1 states the occupation of the workers before joining in the rubber plantations in the state. It can be observed from the figure that out of the total workers a majority (46) of them worked as daily labourers. Students have been the second most common activity. Rubber tapping is the first job for 10% of the respondents. Further it may be noted that before working in rubber plantations most of the wage and share workers were daily labourers, while the workers in public sector unit were unemployed and jhum cultivators. Figure 2 shows that the nature of contracts prevailing among the workers in the state. It can be noted that contracts between the workers and the owners are oral in nature. It can be observed that most (59%) of the workers have seasonal contracts followed by annual (34%) and permanent (7%) agreements. It is to be noted that the workers have the freedom to work with other owners but due to time constraint they are not able to work. Most of the share and wage workers have seasonal contract with the owner.

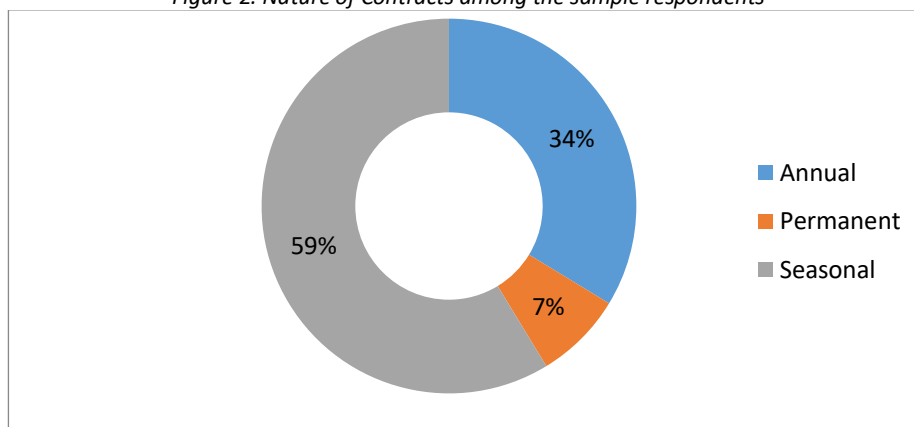
It may note that by seasonal we mean contracts are for the season, i.e, the period of tapping with breaks during the lean period, whereas by annual contracts are for one year and include the tapping break also, where the workers are assigned maintenance work.

Figure 1. Erstwhile occupation of the respondents (in Percentages) (N=125)



Source: Primary Survey, 2016

Figure 2. Nature of Contracts among the sample respondents



Source: Primary Survey, 2016

Table 5. Annual employment in rubber plantation

Working days	WW	SW	PSW	Aggregate
≤130	2(2.90)		1(3.23)	3(2.68)
131-180	28(40.58)	6(50)	1(3.23)	35(31.25)
181-240	19(27.54)	3(25)	21(67.74)	78(69.64)
241-290	9(13.04)	3(25)	7(22.58)	19(16.96)
≥291	11(15.94)		1(3.23)	12(10.71)
Total	69(100)	12(100)	31(100)	112(100)
Mean	210.18	205.75	231.96	
Coefficient of variation	25.37	22.59	13.33	
Max	300	290	300	
Min	112	160	130	

Source: Primary Survey, 2016

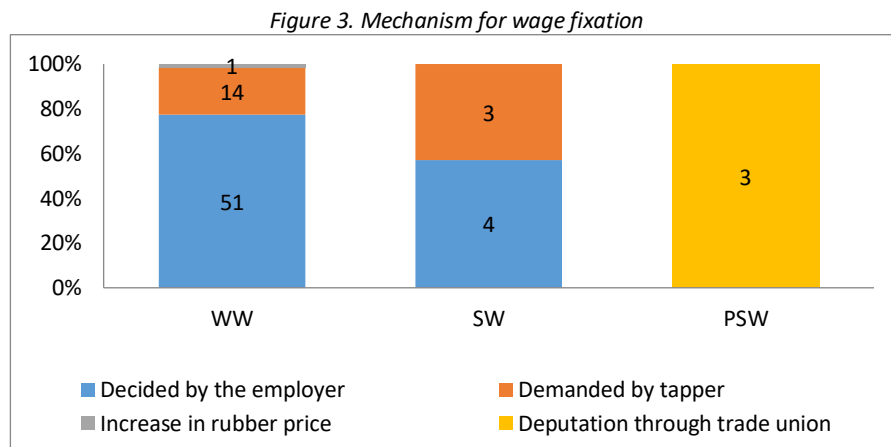
Notes: Figures in parentheses indicate percentage

Notes: WW-Wage worker, SW-Share worker, PSW-Public sector worker

Table 5 states the annual working days of the workers in rubber plantations of Tripura. It can be seen that 69.64 % workers have worked in between 181 to 240 days in a year while only 2.68 % of them have worked less than 131 days. It can also be observed that mean annual working days is highest for workers in public sector (231.96) while it is lowest for the share workers (205.75). Further more than 15 % of the wage workers have worked for more than 290 days while only one public worker did so.

The highest number of working days for the share worker is 290 days. It is also to be noted that most of the wage workers have worked between 131 to 180 days, while most of the public workers worked in the range of 181 to 240 in a year.

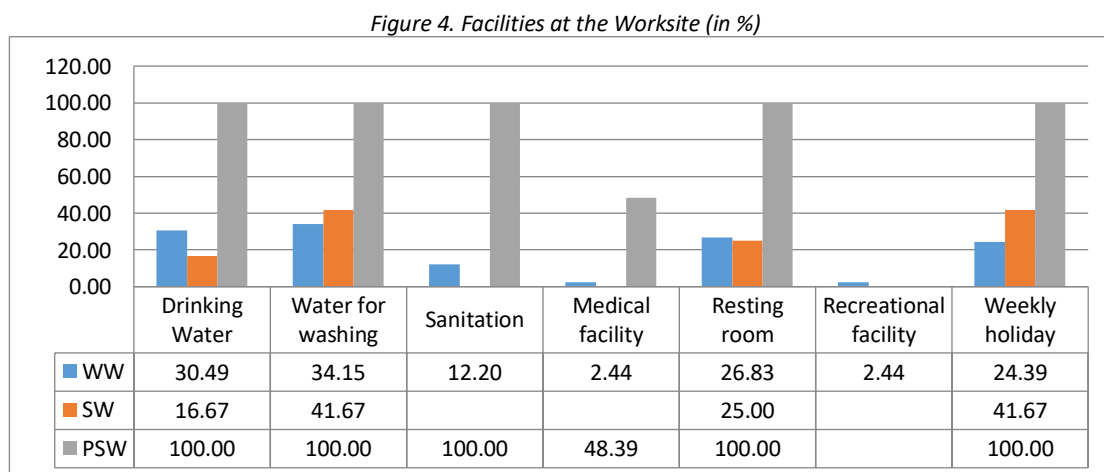
Figure 3 explains wage fixation mechanism of rubber plantation workers in Tripura. It is to be noted that out of the total 72 % of the labourers mentioned that the wages were determined and decided by the owners of the plantations. The remaining 23 percent have the view that owners set wages depending on what they demand, while only 1 % labourers have a view that it depends on rubber price. Most of the wage and share workers stated that the wages are fixed by the owner himself and second most prominent factor of their wage fixation is demand that they make. However, the workers in public sector said that trade union has the significant role in their wage fixation.



Source: Primary Survey, 2016

Note: WW- Wage worker, SW-Share worker and PSW- Public sector workers

Figure 4 explains the facilities available for the workers in the worksite. Most of the workers in the public sector have stated that they were receiving facilities in much larger proportion than that of other category of workers. The response rate was 100% except for medical facility and recreational facility. This is possibly due to the implementation PLA, 1951 in the rubber plantations units under the public sector. It can be seen that 41.67 % share workers had the facilities like water for washing and weekly holiday, while 25 % have resting room and 16.67 % of the workers have drinking water facilities at the work site. In the case of wage workers, the numbers of facilities were more but the extent of receipt were less. Drinking Water availability was reported by 30.49% while water for washing, resting room and weekly holidays were entitlement for 34.15%, 26.83% and 24.39% respectively. Sanitation, medical facility and recreational facilities were also received by a few wage workers.



Source: Primary Survey, 2016

Note: WW-Wage worker, SW-Share worker, PSW-Public sector worker

3. Income, incentives and assets

Table 6 states annual wage earnings of the workers in rubber plantations of the state. It can be seen that mean annual income of the share worker is higher in comparison to wage and public sector workers. Moreover, there are significant differences between the average annual incomes of the three categories as revealed by single factor ANOVA ($F=8.363$, $p= 0.00$; $df- 2, 114$). Surprisingly, the nominal incomes of the Public Sector workers are the least, but they enjoy additional benefits and incentives, which augment the real income. The annual income range is highest for wage workers while it is least for the workers of public sector, which indicates higher variation of income in case for wage workers. It can also be stated that coefficient of variation of the wage worker is higher in comparison to share and public sector workers. It is further observed that out of 117 workers 27 of them, each, earn annually in the range of `24001-30000 and `48001-54000 respectively. The maximum income among the respondents has been `75000 per annum, while the least is `10000, earned by a wageworker, who has worked part-time as a tapper.

Table 6. Annual wage earnings from Rubber Plantations (in Numbers)

Income range	WW	SW	PSW	Aggregate
Below 24001	5(6.76)	1(8.33)	2(6.45)	8(6.83)
24001-30000	18(24.32)		9(29.03)	27(23.05)
30001-36000	3(4.05)		9(29.03)	12(10.25)
36001-42000	12(16.22)	4(33.33)	3(9.67)	19(16.23)
42001-48000	5(6.76)	3(25)		8(6.83)
48001-54000	18(24.32)	1(8.33)	8(25.80)	27(23.07)
54001-60000	10(13.51)	3(25)		13(11.11)
Above 60000	3(4.05)			3(2.56)
Total	74*(100)	12(100)	31(100)	117*(100)
Mean	42236.48	44183.33	35876.12	40750.93
Coefficient of variation	32.3	25.4	27.52	
Max	75000	58300	50400	75000
Min	10000	16500	22400	10000

Source: Primary Survey, 2016

Figures in parenthesis indicate percentage

Notes: *- 8 wage workers did not reveal their income figures;

Notes: WW-Wage worker, SW-Share worker, PSW-Public sector worker

Table 7. Additional Benefits and Incentives enjoyed by the workers (in %)

Type	WW	SW	PSW
Bonus	48.78	16.67	93.55
Incentives	1.22	8.33	90.32
Sick Leave	1.22		77.42
Rainy day allowance	19.51		83.87
Paid holiday	1.22		83.87
Sweater/jumper		8.33	90.32
Hunting shoes	1.22		90.32
Dresses	2.44		
Contingency loans	36.59	25	
Advances for medicine	1.22	25	

Source: Primary Survey, 2016

Notes: WW-Wage worker, SW-Share worker, PSW-Public sector worker

Table 7 depicts the other benefits and incentives that the workers are receiving other than wages. The table shows that the workers in the public sector have been enjoying most of the benefits. Among the wage workers only 48.78 % of them have received bonus followed by contingency loans (36.59 %) and rainy day allowance (19.51 %). In the case of share workers only 16.67 % stated that they have received bonus, while 25 % stated to receive contingency loans and advances for medicine. However, it is to be noted that very low proportion of wage and share workers have received the facilities like incentives, sick leave, paid holiday, hunting shoes, dresses and sweater or jumper.

Table 8. Assets possession of the worker

Assets	WW	SW	PSW	Aggregate
Mobile	71.95	75.00	64.52	70.4
Cow	14.63	25.00	54.84	25.6
Goats	6.10	8.33	61.29	20
Pigs	23.17	41.67	67.74	35.2
Poultry	35.37	16.67	6.45	26.4
Land	80.49	91.67	64.52	76.8
Bicycle	41.46	33.33	16.13	34.4

Source: Primary Survey, 2016

Note: WW-Wage worker, SW-Share worker, PSW-Public sector worker

Table 8 states the asset possession for the workers in rubber plantation of Tripura. It can be seen that 76.8 % tapper households possess land owing to 91% and 80% response from share workers and wage workers respectively. Mobile phones are in possession of 70.4 % households. Ownership of pigs (35.2 %) comes next followed by bicycles, which are owned by 34.4 % while poultry are in possession of 26.4 % households. The possession of Cow and Goat are 25.6 % and 20 % respectively. Table 9 shows the asset ownership index for the workers. It is observed that share workers have the high aggregate index value (0.729) followed by public unit workers and wage workers respectively. In case of production asset too share workers have the highest index score as compared to other two categories of worker. However, in case of consumption asset index, public sector workers are at the top followed by share workers and wage workers.

Table 9. Asset ownership index

Asset index	WW	SW	PSW
Production asset	0.573	0.843	0.456
Consumption asset	0.444	0.491	0.740
Aggregate asset	0.559	0.729	0.576

Source: Computed from primary Survey, 2016

Note: WW-Wage worker, SW-Share worker, PSW-Public sector worker

5. Discussion

The rubber plantation sector in Tripura involves more than 57000 households, which is a definite proof to mark its importance in the economy of a small state like Tripura. The sector is growing further with newer areas maturing for latex production. Naturally, one can realise that the need for labour is also on the rise, particularly because most of these new plantations are under private sector and have been built with the perception of using hired labour. It may be noted here that in Tripura we have the TFDPC plantations where workers have their pre-assigned task and the tapper finishes off his work by depositing the collected latex to the processing centre. The tapper is paid for his services of tapping and bringing the latex to the processing centre, where different set of persons take up the work of transforming the latex to sheets or block rubber. However, the scenario is different in the private sector smallholdings. The workers have a dual assignment of tapping and processing alike Kerala. A worker is supposed to put the latex in the sheet for coagulation and arrange for the drying of erstwhile coagulated sheets in the processing centre.

We may also note that there are a few private sector farms who sell off the latex and do not have any processing facility; in such farms the assignment of the workers are alike that of TFDPC workers. It is because of this difference the term worker and not tapper is used for identifying the labourers in the present study. The third category of worker is the share worker visible in recent years particularly after the recession in the international and domestic rubber sector since 2013. Revenue sharing unlike traditional agriculture is observed particularly in the TTAADC areas and among the ST community. Some ST Farm owners, often beneficiary of an earlier rehabilitation scheme appoints worker for tapping as he/she is unable to perform this arduous task personally. The worker generally taps the trees and collects the latex and then deposits it to the processing centre or sells it to the intermediaries/traders. The value of latex is determined on the basis of the dry rubber content and the received revenue is shared between the worker and the owner in 50:50 ratios. It is the onus of the worker to find out the prospective buyer though he does not share any input cost like fertilisers, which are borne by the owner, if at all. It may be noted here that with the declining prices of rubber since 2013, cultural practices are being compromised by the workers. It is interesting to note that crop-sharing contractual arrangement in rubber is pretty common in Thailand and Malaysia, but is not reported in Kerala. The owners have opined that they prefer crop sharing to ease out the risk of falling prices and it is also a means to attract workers. In this context, we may note that the average annual earnings from rubber plantation have been highest among the share workers as compared to the two other categories, even though they have lesser number of working days. Such a scenario is in tune with Marshall's model of share tenancy [26], which is considered inefficient owing to sub-optimal use of labour, resulting in lesser production. The income earned by the share worker is higher than that of the wage worker even though the former uses lesser quantity of labour, however, the quantity of surplus appropriated by the landowner decreases. In the rubber plantations of Tripura, such a scenario is emerging, particularly in areas where the number of able bodied workers is on the wane. It is to be remembered here that there have been several instances of family farms appointing hired labourers in the late mature phase of plantation as the second generation of the owners have moved away to some other place and to some other vocation.

It is true that most of the respondents in the present study belong to the ST category but it is beyond doubt that the labourers in rubber plantations come from all communities. The public sector plantations generally have more ST workers owing to their locations but among the private sector plantations, we find non-tribals who have been international migrants and agricultural labourers by profession. The labour force is generally male dominated unlike increasing share of females in Kerala [27] mainly because of larger presence of males in the rural society due to limited out migration and limited employment opportunities. The comparatively higher age of the public sector workers is obviously due to the longer years of establishment of the public sector plantation units. On the other hand, the wage workers and share workers are mostly young owing to the lower age of their respective plantation. The higher levels of education among the younger population are also visible which is certainly due to the institutional efforts of the government to spread education and increase literacy. It may be noted that the public sector workers are from Takmacherra, which is one of the oldest rubber plantation site in the state, thus it is obvious that workers from that region will be comparatively older and less educated.

Further, public sector rubber plantation units have not come up in recent years across the state, thus chances for younger workers in these public units are therefore limited. However, the rubber plantation worker lives on bare minimum. The quality of life enjoyed by them is certainly not impressive. Census 2011 figures from the sample region show that the respondent household had better drinking water and electric facility than the district average while in terms of sanitation system, the respondents were worse off in comparison to the district average. Regarding the working conditions and situation of the workers, we find that the wage workers are mostly new entrants to the sector and plans to stay in the sector as they do not have much alternative. The agrarian economy of Tripura is undergoing a transition towards commercial crops as a result opportunity in traditional agriculture is declining. Moreover, limited industrialisation lack of service extension restricts gainful migration. Thus labourers consider rubber sector work as a long-term survival strategy for its regularity of work, though per day wage is often less than that of unskilled worker. We may note here that the labour market in Tripura's rubber plantation sector is akin to that of Kerala, which is characterized by personalisation of contracts. A typical Principal-Agent Mechanism or Agency theory framework is visible with informal and oral contracts coupled with additional benefits including loan advances.

The landowner offers loans to the workers (tapper) as a labour tying mechanism, which the latter accepts due to lack of alternative. Such a scenario is also seen in Tripura but with limited extent as almost 37% of the wage workers and 25% of share workers attest to facility of contingency loan from the owner. The owner, in order to maximise their own benefits often take pains in training the tapper about quality work, which significantly adds to the productivity. Again, the facilitation of training not only improves the worker's skill, but also improves his position in the job-market. He stands a better chance for recruitment in the next season. However, the most surprising thing is that there are no wage differentials due to skill, as we find the wage being similar irrespective of experience and training. The principal and agent in most cases coexist in harmony and an intervention of the trade unions in fixation of wage in the small holdings is rare. The owners are more powerful in setting the wage which are however similar in a particular region and do not vary from farm to farm. However, the interventions of Trade Unions in TFDPC plantations are immense and they range from wage fixation to selection of new workers also. It may be noted all the respondents from the public sector plantations were members of the Tripura Rubber Sramik Union (TRSU) affiliated to the Centre of Indian Trade Unions (CITU). The memberships of trade unions were often part of livelihood strategy of the workers as they prefer being in the good-books of the ruling political party for various governmental schemes and support.

As mentioned earlier, the workers lead a meagre existence and are often in the lookout to augment their income. Part-time engagements are common among the private sector workers and share workers and accordingly, we find their greater investment in productive assets in order to generate additional income. The public sector workers, on the other hand, are more stable in-terms of extra pecuniary benefits and associate support from their employer as part of PLA backup. These Rubber Board mediated labour welfare schemes are almost absent among the private holdings often because of it being an illegal plantation beyond the purview of the Rubber Board interventions.

6. Conclusion

The importance of the rubber plantation sector in the economy of Tripura is beyond doubt of any but the recession that has set in since 2013 is emerging as a worry for the stakeholders. With more and more plantations attaining maturity in the coming years, the sector calls for attention. An important stakeholder in the sector, workers or labourers, appears to be in real distress. The owners of the plantations, as a cost saving mechanism, often changes the frequency of tapping from every alternate day to every third day, as a result the number of workdays for the tapper are reduced which ultimately effects their income and livelihood. Such a scenario is very common among the small plantations, while the workers in the TFDPC plantations appear to be more stable against such vagaries of rubber price. The cushion of the PLA regulation has made them less vulnerable as compared to the wage workers. The emergence of the revenue sharing mechanism is purely a crisis management step of the small holders, who would otherwise suffer even more. The hired share worker is often a relative and tied to the farm owner.

This concept of revenue sharing is found in the TTAADC areas, which are purely ST dominated and where non-tribal workers are neither available nor possible to be sent due to legal bindings. Labour shortage is certainly brewing in those regions though not in as epic proportions of Kerala. However, one cannot deny the fact that emergence of revenue sharing mechanism will be adversely affecting the economic fortunes of the small holders. Thus, it becomes very important for the state to devise careful strategies to augment the size of the labour market. A mechanism of welfare for wage workers beyond the purview of PLA has to be thought off. For the immediate result, illegal plantations may be legalised with penalty and workers of such plantations be provided with the welfare mechanisms of the Rubber Board. Nevertheless, to sum up, we hope that the labourers in this sector will be better off in recent future with the existing and new policies of Rubber Board reaching ground level.

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The Publication fee is defrayed by Indian Society for Education and Environment (www.iseeadyar.org)

Cite this article as:

Pradip Chouhan, Vanlalrema Kuki, Indraneel Bhowmik. A study on the emerging labour relations in the rubber plantations of Tripura. *Indian Journal of Economics and Development*. April 2019, Vol 7 (4), 1-14.

Received on: 15/11/2018

Accepted on: 27/03/2019