SUMMARY
AND
POLICY IMPLICATIONS
CHAPTER V

SUMMARY AND POLICY IMPLICATIONS

5.1 Indian Silk Industry

The large and growing domestic market has been the main stay of the Indian silk industry over the past decades; simultaneously the export market for the industry has been growing over the past few years. One of the major factors to perform well in the export market is the availability and quality of raw silk for the powerloom sector. One of the problems of the Indian silk industry has been the low quality of the raw silk produced locally. The production of mulberry raw silk in India has been around 15,000 metric tonnes while the demand for raw silk has been estimated around 25,000 metric tonnes. The demand - supply gap has been widening and at present it is estimated at around 10,000 metric tonnes.

In order to encourage silk exports, the government allowed import of raw silk. For quite sometime in the past raw silk import was restricted and allowed only to exporters under Duty Exemption Schemes. And the annual
import of raw silk was to the tune of 3000 to 4000 metric tonnes. Now that the import is allowed free without restriction, the silk import has risen to around 9000 metric tonnes. Added to this, the low priced Chinese silk was made available to domestic market cheaper than the local silk, putting the sericulture industry at stake.

This has created a tough situation for the policy planners to strike a balance between the two warring sections of the industry viz. the sericulture farmers who oppose the cheap silk import from China complaining about its cascading effects on the Indian silk industry and on the other the weaving sector standing up with the grievance of non-availability of quality raw silk for running their looms.

In the present situation, the Indian silk industry is facing challenges in the market, both in the export and domestic sectors. The policies of liberalisation and changes taking place world over make it imperative to take a relook at the government interventions.
5.2 The Study and Objectives

In view of the present situation of the Indian silk industry, it was proposed to examine the effects of government interventions on the powerloom sector of the silk industry with the following objectives:

1. to study the relationship between price and quality of raw silk
2. to study the product form integration and spatial integration of Indian raw silk
3. to study the relationship between domestic and international silk prices
4. to study the global competitiveness of Indian raw silk
5. To study the impact of liberalisation of trade in silk industry on the producers and consumers
6. to study the impact of KSMB operations on the prices of raw silk

It was decided to conduct the study in the state of Karnataka as it is the leading silk producing state in the country contributing to more than 50 per cent of the country's production. Also the powerloom sector of Karnataka was taken up for the study as more than 90 per
cent of the silk powerlooms in the country are present in the state.

The yarn specifications required by the powerloom sector was studied from the silk yarn test results collected from reelers and traders using multiple regression analysis. The analysis of the markets of the silk industry was taken up by studying the important cocoon markets of Karnataka viz., Ramnagaram, Siddlaghatta and Kolar cocoon markets and the Bangalore silk exchange. The daily prices of the cocoons and filature silk yarn were collected from these markets for the study and ARIMA models were be fitted to these price series for forecasting of prices. The market structure and efficiency of these markets were also studied through cross correlation analysis.

The relationship between the domestic silk yarn prices and imported silk prices was studied to analyse the effects of imported raw silk on the domestic silk industry. The monthly average prices of domestic raw silk and imported raw silk were used for the purpose. The price series were subjected to ARIMA filtering and cross correlation analysis was carried out.
The Nominal Protection Coefficients (NPCs) were of silk determined to know the comparative advantage enjoyed by domestic silk vis-à-vis imported silk by collecting the landed price of imported and the reference price of domestic silk.

The welfare losses / gains both to the producers and consumers were estimated using the partial equilibrium methods. In order to assess the impact of prices after liberalisation, average annual values between the 2001-01 and 2003-04 were worked out.

The role of KSMB in the stabilisation of silk yarn prices was studied by collecting the KSMB purchase price of silk and the quantities purchased. Cross correlation analysis of KSMB prices, Bangalore silk exchanges prices and KSMB quantities was to know the relationship between these series.

5.3 Findings

The summary of the findings of this study and the recommendations emerging from it are listed below.
1. The multiple regression analysis on the price and quality characteristics of raw silk indicated that the price of raw silk was significantly influenced only by winding breaks. Hence the analysis indicates that winding breaks is the only important quality characteristic of raw silk that the powerloom industry looks for while deciding on the price of the raw silk.

2. ARIMA models were fitted to the cocoon price series of Ramnagaram, Siddlaghatta and Kolar cocoon markets and raw silk price series of Bangalore silk exchange and the test of significance of the residuals indicated that the models estimated were adequate.

3. The cross correlation analysis indicated a strong relationship between the cocoon markets which shows that these markets are price-efficient and competitive. The causal connections between these markets are two way. The analysis on the relationship between the cocoon markets and silk exchange showed that Ramnagaram cocoon prices influenced the Bangalore silk prices by a lead of 6 days.
4. The cross correlation analysis of imported silk prices and domestic silk prices indicated that there exists a close relationship between the two price series. The significant correlation coefficients at zero lead / lag indicated that there is instantaneous transmission of price changes from one market to another.

5. The NPCs calculated assuming zero customs duty for raw silk in Karnataka were found to be more than unity in all the years and with the prevailing customs duty on imports, NPCs were above unity in most of the years. The higher domestic prices as compared to the international prices indicated that the domestic producers of raw silk were protected on the pricing front compared to the situation that would prevail under free trade conditions. NPC indicates the incentives to produce a commodity. If NPC is greater than one, then the commodity is protected. If it is less than one, the commodity is disprotected or in effect taxed. The protectionist results, indicated by the higher NPCs inspite of the barriers, show that raw silk was not an efficient import substitute.
6. The welfare gains and losses of liberalisation of the silk industry was studied using partial equilibrium analysis. The international price adjusted for transfer cost was higher as compared to the domestic price during the period from 2001-02 to 2003-04. These lower world prices would result in decrease in domestic production of raw silk and would have a positive impact on the consumption levels resulting in increase in consumption of raw silk.

The net social loss in production was about 1 per cent of the value of production while the net social gain in consumption was about 2 per cent of the value of consumption. The welfare gains for all the three years were much higher than the welfare losses. Hence the average net effect of liberalisation on welfare is positive.

7. The cross correlation analysis indicates that the KSMB purchase prices and silk prices are closely related to each other. Also the quantities purchased by KSMB have an influence on the silk prices as indicated by the
significant coefficient. This shows that the KSMB operations in the silk markets have an impact on the silk yarn prices.

5.4 Limitations of the Study

1. In the present study, the relationship between the quality characteristics of raw silk and price has been examined. The data collected was only on Indian filature raw silk yarn, similar exercise for imported raw silk is to be attempted since a major portion of the imported silk is consumed by the powerloom sector.

2. ARIMA modelling was used for the cocoon and raw silk price series to forecast the prices. The models fitted were adequate and the forecasts gave a trend of the future prices but could capture the daily fluctuations in the prices to some extent.

3. The analysis of cocoon and silk markets was taken up with daily data on average prices without taking into account the quality of these; as such data was not readily available.
5.5 Policy Implications

1. Quality is an important attribute in the production process which has to be given its due credit. Testing of raw silk will play a major role in bringing about quality improvement in the silk reeling industry. Hence testing should be mandatory before transaction in the silk exchanges.

2. The need for a proper Market Information System in place for the benefit of all the stake holders of the industry is a dire necessity. The basic information about the market, products and technology, especially the prices at the right time and right place to the rearers, reelers and weavers will facilitate decision making. This will help the industry to improve quality, productivity and profitability and become more competitive.

3. An important measure in complementing the present marketing system would be the introduction of online auction system for cocoon and raw silk. This would further enhance the efficiency of cocoon and silk yarn markets.
4. The domestic reeling industry will have to improve quality and control cost to face the challenges of global competition. Suitable policy changes and improved structural support can accelerate the industry towards this end. Technology upgradation of the reeling sector is a must for addressing the issue quality improvement. Under the Catalytic Development Programmes of Central Silk Board this issue is being addressed by establishment of multiend reeling units in the country for production of quality silk.

5. Good quality raw material i.e., cocoons is a prerequisite for production of high quality raw silk. Studies have indicated that cocoon quality contributes about 80 per cent towards the raw silk quality and about 85-90 per cent towards the cost of production of raw silk. Hence evolving better bivoltine races of cocoons with better quality and higher productivity is necessary for improving the quality of raw silk and producing at competitive prices.

6. There is a possibility for welfare gains accruing to the consumers and welfare losses to the producers of raw
silk. However the gains clearly outweigh the losses. This will result in improvement in technology which has the potential to reduce cost of production and offset the negative effect of lower prices on production. By shifting the marginal cost curve positively, the farmers / reelers will produce the same level of output even at lower prices in the medium term. This endeavour will have to be supported by research & development efforts and extension activities.

Lower prices can simulate the export segment of the industry and improve the competitiveness of Indian silk exports. This will widen the market for Indian silk and if the marketing strategy is properly oriented, it will stabilise the domestic prices of Indian cocoons and silk yarn.

7. KSMB should be supported with increased capital, so that it can increase its operations in the silk markets. Increased KSMB presence in the markets would encourage improvement in quality and also serve the purpose of price stabilisation.
8. An important step in the price stabilisation would be the introduction of futures trading for the silk industry which would complement the existing marketing mechanisms. Recently cocoons and raw silk have been listed in one of the commodity markets, National Commodities and Derivatives Exchange (NCDEX), Mumbai. A lot of awareness programmes about futures trading and the benefits ensuing for the industry and the stakeholders in terms of quality improvement, price realization, price stabilisation, etc., should be held in all important silk clusters of the country. Efforts should be made to bring in as many players as possible to participate in futures trading, so that the market becomes active.

9. The silk industry should be studied in its entirety and the weak linkages identified. The industry has to be restructured keeping the interest of all the stakeholders in mind. The industry should be facilitated for achieving high degree of vertical integration for improving the efficiency of operations at all levels of the industry.
10. The regulatory mechanisms of the government in many areas of the silk industry have served their purposes and should be reviewed, so that the private sector will have a larger role to play in the development of the industry. This would bring in more flow of capital into the industry, more capital investment, better technology, faster infrastructure development, more professionalism, etc., leading to improvement in quality, productivity and efficiency and thereby more competitive to face the global challenges.

It is hoped that this study has contributed to better understanding of the various issues discussed, especially the cocoon and silk markets. The issues raised in the thesis are of considerable importance for the development of the silk industry and the methodology adopted may be of use to future researchers.