Chapter 6

SUMMARY OF FINDINGS, CONCLUSIONS AND POLICY SUGGESTIONS

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The research study ‘Performance of spices sector in Kerala: a study with special reference to post-liberalisation era’ is conceptualised into six chapters. Though the spices sector includes many sub-sectors, pepper and cardamom are highly domineering in the spices sector of Kerala and hence acts as a source of livelihood to many and even an immense earner of foreign exchange to the country. Considering this importance, the study has focussed on the vicissitudes of these two spice products and its associated oscillations in demand and market in the liberalised regime. Conclusions of the study has been categorised into area bases for easy perusal.

6.1 Area, Production and Productivity

The study helped to identify a beneficial trend in area, production and productivity of pepper in the pre-liberalisation period. In production and area bases, the growth was 2.89 per cent and 1.45 per cent respectively. A
change in the situation is noticed in the post liberalisation period as Kerala showed a negative growth rate of 2.87 per cent in area. The pertinent reason identified for this is crop change. But the growth of productivity showed an increase in Kerala by 2.22 per cent in the post-liberalisation period. In the post-liberalisation period the envious position of the production of pepper was losing with the entry of Vietnam and Sri Lanka. Kerala also lost its glory of pepper production due to the spread of a disease named as wilting and this most happened in the pepper hub of Wayanad in Kerala.

However, in the case of cardamom a slow positive growth in area, production and productivity is identified in the pre-liberalised period. It showed a growth rate of 6.45 and 7.11 in cardamom production and productivity respectively in post-liberalisation period as against 0.68 and 0.35 in pre-liberalisation period. In Kerala, in the post-liberalisation period cardamom cultivation showed a growth rate of 0.38 per cent in area giving production and productivity growth rate respectively of 7.59 per cent and 8 per cent. It is identified that area of production showed a stagnating trend both in the pre and post liberalisation period, but production and productivity showed an increase in the post liberalisation period.

Statistical estimation based on a comparison of the CDI score for pepper during pre and post-liberalisation era indicates a stupendous increase in the scores across the three attributes, viz. area, production and productivity. Even though the scores are not so alarming, the impact of liberalisation on the pepper cultivators is clearly understood from this as
higher instability for production and productivity is bound to have big impact for the pepper cultivators. For cardamom, the results are opposite to that of pepper as the instability scores have come down drastically during the post-liberalisation era. As was the case with pepper, the CDI values for area under cultivation for Kerala are better than India. The cardamom production and productivity has become more stable during the post-liberalisation period. Also, the CDI values of cardamom production and productivity for Kerala are higher than the India figures.

It is also identified that there is instability in cardamom production and productivity in Kerala compared to India. The area under cultivation, production and productivity of the two spice crops viz. pepper and cardamom have undergone manifold changes during the period 1967-2016. An in-depth scrutiny of the data on a pre-post level has generated interesting inferences. The pepper area, production and productivity are more unstable after liberalisation of the economy, whereas the instability factor for cardamom production for the three attributes has come down. Despite this, dissimilarity between pepper and cardamom cultivators they have been impacted by the dwindling prices due to integration of the domestic and international markets. This is more so for the pepper because of the cheap supply of pepper from other international sources.

Empirical estimates showed that ten-year period (2004-2015) cost of cultivation of black pepper exhibits a monotonic increase of 361 per cent, which is an all-time record. This has three components, and the labour component itself comes to 53 per cent, cost for chemicals and manures and interest on working capital are respectively 9 and 6 percentages.
The cost of cultivation of cardamom is also very high in Kerala and this is particularly high in the first and second years. This type of high cost of cultivation of the spices especially of black pepper and cardamom make all kinds of vulnerabilities to the spice cultivators including indebtedness and one reason for the increasing farmers’ suicide in Kerala.

Evaluation of institutional initiatives both national and international levels revealed that it is important to protect the sector from production and productivity related issues. As competition from the new entrants in spices production is making distortions in the domestic and international markets, institutional interferences may help to curb the pitfalls the spices sector has been haunting since liberalisation.

6.2 Spice Exports

Analyses showed that pepper export earnings of 40-45 per cent in the pre-liberalisation has made a drastic change to 5-10 percent earnings in the post-liberalisation period. Though pepper export from India is influenced by fluctuations, the quantity and value of pepper export has not been that much unsatisfactory. However, the data shows a sudden fall in the period 1978-79 in terms of quantity exported with 15719 tonnes in comparison to 24678 tonnes during the period 1977-78. This type of unprecedented decline was continued during the period 1979-80 as well.

Several factors have been cited for this fall but, two factors prominently cited were fall in pepper production and accelerated demand for pepper. But the situation of the fall made a slow shift in the final phase of the pre-liberalisation era. Another noticeable factor in the pre-
liberalisation period is the severe competition made by Indonesia and Malaysia and the rampant changes in price leading to big price fluctuations and this in turn generated distortions in India’s export of pepper in the US economy. As a result of all these the period 1990-91 witnessed a sharp fall in the quantity of pepper exported from India.

But analyses in the post-liberalisation period in various phases showed a change of trend in the initial periods of post-liberalisation. Comparing it into two periods in the post-liberalisation period, the export of pepper decreased from 42824 during 1999-2000 to 28100 tonnes in 2015-16. One important aspect of this big fall in the export of pepper is due to the Indo-Sri Lanka Free Trade Agreement (ISFTA), Agreements of World Trade Organization and ASEAN India Free Trade Agreement (AIFTA). Quantity and value of pepper exported from India as per the growth rates in the pre-liberalisation period are 1.28 and 9.01 percentages respectively. But in the case of Kerala growth rate of quantity shows negative of 1.40, whereas the value-wise growth rate is 5.11. In the post-liberalisation period the quantity and value growth rate for India has been 1.26 and 13.41 percentages respectively. These figures for Kerala respectively are 0.03 and 11.66. The quantity-wise growth rate fall in the post-liberalisation period is basically connected with increasing global competition and the changes in prices. The major competitors of Indian pepper in the global market is Vietnam, Sri Lanka, Malaysia, Indonesia and Brazil.

It is identified that cardamom export is volatile both in terms of quantity and value. The export of cardamom in the pre-liberalisation
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period showed high fluctuation as it ranges from 1590 tonnes worth Rs.7.96 crores during 1966-67 to 400 tonnes valued at Rs.10.87 crores during 1990-91 and this has increased to 5500 tonnes worth Rs.449.83 crores during 2015-16. The increase of export during this period may be attributed to crop failure or other issues in Guatemala, a major cardamom exporter and global player. In the post-liberalisation period cardamom showed a rising trend in terms of export. Kerala holds the major share in cardamom export as Kerala’s share comes to 52.5 per cent during 2015-16.

The average figures of cardamom export in the pre and post-liberalisation periods respectively are 1028.5 and 816 tonnes. The item of cardamom export in the list of spices export is nil for the period 1997-98 and the reason cited for this is technical. Though post-liberalisation period shows poor export performance of cardamom, it shows a slight improvement since 2008-09.

Analysis of export of small cardamom during the pre-liberalisation period witnessed negative in terms of compound growth rate (5.37 per cent), whereas value from the export grew positively with 1.25 per cent. But in the post-liberalisation era the trend of growth rate in India is positive both in terms of quantity and value respectively with 9.69 per cent and 14.40 per cent. Kerala’s growth rate in the pre-liberalisation period showed negative both in terms of quantity and value with 1.61 per cent and 5.42 per cent, but this has changed in the post-liberalisation period respectively with 7.81 per cent and 12.37 per cent. Several reasons are cited for this negative rate of growth in the pre-liberalisation period as of quality, cost, unfavourable export policies of the government as well new competitor’s entry in the global cardamom market. Policy change on the
part of the government together with improvement in quality of the produce, search for new market has helped a lot in recuperating the market in the post-liberalisation period.

Mean score analysis of the export of pepper showed that USA forms the biggest pepper market with mean score of 9330.35 tonnes even though annually it is growing negatively with 0.06 per cent. Quantity-wise other major importers of pepper are UK and has a mean score of 1530.80 tonnes, Germany (mean score 1176.21 tonnes) and Canada (mean score 1087.46 tonnes). All the other countries together have a mean score of 5416.19 tonnes. The pepper market share of USA, UK, Germany and Canada account 57 per cent and in this respect Germany’s share is fast improving compared to the other three principal importers as it is growing at a faster rate than USA, UK and Canada. The CAGR per cent of 15.04 for Turkey, and 12.52 per cent for Sweden, which in fact implies that these two countries become high potential pepper markets. In quantitative terms countries of Canada, the Netherlands, Japan, France etc. show falling nature with -4.53, -1.63, -1.62, and -0.34 which implies future loss of these markets. Coefficient of Variation which is noted as CV explains inconsistency for high values and consistency for low values and in this respect Turkey with high value of 82.63 shows inconsistency and Japan with low value of 21.89 explains consistency in terms of pepper export from India.

Consistency estimates gave differing pictures for various countries with respect to quantity and earnings in the cardamom export to different nations at differing periods. The monopoly buyer position of Indian
cardamom on the part of USSR, Germany and Japan in the 1980s showed big changes with the onset of liberalisation as in Europe itself it spreads to several countries and the Middle East and other Asian countries have also become major buyers of Indian cardamom. Saudi Arabia emerged as the major buyer of Indian cardamom with a mean quantity of 1229.68 tonnes, which shows an annual compound growth rate of 13.88 per cent. The corresponding mean figures of other countries are respectively UAE with 223.23 tonnes and Japan’s value is 111.99 tonnes and other countries together give a mean value of 314.06 tonnes. The three markets together gave a share of 80 per cent (Saudi, UAE and Japan). Expansion of market in terms of percentage shows that both Saudi and UAE growing fast in comparison to Japan and hence considered as important potential market for Indian cardamom.

Analysis in terms of CV for explaining the consistency of the market, USA with high CV of 108.43 per cent showed inconsistency in export, whereas low CV for others with 71.56 per cent shows consistency. India mostly buys pepper from Bangladesh, Sri Lanka, Myanmar, Vietnam, Madagascar and Indonesia. India imported 19365 tonnes with a value of Rs.116296.43 lakhs in the period 2015-16. Comparing two periods of 2010-11 and 2015-16 the import increased by 20 per cent. Data show that both quantity and value in terms of pepper import is increasing. The annual compound growth rates of the import of pepper both quantity and values respectively are 10.9 and 23.8. Cardamom import to India is mainly coming from Guatemala and Singapore. Data showed a decline in the import in the periods 2010-12 and the decline might be connected with falling production in Guatemala for the period 2011-12 and also
strict vigilance of in the main customs points in India. In spite of these the country witnessed an increased cardamom import in the periods of 2013-15 and this comes in quantity terms as 1110 tonnes and 2285 tonnes and in value terms Rs.3165 lakhs and Rs.6574.95 lakhs.

Estimates of the ANOVA was indicative statistically significant differences in the price levels for the two commodities during the three phases after globalisation and at least one of the mean prices is different from others for both pepper and cardamom. The Tukey HSD Post Hoc test further support the inferences obtained from the Multiple Comparisons. For pepper, phase 1 and 2 appears in subset 1, whereas phase 3 is different from phase 1 and 2 and appears in subset 2. For cardamom, the three average prices appear in three different subsets. These indicate that the mean price of cardamom in each phase is significantly different from each other.

Seasonality analysis for pepper showed high degree of variation compared to each period during the previous year. The price fluctuations are seemed to be less during the initial phases and after which there is a huge volatility upwards. Afterwards, there is a huge plummet in prices compared to the same period last year, which is evident from the negative values of seasonal difference. Barring two fluctuations, the price difference is more or less stable until 2014-15; afterwards there is a huge upward swing and then a fall in price. The hike and correction in price of pepper during the last two or three years has serious impact on the livelihood situations of the cultivators in the state. The recent fluctuations and volatility in price is high compared to the prices of pepper during the same period previous year.
Seasonality analysis for cardamom as well, the results showed higher seasonal volatilities than the prices of pepper. The prices have dwindled a great deal showing movements both upward and downwards and hence the seasonal volatility seems to be high for cardamom prices. Based on this nature the period after 2010 has shown high volatility in prices. The results show volatility in prices of both for pepper and cardamom. Now it is to be evaluated whether this volatility is related to price fluctuations happening in the domestic market. This stresses the need to compare the domestic and global prices of the two commodities and test whether the markets are integrated with each other. The two prices may not be similar but may move in the same direction. The market integration of the domestic with the international prices may be a reason for such big volatilities. Also, as the results are indicative of the high volatility in prices experienced in the domestic market for pepper and cardamom.

Estimates of Seasonality Index of pepper and cardamom in three different phases exhibited wide fluctuations. The Seasonality Index score for pepper price has shown rampant fluctuations in the three phases. The fluctuations have been erratic and unpredictable. For cardamom as well, the result illumines similar inferences. Though there is a seasonality patterns in the prices, the variations have been unpredictable for the post-liberalisation three phases. For pepper, phase 1 and 3 have shown similar seasonality index scores of more than 1 during the period January to March. The months of August to October have shown a score of more than 1 for all the three phases. During the total period, August to December, has shown better prices compared to the average annual price of pepper.
Estimate of the CDI score for price in the case of pepper had shown more instability in the post-liberalisation era. The value has increased from 10.78 to 22.56. It shows that the overall score of instability is also high with 33.49. It has been an alarming increase in the instability of the domestic price of pepper after liberalisation. The cultivators and the traders have always complained about dwindling prices in the domestic market. This is primarily due to the integration of markets and free trade agreements as any variation in the global market is reflected in the domestic market. However, for cardamom the CDI score has come down from 16.08 to 11.84. This showed that the price variation has reduced for cardamom during the post-liberalisation period. The overall CDI score for cardamom is also less than 10 (9.71).

It is identified that the ratio of domestic to international price for the post globalisation for pepper is above 0.75 during the period under review. Only a few times, the value has gone marginally above 1. Therefore, pepper export competitiveness in the international market is somewhat robust. Overall average score is 0.90 which shows that the Indian pepper is competitive in the international markets in the post-liberalisation period. However, the result is further evaluated after subdividing the data into three sub phases of eight, eight and nine years and the mean scores of each period is calculated and data revel that the export competitiveness of pepper has come down during the recent period. For cardamom the results indicate towards more export competitiveness since the ratio scores are lower. The average score during the period is 0.73. The score during all the three periods under review has stayed below 0.75.
An evaluation of the CDI on the data on quantity and value of pepper exported India and Kerala showed that the scores are significant for the pre and post-liberalisation periods. For cardamom the estimated values are insignificant for the pre-liberalisation period and significant for the post-liberalisation period. The overall P values for quantity and value of pepper exported show an insignificant score for the quantity of pepper exported from India and Kerala and significant results in terms of value of export of pepper from India and Kerala. Quantity score for both India and Kerala is not significantly related for cardamom. The P values in terms of value of cardamom exported from India and Kerala are significant. The overall CDI for pepper in terms of quantity for India and Kerala is 15.86 and 16.60, respectively. In terms of value the CDI scores for pepper are 31.47 and 21.64 for India and Kerala. It also shows that the instability in terms of quantity of pepper exports for India has increased from 7.45 in the pre-liberalisation period to 14.41 in the post-liberalisation period. This implies that the quantity of pepper exports from India after liberalisation has been inconsistent. For Kerala, the increase has not been that much drastic (11.17 and 13.92). In terms of value of pepper exported, the instability index score has also not seen any drastic changes. From 22.27 in the pre-globalisation period the score has shown a slight increase of 25.57 for India. The Kerala CDI score has come down marginally from 22.72 to 20.79 during the period under review. However, the values during pre and post-liberalisation are more than 20 indicating that, compared to the quantity exported of pepper, the CDI values are unstable in terms of value of exports during the pre and post-liberalisation period.
Estimates of instability score for cardamom gave the picture that the overall instability score is 40.10 and 47.85 for India and Kerala, whereas the CDI score for quantity of exports has come down during the post-liberalisation period. For India, from 25.57 during the pre-liberalisation, the value has come down to 22.99 in the post-liberalisation period. Kerala score has visualized a marked improvement from 41.40 in the pre-liberalisation to 27.92 in the post-liberalisation era. This shows that the quantity of cardamom exported has stabilized after liberalisation. In terms of value of the cardamom exported, the overall scores are 52.87 and 78.28 for India and Kerala. The results pointed towards a situation of high instability. Though there is an improvement in CDI score for cardamom exports in terms of value for India during the post-liberalisation period (43.15 to 25.70), the value for Kerala during the period for this is 53.40 and 61.45 respectively. Overall, the instability scores for quantity and value of cardamom exported are higher in comparison to pepper, which in fact indicates good stability in terms of value for the cardamom exports from Kerala.

Market concentration inference showed that the United States has been considered as the major importer (40 per cent share) of black pepper from India since 2000-01. However, the market concentration of the Indian black pepper in terms of quantity and value had undergone a drastic change with some countries entering the list, whereas some are exiting from the top list of importers. Indian small cardamom is mainly imported by Saudi Arabia and hence is the leader in terms of quantity and value for the period under review and its share has increased over the period. Bangladesh has vanished from the top 5 in terms of quantity of
cardamom imported from India after 2001-02 and USA has come into the top 5 ranks. In terms of value, UAE has replaced Japan. Bangladesh which was second in terms of quantity of small cardamom exported is changed to the 3rd place in terms of total export earnings to India during the first two years. Japan has moved down to the fifth position from the second rank and UAE to the second from the fourth position. Proportion of earnings from Kuwait has also shown an increase from 5th to the 3rd position.

Evaluating the effect of regional trade agreements in the spices sector for Kerala showed high implications in the Kerala economy particularly in the cases of pepper and cardamom. Sri Lanka forms a big partner in the global trade and is also in the SAARC countries. In the case of pepper in 2006 India permitted import of 2500 metric tonnes based on import authorization issued by the Director General of Foreign Trade (DGFT) of India to Sri Lanka with zero duty. But ISFTA helped to import spices from Sri Lanka and import mostly takes place through Cochin port. Several spices products are imported under this scheme. Year-to-year import under this scheme showed heavy increase and annual average in this respect for the period 2001-16 comes to 5546 tonnes. Vietnam also using the Sri Lanka route to take the advantage of tariff benefit under SAFTA and ISFTA, which in turn resulted in heavy oscillations in the price of pepper and this has resulted in the decline in price of Indian pepper.

Pepper trade under AIFTA has also got several implications in the ASEAN as many ASEAN countries are producers of pepper and in this
Vietnam as the principal producer of pepper. The export intensity as proportion of the production of pepper in India was 75 in the pre-liberalisation period has come down substantially in the liberalisation period. Evaluation of benefits under AIFTA, it is clear that Vietnam and Indonesia have gained from it more as import statistics of Indonesia shows of 3910 metric tonnes of pepper import, during 2015-16 whereas Vietnam imported 6780 metric tonnes during the same period. Spices other than pepper also imported highly from Indonesia and Vietnam among ASEAN regions, exhibiting equal share in total import from ASEAN.

It is true that WTO based SPS functions worked as important and severe non-tariff trade barrier to spices for the exporting countries. Saudi Arabian ban on the consignment of Indian pepper is a classic case in this regard. To overcome this ‘clean spices’ production method is to be popularized. Organic spices production is also an alternative but cost of production is high.

6.3 Socio-Economics and Cultivators’ Profile

Socio economics of the cultivators explained that majority of the cultivators belongs to the education pattern of secondary and higher secondary levels. Those who have qualification of college or university level are 20 per cent. But some cultivators (16 per cent of the respondents) have qualification of primary level and proportion of illiterates in the total sample is only 0.4 per cent only, which is close to the education level of the Kerala economy. An inter-district comparison of education level as shown points towards lesser differences in the educational profiles of the cultivators.
The income data revealed that agriculture or farming is the main income earning activity for the spice cultivators. The prime earning source for more than half of the cultivators is agriculture itself. Even though nearly one third of the sample respondents depend mainly on earnings from private or government sector, plantation or farming for the production of spices is only a family activity for them. In fact, most of the sample respondents seem to have inherited their agricultural land over generations and hence continue to engage as their family activity. Only a few are first generation owners or cultivators of spices who are mainly business groups looking for an alternate investment for profit. Businessmen cum planters are considerably more in Idukki district. The comparative inference showed that cultivators in Wayanad are more dependent on agricultural income than that of the cultivators in Idukki.

Analysis based on the type of holding showed that nearly 60 per cent of the small holders have agriculture as their main source of income and only 8.7 per cent of the small cultivators mainly depend on business income. Medium cultivators category has shown a decline in the agricultural income and an increase in business and service incomes, which also acts as their main earning avocation. The earning source of large cultivators is agriculture itself (54.6 per cent) and business income comes to 25.4 per cent.

Based on the size of plantation, the annual earnings differed considerably. About 57.4 per cent of the small cultivators have an annual income below 1 lakhs and 31.3 per cent have earnings of 1 to 2 lakhs. Those in the higher income brackets are less among the small cultivators. Medium cultivators mainly assemble in the category of 1 to 2 lakhs
income (47.7 per cent), whereas 20.6 per cent of the medium cultivators are in the income category of between 2 to 3 lakhs. However, none of the medium cultivators and 0.3 per cent of the small cultivators have an annual agricultural income of more than 3 lakhs. Nearly 60 per cent of the large cultivators have reported their income in the category of 2 to 3 lakhs and more than 3 lakhs.

It is identified from the primary data that majority of the cultivators (54.4 per cent) use own source of funds for farming and 42.9 per cent rely on a combination of own and borrowed source of funds. The results are also identical when we go for a plantation-wise analysis. Based on the type of holdings, small and large holders mainly depend on their own source of funds while the medium holders rely more on a combination of own source and borrowed sources to carry out their activities. However, the proportion of cultivators using both borrowed and own funds is higher among the large cultivators at 40.8 per cent compared to 28.4 per cent among the small cultivators. Lack of credit, and this acts as a major issue among the small cultivators and most of them do not have access to credit facilities due to the nature of their plantation and hence they can only use their own funds for carrying out the plantation activities. Medium and large cultivators have better access to credit facilities compared to the small cultivators and hence many respondents are using both own and borrowed sources of funds.

Analysis relating to financial assistance showed that the cultivators receive fund based on their holdings. About 83.1 per cent of the cultivators receive financial assistance for their plantation activities.
Based on type of holdings, cultivators that have received financial assistance are comparatively less among the small cultivators (79.4 per cent), compared to (91.5 per cent) of the large cultivators. The source of assistance is mainly obtained from Krishi Bhavan for more than 90 per cent of cultivators and only 7.8 per cent have claimed that they have received assistance from Spices Board. Those who have received assistance from the Spices Board are mainly belonging to the large and medium plantation units.

Inference relating to the use of organic manures showed that majority i.e. 84 per cent of the cultivators make use of organic manure for cultivation. However, the percentages of small and large cultivators using organic manure are higher compared to the medium cultivators. About 57 per cent of the cultivators who do not use organic manure are willing to shift to organic farming and percentage of medium cultivators expressing interest to shift to organic farming are also similar at the level of 56.8 per cent. However, a very less number of large cultivators abstain from using organic manure as none of them is willing to shift to organic farming. Nearly 73 per cent of small cultivators are willing to shift to organic farming. One major reason for the lack of willingness to shift to organic farming is high cost involved in the cultivation. Lack of support from the government authorities shows that interest of the farmers alone would not be suffice to make a shift to organic farming considering its costs. In this respect the institutional agencies like the Krishi Bhavan, Spices Board and other government authorities should come forward to help the cultivators for organic spices cultivation. In this respect they expect not only the present form of technical knowhow and guidance but they expect
financial support for such a change as the cultivators alone cannot meet the cost fully for such organic cultivation. Once it is fully converted it would entail greater demand for their product both from inside and outside the country and it will help to face competition in the global spices market and trade.

Adherence of quality standards inferred that about 16.9 per cent of the pepper cultivators and 17.8 per cent of the cardamom cultivators were rarely able to achieve international quality standards, whereas 22.2 per cent and 23.6 per cent of the pepper and cardamom cultivators were always up to the mark when it comes to adhering quality standards. Based on the type of commodity there was no visible difference and the overall results were also similar. In this case 31.9 per cent of the cultivators very often and 27.9 per cent were sometimes able to achieve the global quality standards during their farming.

Again, adherence of global quality standards varied largely according to the size of holding. The large cultivators have always (64.6 per cent) been or very often (35.4 per cent) able to achieve the global standards in production. Small and medium cultivators were unable to adhere to the global quality standards owing to the high cost involved in the production process. However, one striking inference is with regard to the medium cultivators as 34.8 per cent and 15.4 per cent also in the un-addressing category. Only 7.1 per cent of the medium cultivators were always able to keep up with the standards of production at the global level.

Output disposition analysis showed that only 4.6 per cent of the cultivators directly dispose the crops in the market, 32.6 per cent dispose
their produce in the village market, 30.1 per cent sell through agents and 30.1 per cent sell their produce to exporters. Disposing crops through auctioning is rare as only 2.5 per cent of the cultivators are engaged in auctioning. Spices-wise inference is also similar with only minor differences. 6.1 per cent of the small cultivators and 10.8 per cent of the large cultivators directly dispose their produce. Those selling the products to village shops are higher among the large cultivators compared to medium and small cultivators. Dependence on agents is more seen among the small (33.9 per cent) and medium (36.6 per cent) cultivators. However, the dependence on the agents is low, but participation in auctioning by the large cultivators is also not appealing as only 1.5 per cent of the cultivators auction their produce.

Perception analysis relating to holding type and profitability explained visible differences in their perception. Spices cultivation is very often profitable for 22 per cent of the small cultivators. 62.3 per cent consider it as sometimes profitable and 7.8 per cent of the small cultivators feel that spice cultivation is rarely or never profitable. With regard to the medium cultivators, 26.2 per cent very often consider spices cultivation as a profitable activity and near to 60 per cent of the medium grower category consider spice cultivation as sometimes profitable. Among the large cultivators, nearly 88 percent feel that spice cultivation is profitable very often or sometimes.

Analysis inferred that cultivators are fully aware about the futures trading in pepper and cardamom. About 79 per cent of the cultivators are aware about the futures trading in pepper and cardamom. 82.6 per cent of
pepper cultivators and 74.8 per cent of cardamom cultivators respond that they are well aware of the futures trading option. With regard to the holding type awareness level about futures trading, 71.9 per cent of the small cultivators are aware of compared to 82.5 per cent of the medium and 88.5 per cent of the large cultivators. Even though the awareness level about the futures trading in spices is more than 75 per cent among the cultivators, only 67.5 per cent actually take part in futures trading. The percentages of those who participate are high among the large cultivators at the level of 63.5 per cent. The participation of small and medium cultivators is comparatively less at 18.1 per cent and 32.5 per cent respectively. The respondents who engage in futures trading generally feel that the futures trading helps to cover the risk to certain extent as 57.6 per cent feel that the futures trading is sometimes able to cover the risk associated with price fluctuations. Holding-wise, there exists a difference in perception as 15.1 per cent and 23.3 per cent of the large cultivators always or very often perceive that the futures trading is able to withstand the price fluctuations and associated risks, whereas none of the small and medium cultivators has said that the futures trading always helps in covering the risks. The small and medium cultivators opting ‘very often’ are also less. 37.8 per cent of the small and 34.5 per cent of the medium cultivators have stated that the futures’ trading has helped them to cover the risk only in rare cases.

It is identified that cultivators who are totally satisfied with the present market system are less than 5 per cent in both categories and those who are very satisfied also form a meagre percentage. Majority is moderately satisfied (44.2 and 42.8 percentages for pepper and
cardamom). 19.3 per cent of respondents of pepper cultivators and 33.3 per cent of cardamom cultivators have reported to be unsatisfied. Those in the highly satisfied category are only seen among the large cultivators. Those at moderate satisfaction levels are higher for the two categories of cultivators i.e. medium and large (57.2 per cent for medium, 62.3 per cent for large cultivators). 40.9 per cent of the small cultivators are not at all satisfied with their present activity, whereas the small cultivators who are slightly satisfied are only 31.3 per cent. The overall satisfaction level varies based on the type of holding and in the case of large cultivators show better satisfaction level.

Livelihood index analysis showed that none of the cultivators got high livelihood index value in the sampled data. Majority got a score of medium-low, followed by medium and low (40.6 per cent, 25.9 per cent and 23.4 per cent). Only 10.1 per cent got medium-high index scores. The index values based on the type of spice cultivated shows meaningful inferences. For cardamom, percentage of low and medium-low category scoring is more than that of pepper cultivators and only 6 per cent and 22 per cent of the cardamom cultivators have medium and medium-high scores. This is low compared to the score of 13.8 per cent and 29.4 per cent respectively for pepper cultivators. The results of the index values based on type of holdings show worthy differences. For most of the small cultivators, the index value is at low or medium low levels. For the medium holder’s majority has medium-low index value, those who are having medium index value come to 36 per cent. Majority of large cultivators is in medium-high category and none of them has low index value. Similarly, those in the medium-high category are very less among
the small and medium cultivating. The index scores are high for the high-income cultivators and vice-versa for the low-income cultivators. This strengthens the notion that the cultivators with more area under cultivation often get better and improved livelihood security compared to other cultivators.

6.4 Impact of Liberalisation - Cultivators’ Perception

Perception evaluation showed that the spices sector presently is facing some sort of crisis. Most of the issues in the spices sector have been explained as high intensity issues by majority of the cultivators. Increasing imports and falling exports are not considered as prime conundrum for the cultivators compared to other issues. However, 85 per cent of the cultivators feel that trade liberalisation is a cause of concern. High debt burden (74.1 per cent) and low profit margin (67.4 per cent) are also cited as major issues of high intensity by majority of the cultivators. Factor analysis results show that low profit, lack of interest, high debt burden and liberalisation are featured as the first factor. The other two reasons for lack of interest are repetitive activity and shortage of labourers resulting from migration to other agricultural and non-agricultural activities. These have been come as the second factor. The third and last factor features into two statements related to the Exim trade viz. high imports and low exports. Unfortunately, these are the outcomes of trade liberalisation of the sector.

Index of Intensity (IoI) estimated of the cultivators identified that the intensity of the issues in spices sector is ranging from medium level to high level. Spices-wise there are differences in the scoring with majority
of the pepper cultivators in the medium category (64.9 per cent), whereas among the cardamom cultivators, 52.2 per cent perceive that the issues they face in the sector are of high intensity. The percentage of cultivators who are having high intensity scores come mostly from the low-income groups, which gradually comes down as we move to the higher income brackets. From 50 per cent in the lowest income category of less than one lakh, the proportion of responses in the high intensity category declines to 15.6 per cent in the highest income slab of less than 4 lakhs. It is evident that the intensity of these issues among the higher earning cultivators are less. Small cultivators seem to have high intensity of crisis (67.5 per cent) compared to medium and large cultivators. Similarly, 71.7 per cent of the medium cultivators have got their collective index scores at the moderate level. The percentages of large cultivators with moderate index score are high at 83.1 per cent.

Factor analysis results on problems in the spices sector explained that the first factor in the first factor includes seven statements, out of which 6 are the problems experienced by the cultivators during the production stages. One important trade issue viz. the dwindling price of the spices products in the market is also featured in as the first factor. Rightly so, the labour issues come in as the second factor and five of the six labour related problems have been featured here. The third factor is predominated by the two trade problems. It is identified that labour problems have been the principal problem in most of the agriculture and related sub-sectors of the Kerala economy. The result of the factor analysis also is pointed to this problem in the spices plantation sector as well.
The worked out average index score for all the problems is 65.20 out of 100. Overall, it is evident that the labour and production issues are severe than the market/trade problems as the mean score of trade issues is only 41.25 compared to a score of 76.15 and 78.18 for labour and production issues. While evaluating independently for the small, medium and large cultivators, the results are inconclusive as there is only slight difference in the total mean scores which indicates that the problems of liberalisation have been experienced irrespective of the area of holding. This shows that the cultivators were impacted by one problem or another.

Empirical estimate based on factor analysis regarding the impact of trade agreements showed low exports, increasing imports, less demand for domestic products and crash in domestic price are the statements which feature as the first factor. The second factor features statements like stiff competition from other countries, high quality standards and inadequate product coverage. The third factor shows statements related to trade barriers like restricted rules of origin and non-tariff barriers. The results of the factor analysis testify severe impact of trade agreements for the two products of cardamom and pepper. The major issue identified is fall in demand and this is mostly the result of imports from other countries at a lower price. This has a direct impact on the livelihood situation of the cultivators. Empirical results confirm that the livelihood is at stake which calls for urgent policy measures to rejuvenate this sector so as to safeguard the pepper and cardamom cultivators in the state.

Perception of the spice cultivators confirmed that there is problem in the spices production and hence is in the verge of a crisis. 78.5 per cent
of the cultivators perceive that the present crisis in the sector is mainly due to the international trade agreements. Compared to the small and medium cultivators (77.3 per cent), percentage wise many large cultivators (84.6 per cent) feel that international trade agreements are major reasons for the present crisis. While the awareness level regarding the trade agreements differ based on the size of plantation, majority feels that the international agreements are the major reasons for the present crisis in the spices sector and the difference is negligible.

Perception about the future of the sector, the majority of the cultivators are optimistic about the future of spices sector and feel that the ill-effects of international trade could be removed in the long-run, they do not feel that the present adverse effects created by international trade practices can be favourably be removed. In this case also it does not seem to be any difference in this perception for small, medium and large cultivators. Nearly 50 per cent of the cultivators are of the view that the negatives of international trade could be removed considerably and those saying that the adverse effects could not be removed come around 39 per cent.

Empirical estimate based on factor analysis for the ways to rejuvenate the sector they have the common perception of improving quality in production, promoting organic farming, value addition, brand promotion and organising international trade fair are the statements that have been featured as the first factor. However, the cultivators have also suggested for some policy decisions to be taken by the government, which are essential for the development of this sector and these are the second and third factors. Here, it is imperative to mention that if the
targets related to the statements in the first factor are achieved, the pepper and cardamom cultivators will become self-sufficient, producing better quality and value-added products and hence there will not be any need for policy actions like tariff reduction or control of imports in future. However, there is also need for policy actions on the part of the Spices Board and other related government agencies so as to help the cultivators in promoting organic farming and improving overall quality of the produce. It seems that government interventions would only save the pepper and cardamom sectors with proactive actions to reduce the downward spiral in the spices prices. This is needed mostly during the pre and post cultivation stages rather than focusing on trade restrictions and protections as part of the long-term strategy. Policy makers should ensure the need and requirement of the prime stake holders with utmost priority that is the producers of spices before developing and implementing any schemes meant for their welfare.

The study helped to identify production, productivity and area under cultivation problems in the spices sector. This definitely have implications in the livelihood and earning capacity of the cultivators. But production and area under cultivation depends on the price of the spices, which in turn depends on quality, market and its uncertainties. A noteworthy feature of the present trade is connected mostly with trade gimmicks as importers are freely importing in India from the ASEAN countries through India Sri Lanka free trade agreements in the pretext of value addition for export, but actually it is creating harm in the domestic market and hence not going for value added export. One thing is quite
obvious at this juncture, the regional trade agreements like the ASEAN and ISFTA make a big toll to the spice cultivators of Kerala.

6.5 Policy Suggestions

The major issue faced by pepper and cardamom sectors is the instability in prices. Due to the fact that the global and domestic prices are integrated, any tremors experienced in the global market are transmitted to the domestic markets immediately. A proper price monitoring and propagating mechanism will be useful to the spice cultivators.

Futures trading in spices is introduced with the idea of ensuring price stability. But most of the cultivators are unaware of the process and hence their participation is very minimal. Presently it is seen that the traders get the benefit. The benefit of the futures trade to be equitably distributed to all the stakeholders and the reason for the non-participation of the marginal cultivators is their ignorance about the concept. Therefore, periodical training to be given to the cultivators by the Spices Board or other institutional agencies connected with the spices sector to make awareness about the need and benefit of futures trade in spices.

Spices marketing and trade is highly competitive with the entry of new producing countries who are having the benefit of cheap availability of workers. But workers in Kerala are costly and hence spices cultivation is also equally costly and the products accordingly become uncompetitive. New entrants are mostly using organic cultivation in the spices sector and any country who is not using organic cultivation will be thrown out of the alien. The present subsidy system given by the Spices Board is totally
unhelpful for the farmers to go for 100 per cent organic system of spices cultivation and a new subsidy system with full cost of conversion of organic cultivation along with high yielding varieties of spices to be ensured to the cultivators.

Without addressing the global quality standards, it is difficult for getting the new markets or to get the continued proliferation of the existing markets. Proper training of the cultivators and workers involved in the spices production and even assisting producers and exporters the cost of SPS technicities is also found to be inevitable to meet the growing global competition in the spices sector. Spices Board and Krishi Bhavan can make wonders in this field.

New schemes are required to help the small and medium spice cultivators. For meeting the cost of cultivation, they depend mostly on money lenders at exorbitant rates. Like any other farming activity, pepper and cardamom cultivations also fluctuate based on climatic conditions and hence schemes like ‘debt scheme and special assistance scheme’ will help the cultivators.

Here it is pertinent to mention that some of the small and medium cultivators have been critical about the support they receive from the authorities in the form of subsidies, credit facilities, training and other support. They feel that they are often neglected and most of the benefits are going to the large planters. This needs to be seriously addressed so as to ensure that all sections of the cultivators get benefits of the schemes and programmes.
Hence there is a need for special assistance to small and marginal cultivators in the spices sector. Instead of taking the spices sector unique without making any differences in the big, medium and small cultivators, it needs special help for the small and medium cultivators considering their number and problems. In the liberalised regime they have more problems in production, finance and marketing than that of the big cultivators.

6.6 Further Scope for Research

It needs to be taken up evaluation studies under the ambit of the liberalised regime for other spices sub-sectors connected to Kerala, it is also equally important of this piece of research as an inducement for researchers to take up further research in the spices sector. As other sub-sectors are small and tiny the livelihood implications are manifold. It is visible in the Kerala economy the spurt in the price of any of the spices other than pepper and cardamom may induce the cultivators for a shift which normally is short lived giving untold misery to the cultivators. Moreover, this kind of shift may not be area sensitive and also not even tune to the oscillations, which in most cases end in price fall during the harvest season and hence end in debt-trap or in the form of farm suicides. This is occasionally happening in the districts of Wayanad and Idukki and even in other districts too. Hence, studies of socio-economics of these marginal cultivators and the demand and supply oscillations and its impact in the spices sector of Kerala are valid. The present study has been focussed on the performance of two major spices crops and the perception of spice cultivators, but it is equally useful and appropriate to
frame a research study encompassing all the stake holders of the sector, say for example the traders, agents, workers and marketers etc. in the same post-liberalisation era framework. Another area which is pertinent to be considered is the impact of regional trade agreements to all the stake holders in Kerala and the associated policy requirements to counter if any negative effect is to be identified.

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