Impact of Trade Liberalisation on Tea Industry in India (1964 to 2017)

Parashram Patil
Muhammadriyaj Faniband

We examine the impact of trade liberalisation on Indian tea industry specific factors, namely, area under cultivation, production, productivity, import and export during 1964 to 2017 period using regression method. We divide data into two sub-periods. The pre-liberalisation and liberalisation period is from 1964 to 1991 and the post-liberalisation period covers the period from 1992 to 2017. We find that tea area under cultivation is not changed after the trade liberalisation. Further, we reveal that tea production and productivity are not affected in the post-trade liberalisation period. Moreover, empirical evidence indicates that trade liberalisation has a significant and positive impact on tea import. However, we note an insignificant impact of liberalisation on tea export. The causality between productivity and cultivation area, import and export does not exist.

Keywords: Trade Liberalisation, Tea Industry, Tea Import, Tea Export, Regression, India

JEL Classification: F6, L66, L73

Section I
Introduction

Tea industry in India has vital economic importance especially in North East. India is one of the largest producers, processor and exporter and consumer of tea. Growth of tea industry is the interest of nation. Liberalisation made impact on various industries of India. It has made impact of tea sector too. Tea industry is at the peak of crises and on the verge of economic distress. Presently, Tea is...
not economically profitable as it used to be earlier on account of rising production costs and stagnant prices of the production. The cost of production of tea is been growing by a compounded annual rate of 10 per cent for the last 10 years while the tea prices increasing by a compounded annual rate of 6 per cent only. It drastically reduces down the profit margin. Assam and West Bengal produce nearly 80 per cent of India’s tea, and so this situation would impact not only India but tea consumers globally.

In the crisis year of 1991, there was a decline in virtually all macroeconomic aggregates, including overall and sectoral industrial investment Neogi & Ghosh, (1998). To overcome this problem, Government of India initiated a New Economic Policy in the year 1991 and this policy opened the door of the India Economy for the globe for the first time. This New Economic Policy changed the structure of businesses or industries. Trade liberalisation influenced all industries. In case of Indian tea industry, according to 2016 data, accounts for a fourth of global tea production and over a tenth of exports (Seetharaman, 2018). Tea exports from India reached a 36 year high of 240.68 million kgs in Calendar Year 2017 (https://www.ibef.org).

"On theoretical grounds, the liberalization measures are expected to improve Indian tea industry for a number of reasons. First, liberalisation increases international trade of tea by exporting and share in the global tea market. Second, surge in tea export positively influence tea prices in domestic market by which tea farmers will have added advantages. Third, liberalisation increases tea cultivation area. It also increases production and productivity by adopting best available agriculture production practices in the world"

In this context, we analyse the impact of trade liberalisation on the tea industry specific factors post liberalisation period in India using regression method. Tea industry specific factors include area under cultivation, production, productivity, import and export. Furthermore, we also study the causality between tea productivity and tea cultivation area, production, import and export using Granger Causality test. We reveal no impact of trade liberalisation on area under cultivation, production, productivity and export of tea in the post-liberalisation period. However, this study documents that trade liberalisation has a significant and positive impact on tea import post liberalisation. The results of causality test also indicate no causality between productivity and cultivation area, import and export (except productivity and production that is productivity is not useful in forecasting cultivation area, import and export and vice versa.

We contribute to the existing literature in the following way. First, the empirical investigation of examining the impact of trade liberalisation on Tea industry in India is presented for the first time using regression based event study (with time dummy variable) to the best of our knowledge. Second, we analyse causality between productivity and other tea industry specific factors.
The rest of the paper is organised as follows. Section II reviews past studies concerning trade liberalisation and its effects on tea and other industries. Section III presents data and variables. Section IV presents methodology. Section V covers the results and discussion. Finally, Section VI concludes the paper.

Section II

Review of literature

The past studies with regard to tea industry in India include, Asopa, (2007) finds that India lacks properly organised production systems and subsidies are undesirable. The author suggests tea industry's restructuring, redefining the roles of various agencies and developing a healthy partnership with the labour. Kumar et al., (2008) study the composition, nature, directions of tea trade, and assess the competitiveness of tea. Nagoor, (2009) finds that Indian tea export has been declined from the period of 1981-2004. He shows certain reasons behind this declined such as domestic demand, productivity, cultivation area, and competition, market demand, and loss of traditional tea market. Sivanesan, (2013) analyses the production and sales, average selling price and export and import of tea. Wagh, (2014) reveal that India's tea industry is facing competition from countries like Kenya and Sri Lanka. Laskar & Thappa, (2015) show that Assam is the largest tea producing state in India and tea is the backbone of state economy. Over the period of time, growth of Assam tea industry is declined. The cost of production is increasing and selling price is declining. Gunathilaka & Tularam, (2016) reveal that Indian tea industry is facing various challenges such as resource constraints, competition for land, labour, and climate change. Value at Risk (VaR) is the appropriate model for modelling tea prices.

Studies on tea in other countries contain, Kirui et al., (2014) find that tea liberalisation in Kenya does not affect tea production. Farmers continue production with same rate. Thus, income of the tea farmers has not been increased. Kelegama, (2010) argues that increasing exports of value added teas by importing teas and blending with local teas and then exporting these products as mixed blends would lead to a greater range of Sri Lankan tea exports, including 'Pure Ceylon Tea'. Khan & Hussain, (2011) show that Pakistan is totally depends on import of tea. In order to reduce import of tea, Pakistan has to increase domestic production of tea and find alternative option for tea.

Studies on impact of liberalisation on industries other than tea, Senauer & Venturini, (1994) reveal that there would be positive impact on competitive environment in food processing industry with the entry of global retailers in food system. Seok et al., (2016) use OECD 33 countries data and conclude positive impact on service trade on food industry. Shafaeddin, (2012) find that trade liberalisation and economic reform in developing countries are varied.
Some developing countries have a huge increase in exports of manufactured goods, whereas the impact on some developing countries is negative. Gatawa et al., (2013) show a negative impact of globalization on textile industry output in Nigeria. Bezuneh & Yilheyis, (2014) confirm negative impact on trade liberalisation on food availability in developing countries. Black, (2016) show westernised processed foods are easily available in local market due to presence of transnational food corporation. Their strong presence over domestic market made negative impact on small farmers in developing countries because they cannot compete. Pandey, (2004) find that there are various factors which affect the relationship between trade policies and industry output. Wanie & Tanyi, (2013) note that globalisation benefits the Cameroon Development Corporation which cultivates rubber, banana and palm in various ways such as international capital mobilisation, e-commerce, improved packaging mechanism and faster shipment. Price fluctuation and the privatisation of part of the corporation (the tea sector) are also the results of globalisation.


A number of studies are done in other countries concerning impact of trade liberalisation on economy and other industries. Mbum et al., (2012) do a library survey of trade globalization and price wars Price wars are observed in the Chinese home appliances industry, Brazilian bananas industry, e-book sector, and Airbus and Boeing airlines industry costing global superpowers players billions of United States dollars. Hye & Wizarat, (2013) explore the linkages between Financial Liberalisation Index (FLI) and economic growth in Pakistan during 1971-2007. The results show that that FLI and economic growth are positively associated in the short run. In contrast, FLI is found to be insignificant in the long run. Umoru & Eboereime, (2013) investigate the association between trade liberalisation and industrial development in Nigeria using co-integration and error correction estimation approaches. Trade liberalisation has a positive and significant impact on industrial development. Khandu, (2014) examine relationship between trade liberalisation and economic growth in Bhutan using regression analysis. This study finds that trade liberalisation has a positive and significant impact on growth. Dix-Carneiro & Kovak, (2017) find that trade liberalisation negatively impact on formal sector employment and earnings in Brazilian local labour market. Fuinhas et al., (2019) examines the impact of financial market development and globalisation on economic growth in Argentina, China (Hong Kong SAR), Israel, Japan, Malaysia, Mexico, Singapore, Switzerland, United States and South Africa during 1980-2015.
Previous studies on changed pattern of Indian liberalisation policy in 1991 has also noticed the effects of liberalisation on various segments of Indian economy. These studies show how liberalisation effect reflects in the time-series data that is pre and post effects. Kathuria, (2002) investigates whether change in productive efficiency is significant after the 1991 reforms. It is found that only non-Foreign Direct Investment firms belonging to Research and Development (R&D) intensive sectors have benefited from the liberalisation. The impact is found to be productivity depressing for firms belonging to sectors having low R&D intensity. Chand & Sen, (2002) observe that liberalisation of the intermediate-good sectors has a larger prosperous effect on total factor productivity growth than that of the final-good sectors. Goldar & Aggarwal, (2005) examine the impact of trade liberalisation on price-cost margins in Indian industries. The price-cost margin surged in the post-reform period in most industries. Emran et al., (2007) notice a dramatic surge in the price response of aggregate private investment and five times increase in the elasticity of investment with respect to the relative cost of capital after removing the 'Licence Raj' in India. Aghion et al., (2008) find that tariff reductions led to output expansion in pro-employer states relative to pro-worker states. Further, no evidence of a relationship between when an industry is de-licensed and pre-reform output growth is observed. Kumar & Mishra, (2008) detect that trade liberalisation caused decreased wage inequality between unskilled and skilled workers in India. Ghosh & Chakravarty, (2009) study the effects of trade liberalisation on volatility in Indian agriculture. Bhalla & Singh, (2010) find that the growth rates of agriculture output and of land yields decelerated in the post-liberalisation period in comparison with the pre-liberalisation period.

Nonetheless, we find no studies that explore the impact of trade liberalisation on tea industry in India using regression based event study. Therefore, we fill this gap and extend the literature.

Section III
Data and Variables

We empirically analyse the impact of trade liberalisation on tea industry in India from 1964 to 2017. We add a time dummy as an independent variable. We divide data into two sub-periods. The liberalisation and pre-liberalisation period is from 1964 to 1991 and the post-liberalisation period covers the period from 1992 to 2017. We study the impact of liberalisation on the following explained variables: (i) Tea Cultivation Area; (ii) Tea Production; (iii) Tea Productivity; (iv) Tea Import1 and (v) Tea Export. These data are captured from the website of Food and Agriculture of United Nations2.

1. India is one of the largest tea producer countries in the world. Before liberalization, import of tea was not the focus of the industry as well as Indian economy was not opened for foreign players. Therefore, there was no tea import during 1964-1991.
Figure 1 shows trend of Indian tea industry specific factors over time.

**Figure 1**
Tea Industry Specific Factors
Section IV

Methodology

We use the regression based event study method to study the impact of trade liberalisation on the tea industry specific elements. We estimate five regressions using time dummy variable. Even though, this technique has a couple of limitations but it is most relevant and reliable method to study the effects of change in any policy on the concerned factor. This method is also advocated by (Bernanke & Kuttner, 2005; Hansen & Tarp, 2001; Khuntia & Hiremath, 2019)

The regression model expressed as:

\[ CA_h = \alpha + PL_t + e_t \]  
\[ P_{mt} = \alpha + PL_t + e_t \]  
\[ PD_{mt} = \alpha + PL_t + e_t \]  
\[ E_{mt} = \alpha + PL_t + e_t \]  
\[ I_{mt} = \alpha + PL_t + e_t \]

Where, \( CA_h \) represents area under cultivation in hectare, \( P_{mt}, E_{mt}, \) and \( I_{mt} \) refers production, export and import in metric ton respectively, \( PD_{mt} \) indicates productivity, and the term \( PL_t \) is time dummy variable i.e. post liberalisation (it takes the value of one for post-liberalisation), and otherwise zero whereas \( e_t \) is the error term.

Further, in order to assess whether there is any potential predictability power of one indicator for the other, a Granger-Causality analysis is carried out. The Granger-Causality test is employed in this study to detect the causality relationship between tea productivity and other variables.

\[ CA_t = \alpha + \sum_{i=1}^{m} \beta_i CA_{t-i} + \sum_{j=1}^{n} \gamma_{t-j} (PD)_{t-j} + u_t \]  
\[ PD_t = \Theta + \sum_{i=1}^{p} \phi_i PD_{t-i} + \sum_{j=1}^{q} \psi_j {CA}_{t-j} + \eta_t \]  
\[ P_t = \gamma + \sum_{i=1}^{a} \delta_i P_{t-i} + \sum_{j=1}^{b} \sigma_j PD_{t-j} + \theta_t \]  
\[ PD_t = \lambda + \sum_{i=1}^{j} \epsilon_i PD_{t-i} + \sum_{j=1}^{k} \nu_j P_{t-j} + \eta_t \]
\begin{align*}
I_t &= \hat{\theta} + \sum_{i=1}^{c} \Omega_i I_{t-i} + \sum_{j=1}^{d} J_{j, PD_{t-i}} + K_t \tag{10} \\
PD_t &= \hat{\phi} + \sum_{i=1}^{c} n_i PD_{t-i} + \sum_{j=1}^{y} n_{j, PD_{t-i}} + h_t \tag{11} \\
E_t &= \Delta + \sum_{i=1}^{n} \alpha_i E_{t-i} + \sum_{j=1}^{g} \gamma_{j, PD_{t-i}} + \kappa_t \tag{12} \\
PD_t &= \beta + \sum_{i=1}^{p} \epsilon_i PD_{t-i} + \sum_{j=1}^{q} \theta_{j} E_{t-j} + \epsilon_t \tag{13}
\end{align*}

We check the structural break using Chow breakpoint test to comprehend the effect of trade liberalisation policy change Indian tea industry. Ideally, checking whether the break points occur after a perceptible change in policy provides meaningful insight.

Section V

Results and Discussion

This section is divided into two sub-sections. First sub-section summarizes the descriptive statistics, the results of stationarity and unit root test. Second sub-section discusses the results of regression model. Third sub-section covers analysis of Granger-Causality test.

Analysis of Statistical Properties

The results of descriptive statistics and unit root tests are presented in Table 1. First, we test the stationarity of the series. The null hypothesis of a unit root is tested using the conventional Augmented Dickey and Fuller (ADF) and Phillips and Perron (PP) statistics and the stationarity property under the null using the Kwiatkowski, Phillips, Schmidt and Shin (KPSS) test. All the variables (except export) have a unit root; therefore, we include these variables in the first differences and confirm the stationarity. Further, the results of descriptive statistics and stationarity are also presented. The mean value of all the variables is more than the median. Therefore, these variables appear to be skewed to the right. Kurtosis value for all the variables (except export) is less than the reference value of normal distribution that is equal to 3. It indicates that there is lighter tails than a normal distribution (less in the tails). The Jarque-Bera (JB) test for normality strongly rejects the normality of the unconditional distributions for production and productivity. However, area under cultivation, import and export follow normality.

It is evident that the p-value of productivity, cultivation area, production, import and export is greater than 0.05 (Table 3 to Table 7). Therefore, the null hypothesis of no structural break time has been rejected for all the variables.
Table 1

Descriptive Statistics, Unit Root Tests and Stationarity

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Max.</th>
<th>Min.</th>
<th>Std. Dev.</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>JB</th>
<th>Unit Root ADF</th>
<th>PP</th>
<th>KPSS Stationary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivation</td>
<td>447402</td>
<td>418000</td>
<td>621610</td>
<td>341762</td>
<td>87248</td>
<td>0.596</td>
<td>1.929</td>
<td>5.778**</td>
<td>0.492</td>
<td>0.732</td>
<td>0.827</td>
</tr>
<tr>
<td>Production</td>
<td>732768</td>
<td>702500</td>
<td>1325050</td>
<td>366374</td>
<td>260977</td>
<td>0.560</td>
<td>2.525</td>
<td>3.332</td>
<td>1.706</td>
<td>3.258</td>
<td>0.983</td>
</tr>
<tr>
<td>Productivity</td>
<td>15907</td>
<td>16494</td>
<td>21762</td>
<td>10612</td>
<td>2842</td>
<td>-0.052</td>
<td>2.660</td>
<td>0.285</td>
<td>-0.883</td>
<td>-0.705</td>
<td>0.922</td>
</tr>
<tr>
<td>Import</td>
<td>7108</td>
<td>0.0000</td>
<td>34335</td>
<td>0.0000</td>
<td>10158</td>
<td>1.066</td>
<td>2.699</td>
<td>10.433*</td>
<td>-0.699</td>
<td>-1.233</td>
<td>0.669</td>
</tr>
<tr>
<td>Export</td>
<td>201249</td>
<td>201111</td>
<td>322548</td>
<td>138360</td>
<td>31381</td>
<td>0.970</td>
<td>5.732</td>
<td>25.271**</td>
<td>-3.758**</td>
<td>-3.663**</td>
<td>0.198</td>
</tr>
</tbody>
</table>

Note: *p < 0.05 and **p < 0.01.

Table 2

Results of Regression Model

<table>
<thead>
<tr>
<th>Productivity</th>
<th>Cultivation Area</th>
<th>Production</th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>α</td>
<td>16043.450***</td>
<td>463325.600***</td>
<td>822259.600*</td>
<td>2476.310</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.062)</td>
<td>(0.757)</td>
</tr>
<tr>
<td>Post</td>
<td>-6.846</td>
<td>24183</td>
<td>35354.050</td>
<td>9959.454**</td>
</tr>
<tr>
<td></td>
<td>(0.999)</td>
<td>(0.2612)</td>
<td>(0.957)</td>
<td>(0.034)</td>
</tr>
<tr>
<td>AR(1)</td>
<td>0.982</td>
<td>0.992***</td>
<td>0.997***</td>
<td>0.715***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
</tbody>
</table>

Note: * Significant at 10 per cent level. ** Significant at 5 per cent level. *** Significant at 1 per cent level.

Table 3

Chow Breakpoint Test on Regression of Productivity (1991)

| F-statistic | 0.351900 | Prob. F(4.46) | 0.8414 |
| Log likelihood ratio | 4.934882 | Prob. Chi-Square(4) | 0.2940 |

Table 4

Chow Breakpoint Test on Regression of Cultivation Area (1991)

| F-statistic | 0.265700 | Prob. F(4.46) | 0.8615 |
| Log likelihood ratio | 3.766279 | Prob. Chi-Square(4) | 0.4386 |
Table 5
Chow Breakpoint Test on Regression of Production (1991)

<table>
<thead>
<tr>
<th></th>
<th>F-statistic</th>
<th>Prob. F(4,46)</th>
<th>Prob. Chi-Square(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>0.006941</td>
<td>0.9999</td>
<td></td>
</tr>
<tr>
<td>Log likelihood ratio</td>
<td>5.129837</td>
<td>0.2742</td>
<td></td>
</tr>
</tbody>
</table>

Table 6
Chow Breakpoint Test on Regression of Import (1991)

<table>
<thead>
<tr>
<th></th>
<th>F-statistic</th>
<th>Prob. F(4,46)</th>
<th>Prob. Chi-Square(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>0.414645</td>
<td>0.7972</td>
<td></td>
</tr>
<tr>
<td>Log likelihood ratio</td>
<td>2.628346</td>
<td>0.6218</td>
<td></td>
</tr>
</tbody>
</table>

Table 7
Chow Breakpoint Test on Regression of Export (1991)

<table>
<thead>
<tr>
<th></th>
<th>F-statistic</th>
<th>Prob. F(4,46)</th>
<th>Prob. Chi-Square(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
<td>1.190975</td>
<td>0.3274</td>
<td></td>
</tr>
<tr>
<td>Log likelihood ratio</td>
<td>5.651988</td>
<td>0.2267</td>
<td></td>
</tr>
</tbody>
</table>

Table 8
Pairwise Granger Causality Tests

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>Prob.</th>
<th>Result</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity does not Granger Cause Cultivation Area</td>
<td>0.1088</td>
<td>Reject</td>
<td>Does not exist</td>
</tr>
<tr>
<td>Cultivation Area does not Granger Cause Productivity</td>
<td>0.0945</td>
<td>Reject</td>
<td></td>
</tr>
<tr>
<td>Productivity does not Granger Cause Production</td>
<td>0.0147</td>
<td>Accept</td>
<td>Unidirectional</td>
</tr>
<tr>
<td>Production does not Granger Cause Productivity</td>
<td>0.0552</td>
<td>Reject</td>
<td></td>
</tr>
<tr>
<td>Productivity does not Granger Cause Import</td>
<td>0.5709</td>
<td>Reject</td>
<td>Does not exist</td>
</tr>
<tr>
<td>Import does not Granger Cause Productivity</td>
<td>0.4764</td>
<td>Reject</td>
<td></td>
</tr>
<tr>
<td>Productivity does not Granger Cause Export</td>
<td>0.6032</td>
<td>Reject</td>
<td>Does not exist</td>
</tr>
<tr>
<td>Export does not Granger Cause Productivity</td>
<td>0.3321</td>
<td>Reject</td>
<td></td>
</tr>
</tbody>
</table>

Analysis of Impact of Trade Liberalisation on Tea Industry

The empirical evidence obtained in Table 2-7 using equation 1, 2, 3, 4 and 5 measures post-trade liberalisation effects on cultivation area, production, productivity, export and import. The results suggest that the coefficient of tea cultivation area is statistically insignificant. It indicates that tea cultivation area is not influenced by key post trade liberalisation. Nagoor, (2009) finds that slow growth in tea cultivation area. Before liberalisation, there was no corporatization of tea industry. However, corporate participated intensively in tea cultivation after liberalisation. Further, forest land nearby existing tea area was converted into tea gardens. Moreover, government's promoting policies and increasing domestic demand for tea are the drivers of increased tea cultivation area.
Further, we observe an insignificant impact on tea production post liberalisation (Table 2-5). This result is in accordance with (Kirui et al., 2014) who shows that liberalisation in Kenya does not affect tea production.

Similarly, trade liberalisation has negative but insignificant impact on tea productivity. Over the period of time, growth of tea industry has been declining. Increasing cost of production and selling price are the main factors to pull down the growth. This outcome this similar to Nagoor, (2009).

However, we have observed that the trade liberalisation has a significant and positive impact on import. It shows that tea import has increased after liberalisation policy. The income elasticity of demand is primary determinant of the demand for tea because it is price inelastic and finds negligible income elasticity for developed countries and high for developing countries. Thus, the import share of developing countries in world import is increasing Nagoor, (2009).

With regards to Tea export, export is not changed after the trade liberalisation because the coefficient of export is not significant. However, liberalisation has negative impact on tea export. Due to increase in domestic demand the percentage share of export surplus in production of tea in India declined drastically. Tea economy of India, which was more export oriented became more domestic market oriented (Nagoor, 2009).

**Testing for Granger Causality between Tea Productivity and Other Tea Specific Factors (Cultivation Area, Production, Import and Export)**

A further exercise of causality provides reinforcing evidences. The pair-wise Granger Causality is employed to identify the presence of causality between tea productivity and tea cultivation area, production, import and export. Table 8 tests the null hypotheses with Granger Causality test for the referred variables at a significance level of 5 per cent. Therefore, the $p$-value of more than 0.05 implies that the null hypothesis is to be accepted at the 5 per cent level of significance. On the other hand the $p$-value of less than 0.05 leads us to reject the null hypothesis.

The pair-wise Granger-Causality model between productivity and cultivation area is studied using equations 6 and 7. Consequently, there is no Granger Causality in any direction between them. Since the tea productivity does not increase the prediction of tea cultivation area and *vice versa*, 

$\sum_{j=1}^{n} \tau_j = 0$ and $\sum_{j=1}^{q} \psi_j = 0$.

Further, the pair-wise Granger-Causality is analysed between productivity and production using Eq. 8 and 9. The result demonstrates that there exists unidirectional affiliation from productivity to production but not *vice versa* thus $\sum_{j=1}^{b} \neq 0$ and $\sum_{j=1}^{K} = 0$.  


Moreover, we employ eq. 10 and 11 and detect that there is no Granger-Causality between productivity and import in any direction meaning that there is independence between productivity and import.

Section VI
Conclusion

This study analyses the impact of trade liberalisation on tea industry in India. We reveal that trade liberalisation has no impact on cultivation area, production, productivity and export. However, we notice the impact of trade liberalisation on tea import is positive and significant. The results of causality are quite interesting. We find no causality between tea industry specific factors (except productivity and production).

India has thousands of tea estates and small tea gardens, millions of people are directly getting a livelihood. It’s a big economic setback for the agriculture economy of the nation, if the Tea industry is not running well. Hence, growth of tea industry is in the nation’s interest. Over the period of time, Tea industry has been influenced by various factors such as liberalisations, technological up gradations and global competitions, even though tea industry does not lose its importance in the economy. Indian tea especially Assam tea has been rejected by the global player because of the high content of nitrogen and pesticide residue. Indian tea industry is facing specific problems like when there is a shortfall of green leave, tea gardens procures from small tea farmers which they don’t adopt any quality standards, use excessive fertilizers and manures to boost production. Increasing cost of labour is reducing the profit margin of growers and producers massively and workers are having health issues. Further, closed small tea gardens has been taken over by big corporate.

Since Indian Tea industry is playing a significant role, policy intervention is required at various levels to improve performance. First, there must be a certification mechanism by establishing green leave analysis centres for chemical analysis at the time of procurement. Second, increase in labour cost must be in proportion with market tea prices which is necessary to produce quality tea which is having a better price. Third, need to shut down tea estate operation by December 15 every season that would remove about 35 million kilograms of tea from the market which are considered bad teas. Fourth, tea garden must focuses on a high yield, a genuinely premium quality profile, coupled with a moderate cost of production sustained by low overhead. Fifth, there must be active promotional strategies to promote Indian tea worldwide like Shri Lanka Tea. Adoptions of right value additions and market diversifications strategies would improve the Indian tea industry performance at global level.
Further research could be directed towards the effects of liberalisation on other industries related to agriculture in India. Industries other than agriculture can also be taken into account.

References


