PERFORMANCE OF INDIA'S COFFEE EXPORT TRADE - AN ECONOMETRIC ANALYSIS

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Project Report submitted to the

University of Agricultural Sciences, Bangalore

in Partial fulfillment of the requirement of the Degree

of

MASTER OF BUSINESS ADMINISTRATION

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BANGALORE **JULY, 2011**

Affectionately Dedicated

to

My Beloved

Family, Friends and

Guide

DEPARTMENT OF AGRICULTURAL MARKETING, COOPERATION AND BUSINESS MANAGEMENT
UNIVERSITY OF AGRICULTURAL SCIENCES
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CERTIFICATE

This is to certify that Project Report entitled **"PERFORMANCE OF INDIA'S COFFEE EXPORT TRADE– AN ECONOMTRIC ANALYSIS"** submitted by **Ms. AMARIZA VIVINE** in partial fulfilment of the requirement for the degree of **Master of Business Administration (Agr Business Management)** to the University of Agricultural Sciences, Bangalore, is a record of *bonafide* research work done by her during the period of her study in this University, under my guidance and supervision and that no part of the project report has previously formed the basis for the award of any degree, diploma, associateship, fellowship or other similar titles.

Bangalore
July 2011

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Major Advisor

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PERFORMANCE OF INDIA'S COFFEE EXPORT TRADE: AN ECONOMETRIC ANALYSIS

ABSTRACT

The present study was conducted with the major objective of assessing the performance of India's coffee export trade. A total period of 20 years from 1990-91 to 2009-10 was considered for the purpose. The study was based on secondary data which was collected from database on coffee published by coffee Board, Government of India, publication of Directorate of Commercial Intelligence and Statistics, nationals and internationals journals on coffee, trade and production year books, Food and Agriculture Organization (FAO). Compound growth rate was used to analyze the growth of Indian coffee export, Lorenz curve and Gini coefficient were employed to assess the market structure of Indian coffee export trade and Markov chain analysis was employed to determine the direction of coffee export from India. The growth of coffee export between two decades over the period of (1990-91 to 1999-00) and (2000-01 to 2009-10) in terms of quantity, value and unit value shows an increasing trend, but highest growth was observed in first decade 26.7 per cent and 15.1 per cent in terms of value and unit value respectively. The degree of market concentration of Indian coffee export is high as it is observed in 2000-01, 2005-06, 2009-10. Gini coefficient values keep on increasing from 0.65, 0.7, 0.71 respectively during the same period and showed high concentration among few exporters. It shows the difficulty of capture market by new entrants of coffee export trade. Among the top five importers, the rest of the countries under the category of others had a retention probability of 0.791 and Italy was the second loyal market for export of Indian coffee as reflected by the retention probability of 0.625. Further India need to focus on specialty and Estate branch coffee which add more value to coffee.

Signature of the Student Signature of the Major Advisor

ಭಾರತದ ಕಾಫಿ ರಫ್ತು ವ್ಯಾಪಾರ ಪ್ರದರ್ಶನ– ಒಂದು ವಿಶ್ಲೇಷಣೆ

ಅಮೇರಿಜಾ ವಿವಿನ

ಸಾರಂಶ

ಭಾರತದ ಕಾಫಿ ರಫ್ತು ವ್ಯಾಪಾರದ ಪ್ರದರ್ಶನ ಮಟ್ಟವನ್ನು ನಿರ್ಣಯಿಸುವ ಪ್ರಮುಖ ಉದ್ದೇಶದಿಂದ ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವನ್ನು ಕೈಗೊಳ್ಳಲಾಗಿತ್ತು. ಈ ಉದ್ದೇಶಕ್ಕಾಗಿ 1990–91 ರಿಂದ 2009–10 ರವರೆಗಿನ ಅಂದರೆ 20 ವರ್ಷಗಳ ಮಾಹಿತಿಯನ್ನು ಪರಿಗಣಿಸಲಾಗಿತ್ತು. ಈ ಅಧ್ಯಯನವು ಕಾಫಿ ಮಂಡಳಿ ಭಾರತ ಸರ್ಕಾರ ಪ್ರಕಟಿಸಿದ ಕಾಫಿಯ ದತ್ತ ಸಂಚಯ, ವಾಣಿಜ್ಯ ಗುಪ್ತಚರ ಮತ್ತು ಅಂಕಿ ಅಂಶ ನಿರ್ದೇಶನಾಲಯದ ಪ್ರಕಟಣೆ, ನಿಯತಕಾಲಿಕಗಳು ವ್ಯಾಪಾರ ಮತ್ತು ಉತ್ಪಾದನ ವಾರ್ಷಿಕ ಪುಸ್ತಕಗಳು. ಆಹಾರ ಮತ್ತು ಕೃಷಿ ಸಂಸ್ಥೆ ಇವೆಲ್ಲವುಗಳ ದ್ವಿತೀಯ ದತ್ತ ಮಾಹಿತಿಯನ್ನು ಆಧರಿಸಿದೆ. ಸಂಯುಕ್ತ ಬೆಳೆವಣಿಗೆ ದರ ಭಾರತೀಯ ಕಾಫಿ ರಫ್ತು ಬೆಳವಣಿಗೆಯನ್ನು ನಿರ್ಣಯಿಸಲು ಸಂಯುಕ್ತ ಬೆಳವಣಿಗೆಯ ದರವನ್ನು ಬಳಸಲಾಗಿದ್ದು, ಭಾರತೀಯ ಕಾಫಿ ರಫ್ತು ವ್ಯಾಪಾರದ ಮಾರುಕಟ್ಟೆ ರಚನೆಯನ್ನು ಅರಿಯಲು ಲಾರೆನ್ಜ್ ತಿರುವು ಮತ್ತು ಗಿನಿ ಗುಣಾಂಶಗಳನ್ನು ಬಳಸಲಾಗಿದ್ದು ಎರಡು ದಶಕಗಳ ಅವಧಿಯ ಅಂದರೆ 1990–91 ರಿಂದ 1999–2000 ಮತ್ತು 2000–2001 ರಿಂದ 2009–10 ರ ಕಾಫಿ ರಫ್ತಿನ ದಿಕ್ಕನ್ನು ನಿರ್ಣಯಿಸಲು ಮಾರುಕಟ್ಟೆ ಸರಪಳಿ ವಿಶ್ಲೇಷಣೆಯನ್ನು ಬಳಸಿಕೊಳ್ಳಲಾಯಿತು. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಪ್ರಮಾಣ, ಮೌಲ್ಯ ಮತ್ತು ಘಟಕ ಮೌಲ್ಯಗಳು ಹೆಚ್ಚಿನ ಪ್ರವೃತ್ತಿಯನ್ನು ಹೊಂದಿದೆ. ಆದರೆ ಮೊದಲನೆಯ ದಶಕದಲ್ಲಿ ಮೌಲ್ಯ ಮತ್ತು ಘಟಕ ಮೌಲ್ಯಗಳಲ್ಲಿ ಕ್ರಮವಾಗಿ ಶೇ.26.7 ಮತ್ತು ಶೇ.15.1 ಹೆಚ್ಚಿನ ಬೆಳವಣಿಗೆಯನ್ನು ಗಮನಿಸಬಹುದಾಗಿದೆ. 2000–01,05–06 ಮತ್ತು 09–10 ರಲ್ಲಿ ಭಾರತೀಯ ಕಾಫಿ ರಫ್ತಿನ ಮಾರುಕಟ್ಟೆ ಸಾಂದ್ರತೆಯ ಅಂಶವು ಹೆಚ್ಚಾಗಿರುವುದನ್ನು ಗಮನಿಸಬಹುದಾಗಿದೆ. ಈ ವರ್ಷಗಳನ್ನು ಗಿನಿ ಗುಣಾಂಶದ ಮೌಲ್ಯಗಳು ಕ್ರಮವಾಗಿ 0.65,0.7,0.71 ರಷ್ಟು ಹೆಚ್ಚಾಗಿರುತ್ತವೆ ಮತ್ತು ಕೆಲವು ರಫ್ತುಗಾರರಲ್ಲಿ ಹೆಚ್ಚಿನ ಸಾಂಧ್ರತೆಯನ್ನು ತೋರಿಸಿವೆ. ಇದು ಕಾಫಿ ರಫ್ತು ವ್ಯಾಪಾರದ ಹೊಸ ಸ್ಪರ್ದೆಗಳು ಮಾರುಕಟ್ಟೆ ಆಕ್ರಮಿಸಿಕೊಳ್ಳುವಲ್ಲಿನ ತೊಂದರೆಯನ್ನು ತೋರಿಸುತ್ತದೆ.

ಮೊದಲು 5 ಆಮದುಗಾರರ ಪೈಕಿ, ಇತರೆ ವರ್ಗದಲ್ಲಿ ಬರುವ ಎಲ್ಲಾ ದೇಶಗಳು 0.791 ರ ಧಾರಣ ಸಂಭವನೀಯತೆಯನ್ನು ಹೊಂದಿವೆ. ಭಾರತೀಯ ಕಾಫಿಯ ರಫ್ತಿನ ವಿಷಯದಲ್ಲಿ 0.6253 ಧಾರಣ ಸಂಭವನೀಯತೆಯ ಪ್ರತಿಬಿಂಬಿಸುವಂತೆ ಇಟಲಿ ದೇಶವು ಎರಡನೇ ನಿಷ್ಠೆ ದೇಶವಾಗಿ ಹೊರಹೊಮ್ಮಿದೆ. ಭಾರತೀಯ ಕಾಫಿ ಮೌಲ್ಯವನ್ನು ಹೆಚ್ಚಿಸಲು ವಿಶೇಷತೆ ಹಾಗೂ ಎಸ್ಟೇಟ್ ಶಾಖಾ ಕಾಫಿಯತ್ತ ಭಾರತವು ಗಮನ ಹರಿಸಬೇಕಾಗಿದೆ.

ವಿದ್ಯಾರ್ಥಿನಿಯ ಸಹಿ

ಮುಖ್ಯ ಸಲಹೆಗಾರರ ಸಹಿ

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INTRODUCTION

CHAPTER I
INTRODUCTION

In India coffee is an important plantation crop, which is mainly cultivated in the southern states of Karnataka 57 per cent, Kerala 24 per cent and Tamil Nadu 9 per cent and to a lesser extent, in non-traditional areas like Andhra Pradesh, Orissa and North Eastern States 10 per cent. The major coffee growing areas are the districts of Chickmagalur, Kodagu and Hassan in Karnataka, Wynad, Idukki and Nelliampathys in Kerala and Pulneys, Shevroys, Annamalai's and Nilgiris in Tamil Nadu.

1.1 International trade

Foreign trade plays a crucial role in the economic development of a country. It is traditionally regarded as an engine of economic growth. A country exports commodities for various reasons. The foreign exchange required for imports must be earned through exports. Further, exports are often used as a major indicator of economic growth of a country. The output performance of an economy on the domestic front gets reflected in the foreign trade performance, as well. India with its diversified agro-climatic conditions has enormous potential in the production of commercial crops, horticulture and floriculture. Among the export oriented crops, coffee is one of the major export earnings crops, which hold a significant share in the export earnings of the country.

1.2 History of coffee

Coffee is the world's most favorite beverage. It is widely consumed stimulant beverage prepared from roasted seeds, commonly called coffee beans. Coffee was first consumed in the 9th century, when it was discovered in the highlands of Ethiopia. From there, it spread to Egypt and Yemen and by the 15th century had reached Armenia, Persia, Turkey and Northern Africa. Coffee is an important commercial crop of the

tropics. The importance of coffee as an export commodity may be judged from the fact that a major volume of world production of coffee is diverted towards world's exports.

Coffee belongs to the family Rubiaceae. Most of these are tropical trees and shrubs, which grow in the lower story of forests, the most important species of economic importance are *Coffee arabica* (Arabica coffee), which accounts for over 70 per cent of world's production and *Coffee canephora* (Robusta coffee).

1.3 Global scenario of coffee

Coffee is the world's second most valuable commodity exported by developing countries, after oil. The global coffee industry earns an estimated $60 billion annually. While coffee is produced in about 60 countries, the producing countries hardly consume about 25 percent of their total production.

The total world production was 74 lakh MT during 2009-10, of which India produced 2.89 lakh MT, which accounted for 3.9 per cent of the world production. India is in no position to influence international prices; in fact it is a price taker. Brazil, Columbia, and Vietnam are the world's top coffee producing countries. The estimated value of the export of green coffee is 10 billion dollars.

In 2003, the average price of coffee on the commodities market was 54 cents per pound, the lowest price for coffee (adjusted for inflation) in 100 years. Fewer than six years before, coffee was selling for $3.15 per pound, nearly six times higher, on the New York Coffee, Sugar and cocoa exchange. In 2010, the average price was $126.30 per pound. The weight of standard bag of coffee for international trade is 60kg or 132lb. There are two fundamental types of coffee: espresso and regular or non-espresso.

1.4 Coffee in India

Coffee was introduced to India in 1600 A.D. but commercial plantations were only set up in the 1820's following British investment. Most of the coffee planted in the previous years were Arabica, mainly the old chick's variety which apparently inherited the bean qualities of the original Mokka introduced by a Muslim pilgrim, Baba Budan. Robusta was introduced from Indo-China at the end of 19th century for planting in estates for lower attitude.

Indian coffee enjoys a free market and is easly available. One can buy them directly from farm gate, through disciplined weekly auctions held in India, through reliable export houses, trough experienced facilitators and get them shipped through established clearing and forwarding agents. Indian coffee farmer can act not only as a grower, but also as a curer, a trader, an exporter and a roaster.

The Indian coffee industry is a 180 year old industry. The coffee industry is under the Ministry of commerce which generally associated with the country's exports and imports. Caught between the state and central government, coffee is neither accorded agri.-status not industry status.

The importance of coffee to economy is due to the fact that it earns a sizable amount of foreign exchange. With a diversified economy the contribution of coffee to the gross domestic product (GDP) is between 3 to 4 per cent (2008-09). India ranks seventh in area, sixth in production, third in Productivity and 6th in export with respect to coffee.

India cultivates both the commercially important species of coffee, viz., Arabica and Robusta varieties in an area of 3,55,502 ha during 2009-10, producing nearly 2,89,600 MT of coffee per annum.

The productivity of Arabica and Robusta is 592 kg/ha and 997 kg/ha, respectively and the national average productivity is 815 kg/ha. However India's share in global exports is 3.37 per cent (2008-09). Indian coffee is exported to over 40 countries, but the top 6 markets are Russian Federation, Italy, Germany, Belgium, Spain and USA, which accounts for nearly 70 per cent of Indian coffee exports.

India exported a total of 2.3 lakh MT during 2001-02. Owing to falling international prices the export value cames down to 1050 crores during 2001-02 from 1375 crores of the previous years.

In India, coffee is basically a small grower's activity where 98 per cent of the holding is less than 10 hectares in size. Large growers cultivate on an average about 46.40 hectares accounting for 30 per cent of area under production.

1.4.1 Coffee marketing in India

Prior to liberalization, coffee marketing in India was carried out by Coffee Board under a system in which the producers of coffee was pooled and auctioned in two separate auctions , one for the domestic market and one for the export market. The producers were then obliged to surrender their produce to the Board. On delivery, growers were paid an advance for their coffee; the remainder following after the coffee had been sold at the auction and after exporting. Reflecting government policy and responding to the views of the growers, a process of liberalization was initiated by the Board during 1992-93 and coffee market was completed liberalized during 1994-95. Coffee Board now concentrates on research, extension, and promotion and information dissemination.

Currently, Indian coffee producers have three ways to market their coffee: (a) sell directly to exporters through an exporting agent, (b) hold it in a curing factory before selling it; (c) sell it at voluntary auctions.

Smallholders, who dominate the Indian coffee scenario, mostly sell their parchment coffee (or dry cherry) to exporters through exporting agents. The agent takes the coffee beans to curing factory, where they are checked for quality which must meet the exporters' standards. The second method allows the coffee grower to store the coffee with the curer before selling it in order to speculate on price movements. Under the third method adopted mostly by large producers, coffee is sold at a voluntary auction, organized by the Indian Coffee Traders' Association. In this case, the producer takes the coffee to the curing factory and stores the beans in the auction warehouses, sending a sample for auction.

Internationally coffee is traded at two major centers CSCE (Cocoa, Sugar and Coffee Exchange) in New York and LIFFE (London International Financial Future and Option Exchange) in London. CSCE trades in Arabica, LIFFE trades in Robusta. The Indian coffee Trade Association (ICTA) is the neutral platform to sell coffee at a competitive price in India.

Producers and traders believe the sales tax creates an obstacle to efficient marketing during post-liberalization, which reduces the price paid to growers, particularly small growers. The sales tax has been reduced from 14 per cent to 4 per cent. This was applicable to all transactions along marketing chain, except at export which is exempt on the condition that the purchase is directly connected with a prior export contract sale. According to the logic of supply and demand, an increase in supply tends to drive the price down. How much the price falls depends on how responsive demand is to price.

1.4.2 Coffee consumption in India

According to the Indian Coffee Board, domestic coffee consumption is increasing at 5 to 6 per cent annually, partly due to expansion of the

café coffee culture and the spread of the coffee drinking habit throughout India, even into non-traditional coffee drinking regions in the north. The concerted efforts of the Coffee Board and coffee marketers in promoting the beverage as a lifestyle drink via coffee cafes and vending machines has added more visibility to coffee. According to a survey sponsored by the Indian Coffee Board, coffee consumption in the year 2008-09 is estimated at 94,400 tonnes, 73 per cent in urban areas and 27 per cent in rural areas (south India). Based on this, coffee consumption in 2009 is estimated by the Board at 97,000 tonnes and in the year 2010 at 1,00,000 tonnes.

Indias' growing coffee café'culture

Although tea is the first choice in India, now hundreds of trendy western-influenced coffee bars have emerged across India in Tier I and Tier II cities. The bean has become big business, so large that it now competes against the once dominant tea on menus everywhere. For coffee fans, India offers a few notable coffee bar chains. The significant growth in the number of coffee retail chains in India is due to the changing lifestyle patterns of Indian middle class families and an increase in their disposable income. Although the coffee bars' contribution to India's total coffee consumption may not be significant, these coffee cafes have added more visibility to coffee and opened up an outlet for various value added food items.

Barista Lavazza

One of India's largest franchised chains of coffee bars, the Barista Lavazza coffee company operates around 205 outlets across India – 15 crème lounges and the rest espresso coffee bars. It plans to open 300 new stores over the next three years and has begun aggressively marketing its products outside Indian borders into neighboring countries. Considered the Starbucks of the East, Barista offers many of

the same menu items like espresso, lattes, cappuccino and various pastries, in addition to basic coffee. Despite being Indian, Barista sticks closely to its Italian roots by serving Italian coffees exclusively. (www.barista.co.in).

Café coffee Day

A late entrant, Café Coffee Day (CCD) offers nearly everything coffee-related, from take-home products and equipment to fully operational stores. Since the grand opening of the first store in Bangalore in 1996, Café Coffee Day has grown to become India's largest coffee retailer, with exports into Europe and the Middle East. Like Barista Lavazza, CCD tends to be in every major Indian metro area. Café Coffee Day currently has 810 outlets in over 100 cities. (www.coffeeday.com).

Costa coffee

The British influence isn't entirely missing from Indian cities, as the UK's largest coffee retailer has been setting up shops alongside other coffee competitors. The London-based Costa Coffee Company specializes in imported Italian coffees and made-to-order coffee concoctions like Risteretto (a coffee stronger than espresso) and "Flat Whites" that feature custom barista designs in the froth.

Quicky's coffee pub

The coffee house offers about 101 varieties of coffee, serving drinks such as Espressos, Lattes, Cappuccinos, Mochas, Americanas and Friazzos. It also offers grilled sandwiches, pastries and ice creams. Qwicky's clothing brand, greeting cards, magazines, books and coffee.

Export subsidies

The Government of India's Department of Commerce has approved the implementation of the Scheme for the Export Promotion of coffee by

the Coffee Board. The objective of this subsidy program is to enhance export of Indian branded value added coffees and high value coffees to far off markets such as the United States, Canada, and Japan. The export incentives under this program are: (a) incentive for exports of Indian branded value added coffee at the rate of Rs. 2 per kg (b) incentive to export high value coffees to far off markets such as the United States, Canada, and Japan at the rate of Rs.1 per kg (www.indiacoffee.org/exporter/export-incentive).

1.5 Significance of the study

In India's coffee export basket, the export share of Instant coffee and Robusta parchment is increasing. During 2009, around 80 per cent of Indian coffee export was Instant coffee, Robusta parchment and Robusta cherry. India's export unit value (EUV) was 437 Rs./$ (2007-08) which is less than that of export unit value of other major coffee exporting countries of the world like Germany with 1026 Rs./$ (2007-08) which indicates that India has price advantage to export in the international market. Asia–Pacific Research and Training Network on Trade (ARTNeT) competitiveness index, indicates that Over the years India's percentage share in world coffee exports has increased from less than one per cent until 1980s to 4.34 per cent during 2001-07. It follows that over the years India has increased its coffee export competitiveness. During 2006-07, international Robusta group coffee price was lower than that of Indian domestic price of coffee. It follows that, if international prices are not attractive and lower than domestic market price, the exporters will look for domestic market and, imports will increase.

Another worry in international coffee market is that international prices are highly fluctuating. Further international coffee prices were highly fluctuating during 1998-2009, with a high Coefficient value of 37.09. Indian coffee growers badly affected by the lower international

coffee prices. To prevent fall of foreign exchange earnings, India has to export more.

A realistic introspection regarding the past and pondering over the future should be undertaken. Policy measures cannot be conceived without gaining a clear understanding of factors that affect coffee industry. Thus a clear understanding of trends in Indian coffee export, market structure and direction of trade are essential for formulation of suitable policies.

With this background, the following specific research objectives were formulated.

1. To study the trends in Indian coffee exports,
2. To examine the market structure of coffee export trade and
3. To analyze the direction of trade of coffee export from India.

1.6 Hypothesis

The following hypotheses were framed based on the objectives of the study.

1. There is an increasing trend in the growth of India's coffee export.
2. There is high concentration among a few exporting firms.

1.7 Presentation of study

In the introduction Chapter I, description of international trade, history of coffee, global scenario of coffee, coffee in India, coffee marketing in India and significance of the study are covered.

The specific objectives and hypothesis of the study have been indicated. Chapter II deals with the review of relevant past research studies which can be related to the present study outlined in chapter I.

Chapter III describes the sources of data, the description of database and the statistical tools and techniques used in data analysis. In chapter IV, the results of the present study are reported. The chapter V concentrates on the discussion of the results of the study in the light of the findings of similar studies. The major findings of the study are summarized and presented along with the policy implications in chapter VI. In chapter VII, the references are listed.

REVIEW OF LITERATURE

CHAPTER II

REVIEW OF LITERATURE

Review of literature provides information to the researchers regarding the related previous works conducted in their area of research and thereby help them to identify the theoretical framework and methodological issues relevant to the study. It provides to the researchers proper direction to carry out their research work and enables them to arrive at meaningful results. A brief review of the earlier research work related to the present study is documented in this chapter. Keeping in view of the objectives of the study, reviews are presented under the following headings:

2.1 Trends in Indian coffee exports

2.2 Market structure in Indian coffee exports

2.3 Direction of Indian coffee export trade

2.1 Trends in Indian coffee exports

Growth rates are commonly used as summaries of trends in the time series data. They are measures of past performance of economic variables. They are not developed to predict; but describe the trends in a variable over time-prices; productivity indices and output series are usually discussed in terms of changing growth rates over a period of time. Policy decisions are often based on such growth rates, which depend on nature and structure of the data.

Chengappa (1981) studied the growth rates of area, production and productivity of coffee in India. Linear model of the type $Y_t = a+b_t$ and exponential model of the type $Y_t = ab^t$ were used to work out the growth rates. The exponential function indicated a good fit and obtained an annual compound growth rate in production of 5.68 per cent for Arabica

and 7.4 per cent for Robusta. The combined growth rate being 6.1 per cent per annum.

Bandyopadhyay (1982) analyzed the growth rate in Indian Tea exports. He used a simple linear trend equation. The findings indicated a constant decline in India's share in total world export of tea during the study period 1964-1978. One of the reasons attributed to this trend was spurt in demand for tea in domestic market due to the population boom. Other associated problems were low productivity, high cost of production and scarcity of suitable land and capital.

Kabra (1983) traded agricultural exports from India and opined that in the absence of foreign aid, limited competitive ability of semi-manufactured and manufactured items in international markets and limited flow of foreign currency from non- resident nationals working abroad, export earning from agricultural sector becomes crucial. He cautioned the policy markers that if liberal exports are relied upon for long time, it may bring about changes in cropping pattern which in turn lead to growing of commercial crops instead of staple food crops. Thus he stressed the need to evolve balance production for export market and domestic market.

Dass *et al.* (1984) examined the trends in the unit values, quantum and export value of coffee exports from India. The analysis was done for two periods, one pertaining to the period 1956-57 to 1972-1973 and other to 1973 to 1982.The results showed that the annual compound growth rate of unit value of coffee at 11.3 per cent during the second period was much higher than that of the first period (1.9 per cent). However, the annual compound growth rate for quantum of exports at 9.5 per cent during the first period was due to increase in the quantum of exports but during the second period the growth rate of 17.2 per cent was mainly due to the increase in unit values.

Failor (1985) noticed the production pattern and marketing of cocoa in Ghana using exponential model of the form $Y= ab^te_t$ for computing the growth rates of area, production, yield and exports of cocoa. He noted that the rates of growth in acreage under cocoa for the world as a whole had decreased. However, the total production has decreased at 1.4 per cent per annum, mainly because of a positive growth rate in productivity at 2.3 per cent per annum. The growth rates of exports of the world as a whole (-2.3 per cent per annum) reflected that the international trade in cocoa was on the declining trend.

Prakash (1986) used a modified exponential growth function of the form $\log Y_t = a+bt+ct^2$, where growth is b+2ct,to analyze the growth rates in production, consumption, export and import of coffee. He indicated that the growth rate in production of Indian coffee increased consistently and recorded a compound growth rate of 4.51 per cent per annum during 1962-63 to 1981-82.The consumption growth was 1.69 per cent per annum for the same period. Exports, however, had registered a significant increase during the study period, which recorded a compound growth rate of 6.94 per cent annum.

Gemtessa (1991) compared the performance of Ethiopian coffee exports during the pre-revolution and post-revolution periods. The exponential growth model of the form $Y_t = ab^te^u$ was employed. The results showed that, the export growth in the pre-revolution period was lower (1.51 per cent) when compared to the post-revolution period (1.77 per cent).

Balasubramanian and Rema (1996) reported that the trend in export was found to be directly correlated to imports. A high correlation was found in that for every tonne of kernel exported, 5 tonnes of raw nuts was imported. The dependence of cashew nut export trends on international market price for kernels and on the foreign exchange rate of

the Indian rupee was examined. They further reported that the export was more when the international price was less. India's raw nuts were fairly priced against the international price for kernels. The pricing trends of raw cashew nuts in different states were evaluated and the effect of a monopoly procurement policy in 1981, 1982 and 1988-93 0n the price obtained by farmers was also critically discussed.

Shende *et al.* (1999) studied the export performance of India in tea, coffee and tobacco. The growth rates for tea and tobacco were negative for India was at -0.28 per cent per annum and – 1.09 per cent per annum respectively, which shows drastic fall in export from India. Coffee noted very high growth rate that is 6.08 per cent per annum for India's value of export and tobacco was 2.18 per cent per annum. Thus the coffee and tea show significant growth in India's value of export as compared to tobacco.

Ananthi (2000) analyzed the growth of area, production, productivity and export of Indian non-basmati and basmati rice. The growth rates were calculated by subdividing the study period into 1949-50 to 1969-70 as first period and 1970-71 and 1997-98 as second period. The area, production and productivity showed positive trend. For the exports study period considered was 1980-81 to 1998-99 for Basmati and Non- Basmati rice. The growth rate was also positive and significant.

Ansari and Ahmed (2001) applied ARIMA modeling for time series analysis of world tea prices and industrialized countries export prices. The results of the estimated ARIMA equations imply information on current periods tea price is sufficient to forecast the next periods and the industrialized countries export price can be forecast from information in the prices of the previous two periods. They concluded from the fitted ARIMA models, autoregressive processes generate both price series and there is no influence on external factors.

Guledgudda *et al.* (2002) quantified the trend in the world tea production and export. India's share in the world tea production had slipped gradually from 38.12 per cent in 1960-61 to 28.83 per cent in 1990-91 and further marginally came down to 27.45 per cent in 1999-2000.Whereas, its share in world tea exports had similarly decreased gradually from 36.41 per cent in 1960-61 to 18.83 per cent in 1990-91 and further decreased to 17.86 per cent in 1998-99

Jyothi (2003) found that the quantity of onion and potato exports from India registered a positive and significant growth rate of 6.27 per cent and 4.38 per cent per annum. Export earnings and unit value realization exhibited significant positive growth rates of 16.70 per cent, 2.28 per cent and 9.74 per cent and 7.45 per cent for onion and tomato respectively.

Sharma and Sharma (2003) studied the production and export performance of tea and reported that the growth rates were positive for area, production and productivity of tea. The share of Indian tea export in the total export was as high as 72.17 per cent in 1950, which had steadily declined to 23.79 per cent in 1999.

Shibu *et al.* (2004) studied the trend analysis of cashew nuts in Kerala. In general, trend analysis based on index number and growth rate gave comparable results. Results revealed that growth rate in area was positive for the entire period with stagnant production and declining productivity.

Tejaswi (2004) observed that the supply of coffee had steadily increased both at global and National levels. But demand was not as elastic as that of supply. He observed there was a violent price fluctuation in coffee, i.e., which was as high as 134.45 US cents for each pound during 1994-95 in the global market, reached the rock bottom of

just 45.60 US cents per pound in a span of just seven years. In the case of different domestic markets, the coffee price averaged at Rs. 84.45 per kg in 1994-95, slumped to Rs. 45.19 per kg in 2001-02.

2.2 Market structure in Indian coffee exports

Bhide *et al* (1981) explained the market structure for arecanut in Mangalore using Lorenz curve. The study revealed a steady decline in the value of coefficient of inequality over the period. This was interpreted as an improvement in the size distribution of shares of intermediaries in the market which in turn increased the degree of competitiveness in the market.

Buckwell *et al*. (1983) analyzed the changes in the size structure of the dairy industry in the Scottish Milk Marketing Board (SMMB) area. Projections were made for her size by using Markov transition probability matrix for both micro and macro level data. The average of micro matrix and macro matrix were used to project the total number of dairy herds in each category. The results suggested that although yields are continuing to rise this may no longer be sufficient to compensate for loss incurred by producers, so that they predicted a fall in total milk output in the 1980's.

Subbarao (1984) examined market structure for FCV tobacco in Andhra Pradesh before the introduction of auction marketing. Under the traditional marketing system farmers sold bulk of Tobacco in the farm yard and the rest in the purchasing points at the premises of the companies. The tobacco trade was by and large controlled by the private traders characterized by under-weighment, deferred payment in addition to lower price realization

Achoth (1985) studied the structure of tea export trade by means of Hirschman's index and Theil's entropy index indicated that the market

concentration had decreased progressively as the distribution of the export trade become more and more equitable. Further, he indicated that after sixties, a structural change in the export trade had resulted. The share of largest exporters had fallen to 71 per cent which further declined to 66 per cent in the later part of the seventies. During these two periods, the market had moved towards moderately concentrated oligopoly.

Sujatha *et al.* (1989) analyzed the competitiveness in the marketing of important commodities namely, rice, ragi, onion, and potato at the Bangalore regulated market. The market structure was analyzed using market share analysis and the method of Gini ratio. The market share analysis was based on Bain's theory of classification of markets. The results revealed that the market was less concentrated in rice when compared to potato and onion. In the case of onion and potato the high degree of market concentration was observed. Such high degree of market concentration provides ample opportunity for price manipulations. The Gini ratio further confirmed the extent of concentration.

Prakash *et al.* (1991) analyzed market margin for Indian coffee. They found an inverse relationship between farm price and margin at all market centers, indicating profit maximization margin model being followed. The study also indicated that the wholesale price was more responsive to price change than the retail margins as indicated by larger coefficients of wholesale than that of retail margins. The wholesale prices at Coimbatore and Madras had a base price of Rs. 421.5 and Rs. 434.5 which reduced at the rate of Rs. 0.79 and Rs. 0.62 per unit rise in pool auction price respectively. Thus clearly, indicating a profit maximization mark up being employed of in the coffee market. This type of mark up meant competitiveness among traders.

Laxminarayana (1993) analyzed the market share and market concentration in the silk exports. International markets were more competitive as indicated by the decline in the Hirschman's index from 0.54 to 0.48. The reduction in concentration was due to greater degree of equitable distribution of market share, partly because of the significant increase in their supply of silk goods by countries like France, Hong kong, India and partly because of decrease in export share of Japan, Italy and Republic of Korea as a result of stagnated or decline in production

Nagaraja (1997) examined the market share and concentration for horticultural commodities exported from India during 1970-71 to 1992-93 by using Hirschman's index and Theil's entropy. It was evident that the market concentration had increased progressively from 1981-84 to 1990-93. The Indian horticultural commodities trade more or less approximated a monopoly in a few commodities and the Hirschman's index had increased from 0.50 in 1981-84 to 0.64 in 1990-93, suggesting that there was a concentration towards a few products. In the beginning of the 1980's, the export trade in horticultural commodities was concentrated oligopoly as the largest six commodities, viz, Mango, grapes, onion, garlic, mango juice and mango pickles and chutney accounted for over 67 per cent of the total horticultural trade.

Nagaraja (1998) studied market structure, market share and market potential for sunflower seed in Raichur district of Karnataka state. Dominating the trade, the market share of individual brands and their switching pattern indicated that local unbranded seeds had the major share. A very high degree of brand switching was noticed among the different varieties of seed.

Bhuvaneshwari (2007) studied buyers concentration in Bangalore Flower market. The value of Hirschman Index was found to be 0.24 implying near equitable buying pattern by market intermediaries. The

degree of buyers concentration was further analyzed trough the technique of Lorenz curve and the magnitude of concentration or size distribution of the buyers was analyzed by gini concentration ratio. When category wise buying was taken into consideration there appeared to be inequality in buying pattern as the bigger traders made proportionately more transactions. This inequality was depicted by the wide gap between the line of equality. The Gini ratio that measures the magnitude of inequality was the highest (0.72).

2.3 Direction of trade

Markovian analysis can be employed to find the structural changes in any system whose progress through time could be measured in terms of single outcome variable. By using transitional probability matrix, one can predict the demand for future.

Atkin and Blanford (1982) investigated structural changes in import market share for Apples in United Kingdom. The changes in composition of United Kingdom apple import during the period 1963-74 were analyzed using a first order Markovian model. The study indicated that changes in market share had been systematic, stable and of long duration. The estimated transitional probability matrix could explain the nature of change by indicating the relative competitive strength of different exporters. The large increase in France's market share was examined and estimated derived of the effect of united Kingdom membership of the E.C. for the year 1978-1979.The results showed that E.C. membership increased French market share in the United Kingdom market by more than 26 per cent points and decreased the share of Australia and south Africa by 18 and 10 per cent, respectively.

Veena (1992) quantified the direction of trade of Indian coffee exports using Markov chain model. It was observed that India could not

retain its previous market share of USA, Netherlands, Yugoslavia and other important countries. However, the actual quality exported to all these countries had increased due to increased quantity of Indian coffee exports. India retained its market share to former West Germany, while USSR and Italy lost their share.

Lakshminarayana (1993) studied the direction of Indian Silk exports by employing first order Markov process. The major importing countries considered for analysis were the USA, West Germany, UK, France, Italy and Japan. The exports to the USA were stable and would remain highly loyal to Indian silk. The probability of export to the UK, West Germany and Japan switching over to the USA was unity implying that entire quantity of exports to these countries would drift to the USA over the period of time.

Jeromi and Ramanathan (1993) noticed significant changes in direction of pepper exports from India for the period of 1975-90. It was observed that nearly 44 per cent of India's exports were directed to former USSR, which constituted about 82 per cent of the total imports of that country but, also could not maintain the quantity exported in the past years. Insatiability in exports was low in the case of former USSR, Italy and Canada and higher for Poland, USA and Czechoslovakia.

Jalajakshi (1994) studied the pattern of India shrimp exports between two periods: period I covering 1970-80 and period II covering 1980-90.The export of frozen shrimp to Japan and USA and EEC were stabilized during the period II over the period I. There was high variation with respect of shrimp export to USA and EEC countries because of the preference of cold water shrimps in these countries.

Veena *et al.* (1994) examined the changing directions of Indian coffee exports in terms of importing country shares over the period 1965

to 1990 using Markov chain analysis. It was observed that India could not retain its previous market share to USA, Netherlands, Yugoslavia and other importers. However, the actual quantity exported to all these countries had increased which was due to increased quantity of Indian coffee exports. India retained its markets share to former West Germany, USSR and Italy. The increased market share of USSR in the 1970 and 1980 was then threatened by the economic and political upheaval in the region.

Gemtessa (1996) analyzed the directions of trade using Markov Chain model. The share of Ethiopian coffee exports to USA drastically declined during 1979-1989. However, West German market indicated to be the potential market for Ethiopian coffee. Further, the low market share of Ethiopian coffee in USA, France, USSR and other countries diverted to West Germany's market. It was also projected that the market share of Ethiopian coffee exports to West Germany had increased to 32 per cent by 2000 AD, mainly because of West Germany's preference for Ethiopian mild coffee.

Srinivasamurthy and Subramaniam (1999) traced the direction of onion trade by using Markov chain model during the year 1980-81 to 1994-95.The major importers of Indian onion over a period of time was Malaysia which was having a transfer probability of 0.6459 from Saudi Arabia and 0.3488 from UAE, in addition to having high probability of retention of its own share. On the other hand, Saudi Arabia, which was having zero probability of retention of own share of fresh onion, was likely to gain to some extent from Bangladesh and other countries.

Mahesh (2000) studied the structural changes in exports of Indian Tea for the period 1979-80 to 1998-1999 by employing the first order Markov model. The probability matrix indicated that the countries like UK, USSR, Iran, UAE, Saudi Arabia and other importing countries

retained its previous shares of Indian tea while rest of the countries like Germany, Poland, and USA could not retain their share of Indian tea imports.

Shivaraya (2000) studied the changes in trade directions of export of selected vegetables using Markov chain analysis. The results of the study revealed that UAE and Malaysia were the loyal markets for Indian onion. In the case of potato, Sri Lanka and Nepal were found to be the most loyal markets whereas; Bangladesh and Nepal were the most stable importers of Indian fresh tomatoes.

Mahadeviah (2001) estimated the transitional probability matrix for Indian cotton exports for the period (1981-87 to 1990-1991) and period II (1991-92 to 1998-99). He concluded that China was the only stable country among the major importers of Indian cotton as reflected by high probability of retention which increased from 8 per cent in period I to 32 per cent in period II. The major gainers among the importers of Indian cotton in the period II over the period I were china, Japan, Indonesia and other countries.

Angles *et al.* (2001) used Markov chain model for assessing the direction of trade and destination of Indian Turmeric. The results of Markov chain analysis showed that previous export share retention for Indian turmeric was high in UK 42.99 per cent and countries pooled under others category 58.77 per cent. The countries such as USA, Iran, Japan and UAE were not stable importers of Indian turmeric.

Desai (2001) evaluated Markov chain analysis model to analyze the trade direction of export of Indian fresh mango and mango products. Japan was one of the most stable countries, among major importers of Indian fresh mango as reflected by its high probability of retention (1.00). In the case of mango pulp, the other countries had the highest

probability of retention 42.90 per cent followed by Saudi Arabia 24.00 per cent while, Netherlands, UK, Kuwait and UAE were enable to retain their share as reflected by their probability of retention of zero. The transitional probabilities estimated for mango slices in brine showed that UK was the most stable country among major importers of Indian mango slices in brine as reflected by its high probability of retention (0.78).

Jayesh (2001) used Markov chain analysis to study the direction of trade and changing pattern of pepper and cardamom exports from India. The results of Markov chain analysis indicated that exports of Indian pepper were likely to be concentrated in USA and Russia. Similarly, cardamom exportwere likely to be concentrated in Japan and Soudi Arabia. A high dependence on one or two export markets would increase the trade risk in the long run. Hence, it was suggested to evolve appropriate export promotion strategies to diversify the geographic concentration. Especially in the case of cardamom exports, steps should be taken to enhance Indian exports to other countries of Middle East along with Saudi Arabia, since this region was major consumer of cardamom in world.

METHODOLOGY

CHAPTER III

METHODOLOGY

Performance evaluation of export trade is an important pre-requisite for sustained economic growth and development of any country. There is need to analyze the performance of India's coffee export trade based on its determinant.

This chapter deals with the description of the study area, nature and source of data, and analytical tools used in the study.

3.1 Description of study area

3.2 Nature and source of data

3.3 Analytical tools and techniques employed

3.1 Description of study area

Coffee production and trade export performance of India was assessed for the country as a whole.

3.2 Nature and source of data

A total of twenty years period from 1990-2010 was considered for the purpose of analyzing the performance of India's coffee export trade. The entire study is based on the secondary data. The sources of secondary data were: database on coffee published by coffee Board, Government of India, publication of Directorate of commercial intelligence and statistics, Agencies reports which regulated coffee export, nationals and internationals journals on coffee, trade and production year books, Food and Agriculture Organization (FAO) and websites like www.indiastat.com,www.indiacoffee.org.

For analyzing the market concentration, data on total value of coffee sold by major market suppliers were collected from the database

on coffee published by coffee Board, Government of India for the period of 2000-01, 2005-06 and 2009-10. Fifty major exporters and others were selected.

3.3 Analytical tool and techniques employed

3.3.1 Compound growth rate analysis

Estimation of growth rates is an important area of research interest. It measures the performance of economic variables, which in turn reflects the performance of the sector. They summarize the trends in time series data.Growth rates of Indian coffee exports for both, Arabica and Robusta coffee were computed using exponential growth function of the form:

$$Y_{(t)}=ab^te^u$$

Where,

$Y_{(t)}$=Dependent variable for which growth rate is estimated

a=intercept

b=regression coefficient

t=time variable

e=error variable

u=disturbance term

The growth rate coefficient (b's) were computed by transforming the equation ($Y_{(t)}= a\ b^t\ e^u$) in logarithmic form as

$$\text{Log } Y_{(t)}= \ln a+ t\ln b+u$$

The compound growth rate (g) in percentage was computed from the relationship,

$$g= \{(\text{anti log of ln } b)-1\}*100$$

3.3.2 Market structure analysis

One of the most important structural parameters influencing the competition is the number of market functionaries operating in the market and distribution of trade among them. The study of market concentration helps to know whether the market is competitive or monopolistic in nature.

For this purpose two widely used measures of inequality viz.. Lorenz Curve and Gini Concentration ratio were used and percentage of market share of top four traders was calculated.

3.3.2.1 Lorenz curve

The Lorenz curve is based on extent of inequality in distribution of volume of business (Sujatha et al.,1989) in turn that is a measure of market concentration. The coefficient of inequality is given by

$$L = 1 - \sum_{i=1}^{n} \left((X_i - X_{i-1}) (Y_i + Y_{i-1}) \right)$$

Where,

L= Lorenz coefficient of inequality

X_i= cumulative percentage of number of firms up to and including i^{th} class

Y_i= cumulative percentage of quantity handled or value of transaction by firm up to and including i^{th} class

n= number of firms

i= takes value 1,2,3…n, number of firms

If L=0, there is a perfect equality in the distribution

L=1, there is a perfect inequality in the distribution

3.3.2.2 Gini concentration ratio

Among all the inequality measures the most widely used is the Gini concentration ratio. The Gini concentration ratio varies from 0 to 1. If the value is zero, it denotes perfectly equal distribution and if it is 1 then perfect inequality.

The coefficient of inequality is given below.

$$G = \left| 1 - \sum_{i=1}^{n} (P_i - P_{i-1})\,(Q_i + Q_{i-1}) \right|$$

Where,

L= coefficient of inequality

Pi= cumulative proportion of firms up to and including i^{th} class

Qi= cumulative proportion of transaction of firms up to and including i^{th} class

3.3.3 Markov chain analysis

The direction of trade and the changes in exports were examined by employing first order Markov chain model. There is growing awareness of the usefulness of this technique for analysis and forecasting in many fields including exports particularly in the case of variables in the process of constant but gradual change.

Theoretical frame work

The first order finite Markov model is a stochastic process (Xi) which describes the finite number of possible outcomes Si (i=1,2,3 … r) that a discrete random variable X_t(T=1,2,3…t) can assume with the passage of time. This is said to have the first Oder Markovian property if the conditional probability distribution of X_i is dependent on the state the

system is in at step 'i' and not in step0,1,2,3, i-1 (Lee et al,. 1965). Mathematically the stochastic process (X_i) has markovian property if,

$$P(X_{i+1}=S/X=T_o, X_t=T_1....X_{i-1,}=t_{i-1,} X_i=r)= P(X_{i+1}=S/X_i=r)$$

Where, $p(X_{i+1}=S/X_i=r)$ is the step transitional probability of going from state ' r' at step i+1. This represents the conditional probability of X_{i+1} given X_i. If for each 'r' and 's', $P(X_{i+1}=S/X_i=r)=P(X_i=S/X_o=r)=P_{rs}$ for all 'i', then the one step transitional probability remain stationary.

Specification of the Markov chain model

The share of export of coffee from India (X_{it}) to a particular country (j) at time't' is considered as a random variable and this depends only on its past exports to the country. In the context of current analysis, seven major importing countries of coffee from India were considered. The average export to particular country was considered to be a random variable following a first order Markov process.

In the context of current application, five major importing countries and other countries of coffee were considered. The average exports to a particular country was considered to be a random variable which depends only on the past exports to that country, which can be denoted algebraically as

$$Xjt = \sum_{i=0}^{n} X_{it-1}.Pij + e_{jt}$$

Where,

X_{jt} = Export of coffee from India to jth country during the year't'

$X_{i\,t-1}$ = Exports to i^{th} country during the year t-1.

P_{ij} = Probability the exports will shift from i^{th} country to j^{th} country

e_{jt} = Error term independent of X_{it-1}

n = Number of importing countries

The transitional probability (P_{ij}) is central to Markov chain model which can be arranged in a (c*r) matrix, has the following properties.

$0<P_{ij}<1$

$\sum P_{ij}=1$, for all 'i'

The transitional probability P_{ij} indicates the possibility that exports switch over from country 'i' to country 'j' with the passage of time. The probabilities P_{ij} for $i \neq j$ indicate the gain or losses in exports of each of the importing country. The probability P_{ij} for i=j(diagonal probabilities) indicates probability of retention of an importing country.

Estimation of Markov chain model

There are several approaches to estimate the transitional probabilities of the Markov chain model such as unweithed restricted least squares, weighted restricted least squares, Bayesian, Maximum likelihood, unrestricted least squares etc. in the present study, minimum absolute deviations(MAD) estimation procedure was employed to estimate the transitional probabilities, which minimizes the sum of absolute deviations. The conventional linear programming (LP) technique was used as this satisfies the properties of transitional probabilities of non-negativity restrictions and row sum constraints in estimation.

The linear programming formulation is,

$$\text{Min } OP^*+Ie$$

Subject to,

$XP^*+V=Y$

$GP^*=1$

$P>0$

Where,

0 is the vector of zeros

P* is the vector of probability P_{ij}

I is an appropriately dimensioned identify matrix

e is the vector of exports of absolute error

Y is the vector of exports of each country

X is the block diagonal matrix of lagged values of Y

V is the vector of error

G is the grouping matrix to add row elements of P arranged in P* to unit

To analyze the actual shares of coffee exports to different countries, percentage analysis have been used.

RESULTS

CHAPTER IV

RESULTS

The main focus of the study was to analyze the performance of Indian coffee export trade. In accordance with the objectives of the study, the results are presented in this chapter under the following headings.

4.1 Analysis of trends in Indian coffee exports

4.2 Market structure of Indian coffee exports analysis

4.3 Direction of trade

4.1 Analysis of trends in Indian coffee exports

4.1.1 Coffee productions and exports (1990-91 to 1999-00)

The percentage of Indian coffee export with respect to the total production was calculated for two decades. The results for first decade (1990-91 to 1999-00) are depicted in the Table 4.1 which shows that over that period the quantity of coffee export increased from 1lakh to 2.45 lakhs, the percentage of coffee export with respect to the total production increased from 58.98 per cent to 83.88 per cent while and it was high during 1996-97 where it reached 88.4 per cent. The value of exports increased from Rs. 278.89 crores to Rs.1901.21 crores during the same period.

4.1.2 Coffee production and exports during (2000-01 to 2009-10)

During second period (2000-01 to 2009-10) the percentage of coffee export with respect to total production is presented in table 4.2. The table shows that during this period, the quantity of coffee exported decreased from 2.47 lakhs to 1.95 lakhs.

Table 4.1 : Coffee Productions and Exports (1990-91 to 1999-00)

Year	Coffee production (MT)	Export quantity (MT)	Exports earnings (Rs. in Crores)	Export (percentage)	Unit Value (Rs./tonne)
1990-91	1,69,726	1,00,110	278.89	58.98	27,858
1991-92	1,80,000	1,11,452	349.01	61.91	31,314
1992-93	1,69,395	1,13,602	381.31	67.07	33,565
1993-94	2,12,000	1,36,492	585.06	64.38	42,864
1994-95	1,80,100	1,37,604	1096.52	76.4	79,686
1995-96	2,23,000	1,70,990	1527.16	76.67	89,312
1996-97	2,05,000	1,81,224	1466.33	88.4	80,912
1997-98	2,28,300	1,79,054	1707.59	78.42	95,367
1998-99	2,65,000	2,11,731	1751.59	79.89	82,727
1999-00	2,92,000	2,44,941	1901.21	83.88	77,619

The percentage of coffee export with respect to the total production decreased from 81.97 per cent to 67.28 per cent and it was high up to 86.46 per cent during 2007-08 while the value of export increased from Rs. 1374.25 crores to Rs. 2059.59 crores.

4.1.3 Annual compound growth rate of Indian coffee exports (1990-91 to 1999-00)

To determine the growth rate of Indian coffee exports, compound growth rates were computed for quantity, value and unit value of exports. The entire study period of 1990-91 to 2009-10 was divided into two sub periods viz., first decade (1990-91 to 1999-00) and second decade (2000-01 to 2009-10). The exponential function was employed to find out the growth rates. The estimated growth rate of coffee exports in quantity terms in the first decade (1990-91 to 1999-00) are presented in Table 4.3. The growth rate was 10.1 per cent per annum, which was statistically significant at 5 per cent while growth in value of exports was 26.7 per cent per annum. The unit value realized increase at 15.1 per cent per annum, which was statistically significant at 1 per cent level. The growth rates of all the parameters studied in first decade (1990-91 to 1999-00) were found to be statistically significant.

4.1.4 Annual compound growth rate of Indian coffee export (2000-01 to 2009-10)

The results of growth rate of Indian coffee exports during second decade are presented in Table 4.4. The estimated growth rates of quantity in the second decade (2000-01 to 2009-2010) of quantity was negative -1.13 per cent, but not significant. While growth in value terms was 8.94 per cent per annum. The unit value registered an increase of 10.46 per cent. The growth in value of exports and unit value realized were statistically significant at 1 per cent level.

Table 4.2 : Coffee Productions and Exports (2000-01 to 2009-10)

Year	Coffee production (MT)	Export quantity (MT)	Exports earnings (Rs. in Crores)	Export (percentage)	Unit Value (Rs./tonne)
2000-01	3,01,200	2,46,908	1374.25	81.97	55,658
2001-02	3,00,600	2,13,586	1050.36	71.05	49,177
2002-03	2,75,275	2,07,333	1051.45	75.31	50,713
2003-04	2,70,500	2,32,684	1158.45	86.01	49,786
2004-05	2,75,500	2,11,765	1224.67	76.86	57,831
2005-06	2,74,000	2,01,555	1510.38	73.56	74,936
2006-07	2,88,000	2,49,029	2007.9	86.46	80,629
2007-08	2,62,000	2,18,996	2046.29	83.58	93,569
2008-09	2,62,300	1,97,173	2242.68	75.17	1,13,741
2009-10	2,69,600	1,94,844	2059.59	67.28	1,05,704

Table 4.3 : Annual compound growth rate of Indian coffee exports (1990-91 to 1999-00)

Parameter	CGR (%)
Quantity	10.1*
Value	26.7**
Unit value	15.1**

*Significant at 5 per cent level

** Significant at 1 per cent level

Table 4.4 : Annual compound growth rate of Indian Coffee exports (2000-01 to 2009-10)

Parameter	CGR (%)
Quantity	-1.36NS
Value	8.94*
Unit value	10.46*

NS-Non Significant

* Significant at 5 per cent level

4.2 Market structure of Indian coffee exports

The market structure of Indian coffee export provides sufficient information on the nature of the market, which in turn determines the market performance. It helps to know whether the market is competitive or concentrated.

A combination of methods such as Lorenz Curve, Gini ratio and the share of the top four exporters were employed in order to study the market concentration for coffee export in India. For the analysis, data on total quantity of coffee exported by 50 major traders and others in value terms for the year 2000-01, 2005-06, 2009-10 were computed.

The objective was to see if there was high concentration among few exporters. For this purpose, the entire transaction of coffee exporters was arranged from the lowest to the highest for export in terms of value and cumulative number of exporters was computed to build Lorenz curve and to calculate Gini concentration ratio. The percentage share of top 4 exporters out of the total of 50 exporters was calculated in terms of quantity and value of coffee exported during three periods which are: 2000-01, 2005-06 and 2009-10 for the entire decade 2000-01 to 2009-10. The annual changes in Gini ratio was computed for the ratio 2000-01 to 2009-10.

4.2.1 Market concentration of coffee exports during 2000-01

From the Table 4.5, it is evident that during 2000-01, the top four traders: Amalgamated Beans Coffee Trading Co.Ltd., Allanasons Limited, Nestle India Ltd., and Tata Coffee Ltd., were holding up to 40.88 per cent of total quantity of coffee exported and other 46 exporters are holding up to 59.12 per cent. The result shows that the market concentration is medium in coffee exports during 2000-01.

Table 4.5 : Share of top four exporters of coffee during 2000-01

Sl. No.	Exporters	Quantity (MT)	Share (%)	Value (Rs.lakhs)	Share (%)
1.	Amalgamated Bean Coffee Trading co.Ltd.,	28,698.10	12.15	14,671.10	11.01
2.	Allanasons Limited,	27,059.10	11.46	14,249.60	10.69
3.	Nestle India Ltd.,	26,585.30	11.26	21,542.50	16.17
4.	Tata coffee ltd.,	14,185.40	6.01	12,277.70	9.21
5.	Hindustan Unilever Ltd.,	14,069.00	5.96	8054.20	6.04
6.	Skanda Export Company,	11,671.90	4.94	4749.90	3.56
7.	Ramesh Exports Pvt.ltd.	10,982.20	4.65	5669.90	4.25
8.	General Commodities Pvt. ltd.,	10,264.90	4.35	5237.30	3.93
9.	Madhu Jayanti International ltd.,	8417.50	3.56	3646.40	2.74
10.	Ramesh Enterprises,Coffee divn. of Ramesh Exports	7329.20	3.10	3949.10	2.96
11.	I.t.c.Limited.,	6300.40	2.67	3467.00	2.60
12.	L.m.j.International ltd.,	6228.00	2.64	2881.70	2.16
13.	Indian Products ltd.,	5242.60	2.22	1818.90	1.36
14.	Cauvery Coffee Traders,	5063.50	2.14	2126.90	1.60
15.	Ccl Products (India)ltd.,	4719.90	2.00	3057.80	2.29
16.	Cholas spices Private ltd.,	3970.20	1.68	1405.30	1.05
17.	Olam Agro India ltd.,	3813.60	1.61	1515.00	1.14
18.	Aspinwall & Co.ltd.	3373.10	1.43	1677.10	1.26
19.	S.l.n.exports,	3201.30	1.36	1456.30	1.09
20.	Associated Commodities & Exports	2630.50	1.11	991.50	0.74
21.	Grasim Industries ltd.,	2283.00	0.97	987.00	0.74
22.	Jfk International,	1781.50	0.75	4165.80	3.13
23.	SaldanhaInternational	1718.10	0.73	619.40	0.46
24.	Mercara Curers (p)ltd.,	1697.70	0.72	618.90	0.46

25.	Andhra Trade Development Corporation Pvt.ltd.,	1676.40	0.71	610.90	0.46
26.	S.m & Company,	1525.30	0.65	836.30	0.63
27.	H.t.exports Pvt. Ltd.,	1474.80	0.62	882.80	0.66
28.	Sa Rawther Spices (p)Ltd.,	1357.50	0.57	528.40	0.40
29.	Sargod Trading Co.,	1288.10	0.55	563.00	0.42
30.	Astra Exports,	1194.50	0.51	523.00	0.39
31.	R.d. Curers Private Limited	1186.00	0.50	738.10	0.55
32.	Cargill India Pvt.ltd.,	1095.20	0.46	479.50	0.36
33.	Bafna Enterprises,	1043.10	0.44	403.90	0.30
34.	Alpha Plantations Pvt.ltd.,	1005.40	0.43	367.30	0.28
35.	Rathna Coffee and Commodities Pvt.ltd.	951.30	0.40	628.30	0.47
36.	Kay Cee Coffee & Spices Exports Pvt.ltd.,	882.00	0.37	488.30	0.37
37.	Coffico Agencies,	867.00	0.37	423.30	0.32
38.	Amirtha Imports Exports,	849.40	0.36	315.00	0.24
39.	Kodagu Coffee Products and Exports,	830.40	0.35	435.90	0.33
40.	Manjushree Plantations ltd.	819.40	0.35	372.00	0.28
41.	Amaryllis Exports Pvt.ltd.,	812.20	0.34	399.80	0.30
42.	Arcon(India)Pvt.ltd.,	792.00	0.34	541.00	0.41
43.	Karnataka Planters Coffee Curing Works p.ltd.,	766.40	0.32	517.00	0.39
44.	Ambo Exports limited	669.20	0.28	611.00	0.46
45.	Classic Coffee & Spices(p)ltd.	666.00	0.28	305.80	0.23
46.	South Indian Spices,	655.20	0.28	232.30	0.17
47.	Coffee Processing Technologies	646.20	0.27	232.10	0.17
48.	Bharathi Estate Supplies Co.,	637.50	0.27	350.50	0.26
49.	Zann Commodities,	605.70	0.26	297.70	0.22
50.	Blossom Coffee Pvt.Lmited,	591.90	0.25	336.10	0.25
	TOTAL	**2,36,174.10**	**100.00**	**1,33,255.60**	**100.00**

4.2.2 Market concentration of coffee export during 2005-06

The top four traders: General Commodities, Allanasons Limited, Nestle India Ltd., and CCL Products (India) Ltd., constituted up to 42.59 per cent of total of quantity of coffee export while other 46 exporters were holding up to 57.81 per cent (Table 4.6).

4.2.3 Market concentration of coffee export during 2009-10

The top four traders: NKG Jayanti Coffee Pvt. Ltd., CCL Products (India) Ltd., Allanason Limited and Nestle India Ltd. were holding up 44.17 per cent while other 46 exporters were holding up to 55.83 per cent. From the analysis, it was clear that the market concentration was increasing over the years (Table 4.7).

4.2.4 Lorenz curve for coffee export during 2000-01

Lorenz curve was used for the determining market structure of Indian coffee exports. The results are presented in Fig.4.1 where the X-axis reflects the cumulative number of exporters arranged from the lowest to the highest. The y axis shows the cumulative percentage of export of coffee by traders. As indicated in Fig.4.1, the graph shows 70 per cent of exporters handled bottom 20 per cent of coffee exports in 2000-01.

4.2.5 Lorenz curve for coffee export during 2005-06

The Lorenz curve for the year 2005-06 shows that bottom 75 per cent of exporters handled 20 per cent of coffee and remaining 25 per cent handled up to 80 per cent (Fig.4.2). Though there is increase of degree of market concentration over this period.

Table 4.6 : Share of top four exporters of coffee during 2005-06

Sl.No	Exporters	Quantity (MT)	Share (%)	Value (Rs. in lakhs)	Share (%)
1.	General Commodities Pvt. ltd.,	24,214.80	12.10	16,393.00	10.95
2.	Allanasons Limited,	24,064.00	12.03	20,519.50	13.71
3.	Nestle India Ltd.,	20,802.60	10.40	13,607.80	9.09
4.	Ccl Products (India)Ltd.,	16,128.50	8.06	12,729.00	8.50
5.	Hindustan Unilever Ltd.,	13,474.00	6.73	10,240.70	6.84
6.	Olam Agro India Ltd.,	11,782.60	5.89	7528.10	5.03
7.	Amalgamated Bean Coffee Trading co. Ltd.,	10,888.50	5.44	9498.90	6.35
8.	Tata Coffee Ltd.,	10,362.50	5.18	8585.10	5.74
9.	Ecom gill coffee trading pvt.ltd.	8300.20	4.15	4940.50	3.30
10.	I.t.c.limited.,	7315.50	3.66	5522.10	3.69
11.	Ned Commodities India Pvt. Ltd.,	7297.20	3.65	5585.90	3.73
12.	S.l.n.Exports,	7216.00	3.61	5258.40	3.51
13.	Ramesh Exports Pvt.Ltd.	6588.90	3.29	5436.10	3.63
14.	L.m.j.International Ltd.,	5123.70	2.56	3721.50	2.49
15.	Aspinwall &Co.Ltd.	3068.10	1.53	2779.10	1.86
16.	Bola Surendra Kamath & Sons,	2130.00	1.06	1787.50	1.19
17.	Sri Narasu's Coffee Company Limited,	2027.70	1.01	1527.40	1.02
18.	Chimco International (p)Lltd.,	2002.80	1.00	829.40	0.55
19.	Andhra Trade Development Corporation Pvt.Ltd.,	1537.50	0.77	1085.60	0.73
20.	Ruchi Soya Industries Limited	1365.80	0.68	1096.00	0.73
21.	Zaan Commodities Pvt. Ltd.,	1090.20	0.54	752.60	0.50
22.	Darsh Global Services	1026.60	0.51	763.00	0.51
23.	H.t.exports Pvt. Ltd.,	988.80	0.49	758.60	0.51
24.	High Hill Coffee India(p)Ltd.,	753.90	0.38	616.70	0.41

25.	Indcafe Exports	740.00	0.37	668.10	0.45
26.	The Bombay Burmah Trading Corp.Ltd	717.60	0.36	663.60	0.44
27.	Ambo Exports Limited	672.50	0.34	461.80	0.31
28.	Andhra Pradesh Forest development Corpn.	671.30	0.34	531.20	0.35
29.	C.p.Exports,	662.60	0.33	243.20	0.16
30.	Indian Products Ltd.,	556.60	0.28	518.10	0.35
31.	Saldanha International	537.10	0.27	313.00	0.21
32.	S.p.g.Ramasamy Nadar & Sons,	479.00	0.24	493.20	0.33
33.	Sa Rawther Spices (p) Ltd.,	442.80	0.22	284.30	0.19
34.	U.e Trade Corporation(i)Pvt. Ltd.,	441.60	0.22	191.80	0.13
35.	Jfk International,	427.30	0.21	400.50	0.27
36.	Sarathy Coffee Curing Works,	418.80	0.21	340.60	0.23
37.	Harley Carmbel(i)Pvt.Ltd.,	363.80	0.18	335.60	0.22
38.	Om Shree International	348.90	0.17	255.70	0.17
39.	Badra Estates & Industries Ltd.,	343.60	0.17	289.70	0.19
40.	C.t.coffee Curing & Exports Pvt Ltd.,	326.40	0.16	184.70	0.12
41.	Sargod Trading co.,	325.40	0.16	289.50	0.19
42.	Balanoor Plantations & Industries Ltd.,	290.30	0.15	203.40	0.14
43.	Ranadey Exports(p)Ltd.	270.80	0.14	311.60	0.21
44.	Madhu Jayanti International Ltd.,	267.40	0.13	171.30	0.11
45.	Cauvery Coffee Taders,	248.40	0.12	176.80	0.12
46.	Astra Exports,	242.20	0.12	215.20	0.14
47.	The Anaparai Estates Limited	225.00	0.11	154.00	0.10
48.	Alna Trading & Exports Ltd	211.20	0.11	184.70	0.12
49.	Skanda Export Company,	169.20	0.08	107.20	0.07
50.	Ossoor Estates Ltd.,	151.20	0.08	116.80	0.08
	Total	**2,00,101**	**100**	**1,49,668**	**100**

Table 4.7 : Share of top four exporters of coffee during 2009-10

Sl.No.	Exporters	Quantity (MT)	Share (%)	Value (Rs. Lakhs)	Share (%)
1.	NKG Jayanti Coffee Pvt. Ltd.	27,756.70	14.19	26,667.60	12.92
2.	Ccl Products (India)Ltd.,	20,454.80	10.46	25,060.60	12.14
3.	Allanasons Limited,	19,516.90	9.98	21,065.40	10.20
4.	Nestle India Ltd.,	18,215.10	9.31	18,391.90	8.91
5.	Tata Coffee Ltd.,	12,740.70	6.51	15,309.20	7.41
6.	Ned Commodities India Pvt. Ltd.,	12,216.20	6.25	9870.10	4.78
7.	Amalgamated Bean Coffee Trading co Ltd.,	11,910.50	6.09	12,366.70	5.99
8.	Olam Agro India Ltd.,	9913.10	5.07	10,063.60	4.87
9.	S.l.n. coffee Pvt.Ltd.	8671.00	4.43	8500.90	4.12
10.	Sri Narasu's Coffee Company Limited	6764.80	3.46	7373.20	3.57
11.	Vayhan Coffee Limited,	5066.50	2.59	5752.90	2.79
12.	Bola Surendra Kamath &Sons	4876.90	2.49	4591.00	2.22
13.	I.t.c.Limited.,	4750.10	2.43	4465.40	2.16
14.	Aspinwall & Co.Ltd.	4161.00	2.13	5221.30	2.53
15.	Ecom Gill Coffee Trading Pvt.Ltd.	3859.50	1.97	4813.00	2.33
16.	Sa Rawther Spices (p) ltd.,	3610.20	1.85	2874.70	1.39
17.	L.m.j.International Ltd.,	3048.70	1.56	3206.90	1.55
18.	Hindustan Unilever Ltd.,	2820.20	1.44	4109.40	1.99
19.	Om Shree International	1965.50	1.00	2205.50	1.07
20.	Ruchi worldwide Ltd.,	1597.80	0.82	1280.50	0.62
21.	Louis dreyfus Commodities (i) Pvt.Ltd.,	1576.00	0.81	1513.20	0.73
22.	Ramesh Exports Pvt.Ltd.	1497.20	0.77	2004.20	0.97
23.	J.v.s.Commodities,	1299.00	0.66	1012.10	0.49
24.	Bola Raghavendra Kamath & Sons	997.40	0.51	976.60	0.47
25.	Jfk international,	804.70	0.41	1092.90	0.53
26.	Beeville Exports India Private Limited	576.00	0.29	410.40	0.20

27.	S.p.g.Ramasamy Nadar & Sons,	570.00	0.29	1043.80	0.51
28.	C.p.Exports,	540.60	0.28	458.40	0.22
29.	The Bombay Burmah Trading Corp.ltd	530.20	0.27	746.80	0.36
30.	Saldanha International	518.40	0.27	342.50	0.17
31.	Harley Carmbel(i)Pvt.Ltd.,	331.60	0.17	459.10	0.22
32.	Sargod Tading Co.,	267.60	0.14	324.70	0.16
33.	Elements Homestead Products Pvt. Ltd.	255.60	0.13	290.80	0.14
34.	Indcafe Exports	247.20	0.13	301.70	0.15
35.	Sarathy coffee curing works,	242.40	0.12	287.10	0.14
36.	Badra Estates & Industries Ltd.,	158.60	0.08	231.90	0.11
37.	Alna Trading & Exports Ltd	153.60	0.08	117.00	0.06
38.	Balanoor Plantations & Industries Ltd.,	150.30	0.08	211.60	0.10
39.	Indus Products	140.80	0.07	246.70	0.12
40.	Oriental Carpet Centre	134.40	0.07	118.00	0.06
41.	General Commodities Pvt. Ltd.,	120.90	0.06	162.00	0.08
42.	Coca-Cola India Pvt.Ltd.,	82.70	0.04	244.40	0.12
43.	Shan Exports	70.60	0.04	76.20	0.04
44.	Devon Plantations & Industries Ltd	70.60	0.04	124.00	0.06
45.	Ranadey Exports(p)Ltd.	68.60	0.04	104.30	0.05
46.	Emil Traders (p) Ltd.	57.60	0.03	37.60	0.02
47.	Belur Coffee Curing & Trading Co	57.60	0.03	40.80	0.02
48.	N.j.Spices	57.60	0.03	89.00	0.04
49.	Indafro Impex	55.90	0.03	123.50	0.06
50.	Ratnagiri International,	47.40	0.02	85.40	0.04
	TOTAL	**1,95,597**	**100**	**2,06,466**	**100**

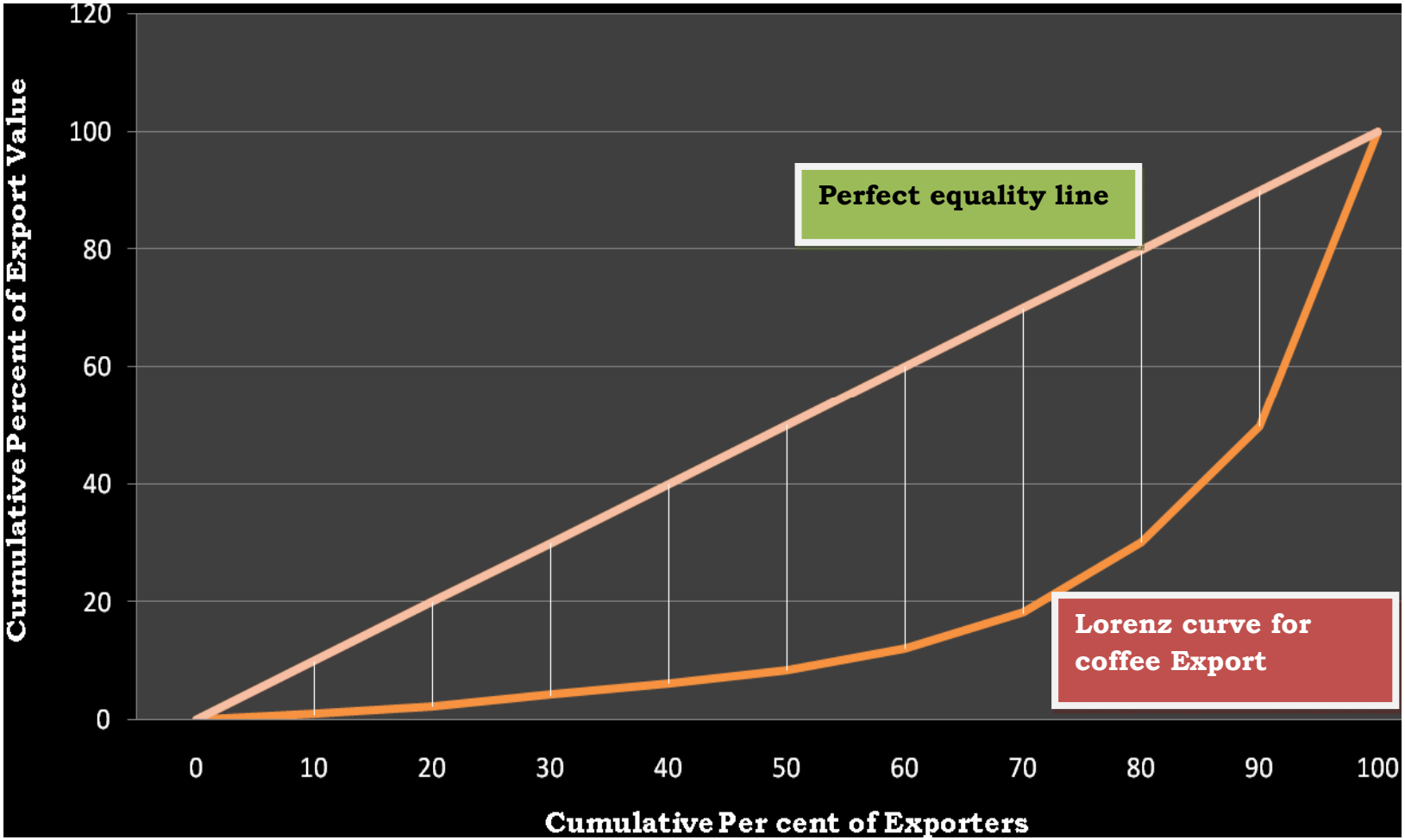


Fig. 1 : Lorenz curve for Indian Coffee Exporters during 2000-01

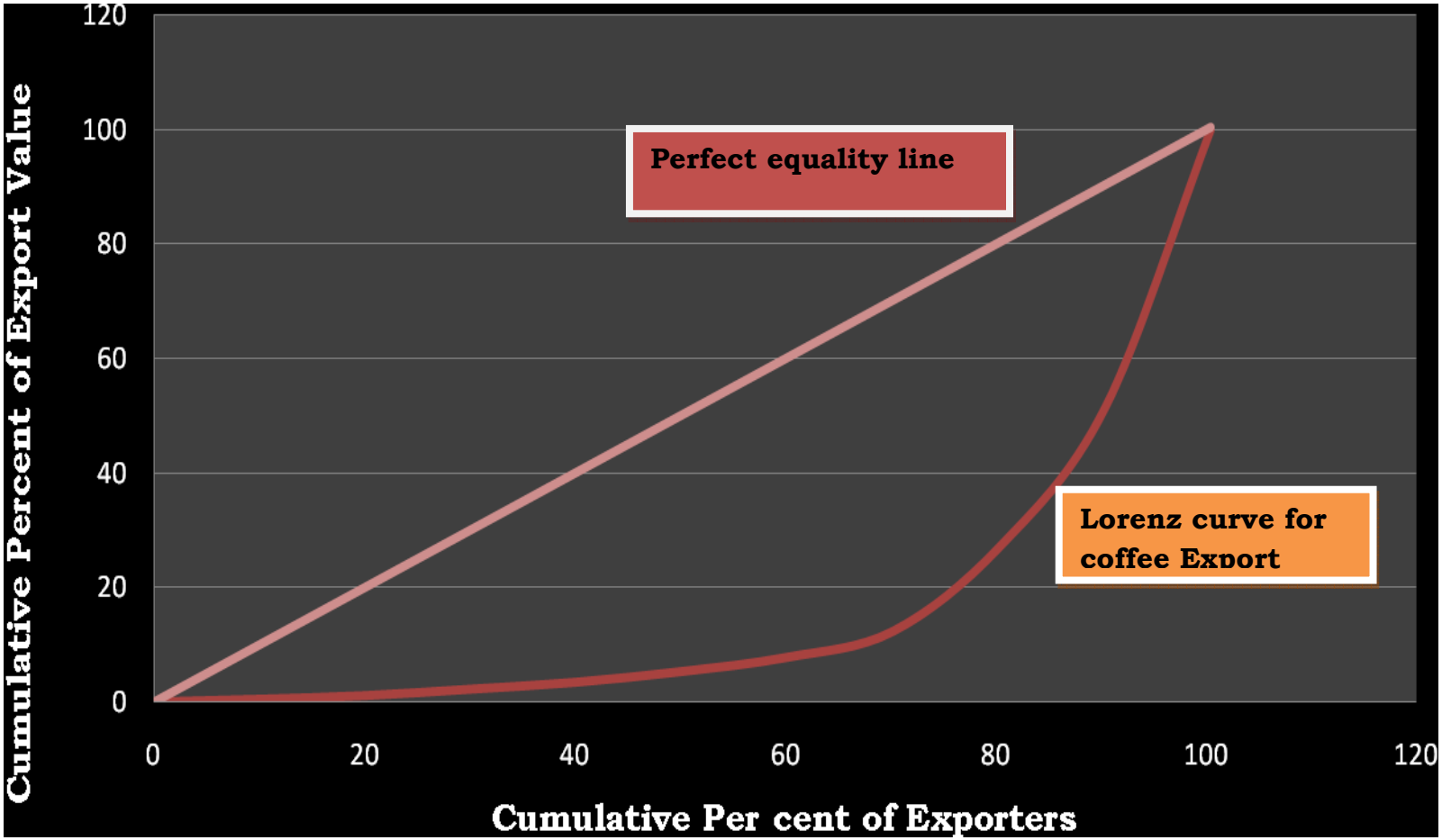


Fig. 2 : Lorenz curve for Indian Coffee Exporters during 2005-06

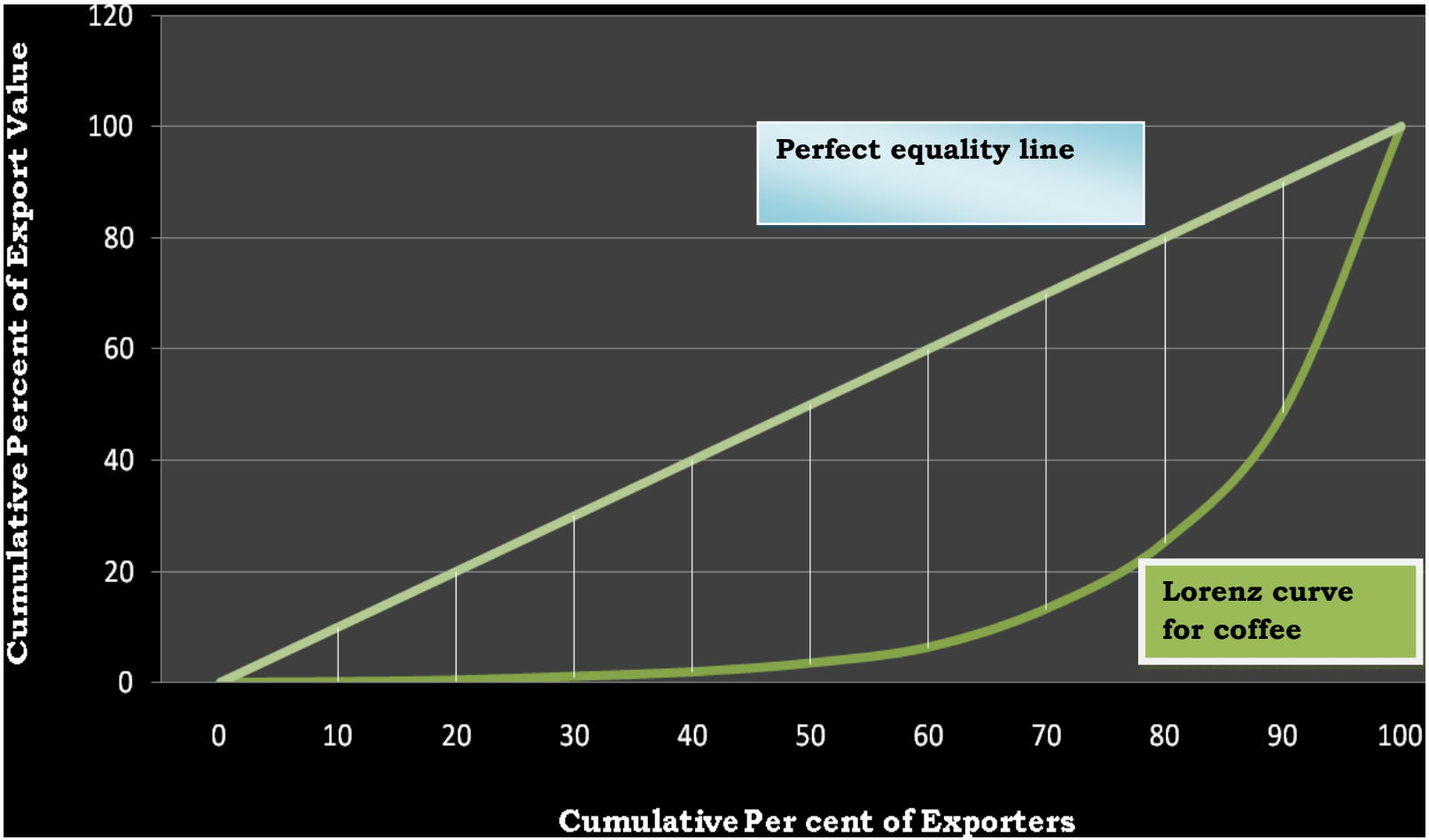


Fig. 3 : Lorenz curve for Indian coffee exporters during 2009-10

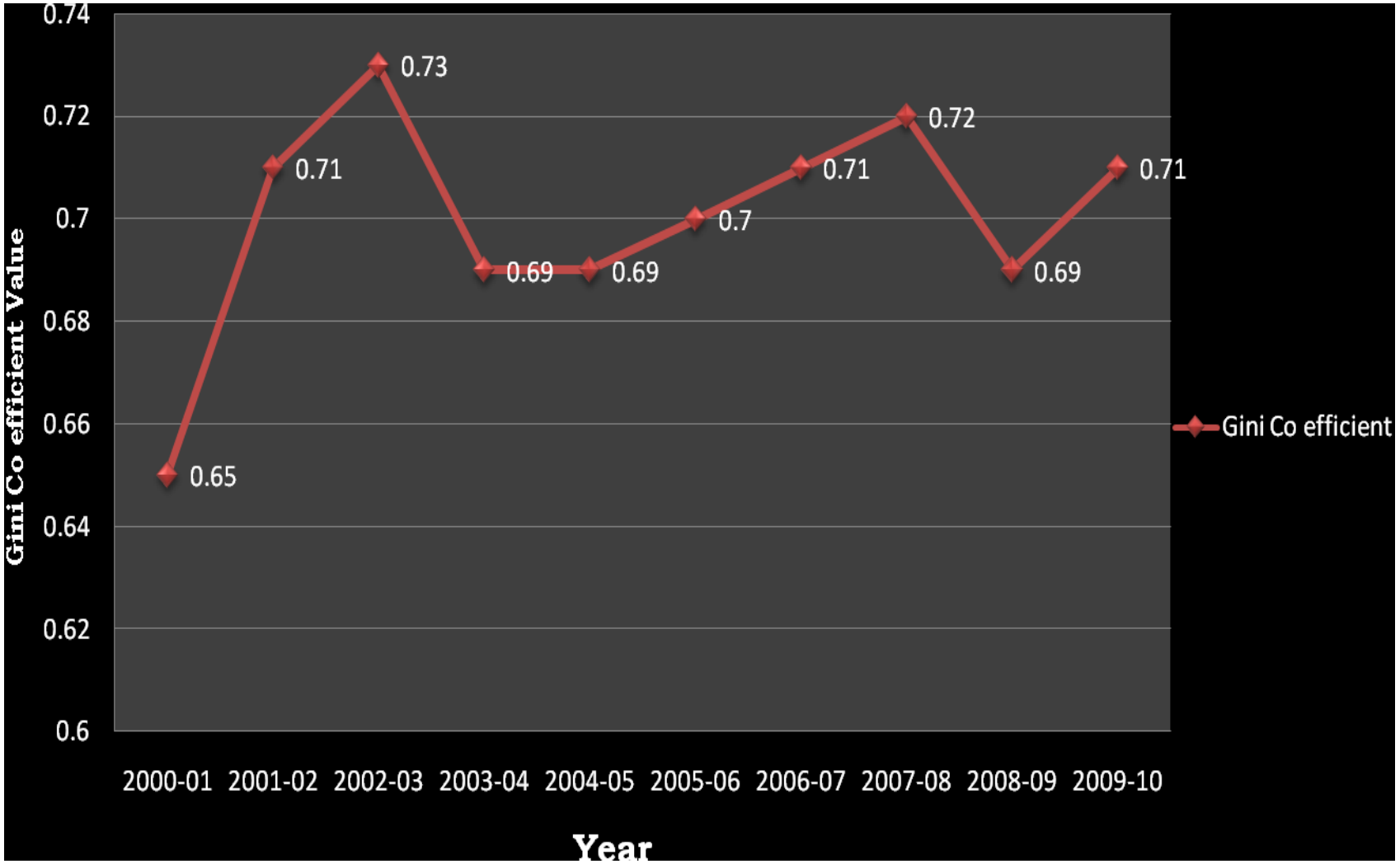


Fig. 4 : Gini concentation ratio of Indian coffee exporters (2000-01 to 2009-10)

4.2.5 Lorenz curve for coffee export during 2009-10

The Lorenz curve was employed to determine the market structure of coffee export for the year 2009-10. The graph shows that 80 per cent of coffee exporters handled up to 20 per cent and the remaining 20 per cent are handling up to 80 per cent (Fig.4.3).

4.2.6 Gini concentation ratio of Indian coffee export (2000-01 to 2009-10)

Among all the inequality measures the most widely used is the Gini concentration ratio. The Gini concentration ratio varies from 0 to1. If the value mouve toward zero, it denotes perfectly equal distribution and if it is mouving toward 1 then perfect inequality.The Gini concentration ratios were calculated for the period 2000-01 to 2009-10. From the graph it can be observed the extent of inequality has increased over the years. During 2000-01, 2005-06 and 2009-10.The respected values of the calculated Gini concentration were 0.65, 0.70 and 0.71.

4.3 The Direction of trade of Indian coffee export

The direction of trade of trade is important from the point of view of exporting country. Although there are a number of importers for a particular country the unit value realized and quality requirements could vary depending on the importers specifications. The analysis can right as the stability of exports and loyal buyers for Indian coffee.

4.3.1 Transitional probability matrix of Indian coffee exports (2000-01 to 2009-10)

The direction of trade of Indian coffee exports to different importing countries was studied by estimating the transitional probability matrix using the Markov chain framework. Transitional probabilities are presented in Table 4.8. The results depict a broader idea on changes in

the direction of trade over a period of ten years. The top five importers of Indian coffee viz., Italy, Russian Federation, Germany, Belgium and Spain were considered for the study. The exports to remaining countries were pooled under the 'other' countries category.

The diagonal elements in a transitional probability matrix provide the information on the probability of retention of the trade. While, the row elements indicate the probability of loss in trade on account of competing countries. The column elements indicate the probability of gain in trade from other competing countries.

It could be noticed from the table that Italy was one of the most stable markets among the major importers of Indian Coffee as reflected by the higher probability of retention at 0.625, i.e., the probability that Italy retains its previous export share was 62.50 per cent of the coffee. Thus, Italy was the most reliable and loyal market for Indian Coffee. Belgium had moderate probability retention of 0.228, which shows that only 22 per cent of past imports by Belgium could be expected for the next year. This implied that it had lost most of its share to other importing countries. The remaining countries such as Germany had the retention probability of 0. 077 per cent (Table 4.8).

Whereas those countries, which imported less quantity of coffee from India, were pooled under the 'other' countries category showed high stability (0.7910). The entire share coffee market of Spain was directed to 'other' countries category alone.

Totally, 100 per cent of Spain's share of coffee imports from India was lost to 'other' countries. However, Spain gained 12.17 per cent of Belgium market share and 24.63 per cent of Russian Federation market share and 2.47 per cent of Italy market share.

Table 4.8 : Transitional probability matrix of Indian coffee exports 2000-01 to 2009-10.

	Italy	Russian federation	Germany	Belgium	Spain	Others
Italy	**0.6253**	0.0000	0.0000	0.0000	0.0247	0.3500
Russian federation	0.1650	**0.0000**	0.2740	0.3148	0.2463	0.0000
Germany	0.0000	0.9226	**0.0774**	0.0000	0.0000	0.0000
Belgium	0.0000	0.0000	0.3770	**0.2283**	0.1217	0.2730
Spain	0.0000	1.0000	0.0000	0.0000	**0.0000**	0.0000
Others	0.1607	0.0000	0.0483	0.0000	0.0000	**0.7910**

Italy lost to the tune of 2.47 per cent to Spain and 35 per cent to 'other' countries, whereas it gained 16.50 per cent from Russian Federation and 16.07 per cent from 'other countries'. Therefore, Italy retained 62.53 per cent of original share and lost about 37.47 per cent to Spain and 'other countries' together.

The major gainer among importers of Indian coffee over a period of time was Russian Federation, which had transfer probability of 0.9226 from Germany and 1.00 from Spain. The probability that Russian Federation would gain in the export share of Indian coffee over the study period at the cost of Germany and Spain are 0.9226 and 1.00 respectively. Whereas it lost 16.50 per cent to Italy, 27.40 per cent to Germany, 31.48 to Belgium and 24.63 per cent to Spain. Therefore, Russian Federation looses about 99.9 per cent of its total imports.

Germany could retain 7.74 of its original share and gained 37.70 from Belgium and 4.83 from other countries. Whereas it lost its share to the tune of 92.26 per cent to Russian Federation.

Belgium sustained its share of 22.83 per cent and gained 31.48 per cent from Russian Federation. Whereas it lost 37.70 per cent to Russian Federation, 12.17 per cent to Spain and 27.30 per cent to other countries. Therefore, Belgium lost about 77.17 per cent and retained the rest.

Russian Federation could not retain its previous share and lost its entire share to Italy, Germany, Belgium and Spain a share of 16.50 per cent, 27.40 per cent, 31.48 per cent and 24.63 respectively.

Other countries retained its original share of 79.10 per cent and gained 35 per cent from Italy and 27.30 from Belgium. Whereas it lost

16.07 per cent and 4.83 per cent, to Italy and Germany, respectively. Therefore, the total loss of other countries is 20.9 per cent.

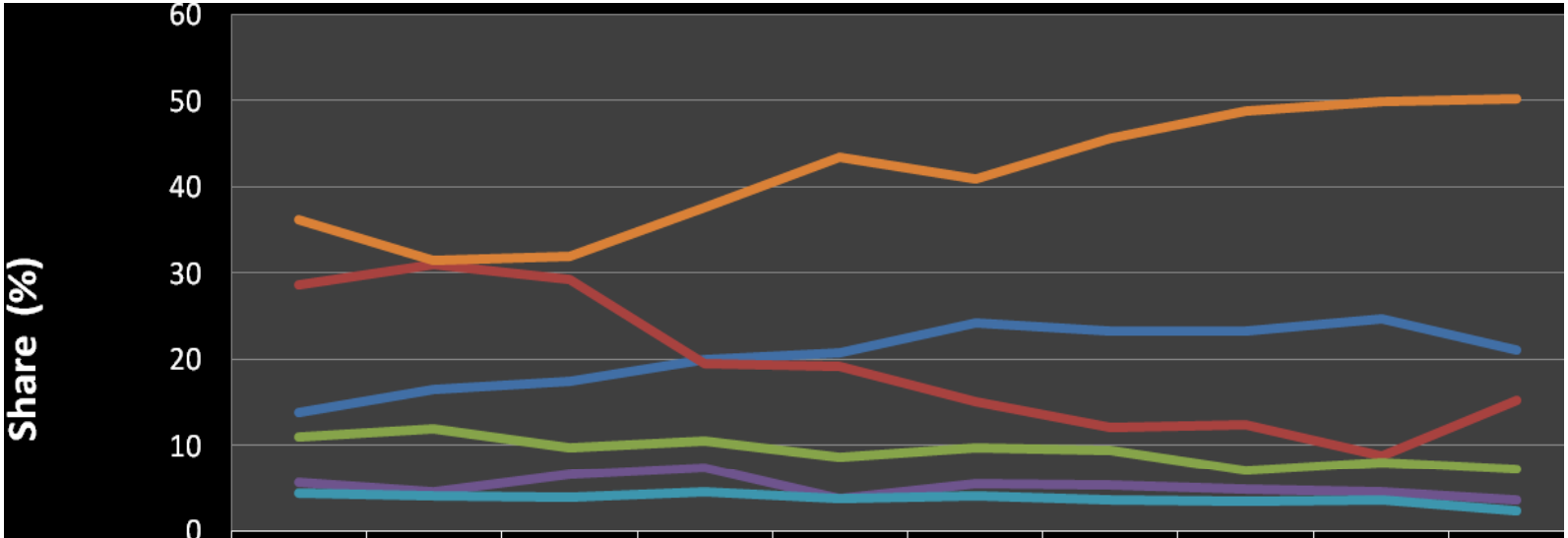
4.3.2 Share of actual value of Indian coffee export to the major importing Countries

The actual share of values of Indian coffee exports to major importers from 1990-91 to 2009-10, is presented in table 4.9. The table revealed that the actual export to Italy had increased from 13.85 per cent to 21.2 per cent over the period of 1990-91 to 2009- 2010 and the value of coffee exports had increased from Rs. 190.32 crores to Rs. 436.79 crores during the same period. The proportion of actual coffee exports to Russian Federation in percentage terms had decreased from 28.63 per cent in 1990-91 to 15.22 per cent in 2009-10. In the case of Germany, the actual exports had decreased from 11.08 per cent in 1990-91 to 7.21 per cent in 2009-10. The actual export share of coffee to Belgium had decreased from 5.76 per cent in 1990-91 to 3.67 per cent in 2009-10. In the case of Spain, the actual export value share had decreased from 4.43 per cent in 1990-91 to 2.39 per cent in 2009-10. The actual export share to the countries pooled under others, showed an increase from 36.25 per cent in 1990-91 to 50.31 per cent in 2009-10.

The Fig.4.5 shows that up to 2002-03, Russian federation was the major destination for Indian coffee but after this period there was gradual decrease in demand for Indian coffee in Russian Federation. During 2008-09, there was increasing trend for Indian coffee in Russian federation coffee market. After 2002-03, Italy is the major destination for Export of Indian coffee, it shows gradual increasing trend over the period.

Table 4.9 : Actual shares of coffee exports from India to various destinations

Year / Country	Italy		Russian Federation		Germany		Belgium		Spain		others	
	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share	Value	Share
2000-01	190.32	13.85	393.44	28.63	152.35	11.09	79.16	5.76	60.84	4.43	498.14	36.25
2001-02	173.89	16.56	325.74	31.01	126.28	12.02	49.02	4.67	44.58	4.24	330.85	31.50
2002-03	184.64	17.56	307.74	29.27	102.60	9.76	70.14	6.67	42.46	4.04	343.87	32.70
2003-04	231.70	20.00	225.42	19.46	123.46	10.66	86.64	7.48	53.92	4.65	437.31	37.75
2004-05	254.81	20.81	235.74	19.25	106.16	8.67	47.34	3.87	48.16	3.93	532.46	43.48
2005-06	365.86	24.22	228.25	15.11	147.58	9.77	84.72	5.61	63.42	4.20	620.55	41.09
2006-07	469.49	23.38	244.09	12.16	190.91	9.51	109.13	5.44	75.44	3.76	918.84	45.76
2007-08	476.52	23.29	253.48	12.39	144.77	7.07	99.99	4.89	71.39	3.49	1000.14	48.88
2008-09	555.28	24.76	197.50	8.81	181.38	8.09	102.37	4.56	83.19	3.71	1112.96	50.07
2009-10	436.79	21.21	313.50	15.22	148.51	7.21	75.41	3.66	49.09	2.38	1036.29	50.32



	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Italy	13.85	16.56	17.56	20	20.8	24.22	23.4	23.28	24.77	21.2
Russian federation	28.63	31.01	29.27	19.46	19.25	15.11	12.15	12.38	8.8	15.22
Germany	11.08	12.02	9.76	10.65	8.67	9.79	9.5	7.07	8.08	7.21
Belgium	5.76	4.6	6.68	7.5	3.9	5.6	5.43	4.89	4.57	3.67
Spain	4.43	4.24	4.03	4.65	3.92	4.2	3.75	3.48	3.71	2.39
Others	36.25	31.57	32.07	37.74	43.46	41.08	45.77	48.9	50.07	50.31

Fig. 5 : Proportion of Indian coffee export to various destinations from 2000-01 to 2009-10

Germany is the third major importer for Indian coffee during 2000-01 to 2009-10, there was consistent demand for Indian coffee from Germany. The fourth importer destination of Indian coffee is Belgium which was not shown significant variation. Spain is the fifth major importer of Indian coffee and the trend shows that there was constant demand for Indian coffee from Spain over the period. The Fig.4.5 indicates that about one third share of Indian coffee was held by other countries category in 2000-01 year and it had increased to 50.31 per cent in 2009-10.This shows that the demand for Indian coffee from other countries was increasing.

DISCUSSION

CHAPTER V
DISCUSSION

The results presented in the previous chapter are discussed in this chapter under the following headings;

5.1 Analysis of growth rate in Indian coffee Export

5.2 Market structure of Indian coffee export trade analysis

5.3 Direction of Indian coffee Export trade

5.1 Analysis of growth rate in Indian coffee export

The present study assessed share of Indian coffee export with respect to the total production for two decades. Compound growth rate to analyze the growth of Indian coffee export trade in terms of quantity, value and unit value realized. The time period considered for analysis was 1990-91 to 2009-10.

The percentage of coffee export to the total production increased from 58.98 per cent to 83.88 per cent while the value of exports increased from Rs. 278.89 crores to Rs.1901.21 crores during the same period. The growth rates were computed for two decades: (1990-91 to 1999-00) and (2000-01 to 2009-10) in Table 4.3 and Table 4.4 respectively.

The growth rate of quantity export of coffee was 10.1 per cent over the period 1990-01 to 2009-10. The growth in quantity exported indicated a positive and significant growth at 5 per cent level. This increase in quantity of coffee export can be attributed to area expansion in some of non-traditional areas as well as increase in import of coffee from abroad for re-export purpose. The export value realized was found to be growing at a significant rate of 26.7 per cent for the entire period.

This was mainly due to the increase in unit value of coffee exports along with rise in quantity of coffee exports.

The growth in unit value realization of coffee registered at the rate of 15.1 per cent which was found to be statistically significant at 5 per cent probability level. This high growth in unit value realization was due to the fact that, there was a slight rise in coffee prices in world market during 2000-01 to 2009-10.

During 2000-01 to 2009-10, the growth in quantity of coffee was lower than that of the value and unit value of coffee exports, which are statistically significant at 10 per cent level. During the same period period, the export of coffee registered at a compound growth rate of -1.36 per cent, where as the growth rate of 8.96 per cent in value of exports was found to be lower than unit value of coffee 10.46 per cent. The growth rate for coffee export in terms of quantity was negative, which shows declining trend for Indian coffee export due to erratic rainfall, increase in domestic consumption which shows a growth rate of 4.1 per cent during 2000-01 to 2009-10, increase in coffee production from other countries like Brazil with a growth rate of 22 per cent to 28 per cent during 2000-01 to 2009-10 and Vietnam with 20 per cent growth rate per year. The growth rate in terms of value shows positive increase of 8.96 per cent due to less supply and high demand which leads to increase in the price of coffee.

5.2 Market structure of Indian coffee export analysis

The market structure of Indian coffee export is determined in terms of market concentration of trade in the hands of major 50 traders of coffee in India from 2000-01 to 2009-10. In the present context, market concentration of top four traders, Lorenz curve and Gini coefficient have been used to determine the market structure of Indian

coffee export. The results of market concentration of top four exporters are presented in Tables 4.5, Table 4.6 and Table 4.7 though it can be observed that the market share of top four traders is increasing from 40.88 per cent to 42.59 per cent over the period of 2000-01 to 2005-06 which indicate increase in market concentration among few traders.

The market share observed from results shown in Table 4.7 again shows increase in market share of top four traders from 42.59 per cent to 44.17 per cent over the period of 2005-06 to 2009-10 which indicate high degree of market concentration.

The results represented in Fig.4.1 reveal that in 2000-01, 70 per cent of coffee exporters handled buttom 20 per cent of coffee export trade and about 80 per cent of coffee export trade handled by 30 per cent of exporters. It shows that the market concentration of coffee export trade is constituted among few traders. The Gini coefficient value of 0.65 observed from Fig.4.4 also shows that market concentration is slowly shifting toward perfect inequality distribution.

The results indicated by Lorenz curve from the year 2005-06 in the Fig.4.2 shows that 75 per cent of exporters are handling only up to 20 percent of coffee export trade and 80 per cent handled by 25 per cent of exporters. This indicate that market concentration is constituted among few traders. The Gini coefficient shows that there is increase in gini coefficient value that is from 0.65 to 0.7 in period of 5 years. It indicates that there further increasing in perfect inequality distribution among coffee exporters. It is mainly dominated by companies like: Amalgamated Beans Coffee Trading Co.Ltd., Allanasons Limited, Nestle India Ltd., and Tata Coffee Ltd.,

The Lorenz curve represented in Fig.4.3, reveal that in year 2009-10 about 80 per cent of exporters handled up to 20 per cent of coffee

export trade and 80 per cent of coffee export was handled by 20 per cent of coffee exporters. Again it shows that the market is highly concentrated among very few traders. The Gini coefficient observed from Fig.4.4 indicates that there is increasing in Gini coefficient value that is from 0.7 to 0.71 in the period of next five years (2005-06 to 2009-10). It shows that there is increase in perfect inequality distribution among coffee exporters. Such high degree of market concentration provide ample opportunity for price manipulations. This high concentration among few traders is mainly due to the distribution of market share which is not equitable and increasing demand for coffee in international market from other countries like Brazil and Vietnam.

5.3 Direction of trade of Indian coffee export

Most of the coffee exporters are developing countries and importers are developed nations. A number of factors determine the direction of trade. In the absence of bilateral trade, negotiating countries are free are free to import from anywhere in the world. Globalization, liberalization and OTA have added dynamism International trade.

It would be of interest to document the changes, which perhaps aid in the framing appropriate export promotional policies so as to retain and or increase the market share to a particular destination. Though, it would be difficult to detect the exact nature of the changes in the direction of exports, Markov chain Analysis provides a probability approach in broadly unraveling these change.

The changes in export of Indian coffee to different destinations is analyzed by using a first order Markov chain model. This shows the net effects of switching pattern of export trade over the period of time. This was achieved by examining the gains and losses in the export share.

It can be seen from Table 4.8 that other countries were the most reliable and loyal importing countries (loyalty index with the probability of retention of 79.10 per cent) than any other importing countries, followed by Italy, Belgium, Germany *etc.*

Analyzing the losses and gain in market share proportions, Russian Federation was a major net gainer, which was borne by the fact that 92.26 per cent of Germany's market share of imports from India and 100 per cent of Spain's market share were diverted to Russian Federation.

It is evident from Table 4.8 that the other countries and Italy were loyal markets for export of Indian coffee as reflected in high retention probabilities of 79.10 and 62.53 per cent, respectively. India could not retain the previous export share to Russian Federation and Spain. Similar interpretation can be made for Belgium, with probability of retention of 22.83 per cent, Germany with the retention probability of 7.74 per cent. On the contrary, Spain and Russian Federation were having probability retention of zero indicating that they were unstable importers of Indian coffee. This might be due to lowered import demand for Indian coffee due to the competition in the world market from other exporters like Vietnam and Brazil, which reveals sufficient scope to improve the productivity and quality of coffee.

SUMMARY & POLICY IMPLICATIONS

CHAPTER VI

SUMMARY AND POLICY IMPLICATIONS

A brief review of the present study along with the salient findings is presented in this chapter based on the empirical evidences. The policy implications suggested would help planners and policy makers to formulate appropriate policy measures.

World trade in agricultural commodities is worth over US$ 600 billion per annum and India's share in it is less than one per cent. In spite of being an agricultural based economy, it has failed to capture its rightful place in global agriculture commodities market.

There is immense scope for exports offered by the agricultural sector in India. The contributing factors are the diverse climatic conditions in different parts of the country permitting cultivation of numerous agricultural and horticultural crops. Agricultural export is vital for the stability of domestic production and economy of India. Agricultural exports are contributing around 18.18 per cent to India's total export earnings (2007-08) and also play a significant role in employment generation, particularly in the rural sector. The New Agricultural Policy, therefore, emphasizes diversification of agriculture and promotion of farm exports. In this context, the production and export potential of plantation crops, especially coffee needs to be highly emphasized. Among the export-oriented crops, coffee is one of the major export earning crop of India and continues to hold a significant potential share in the export basket of the country.

In the wake of recent efforts of liberalization of trade policies by Indian government and implementation of WTO provisions. since 1995 the exports of agricultural commodities requires a fresh look. The economic environment for Agriculture trade is changing in a remarkable

way due to changes in trade policies, global competitiveness and buyers preferences.

The international development in agricultural trade is witnessing major changes in two areas. One, several groupings of the countries are emerging with the objective of forming united trade blocks like EEC, ASEAN, NAFTA, SAFTA and SAARC. Second and probably more important development is the signing of various agreements as a result of Uruguay round of trade negotiations. The significance of this agreement is that agriculture is brought under the GATT discipline for the first time and several agreements have been reached on important areas like farm subsidies, market access, intellectual property rights and sanitary and phytosanitary measures etc.

As a result of trade liberalization, agricultural exports have increased substantially over a period of time. Accumulated evidences (Bhattacharya,1996; Jeromi,1997; Selvaraj, 1998) revealed that agricultural exports continued to become the future growth of India's overall exports and economy. Maximization of foreign exchange earnings through increase in exports of the economy to meet growing import requirements was one of the main objectives of economic reforms in India. Coffee is the most important cash crop grown in the tropics. Many less developed countries depend heavily on the export of coffee for their source of foreign exchange earnings. Even though, India is not a major coffee producing country in the world, it plays a significant role in Indian economy in terms of income, employment and foreign exchange.

Coffee is basically an export-oriented commodity of India. International trade in coffee is exposed to increased risk because of complex and continuously changing market environment.

Indian productivity in plantation sector (2,865 kg/ha.) is better than the world average. In 2007, the total area harvested under plantation crops in India was 4.3 million hectares, producing 12 million tonnes. Of this, coffee accounts for 8.26 per cent of the total plantation crops area.

India cultivates both the commercially important species of coffee, viz., Arabica and Robusta varieties of coffee in an area of 3,55,502 ha in 2009-10, producing nearly 2,89,600 MT of coffee per annum. The productivity of Arabica and Robusta is 592 kg/ha and 997 kg/ha, respectively and the national average productivity is 815 kg/ha. However India's share in global exports is 3.37 percent (2008-09). Indian coffee is exported to over 40 countries, but the top 6 markets are Russian Federation, Italy, Germany, Belgium, Spain and USA, which accounts for nearly 70 per cent of Indian coffee exports. India exported a total of 2.3 lakh MT during (2001-02). Owing to falling international prices the export value cames down to 1,050 crores (2001-02) from 1,375 crores of the previous year. In India, coffee is basically a small grower's activity where 98% of the holding is less than 10 hectares in size. Large growers cultivate on an average about 46.4 hectares accounting for 30 percent of area under production. International market for coffee is increasingly competitive exerting threat to India's export prospects. Further, the export market is exposed to increased risk because of trade liberalization and complex and continuously changing market environment.

Therefore, it is imperative to study the market opportunities and to plan for appropriate export marketing strategy and policy so as to strengthen the export trade in coffee. Apart from this, in the world market, at present, India is facing stiff competition from Vietnam and Brazil. With this background in view, the research study was specifically

designed to study the Performance of Indian coffee export trade with the following specifics objectives.

1. To study the trends in Indian coffee exports,
2. To examine the market structure of coffee export trade and
3. To analyze the direction of trade of coffee export from India.

Methodology

The data pertaining to various aspect of India's coffee export trade were collected from various publication of Directorate of commercial Intelligence and Statistics, coffee Board's, Data base on coffee, Agencies reports which regulated coffee export, national and international journals on coffee, trade and production year books, Food and Agriculture Organization (FAO) and websites like www.indiastat.com, www.indiacoffee.org.

Growth rate in quantity, value and unit value of coffee exports from India were estimated using exponential growth rate function. Lorenz curve and Gini concentration ratio were employed to determine the market structure of Indian coffee export and Markov chain analysis was used to study the changing direction of coffee export from India.

Major findings of the study

1. The growth of coffee export between two decades over the period of (1990-91 to 1999-00) and (2000-01 to 2009-10) in terms of quantity, value and unit value shows the increasing trend, but highest growth was observed in first decade 26.7 per cent and 15.1 per cent in terms of value and unit value respectively. This was mainly due to increase in competitiveness of Indian coffee.

2. The growth in export of coffee in first decade (1990-91 to 1999-00) in terms of quantity and value showed increasing trend. This increase in quantity of coffee export can be attributed to area expansion in some of non-traditional areas as well as increase in import of coffee from abroad for re-export purpose. The growth rates in export quantity of coffee were statistically significant at 5 per cent level during period I.

3. The growth in export of coffee in terms of quantity over the second decade (2000-01 to 2010) showed declining trend. This was attributed to global export competition from Vietnam, Brazil and other African countries.

4. The growth in export of coffee in terms of value and unit value over the second decade (2000-01 to 2010) showed an increasing trend. This may be due to shortage of global supply and consequent increase in price.

5. The market share of top four traders overall period of last decade (2000-01 to 2009-10) was high in 2009-10 year with 44.17 per cent which indicate increase in market concentration among few traders.

6. The degree of market concentration of Indian coffee export is high as it is observed in 2000-01, 2005-06, 2009-10 Gini coefficient values keep on increasing from 0.65, 0.7, 0.71 during the same period and showed high concentration among few exporters and it shows the difficulty of capture market by new entrants of coffee export trade.

7. The Lorenz curve indicate high market concentration over the period 2009-10 where 80 per cent of coffee exporters handled 20 per cent of Indian coffee export and 20 per cent handled 80 per cent of coffee export trade. During 2000-01, 70 percent of coffee exporters handled

20 per cent and remaining 30 per cent handled 80 per cent of coffee export.

8. Among the top five importers, the rest of the countries under the category of others had a retention probability of 0.7910 and Italy was loyal market for export of Indian coffee as reflected by the retention probability of 0.6253.This shows the possibility of exporting new market for Indian coffee.

9. Russian Federation was a major net gainer, which was borne by the fact that 92.26 per cent of Germany's market share of imports from India and 100 per cent of Spain's market share were diverted to Russian Federation.

10. Germany is the third importer market for Indian coffee over the period and there was consistent demand for Indian coffee from Germany. The fourth importer destination for Indian coffee is Belgium and over the period the demand does not show significant variation.

11. Russian Federation, Germany, Belgium and Spain were not stable market as reflected through the retention probability. This might be due to lowered import demand for Indian coffee due to the competition in the world market from other exporters like Vietnam and Brazil, which reveals sufficient scope to improve the productivity and quality of coffee.

Policy Implications

1. Efforts should be stepped up to produce specialty coffee, which is of higher value and of great demand in the world markets and the Government of India should initiate training program on handling coffee for global market.

2. The small exporters should join the large exporters houses to gain competitive advantage in coffee global market.

3. India need to focus on the potential markets not only by concentrating on a few countries, but by participating in International trade fairs and projecting the higher quality of coffee, over other countries.

4. India has to look for a strategy to export more value added coffee. It needs to focus on specialty and Estate brand coffee which could enable high value realization.

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CHAPTER VII

REFERENCE

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APPENDIX

TRENDS IN INDIAN COFFEE EXPORT VOLUME, EARNINGS AND UNIT VALUE

YEAR	EXPORT QUANTITY (MT TONNES)	EXPORTS EARNINGS(RS.CRORES)	UNITVALUE (Rs./TONNE)
1990-91	100110	278.89	27858
1991-92	111452	349.01	31314
1992-93	113602	381.31	33565
1993-94	136492	585.06	42864
1994-95	137604	1096.52	79686
1995-96	170990	1527.16	89312
1996-97	181224	1466.33	80912
1997-98	179054	1707.59	95367
1998-99	211731	1751.59	82727
1999-00	244941	1901.21	77619
2000-01	246908	1374.25	55658
2001-02	213586	1050.36	49177
2002-03	207333	1051.45	50713
2003-04	232684	1158.45	49786
2004-05	211765	1224.67	57831
2005-06	201555	1510.38	74936
2006-07	249029	2007.9	80629
2007-08	218996	2046.29	93569
2008-09	197173	2242.68	113741
2009-10	194844	2059.59	105704

Export of coffee during 2000-01

Sl. No.	EXPORTERS	QUANTITY IN MT	VALUE IN Rs. LAKHS
1	AMALGAMATED BEAN COFFEE TRADING CO.LTD.,	28698.10	14671.10
2	ALLANASONS LIMITED,	27059.10	14249.60
3	TATA COFFEE LTD.,	14185.40	12277.70
4	HINDUSTAN UNILEVER LTD.,	14069.00	8054.20
5	SKANDA EXPORT COMPANY,	11671.90	4749.90
6	RAMESH EXPORTS PVT.LTD.	10982.20	5669.90
7	GENERAL COMMODITIES PVT. LTD.,	10264.90	5237.30
8	MADHU JAYANTI INTERNATIONAL LTD.,	8417.50	3646.40
9	RAMESH ENTERPRISES,COFFEE DIVN. OF RAMESH EXPORTS	7329.20	3949.10
10	I.T.C.LIMITED.,	6300.40	3467.00
11	L.M.J.INTERNATIONAL LTD.,	6228.00	2881.70
12	INDIAN PRODUCTS LTD.,	5242.60	1818.90
13	CAUVERY COFFEE TRADERS,	5063.50	2126.90
14	CCL PRODUCTS (INDIA)LTD.,	4719.90	3057.80
15	CHOLAS SPICES PRIVATE LTD.,	3970.20	1405.30
16	OLAM AGRO INDIA LTD.,	3813.60	1515.00
17	ASPINWALL & CO.LTD.	3373.10	1677.10
18	S.L.N.EXPORTS,	3201.30	1456.30
19	ASSOCIATED COMMODITIES & EXPORTS	2630.50	991.50
20	GRASIM INDUSTRIES LTD.,	2283.00	987.00
21	JFK INTERNATIONAL,	1781.50	4165.80
22	SALDANHA INTERNATIONAL	1718.10	619.40
23	MERCARA CURERS (P)LTD.,	1697.70	618.90
24	ANDHRA TRADE DEVELOPMENT CORPORATION PVT.LTD.,	1676.40	610.90
25	S.M & COMPANY,	1525.30	836.30
26	H.T.EXPORTS PVT. LTD.,	1474.80	882.80
27	SA RAWTHER SPICES (P) LTD.,	1357.50	528.40
28	SARGOD TRADING CO.,	1288.10	563.00
29	ASTRA EXPORTS,	1194.50	523.00
30	R.D. CURERS PRIVATE LIMITED	1186.00	738.10
31	CARGILL INDIA PVT.LTD.,	1095.20	479.50
32	BAFNA ENTERPRISES,	1043.10	403.90
33	ALPHA PLANTATIONS PVT.LTD.,	1005.40	367.30
34	RATHNA COFFEE AND COMMODITIES PVT.LTD.	951.30	628.30
35	KAY CEE COFFEE & SPICES EXPORTS PVT.LTD.,	882.00	488.30
36	COFFICO AGENCIES,	867.00	423.30

37	AMIRTHA IMPORTS EXPORTS,	849.40	315.00
38	KODAGU COFFEE PRODUCTS AND EXPORTS,	830.40	435.90
39	MANJUSHREE PLANTATIONS LTD.	819.40	372.00
40	AMARYLLIS EXPORTS PVT.LTD.,	812.20	399.80
41	ARCON(INDIA)PVT.LTD.,	792.00	541.00
42	KARNATAKA PLANTERS COFFEE CURING WORKS P.LTD.,	766.40	517.00
43	AMBO EXPORTS LIMITED	669.20	611.00
44	CLASSIC COFFEE & SPICES(P)LTD.	666.00	305.80
45	SOUTH INDIAN SPICES,	655.20	232.30
46	COFFEE PROCESSING TECHNOLOGIES	646.20	232.10
47	BHARATHI ESTATE SUPPLIES CO.,	637.50	350.50
48	ZANN COMMODITIES,	605.70	297.70
49	BLOSSOM COFFEE PVT.LIMITED,	591.90	336.10
50	ESWAR COFFEE CURING WORKS,	589.50	319.80
51	PAULSON COFFEE CURING WORKS PVT. LTD.,	578.70	204.00
52	ECOM GILL COFFEE TRADING PVT.LTD.	548.40	195.80
53	SARGOD COFFEE CURING WORKS,	525.00	190.50
54	POORNA COFFEE & SPICES EXPORTS P.LTD.,	486.00	230.50
55	FRESH BEAN EXPORTS,	475.20	230.50
56	SRS INTERNATIONAL,	417.90	217.50
57	R.D.EXPORTS,	411.00	155.00
58	FATHAM EXPORTS,	402.00	247.10
59	JADE INTERNATIONAL,	394.20	131.10
60	THE JOSEPH COFFEE CURING WORKS,	379.20	164.20
61	THE BOMBAY BURMAH TRADING CORP.LTD	376.60	224.30
62	ASHRAF EXIM PRIVATE LIMITED.,	361.20	132.30
63	SUKANI ENTERPRISES	356.20	146.90
64	BADRA ESTATES & INDUSTRIES LTD.,	342.00	184.00
65	SARATHY COFFEE CURING WORKS,	340.20	147.00
66	S.P.G.RAMASAMY NADAR & SONS,	328.00	265.80
67	SRI NARASU'S COFFEE COMPANY LIMITED,	325.10	97.80
68	BHARATHI EXPORTS,	324.00	142.50
69	NANDI EXPORTS,	306.60	101.80
70	MALABAR EXIM (PVT) LTD.,	306.00	157.00
71	ESSEN EXPORTS,	300.00	115.20
72	OM SHREE INTERNATIONAL	293.30	125.80
73	SAMPAC ENTERPRISES,	261.90	113.90
74	CITY COFFEE (P)LTD.,	252.60	113.50
75	HIBATHULLAH ENTERPRISES,	252.00	111.80
76	JAYABHARATHI EXPORTS	249.30	119.40
77	BALANOOR PLANTATIONS & INDUSTRIES LTD.,	233.00	158.10

78	AGRO PRIVATE LTD.,	214.20	193.50
79	BELUR COFFEE CURING & TRADING CO	198.60	45.90
80	MARUDHAR EXPORTS	198.00	79.60
81	AMITY GLOBAL	198.00	150.10
82	SIDDHARTHA INDUSTRIES,	197.60	104.40
83	G.R.K.AND COMPANY,	194.00	114.70
84	JAKYS INTERNATIONAL (P)LTD.,	180.00	95.70
85	WYN BRANDS,	180.00	63.30
86	TEJASWI EXPORTS,	180.00	83.00
87	KALPA OILS	180.00	83.60
88	KANAGA DURGA INDUSTRIES,	163.20	47.80
89	A&P EXPORTS	153.60	72.70
90	SANGAMESHWAR COFFEE ESTATES LTD.,	144.00	210.90
91	INDAVARA EXPORTS,	144.00	42.40
92	CHIKMAGLUR COFFEE CURING WORKS PVT. LTD.,	136.00	68.50
93	COELHO COFFEE EXPORTS	135.00	94.90
94	OSSOOR ESTATES LTD.,	129.00	66.90
95	BRINDAVAN TRADERS	127.80	46.70
96	NANJI TOPANBHAI & CO.,	126.00	77.10
97	WARTYHULLY ESTATES LTD.,	126.00	78.80
98	SHILPA EXPORTS,	126.00	60.60
99	PLANTATION PRODUCTS INDIA PVT. LTD.,	126.00	69.30
100	RATNAGIRI INTERNATIONAL,	117.00	55.20
101	GREAT SOUTHERN COFFEE P.LTD.,	110.40	25.10
102	BIRLA INTERNATIONAL LIMITED	108.00	53.50
103	J.RODRIGUES COFFEE PVT.LTD.,	106.80	58.00
104	HILL PRODUCE TRADING COMPANY PVT. LTD	92.40	55.70
105	HILL GROVE EXPORTS,	90.00	31.30
106	SUCCESS LINE EXPORTS PVT.LTD.,	90.00	26.50
107	SILVER CLOUD ESTATES PVT.LTD	90.00	42.40
108	RAJRANI EXPORTS LTD.,	72.60	55.70
109	BHARATHI ASSOCIATES,	72.00	23.90
110	JIVANLAL AND COMPANY,	72.00	45.40
111	S.S.EXPORTS	72.00	36.80
112	GURURAJ EXPORTS,	71.50	34.30
113	SUNDEKERE INVESTMENTS PVT.LTD.,	69.00	37.30
114	MAS ENTERPRISES LIMITED	60.00	55.40
115	PONS COFFEE CO.,	54.00	25.60
116	LONGULF TRADING(INDIA)PVT.LTD.	54.00	25.30
117	EMDEE EXPORTS,	52.50	18.00
118	JOONKTOLLEE TEA & INDUSTRIES LTD.	38.40	23.10

119	<NOT FOUND> 65	36.00	19.10
120	SAHYADRI COFFEE TRADING CO.,	36.00	20.70
121	OM-K-EXIM	36.00	10.60
122	SURESH SEJPAL & CO.,	36.00	21.20
123	VEEYEN PACKING COMPANY	36.00	10.60
124	AL-GAYATHRI TRADING CO (P) LTD.,	36.00	33.50
125	HALASINKHAN TRADERS,	36.00	20.40
126	OM EXPORTS	36.00	12.80
127	BEEYU OVERSEAS LTD.	36.00	29.60
128	GREENLAND COFFEE,	36.00	16.90
129	SLN COFFEE CURING WORKS	36.00	13.80
130	RATHNA EXPORTS,	36.00	18.20
131	TANNA AGRO IMPORT PVT.LTD.,	30.00	30.50
132	GEECY ENGINEERING PVT.LTD.,	30.00	29.30
133	THE STATE TRADING CORP.OF INDIA LTD.,	18.00	7.50
134	SAMEX AGENCY,	18.00	12.30
135	KARTHIK EXPORTS	18.00	10.30
136	GEM COFFEE INTERNATIONAL LTD.,	18.00	6.00
137	PANAKKAL EXPORTS,	18.00	6.10
138	THE ALAGESWAR ESTATES LTD.,	18.00	8.40
139	BEDI COFFEE EXPORTS,	18.00	5.60
140	DITTEX MANPOWER SECURITY CONSULTANTS PVT. LTD.,	18.00	10.60
141	PLANT LIPIDS LTD.,	18.00	13.50
142	DOLPHIN INTERNATIONAL LTD.,	18.00	8.20
143	TEXCOMASH EXPORT PVT.LTD	18.00	9.90
144	THE COTTANAD PLANTATIONS LTD.,	17.50	7.60
145	A.P.MOIDEEN KUTTY,	17.40	14.90
146	KADAVATH EXPORTS	17.00	7.70
147	THE YERCAUD COFFEE CURING WORKS PVT. LTD.,	10.20	5.60
148	PANKAJ EXPORTS	1.90	1.70
149	PHOENIX EXPORTS,	1.20	0.70
150	TANYA EXPORT HOUSE,	1.00	2.10
151	FRESH & HONEST CAFE LIMITED	0.60	0.20
152	WESTERNS AGENCIES,	0.50	0.50
153	MAHENDRA EXPORTS	0.50	2.50
154	BUENA VISTA INTERNATIONAL PVT. LTD.,	0.30	0.20
155	KESHAV EXPORTS PVT.LTD	0.20	0.10
156	EASTERN RED RUBY FOOD PVT.LTD.,	0.00	0.10
157	EASTERN RED RUBY FOOD PVT.LTD.,	0.00	0.10
	TOTAL	252397.10	141107.10

Export of coffee during 2005-06

SL. No.	EXPORTERS	QUANTITY IN MT	VALUE IN LAKHS
1	ENERAL COMMODITIES PVT. LTD.,	24214.80	16393.00
2	ALLANASONS LIMITED,	24064.00	20519.50
3	NESTLE INDIA LTD.,	20802.60	13607.80
4	CCL PRODUCTS (INDIA)LTD.,	16128.50	12729.00
5	HINDUSTAN UNILEVER LTD.,	13474.00	10240.70
6	OLAM AGRO INDIA LTD.,	11782.60	7528.10
7	AMALGAMATED BEAN COFFEE TRADING CO. LTD.,	10888.50	9498.90
8	TATA COFFEE LTD.,	10362.50	8585.10
9	ECOM GILL COFFEE TRADING PVT.LTD.	8300.20	4940.50
10	I.T.C.LIMITED.,	7315.50	5522.10
11	NED COMMODITIES INDIA PVT. LTD.,	7297.20	5585.90
12	S.L.N.EXPORTS,	7216.00	5258.40
13	RAMESH EXPORTS PVT.LTD.	6588.90	5436.10
14	L.M.J.INTERNATIONAL LTD.,	5123.70	3721.50
15	ASPINWALL & CO.LTD.	3068.10	2779.10
16	BOLA SURENDRA KAMATH & SONS,	2130.00	1787.50
17	SRI NARASU'S COFFEE COMPANY LIMITED,	2027.70	1527.40
18	CHIMCO INTERNATIONAL (P) lTD.,	2002.80	829.40
19	ANDHRA TRADE DEVELOPMENT CORPORATION PVT.LTD.,	1537.50	1085.60
20	RUCHI SOYA INDUSTRIES LIMITED	1365.80	1096.00
21	ZAAN COMMODITIES PVT. LTD.,	1090.20	752.60
22	DARSH GLOBAL SERVICES	1026.60	763.00
23	H.T.EXPORTS PVT. LTD.,	988.80	758.60
24	HIGH HILL COFFEE INDIA(P)LTD.,	753.90	616.70
25	INDCAFE EXPORTS	740.00	668.10
26	THE BOMBAY BURMAH TRADING CORP.LTD	717.60	663.60
27	AMBO EXPORTS LIMITED	672.50	461.80
28	ANDHRA PRADESH FOREST DEVELOPMENT CORPN.	671.30	531.20
29	C.P.EXPORTS,	662.60	243.20
30	INDIAN PRODUCTS LTD.,	556.60	518.10
31	SALDANHA INTERNATIONAL	537.10	313.00
32	S.P.G.RAMASAMY NADAR & SONS,	479.00	493.20
33	SA RAWTHER SPICES (P) LTD.,	442.80	284.30
34	UE TRADE CORPORATION(I)PVT. LTD.,	441.60	191.80
35	JFK INTERNATIONAL,	427.30	400.50
36	SARATHY COFFEE CURING WORKS,	418.80	340.60

37	HARLEY CARMBEL(I)PVT.LTD.,	363.80	335.60
38	OM SHREE INTERNATIONAL	348.90	255.70
39	BADRA ESTATES & INDUSTRIES LTD.,	343.60	289.70
40	A.T.COFFEE CURING & EXPORTS PVT LTD.,	326.40	184.70
41	SARGOD TRADING CO.,	325.40	289.50
42	BALANOOR PLANTATIONS & INDUSTRIES LTD.,	290.30	203.40
43	RANADEY EXPORTS(P)LTD.	270.80	311.60
44	MADHU JAYANTI INTERNATIONAL LTD.,	267.40	171.30
45	CAUVERY COFFEE TRADERS,	248.40	176.80
46	ASTRA EXPORTS,	242.20	215.20
47	THE ANAPARAI ESTATES LIMITED	225.00	154.00
48	ALNA TRADING & EXPORTS LTD	211.20	184.70
49	SKANDA EXPORT COMPANY,	169.20	107.20
50	OSSOOR ESTATES LTD.,	151.20	116.80
51	COELHO COFFEE EXPORTS	120.20	136.70
52	MADURA COMMODITIES,	115.20	52.90
53	POABS EXPORTS	111.80	167.90
54	PEPSI FOODS PVT. LTD.,	110.20	131.00
55	RATNAGIRI INTERNATIONAL,	102.60	109.50
56	SANGAMESHWAR COFFEE ESTATES LTD.,	96.00	69.60
57	WARTYHULLY ESTATES LTD.,	94.80	76.40
58	HILL PRODUCE TRADING COMPANY PRIVATE LIMITED	76.80	60.60
59	THE RAJENDRA COFFEES LIMITED,	75.20	47.00
60	J.RODRIGUES COFFEE PVT.LTD.,	72.00	37.30
61	CLASSIC COFFEE & SPICES(P)LTD.	44.30	34.80
62	S.S.EXPORTS	38.40	39.30
63	KOTAK AGRI INTERNATIONAL PVT. LTD.	38.40	24.10
64	DEVON PLANTATIONS & INDUSTRIES LTD	36.00	42.40
65	ARADHANA EXPORTS,	36.00	21.40
66	INDUS PRODUCTS	27.90	41.50
67	PHALADA AGRO RESEARCH FOUNDATIONS PVT.LTD	22.50	18.10
68	NANJI TOPANBHAI & CO.,	20.00	22.50
69	HONEY FARM COFFEE,	19.10	13.70
70	SARATHY COFFEE COMPANY,	18.00	22.40
71	MEHTA EXPORTS,	18.00	12.40
72	JAYABHARATHI EXPORTS	18.00	21.30
73	BABA REALTORS & DEVELOPERS PVT. LTD.	18.00	18.70
74	SAMPAC ENTERPRISES,	14.50	12.60
75	COCA-COLA INDIA PVT.LTD.,	14.20	24.50
76	ADITYA TRADING CO.	12.50	12.00

77	BRIHAT CONSULTANTS (INDIA) PVT. LTD.	12.20	6.60
78	B.B.CHENGAPPA,	10.00	8.70
79	SHONIT IMPEX PVT. LTD.	9.00	13.50
80	HIBATHULLAH ENTERPRISES,	7.00	8.30
81	SURYA INTERNATIONAL	6.20	6.30
82	ASTADIK OVERSEAS	5.50	7.80
83	OHM SHAKTHI SERVICES,	4.80	6.10
84	AAYU IMPEX	4.50	6.20
85	GRANDMAS FOOD PRODUCTS	3.20	3.50
86	WESTERNS AGENCIES,	3.10	4.50
87	SHAN EXPORTS	2.30	3.50
88	KALMANE TRADING (P) LTD.,	2.00	3.10
89	ASIAN EXPORTS	2.00	3.50
90	SURIYA EXPORTS	1.80	2.40
91	RAMAR INTERNATIONAL INC	1.80	4.10
92	NILGIRI FOODS & BEVERAGES	1.80	3.20
93	SAKTHI VINAYAGA TRADING	1.70	1.60
94	TANYA EXPORT HOUSE,	1.30	1.80
95	EASTERN CONDIMENTS PVT. LTD.,	1.20	2.10
96	ANIL AND COMPANY	0.60	0.40
97	ARIKKAT EXPORTS,	0.50	0.30
98	KAIRALI DECAN MERCHANDISERS,	0.40	0.60
99	EASTERN RED RUBY FOOD PVT.LTD.,	0.40	0.50
100	KAVI EXPORTS & IMPORTS,	0.10	0.10
101	MADHU BAZAR	0	0
	TOTAL	201555.40	151037.40

Export of Coffee during 2009-10

Sl. No.	EXPORTERS	QUANTITY IN MT	VALUE IN LAKHS
1	NKG JAYANTI COFFEE PVT. LTD.	27756.70	26667.60
2	CCL PRODUCTS (INDIA)LTD.,	20454.80	25060.60
3	ALLANASONS LIMITED,	19516.90	21065.40
4	NESTLE INDIA LTD.,	18215.10	18391.90
5	TATA COFFEE LTD.,	12740.70	15309.20
6	NED COMMODITIES INDIA PVT. LTD.,	12216.20	9870.10
7	AMALGAMATED BEAN COFFEE TRADING CO. LTD.,	11910.50	12366.70
8	OLAM AGRO INDIA LTD.,	9913.10	10063.60
9	S.L.N. COFFEE PVT.LTD.	8671.00	8500.90
10	SRI NARASU'S COFFEE COMPANY LIMITED,	6764.80	7373.20
11	VAYHAN COFFEE LIMITED,	5066.50	5752.90
12	BOLA SURENDRA KAMATH & SONS,	4876.90	4591.00
13	I.T.C.LIMITED.,	4750.10	4465.40
14	ASPINWALL & CO.LTD.	4161.00	5221.30
15	ECOM GILL COFFEE TRADING PVT.LTD.	3859.50	4813.00
16	SA RAWTHER SPICES (P) LTD.,	3610.20	2874.70
17	L.M.J.INTERNATIONAL LTD.,	3048.70	3206.90
18	HINDUSTAN UNILEVER LTD.,	2820.20	4109.40
19	OM SHREE INTERNATIONAL	1965.50	2205.50
20	RUCHI WORLDWIDE LTD.,	1597.80	1280.50
21	LOUIS DREYFUS COMMODITIES (I)PVT.LTD.,	1576.00	1513.20
22	RAMESH EXPORTS PVT.LTD.	1497.20	2004.20
23	J.V.S.COMMODITIES,	1299.00	1012.10
24	BOLA RAGHAVENDRA KAMATH & SONS	997.40	976.60
25	JFK INTERNATIONAL,	804.70	1092.90
26	BEEVILLE EXPORTS INDIA PRIVATE LIMITED	576.00	410.40
27	S.P.G.RAMASAMY NADAR & SONS,	570.00	1043.80
28	C.P.EXPORTS,	540.60	458.40
29	THE BOMBAY BURMAH TRADING CORP.LTD	530.20	746.80
30	SALDANHA INTERNATIONAL	518.40	342.50
31	HARLEY CARMBEL(I)PVT.LTD.,	331.60	459.10
32	SARGOD TRADING CO.,	267.60	324.70

33	ELEMENTS HOMESTEAD PRODUCTS PVT. LTD.	255.60	290.80
34	INDCAFE EXPORTS	247.20	301.70
35	SARATHY COFFEE CURING WORKS,	242.40	287.10
36	BADRA ESTATES & INDUSTRIES LTD.,	158.60	231.90
37	ALNA TRADING & EXPORTS LTD	153.60	117.00
38	BALANOOR PLANTATIONS & INDUSTRIES LTD.,	150.30	211.60
39	INDUS PRODUCTS	140.80	246.70
40	ORIENTAL CARPET CENTRE	134.40	118.00
41	GENERAL COMMODITIES PVT. LTD.,	120.90	162.00
42	COCA-COLA INDIA PVT.LTD.,	82.70	244.40
43	SHAN EXPORTS	70.60	76.20
44	DEVON PLANTATIONS & INDUSTRIES LTD	70.60	124.00
45	RANADEY EXPORTS(P)LTD.	68.60	104.30
46	N.J.SPICES	57.60	89.00
47	EMIL TRADERS (P) LTD.	57.60	37.60
48	BELUR COFFEE CURING & TRADING CO	57.60	40.80
49	INDAFRO IMPEX	55.90	123.50
50	RATNAGIRI INTERNATIONAL,	47.40	85.40
51	PHALADA AGRO RESEARCH FOUNDATIONS PVT.LTD	42.90	50.80
52	SANA EXPORTS	39.20	33.10
53	SANGAMESHWAR COFFEE ESTATES LTD.,	38.40	56.50
54	LINGAPUR ESTATES LTD.,	38.40	33.90
55	MATHESON BOSANQUET ENTEPRISES LTD.	24.00	41.20
56	SHAKUNTLA EXPORTS	23.40	34.00
57	RADIANT COMMODITIES PVT.LTD	19.20	13.00
58	GURURAJ EXPORTS,	19.20	17.50
59	GLOBAL COFFEE	18.50	16.90
60	NANJI TOPANBHAI & CO.,	18.00	32.80
61	INDIAN ORGANIC FARMERS PRODUCERS CO., LTD.,	18.00	24.60
62	ARAKU ORIGINALS LIMITED	17.40	34.10
63	POABS EXPORTS	14.10	25.50
64	COELHO COFFEE EXPORTS	13.00	21.20
65	ADF TRADING PVT.LTD.	12.10	22.00
66	CLASSIC COFFEE & SPICES(P)LTD.	11.90	26.90
67	VISNUKUMAR TRADERS PVT. LTD.	10.80	23.60

68	RAMS EXIM,	9.50	20.90
69	GEM COFFEE	9.10	10.00
70	KESHAV EXPORTS PVT.LTD	7.60	18.20
71	LANDMARK EXPORTS	6.50	5.20
72	ANNAI ENTERPRISES,	6.20	12.30
73	EASBEE TRADING	5.20	9.10
74	EASTERN CONDIMENTS PVT. LTD.,	4.60	12.70
75	WESTERNS AGENCIES,	4.50	7.70
76	GRANDMAS FOOD PRODUCTS	3.70	6.70
77	B.B.CHENGAPPA,	3.70	6.50
78	CHAITHANYAA COFFEE	3.60	11.40
79	AL-ADIL EXPORTS	3.60	6.30
80	RAVI SPICE PROCESSORS PVT.LTD.	3.10	8.70
81	J&T EXPORTS,	3.00	2.70
82	JAY KESHAV EXPORTS PVT.LTD.	1.60	3.80
83	P.S.TEA INDUSTRIES	1.00	1.50
84	EASTERN RED RUBY FOOD PVT.LTD.,	1.00	2.70
85	QUALITY EXPORTS	0.90	2.20
86	OMSHAKTHI IMPEX PRIVATE LIMITED	0.70	1.10
87	MERCURY ENTERPRISES	0.70	0.90
88	KAAPI ROYALE,	0.70	1.80
89	AAYU IMPEX	0.70	1.30
90	FRESH & HONEST CAFE LIMITED	0.60	1.50
91	BARISTA COFFEE COMPANY LIMITED,	0.60	1.60
92	ATHITHIAN EXPORTS COMPANY	0.50	1.30
93	PACEX INTERNATIONAL	0.40	0.60
94	COTHAS COFFEE COMPANY,	0.40	14.80
95	ASIAN EXPORTS	0.40	1.20
96	QUALITY CHEF AGRO FOODS (P) LTD.	0.30	0.50
97	KUMAR TEXTILES	0.30	0.60
98	KR & CO	0.30	0.80
99	KAVI EXPORTS & IMPORTS,	0.30	0.90
100	VANI ENTERPRISES	0.20	0.30
101	PANKAJ EXPORTS	0.20	0.80
102	COINS FOODS AND SPICES(P)LTD.,	0.20	0.40
103	M.K.AGRO EXPORTS,	0.10	0.30
104	TARAADI,	0.00	0.10
105	SAFA EXIM	0.00	0.00
	GRAND TOTAL	196061.80	207153.50

Coffee export from India (2000-01 to 2009-10)

year/ Country	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
ITALY	40004	41842	45594	52197	49232	53413	62807	53804	51207	46752
RUSSIAN FEDERATION	44435	40301	36578	33592	34459	29432	27447	25183	16143	27436
GERMANY	30256	27589	23344	25680	16518	16742	21835	14236	14715	13132
BELGIUM	17993	15661	17430	18777	9204	11190	13989	10615	9673	6562
SPAIN	14498	12209	11142	13898	11499	10292	11091	8802	8556	6150
OTHERS	99722	88090	85995	85727	88136	84938	86745	86794	84440	86333
TOTAL	246908	213586	207333	232684	211765	201555	249030	218996	197174	194844