CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter consists of two parts. The first part compiles the findings of the analysis of secondary data and the second part summarises discusses the findings of the analysis of the primary data. The conclusions of the research and recommendations are presented in the following sections.

5.2 FINDINGS FROM THE ANALYSES OF SECONDARY DATA

The absolute export value of Indian floriculture has increased up to 2007. After 2008, the total export value has started climbing down drastically. The downtrend in export value is mostly due to the sub-prime crisis in US and financial meltdown in most of the European countries. Most of the floriculture markets for Indian exports are located in USA and Europe.

There is a significant impact of trade reforms on floriculture export value in the reform period. It implies that the Indian trade reforms have helped to increase the export of floriculture products in terms of value.

But, the Indian trade reforms have not influenced the export of floriculture products in terms of volume. It means that the export of
floriculture products from India has not increased in quantity terms. The increase in value of exports is attributed to the increase in the prices of floriculture products of India in the international market.

The growth rate of export of Indian floriculture products under all categories of HS06 shows high fluctuation during the adjustment period: 1991 to 2000. From the year, 2001 onwards up to 2007, the growth rate is steadily increasing. But there is a sharp fall in growth rate in the year, 2008 and thereafter there is a slow recovery in the growth rate of exports of Indian floriculture products.

The growth rate of the value of exports under HS0601 shows oscillation during the period: 1988 to 1998. The same pattern is reflected during the period: 2003 and 2007. However, there is a study growth in the period: 1999 to 2002. From 2008 onwards the growth rate of the value of exports of HS 0601 declines.

The products under HS 0602 category show that the export growth rate is moderate for the entire study period except 1994 and 2007. The growth rate of HS 0602 is high during 1994 and 2007.

In the case of HS0603 category of products, the growth rate is highly fluctuating for the period: 1988-98. But during the period: 1999 to 2010, there has been a moderate growth, except 2003 and 2008.

The growth rate of products under HS0604 shows highest range of fluctuation for all the sub groups of floriculture products during the period: 1988 to 2000. There is a growth during the period: 2001 to 2003. Since 2004, the growth rate is declining.
The comparison of the growth rates has shown that the growth rate of world floriculture export is quite high before the trade reform period i.e. till 1992. Afterwards, growth rate of world floriculture export is less than the growth rate of India’s export of floriculture products. In comparison with the growth rates of world exports of floriculture products, India has performed well after the trade reforms. Specifically, India’s export growth rate is higher than the world export in most of the years during the period: 1994 to 2007.

India’s growth rate of HS0601 is higher than the growth rate of world export in most of the years during the period: 1991 to 2006.

India’s’ growth rate of HS0602 category of products is higher than the world growth rate during the end of the adjustment period and beginning of the post adjustment period i.e. during the period: 1994 to 2007. India’s export performance is not on par with the world’s export performance in the initial period of reforms and at the end of the study period.

The growth rate of HS0603 category of products shows that after the trade reforms, India’s growth rate has been impressive than the growth rate of world’s export in most of the years.

The growth rate of HS0604 category of products is higher than the world growth rate in most of the years during the reform period. India has shown poor performance in the export of HS0604 in terms of growth rate comparing to world growth rate in the initial period of reforms.

In general, during the trade reform period, India’s export growth rate of floriculture products is comparably higher than the world growth rate.
The growth rate of export of HS06 category of products from India is higher compared to the growth rate of world import of floriculture products till 2007, except 1990, 1992, 1996 and 2000.

India’s floriculture export growth rate of HS0601 category of products in value terms is fluctuating. Comparing to world import growth rate, India’s growth rate is not either high or low during the same period.

From the year 1999 onwards India’s growth rate is reasonably high comparing to world import growth rate till 2006. From 2007 onwards India’s export growth rate is negative and lower than the world import growth rate till 2010.

India’s export growth rate of HS 0602 category of products is higher than the world import growth rate during the period: 1994 to 2009.

In the initial period of reform, the export growth rate of HS0603 category of products is impressive comparing to world import growth rate of same category. But during the period: 1996 to 2003, the international floriculture market was sluggish except 1997 and 2000. From 2004 onwards, there is an improvement in the growth rate of exports. But it falls in the years, 2008 and 2009 and slightly heading upward in the year 2010.

The export growth rate of HS0604 category of products is higher than the world import growth rate during the mid period of reform: 1995 to 2004, except for the year 1996 and 2000. After 2004, the growth rate is marginally higher than the world import rate. During initial period of reforms, the India’s growth rate has dropped though the world import rate is reasonably high.
There is a significant impact of reforms on the growth rate of floriculture export in value terms in the reform period. So, the trade reforms have brought reasonable growth in the export of floriculture products during the trade reform period.

Overall, the absolute value of exports of Indian floriculture products has increased during the reform period. The growth rate of export of Indian floriculture products is higher than the growth rate of world export as well as world import of floriculture products. However, the export of floriculture products from India has not increased in quantity terms.

Several factors such as price, seasonal variations in the tariff rates of importing countries, quality standards imposed on the floriculture products time to time, customer preferences for the product varieties, production of floriculture products in the importing countries, non tariff barriers, etc, contribute to the fluctuations in the exports of floriculture products from India.

The percentage of the share of sub groups of Indian floriculture products for the period 1988 to 2010 in value terms reveals that HS0601 has a share of around 8% of the overall Indian export of floriculture in the initial period of the trade reform. Then it is gradually declining in the reform period. In the post adjustment period, it comes down to less than 2% of the total export. HS0602 products have a share of around 40% of the export in the initial period of trade reform. But later, it has declined to around 10% for most of the reform period. In the end of the post adjustment period, it has gained back around 15% of export share. HS0603 products have shown high growth in the percentage of share of Indian floriculture exports during the trade reform period. Especially, it has shown an increase in percentage of share of exports from 19% to 39% during the adjustment period. But during
the post adjustment period, its share has started declining. HS0604 has low share of exports in the adjustment period of the trade reforms. But it has gained a major share of exports, up to 52%, in the post adjustment period.

The CAGR, percentage share of exports of sub groups of floriculture products and the Instability Index, were calculated for the study period. The growth rate for HS06 category is 13.58% during the reform period. In the pre reform period, the growth rate of export of floriculture products is 10.62%. But, the growth rate of export of HS 06 category of products in the adjustment period is 15.11%. The growth rate for HS06 category of products is 9.79% in the post adjustment period.

In the case of instability index of HS 06, there is a slight decrease in the volatility of floriculture export. In the pre reform period, it was 42.95 and in the reform period, it was 41.29.

The products under HS 0601 are concerned, in the pre reform period, it showed negative growth rate, -7.10 %. The same trend was continued in the adjustment period. The growth rate was -1.83%. But, the growth rate was positive in the post adjustment period. The growth rate was 9.12% in the post adjustment period.

Though export of HS 0601 shows high growth rate in the reform period, the percentage share of the export in the total floriculture export has decreased in the reform period. The percentage share of exports of HS 0601 in the pre reform period was 12.23%. It has decreased to around 2% in the reform period.

The instability index of HS 0601 products shows that during the adjustment period, the instability index of HS 0601 products has increased
to 88.6. But it was 40 during the pre reform period. Afterwards it has come down to the pre reform period level.

The growth rate of export of HS 0602 products was 5.55% in pre reform period. It has increased to 11.8% in the reform period. Especially, the growth rate in the adjustment period was higher than the adjustment period.

But the percentage share of export of the HS 0602 was 39% in the pre reform period. It has dropped to 12% in the reform period.

The instability index of the HS 0602 remains almost same during the entire study period.

In the case of exports of HS 0603 category of products, in the growth rate declined in the overall reform period. The growth rate was 31.29% in the pre reform period and 11.47% in the reform period. In the case of comparison between the adjustment period and post adjustment period, there was an unusual drop in the growth rate in the post adjustment period.

The products under HS 0603 were the major contributors to the total floriculture export in the post reform period. 53% of the total floriculture exports is accounted by HS 0603 products. It was only 30% in the pre reform period.

So the instability in the export of HS 0603 category of products has a major impact on the overall export of floriculture products. The instability index of HS 0603 products indicates that there is a reduction in the volatility of export of HS 0603 category of products in the reform period. The instability index of HS 0603 products has increased to 58.49 in the adjustment
period. Subsequently, in the post adjustment period, the instability index of HS 0603 has come down to 45.16.

The growth rate of exports of HS 0604 products has increased in the post reform period. It was only 5.22% in the pre reform period. It has increased to 19.06% in the reform period.

The percentage of share of exports of HS 0604 products is 18.75% in the pre reform period. It is 32.84% in the reform period. But, there is an increase in the instability index of HS 0604 products in reform periods. So, there are fluctuations in the export of floriculture products during the trade reform period.

The OECD and the NAFTA countries have largely accounted for the exports of floriculture products from India. The growth rate and the instability in these two regions will have a major impact on the Indian floriculture export.

The CAGR of floriculture exports to OECD countries was 14.87% in the pre reform periods. But, in the post reform period, it had dropped to 12%. The further analysis showed that there was a steep drop in the growth rate of floriculture export to OECD in the post adjustment period. It was only 7.23%. It made the overall CAGR of floriculture exports to OECD to drop in the post reform periods.

OECD accounts for 87.63 % of the total exports of Indian floriculture products in the post reform period. But, in the pre reform period, it has only 60% of contribution to the overall export of total Indian floriculture products.
The instability index of export of floriculture products to OECD group remained almost same in the post reform period.

The NAFTA has negative growth rate in the pre reform period -14.73. But, in the post reform period, it has the growth rate of 13.64%.

The percentage share of exports of floriculture products to NAFTA region is 22.5% in the pre reform period. It is 22.08 in the post reform period. It is slightly lesser than the pre reform period. However, NAFTA region is the second highest importing region for Indian floriculture products.

The instability index of export of floriculture products to NAFTA region remained almost same in the reform period.

The other county groups like OPEC, Oceania, SADC, SACU, Mercosur plus chile, other American CACM, North Africa, Other American Caribbean and miscellaneous contribute less than 5% of import of floriculture products from India. Hence, the growth rate and instability of Indian floriculture export to these regions may not affect Indian floriculture trade much at present. But, India has to explore opportunities in these regions. These emerging markets have good potential to grow in future for Indian floriculture products.

In the pre reform as well as in the reform period, the countries such as USA, Netherlands, Germany, United Kingdom, Italy, United Arab Emirates and France are the major export destinations for Indian floriculture products.

In the reform period, Japan has elevated as second largest importer of Indian floriculture products. It accounted for 1.54% of share of exports in
the pre reform period. But, it accounted for 17.75% in the reform period. It compensates the loss of shares of Indian floriculture exports to the countries like USA, Germany, Italy, United Arab Emirates and France in the post reform period.

The CAGR of export of floriculture to USA in the pre reform period was -14.80%. But, it had increased to 13.43% in the reform period. The CAGR of export of floriculture to Japan was -4.30% in the pre reform period. But, it had increased to 15.61% in the reform period. CAGR of export of floriculture to UAE has increased in the reform period to 11.70% from -20.48% in the pre reform period. The other major importing countries of Indian floriculture products like Netherlands, Germany, United Kingdom, Italy and France were showing drop in CAGR.

But, the CAGR in the post adjustment period was low comparing to adjustment period in the major importing countries, in general.

Overall, the rest of the countries accounts for less than 5% of share of Import of Indian floriculture products. So, their growth rate and instability would not affect the Indian floriculture trade at present scenario.

However, the countries like Ethiopia, Canada, Belgium, Thailand, Colombia, Greece and Russian federation have huge potential to grow in the future for the export of Indian floriculture products.

The instability index of most of the countries remains almost same for the export of floriculture products in the post reform period.

There is a significant impact of reforms on volatility of floriculture export value in the post reform period. So, the trade reforms have brought
reasonable stability in the export of floriculture products during the trade reform period.

Revealed Comparative Advantage of exports of Indian floriculture products (XRCA) of Indian Floriculture Export under HS 06 category of products indicates that India is not having the comparative advantage in the export of Indian floriculture products under HS06 during the reform period. It also indicates that export of HS 06 is gaining the comparative advantage since 1992 to 2007. But, it could not attain the desired level of comparative advantage.

The XRCA of HS 0601 is 3.25 in the year 1991. But, since 1992 it is less than one. It reveals that the export of HS 0601 is not having the comparative advantage during the Indian trade reform period.

The XRCA of HS 0602 also is less than one during the reform period: 1991 to 2010. It reveals that the export of HS 0602 is also not having the comparative advantage during the Indian trade reform period.

The XRCA of HS 0603 indicates that performance of HS 0603 is relatively better than HS0601 and HS 0602. It has gained comparative advantage in the years 1998, 1999, 2006 and 2007 with XRCA index value 1.31, 1.08, 1.17 and 1.66 respectively. Hence, the HS0603category products, Cut flowers, dried flowers for bouquets, etc, are having huge export potential for India to gain international trade advantage if specific product focus measures, like innovation of new varieties, improving the post harvest technology, measures to increase shelf life of product, are under taken.

The export of HS 0604 category of products of India has shown good export performance during the trade reform period. The export index of
revealed comparative advantage of HS 0604 is more than one during the period: 1998 to 2010, except the year 2000. It is less than one only during the initial years of adjustment period. Especially, in the year 2008, Indian export performance of floriculture products is bad due to international financial crisis. Even in the year 2008, XRCA of HS 0604 is 2.72.

The products which come under HS 0604 category are Foliage etc, except flowers for ornamental purposes. These are the key products for Indian floriculture export. These products have to be given high importance by the stake holders of floriculture industry and policy makers as they possess comparative advantage internationally.

HS 060110 is not having the comparative advantage since the index score is less than one during the trade reform period: 1991 to 2010.

In the case of HS 060120, in the year 1991, 1992 1994 and 1995 the Export Index of Revealed Comparative Advantage (XRCA) values are 7.12, 1.26, 1.52 and 1.57 respectively. So, the HS 060120 category products had comparative advantage during the initial period of the adjustment period. But, it could not sustain the comparative advantage in the rest of the trade reform period. But, India has potential to have comparative advantage in the HS 060120 products - Bulbs, tubers, tuberous roots, corms, crowns and rhizomes, in growth or in flower; chicory plants and roots.

The HS 060210 category of products has XRCA index score of 1.14, 1.42 and 1.02 in the years 1991, 1994 and 1995 respectively. In rest of the years, it has the index value less than one for HS 060210. Hence, HS 060210 has comparative advantage in the initial period of reforms. It could not sustain it in the rest of the period.
In the case of HS 060220, HS 060230, HS 060240 and HS 060290 category of products, XRCA index score is less than one during the period: 1991 to 2010. So, none of these products is having comparative advantage after the trade reforms.

However, the HS 060240 category of products (Roses, grafted or not) and HS 060290 category of products (Plants live, mushroom) has the potential to attain comparative advantage as it shows an increasing trend in the XRCA index score.

The XRCA index of HS 060310 is less than one during the Indian trade reform period. It reveals that during the Indian trade reform period, it has not having the comparative advantage. But the HS 060310 has the increasing trend towards the end of the study period.

The XRCA index of HS 060390 is more than one in all the years during the Indian trade reform period: 1991 to 2010. It shows that it has comparative advantage in all the years during the Indian trade reform period: 1991 to 2010. The products under HS 060390 category are cut flowers and flower buds for bouquets, dried, etc. These are the key products for India in the export of floriculture. These products have international preference in most of the countries in Europe, Japan and USA because of high quality. These products mainly used for bouquets and ornamental purpose. It also indicates that the index value for HS 060390 is declining in the later part of study period due to the financial crisis in the European countries and expansion of production centres for these products in African countries.

The XRCA index of HS 060410 is more than one in the year 2008 with the index score 1.61. In the rest of the years it has the score less than one. It indicates that HS 060410 is not having the comparative advantage during
the Indian trade reform period except 2008. But, it shows an increasing trend in the later period of the post adjustment period.

In the case of HS 060491, it has the XRCA index score less than one during the trade reform period. Hence, it has comparative disadvantage during the trade reform period.

The XRCA index of HS 060499 category of products has the value more than one in all the years of the Indian trade reform period. Especially, in the post adjustment period, the XRCA index values are high. So, the HS 060499 category of products has high comparative advantage during the Indian trade reform period. Hence, the HS 060499 category of products is the most important for Indian floriculture export basket. The products under HS060499 category are dried foliage, branches, for bouquets, etc. These products are having longer shelf life and can be produced with minimum technology. So, the distance for export and transportation factor would not affect the life of the products much.

XRSCA index of HS06 reveals that the HS 06 category of products is gaining the specialisation during the trade reform period till 2007. It has dropped from 2008. It indicates that India could have gained the specialisation in the export of floriculture products if the international economies are not having the financial crisis after 2008.

XRSCA analysis indicates that HS 0601 is having the positive score only in the year 1991. So, India does not enjoy the degree of specialisation in HS0601.

In the case of HS 0602, it has negative value in all the years of the trade reform period. So, India has no specialisation in the export of HS 0602.
The XRSCA indices of HS 0603 are 0.13, 0.04, 1.00 and 0.25 for the years 1998, 1999, 2006 and 2007 respectively. It indicates that HS 0603 has attained specialisation in the export of Indian floriculture products only for four years in the reform period. But, it has huge potential to attain and sustain the degree of specialisation in the export of Indian floriculture.

The XRSCA indexes of HS 0604 are positive in the post adjustment period. It reveals that India has specialisation in HS 0604 category of products in the post adjustment period onwards.

HS 060110 has negative index value during the trade reform period: 1991 to 2010 and has no specialisation of them from India.

In the case of HS 060120, it has positive XRSCA Index value from 1991 to 1995. It reveals that HS 060120 has specialisation in the initial period of the adjustment period. Then, it could not sustain the specialisation in the Indian floriculture export.

XRSCA index values are positive for HS 060210 for 1991, 1994 and 1995. It has been negative in the rest of the period. So, HS 060210 products have export specialisation in the initial period of the adjustment period. It could not sustain the specialisation in the rest of the years of the reform period.

In the case of HS 060220, HS 060230, HS 060240 and HS 060290 category of products, none of them has positive value of XRSCA during the reform period. Hence, there is no specialisation in the export of these products in the international market for India.
XRSCA values for HS 060310 are negative during the trade reform period: 1991 to 2010. So, HS 060310 has not attained specialisation in Indian floriculture export during the reform period. Though it is gaining the specialisation during the trade reform period, it has not attained the desired level of export specialisation in the Indian floriculture exports.

But, HS 060390 category of products has positive XRSCA values during the trade reform period: 1991 to 2010. Hence, HS 060390 category of products (Cut flowers and flower buds for bouquets, dried, etc) has high specialisation in the export of Indian floriculture products during the Indian trade reform period.

The Export Revealed Symmetric Comparative Advantage (XRSCA) Index of HS 060410 is positive in 2008. In the rest of the trade reform period, it has negative value of XRSCA. So, HS 060410 category of products has attained specialisation in the end of the post adjustment period of trade reforms. It has lost the export specialisation from 2009 onwards.

In the case of HS 060491, XRSCA Index value is negative during the reform period. So, it has no specialisation in the Indian floriculture export basket.

HS 060499 category of products has positive XRSCA Index value during the Indian trade reform period, except 1994. Hence, it has the degree of export specialisation in the Indian floriculture export.

Double Relative Measure (Dr_{ij}) of Trade Intensity Index indicates that during the trade reform period, United States of America, Netherlands, Australia, United Arab Emirates, Malaysia and Saudi Arabia are the major export destinations for the Indian floriculture products as the trade intensity
indices of these countries are greater than one. But in the post adjustment period, Japan, Ethiopia, Poland, Thailand, Singapore, Greece and South Africa have intensity index greater than one and emerged as major export destinations for the Indian floriculture products in addition to the above mentioned countries.

It also indicates that USA, Netherlands, Japan, United Arab Emirates, Australia, New Zealand, Malaysia, Saudi Arabia, Thailand, Singapore, South Africa, United Kingdom, Greece, Spain, Poland and Ethiopia are having major floriculture markets for India. So, these are the important countries for Indian floriculture exports. Hence, Indian floriculture exporters and policy makers may focus more on these countries.

CMS analysis indicates that the other factors such as trade reforms, special initiatives, infrastructure growth, etc. of the Indian floriculture industry are the key sources of export growth. The effect of other factors is 80% on the overall export growth of Indian floriculture products. It reconfirms that the growth of the Indian floriculture industry is mainly due to the supply side comparative advantage of floriculture products which is contributed by the measures of trade reform and the initiatives of the Government.

The contribution of the growth of the international floriculture market to Indian floriculture export during the post reform period: 1991 to 2010 is only 8%. The poor contribution is due to the structural infirmities or international trade barriers to Indian export or locational disadvantages to Indian floriculture products.

The effect of the market size on the growth of floriculture exports is only 12%. It indicates that India is unable to avail the opportunities on
account of the growth of international market which other countries are capable of availing. At best, these figures are the modest indicators of the different forces that are in action at the international markets for Indian floriculture industry.

The result of CMS analysis for the top twenty importing countries of Indian floriculture products also reveals a similar scenario except for few markets like United Kingdom, Ireland and United Arab emirates. That is, the growth of the Indian floriculture export is mainly due to the other factors such as trade reforms, special initiatives, infrastructure growth, etc.

However, in the case of United Kingdom, Ireland and United Arab emirates the growth of exports of Indian floriculture products is mainly due to the expansion of market.

But India has not yet benefited from the increase in its market share in the international floriculture market.

The major determinants of the export of Indian floriculture products are GDP of the India, GDP of importing country, population of the importing country, tariff rate of the importing country, per capita income of the importing country, exchange rate of currency and the distance between the countries. All these factors affect the export of Indian floriculture products.

The transportation cost is found to be a significant factor in influencing the Indian floriculture export negatively. This implies that India would do export more to the countries which are closer to India. In other words, there is a huge potential for the export of floriculture products to Asian countries from India. It is also supported by the export data of Indian
floriculture products that Japan has elevated as the second largest importer in the later part of the trade reform period.

But, the empirical data of Indian floriculture export indicate that USA and EU are the major destinations for Indian flowers. It implies that the other major influencing factors on the export of Indian floriculture products are the GDP, per capita income and population of the importing countries. These key variables attract the export of Indian floriculture products towards USA and EU.

The tariff rate of the importing country is influencing the export of the Indian floriculture products negatively. But, the tariff rate on the Indian floriculture import in the respective importing country varies seasonally, based on the domestic production and supply.

Common border between the trading countries, common language, colonial relation and same country in some point of time are found to be insignificant in the export of Indian floriculture products during the trade reform period.

The gravity model also indicates that the GDP of India and exchange rate of the trading currency also influence the export of Indian floriculture.

There is an impact of India’s GDP, population and exchange rate on export volume of Indian floriculture products during the trade reform period.

Hence it is concluded that the export volume of India’s floriculture products will decrease, if the India’s GDP increases. The export volume of
India’s floriculture products will decrease, if the population increases. The export volume of India’s floriculture products will fluctuate, if there is any fluctuation in exchange rate of currency.

There is an impact of GDP of importing countries, population, tariff rate, distance, per capita income on export value of Indian floriculture products during the trade reform period.

Hence it is concluded that the export value of India’s floriculture products will increase, if the GDP of importing country, per capita income of importing country and the population of importing country increases. If the distance between India and importing country is shorter, the export value of India’s floriculture products will increase. Hence, India has to increase its floriculture trade with the neighbouring countries. The Government also has to continue its transport subsidy for the export of floriculture products.

If there is any fluctuation in the exchange rate of the trading currency, the export value of Indian floriculture products will also fluctuate.

5.3 FINDINGS FROM THE ANALYSES OF PRIMARY DATA

The demographic profile of respondents shows that 37.8% of the respondents are located in the urban area, 44% of the respondents are located in the rural area, 16.9% of them are located in the semi urban area and 1.3% of them are located in others like hill areas, town panchayats etc.

The legal status of respondent’s ownership of their floriculture business shows that 51% of the respondents have proprietary type of ownership, 39% have private limited, 5% have public limited and 5% have partnership firms.
In the case of role of respondents in the floriculture business, 45% are the farmers of flowers, 29% are owners of the floriculture unit and 26% are the business heads of the floriculture unit.

25.8% of the respondents belongs to the age group of 41-45 years, 19.6% are in the age group of 36-40 years, 15.1% are in the age group of 46-50 years, 14.7 are in the age group of 51-55 years, 12% are in the age group of 31-35 years, 7.6% are in the age group of 26-30 years, 2.7% are in the age group of 56-60 years, 1.8% are in the age group of 20-25 years and 0.9% are in the age group of 61-65 years.

98% of the respondents belongs to male category and only 2% of the respondents belongs to female. 95% of the respondents are married and 5% are bachelors.

Out of the total respondents, 60% of them have only school level education. 31% are having graduate level education and 9% are having professional educational qualifications.

The major reasons for starting the floriculture units are growth of floriculture market in near future, potential for high profit and personal factors like desire for self employment and personal interest in floriculture industry.

87% of the stake holders of the floriculture industry is aware of the trade reforms and government initiatives on floriculture industry and 13% is not aware of it.

84% of respondents felt that reform had positive impact on floriculture industry. Whereas 16% of the respondents felt that it had negative impact on floriculture industry.
37.8% of the respondents had informed that the floriculture market had grown reasonably good. 32.4% had informed that the market had stagnated. 28.9% informed that the market had grown rapidly than their expectations and 0.9% of respondents had an opinion that market had declined.

86.7% of the respondents prefers the Government to continue trade policy reforms related to floriculture industry and 13.3% does not want the Government to continue reforms.

65% of the respondents is having plans to start new unit or expand export or production facility or trade. 35% of them has no plans for expansion.

The respondents expect the government to take steps to negotiate to reduce the import duties on imports of Indian floriculture products, to provide marketing support and to develope physical infrastructure for the floriculture industry. The least expected is the increase in freight frequencies to major buying countries.

44.4% of the respondents felt that the infrastructure related to communication had highly grown. The infrastructure related to availability of power, cold chain transportation facilities connecting to port, facilities at port and connectivity to floriculture market by air/sea, warehouse facilities within grading or green house premises, green house technology, irrigation facility and availability of input materials has moderately grown.

The central government special initiatives like utility of special economic zones for floriculture, services of model floriculture centres, reduction of import duty to 10% for floriculture planting materials, reduction
of 25% import duty on refrigerated transport units, duty free import if 50% of production meant for export, cold storage and special cargo handling facility for floriculture product at all major airports, automatic clearance of FDI for floriculture industry were beneficial to them. The services of APEDA market centres and Vishes Krishi and gram Udyog yojana scheme were moderately beneficial to them. In general the central government special initiatives are beneficial to the stakeholders.

36% of the respondents said that services of demonstration farm and training centre for floriculture production were highly beneficial to them. The state government initiatives like industrial status to floriculture industry, supporting schemes for floriculture incubation project, sales tax concession up to 3% on purchase of raw material and inputs of GHU were beneficial to them. Amendment of land ceiling act for floriculture, availability of LT tariff III electricity rate for green house units were felt as moderately beneficial to them. There were 41.3% of respondents felt that exemption of Rs. 10000 per annum towards pollution control board charges was not at all beneficial to them.

Services of demonstration farm and training centre for floriculture production have the highest weighted average score 3.78. Facilities of floriculture incubation project has the weighted average score 3.62. Exemption of Rs. 10000 per annum towards pollution control board charges has the lowest weighted average score 2.80.

41.3% of the respondents felt that the central government schemes were good in terms of usefulness of schemes for the development of the floriculture trade. 42.7% of the respondents felt that the central government schemes were good in terms of adequacy to meet their requirement. 36.9% of the respondents felt that the central government schemes were good in terms
of accessibility of central government schemes. 29.3% of respondents felt that the satisfaction level of the schemes was good.

The weighted average scores of the ten statements related central government schemes indicate that all of them stand between neither good nor bad to good and have the score more than three.

Majority of the respondents felt that the schemes of the state government towards the development of the floriculture trade were neither good nor bad.

Accessibility of schemes by stakeholders, coverage of number of beneficiaries through schemes, timely implementation of schemes and satisfaction level of schemes have the weighted average scores more than three. Rest of the dimensions scores are less than three.

Comparatively, the initiatives of the central government are appreciated better than the initiatives of the state governments by the respondents.

The EFA reduces the 29 individual statements into six components. The First component, production and distribution (supply side) constraints, contributes 17.115 percent of variance in the original variance.

The Second component, constraints of market attractiveness contributes 14.234 percent of variance in the original variance.

The third component, Trade dynamics, contributes 9.424 percent of variance in the original variance.
The fourth component, Tariff barriers, contributes 8.609 percent of variance in the original variance.

The fifth component, market access constraints, contributes 7.518 percent of variance in the original variance.

The sixth component, Trade channel constraints, contributes 7.333 percent of variance in the original variance.

The first dimension viz., the Production and Distribution (supply side) constraints, has highest dimensional weighted average score 4.050222. It is followed by Market attractiveness with dimensional weighted average score of 3.864444. Hence, it is concluded that the respondents feel that the Production and Distribution (supply side) constraints and Market attractiveness are the major problems in the floriculture trade.

Further to that, the unpredictable agro climatic conditions, unhealthy competition among the players, poor post-harvest management, forced sale due to perishable nature, exploitation by middle men, high transport (freight) cost, poor market information and lack of efficient market channel are considered as the major problems of floriculture industry as the weighted average scores of them are above 4.

So, these problems make the floriculture industry to under perform during the post reform period in spite of all the government initiatives. The remedies to the above mentioned problems will rejuvenate the floriculture industry and shift it to the positive performance track.
5.4 CONCLUSIONS

The analysis of export performance confirms the growth of Indian floriculture export during the trade reforms. Overall, the growth rate of floriculture exports from India is comparably higher than the world growth rate in the reform period.

The study results show that there is no change in the regional composition of Indian floriculture export in reform period. But there is a change in country composition of floriculture export.

The results of instability index reveal that the Indian trade reforms have brought a reasonable stability in the export of floriculture products during the trade reform period.

India has comparative export disadvantage in the floriculture products as a whole. But, Foliage etc, except flowers for ornamental purposes (under HS 0604 category) are having comparative advantage internationally. These products have to be given high preference by the stake holders of floriculture industry and policy makers.

More specifically, dried cut flowers, flower buds for bouquets, etc (HS 060390) and dried foliage, branches, for bouquets, etc., except (HS 060499) have high comparative advantage during the Indian trade reform period. These are the key products for India in the export of floriculture products.

India has potential to have comparative advantage in the Bulbs, tubers, tuberous roots, corms, crowns and rhizomes, in growth or in flower; chicory plants and roots products (HS 060120).
The factors like reform measures, government initiatives, infrastructure development, etc., bring export growth of floriculture products during the reform period rather than the growth of market size and market share. So, India has to opt for selective market development strategies and focus market promotions with respect to each group of floriculture products. USA, Netherlands, Japan, United Arab Emirates, Australia, New Zealand, Malaysia, Saudi Arabia, Thailand, Singapore, South Africa, United Kingdom, Greece, Spain, Poland and Ethiopia are having major floriculture markets for India. So, these are the important countries for Indian floriculture exports. Hence, Indian floriculture exporters and policy makers should focus more on these countries. The major hurdles and challenges in exporting to these countries will have a greater impact on India’s floriculture trade in the global market. While designing strategies for floriculture export, these countries have to be given special focus.

The transportation cost is found a significant factor in influencing the Indian floriculture export. So, India can export floriculture products to neighbouring countries.

India’s GDP, population and exchange rate influence the export volume of Indian floriculture products after the trade reform. The per capita income of importing country, tariff rate of the importing country, GDP of India and exchange rate are the major influencing factors of the export value of Indian floriculture products after the trade reform. India has to sign preference trade agreements with major export destinations of Indian floriculture products.

The stakeholders hope for the growth of floriculture market and potential for high profit. The central and state government special initiatives are well appreciated by the stake holders of the floriculture
industry. The government initiatives also have a positive impact on the floriculture industry. It has brought considerable growth in the infrastructure for floriculture trade. The majority of the stakeholders expects the government to take steps to lower import duties on floriculture products by the importing countries, providing marketing support and enhancing physical infrastructure for floriculture industry. Services of demonstration farms and training centres for floriculture production are highly appreciated by the stakeholders.

The structural infirmities such as international trade barriers to Indian flower export, locational disadvantage (distance to market), etc. are the major causes for under performance of Indian floriculture trade. So, the stakeholders are expecting the central government to focus on international floriculture trade facilitation (external) and the state governments to focus on supply side structural infirmities (internal) on floriculture in future.

The Production and Distribution (supply side) constraints and Market attractiveness are the major problems in the floriculture trade. The unpredictable agro climatic conditions, unhealthy competition among the players, poor post-harvest management, forced sale due to perishable nature of products, exploitation by middle men, high transport (freight) cost, poor market information and lack of efficient market channel were the major problems of floriculture industry. So, these problems make the floriculture industry to underperform during the reform period in spite of all the government initiatives. The remedies to the above mentioned problems will rejuvenate the floriculture industry and shift it to positive performance track.

There is an ample scope for even small and marginal florists to exploit the global demand for flowers with improvements in quality of planting material, utilisation of infrastructure, obtaining training in
production, harvesting and post-harvest management techniques, during the period of Indian trade reforms.

Hence, it is concluded that there is a positive impact of trade reforms on floriculture industry and government of India has to continue the trade reforms for the floriculture sector in the future.

5.5 RECOMMENDATIONS

a. India is subjected to import duty disadvantage in the exports of floriculture products to the Europe as against all its competitors who enjoy zero import duty structure in Europe. Hence, Government of India has to enhance its efforts in negotiating with the major floriculture importing countries to streamline the tariff rates.

b. India has to opt for country specific and product specific promotional strategies with respect to floriculture products. The government schemes for market development also have to be product specific internationally. India has to sign preference trade agreements with major export destinations of Indian floriculture products.

c. Indian government has to give special support schemes to dried cut flowers, flower buds for bouquets, etc. (HS 060390), and dried foliage, branches, for bouquets, etc. (HS 060499) and Bulbs, tubers, tuberous roots, corms, crowns and rhizomes, in growth or in flower; chicory plants and roots products (HS 060120) for production and exports.
d. In order to overcome the structural infirmities in the supply side of floriculture industry, a state-of-the art Integrated Cold Chain for flowers right from the point-of-origin (growers) to the point-of consumption (customers) has to be developed. The Government strategy should encourage private sector for co-investments in the supply-chain infrastructure. New IT-components and telecom communication aspects such as RFID tags, micro sensors can be effectively linked to distribution and route planning in flower trade. Low cost greenhouses need to be developed using indigenous research and development to reduce the cost of the project. So that, India becomes competitive in the international markets and its suit to the Indian climatic conditions.

e. There is a need to intensify marketing efforts for direct sales to the emerging markets, and expand markets outside the traditional European markets such as Eastern Europe, South Asia, Russia, and the Middle East.

f. The Model Floriculture Centres (MFCs) are highly beneficial to the growers. More number of MFCs has to be opened in the clusters of floriculture production.

g. The profile of the respondents indicates that India has shortage of trained technical and commercial professionals in the export operations. Thus, private initiatives to train individuals in the floriculture can be encouraged to benefit the industry in the long run. MFCs are also to cater to the needs of the trained personnel at various levels. MFCs will help to intensify
marketing efforts for direct sales to emerging markets, and expand markets outside the traditional European markets

*Policy implications*

a. The initiatives of the central and state government for the development of the floriculture industry are perceived differently by the stake holders. So, the central government has to bring in coordination among of various developmental agencies and state government departments for the development of floriculture export by establishing “National floriculture Export Promotion Council” to reduce the problems of all stake holders of floriculture industry.

b. The Market Focus Initiatives of trade policy has to be designed according to the current trade developments in the sector. At present, it is general in nature in the selection of the country or the region for export promotion. The countries where India has strong trade intensity for the floriculture products are missed in the current method of selection for export promotion by the government of India. At present, United States of America, Netherlands, Australia, United Arab Emirates, Malaysia, Saudi Arabia, Japan, Ethiopia, Poland, Thailand, Singapore, Greece and South Africa have to be the countries of focus for export promotion of floricultural products.

c. India has to strengthen the floriculture trade relationship through missionary visits to the bordering countries. So that India can increase the export of floriculture products to the neighbouring countries.
d. The transport and air freight subsidy has to be continued. It has to be increased for the countries where India has high trade intensity for floriculture products.

5.6 AREAS FOR FURTHER RESEARCH

Though the present study contributes a reasonable body of knowledge to the Indian floriculture trade, as with most research endeavors, there is a considerable scope for further research in continuation of this present study. Some of them are highlighted below.

There is a scope for studying the floriculture trade dynamics with respect to trade policies of the major importing countries and their impact on Indian floriculture trade.

Though the government policies are general in nature, there are specific policies and schemes focusing specific floriculture products. The impact of such micro policies on specific products may be focused in future.

In the present market oriented global economy, the trade policies are highly dynamic. It is amended as and when required. It originates a chain of reactions in the international trade scenario. Floriculture trade also encounters such kind of ad hoc policies. The impact of such ad hoc policies may be studied in the context of international floriculture trade.

Floriculture trade is highly seasonal oriented. Hence, there is a scope for further research on the impact of seasonality of floriculture trade.
In this present study, all the major four categories of the stakeholders (growers, traders, exporters and greenhouse owners) are studied holistically. But, there is a huge scope to focus on the impact of Indian trade policy on each individual category of stakeholders of Indian floriculture industry.