

CHAPTER IV : Employment And Production In Tea Industry.

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4.1 Employment Trends

The growth in employment is one of the important aspects which directly influences the industrial relation system of any industry. In tea industry it is more important, because most of the tea gardens are located in backward regions and the workers are permanently settled in tea garden areas. They are isolated from urban industrial complex. Moreover, education has not developed among the children of the workers. Consequently, tea gardens are the only source of employment for the new generation. From this point of view, creation of the scope for employment for the new generation is very much important.

In this part of the chapter we have estimated the employment trends in the tea industry of West Bengal under two phases. In the first phase, we have taken 41 years period, 1901 to 1941, data on employment of labourers in the tea gardens of Darjeeling (including Terai) and West Bengal during the period 1901 to 1941 are presented in Table 4.1.

Table 4.1

Total labour force in tea gardens (Darjeeling and All West Bengal) 1901-1941

Year	Area (in hectares)		Labour		Labour per hectare	
	West Bengal	Darjee- ling*	West Bengal	Darjee- ling	West Bengal	Darjeeling
1901	51,851	20,932	1,09,070	40,451	2.10	1.93
1911	57,620	20,836	1,14,876	39,561	1.99	1.90
1921	69,482	23,837	1,38,274	48,710	1.99	2.04
1931	80,634	27,186	1,80,518	63,665	2.24	2.34
1941	78,890	25,565	2,11,086	69,699	2.68	2.74
% in- crea- se over - 1901	52.14	22.13	93.53	72.30	27.62	41.97

*Including Terai.

Note : Area has been converted from acres to hectares using
1 hectare = 2.4710581 acres.

Source : Data compiled from Ashok Mitra, Census of India
1951, Vol. VI, Part 1A (West Bengal), Sikkim and
Chandernagore, Report, Government of India, Calcutta,
1953, pp. 263 and 266.

Table 4.1 shows that in West Bengal area under tea increa-
sed by 52.14 per cent and labour force increased by 93.53 per-
cent during the period 1901 to 1941. While in Darjeeling area
under tea and labour force increased by 22.13 per cent and
72.30 per cent, respectively during the same period of time.
The labour per hectare also showed an increasing trend. In

West Bengal it increased from 2.10 in 1901 to 2.68 in 1941, while in Darjeeling the same increased from 1.93 to 2.73 during 1901 to 1941.

In order to estimate the growth pattern of employment with respect to area we have first found out the annual growth rate of employment and area.* Next the gross employment area elasticity (Eg) is computed by dividing the growth rate in employment by growth rate in area under tea during the same periods.

The estimated annual growth rate of employment and area under tea during the period, 1901 to 1941 are presented in Table 4.2.

Table 4.2

Annual Growth Rate of Labour Employment and Area
1901-1941

Year	Labour		Area	
	West Bengal	Darjeeling	West Bengal	Darjeeling
1901-1911	0.52	(-)0.22	1.06	(-)0.05
1911-1921	1.87	2.10	1.89	1.37
1921-1931	2.70	2.71	1.50	1.31
1931-1941	1.57	0.91	(-)0.22	(-)0.62
1901-1941	1.66	1.37	1.05	0.52

Source : Mitra, A.K., Census of India, 1951, Vol.VI, Part 1A (West Bengal, Sikkim and Chandernagore) Report, Calcutta, 1953, pp.263 and 266.

Table 4.2 shows that the area under tea in West Bengal as a whole has grown at the rate of 1.05 per cent per year during the period 1901 to 1941, while employment has grown at the rate of 1.56 per cent per year. In Darjeeling the annual growth rate in area under tea and employment during the same period of time registered at 0.52 per cent and 1.37 per cent per year respectively.

With the help of the growth rates as presented in Table 4.2. We have computed the gross employment area elasticity (Eg) ^{**} and the results are presented in Table 4.3

Table 4.3
Gross Employment area elasticity (Eg)

Year	West Bengal	Darjeeling
1901-1911	0.49	4.4
1911-1921	0.98	1.53
1921-1931	1.80	2.06
1931-1941	(-) 7.80	(-) 1.46
1901-1941	1.58	2.74

Table 4.3 shows that the gross employment area elasticity (Eg) is computed at 1.58 for West Bengal and 2.74 for Darjeeling for the period 1901 to 1941. This indicates that a 10 per cent rate of growth in area resulted in 15.8 per cent growth in employment in West Bengal tea gardens during 1901-1941.

while in Darjeeling a 10 per cent rate of growth in area resulted in 27.4 per cent growth in employment during the same period of time. This indicates that labour absorption rate in per hectare of area under tea in the Darjeeling tea gardens was higher than all West Bengal average.

The employment trends in the second phase have been estimated for 40 years period, 1951 to 1990. But data on labour in the Terai tea gardens are not available separately in Tea Statistics till 1960. Only after 1960 the districtwise data on number of labour force are available in Tea Statistics.

Thus, we have analysed the employment trends in the second phase under two divisions. First 1951 to 1960, which shows the employment trends in the tea gardens of West Bengal and then 1961 to 1990, which shows the employment trends both in the tea gardens of West Bengal and Terai. Employment trends have been estimated on the basis of average daily number of labour employed.

The labour force in the tea gardens of West Bengal during the period, 1951 to 1960 is shown in Table 4.4.

Table 4.4 shows a clear trend of decreasing both the average daily number of labour and labour per hectare in West Bengal tea gardens during the period 1951 to 1960. Labour force sharply decreased between 1952 and 1953, where the labour force was reduced by around 56,000. In 1954 labour force

Table 4.4
Labour force in West Bengal tea garden
1951-1960

Year	Area under tea (in hectares)	Average daily no. of labour	Labour per hectare
1951	79,580	2,65,064	3.38
1952	79,581	3,22,679	4.05
1953	79,456	2,55,753	3.35
1954	79,563	2,83,593	3.56
1955	79,483	2,73,163	3.43
1956	79,235	2,68,671	3.39
1957	81,312	2,61,384	3.21
1958	81,636	2,51,145	3.07
1959	81,949	2,36,574	2.89
1960	82,331	1,97,165	2.39

Source : Data compiled from Tea Statistics 1963, p.65 and 1963 p.66 published by Tea Board, Calcutta.

increased by around 17,000 over the previous year. But thereafter it continued to decrease up to 1960. Again between 1959 and 1960 labour force reduced by nearly 40,000. Around 1,25,000 labour force reduced in West Bengal tea gardens within a period of 9 years between 1952 to 1960. The labour force has reduced at the rate of 5.33 per cent per year, on an average, during the period 1952 to 1960.

The root cause of such sharp decreasing of labour force in West Bengal tea gardens is the enactment of plantation

Labour Act (PLA) 1951. The Act made obligatory for the employers to provide several welfare measures to the workers.

Consequently, the employers reduced the permanent labour forces, who are entitled to get the welfare benefits under the plantation labour Act.

With the total labour force the land labour ratio also reduced sharply. In 1952 the land labour ratio was estimated at 1:4.05 for every hectare of area under tea. The employers continued to decrease the land labour ratio and brought down to 1:2.39 by 1960. At the same time they increased the work load per labour to maintain the production. Thus, in spite of reducing labour force the industry could maintain its production. This had been possible due to continuous increase of production per labour. This is reflected in Table 4.5, which

Table 4.5

Production and production per labour in West Bengal
tea gardens-1951 to 1960

Year	Production (in thousand kg.)	Production per labour (in kg.)
1951	78,158	295
1952	71,962	223
1953	72,782	273
1954	75,758	267
1955	74,433	272
1956	76,361	284
1957	75,397	288
1958	76,193	303
1959	80,107	338
1960	81,523	413

Source : Data compiled from Tea Statistics, 1962, p.65, 1963, p.66, and 1965-66, p.4, published by Tea Board, Calcutta.

shows a clear trend of increasing of production per labour during the period 1952 to 1960. It has been almost doubled during the 9 years period, 1952 to 1960.

Now we will observe the employment trends during the second part of the second phase, i.e., 1961 to 1990. We have presented data on labour force in the tea gardens of West Bengal and Terai during the period, 1961 to 1990 in Table 4.6.

Table 4.6

Labour force in the tea gardens of West Bengal and Terai
1961-1990

Year	West Bengal			Terai		
	Area (in hectares)	Average daily no. of labour	Labour per hectare	Area (in hec- tare)	Average daily no. of labour	Labour per hectare
1961	82,705	1,93,511	2.34	9,344	17,122	1.83
1962	82,864	1,89,968	2.29	9,233	17,311	1.87
1963	83,615	1,96,404	2.35	9,328	19,472	2.08
1964	84,830	1,95,404	2.30	9,616	19,559	2.03
1965	85,031	1,91,764	2.26	9,857	18,112	1.84
1966	85,648	1,91,672	2.24	10,021	17,688	1.77
1967	86,393	1,87,612	2.17	10,215	20,130	1.97
1968	87,475	1,89,745	2.17	10,510	18,837	1.79
1969	87,568	1,87,860	2.15	10,590	19,376	1.83
1970	87,989	2,00,280	2.28	10,712	19,177	1.79
1971	88,499	1,98,020	2.24	10,769	19,714	1.83
1972	88,556	1,94,901	2.20	10,822	18,295	1.58

contd ...

Table 4.5 contd...

1973	89,025	1,96,129	2.20	10,864	19,175	1.77
1974	88,224	1,99,793	2.26	10,893	20,153	1.85
1975	88,784	2,00,131	2.25	10,983	20,050	1.84
1976	88,799	2,00,049	2.25	11,040	20,055	1.82
1977	89,253	2,05,466	2.30	11,020	20,204	1.83
1978	89,954	2,09,989	2.33	11,064	21,478	1.94
1979	91,003	2,13,300	2.34	11,472	21,861	1.91
1980	93,497	2,18,848	2.34	11,474	23,290	2.03
1981	93,971	2,13,670	2.27	11,314	22,240	1.97
1982	96,613	2,16,995	2.25	12,055	23,210	1.93
1983	97,170	2,21,060	2.27	12,166	23,451	1.93
1984	97,788	2,24,661	2.30	12,301	23,548	1.91
1985	98,015	2,32,553	2.37	12,395	24,893	2.00
1986	1,00,129	2,31,360	2.31	12,905	24,222	1.88
1987	1,00,530	2,38,967	2.38	13,096	26,387	2.01
1988	1,00,616	2,52,080	2.51	13,280	32,733)	2.46
1989	1,01,000	2,49,307	2.47	13,325	35,992	2.70
1990	1,01,170	2,48,671	2.46	13,345	37,875	2.83

Source : Data compiled from Appendix I and II.

Table 4.6 shows that the labour force in West Bengal tea gardens continuously decreased upto 1969. In 1970 labour force increased by 12,420, but thereafter it continued to decrease up to 1980. The labour force in West Bengal tea gardens showed continuous increasing trend after 1981. But during the last two years of the study period

(1989 and 1990) it registers a declining trend. 3409 labour forces were reduced during the same period.

The number of labourers in the Terai tea gardens was more or less stagnant up to 1973. After 1973 it showed continuous increasing trend.

Between the year 1961 to 1990, the labour force in the West Bengal tea gardens increased by 28.50 per cent while area recorded an increase of 22.33 per cent during the same period of time. In Terai labour force and area under tea increased by 121.21 per cent and 42.82 per cent respectively. Thus we can safely conclude that in the Terai, labour absorption rate in per hectare area under tea is much higher than the all West Bengal average.

Now we have attempted to make a comparative analysis of annual growth rate of labour in the tea gardens of West Bengal and Terai.* For this purpose we have divided the total study period of 30 years into three sub-periods viz. 1961-1970, 1971-1980 and 1981-1990.

The calculated annual growth rates of labour are presented in Table 4.7.

Table 4.7 shows that the labour force in the tea gardens of all West Bengal and Terai increased at a very slow rate during the first two sub-periods, viz. 1961-1970 and 1971-1980.

Table 4.7
Annual growth rate of labour
(in percentage)

Year	West Bengal	Terai
1961-1970	0.34	1.14
1971-1980	1.00	1.68
1981-1990	1.53	5.47
1961-1990	0.84	2.68

Source : Appendix II.

It increased significantly during the sub-period, 1981-1990. The labour in all West Bengal tea gardens increased by 1.53 per cent annually during 1981-1990, while in the Terai it increased by 5.47 per cent annually during the same period of time. On an average, in all West Bengal tea gardens employment has grown at the rate of 0.84 per cent per year during 1961-1990, while in the Terai tea gardens it has grown at the rate of 2.68 per cent per year. This further establishes our earlier conclusion that the labour absorption rate in the Terai tea gardens is much higher than that of all West Bengal average. This has been possible due to additional employment of 15635 workers in the Terai during the last 10 years period, 1981-1990. Moreover, the employment in the tea gardens depends on the area under the cultivation of tea. During the post independence period the area under tea in the Terai expanded at higher rate than the other two tea growing

regions of the state, viz. Dooars and Darjeeling. Consequently the labour absorption rate in the Terai was much higher than the all West Bengal average.

In Table 4.8, we have presented the employment trend in all major tea growing regions of India during the last 10 years (1981-1990).

Table 4.8

Employment trend in tea plantations in India

District/ State/Region	Average daily no. of labour		% increase over 1980	Annual growth rate
	1980	1990		
Dooars	1,49,571	1,62,680	8.76	0.77
Darjeeling	45,987	48,116	4.63	0.41
Terai	23,290	37,875	62.62	4.52
West Bengal	2,18,848	2,48,671	13.63	1.17
Assam	4,48,949	5,41,661	20.65	1.72
Tamil Nadu	86,359	1,02,786	19.02	1.60
Kerala	71,086	74,388	4.65	0.41
Karnataka	4,000	4,217	5.43	0.48
South India	1,61,445	1,81,391	12.35	1.06
All India*	8,46,659	9,86,781	16.55	1.40

* Includes all tea growing areas in the country.

Source : Tea Statistics, pp.140-141, Published by Tea Board, Calcutta. 1990-91

Table 4.8 shows that during the last 11 years (1980-1990) labour force in the Terai increased by nearly 63 per cent,

i.e., 4.52 per cent annually. While in the other two tea growing regions of West Bengal, viz., Dooars and Darjeeling hills the labour force has grown at the rate of 0.77 per cent and 0.41 per cent per year respectively during 1980 to 1990. In all tea gardens of West Bengal and India the labour force has grown at the rate of 1.17 per cent and 1.40 per cent annually during the same period of time. Thus the annual rate of increase in labour force in Dooars and Darjeeling hills is much lower than that of all West Bengal average and also below the all India average. But the annual growth rate of employment in the Terai tea gardens is much higher than that of the averages of all West Bengal and all India.

Increase in labour in South Indian tea gardens is very insignificant. The labour force has moved up by only 1.06 per cent annually during the last 11 years 1980 to 1990. In Tamil Nadu the labour force has grown at the rate of 1.60 per cent per year during 1980 to 1990. While in the other two tea growing regions of the state, viz. Kerala and Karnataka the annual growth rate in labour was less than one per cent.

4.2 Land Labour Ratio

The land labour ratio has been estimated on the basis of average daily number of labour employed in per hectare.

We have already stated that the land labour ratio in West Bengal tea gardens showed a sharp decreasing trend during the fifties (Table 4.4). The trend in the sixties, seventies and eighties reveal that it was more or less stagnant. Between 1961 to 1990 the labour per hectare was always less than 2.5 except in 1988 when it was 2.51 (Table 4.6).

In Terai tea gardens the land labour ratio was always less than the all West Bengal average throughout the period, 1961 to 1988. Table 4.6 also reveals that the land labour ratio in the Terai tea gardens was more or less stagnant at least upto 1984. Since 1985 the ratio showed an upswing trend and reached to 1:2.83 by the end of 1990.

Thus, though we ^{have} observed in Table 4.7 that the rate of annual increment in labour in Terai was always higher than the all West Bengal average during 1961 to 1990, but the labour per hectare improved significantly only after 1984. Since then it increased at much faster rate and at present (1990) the labour per hectare in Terai is much higher than the all West Bengal average and also above the all India average as shown in Table 4.9.

Table 4.9 shows that at present (1990) among the major tea growing state the land-labour ratio is the highest in West Bengal tea gardens with 2.46 labour in per hectare followed by the South Indian tea gardens with 2.40 labour in per hectare and Assam with 2.35 labour in per hectare.

Table 4.9

Labour per hectare in Tea Plantations in India
1990

District/ State/Region	Area (in hectare)	Average daily no. of labour	Labour per hectare
Darjeeling	20,065	48,116	2.40
Terai	13,345	37,875	2.84
Dooars	67,760	1,62,680	2.40
West Bengal	1,01,170	2,48,671	2.46
Assam	2,30,363	5,41,661	2.35
Tamil Nadu	38,874	1,02,786	2.64
Kerala	34,612	74,388	2.15
Karnataka	2,073	4,217	2.03
South India	75,559	1,81,391	2.40
All India*	4,16,563	9,86,781	2.37

* Includes all tea growing areas in the country.

Source : Tea Statistics, 1990-91, Published by Tea Board, Calcutta, pp.5 to 6 and pp.140-141.

Among the three tea growing districts of West Bengal Terai estimated the highest land labour ratio with 2.84 labour in per hectare followed by Dooars and Darjeeling Hills both with 2.40 labour in per hectare. Thus, the land-labour ratio in Terai is not only higher than other two tea growing districts of West Bengal but also higher than that of all tea growing regions of India.

The concept of land labour ratio still remains a controversial aspect in the labour management relations in tea industry.

In 1969, when the Second United Front Ministry, led by CPI(M) was voted to power, the Co-ordination Committee on Tea Plantation Workers (CCTPW) decided to launch an agitation for increase in the labour force. An industry wide strike was launched on 18th August 1969 which lasted for sixteen days. The CCTPW demanded that a land labour ratio of 1:5 workers for every acre under the production of tea be enforced. It means 3.70 workers in per hectare. (Taking one hectare = 2.4710581 acres.) The employers maintained that the existing ratio of 0.90 workers per acre or 2.22 workers per hectare was ideal. After the strike was called off the State Government appointed a committee headed by the Joint Labour Commissioner to look into the matter. This committee recommended that a new land labour ratio of 1:1.5 workers in per acre be maintained. The Co-ordination Committee of Planters' Association (CCPA) refused to accept the recommendations but finally agreed to maintain a ratio of 1:1.1 converted to the metric system this means 2.72 workers for every hectare under tea. But in fact it exists more as a notion than a reality.

Table 4.9 shows that except Terai in no other tea growing regions of India this agreement has been fulfilled. If this agreement is fulfilled the possible additional employment in the tea gardens of different regions of India has been shown in Table 4.10.

Table 4.10

Possible additional employment in tea plantations in India

District/ State/Region	Area under tea (in hectares) (1990)	Existing labour force (1990)	Labour force at 2.72 in per hectare	Additional employment
(1)	(2)	(3)	(4)	(5) 5 = (4) - (3)
Dooars	67,760	1,62,680	1,84,307	21,627
Darjeeling	20,065	48,116	54,577	6,461
Terai	13,345	37,875	36,298	-
West Bengal	1,01,170	2,48,671	2,75,182	26,511
Assam	2,30,363	5,41,661	6,26,587	84,926
Tamil Nadu	38,874	1,02,786	1,05,737	2,951
Kerala	34,612	74,388	94,145	19,757
Karnataka	2,063	4,217	5,639	1,422
South India	75,559	1,81,391	2,05,520	24,129
All India*	4,16,563	9,86,781	11,33,051	1,46,270

* Includes all tea growing areas in the country.

Source : Tea Statistics, 1990-91, Published by Tea Board, Calcutta, pp.5-6 and pp.140-141.

Table 4.10 shows that if the agreement of 2.72 labour per hectare is executed more than 26,000 additional workers can be employed in West Bengal tea gardens. except in the Terai, where no additional employment is possible as per this agreement, as the existing land-labour ratio in Terai is already 2.84. In all tea gardens of India more than 1,46,000

additional employment can be generated through the *execution* of this agreement. So the trade unions should exert pressure on management to give immediate effect to the agreement. This will relieve the present unemployment problems in tea gardens to some extent. But this is not the permanent solution to resolve the growing unemployment problems in the tea garden area.

4.3 Production and Employment

The relationship between production and employment has been measured by gross employment output elasticity (Eg)^{**}. The Eg is computed by dividing the growth rate in employment by growth rate in output. For this purpose the 30 years period (1961 to 1990) is divided into three sub-periods, viz. 1961 to 1970, 1971 to 1980 and 1981 to 1990. The results of the value of gross employment output elasticity (Eg) in the different periods is shown in Table 4.11

Table 4.11 shows that production in all tea gardens of West Bengal as a whole has grown at the rate of 1.86 per cent per year during the period 1961-1990, while employment has grown at the rate of 0.84 per cent per year. This suggests that the rate of growth of employment was more than half of the rate of the growth of output. These growth rates give the gross employment output elasticity (Eg) as 0.451. This

Table 4.11

Average annual growth rates in production, employment and gross employment output elasticities 1961-1990

Year	West Bengal			Terai		
	RP	RL	Eg	RP	RL	Eg
1961-1970	1.61	0.34	0.211	2.44	1.14	0.467
1971-1980	2.50	1.00	0.400	2.05	1.68	0.819
1981-1990	1.56	1.53	0.980	2.96	5.47	1.847
1961-1990	1.86	0.84	0.451	2.79	2.68	0.960

Note : RP., RL and Eg. stand, respectively for rate of growth in production of made tea, employment and gross employment output elasticity.

Source : Appendix I and II.

indicates that a 10 per cent rate of growth in output resulted in around 4.5 per cent rate of growth of employment during 1961 to 1990.

In Terai tea gardens output as a whole has grown at the rate of 2.79 per cent per year during the period 1961 to 1990, while employment has grown at the rate of 2.68 per cent per year during the same period of time. It indicates that the rate of growth of employment was nearly equal to the rate of the growth of output. The value of gross employment output elasticity is computed 0.96 for the period 1961 to 1990. This indicates that a 10 per cent rate of growth in output resulted in around 9.6 per cent rate of growth of employment during 1961 to 1990.

This comparative analysis of the results of gross employment output elasticity (Eg) clearly indicates with respect to production labour force in the Terai is absorbed at a much higher rate than the all West Bengal average.

4.4 Area and Employment

The relationship between the area under the cultivation of tea and employment has been measured by the gross employment area elasticity (Eg)^{**}. In Table 4.12, we have presented the values of gross employment area elasticity in different periods in the tea gardens of all West Bengal and Terai.

Table 4.12

Average annual growth rates in Area under the cultivation of tea, employment and gross employment area elasticities 1961-1990

Year	West Bengal			Terai		
	RA	RL	Eg	RA	RL	Eg
1961-1978	0.67	0.34	0.507	1.48	1.14	0.770
1971-1980	0.55	1.00	1.818	0.64	1.68	2.625
1981-1990	0.74	1.53	2.067	1.66	5.47	3.295
1961-1990	0.67	0.84	1.253	1.20	2.68	2.233

Note : RA, RL and Eg stand respectively for rate of growth in area under the cultivation of tea, employment and gross employment area elasticity.

Source : Appendix I and II.

Table 4.12 shows that in all tea gardens of West Bengal area under the cultivation of tea and employment have grown at the rate of 0.67 per cent and 0.84 per cent per year respectively during the period 1961 to 1990. These growth rates give the gross employment area elasticity (Eg) as 1.253. This indicates that a 10 per cent rate of growth in area under the cultivation of tea resulted in around 12.53 per cent rate of growth of employment during 1961 to 1990.

In Terai tea gardens area under the cultivation of tea has grown at the rate of 1.20 per cent per year during the period 1961 to 1990. While employment has grown at the rate of 2.68 per cent per year during the same period of time. This suggests that the rate of growth of employment was more than double of the rate of growth of area under the cultivation of tea. The value of gross employment area elasticity is computed as 2.233 for the period 1961 to 1990. This indicates that a 10 per cent rate of growth in area under the cultivation of tea resulted in around 22.33 per cent rate of growth of employment during 1961 to 1990.

Thus, with respect to the area under the cultivation of tea the labour force has absorbed in the Terai tea gardens at a much higher rate than the all West Bengal average.

4.5 Average Price of Tea and Employment

The relationship between the average price of tea and employment has been measured by the gross employment price elasticity (Eg). ** The gross employment price elasticity is found out for all West Bengal tea gardens. For this purpose the average price per kg. of tea sold in Indian auctions has been used.

In Table 4.13, we have presented the values of gross employment price elasticity in different periods in the tea gardens of all West Bengal.

Table 4.13

Average annual growth rates in average price of tea, employment and gross employment price elasticities 1961-1990

Year	RAP	RL	Eg
1961-1970	2.90	0.34	0.117
1971-1980	7.29	1.00	0.137
1981-1990	12.38	1.53	0.123
1961-1990	7.68	0.84	0.109

Note ; RAP, RL and Eg. stand respectively for rate of growth in average price of tea, employment and gross price employment elasticity.

Source : Appendix II, Tea Statistics, 1989, published by J.Thomas & Company Pvt. Ltd., pp.4-5 and Tea Statistics, 1990-91 published by Tea Board, Calcutta, p.72.

Table 4.13 shows that the average price of tea and employment have grown at the rate of 7.68 per cent and 0.84 per cent per year respectively during the period 1961 to 1990. These growth rates give the gross employment price elasticity (E_g) as 0.109. This indicates that a 10 per cent rate of growth in average price of tea resulted 1.09 per cent rate of growth in employment during 1961 to 1991. This suggests that the rate of growth in employment was only one-tenth of the rate of growth of average price of tea.

Considering separately the elasticity of employment with respect to production, area under tea and average price of tea, we found that the employment in tea gardens is more elastic with respect to area under the cultivation of tea. The correlation coefficient between the area under the cultivation of tea and average daily number of labour employed in the Terai tea gardens during the period 1961 to 1989 comes to 0.85 on the other hand we observed that the labourer per hectare is more or less stagnant. So, the employment in tea industry cannot be much expanded within the existing area under the cultivation of tea. There is very little hope to increase the employment if the new area under the cultivation of tea is not brought in. But during the post independence period the industry did not expand at a faster rate. During the last 40 years period, 1951 to 1990, the area under tea in west Bengal increased annually by 0.62 per cent only. Again due to non expansion of education among the children of the

workers and lack of employment opportunity near the vicinity of the tea gardens, the third generation of the tea garden workers' still depended on the employment in tea gardens.

At present there is very little scope in West Bengal to bring out new area under the cultivation of tea, so the alternative employment scope near the vicinity of the tea gardens should be generated to absorb the surplus population in the tea gardens.

4.6 Summary

The employment of labour in the tea gardens of West Bengal significantly increased during the pre-independence period. The labour force increased by 72% per cent during 1901 to 1941. But during the post independence period the employment of labour in the tea gardens of West Bengal remains more or less stagnant. The employment sharply decreased during the period 1952 to 1960. More than 1,25,000 workers were reduced during that period. It is mainly due to the enactment of the Plantation Labour Act, 1951.

During the period 1961 to 1990 the growth of employment in the tea gardens of West Bengal was more or less stagnant. The rate of growth of employment computed was less than one per cent on an average, during the period 1961 to 1990. However in the Terai tea gardens the growth of employment was

estimated at 2.68 per cent, on an average, during the same period. Again during the last decade (1980 to 1990) the employment of labour force in the Terai has grown at the rate of 4.52 per cent annually, on an average. This was much higher than the annual rate of growth of employment in other tea growing region of India.

The employment in tea gardens is more elastic with respect to area under the cultivation of tea than the other factors like production and average price of tea. Though the employment increased with the increase in area but the labour per hectare was more or less constant. In all tea gardens of West Bengal the labour per hectare lies within 2.5, on an average. However in Terai it exceeded 2.8.

The concept of land labour ratio still remains controversial aspect in the labour management relations in tea industry. After the general strike in 1969 a settlement was reached between the co-ordination committee of Tea Plantation Workers' (CCTPW) and the co-ordination committee of planters' association (CCPA) at the intervention of the State Government regarding the land labour ratio. The CCTPW demanded 3.70 workers per hectare, but the CCPA ultimately agreed to maintain 2.72 workers for every hectare under tea. But in fact it exists more as a notion, than in reality. At the end of 1990, except Terai in no other tea growing regions of India this agreement has been fulfilled.

During the post independence period, the labour per hectare in the tea gardens of West Bengal remained more or less stagnant. Area under the cultivation of tea increased at a very slow rate. Moreover due to backwardness of the areas no other employment opportunity is generated in the vicinity of the tea gardens. Education among the children of the workers did not expand. As such they are depended upon the employment of tea industry generation after generation. As a result, at present there is saturation of employment in tea industry. Huge number of surplus population generated in the tea garden areas.

The excessive pressure of employment in the tea industry is to be removed. For this purpose other employment opportunity is to be developed in the vicinity of the tea garden areas. In this juncture we may suggest to connect the tea garden areas with the nearest panchayat. Primary education among the children of the workers is to be expanded. The adolescents are to be imparted some technical skills to make them fit in other employment. For this purpose we may suggest to extend the training scheme of Nehru Rozgar Yojana to the children of the tea garden workers. At present this scheme is only available to the poorer section of Municipal and Panchayat areas.

Notes & References

- * We have used the following formula to find out the growth rate :

$$g = \left(\sqrt[n]{\frac{A}{P}} - 1 \right) \times 100$$

Where,

- A = Value of variable in final year.
 P = Value of variable in initial year.
 n = Number of years.
 g = Compound annual rate of growth (percentage).

- ** We have used the following formulas to find out the elasticity of employment with respect to area under tea, production and average price of tea.

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| i) Gross employment area elasticity | $= \frac{\text{Annual growth rate in employment}}{\text{Annual growth rate in area}}$ |
| ii) Gross employment output elasticity | $= \frac{\text{Annual growth rate in employment}}{\text{Annual growth rate in output}}$ |
| iii) Gross employment price elasticity | $= \frac{\text{Annual growth rate in employment}}{\text{Annual growth rate in average price of tea}}$ |