Chapter 6

CONCLUDING OBSERVATIONS

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The study has been divided into two parts.

The first part of the study has focused on the trends in area, production and productivity comparing the state’s performance with the national level performance. Also an attempt was made to understand the trends in commodity price over the years especially in the post liberalization period from the early 1990s. Plantation commodities occupy an important share in the country’s export basket and thereby earning foreign exchange to the national exchequer. Taking into consideration the competitive dimension of natural rubber, cardamom and pepper in the export market was analyzed to see penetration of these commodities in the world market.

The second part of the study has tried to understand the plantation workers livelihood by understand the employment generation in the sector. Livelihood assets of plantation workers were analyzed to understand the
nature of ownership of various assets. Understanding the poor quality and ownership of various livelihood assets and their relative deprivation the study also tried to understand the income-expenditure patterns and the nature of indebtedness among workers and the factors responsible for deprivation and thereby social exclusion.

6.1 Area, Production and Productivity Implications

Area, Production and productivity trends of rubber, pepper and cardamom show a mixed picture. Area, Production trends are impacted greatly by the commodity price of the plantation crops. High correlation exists between commodity price and area and production trends of plantation crops in the state. Incentive in the form of better price is also the prime reason for the change in the agriculture pattern in the state from paddy cultivation to cash crops like coconut, natural rubber, pepper etc.

In terms of Natural Rubber, Kerala experienced a steady growth over the years in terms of area production and productivity as the price of rubber has increased. Area of rubber in the state experienced a growth of 34 percent in 2013-14 when compared to 1992-93. In the case of production the sector witnessed an increase of 160 percent from 307521 MT in 1990-91 to 800050 MT in 2012-13 and declined sharply to 648220 MT in 2013-14 owing the decline in natural rubber price. The price of natural rubber experienced an increase from ₹ 25 per kg in 1992-93 to more than ₹ 166 per kg in 2013-14 thereby registering an average annual growth of 6.92 percent. The correlation worked out in this respect shows a strong positive correlation (0.9087) with the international crude oil prices as synthetic rubber is one of the important bi-products of crude oil.
In terms of black pepper, the state witnessed a deceleration in growth. Even though Kerala occupies a lion’s share of 85 percent of area in the country, the area of pepper cultivation declined around 50 percent during the period from 1990-91 to 2013-14. But from 1990-91 to 1999-00, the sector had a positive growth of 17 percent in terms of area which further decelerated into a negative growth of 58 percent during the period from 2000-01 to 2013-14. Production of pepper increased from 46800 MT in 1990-91 to 87605 MT in 2005-06. But similar to the decline in area of pepper cultivation in the state, production of pepper also started declining from 2006-07 onwards. The decline in trend remains significant in the context that price of pepper started increasing from the period 2006-07 when price started moving from ₹ 100 per kg in 2006-07 to ₹ 448 per kg in 2013-14. Primary observations from field testifies to the fact that failure of monsoon, adverse weather conditions, increase in diseases to pepper crops, increase in wages, low prices and indebtedness among farmers during the early part of 2000’s resulted in farmers abandoning pepper cultivation resulting in fall in area and production of pepper in the state.

In the case of cardamom the area of cultivation declined whereas production increased. The situation could be attributed for the high yielding variety of cardamom being cultivated by farmers. Area of cardamom plantation in the state decreased from 43826 Ha in 1990-91 to 39763 in 2007-08, later the quantity increased nominally to 39730 Ha in 2013-14. At the same time the production of cardamom shows a manifold increase from 3450 MT in 1990-91 to 14000 MT in 2013-14. Price of cardamom witnessed an increase in fluctuation during the period from 2005-12 when the price increased from ₹ 215 per kg in 2005-06 to ₹ 968 per kg in 2010-11 and later
declined to ₹ 649 per kg in 2013-14. This volatility in the price of cardamom resulted in lack of interest on the part of farmers to cultivate cardamom which could be attributed as one of the reasons for the decline in the area of cardamom cultivation.

Productivity of natural rubber, pepper and cardamom has increased substantially over the years. Improved variety of crops and modern agriculture practices have helped a lot in picking up the productivity of these commodities. In terms of rubber the productivity increased from 1079 kg/ha in 1990-91 to 1903 kg/ha in 2012-13 and later declined drastically to 1182 kg/ha in 2013-14. Productivity of pepper in the state increased from 278 kg/ha in 1990-91 to 546 kg/ha in 2012-13 but similar to the trends in area and production, the productivity also declined dramatically after 2005-06, when it slipped from 315 in 2005-06 to 221 in 2010-11 but later and stood at 546 kg/ha in 2013-14. Productivity of cardamom in Kerala almost doubled from 125 kg/ha in 1990-91 to 237 kg/ha in 2005-06. Though the productivity fell to a low of 176 in 2007-08 the numbers recovered and reached to an all-time high of 246 kg/ha in 2011-12 and later declined to 179 kg/ha in 2013-14.

6.2 Trade Implications

In terms of trade implications the plantation sector has a significant impact on the economy of Kerala as the plantation commodities have considerable market importance both in domestic and international market. Even though the price of natural rubber increased in the post-liberalization period from the early 1990s, the period also witnessed increase in the fluctuation in the price of natural rubber facing tough competition from the major rubber producing countries included in the ASEAN bloc mainly
Malaysia and Thailand and Indonesia as a result of the opening up of the Indian market. Though opening up of the economy increased the trade volume of plantation commodities, increase in demand for natural rubber from industrial sector resulted in high volume of import of natural rubber from other countries. The import of natural rubber increased from 51635 MT in 1995-96 to 325190 MT in 2013-14 with around 90 percent of import came from these three countries. Similarly in the case of cardamom and pepper also the exposure of our economy to foreign competition resulted in constant fluctuations in commodity prices.

Pepper and cardamom occupy 10 percent of the total spices exported from the country. Even though the quantity of pepper exported from the country declined from 35000 MT in 2007-08 to 15362 MT in 2012-13, the value of export experienced a steep increase of 70 percent during the period i.e. from ₹519 crore in 2007-08 to ₹638 crore in 2012-13 with USA, Germany and Italy as principal importers. There are several reasons for the quality decline and major factors are, fall in the production and the increased competition from Vietnam, the major producer of pepper.

In the case of cardamom, increase in domestic production resulted in increase in export of cardamom i.e. from 499 MT in 2007-08 to a whopping 2371 MT by 2012-13. Value of export also increased from a meager ₹ 24 crore in 2007-08 to ₹ 212 crore by 2012-13. Increase in demand from Saudi Arabia, the major cardamom consuming country was responsible for the hike in export quantity (65 percent) and value (₹ 160 crore). U.K, Malaysia, Kuwait and Japan remain the other major importers of cardamom from India.
Import of pepper and cardamom comprised 12 percent in terms of total quantity and 27 percent of the total value of spices export. Pepper import increased from 10750 MT in 2007-08 to 15680 MT in 2013-14. Value of pepper import also increased in the concerned period from ₹176 crore to ₹616 crore. Cardamom import to the country increased from 180 MT in 2007-08 to 1110 MT in 2013-14 whereas value increase significantly from ₹3 crore to ₹31 crore during the corresponding period.

The ASEAN countries becoming major producers of plantation commodities like natural rubber and pepper and hence it remains relevant in the context of India-ASEAN FTA even though plantation commodities are placed in the negative list till 2018 insulating competition from ASEAN countries as of now. Even though situation remains safe as of now, the study tried to understand the market concentration of the plantation commodities in the international trade sphere. Herfindahl-Hirschman Market concentration Index is used to identify empirical realities so as to understand how far the market is concentrated or diversified in terms of exports of natural rubber, pepper and spices from India. With fall in index value exemplifies diversified market nature for the commodity, in the case of natural rubber the index value declined from 978 in the year 1996 to 268 in 2013 and number of markets for natural rubber export increased from 136 to 190. Similarly in the case of pepper and cardamom also the index declined respectively from 1905 and 2935 in 1996 to 748 and 1745 in the year 2013. The number of markets also increased from 27 in 1996 to 99 in the case of cardamom and number of markets increased from 81 in 1996 to 120 in the year 2013. Results of Herfindahl-Market Concentration Index prove that the post liberalization era enabled the country to discover new markets for Natural rubber, Cardamom
and Pepper. Increase in the number of export markets is positive to the plantation economy as concentration on fewer markets is vulnerable in the period of increased competition from other countries.

Similarly, comparative analysis of India’s trade intensity to world as well as ASEAN group of countries shows that ASEAN block was taken into consideration in the case of plantation commodities because many of the ASEAN countries are major players in terms of production of natural rubber and pepper and India forms a major destination of export of plantation commodities. The analysis proves that the trade intensity index of India with ASEAN in terms of natural rubber declined from 320.96 in 1996 to 183.77 in 2013 proving fall in export concentration to ASEAN countries. In the case of Pepper and cardamom, trade intensity index explains an increase in export concentration on ASEAN countries as the index value increased from 67.81 and 10.51 in 1996 to 228.34 and 132.26 respectively in 2013.

The Gravity model helped to analyse the underlying factors responsible for the increase in import to the country from ASEAN countries in the case of natural rubber and Pepper. Model estimates explain that higher the GDP of the importing country higher is the chance of increase in volume of import in order to meet domestic demand. In the case of ASEAN countries (exporting nations) both the GDP as well as Per-capita GDP are positively correlated thereby implying that higher the size of GDP the higher will be the capability of the exporting country to export more.

In the case of Pepper imports, the Gravity model results show that GDP of the importing country-India is negatively correlated significantly related.
Positive correlation of Per capita GDP of India implies that higher markets and higher demand for import of pepper in India.

While looking into the results the GDP of exporting country-ASEAN block is positively correlated and significant at 95 percent level of significance, whereas Per-capita GDP in the case of ASEAN country is negatively correlated. The negative correlation of per capita GDP clearly explains that higher the size of GDP of exporting country higher is the chance of export and vice versa. One reason for the negative correlation of per capita GDP of ASEAN may be the high domestic demand for the product in these countries. Other time invariant variable also proves to be significant in the analysis.

6.3 Socio-economic Condition of Plantation Workers

Employment pattern in rubber and spices sub-sector has been analyzed by looking into the commodity prices so as to see the changes in employment pattern over the years. The study has helped to understand that commodity price and employment generation in plantations are interconnected to such an extent that a fall in the commodity price have greater reverberations on the employment pattern in plantations. Average daily employment in small rubber plantations increased from 304618 in 1992-93 to 411800 in 2013-14 as price increased from ₹ 25 per kg to ₹163 per kg during the corresponding period. Similarly in the case of cardamom average daily employment experienced a compound annual growth rate of 6.75 percent during the period 2005-13 as the commodity price of cardamom increased. All these trends pinpoints to the fact that plantation economy still plays an important role in the rural labour market of the state.
Livelihood analysis both in the small and large holdings show that workers belonging to rubber (large and small rubber) plantations have shown better possession of livelihood assets when compared to spices plantation workers as 16.2 percent of the spices sub-sector workers claimed about ownership of house which is considered to be an important and primary livelihood asset. Whereas more than 50 percent of the rubber plantation workers possess own house. Regarding the type of house almost 80 percent of the workers in spices sub sector have houses which are serviceable kucha in nature whereas almost 75 percent of the workers in rubber plantations have semi-pucca type of house.

In the case of natural assets like accessibility, availability and duration of water for drinking and other household purposes, the situation of workers in spices plantation still remain poor as around 80 percent of workers depending on public well public taps and canals as source of drinking water. Around 60 percent of the workers in spices plantation suffer water crisis during the period of summer where as 47.5 percent suffer the problem in small rubber plantations

Human assets are considered to be the fundamental assets in the quest for attaining better livelihood assets and thereby improving standard of living. Education qualifications, proficiency in job related skills, age, primary employment etc are taken as human assets in this study. In terms of education qualification almost 60 percent of the workers in rubber sub sector have S.S.L.C qualification whereas in spices sub sector 3.8 percent of the workers responded that they are illiterate and only 8.8 percent of the workers completed S.S.L.C. Proficiency in job-related skill is almost nil in the case of spices plantation workers. Regarding age of the workers one of the disturbing
trends is that around 70 percent of the workers in rubber sub-sector are above the age of 35. This explains the disinterest among the younger generation in taking up job in plantation which will have far reaching consequences in the plantation sector of the state. Seasonality of job, unhealthy working conditions, existence of wage lower than the market rate etc. is the major factor responsible for the disinterest. In terms of proficiency of skills majority of workers remain unskilled making employment options limited. Regarding employment options, the workers are left with few options other than job in plantations. Negligible presence of industries, lack of job related skills and remote location of plantations could be attributed for the situation.

Evaluating financial assets also give clear indication that the road to secure financial assets still remains a distant dream for the workers in plantation sector. About 72.9 percent of the workers irrespective of the type of plantations responded that they have no bank account. Absence of proper social security options, poor saving habits etc. are making the livelihood of workers highly vulnerable. Regarding possession of political and social assets also the workers in the plantation sector are equipped with fewer assets, making them more vulnerable in the present day context where political and social assets acts as an important facilitator in enhancing the employment and livelihood options.

Indebtedness among the workers in these plantation sub-sectors are also playing an important role in hampering the livelihood assets of workers. Exposure of plantation workers, especially spices sub-sector workers to informal source of credit, is really a disturbing trend as the informal sources like private money lenders charges exorbitant interest and forces the workers to remain under their clutches throughout the life. Inaccessibility, time lag
and complex procedures for availing credit in formal sources are some of the reasons attributed for the increasing credit exposure to informal sources.

Evaluating income and expenditure trends pinpoints to the fact that disparity in terms of income exist among the plantation workers. Average monthly mean income of workers in spices sub sector came to ₹ 3724 whereas in rubber plantation (large and small) it was around ₹ 7100. Regarding expenditure pattern trend, spices plantation workers incurred more expenditure when compared to workers in rubber plantations. Average monthly expenditure analysis stood at ₹ 3034, ₹ 2596 and ₹ 2711 respectively among workers spices, large and small rubber plantations. Expenditure on food consumption itself comprised almost half of the total expenditure in the case of spices plantation workers whereas among rubber sub-sector workers food consumption forms around 70 percent of the total expenditure. The matter occupies greater significance in the context of lower average mean income among spices sub sector workers while greater expenditure incurred to meet expenditure on alcohol, health treatment and debt repayment making them more vulnerable among the plantation workers. In addition to the above mentioned plantation wise disparity, region wise disparity also exits with workers in Idukki district remaining worse off among the regions studied in terms of education, income and other important livelihood assets explained earlier.

6.4 Evaluating Quality of Life and Exclusionary Trend among Plantation Workers

Standard of living as a base with livelihood assets is worked out to highlight exclusionary trend among workers in the plantation sector. The
analysis shows that there exists wide disparity in standard of living which in turn keeps them socially excluded. Chi-Square result also validates the argument that inter-plantation difference exist in terms of livelihood assets, monthly income-consumption and indebtedness leading to social exclusion of workers. Logistic regression result also exhibits significant relationship with factors like type of house, ownership of house, land holding pattern, nature of sanitary facility, electrification status source of drinking water, possession of bank account and number of days lost due to diseases affecting social exclusion. Correspondence Analysis proves the existence of small versus large plantation disparity in terms of livelihood. Workers in spices sub-sector (which mostly are large in size) fall under the Low SLI category, whereas workers in small rubber plantations fall under high SLI category and large rubber plantation workers come under medium SLI category based on their relative performance of various livelihood assets.

The plantation sector provides a mixed picture while observing the area, production, productivity, price and trade trends of natural rubber, pepper and cardamom. Kerala remains to be the key producer of all these plantation commodities. In terms of area and production the rubber sub sector provides promising results, whereas the situation is not so rosy in the case of pepper as the area of cropping have declined drastically over the years. Cardamom production increased substantially even though the sector witnessed decline in terms of area of cropping. Productivity of all plantation commodities increased significantly over the years owing to the introduction of high yielding varieties of these crops. Commodity prices analysis of plantation crops show a direct bearing on the area and production trends of these commodities. Opening up of the economy provided positive and
negative implications on the sector with export markets increasing on one side and increase in competition from the other side. Analysis proves to the fact that post liberalization period enabled the sector to discover newer markets and thereby diversify markets and to reduce vulnerabilities associated with tougher competition in international market. At the same time the quantitative easing in the form of removal of non-tariff barriers resulted in larger volume of import of plantation commodities from ASEAN countries. In a sense the plantation sector remains vulnerable and the situation becomes susceptible once the sector is removed from the excluded list in the ASEAN FTA as ASEAN countries are the major global players in terms of productions of Natural rubber and Pepper.

While observing the employment though wage levels have improved because of improvement in commodity price of plantation crops, significant improvements are not visible in their livelihood and they remain excluded compared to other sections of the society. Trade distortion in the form of RTA and FTA has resulted in increased global competition to the plantation economy of the state paving way to large scale fluctuation in commodity prices obviously making already fragile plantation labour more vulnerable. In addition to this, low education, poor skill status, poor financial stability, fewer social security options, adverse geographical location etc are impeding their improvement in livelihood leaving them in vicious circle of exclusion. Putting together the aforementioned facts and analysis, the study reach to a conclusion that, regarding the livelihood and employment workers in plantation sub-sector is in the quest for accomplishing a better standard of living still remains a distant dream.
6.5 Policy Suggestions

- Increase in Price stabilization fund is needed to insulate the plantation commodities from increased price volatility as commodity prices have a direct bearing on the area production of plantation crops.

- Continuance in keeping plantation crops in the negative list in the case of India-ASEAN FTA also is desirable given the relative importance of the sector in the economy of Kerala and nation in terms of earning substantial revenue.

- Its high time governmental agencies intervene to understand the underlying reasons for the deprivation of livelihood and employment option and thereby forcing them to remain in a vicious circle of social exclusion.

- Stricter implementation of the Plantation Labour Act by ensuring plantations obliges the rules and regulations for promoting the welfare of workers are also needed.

- Measures also need to be taken to expand the ambit of the social security provisions of plantation workers thereby enhancing the social protection of plantation workers and their families and thereby reducing the vulnerability of livelihood in case of adversity.

- Commodity boards like Spices Board and Rubber Board needs to be more proactive in promoting the welfare of workers by increasing the plan expenditure on labour component.
6.6 Scope for Future Research

The present study has focused basically on the trends of production of the plantation sector and this in turn are juxtaposed to the employment, income and livelihood so as to address the issue of social exclusion of the workers. Livelihood of the resource based industries in Kerala and its implications on employment of the workers in a comparative framework would help to unravel sectoral and sub-sectoral issues inter alia the trend of exclusion of the workers is one such area for research which will help for policy formulations. In Kerala the trend of commercial agriculture is always prone to area and output responsiveness with price and this shift will have benefits and problems to various sectors and sub-sectors not only to the plantation owners but also to the workers. A study based on this will be useful in understanding the employment and income shifts of the workers and thereby the implication of social exclusion the working class faces in the plantation sector visa-a-vis other sectors. The rubber and spices have vibrant backward and forward output and supply chains with very high national and international link giving a high prominence with the capitalist business groups who make all kind of distortions for taking undue advantage in this chain excluding the life and livelihood of the people in the lower end of the chain. This possibly is a fertile area for future research.