IJMS 2024 11 (1): 50 - 64

International Journal of Multidisciplinary Studies (IJMS)
Volume 11, Issue I, 2024

Employer-employee debate over productivity improvement in the Sri Lankan tea plantation sector: who is right - employers or employees?

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ABSTRACT

The relative importance of Sri Lanka's tea plantation industry as a major tea producer and a foreign currency earner has reduced over time. Considering this depressing trend, the plantation companies accuse tea workers and their unions giving a lower level of labour productivity compared to its competitors. But worker unions do not accept this assertion highlighting that companies have neglected the development and maintenance of tea plantations for not enabling tea workers to increase productivity. Hence, continuous debate has emerged in respect of increasing labour productivity between employers and employees in the tea plantation industry. Therefore, this study aims at examining who is right in this debate following a case study method of research based on a selected up-country tea estate as the study's setting while tea estate managers, tea plucking workers, union officers therein and other experts as actors using snowballing sampling method for obtaining information. Accordingly, the study found that company managers were trying to maximize the short-run production function by increasing only variable factor, labour productivity undermining what should be done in the long-run while trade unions and workers talk of the need to maximize multifactor productivity function or long-run production function but with emphasizing more on increasing other factors' productivity rather than that of labour. Accordingly, the study concludes that both parties are only partially correct in their arguments for productivity enhancement. Besides, and more prominently, the study finds that both sides are not yet aware of the importance of the concept of total factor productivity as found by international researchers for ensuring continuous productivity growth in industries, especially in a background of depleting the availability of overall volume of inputs that now the Sri Lankan tea industry is also confronting.

KEYWORDS*: employees, employers, productivity, production functions, tea plantations*

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1. INTRODUCTION

Tea industry has been playing a vital role in the Sri Lankan economy from its inception although its relative importance to the national economy has fallen from 17% in the 1950s to now approximately, to 2% of Gross Domestic Product (GDP) (Central Bank 2020). Notwithstanding this fact, the tea industry is remaining yet as a significant source of foreign exchange earnings for the economy accounting for about 70% of agricultural export income and about 13% of the total export earnings providing employment for nearly to 1 million people connected to the tea industry and related activities (ibid 2020). However, this evidence shows that the Sri Lankan tea industry is lagged now from the international competition, and plantation companies attribute this descent mainly to low labour productivity, high wage costs and increasing unions' political power to influence workers' wage determination, badly affecting tea estates' overall productivity (Rajadurai 2020). However, trade unions and workers refuse to accept this assertion saying that not the workers, but the employers are more responsible for having a low productivity, emphasizing that companies are having a practice of paying insufficient wages demotivating workers to work hard (Yogarajan 2020). As such, the continuing debate over the tea plantation sector's productivity between plantation companies and tea workers can be witnessed over time.

1.1 Research Problem

Sri Lanka's annual tea production has stagnated around 300 million kgs per year before appearing the recent economic crisis while the world tea production has increased at an average rate of 6.5% (Central Bank 2018). Correspondingly, country's share of the global tea export trade also has declined from 18% in 2010 to 12% in 2018 and it will further continue to decline, year on year making the supply chain constricted due to stagnant output and low productivity in tea plantation sector (Central Bank 2019 & 2020). In this setting, tea plantation management highlights that the daily average plucking of green leaf in the Sri Lankan plantation is around 16-18 kilos per day compared to 40 kgs in India and 60 kgs in Kenya (Molligoda 2020). Within Sri Lanka also, in small holding sector mainly in the Southern Province, a worker plucks about 30 kgs green leaves per day (ibid 2020). Further, it has been reported that especially male workers' productivity in the tea plantation sector is lesser than that of female workers. For example, a male labourer starts working at 8.30 am and finishes by 12.00 or 1.00 pm yielding only 4 to 5 kgs for a day whereas a female worker works for 8 hours, plucking green leaf exceeding 18 kgs target by another 2 to 6 over kilos for a day (Perera 2017). Also, males mainly have become heavy alcoholics, and indiscipline to the estate management leading to seriously eroding the productivity (ibid 2017). Also, managers have recognized the gang system which has been practicing for over 150 years as another constraint for increasing productivity (Rajadurai 2020). In this background, plantation companies have been reiterating the need to shift away from the age-old attendance-based wage model to a productivity-based, self-

managed wage model enabling workers to earn more and plantation companies to sustain operations in a competitive market. Although the companies show the necessity and advocate in establishing a link between productivity and wages, such a solution has been unacceptable to the trade unions. In this background, whenever workers demand higher wages, plantation managers refuse to offer such demands arguing that the labour productivity is not adequate. However, in such situations, worker unions say that plantation managers emphasize only single factor productivity i.e. labour productivity ignoring the contribution made by other factors to increase productivity for which management should be primarily responsible. As such, this study identifies a gap that plantation management and workers hold diverse views towards increasing tea plantation sectors' productivity. Consequently, this study aims to investigate which party is correct in their respective proclamations on productivity augmentation and explore ways and means to ensure higher productivity for the tea plantation sector.

1.2 Literature Review on Productivity

Keywords

Plantation in the study is defined as "any large land used or intended to be used for growing tea, coffee, rubber, cinchona, cardamom etc. (Plantation Labour Act 1951). Accordingly, it is an economic and commercial production unit and is considered as a social institution, which controls the lives of their resident work force where they are born, live, breed and die. As such, the plantations do not just only offer employment, but also are responsible for providing housing, water, gardens, welfare, temple, cemetery, dhobi, barber, and many other facilities that affect the daily lives of workers. Thus, it is a complete and total system (Sinnathamby & Vijesandiran 2018). Originally, tea industry was initiated by British entrepreneurs in the latter part of the 19th century as a large plantation in the upcountry, and later it has been expanded to low country areas as a small holding. This study examines only the upcountry tea plantation sector in Sri Lanka.

Major stake holders in plantations are managers and workers, and with them a rigid hierarchy of administration can be seen. Accordingly, plantation company's organizational structure is divided into five strata: the owner, management, staff, sub-staff (all can be included in management levels) and workers at the grass-root level (Kodithuwakku 2001). As far as tea workers are concerned, all males and females are employed in tea plucking, gardening, and factory work, but worker productivity is mainly measured through how many kgs of green leaf are plucked by a worker per day.

Partial factor productivity

International trade in almost all the commodities and services has become more competitive as a result of globalization (Sandaratne 2019). This is common to the world tea trade as well. As such, productivity is considered as the most common measure of competitiveness (Russell & Taylor 2011). Accordingly, productivity improvement has been identified as the key strategy to achieve

competitiveness (Abrenica 2002). In this setting, first, it is necessary to define what productivity is and how it is measured since it helps identifying means and ways for increasing productivity. However, this important concept is traditionally assessed by dividing units of output by that of a major input as shown below:

$$\text{Productivity} = \frac{\text{Output}}{\text{Input}}$$

Thus, we consider single-factor-productivity comparing output expressed in units or sales with one of the major (single) input as shown by the following formulae:

$$\text{Labour Productivity} = \frac{\text{Output}}{\text{No of labourers or labour hours}}$$

$$\text{Material Productivity} = \frac{\text{Output}}{\text{Materials}}$$

$$\text{Machine Productivity} = \frac{\text{Output}}{\text{Machine hours}}$$

$$\text{Capital Productivity} = \frac{\text{Output}}{\text{Capital}}$$

All these are partial factor productivities or single-factor productivities out of which the most common productivity measure is the labour productivity. Therefore, in many instances, the term 'productivity' is used synonymously with labour productivity. As such, there is no exception for the tea plantation companies to recognize the efficiency of production.

Multi-factor productivity

In practice, the normal trend is to turn to labor productivity overlooking the contribution made by other factors for increasing productivity. But in contrast to single-factor productivity, we find multifactor productivity, and which is considered as more logical where output is related to all the inputs used to produce the output as shown below:

$$\text{Multifactor Productivity} = \frac{\text{Output}}{(\text{labour} + \text{material} + \text{capital} + \text{overhead})}$$

However, whether it is single or multifactor productivity, it is important to understand the fact that sometimes productivity statistics can be misleading. For example, productivity can be increased by decreasing inputs faster than that of output. This becomes clearer when we study the productivity of two countries namely Republic of Korea and the US. Republic of Korea and the US were among few countries that increase their productivity in the recent recession started in 2008. Accordingly, both countries have shown positive productivity growth in the year 2008 but reported different trends (Oguchi 2001). Korea showed a small increase in both output and input required to produce that output, but with faster increase of output than that of input, and as a result, its productivity showed an increase. On the other hand, the recession in the US caused a decrease in both output and inputs, however, the cut in input (labour hours) was more severe, again showing an increase in productivity (Russell & Taylor 2011). In Sri Lanka, according to the Central Bank data, although tea production is stagnated, it has been reported that labour productivity has increased. It may be mainly due to less workforce, which has decreased from 327,000 to 120,000 in 1992 over time (Kodituwakku 2001). Further, in another

scenario, even if the number of employees remained the same, if fertilizer is adequately applied, if more care is taken to look after tea cultivation, if more yielding varieties have been planted, and if climate conditions are favorable, per capita output would certainly increase (Amarasuriya 2020).

Irrespective of these trends, tea plantation companies still give more priority to labour productivity or single factor productivity as evidenced by the following frequently mentioned criticisms concerning increase of productivity which are closely related to labour other than other factors of production:

a) Cultural drawbacks - Sri Lankan employees, particularly Indian origin tea industry workers are traditionally laid back and tend to give more importance to social and recreational pursuit,
b) Poor nutrition, working conditions, and equipment, and
c) Low gainsharing, recognition and working independently (Amarasinghe 2011).

Moreover, thinking in these lines, plantation companies have been attempting to replace time-based system of wage payment with that of productivity-based system to increase labour productivity (Perera 2017). Another strategy used to increase the workers' productivity is planters' effort to place workers on a casual basis rather than making them permanent, believing that job insecurity secures better productivity (Amarasinghe 2011). However, contrary to these ideas there are human resource experts who identify labour as an asset to be invested in for productivity increase and harness its benefits for the future. Accordingly, the goal is no longer to bring down the cost of labour but to maximize its potential (Dessler 2002 and Abrenica 2002).

Total Factor Productivity

However, against the popular view of labour biased productivity or single factor productivity and multi factor productivity, researchers such as Krugman (1994), Young (1992 & 1995), Kim & Lau (1994) and De Silva (2001) have emphasized the importance of the concept of total factor productivity examining the rapid growth acquired by the East Asian economies in 1960s, 1970s and 1980s against that of G-5 developed countries. Accordingly, it has been found that the former countries have acquired rapid growth through increasing the volume of inputs (resources) whereas the latter countries have acquired their growth by increasing total factor productivity (TFP). Hence, they have concluded that a sustainable development cannot be gained in the long run by following East Asian countries' strategy since resources are scarce and depleted over time. As such, the role of total factor productivity has today received renewed attention as a crucial element in achieving sustainable growth (De Silva 2001). Also, it has been accepted that increasing TFP growth is instrumental even for increasing labour productivity. For example, in the opening of the Productivity and Standard Board in 1995 in Singapore, then Minister of State of Trade and Industry said: 'The core aim of the new agency is to sustain TFP growth at 2% a year or more in order to achieve 4% labour productivity growth and 7% annual economic growth' (Owyong 2001). This assertion

confirms that the main cause for productivity enhancement and growth is increasing total factor productivity. As such, although Total Factor Productivity Growth (TFPG) studies originally focused on TFP growth at the economy level, later researchers such as Hassan et al. 2021 and Kannan (2011) have extended the concept of TFPG to examine growth trends at the sectorial levels as well. Accordingly, in this setting, it is appropriate to understand how this concept can be applied to investigate into productivity of tea cultivation industry based on the following production function:

$$Q = A\,f\,(E, C, L, La)$$

where Q is output (value added production of tea), E is enterprise, C is capital, L is land and La is tea producing labour, A is level of efficiency or total factor productivity or technological change, and *f* denotes functional relationship.

Thus,

$$\text{Total production } (Q) = \text{Efficiency } (A) \times \text{Volume of combined inputs } (E, C, L, La)$$

$$\text{Total production} = \text{Total factor productivity} \times \text{Volume of combined inputs}$$

Accordingly, total factor productivity or efficiency can be defined as follows:

$$\text{Total factor productivity} = \text{Total production} - \text{Various factors' contribution to Output}$$

or as follows:

$$A = Q - (E, C, L, La)$$

(Oguchi 2001)

We can take the growth rate of each term of the total production function indicated by the following expression, and can be used to indicate the TFPG function as follows:

$$\text{Growth rate of output} = \text{Growth rate of TFP} + \text{Growth rate of combined inputs}$$

The above relationship shows that efficiency or total factor productivity or technological change is the difference between output and contribution of the volume of combined inputs (sum of all factors' contribution) to the output. Then, it is necessary to examine the causes that are instrumental for increasing the total factor productivity or efficiency. Accordingly, the acceleration of TFP growth is attributed to a number of strategies such as openness of the economy, infrastructure investment, attracting foreign direct investment (FDI) or technology transfer, changes in industrial or agricultural structure, intensification of Research & Development (R & D), adoption of the best managerial and organizational practices, changing work attitudes of employees and management for achieving organizational effectiveness, enhancing the efficiency of labour and skills development and creating positive attitudes among workers through ensuring job satisfaction, acquiring capital efficiency through modernization of plant and equipment and encouraging firms to link wages to the worker's productivity are also some of the important steps that can be taken to improve TFP growth (Barro 1991 & Mankiw et al. 1992 & Oguchi & Hoshino 2001).

2 RESEARCH METHODOLOGY

Data and information for the study were mainly obtained through unstructured questions, interviews, and observations and through participation following case study method as a qualitative research technique. Accordingly, the researcher somewhat deviated from following random sampling or selection of many participants as typically prescribed by quantitative researchers. Following this line of thinking, as suggested by Merriam (1998), a discussion about participants and sites included the setting (where the research will take place), the actors (who will be observed or interviewed), the events (what the actors will be observed or interviewed doing), and the process (the evolving nature of events undertaken by the actors within the setting). Thus, the study's setting is the selected up-country tea estate (X estate with the extent of 127 hectares situated in upcountry) belong to a Regional Plantation Company (RPC). Tea estate managers and lower officers in the management hierarchy, tea plucking and other field and factory workers, union representatives, top officers of other related organizations as specialists of this industry are considered as the primary informants as shown in the Table 1. As such, interviewee designations and codes are identified as depicted in Table 1.

Then, major ideas that surface through investigation and observation were chronicled as suggested by ibid (1998) and evidence so observed was cited as indented passages with participants' wording to identify patterns and themes relevant to the research problem. Finally, the themes so obtained were intertwined with the author's interpretation for getting a meaning and making a conclusion.

Table 1. Crop, Land Area and Profile of Actors of the X Tea estate

Crop & productivity	Land Extent hectares	Management Categories (M)	Union officers (U)	Workers (W)	Experts from other organizations (E)
Tea Productivity of 20 kg green leaf per labour.	127	1. Estate Manager 2. Assistant Managers 3. Kangani 4. Kanakapullei	U-Trade unionists	W_1- 42 Factory workers W_2-38 Garden workers W_3 - 410 Pluckers mainly females	1. Tea Board officers 2. Experts 3. Researchers

Source: Compiled by the writer

3 RESULTS & DISCUSSION

Whenever higher wages are demanded by workers, tea plantation management requires increased productivity from the workers. As such, secondary data relating to the requirements of productivity enhancement and wage increases are obtained based on tripartite Collective Bargaining Agreements (CBAs) recently signed by plantation companies, workers' trade unions and government representatives which are normally expected to

be signed for each two-year period (Refer Table 2). As shown by year 2013 and 2019 agreements, productivity requirements were removed due to workers' and unions' influence by getting their higher bargaining power over that of plantation managers.

It is usual to surface disagreements between companies and workers over wage demands just before signing a new CBA for each two-year period. As such, if workers demand a wage increase, companies are always forced to establish a link between productivity and wage and simply ask to pluck more tea leaves for approving wage increases.

Table 2. Wages agreed by Collective Bargaining Agreements in 2013, 2016 and 2019 for Plantation workers.

Wage breakdown	2013 (Rs.)	2016 (Rs.)	2019 (Rs.)
Basic wage	450.00	500.00	700.00
Productivity incentive	-	140.00	-
Fixed price share supplement	30.00	30.00	50.00
Attendance incentive	140.00	60.00	-
Basic wage + allowances	620.00	730.00	750.00
EPF/ETF 15%	67.50	75.00	105.00
Total	687.50	805.00	855.00

Source: Business Times (2019)

But workers' trade unions constantly fight against such attempts. For example, however, when signing 2016 CBA, companies became successful in including Rs. 140 productivity allowance if a given target of output was exceeded. But thereafter, workers could remove this requirement from the 2019 CBA, and even won a 40% basic salary increase reverting to the age-old attendance-based wage model using their higher bargaining power over companies (Table 2).

Meanwhile for fulfilling an election promise after 2019 Presidential Election, the new government directed plantation companies to increase the daily wage up to Rs. 1,000/- for a tea worker without making any reference to productivity (Rajadurei, 2020). But plantation companies expressed their strong objection to this pronouncement questioning where money for this increase can be found. As such, whenever workers demand wage increases, plantation companies urge workers to increase labour productivity exposing the benefits that can be derived from such efforts. For example, the planters' association said just before signing 2019 CBA that if the plucking average could be increased to be between 30 - 40 kgs per day, workers could double their earnings to about Rs 60,000 per month ibid (2020). As such, whenever workers demand higher wages plantation managers argue that the only possibility for offering a wage hike is to increase labour productivity.

Regarding companies' assertion, it is appropriate to analyze to what extent plantation companies' request is rational. In the short-run, plantation companies cannot influence market price since it is determined by the world market for tea. In this state, what planters can simply do is ask workers to pluck a few more kgs of green leaf or increase their productivity over a given target, with gaining some incentive payment. Thus, plantation companies' direction like this is consistent with the short-run theory of labour demand. The short-run labour demand

depends on Marginal Revenue Product (Productivity) of labour (MRP_L) that can be defined as follows:

$$MRP_L = [MPP_L \text{ x } P_F \text{ or } MR]$$

Also, short-run wage determination can be theoretically shown by figure 1. Accordingly, when MRP_L (labour demand curve) intersects with L_S (labour supply curve) for determining wage to be paid as W.

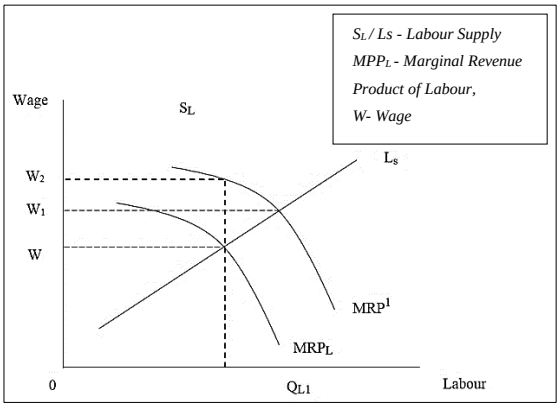

Figure 1. Wage determination in the short run
Source: Kaufman (1986) *The Economics of Labor Market and Labor Relations*

Accordingly, let's assume that W is the wage currently paid to workers and now they are about to sign a new CBA for the next two years. In this state, worker unions, as usual, ask for wage increases beyond W. But companies refuse to react to this demand claiming that labour productivity is not sufficient to offer further wage increase. In this scenario, now we should examine how logical companies are to ask for increased labour productivity to offer a higher wage. Labour productivity is shown by MPP_L component (marginal physical product) in MRP_L (Labour demand curve). The remaining component in MRP_L is P_F (world market price of tea) which companies cannot control in the short-run and is beyond their control. As such they argue that the only possibility for increasing wages beyond W up to W_2 in the short run is increasing labour productivity (MPP_L) by shifting MRP curve upward to MRP^1 as shown in the diagram.

However, workers with trade unions' influence always refuse to comply with any request made by plantation companies for increasing labour productivity for giving wage increase saying that,

> 'It is inevitably associated with more stress to us (employees), and it will be beyond our capacities (W)'.
>
> Also, incentives given to us for increasing productivity is insufficient (U&W)

But, in this background plantation companies criticize the unions saying that,

> 'Even asking for such little amount as an extra of 2 kilos of green leaf plucking is vehemently opposed by unions. Such opposing parties often claim that such an overproduction is not possible, and it is unfair to ask for more from workers (W)'.

However, this claim was reputed by managers saying that,

> 'During the recently concluded Best Tea Plucker Competition, the winner plucked 19.4 kgs in just within one hour. This event is exceeding the minimum target (18 Kgs) requirement given for a day. So, this shows that the idea that workers cannot even raise output for a day by a mere 2 kgs for simply

altering the wage model is evidently untrue (M)'.

After signing a new CBA at least for subsequent two-year period, a new demand for wage increase will not normally surface, and, as a result, both plantation companies and workers are not confronting each other seriously on wage issues until they are about to sign the next CBA. If companies' this behavior is analyzed, it is possible to assume that plantation managers' response to increase productivity is limited to short-run behaviour ignoring what should be done in the long-run to increase output.

Further, against plantation company managers' idea to increase productivity through workers, trade unionists say that until the crop yields are increased one cannot expect workers to harvest more than what is potentially available in the field. As such, plantation companies should take more positive steps to increase productivity continuously in the long-run, particularly through speeding up replantation and taking other measures. In support of this idea, a tea plantation expert says that:

'Estate tea gardens have a high proportion of low productive senile tea, and that must be replanted with vegetative propagated (VP) teas (E)'.

Further, Sri Lanka Tea Board Chairman says that the SLTB will be backing the tea re-planting and infilling programme that had been launched in the past, and it should be accelerated in order to increase tea production. However, it is found that planters have been reluctant to embark on this project as it involves a heavy cost and takes time to bring in returns (E).

Also, plantation companies say that sufficient incentive scheme is not available for such an effort (M).

In the same line of thinking, it has been further reported that if the industry is to keep pace with the rate of ageing of tea bushes, and decline in productivity of the older seedling tea, re-planting should proceed at a minimum of 2% per annum of the total extent of tea land. This is based on the premise that replacement of the tea land should take place every 50-year period (Kodithuwakku 2001).

Further, it says that if the RPCs had maintained the 2% replanting rate during the last 27 years after privatizing the plantation, 50% of the tea land would have been replanted by now, and unions argue that if so, workers could have been more productive like small holders in the low country (U).

The word of wisdom expressed by a leading personnel in the tea industry is that 'regarding human productivity, there are many challenges. Firstly, until the crop yields are increased, one cannot expect workers to harvest more than what is potentially available in the field. As such, the logical way of increasing productivity is replanting older bushes (E).

Like this, worker unions always complain that managers pay more attention to labour productivity rather than that of other factors to increase productivity indicating that planters are much more worried of short-run challenges. These arguments surface just before signing CBAs, rather than paying attention to other factors which are more related to taking long-run measures to increase productivity. Apart from these trends, researchers such as Krugman (1994), Young (1992 & 1995), Kim & Lau (1994) and De Silva (2001), highlight that increasing total factor productivity is more appropriate to revitalize industries. However, evidence shows that this aspect of productivity is a new idea to plantation companies and worker unions even though it is appropriate to increase productivity and thereby revitalize the tea industry.

At present, over 35 countries grow tea and Sri Lankan producers should recognize this competition directed from other producing countries and supplying unique product that cannot be matched by others is the way forward for the industry to face the competition. Also, although it is the general perception that Ceylon tea is the best in the world, only 40% of the teas manufactured in the country qualify for the LION logo certification whilst the rest is comparable with teas from other countries.

> Sri Lanka Tea Board (SLTB) Chairman, X says that adhering to good global agricultural and manufacturing practices productivity along with quality can be increased and maintained. Further, he says that steps have already been taken to improve the standard of green leaf which has dropped over the years. In this setting, the necessary pre-requisite is a further enhancement of the quality of Ceylon tea on a consistent basis by the respective players at each block chain by improving efficient management system (E).

Thus, ensuring quality at each step of the production process is a prerequisite when increasing productivity, and if not, higher prices cannot be obtained at tea auctions. But now it seems that this fact has not been sufficiently recognized by many Sri Lankan producers although some modern tea factories have obtained local and international accreditations.

> Further, the low extent of using new technologies such as machine plucking and machine pruning in the Sri Lankan tea industry compared to other producing countries has also been instrumental to reduce our tea sector's productivity (E).

Another criticism directed against RPCs' failure to increase production is that the total land area available is not cultivated.

> For example, although the total land area covered by tea growing estates is 171,454 hectares, out of which about 29,524 hectares are either not cultivated or have been put to other uses (U).

This evidence shows the need either to scale down their capacities or increase their scope of economies (activities). However, a few well-managed plantations have already embarked on working in increasing their scope by

introducing new crops such as cinnamon, agar wood, hybrid coffee, fruits, high-value timber, medicinal and native plants etc. (Molligoda, 2020).

Further, contrary to criticisms levelled against plantation companies by workers, almost all managers are complaining that,

> Workers are more loyal to trade unions and political parties rather than to plantation management. As a result, they say that unnecessary influence very often comes from these politicized unions making difficult for them to implement productivity enhancing measures such as establishing productivity linked wage payment system and thereby reducing cost of production (M).

The above-mentioned citations selected and stated from qualitative information gathered prove the hunch made in this study revealing that there is a debate about who is responsible over increasing productivity in tea manufacturing industry i.e. whether it is employees or employers. Accordingly, it is found that managers are trying to optimize short-run production function while unions and workers point out what is needed is optimizing long-run production function, therein also looking at other long-run production function variables rather than giving a particular emphasize to labour productivity increase as workers and unions highlight. As such it seems that both parties are partially correct in their arguments but what is needed is that they should cooperate with each other both to optimize short-run and long-run variables equally. Also, it seems that both parties have not yet sufficiently recognized the fact that this industry is now unable to increase its productivity only just by increasing its supply of major inputs such as capital, land and labour as it was done in the initial era of expanding tea industry in Sri Lanka. Consequently, as shown by researchers such as Krugman (1994), Young (1992 & 1995), Kim & Lau (1994) and De Silva (2001), in the present environment, what is needed is paying attention to increase total factor productivity as well in addition to optimizing both short-run and long-run aspects of production functions for increasing tea industry's overall productivity.

4 CONCLUSION & RECOMMENDATIONS

The study confirms that employers and employees are holding different arguments with regard to enhancing productivity in the tea plantation industry. As such, worker unions view that companies have neglected tea garden maintenance, replanting, and are depending mainly on old tea bushes impacting overall productivity to be lessened whereas companies always find mistakes with unions and workers saying that they prefer old aged archaic time base wage system to productivity-based payment system with trying to get only their wages increased by not agreeing to increase productivity. Accordingly, it can be determined that companies are trying to maximize the short-run production function with paying much attention to increase its only variable factor-labour productivity in the short-run

undermining what should be done in the long-run while trade unions and workers talk of maximizing multifactor productivity function or long-run production function but emphasizing more on increasing other factors' productivity rather than increasing that of labour. Consequently, the study concludes that both parties are only partially correct in their arguments on productivity enhancement, and they do not cooperate with each other to make a combined effort to increase productivity. Further, but more importantly, it is found that both employers and employees are not yet sufficiently following the concept of total factor productivity for increasing industry's overall productivity although international researchers have identified and shown its importance for continuing the industry's growth, especially, in a background of depleting the availability of overall volume of inputs which can be clearly witnessed in the Sri Lankan tea industry over time. As such, at the initial phase of the expansion of tea industry in the latter part of the 19th century and the early part of the 20th century as shown by the literature review, all factors of production like enterprise, capital, land, and labour were abundantly available, but thereafter they all became highly scarce (Snodgrass 1966) showing the impact of increasing the concept of total factor productivity for augmenting both labour and other factors' productivities are indispensable, but the Sri Lankan tea industry has yet placed insignificant recognition of this fact for increasing its overall productivity.

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