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Value Chain Analysis for Coffee in Karnataka, India

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The Author
Bhavya Venkatesh KODIGEHALLI
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BHAVYA Venkatesh
Berlin, August, 2011
Abstract

For every cup of coffee we drink, there is a story from crop to cup. In a value chain, Coffee beans go through different processes before it reaches the hands of a consumer. The thesis is a study of the coffee market through the process of value addition, with importance given to small coffee producers aiming at their development. Prior to liberalization, in India, coffee was marketed only through Coffee Board. After liberalisation in 1992-93, there was an end of Monopoly behavior of the Coffee Board in supply of coffee. Growers became the sole masters of their produce. They were free to market their produce either in uncured or cured form to the domestic dealers or exporters. Presently, coffee marketing has been dominated by the intermediaries who have made small producers to remain in their clutches. Further results show that the governance structure in the coffee market is often buyer driven, mostly dominated by roasters. Requirements are mainly influenced by the consumption habits and roasters’ organizations. Coffee consumption sectors are highly brand-driven which has made difficult to penetrate. The information flow has been limited to the intermediaries. In the value chain, the share in the profit received by the small producers is found to be very less. Producers face problems throughout the production and marketing process. Additionally, quality of the produce and quantity supplied play a major role in the international markets. Poor quality and low quantity of supply has been a hurdle for the small producers in gaining direct access to the international markets. Apart from the challenges in the sector, it is concluded that innovations through upgrading the activities, collective action of the producers may ease their way to higher profit margins. While innovations in mechanizations; financial support may help the producers to improve their production activities. Furthermore, efforts are required to see that there is proper flow of information and to reduce the role of intermediaries which helps the small producers to make their position better in the value chain.
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**Abbreviations**

CAFNET: Connecting Environmental services and Market Values for Coffee Agroforestry

CIRAD: Agricultural Research for Development

GVC: Global Value Chain

Ha – Hectare

ICTA- Indian Coffee Traders Association

INR – Indian National Rupees

Kgs - Kilograms

Mt: Metric tonne
Coffee is an important commercial crop of the tropics and is the native of tropical rain forests of Ethiopia and Central Africa. It is of great significance in the world economy as the largest single commodity entering the international trade, after petroleum and petroleum products and it is being grown in more than 80 countries. The reports of International Coffee organization details that coffee is supporting millions of small farmers and creates enormous employment opportunities in rural areas. The importance of coffee as an export driven commodity can be judged from the fact that a major quantity of world production of coffee is diverted towards worlds exports (DASS et al., 1991).

Botanically, coffee belongs to the family Rubiaceae. Two important economic species of coffee grown across the world are Arabica (Coffeea arabica) and Robusta (Coffeea robusta) which accounts for more than 70 percent of world production. Major Coffee growing countries have been distinguished under four regions: Africa, North and Central America, South America, Asia and Oceania regions. Across these regions, Brazil, Columbia, Indonesia, Vietnam, Mexico, Ethiopia, India, Guatemala, Cote de Ivory and Uganda are being recognized as top 10 coffee growing countries (COFFEE FAIR, 2009). The major coffee growing countries across the world is shown in figure 1. Yellow colour depicts the top 10 coffee growing regions and other countries in brown colour.

Figure 1: Countries producing coffee across the globe.

Source: Coffee Fair, 2009
1.1. Coffee sector in India

Indian coffee is known for the world’s best shade-grown ‘mild’ coffees (COFFEE BOARD, 2011) since most of the coffee cultivation is under shade in India. Unlike in Mexico, Brazil, Uganda where coffee is cultivated under open conditions ‘Sun coffee’ (DAMODARAN A, 2002). It occupies a place of pride among plantation crops in India. Coffee grown here is typically mild and not too acidic and possesses an exotic full-bodied taste with a fine aroma. In the year 2009-10, coffee production in India stood at 289,600 Mt (Metric tons) of which Arabica variety contributed 33 percent and Robusta variety contributed to 67 percent (COFFEE BOARD OF INDIA, 2011). Inspite of huge domestic consumption, a large amount, 75 percent of the coffee produced in India is annually exported to the international markets mainly to Europe, Far East and North America.

The introduction of Coffee in India dates back to 1600 A.D. It is said to have been introduced in the hills of Chikmagalur in Karnataka state by a Mohammedan Saint by name ‘Baba Budan’ in the Chandradrona Parvatha by sowing seven seeds. Coffee seedlings gradually came to be popular in the backyards and gardens of most of neighboring villages especially in Attigundi. It is from these gardens the seedlings were introduced to Nalakand in Kodagu, which subsequently spread on luxuriant Kodagu plantations of today. In 1857, there were as many as 200 British planters in Kodagu. However, Commercial production was started during 1820’s supported by British investments. Traditional coffee-growing regions in India are located in South India, mainly in the state of Karnataka, Kerala and Tamil Nadu. Robusta dominates with 60-70% of the total coffee production. Karnataka accounts for 57 per cent of the planted area, contributing about 71 per cent of the Indian production. Kerala with 21 per cent and Tamil Nadu with 8 per cent of planted area account for 24 and 7 per cent of Indian coffee production, respectively. However, in Karnataka, Coorg district accounts for higher production of 111,200 MT (metric tones) during 2009-10 (COFFEE BOARD OF INDIA, 2011). Today, Indian coffee enjoys a free market and coffees are easily and readily available. One can buy them directly from farm gate, through disciplined weekly auctions held in India, through reliable export houses, through experienced facilitators and get them shipped through established clearing and forwarding agent.
Figure 2: Production of different growing region in India 2009/10 (Post Monsoon Estimates)

Source: Coffee Board of India

1.2 Problem statement

The central challenge in the development is the search for the sustainable growth. When the growth is unevenly distributed, there may be little increase in welfare. The process of globalization has not only brought far-reaching impacts on the structure and sourcing of production but also on the nature of market opportunities and competitive pressures for producers around the world (Schmitz, 2005). Agricultural sector still dominates the Indian economic scene by providing livelihood to majority of the population. In most of the developing countries including India, agricultural development is a precondition for economic development.

A major proportion of agricultural production in India is taken by small farms, which are often found to be efficient in terms of productivity (Singh et al, 2002). Indeed, coffee is basically a small farmer’s activity where 98.8 per cent of the holdings are less than 10 hectare size. About two thirds of the area is cultivated by small holders contributing about 70 per cent to the total production. Remaining 1.2 per cent of the holdings are
cultivated by large farmers accounting for 25 per cent of the area and 30 per cent of the production, as their productivity levels are relatively higher (table 1). As an agro based rural enterprise, it provides primary employment in crop cultivation for about 5.87 lakh people apart from providing indirect employment to processing and trade sectors. On an average 4.67 lakh persons are employed in Coffee plantations in Karnataka.

Table 1: Area and share of production of Coffee under different coffee holdings in India (2007-08)

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Size of Holdings (in hectares)</th>
<th>No. of Holdings (in hectares)</th>
<th>Percentage</th>
<th>Area under coffee</th>
<th>Percentage</th>
<th>Share of production</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Small Holdings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;2 1758585</td>
<td>80.9</td>
<td>144196</td>
<td>37.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-4 27731</td>
<td>12.6</td>
<td>71905</td>
<td>18.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4-10 11800</td>
<td>5.3</td>
<td>73642</td>
<td>19.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total 218116</td>
<td>98.8</td>
<td>289743</td>
<td>74.6</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>Large holdings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10-25 1789</td>
<td>0.8</td>
<td>29829</td>
<td>7.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;25 920</td>
<td>0.4</td>
<td>68623</td>
<td>17.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub total 2709</td>
<td>1.2</td>
<td>98452</td>
<td>25.4</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>Total (India) 220825</td>
<td>100.0</td>
<td>388195</td>
<td>100.0</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Coffee Board of India.

1.3 Coffee marketing

Prior to liberalization, coffee was the only commodity to be marketed through a statutory organization viz., the Coffee Board. It was carried under a system in which coffee was often pooled from the producers and auctioned in two separate auctions for the domestic market and the export market. After harvest, washed coffee was pulped and dried, and unwashed cherry was dried and both were delivered to a curing factory licensed by the Coffee Board. On delivery, growers were paid in advance for their coffee; with the remainder following after the coffee had been sold at the auction. However, because of inefficiencies in the system, many growers did not receive the final payment for their
coffee until up to two years after the Coffee Board had taken possession of it. This was accompanied by problem of higher export tax which was a burden for the small growers.

After liberalisation in 1992-93, there was an end of Monopoly behavior of the Coffee Board in supply of coffee. Growers became the sole masters of their produce. They were free to market their produce either in uncured or cured form to the domestic dealers or exporters. They were given opportunity to register themselves as exporters and supply the coffee to the world market. In spite of all these, there still exists the problem of sales tax which is affecting the efficient marketing. This is still a hurdle for the small growers which always reduce the price they get for their produce. This has often led small growers to remain far away from directly selling to exporters.

Coffee prices are often influenced by the size and availability of coffee stocks worldwide. In dollar terms it is the most traded agricultural product in the world supporting millions of small farmers and their families. India’s domestic coffee price moves in tune with the International price of the same. With world coffee prices being at their lowest levels for many years the very existence of many small growers is at stake. Such prices represent a real threat to the industry (CHATTOPADHYAY et al, 2007). Coffee supply chain works in an international way, the direct link between producers and consumers are not present. Coffee is traded down a complex line of intermediaries, ranging from local traders, exporters, international traders, roasters and retailers, who each capture a percentage of the retail value of coffee.

Another factor influencing the market prices in Indian agriculture is seasonal factor. Indian agriculture is always said to be a gamble with monsoon. Production is associated with risks with failure of monsoon. The failure of rains, occurrence of droughts, unseasonal and erratic rains have always hindered Indian agriculture. There is a direct impact on the yield due to unpredictability of climate which in turn has an effect on producer returns. Humans cannot directly intervene to control this problem; however, loss of farmers can be compensated through agricultural insurance. After liberalization, since agricultural commodities are exposed to the international markets, the risks
associated with the price fluctuations or trading restriction in the international market are easily transferred to domestic markets which in turn affect farmers. This will have direct impact on revenue and sometimes lagged effect on production. However, control of markets is possible through various forms of market intervention and regulatory measures by the government and trade policies.

In Karnataka, Coorg district accounts for higher production of coffee with large number of farmers involvement in its cultivation. Out of total population, more than 52 percent are dependent on coffee cultivation and out of the total cultivable land 50 percent of the land is under coffee. Coffee cultivation is the main source of income in Coorg. Coffee supply chain works in an international way. To get a better understanding of where the small coffee farmers stand in the global value chain, it is important to analyze who the actors are and what their interactions are like. Analyzing the chain of supply of coffee is important to capture the enormous share of profits of intermediaries which in turn help to understand farmer’s position in the chain and help them to realize the better retail prices. Thus with this background, the present study focused on having in depth analysis of value chain in coffee with the key research question

Research Question

• How to improve the livelihood situation of Rural Population involved in Coffee Industry in India?

However, the study is limited to one district selected in Karnataka State in India. With this background, following objectives were fixed tentatively under the research study entitled “Value Chain Analysis for Coffee in Karnataka, India”.

1). To describe important marketing channels and actors involved (mapping) for domestic coffee

2). To analyze the coordination between the actors of the coffee value chain.

3). To analyze how value added is distributed between the different actors.

4). To discuss, how to improve the livelihood of small holder farmer
1.4 Organization of the study

The study is organized into six main chapters. The first chapter provides a brief introduction to the coffee sector in India at global level. Furthermore, with the description of the problem along with the specific objectives. In second chapter, some pertinent reviews are presented in consonance with the study objectives. Third Chapter describes main feature of the study area, sampling framework, database and analytical tools employed in the analysis of data. Based on the knowledge gained from review of literature and primary data, empirical results and discussions are presented in the fourth chapter. Fifth chapter summarizes the whole research work carried out to derive conclusion from the research findings followed by, further research scope and ends with limitations of the present study. Finally Chapter six lists the sources of research material, books, research reports and papers referred for the purpose of the present investigation.
Chapter 2. REVIEW OF LITERATURE

In this chapter, an attempt has been made to explain certain concepts used in this study. In addition, this part is intended to critically review the literature of the past research work in relevance to present study objective, so that theoretical views and empirical evidences of the reviews enables better understanding of the subject.

2.1 Concepts and Theoretical Explanations

2.1.1 Understanding the term Value Chain

KAPLINSKY (2000) describes Value Chain as “full range of activities which are required to bring a product or service passing through the intermediate phases of production to delivery to consumers and final disposal after use”. According to GEREFFI (1994) the actors of a value chain as well as the input-output, and the territorial structure along with technical structure also define a value chain.

There are different approaches for value chain research. GEREFFI et al (2003) further discusses the Global value chain research as the different ways to examine how global production and distribution systems are integrated and possibilities of firms in developing countries to improve their position in global markets. Although this definition covers most important core of the value chain, additionally it becomes necessary that institutional and other aspects like legal framework need to be considered in the value chain (SCHIPMANN, 2006, p .13). A visual representation of different aspects of value chain is represented in figure 2 below

![Value Chain Diagram]

Figure 3: Visual representation of different aspects of value chain

Source: Value Chain Adapted from GTZ, 2004a as cited in Schipmann, 2006,p 13
2.1.2. Dimensions in Value chain

Value chain analysis forms an important tool to examine structural change. All together, it comprises of five dimensions which include the technical structure, the actors in a chain, the territorial, the input output and the governance structure (GEREFFI, 1994). The analysis of these structures answers a set of questions like How does the production process, who participates at which stage, where do the different stages take place, how are they linked, who has which benefits, etc. These answers are required to find the pertinent points of intervention for a successful integration of poor population sections. However, this study focuses on the agricultural sector all executions and examples relate to the agricultural sector and in sector others than this, different situations might be found.

2.1.2.1. Technical structure and actors

As seen earlier, technical production process can generally be separated into five stages: input supply, primary production, processing, marketing and consumption. Different actors can be found in each of technical production process

Input supply, being the first step in the production process considers everything from the seeds to the technical equipment needed for the production of the concerned product. Input supply facilitates the primary production of raw materials like grains and vegetables. Actors at this stage can be individual small, middle or big sized smallholders as well as enterprises with own production plants. If the product does not have market in its raw form, processing becomes essential. In this stage transformation of raw materials into processed products takes place. There is huge demand for processed products among consumers in industrialized countries. Different actors found in this stage depend on the amount and quality of the product, complexity of product and production process (SCHIPMANN, 2006).

The next stage in the process is trade and marketing. Transportation and Distribution of products to the places of demand forms an important activities here. Marketing can be directly done by the producers or processors, but as the amount and quality of the traded
goods becomes higher, the requirements for marketing is also higher. In such cases logistic companies, food corporations and supermarket chains are mainly found.

The last stage is consumption of a good. In most cases the consumer is the driving power of the whole process. It is true that even though the consumer does neither participate in the production process nor add value to the product, he forms an important part of the chain. Consumer demand is the determining factor for the kind, amount and quality of a product. Trading activities takes place at each stage of the above mentioned process. However It is assumed that trading activities between these stages takes place as a pure transfer of goods within the production process (SCHIPMANN, 2006,p 16)

2.1.2.2 Territorial structure
The territorial structure is understood as “the geographic concentration or dispersion of production and marketing” (STAMM., p. 13, 2004). It gives an overview of the location of the distinct stages of a value chain. Although , in national value chains all stages take place in the same country but in international chains not only the stages, but also the activities within each stage can be widespread around the world.

2.1.2.3 Input-output structure and profit distribution
The input output structure is closely related with the technical structure. STAMM (2004) defines this structure as the “tangible (raw materials, intermediate goods) and intangible (knowledge) flows linked together in the process of value creation”. The input output structure is an overview about four aspects: the amount and quality of a good required by one stage of the chain to fulfill the requirements of the following stage, the value that is created on each stage, the profit distribution in a chain and the information flow between each stage of a chain.

2.1.3. Governance structure
The concept of governance is central to the global value chain approach which is used to refer the inter firm relationships and institutional mechanisms through which non-market co-ordination of activities in the chain takes place. This coordination is achieved by
setting and enforcement of product and process parameters to be met by the actors in which developing country producers typically operate (HUMPHREY et al., 2001:3).

Governance in the value chain is very often understood as the power to define who and who does not participate in the chain, the setting of rules of inclusion, assisting chain participants to achieve the standards set, and monitoring their performance. (KAPLINSKY et al., 2000). An essential property of the chain is its governance structure determining the allocation of resources and gains and their flow within the chain. Indeed, the overall mode of governance of a chain refers to the extent of control which the leading segment(s) has on the exchange of information and production activities, and thereby able to shape the functional division of labor along the chain and to set entry barriers through which economic profits may be concentrated in particular segments. These various activities in the chain found within the firms and in the division of labour between firms are subjected to governance (GEREFFI, 1994). In line with this, there is an argument that in a chain, power is exerted when lead firms are able to set and/or enforce the parameters under which others in the chain operate (ROLDAN et al., 2005).

In 1990s, a framework, called “global commodity chains” was developed by GEREFFI and others (1994), that tied the concept of the value-added chain the global organization of industries directly. (GEREFFI et al., 1994). This work highlighted the importance of coordination across firm boundaries as well as the growing importance of new global buyers including retailers and brand marketers in the formation of production and distribution networks which are globally dispersed and organizationally fragmented. Further, GEREFFI (1994) identified two broad categories of governance structures namely, ‘producer-driven’ and ‘buyer-driven’ for global commodity chains. Producer-driven chains refers to production systems common in capital- or technology-intensive industries controlled at upstream level while the buyer-driven chains is used to describe production networks controlled by labor-intensive sectors including downstream-located manufacturers, large retailers, brand-name merchandisers, or trading companies. (ROLDAN et al., 2005). Furthermore, Buyer-driven chains denote how global buyers use explicit coordination to help in creating a supply-base which is highly competent through
which global-scale production and distribution systems could be built without direct ownership. Global buyers (retailers, marketers, and traders) can and do exert a high degree of control over spatially dispersed value chains even when they did not own production, transport or processing facilities (GEREFFI, 1994). This notion of role of global buyers was reinforced by the evidences in horticulture industry (DOLAN et al 2000) and the footwear industry (SCHMITZ et al 2000).

GEREFFI et al. (2003) identified three variables which shape internal Global Value Chain governance structures.

1. Complexity of information and knowledge transfer required to sustain a particular transaction particularly with respect to product and process specifications;
2. Codification of information and knowledge; i.e. can it be codified and transmitted efficiently without transaction specific investment between parties?
3. Capabilities of actual and potential suppliers in relation to the requirements of the transaction

Furthermore, extending this GEREFFI et al (2003) have identified five governance types as market, modular, relational, captive, and hierarchy based on interaction of above mentioned variables. Table 2 shows the simplified representation wherein each factor is characterised with only two values, low or high.

<table>
<thead>
<tr>
<th>Governance type</th>
<th>Information complexity</th>
<th>Ability to codify information</th>
<th>Supplier capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Modular</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Relational</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Captive</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Hierarchy</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>

Source: Gereffi et al., 2003

The different forms of governance that establish through the interaction of the different aspects mentioned above are explained in the following
a). Market coordination: In this type, there is no specific relation between the stages of the chain but all the transactions are market coordinated. However, market linkages can persist over time with repeated transactions. The costs of switching to a new partner are found to be low for both parties (GEREFFI et al., p.5, 2003).

b). Modular value chains: Suppliers in the modular value chains “manufacture products according to the detailed instructions of the purchaser, but maintain full responsibility, e.g. for the process technology employed “(STAMM, p.24, 2004). This offer the suppliers with a greater possibility of stronger integration through which reliability, transfer of knowhow and others can be anticipated.

c). Relational value chains: In these chains, a mutual dependence occurs which is regulated through reputation, social and spatial proximity, family and ethnic ties, and the like. Often, the ability to codify the information is low. The exchange of information is accomplished by frequent face-to-face interaction and governed by high levels of explicit coordination, making the costs of switching to new partners high (GEREFFI et al., p.5, 2003).

d). Captive value chains: This type of chains is found when suppliers are less qualified due to which a great deal of intervention and control on the part of the lead firm is required. Lead firms encourage the build-up of transactional dependence to lock-in suppliers excluding others from reaping the benefits of their efforts. Therefore, the suppliers face significant switching costs and are "captive". Captive suppliers are engaged in simple assembly and are dependent on the lead firm for complementary activities such as design, logistics, component purchasing, and process technology upgrading” (GEREFFI et al., p.7, 2003). Thereby, loose their independence and have a low standing in captive value chains that limit their benefits from integration into it.

e). Hierarchical value chains: In these chains no individual suppliers exist as lead firms are forced to develop and manufacture products in-house as product specifications cannot be codified and highly competent producers are not found (GEREFFI et al., p.7 2003).
2.1.3.2 Governance and coordination

Kaplinsky (2000) argues that the term coordination often used describes the non-market relationships that exist between firms in different segments, or between external (e.g., NGOs) and internal parties in the chain. Although Roldan and others (2005) use the term coordination to describe the exchange of non-market information, capabilities, and activities between two segments of the commodity chain which are not linked through ownership. Also, Coordination is meant to ensure particular product specifications, including performance, processes, and logistics in the chain. It is often seen that Coordination is likely to arise in commodity chains which involves suppliers in developing countries and buyers in industrialized countries, since it forms a suitable way to ensure reliable transactions when there is conditions like high risks, heterogeneous production conditions, technological backwardness, and unstable financial systems that are common characteristic of developing countries.

Gibbon (2001) describes chain co-ordination as enhancing barriers to entry, more precisely allowing ‘driving’ agents to incorporate measures that can reduce costs and risks as well as increasing the speed and reliability of supply, bringing in increase of sales. Furthermore, chain co-ordination and upgrading usually occurs when it benefits the chain driver.

A market based governance structure is characterised by many buyers and sellers, and is more characteristic of the ‘traditional’ coffee Global Value Chain (GVC). This type of GVC has much looser form of co-ordination. In the market based system, the products are standardized which implies that there are low barriers to entry as all the products are essentially being similar to each other. (Jodie et al., 2004)

Dolan et al., (2000) in their study, have shown that some of these categories can be used to analyze interactions at different points in the fresh vegetable chain between Kenya and the United Kingdom. The market of the fresh vegetables in Kenya had shown a trend from shifting from market coordination to explicit coordination. This revealed the importance of the competitive strategies of United Kingdom (UK) supermarkets in driving this change. Until the mid of 1980’s the fresh vegetables trade was handled
through a series of market relationships. Produce was brought from the traders in wholesale markets or at the farm gate and exported it to the UK, where it was further sold in wholesale markets. However, in the later period supermarket chains in the UK gradually took over the trade and became powerful actors and started exhibiting explicit coordination in the chain. In order to attract the consumers, emphasize was given to quality. This also provided consistent year-round supply and increased the demand for processing of products. They were also forced to keep up the environmental regulations including food safety, pesticide residues and labour standards. In order to go in pace with these goals, supermarkets tried to increase explicit coordination. They used the strategy of buying the produce directly from the UK importers and African exporters by developing closer relationship and renewable annual contracts with the suppliers. There was regular monitoring from supermarkets. Also, Suppliers and buyers worked together on product development, logistics and quality which led to the creation of new value chain relationships and competencies. Over time, relationships between supermarkets and UK importers took new form which showed a recent trend of value chain governance moving in the direction of modularity.

### 2.1.4. Upgrading in value chains

STAMM (2004) defines upgrading as “the process that enables a firm or any other actor of the chain to take on more value intensive functions in the chain, make itself harder to replace, and thus appropriate a larger share of the generated profits” (STAMM, p.27, 2004). Furthermore, upgrading means that individuals, firms or even a whole country improves its original situation through “changes in the nature and mix of activities, both within each linkage in the chain, and in the distribution of intra-chain activities” (KAPLINSKI et al, p.38, 2000). Growing competition in global markets can be met by developing the capacity to innovate more rapidly and effectively than their rivals.

Further, HUMPHREY et al (2000) uses this concept of upgrading to understand the three different shifts that firms might undertake in the global chain. Firstly, a firm can upgrade through transformation of inputs into outputs more efficiently by reorganizing the production system or by introducing superior technology which is often referred as
Process Upgrading. Secondly, Product upgrading through which a firm can upgrade from moving into more sophisticated product lines. Thirdly, upgrading by value addition referred as Functional Upgrading. In addition, fourth case is added by KAPLINSKY et al (2000) termed as Intersectoral upgrading where firm can upgrade by moving out of a chain into new one.

2.1.4.2. Preconditions for Upgrading
Upgrading is not only improving their own position but more than a necessity to secure the position within the chain (SCHMITZ 2006). Preconditions for upgrading forms the strategic intent of a not only the firm and the policy environment but also the innovation process and investment needs. First and foremost one should be aware that learning processes that are available to the single actors of a chain influence upgrading. “As a result of learning processes, firms are able to improve their position in the value chain” (STAMM, p.27, 2004). While on the other hand Learning is influenced by governance structure of a chain. Besides production systems, knowledge systems exist in value chains through which different kinds of know how are transferred between the single stages of a chain. The organization of information flow and its intensity depends on the interest of the leading party in a chain, which is most times the buyer. It can be assumed that information transferred from a buyer to his suppliers is limited to the amount that favours the buyer (HUMPHREY et al 2002). Other aspects relevant for learning processes are availability and access to extension services, further education, market information, etc.

2.2 Empirical Evidences
As described by DOLAN et al. (1999), Horticulture Global Value Chain (GVC) has been dominated by large retailers that have adopted competitive strategies year round supply. Also, attributing to quality and product differentiation. A dramatic change in the marketing channels is seen which shifted from wholesale markets to tightly-knit supply chains. Production moved away from small-holders to large firms, many of which are owned by exporters. Within the horticulture GVC, Producers who are also exporters directly deal with importers and importers, in turn, deal directly with
retailers/supermarkets. Directly owned units firms are able to exert greater control over production processes and are better able to comply with quality, environmental and social standards.

Talbot (2002) describes that in Uganda, the green coffee produced is being typically sold. It is typically sold to coffee millers at the farm gates. This type of coffee requires relatively simple and low technology processing or hulling. However, after milling, coffee is sold on to exporters and world markets where it is further purchased by roasters. Nevertheless, in Post-liberalization period, there was direct purchase direct buying by roasters from local exporters. Further, Liberalization also paved the way for some ‘own estate’ production of coffee by large multi-national roasters. Despite such developments, the predominant route of purchasing green coffee is via spot markets.

Fitter et al., (2001) in their study to analyze gains from the product rent when coffee market gets differentiated found that after differentiation, coffee (Instant coffee) showed a significant variation in final product prices and interviews from producers suggested that margins are higher on higher-priced items. Similar price variations were found between different types of coffee in the roasted ground market. However, there were much smaller differences in processing costs. In addition, the differentiation was found in coffees consumed at home. Results showed that, in the US, the Specialty market has been a major change in the coffee market. A similar incident was seen in the UK (Starbucks, Seattle, Costa, etc.), which are found to enhance their establishment in Continental Europe. Moreover, there is growing importance to Fair trade products which enables the producers to get a fair price. Results showed that in this case that guaranteed minimum prices paid to farmers was about of 126 US cents/lb for Arabicas and 106 cents/lb for Robustas which is double the world price in May 2001.

In applying Global Value Chain to the specific case of coffee, Daviron and Ponte (2005) focused on quality and standards by drawing a link between quality and value. They used conventional theory to explain how quality is valued at different points in the value chain and in different markets. A typology was developed based on material, symbolic and in-person service quality attributes:
a. **Material attributes** are nothing but measurable attributes that are inherent to the product while it is independent from the identity of buyers/sellers. These attributes are often measured through senses (smell, taste, vision, hearing, touch).

b. **Symbolic quality** attributes are those which are not measurable through human senses. However, they are based on reputation and are often embedded in trademarks, geographical identification and sustainability. The actors capable of defining these standards obtain an important governing position in the value chain.

c. **In-person service quality** attributes deal with those immaterial characteristics of the commodity, such as the services. Services often involve relationship between producers and consumers.

When coffee is sold at any given café: all the above mentioned attributes come together. Material attributes relating to the taste, aroma and appearance while, symbolic attributes are linked to the specific brands or establishments and copyrights. And In-person service refers to the relation between the employees and the consumer. This classification can be useful to understand the ‘coffee paradox’. In developing countries, Producers of tropical commodities often do not have direct contact from the consumption places and hence are unable to obtain gains from the attributes embedded in the product as they move along the chain. Thus, market power is a question of both market share and about the ability to capture the valuable attributes.

Global value chain analysis which focuses on governance relations can be made useful in identifying the major institutional actors in the course of chain and the policy levels that may influence the behavior of key stakeholders in the value chain. Also it is helpful examine the particular barriers to entry and rent (KAPLINSKY 2000).

Very low international prices for coffee often affect the small holders to invest on quality improvements. Coffee farmers lack economic incentive to improve their product and service quality as it does not bring any higher prices from the local distribution channels (USAID, 2005). GILBERT (2006) discusses that heterogeneity among coffee varieties and cross origins allow the roasters to produce differentiated products enhanced with higher
taste in specific market sectors. Further he points out that brands are often heavily promoted and serves as barrier to entry. Quality is a significant barrier for the small holders seeking to enter in the niche markets and small farmers often grow coffee in poor agro ecological conditions with less care and management that make it impossible for them to meet increasingly high quality standards (CALO and WISE, 2005). However, Integration of rural small holder produces in the value chain approach improve their access to market helping them to achieve better price both in domestic as well as international market. It is very important to find the relevant points of intervention for successful integration of poor population in the value chain (SCHIPMANN, 2006).

OXFAM (2002b, p 3) reports that low market prices in coffee creates a buyers markets which makes the poorest and powerless people in the world to negotiate with the rich and most powerful in the open market. Nevertheless, “Changes in the international policy environment, new arrangements in supply and demand, technological changes and/or the asymmetrical character of power in the coffee value chain, have increasingly narrowed the opportunities for vulnerable economies to secure the benefits from coffee trade needed for economic development and poverty reduction” (PETIT, 2007, p 225). Furthermore the industrial surveys, made by LEWIN et al (2004) indicated that quality and consistency are the most important factors to be competitive in the present markets in coffee sector. Additionally, to enhance the bargaining power at production level and realizing incentive schemes for quality production, there is a need for an increased information management and product definition regarding distinct quality attributes.

The dynamics in the coffee market have not been uniform even after liberalization of domestic coffee market in many countries. FROMM and DUBON (2006) stresses the importance of strong coordination between local institutes and coffee producer cooperatives in improving the status of small holders in Honduras which also led to changes in global competitiveness.

Farmer associations and cooperatives are often found to play a essential role in supporting famers to convert their production and adopting quality standard (BACON, 2005). Cooperatives are found to substantially reduce the cost of information gathering
(VERHAEGEN et al, 2001). While, BLACK and others (2005) describes that cooperatives can play an important role in enabling farmers to gain access to specialized markets. According to DEMPSEY (2006, p.11), the combination of value chain approach and strong institutional development interventions provide the basis for success in cooperative coffee in Ethiopia, having a positive impact on new coffee export value chain channels. By this, small holder coffee producers had improved the quality, gained access to higher value coffee markets and sustainable income from their coffee production.

Nevertheless, by the turn of 20th century, several certification schemes have made its way in global coffee market. Fair trade, Organic and shade grown coffee are the major ones among them (PONTE 2004). Each initiative is different in response to different ecological and socio-economic concerns. On one hand Fair trade approach is the conventional trade aiming to improve the livelihood of small producers by improving their market access, strengthening their organizations, paying them a fair price with a fixed minimum and thus providing them a continuity in trading relationships (GIOVANNUCCI and KOEKOEK, 2003). While on the other hand organic standards are based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony. However, shade grown is recent initiative which aims at conserving forest cover through the production of coffee under the shade of forest canopy. Although while price premium are paid for higher quality, the awareness among the farmers and cooperatives is less.(KIEMEN et al., 2008).

In the era of globalization, making its best, requires the improvement of the upgrading capacity of producers to tackle increasingly differentiated markets by producing variety of products with enhanced quality. This challenge is not just confined to traded manufactured products but also in number of primary markets (and indeed service sector markets) since each sector is becoming increasingly differentiated. However, recent trends in the global coffee value chain has shown that in order to meet these requirement it does not just mean that the returns to differentiation is ensured to the poor producers (FITTER et al., 2001). As FROMM and JAUN (2006) point out that there seems to be a chance of gain for producing coffee for differentiated markets. The price paid in these
markets is as twice as much per bag of coffee. In addition they suggest that through internet auctions and direct buys, the role of intermediaries can be reduced and this guarantees higher price to the producers.

Remarks from literature reviewed
Based on research studies, it is clear that value chain approach enables us to understand various activities from the point of production to consumption (KAPLINSKY, 2000). While DOLAN et al (2000) have made use of the concept of governance structures to explain the chain between UK importers and Kenya. Also, policies have been made based on value chain approach (FITTER et al., 2001; DEMPSEY (2006). The study makes an attempt to use concept of governance to understand the situation in Coffee in India. Also, tries to implement some policies recommended by the researchers to improve the livelihood of small producers.
Chapter 3. METHODOLOGY

This chapter aims at outlining the methods used in the study. Firstly, it details the conceptual framework used in the research in Indian coffee value chain. Secondly, it presents the general characteristics of the study area and also the sampling procedures.

3.1. Conceptual Framework

The identification of challenges related to marketing and involvement of the coffee producers in the value chain is subject to the application of a research framework. Based on theoretical concepts and empirical studies in coffee sectors, a framework is presented in figure 4. This conceptual perception followed in the study is of multi-dimensional content in nature. As shown in the figure, the production of coffee is influenced by various factors like technological factors (mechanized tools), efficient use and management of resources, physical factors like land, labour and capital. Secondly, the institutional factors having a pioneer role on the production which includes extension and research system, market existence, and storage and transportation network. However, the third factor is the environmental factor having an important role in the production process.

Furthermore, the framework helps in understanding the marketing chain process in the value chain of Indian coffee. Value chain covers the activities from the stage of coffee harvesting until it reaches the point of consumption. This involves various actors either in national level or the international level. The major driving factors in the domestic market is the profit margin, value added practices and security of income, while at the international markets more emphasis is on the quality of the produce. Small producers have to comply with these standards in order to access the international markets. Nevertheless, income security and the profit margin are also the driving factors in the international markets.

Poor quality and lower scale of production has been the factors hindering the poor farmers to reach the international markets easily while intensification and improved production level, upgrading activities in the processing may help the farmers to have
direct contact with the exporting markets. Also, help them to get a higher profit margin thereby improving their livelihood conditions.

![Conceptual Framework on Indian Coffee marketing chain.](image)

**Figure 4: Conceptual Framework on Indian Coffee marketing chain.**

*Source: Own illustration and adopted by Rishi (2009)*

### 3.2 Description of the study area and Sampling Procedure

The study is conducted in Coorg district of Karnataka state. The Coorg district being a major coffee-growing region, occupies the Eastern and Western slopes of the Ghats. The district is mountainous surrounded by valleys and ravines. Agriculture forms the major lifeline in the Coorg region. Main crops grown here include coffee, spices like cardamom, Pepper, Ginger, Turmeric etc and Paddy. Spice crops are mostly grown as
intercrops in Coffee Plantation. Earlier, Fruits such as orange, guava, sapota, lime, pineapple and banana were grown to a larger extent. However, at present only banana is grown mainly while cultivation of others is declining. The coffee is grown mostly in agroforestry system, under native tree cover. Indeed, it produces nearly one third of Indian coffee. Forest cover is about 50 per cent of the district, making it one of the most densely forested districts. Forests and agro-forest together account for nearly about 80 percent of this district.

Agriculture is dominated in central Coorg region. Coffee estates cover about 30 per cent of the total area of the district. Coffee is mostly grown under shade which supported by rich diversity. Arabica and Robusta are the varieties grown in the region. The geographical area of the district is 410,755 sq.km with a population of 548,651 wherein 78 percent of them are literates. The district is surrounded by Dakshina Kannada District towards North, Wayanad district of Kerala to the south, Dakshina Kannada and Malabar on the West while towards the east it is bounded by Hassan and Mysore districts. The 2 rivers Cauvery and Hemavathy mark the boundary between Mysore and Coorg towards north.

Elevation and land tenure system influences the coffee cultivation to a larger extent. This is true in case of the Coorg district of Karnataka which benefits from a special land tenure system that specifies two main types of private tenures, namely redeemed and unredeemed. This division allows owners of redeemed lands to use the trees that are planted in their estates while unredeemed land owner do not have the usufruct of the trees that grow on his land. Owners of unredeemed lands often try to bypass these rules in order to get additional income from timber wood. Indeed, plantations in this region is have generally a diversified cover rather than a mono-specific grevillia one. Moreover, jamma lands in Coorg can be acquired only by heritage. This complex land tenure system appears to be a main reason for the conservation of biodiversity in Coorg district (Delphine et al, 2008; Neilson, 2008)
Climate

The climate is very pleasant in the Coorg region all through the year. The temperature does not rise beyond 30 degree even during the summer. Annual rainfall is 2,725mm speed, spread over six months in a year mostly from south-west monsoon. However it is supplemented by the cyclonic rains during November and December. The district is blessed with topographic and climatic conditions suitable for coffee plantation.

Economic wealth

Economically, the district is based on Coffee, Cardomom and pepper. Coorg and Chikmagalur especially contribute to the bulk of Robusta Parchment production. Paddy is grown as a staple crop wherein most of the cultivation is carried under rainfed conditions. Horticultural crops like oranges, bananas and cardamom are inter-planted in the coffee estates. Arabica and Robusta are the important varieties of coffee grown. Also, Coconut, Arecaanut, Ginger and some other spices are grown in this region. Highest per capita income is found in this region. Excellence in the quality is assorted to the coffee as well as pepper and cardamom grown in Coorg region. Furthermore, the honey produced here is known for its unique flavor and the quality. The Coorgis are known to be well economically based. In recent years tourism has begun to make an important role in their economy. They are earning by converting their buildings as guest-houses taking an advantage of eco-tourism.
Table 3: General Characteristics of the study area

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Particulars</th>
<th>Kodagu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Geographical area (hectares)</td>
<td>410775</td>
</tr>
<tr>
<td>2</td>
<td>Forests (hectares)</td>
<td>134615</td>
</tr>
<tr>
<td>3</td>
<td>Taluks (numbers)</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Villages (numbers)</td>
<td>303</td>
</tr>
<tr>
<td>7</td>
<td>Population (numbers)</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>7.1</td>
<td></td>
<td>274831 (50.10)</td>
</tr>
<tr>
<td>7.2</td>
<td></td>
<td>273730 (49.90)</td>
</tr>
<tr>
<td>7.3</td>
<td></td>
<td>548561 (100)</td>
</tr>
<tr>
<td>8</td>
<td>Density of population (per sq. km)</td>
<td>113</td>
</tr>
<tr>
<td>9</td>
<td>Literacy rate (%)</td>
<td>78.17</td>
</tr>
<tr>
<td>10</td>
<td>Average rainfall (mm)</td>
<td>2725.5</td>
</tr>
<tr>
<td>11</td>
<td>Per capita Income (Rs. per annum)</td>
<td>3535</td>
</tr>
</tbody>
</table>

Source: Census of India, 2001
3.2.1 Sampling Procedure

The study is both qualitative and quantitative in nature since it involves more of observing and understanding the conditions in marketing in the study region. Also, there is a need to use some quantitative methods like simple percentages. The study requires interviewing the different actors in the coffee value chain. Both primary and secondary data have been made used in the study.

Coorg district in Karnataka (India) is selected for the study as it is one of the highest producers of coffee amounting to 65,665 MT of total production of coffee in Karnataka (Coffee Board, 2011).

Study involved observation and interaction with different actors in the chain. Additionally expert interviews were carried. The sample structure is as follows:

- In Coorg district, mainly Virajpet taluk was selected. 30 farmers were randomly chosen in different villages in the Virajpet taluk.

- Three Small Curing works surrounding the virajpet taluk were selected to conduct the study.

- Five Local roasters in the Virajpet taluk were also interviewed in the study.

- Additionally, One Exporting Company (S.L.N Pvt. Ltd) located in Kushalnagar in Coorg district was interviewed

- Expert interviews was carried with officials of Coffee Board

Different actors involved and Governance structure in the chain was observed by interaction with the experts and stakeholders. This provides a framework to understand the institutional relationship between different actors in the chain. Interactions with the farmers helped to understand different problems related to production and marketing.

Furthermore, Secondary data have been collected and used from Coffee Board of India.
3.2.2 Description of Database and Analysis

The sample constituted several group of respondents as mentioned above. The data collection was carried during the period of April to May, 2011. With respect to coffee growers, the primary information was collected from the adult member based on the farm records and memory of the respondents. A separate semi structured questionnaire with both open and close ended questions related to the study objectives was used to collect relevant information. The questionnaires were used to interview the famers while the other intermediaries were allowed to speak openly and share their experiences. The required information was extracted from the interaction with them. The questionnaire was pretested and appropriate changes were made to get relevant information. The questions were administered in local language Kannada. Interviews have been carried out for a total number of 30 coffee growers. The coffee growers selected were small scale producers relevant to the research question. Care was taken to explain the objectives of the study to the respondents and to avoid unwanted information and redundancy.

The analysis of the data collected involved simple descriptive statistical tools like average, percentages. These aspects include the marketing costs and price spread. Marketing cost refers to the cost incurred by the producer-seller from the point of production up to sale. This cost per tonne was worked out by adding different component namely packing, loading and unloading, packing material, and transportation cost and commission charges paid. Price spread was worked out by computing the differences between the prices received by the producers and prices paid by the consumer.

\[ \text{Price spread} = P_p - P_f \]

Where,

\begin{align*}
P_p &= \text{prices paid by the consumer} \\
P_f &= \text{prices received by the producer}
\end{align*}
3.3 Constraints in the study

The study is mainly qualitative based. However, simple quantitative methods are used. The sample size of the respondents was limited to 30 farmers and few intermediaries. Complex Quantitative tools are not applied in the study as it demands a larger sample size and more time and effort in collecting the data. As time was the foremost constraint during the period of this study. Another factor of constraint is the availability of respondents since the coffee growing households are scattered and isolated, it was time consuming to move around and meet the respondents. Further, the information obtained from the curers and other intermediaries may be biased since the answers given by them were mostly based on approximations. Hence the study could not the capture the value addition scenario to its 100 per cent.
Chapter 4. RESULTS AND DISCUSSION

This aim of this chapter is to conduct a value chain analysis of the conventional coffee chain in India on basis of 1) Outlining the stages and actors in the value chain 2) The governance structures  3) Distribution of value addition and finally with some recommendations to improve the livelihood of small producers. The aim is to make a value chain analysis identify the development-related merits for small-scale coffee producers.

4.1. Mapping of Value chain in coffee
Milford 2004 argues that a coffee bean may change hands as many as 150 times from producer to consumer (MILFORD 2004:13).The purpose of mapping is to outline the different stakeholders from crop to cup. This process includes various actors – coffee farmers, intermediaries like local traders, curers, exporters (international traders), roasters, retailers (like hotels, restaurants, and cafés), and finally, the consumers in the domestic and international markets. Since mid 1990s Indian coffee is fully liberalized and growers are liberal to sell their produce. General overview of the chain in the Coorg district is presented in figure 6.
4.1.1. Coffee Growers

Majority of the farmers in the Coorg region are small farmers having a cropping area ranging from 2-20 hectares contributing to majority of the production as shown in the table 3. While, large farmers own land ranging from 10-100 hectares.
Table 4: Number of small and large coffee growers in Coorg district (Karnataka)

<table>
<thead>
<tr>
<th>Region</th>
<th>Small growers (2-10 hectares)</th>
<th>Large growers (10-100 hectares)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gonikoppa</td>
<td>6262</td>
<td>16</td>
<td>6278</td>
</tr>
<tr>
<td>Srimangala</td>
<td>4032</td>
<td>72</td>
<td>4104</td>
</tr>
<tr>
<td>Siddapura</td>
<td>4139</td>
<td>102</td>
<td>4241</td>
</tr>
<tr>
<td>Virajpet</td>
<td>6299</td>
<td>25</td>
<td>6324</td>
</tr>
<tr>
<td>B.R. Hills</td>
<td>439</td>
<td>4</td>
<td>443</td>
</tr>
<tr>
<td>Total</td>
<td>21171</td>
<td>219</td>
<td>21390</td>
</tr>
</tbody>
</table>

*Source:* Interviews with Coffee board, Virajpet, Coorg.

Table 5: Crop production Estimates (post monsoon estimates) in Coorg district (Karnataka) (in metric tonnes)

<table>
<thead>
<tr>
<th>Region</th>
<th>Arabica</th>
<th>Robusta</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gonikoppa</td>
<td>30</td>
<td>17050</td>
<td>17080</td>
</tr>
<tr>
<td>Srimangala</td>
<td>100</td>
<td>16000</td>
<td>16100</td>
</tr>
<tr>
<td>Siddapura</td>
<td>1275</td>
<td>20450</td>
<td>2175</td>
</tr>
<tr>
<td>Virajpet</td>
<td>10</td>
<td>10200</td>
<td>10210</td>
</tr>
<tr>
<td>B.R. Hills</td>
<td>550</td>
<td>0</td>
<td>550</td>
</tr>
<tr>
<td>Total</td>
<td>1965</td>
<td>63700</td>
<td>65665</td>
</tr>
</tbody>
</table>

*Source:* Coffee Board, 2011, Virajpet, Coorg

It is clear from the table 4 that in the study region, Virajpet taluk had more number of small growers followed by Gonikoppa taluk. Although both Robusta and Arabica had been grown in the region, Robusta had occupied the large growing area contributing to the higher production. This is due to the fact that the production and maintenance of Arabica was more complex and it required higher amount of care and maintenance charges which is not easily affordable by the small growers. Often, Coffee farmers live in isolated areas, and lack an adequate infrastructure and transportation facility, which has given them a less opportunity to reach local markets. In addition, they have little knowledge on price information, access to credit and control of activities like marketing and processing (cleaning coffee beans) that would allow them to sell their coffee for a higher price.
4.1.2 Hullers and Curers

In the present study in Virajpet region, out of 30 coffee growers interviewed, 70 percent of farmers were selling their produce to the agents at farm gate prices. While, 20 percent of them sell their produce directly to the curing works.

The role of Hullers basically is to process cherry coffee from dried cherries to parchment coffee. They are located all over the growing regions and are especially important in Coorg. However, hulling results in a low quality coffee since it results in higher number of damaged beans as the machines used by them are very simple.

Curing works are the key node in the Indian coffee chain. They are usually located in precise towns of every coffee-growing region and are normally owned by exporters. The Curers carry out secondary processing (mainly drying of cherries) and allow good storage conditions. Basically, they purchase the coffee beans from the agents who are attached to them and located all over the region. These agents are located in villages all over the coffee-growing regions and collect the coffee from each plantation and transport the produce to the curing units. However, it is also seen that some farmers in the study region (20%) have direct contact with the curers and sell their produce directly to the curers. Sometimes the curers themselves take in charge of collecting the produce from the farm itself. The agents mainly operate on commission basis on behalf of exporters or curing works’ owners. DAVID and CLEMENTINE (2008) have identified two critical nodes in the coffee trade network which includes agents at the local level and curing works at the regional level. These nodes are highly largely controlled by exporters who are benefitting from the information obtained from their network of agents.

The appearance of agents in the coffee market has been found since liberalization. It was seen from the study that agents are powerful local actors. These agents provide a range of support services including the collection of the coffee from planters, transportation to the curing works and also provide own storage facilities. Additionally, they are also associated with providing financing facilities and information collection. They have made huge control in these activities which has increased their role as crucial middlemen between curers and planters. Furthermore, this control expands their network that
provides them with good information concerning the plantations, their practices as well as prices.

Small growers are largely taken aside of the marketing channels of their coffee. Although, Most of the small and marginal farmers contribute to majority of production, they sell their coffee at the farm gate to purchasing agents. Hence, they do not participate in the marketing of their coffee and do not benefit from the information related to the valuable attributes of their product. This is because when the small farmers sell their coffee in bigger towns or to curing works directly often loose money because of higher transportation costs. The price they get may be higher, but deduction of transportation costs might then make a lower price than agents’ ones. Hence they prefer to sell their produce to the agents rather taking the burden of transportation costs. Furthermore, Agents also lend loans to the growers and then secure their supply. Although taking interest is not their priority, they tend to secure their supply by giving the loans and increase their bargaining power. Their intension is by lending money, they can afford paying less than the market price for the coffee they purchase from the grower.

4.1.3. Quality parameters
During the study, it was seen that there were 4 quality parameters usually checked at the farm gate level.

i). Moisture content was the first to be checked by all the actors.

ii). The out-turn of the coffee was also an important feature at the farm gate for cherry coffee. This test was based on hulling a sample of 1 kg to determine the growers’ out-turn. This was practiced from some agents.

iii). Berry-borer infected beans- The infected beans are often rejected and or fetch less value to the producers

iv). Blacks and Bits

Discounts in the prices were made according to the quality parameters checked by agents. The number of growers going for the above mentioned quality check is represented in the figure 7.
Figure 7: Number of growers checking the four main quality parameters

It is clear from the graph that, out of 30 growers selected, 25 (75%) of them were checking the moisture content followed by berry borer infected beans (73%). The cherry with blacks and bits fetched less prices in the market. It is also seen that the growers receive the immediate payments in cash and usually they do not receive any receipts for the transaction.

Some curing works in Coorg, are owned by big companies who also own large corporate plantations. This includes Tata Coffee which has its curing works in Kushalnagar and the other one is namely Bombay Burmah Trading Corp. Ltd. (BBTC) having its curing works in Siddapur. Often, these curing works can handle coffee both from the company’s plantations as well as coffee from small planters. Tata Coffee was found to be involved both in mainstream and specialty markets. The production from their plantation is mainly intended for specialty export market as well as they also follow an estate-branding strategy. It is also being a significant player in filter and instant coffee market in India and in International markets like Russia for instant coffee. This has made them to purchase lower-quality coffee from agents at their curing works in Kushalnagar.

Other curing works are owned by exporters. While, Very few of them works independently. Some of them also have the grading facilities in their curing works. After
grading they further sell it to the exporters. Curing works without the grading facilities hand over their produce to the Big Curing Works located at Kushalnagar for further grading and export purpose. Exporting is mainly concentrated in London and/or New York futures markets depending on the type of coffee (Robusta and/or Arabica).

The curing works located at Kushalnagar is biggest among all the curing works in Coorg district. Apart from coorg, they also takes coffee coming from Hassan or Chikmagalur. They carry out mixing of coffee from different “origins”. Both Robusta and Arabica is being purchased here. It is seen that coffee from Hassan, Mysore and Chikmagalur can make up to 40% of the total volume purchased by the Kushalnagar’s curing units (DAVID and CLEMENTINE, 2008)). Main reason is that Kushalnagar region is located on important roads and has good infrastructure facilities. Also, the weather being drier in the surrounding area than in Coorg’s hills facilitates secondary process and storage. At the curing works’ level, the coffee is mixed together and then sorted according the Coffee Board’s grades unless the buyer’s demands for a pure origin coffee from a specific estate or region.

In the recent years the curing works have gained importance as they own storage facilities that often lack in the farms. This gives them flexibility in the time when they sell their coffee, and thus making profits by speculating on the price movements. Although, Small growers can store their coffee at their farm but the poor storage conditions at the farm level can lead to a deterioration of the coffee quality, especially by increasing the risk of mould contamination. Hence their flexibility concerning the time of selling their coffee to get the maximum profit from the price movements is considerably limited. (ACHOTH, 2005).

There are three main channels for clean coffee after secondary processing is done at the curing works. This includes

i) Selling either through Indian Coffee traders Associations (ICTA) auction in Bangalore

ii) It can be exported

iii) Selling to domestic roasters.
ICTA auction is held once a week in Bangalore. Very small quantities are sold through this auction where purchasing is done mainly by small or medium domestic roasters. Nearly 70 percent of coffee produced is being exported. Indeed, Exporters play a very important role in the Indian Coffee Industry having a huge control in the supply chain and trade channel. Coffee Board records more than 75 exporters, the top ten contributing approximately 75% of the total exports in quantity which is shown in table below.

Table 6: Top Indian coffee exporters for financial year 2009-10

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Exporter</th>
<th>Quantity exported(MT)</th>
<th>% to total quantity</th>
<th>% Cumulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NKG Jayanti Coffee PVT. LTD.</td>
<td>27756.7</td>
<td>14.2</td>
<td>14.2</td>
</tr>
<tr>
<td>2</td>
<td>CCL Products (INDIA) LTD.,</td>
<td>20454.8</td>
<td>10.5</td>
<td>24.7</td>
</tr>
<tr>
<td>3</td>
<td>Allanasons LTD</td>
<td>19538.6</td>
<td>10.0</td>
<td>34.8</td>
</tr>
<tr>
<td>4</td>
<td>Nestle India LTD</td>
<td>182151.1</td>
<td>9.3</td>
<td>44.1</td>
</tr>
<tr>
<td>5</td>
<td>Tata Coffee LTD.</td>
<td>12740.7</td>
<td>6.5</td>
<td>50.7</td>
</tr>
<tr>
<td>6</td>
<td>Amalgamated Bean Coffee Trading Company</td>
<td>11910.5</td>
<td>6.1</td>
<td>56.8</td>
</tr>
<tr>
<td>7</td>
<td>Ned Commodities India Pvt. LTD.,</td>
<td>11811.2</td>
<td>6.1</td>
<td>62.8</td>
</tr>
<tr>
<td>8</td>
<td>Olam Agro India LTD.,</td>
<td>9913.1</td>
<td>5.1</td>
<td>67.9</td>
</tr>
<tr>
<td>9</td>
<td>S.L.N. Coffee Pvt. LTD</td>
<td>8616.6</td>
<td>44.4</td>
<td>72.3</td>
</tr>
<tr>
<td>10</td>
<td>Narasu’ Exports</td>
<td>6764.8</td>
<td>3.5</td>
<td>75.8</td>
</tr>
<tr>
<td>11</td>
<td>Others</td>
<td>47121.7</td>
<td>24.2</td>
<td>100.0</td>
</tr>
<tr>
<td>12</td>
<td>Total</td>
<td>194843.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Own Calculations and Coffee Board,2010*
Table gives an idea of the top ten exporters of Indian Coffee of which the company, NKG Jayanti Coffee PVT. Ltd is being the major exporter in that year accounting to 14% of total exports followed by CCL products exporting 10% of the total export. It could be seen that top ten exporters contribute to 75% of the total export of coffee in India while rest of 25% is exported by small companies.

**Cup testing**

Sometimes, Curing works undergo cup testing before carrying forward to the export. Samples are sent to different buyers to evaluate and taste the coffee. Cup testing is done in Bangalore. However, physical quality is of main concern for most of the buyers. It also depends on the trust gained from the sellers.

**Figure 8: Pre-shipment procedure of S.L.N Coffee Exporting company**

*Source: Own illustration, Interviews*

Figure 8 illustrates the path of export from S.L.N Private Limited curing works. This Curing works also are dealing with exports and are one among the top ten exporters in Coorg region. It is seen that after the contract is made between sellers and buyers, coffee is sent from the curing works to the port of shipment wherein again physical quality (grade) is checked by government authorities before issuing the export permit. Once the permit is obtained, it is sent to different countries. In India, main ports of shipment include Cochin, Chennai and Mangalore. Among these, Cochin and Chennai are the major ports.

**4.1.4. Informal Trade Channel: Loose Coffee Shops and Local Roasters**

There is another channel in the coffee marketing which includes Local Coffee Shops and Local Roasters. A small amount of the production is marketed through these informal channels. These channels include either relatives getting directly their coffee in the
family’s or friend’s estate and then roasting and grinding it either by themselves or at small roasting and grinding units. Loose coffee shops are also found in the main towns of the district. They sell small amounts of unbranded filter coffee with small amount of chicory depending on customer’s choice. Their customers include locals as well as tourists, and hotels, restaurants and other. Prices vary based on pure coffee or coffee mixed with chicory. Such roasters obtain coffee beans either directly through the planters or through the curing works. Very few really care about the grade while others purchased either ungraded coffee or mixed grades. Some curing provided raw coffee to the roasters as they want to get rid of their damaged beans and lower quality grades for a good price. Most of these shops in Coorg district, only sell Robusta, reflecting the fact that 80% of Coorg’s production is made of Robusta.

4.1.5. Cooperatives and Associations of Growers

The performance of co-operatives and Growers association in Indian coffee industry is not up to the mark. Co-operative Societies were formed since the liberalization in the early 1990s. The only national level co-operative institution of coffee growers in the country is Indian Coffee Marketing Cooperative (COMARK) started in 1992. This was formed with the main objective being collection of coffee from the small growers and sells it in the global market. This had a joint share of capital from nearly 5,500 coffee growers and the government through the National Cooperative Development Corporation.

The Co-operative Society had worked well when the coffee prices were high in the initial years after Liberalization. During this period the co-operative had exported around 14,000 MT and marketed 6,000 MT in the domestic market till 1997 (AMBINAKUDIGE, 2006) and made significant amount of profits. The profits were distributed among the members. However, in the later years due to fall in prices, society had sold the coffee at lower prices which made the members to loose the confidence in the society and they started withdrawing their produce. Inefficiency in marketing and failure of understanding the international coffee price trends made the cooperative to go bankrupt.
Furthermore, Prior to liberalization coffee marketing was undertaken by the Coffee Board. Later, co-operatives started selling their members’ coffee at the ICTA auction. Gradually, there was a decline in the volume sold at this auction as co-operatives failed to adapt to new marketing strategies, including direct export. Most of the cooperative societies failed to adapt new chain organization features especially in managing is the marketing of their members’ coffee. Furthermore, corruption scandals in the co-operatives made the members to move out of these societies. Also, payments made to the members were slow which made a way for the entry of facilitating agents’ in the marketing of coffee. Three main challenges that Indian co-operatives face include building members’ confidence by showing transparency, implementing fluidity in the payment of their members, and succeeding in reaching new markets (DAVID AND CLEMENTINE, 2008).

Self –Help Groups (SHGs) are emerged as recent attempt to review the failure of associations by Coffee Board. Major objective of this concept was linking up a maximum of 50 small coffee growers in the potential areas and registering them under the State’s Societies Act governing cooperative societies. The members in the group should follow the rules stipulated by the act. However, this initiative did not prove to be successful since such groups are small and did not aim at a common marketing of the coffee which was similar to the reason of failure of co-operatives. By 1999-2000, Coffee Board had created 42 regular Self-Help Groups by 1999-2000. The activities encouraged under these groups included. Through these groups, the activities like raising of community nursery for production of planting material, procuring and use of farm equipment on a community basis, adoption of effective measures to control pests and diseases+, use of new technologies and promoting specialty coffee and creation of infrastructure like drying yards or store houses were encouraged.

Out of 42 SHGs formed in Karnataka, 13 SHGs have been formed in Coorg while remaining in Chikmagalur and Hasan region. It was also seen that women were encouraged to join the groups and carry out processing activities.
4.1.6 CAFNET- Project

Recently another project has been implemented in Coorg region - Coffee Agro-Forestry Network (CAFNET) – which aimed at connecting, enhancing and sustaining environmental services and market values of coffee agro-forestry in Central America, East Africa and India. This project is being funded by the European Union and executed by CIRAD. The main objective of CAFNET is to link sustainable management and environmental benefits of coffee agro forests with appropriate remuneration for producers through better access to markets and payment for environmental services. This also involves finding ways to improve livelihoods for coffee farming communities while conserving natural resources in a major coffee agro forest region. This aimed to strengthen the technological reasoning, access to information, management capacity and business skills of farmers’ organizations so that they can comply with international certification criteria and hence negotiate access to markets and payment for environmental services. Project duration was from July 2007 to Dec 2010. Project had helped around 150 farms to undertake cup quality analysis for the first time. A group of 6 farmers from Chermbane village were able to get certified by Rainforest Alliance and UTZ. Furthermore, it facilitated the Participation in International workshops in Kenya, Costa Rica, France and National workshops in Delhi and Bangalore local events in Kushalnagar which created awareness about eco-friendly coffee.

4.1.7 ICTA Auction AND Futures Markets in India

Since after liberalization of market, management of price volatility has been a major concern for Indian producers. In order to address this issue, a range of initiatives have been carried out which includes creation of a private auction system and the creation of different coffee contracts by Indian newly-established futures auctions. The Indian Coffee Traders Association (ICTA) was created in 1993, just after the liberalization. In the initial period, the auction was “successful”, with an average 23,000 MT per year being traded at the auction. However, now it has been declined to 10,000 MT i.e. less than 5% of the total production as the preference of the growers has changed to sell their coffee at the farm gate to exporters’ or curing works’ agents. Also, there is decline in number of members from 450 to 250 in the first five years. Due to alarming
fall in coffee volumes traded on the ICTA in recent years, Carritt Morgan, one of its three auctioneers, has withdrawn its membership from ICTA since May 2008. Furthermore, there is a taxation of 4% on all the coffee traded at the auction and duration of settlement at the auction is between 10 and 15 days. Also, the system offers less facilities compared to facilities offered by agents which have facilitated the development of agents on a larger scale. In spite of this, the positive impacts of the ICTA auction include a local price-discovery mechanism for all grades of coffee. This has also become an important means of supply for small and medium local roasters through which they are able to get year-round supply of coffee even though they lack storage facilities. (David and Clementine, 2008)

In Indian Coffee industry there has been huge developments in the future markets in coffee. Despite the efforts to disseminate information, participation of smallholders in the future markets has been relatively low so far. However, it has helped in widening the access to markets, empowering farmers to make better cropping and selling decisions. Furthermore, it has facilitated the upgrading in storage, grading and technology infrastructure. Indeed, there is reduction in information asymmetries.

**Summary**

The main actors in the coffee value chain include producers, hullers, agents, curers, exporters, roasters and retailers and finally consumers. Most traded channel was found to be through the local purchasing agents. Also, Curers and local roasters are important players in the chain. Although majority of produce is exported, the direct contact of producers and exporters was less. The co-operative movement has been a failure, while, new forms like Self-help groups have been emerging. Also, in the recent years future trading is becoming more prominent in the value chain helping to widen the market.

**4.2. Governance and Co-ordination in Coffee**

**4.2.1 Performance in the chain**

The performance in the chain was assessed through variables like market structure, transparency, trust in the trade and flow of information. This was found based on the interactions made with the growers and other intermediaries.
Table 7: Performance in the Chain

<table>
<thead>
<tr>
<th>Chain structure</th>
<th>Conventional Chain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market structure</td>
<td>Open market</td>
</tr>
<tr>
<td>Transparency</td>
<td>Low (less price negotiation)</td>
</tr>
<tr>
<td>Trust in trade</td>
<td>Medium to high</td>
</tr>
<tr>
<td>Information flow</td>
<td>Low to medium</td>
</tr>
<tr>
<td>Relation with input market</td>
<td>Medium</td>
</tr>
</tbody>
</table>

*Source: Own illustration based on interviews*

In India, the market for coffee is open where the producers are free to sell their produce to any of the buyers. However, the fact that will focus our attention is transparency in the trade that had found to be less. Producers had less price negotiation for their produce while the information found to be was low to medium (table 7). Trade of coffee was found to be highly influenced by trade since most of the farmers (75%) farmers interviewed said they sell their produce since they trust the millers (curers). This was because most of the produce was sold at the farm gate level to the local purchasing agents or curers as they were easily accessible and the growers were more bounded to them. Furthermore explanation is given in the following sections.

4.2.2. Co-ordination among actors in the Value chain

A typical example of a *buyer-driven* chain is the value chain of coffee, specifically a *roaster driven* chain (Ponte, 2001). After the liberalization of the coffee sector in India, the coffee board had lost its control on the marketing of coffee and the roasters have gained control in the supply chain over the years. The strategic choices of coffee roasters have shaped both barriers to entry both at the roaster level and further in upstream segments like traders, exporters and the other processors. Entry barriers in the coffee market have increased for roasters because of the advertisement battle between brands. Branding plays an important role mainly in the in-home consumption market which needs huge investments. As a result, the concentration of the roasting sector is very high, especially for the in-home consumption market.
These governing structures have been observed mainly based on the conditions set by Gereffi et al. (2003) in defining the governance structure. In the study region, the governance structure between the producers and curers was found to be of market co-ordination wherein the complexity of information was found to be low. Also, the capabilities of codifying information between producers and curers were high since the information flow was through the extension services, yet not up to the mark. Additionally, the transactions was also based on mutual dependence being regulated by trust since most of the transactions carried was due to good relationships maintained between them due to family reputation and proximity to their area. The reason behind such co-ordination was the producers preferred to sell their producer to the curing works closer to their production area because of higher transportation costs and their belief was that there were less chances of them being cheated if the produce was sold to the well-known persons.

While the governing structure operated between the Curers and Exporters was found to be of modular nature wherein the coffee was graded and sold according to the demand of exporting companies and the specifications of the product and the process are more complex. However, the ability to codify information is found to be high and there was no requirement for supplier qualifications. There was possibility of acquiring improved processing and marketing skills when provided with proper training.

4.2.3 Asymmetry of Information
The small farmers in the Coorg region have very less bargaining power over price as they are highly dependent on the other actors in the chain like local agents, and curers. They have limited access to information about the quality issues as well as standards. Almost all the farmers interviewed reported that they do not know where exactly their product...
reaches and its price at the end markets. Most of the farmers sold their produce to the agents and the curers which is based on long period relationships and trust. Also, Farmers generally do not taste the coffee they produce and also lack the tasting skills necessary to evaluate the product.

Market concentration on the global scale facilitates a small number of multinational traders and roasters to dominate the supply chain and sets requirements for other actors in the chain. These asymmetrical power relations have left little room for negotiation for small-scale producers. These governance structures are often challenging for small-scale producers who lack the resources or skills to obtain and sustain the necessary certification, quality standards, and skills to undertake processing to increase their bargaining power. Furthermore, increasing standards that global buyers like certified – and specialty coffee is creating entry barriers for the coffee farmers who do not have resources and skills to enter these markets. The transparency in the flow of information to small scale producers is low.

Limitations in increasing bargaining power at production level in India is low education level of smallholder producers, less marketing experiences, monopoly coffee market structure and low economic scale of production. Thus, there is need for training of small scale producers in capacity building and upgrading either through marketing institutions or non-governmental agencies.

Having outlined the governance structures in the value chain, it is time to address how these structures affect value addition in the chain and opportunities and barriers for small-scale producers to upgrade, and effectively, facilitate sustainable development.

**Summary**

The co-ordination in the value chain is mostly the buyer-driven since roasters being the major actors in the value chain. The trade between the producers and curers is mostly due to the trust gained over the years. However, it is also market co-ordinated. The Transparency in the flow of the information is being low in the chain. And there was less bargaining power for the small growers.
4.3 Distribution of Value addition

4.3.1 Farm gate Prices
The prices at the farm gate have been fluctuating in each month. Figure shows that the price in a single year varied from Rs.1650 to Rs.2000/50 kg bag. Various factors have been influencing the prices of coffee like seasonal variations, monsoon, international market fluctuations etc. Lower prices affect the small farmers to a large extent. Such fluctuation is shown in the figure 10 between the period January 2009 till August 2010. This shows the prices are unpredictable and so the income obtained from the small growers.

Figure 10: Monthly Farm gate prices of Robusta Cherry in Coorg Region

*Source:* Own illustration and Coffee Board, 2011

4.3.2. Price Spread and Value Addition
For the analysis of price spread, two marketing channels have been considered.

i) Farmers → Agents → Curers → Local Roasters

ii) Farmers → Curers → Exporters
Table 8: Price spread of marketing in channel-1 (Domestic market)

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Particulars</th>
<th>Rs./tonne</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Farmers cost</td>
<td>1528</td>
<td>1.79</td>
</tr>
<tr>
<td>2</td>
<td>Price received by producer</td>
<td>50000</td>
<td>58.58</td>
</tr>
<tr>
<td>3</td>
<td>Agents purchase price</td>
<td>50000</td>
<td>58.58</td>
</tr>
<tr>
<td>4</td>
<td>Cost of Agents</td>
<td>934</td>
<td>1.09</td>
</tr>
<tr>
<td>5</td>
<td>Net margin to the agent</td>
<td>2850</td>
<td>3.34</td>
</tr>
<tr>
<td>6</td>
<td>Curers purchase price</td>
<td>53784</td>
<td>63.02</td>
</tr>
<tr>
<td>7</td>
<td>Cost incurred by curers</td>
<td>3525</td>
<td>4.13</td>
</tr>
<tr>
<td>8</td>
<td>Net margin to the curers</td>
<td>5446.05</td>
<td>6.38</td>
</tr>
<tr>
<td>9</td>
<td>Roaster purchase price</td>
<td>62755.05</td>
<td>73.53</td>
</tr>
<tr>
<td>10</td>
<td>Roaster cost</td>
<td>9580</td>
<td>11.22</td>
</tr>
<tr>
<td>11</td>
<td>Net margin of roaster</td>
<td>13014.95</td>
<td>15.25</td>
</tr>
<tr>
<td>12</td>
<td>Roaster selling price</td>
<td>85350</td>
<td>100.00</td>
</tr>
<tr>
<td>13</td>
<td>Price spread</td>
<td>35350</td>
<td>41.42</td>
</tr>
</tbody>
</table>

Source: Own compilation

Note: Price received by the producers: Rs.50 per kg. Costs incurred by producers include: transportation, bagging charges, commission charges, labour charges for loading and unloading. Costs incurred by other intermediaries include: transportation, rent, labour charges, packing material cost, tax, license fee, commission charges.

Findings from the survey showed that there is huge difference in the prices obtained from the producer at the farm gate level to the retail prices. The producer share in consumer rupee in channel-1 was 60 per cent wherein the total marketing cost incurred by producer accounted for 1.96 per cent of consumer’s price. Price spread was found to be Rs.35,350 per tonne (41.42%). It is clear that as the coffee moves from producer to each level of actor, there is certain amount of value added to it, and indeed it has resulted in the higher
price of the product. However, at each stage there is cost involved, each actor in the process is found to have a net, with roasters having a net margin of 15 percent (see table 8).

Table 9: Price spread of marketing in channel-2 (including exporters)

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Particulars</th>
<th>Rs./tonne</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Farmers cost</td>
<td>3200</td>
<td>4.07</td>
</tr>
<tr>
<td>2</td>
<td>Price received by producer</td>
<td>50000</td>
<td>63.52</td>
</tr>
<tr>
<td>7</td>
<td>Curers purchase price</td>
<td>53784</td>
<td>68.32</td>
</tr>
<tr>
<td>8</td>
<td>Cost incurred by curers</td>
<td>3825</td>
<td>4.86</td>
</tr>
<tr>
<td>9</td>
<td>Net margin to the curers</td>
<td>4891</td>
<td>6.21</td>
</tr>
<tr>
<td>10</td>
<td>Exporter purchase price</td>
<td>62500</td>
<td>79.39</td>
</tr>
<tr>
<td>11</td>
<td>Exporters cost</td>
<td>5250</td>
<td>6.67</td>
</tr>
<tr>
<td>12</td>
<td>Net margin of exporter</td>
<td>10970.5</td>
<td>13.94</td>
</tr>
<tr>
<td>13</td>
<td>Exporters selling price</td>
<td>78720.5</td>
<td>100.00</td>
</tr>
<tr>
<td>14</td>
<td>Price Spread</td>
<td>28720.5</td>
<td>36.48</td>
</tr>
</tbody>
</table>

*Source: Own compilation*

Note: Price received by the producers: Rs. 50 per kg.
Costs incurred by producers include: transportation, bagging charges, commission charges, labour charges for loading and unloading.
Costs incurred by other intermediaries include: transportation, rent, labour charges, Packing material cost, tax, license fee, commission charges.
Exporter selling price is taken at: 1796 dollar per tone (exchange rate 1 dollar = 44.51 INR) source: Coffee Board.

The price spread in channel-II is given in the table 9. It shows that producer share in consumer rupee was 3.52% higher compared to channel with agents. However, the marketing cost is also found to be higher (4%). The net profit of curers was per cent (Rs.4891 per tonne). The additional cost incurred towards processing per tonne of coffee beans by curers was Rs. 3825 and the additional returns realized were Rs.4891 (6%). The price spread in this channel was comparatively low (36.48%).
It is clear from the table that the price spread is high in both the channels. This might be due to the fact there is less transparency in the flow of information and the small producers are not able to reach the export market directly as they are bounded by the intermediaries. Their weak position in the market has made them to have less bargaining power.

4.3.3. Methods of Coffee processing at farm level and the Quality Concern

Quality of coffee is referred in respect to color, size, appearance, and flavor with acidic aroma. The quality of the final product depends upon the pre-harvesting and post-harvesting activities. Taste of coffee is affected firstly by altitude, shade, variety and soil at the pre-harvest level. However, there are also important issues regarding diseases and insects having a great effect on the product quality obtained at the end. Also, Harvest and post-harvest process has a strong influence on the generic quality of the coffee beans. Depending on the maturity of the fruit; the final taste of the product is affected. The picking of ripe fruits or slightly over-ripe fruits brings a fruity taste to coffee.

At the post harvest level, practices adopted like sorting, pulping, fermentation, washing, drying, storage, packing and processing including hulling and grading activities have a direct bearing on the final quality of coffee. Often, the beans produced are washed or hulled in the plantations and mostly dried or semi-dried beans are sold to the agents or the curing works. In the recent years, the safe moisture content is essential to maintain the quality which otherwise results in mould contamination. The mould contamination has been to be toxic to the human health mainly the kidney. The optimum moisture content in the dry cherry and parchment is up to 12 to 13 percent (Coffee Board). Also, the berry borer infected beans affect the quality and does not fetch any value in the market. Furthermore, the fermentation process as well as the cut of the beans resulting while pulping of cherries might avoid the coffee with good intrinsic qualities. Indeed, the quality of coffee not only depends on management practices during the production but also on the uniformity in environmental conditions coupled with best practices in the harvesting and post-harvesting process.
Processing starts at the farm level itself. Before selling to the agents or curers, there is a need to separate the beans from the ripe fruits. In India, it is done by two types of methods namely wet and dry process. However the method adopted depends on facilities available in the coffee-growing regions and the modernity and the efficiency of structures and infrastructures. In the Coorg region, most of the farmers follow the dry process where the cherries are dried on a cement floor for about 7 days. (See Appendix for details) Also, cherries are pulped by wet process at the village level pulper to get the dry parchment. Climate and local infrastructure (electricity and water supply) play a crucial role in the quality of the post-harvest process. The small growers in the region lack proper storage facilities. Further, the storage and transportation conditions being the major concern has an influence on the quality of green beans as it can increase the moisture content and also resulting whitening the beans.

Once after the post-harvest process is completed, the beans need to be polished in order to remove this outer skin that remains on the green beans. Further, processing of the coffee is at the curer level (See Appendix for details). At this stage, the coffee is either sold in bulk to domestic industry, or being sorted and then the best coffee beans are exported. It is important to have storage facilities with higher capacities.

4.3.4. Coffee Grading practices at farm level
Grading practices are carried at the farm level on the basis of colour and size at the basic level. They practice two kinds of methods

i) Hand sorting: In this method, the harvested cherries are sorted for unripe and overripe cherries. Also, the damaged cherries are removed during this process. This is made to make cherries free from dirt, leaves, etc.,

ii) Density Grading: In this method the cherries are made to flow through the channel of water. The light weighted cherries float on the water which is then discarded.

Further at the curers’ level, the beans are sorted and graded. Indian Coffee Board has set certain standards for Grading of the beans according to Moisture content, Size, Colour and the number of damaged beans (insect damage).
4.3.5. Barriers to Entry

Expert interviews say that entry barriers for small coffee producers in India to integrate to the international market include two main reasons. First and foremost reason Quality inconsistency due to lack of grading and poor level of product and process upgrading and secondly, lower production level leading to low quantity of supply.

Table 10: Barriers to entry to International Market

<table>
<thead>
<tr>
<th>Major entry barriers</th>
<th>Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistence in quality</td>
<td>High</td>
</tr>
<tr>
<td>Quantity of supply</td>
<td>High</td>
</tr>
<tr>
<td>Relationship with buyer</td>
<td>Low</td>
</tr>
<tr>
<td>Certification of coffee</td>
<td>High</td>
</tr>
</tbody>
</table>

*Source: Expert interviews (Own compilation)*

However, there were few other reasons like frequency of supply which could act as entry barriers, but their influence was comparatively lower than the above reasons

a) Consistence in quality: Good Quality coffee is always preferred more in the international market and fetches high prices. However, the quality of coffee produced by the small producers is low due to the improper management practices. In addition, the processing methods followed at the farm level are poor which will add less quality of the product. Hence, the quality aspect acts as a major barrier for small producers to International market. Study made by RISHI(2009) also have showed that low quality and poor level of farm upgrading are the major barriers in the coffee market

b) Quantity of Supply: The Volume of coffee produce for exports should be higher. But the level of supply from the small producers is low due to lower scale of production levels. This acts as a major entry barrier.

c).Relationship with buyer: Relationship with a buyer is found to have less effect in the integration to the international markets.

d) Certification: The value of certified coffee is higher; thereby certification of product becomes very essential. Certification acts as a high entry barrier for small producers.
4.3.6 Major Problems faced by Small Producers

Source: Own compilation

Figure 11 Representation of major problems of small producers

1). Labour scarcity: 90 percent of famers interviewed said that they faced the problem of labour scarcity. Moreover there was no year round supply of labour and they had to bring the labours from outside region that made them to pay higher wages. The efficiency of the labour was less but they demanded higher wages.

2). Irrigation Problem: Most of the small producers in Coorg region depend on rainfall for the production process mainly at the harvesting period. During the failure of monsoons, they had to depend on the other sources for irrigation. The cost of irrigation was found to be expensive which was a burden.

3) Difficult to afford machineries: Expensive machineries were not easily accessible by the small to medium producers. Although, 50 per cent of subsidy was given by the Coffee Board, it was not reachable to all the producers and there was information gap between producers and the coffee board.

4) Access to credit: Most of the producers depend on the informal credit since it can be afforded anytime from relatives, friends and agents. However, there was formal credit
dispersed through formal credit institutions like co-operative bank, the interest rates of 4% and if the loan is not repaid within a year, it raised up to 12% in the next year. This was a major problem which prevented to invest on improvement in the productivity level.

“I am in debt, since I was not able to repay the credit during this period as the coffee prices fell down, and was not able to make new investments in the next production process. So was forced again to take credit at high interest rates from the agents. It is also that when the credit is not paid back in time, the interest rate on that amount goes on increasing each year which is a burden.”

- Poovanna, Small coffee producer in Virajpet, Coorg (Source: Interviews).

The above statement is true for many of the small coffee producers.

5) Pests and diseases: Berry Borer was the major insect which was affecting the cherry quality. And such infected cherries are always rejected in the market. Both diseases and insects were able to reduce the yield level until 50%.

**Marketing Problems:** includes

6) Asymmetry of information: There was always a gap between the prices received at the end market and the prices received by the producers.

2) Lack of infrastructure and transport: Small producers did not possess the vehicles to transport their produce to the curers and the road facilities were not proper in the villages. These factors made them to sell their produce at the farm to the agents at lower prices.

3) Variation in prices: There was a fluctuation in the prices in the coffee in each month (see also figure10). Such variation had an effect on the income of the producers which in turn affect the investments in the next production process.

4) Lack of storage and processing facilities: Small producers did not have proper storage facilities at the farm level. They were following simple methods of processing like hand sorting as seen above. And were forced to sell even at lower prices because of lack of storage facilities.
Summary:
The profit margin received by the producers is very low. However, as the stage of value addition rises, the margin received also increases. The price has been fluctuating each year. The processing activities taken up by the farm is very simple and small producers face many problems in production and marketing. Poor quality and low scale of production are the main entry barriers to the international markets.

4.4. Improvement of Livelihood of Small Producers

4.4.1 Opportunities for Upgrading
As we saw earlier, that the coffee value chain being a buyer-driven value chain (roaster driven), there is less space for upgrading for small producers. Market power of International traders has hindered the capacity of Small scale farmers to move into higher value-added activities.

To make the coffee producers competitive in the global value chain and to help them to escape from poverty by improving their livelihood, upgrading forms the major concern. In this study, the notion of upgrading is understood as ability of producers to create and manage the value-added activities and help them to attain the coffee with various quality attributes that fetches them a good price in the market.

We saw that in the value chain, roasters and retailers are said to capture the larger profits while famers are left at the end. Roasters occupy a sheer size in the volumes and also from the brand power and are flexible in blending formulas. Indeed, this imposes a major constraint to small scale producers. Most coffees sold in consuming countries are blends of various coffee beans from different sources of origin. As a result, roasters in the importing countries rely upon on a few numbers of international traders to supply their base. This type of governance mode also allows roasters to pressure price which results in lower margins for the producers. This hinders the opportunity of small scale producers to go for higher investments in production to upgrade the activities which is having an effective impact on the coffee farmers to be competitive in the global coffee market and control activities that generate more value. All these factors make lead us to think there is a necessity of encouraging the upgrading activities in Coorg region.
Upgrading of coffee value chain could be done by the activities like

i) Product differentiation (sustainable certification and specialty coffees),

ii) Processing (distribution, milling, packing, roasting, and grinding), marketing etc.

**Product upgrading** requires investments in the improvement of inherent coffee quality to participate successfully in the niche markets. It was seen that small producers in Coorg region lack technical support for improving productivity and reduce the disease and insect attack. However, Coffee Board of India is making efforts in training the producers, yet, it is not yet up to the mark. Coffee Board is actively involved in the promotion of organic coffee in the region which is having high market value. Also, income losses could be reduced if higher quality products are produced.

**Process upgrading**: we saw that the producers in Coorg region mostly followed the basic methods (wet process to get dry parchment) in processing of coffee cherries and they lack proper storage facilities which made them to sell their produce at lower prices. According to the producers there were willing to adopt the advanced methods in processing of the farm level if proper training is given. Training of farmers is required to improve the product management through proper extension services.

According to one of the farmer

“*Trainings given by Coffee Board extension officers are once in a year or two for a period of one week. Once the training period is over, the training officers never turn up whether we have applied it on the farm or not. In most cases, one or two farmers will try to implement the lessons taught in the training*”

-Rudrappa, Coffee Producer, Coorg(Source: Interviews)

Very low level of upgrading is seen at the farm level. The main reason behind this failure of institutional and capacity building in strengthening of farm level upgrading in the region. As seen there is a little support in the form of Institution and capacity building, and Institutions have failed in the formation of unions. This fact arises the need of an approach focusing on the capacity building at the farm level.
4.4.2. Institutional development

Coffee Board of India is the key player in India to strengthen the coffee sector. Although, it carries many activities like research and development, conducts extension and training, we saw that it is not effective in the study region. Therefore, more efforts have to be made in implementing the developmental activities effectively and bringing particularly the small producers closer to higher productivity level.

At present, Coffee Board has been completely de-linked from marketing domain. Involvement of the Coffee Board in marketing again will minimize the role of middlemen. Meanwhile, Local level advisory consultants should be encouraged to guide the small producers in focusing conserving biodiversity and ensuring sustainable livelihoods by transforming land-use practices, business practices and consumer behavior.

First and foremost responsibility for the Coffee Board extension services is to carry out training effectively to help to manage the farm efficiently. Extension officers should be more open to the producers in order to transfer the development oriented research activities. Successful examples would encourage the small growers to implement the new ideas.

Furthermore, an institutional arrangement is essential to pool the produce and transport it efficiently to the processing units. This would not only reduce burden of the transportation cost but also avoids the inconvenience faced by many small and medium growers.

Subsidies has to be given to buy the farm inputs and machineries which would help them to mechanize the farm activities and help them to overcome the problem of labour scarcity and care should be taken to see that it is reaching the needy hands. A cordial understanding between the labour community and coffee growers is important as the labour needs to be employed almost throughout the year. Innovations in mechanization should still be explored as a potential supply side solution for the labour scarcity (AKARSHA, 2009).
4.4.3. Role of Co-operatives and Farmers Associations- to transfer the knowledge

It was seen that the relationship between the producer and buyer is loose and indirect which has left with less opportunities for transfer of knowledge, skills and services to the producers. This arises the concern for the Government in making efforts to transfer the knowledge and skills which can be done easily through famers associations and co-operatives and Self- help groups. The cooperative movement in the Coorg region has lost much of its attractiveness to farmers due to factors of mismanagement, Efforts have to be made to revitalize these associations and initiatives must be taken to rebuild the confidence of the producers for these associations. These associations could act as a pathway to transfer the knowledge and technical skills to the producers.

Additionally, Many number of producers organizations and Self-Help Groups should be encouraged, providing important information to growers about how to improve and optimize coffee production on their farms.

4.4.4 . Collective action to gain direct access to the international market

In the recent years, there is huge demand for certified and specialty coffee including the traceability of the product in the chain. However, this requires meeting of certain standards from the level of production. Value addition to the green coffee involves cost of certification, promotion of quality improvement, raising the reputation of the origin, good marketing skills and also sometimes costly physical investments (PONTE 2001: 19). This requires a certain level of good organizational development for producers to meet the legal, quality, and volume requirements of the international buyers. It is not possible to meet this huge demand from the international buyers by a single small scale producer, Hence, efforts should be made to bring the small scale producers together and link them directly to the export market. This also tries to reduce their dependence on the intermediaries and thereby their margin can be improved.

Linking group of producers can bring about improvements in the margin of profit received by the famers. Also, when the direct contracts are set between farmers and the exporters, exporters can control the quality of the coffee. Exporters, though to a lesser extent, have recently engaged in sourcing certified coffee directly from the producers.
When linked to certification through exporters, farmers will be obliged to comply with the standards of certification.

We saw earlier that such an initiation was made in the Coorg region in this regard, CAFNET which enabled the farmers to come together. In this project it was made that production was carried according to the standards set and producers were successful in getting certification. Certified produce had brought a better price to those producers. Although, this was project was successful, there is a need to bring in more producers in the region to act collectively in order to gain easy access to international markets.

4.4.5. Financial Support

Most important factor in the production process is the money to invest. In the study region, although the interest rate is high, most of the producers take the credit from the agents since they do not ask to pledge their properties. This also has bounded them to remain in the clutches of the agents and are forced them to sell their produce to the agents. And often the farmers are caught in relationships that are unfavorable to them because of the low, sometimes unfair, prices paid to them.

It becomes very essential on the part of the Government to make attempts to provide loans at the lower interest rates for the small producers to boost their investments in production and upgrading their activities. Investment in enhancing the productivity by the coffee growers will also lead to larger margins. Enhancing the productivity will not only increase the profits but also creates more employment opportunities due to reinvestments in the sector.

Also, the attempt of delivering credit through Self-Help groups should be undertaken on larger scale. Such groups allow the management of credit amount and repayment in an efficient manner. Most important thing is to see that the credit amount reaches the producers in time. This would help the farmers to use the credit for the productive purpose and will avoid the miss-use of the credit.
Coffee production is the catalyst for development of rural economy, balancing the livelihoods of the people in the region. The study has indicated that the livelihood of the people in coffee plantation sector is at stake mainly due to the challenges arising from different problems related to production and marketing. Further, research on the other issues like weather, avoiding migration of labour force from coffee growing regions and other problems can help in obtaining comprehensive idea about the overall problems in coffee plantation sector and to take appropriate policy measures in tackling the problems.

Summary
This objective majorly focused on the important policies to improve the livelihood of small producers. Most important is the development of institutions in the study region focusing on the initiation to be taken in the flow of the knowledge. Focus is also on the role of co-operatives and farmers associations in the transfer of the knowledge in efficient manner. Collective action of the producers helps in increasing their bargaining power in the market and helps them to get a better price. Financial support and developmental oriented activities is very essential in bringing the producers from the clutches from the agents. Yet a combination of approaches with the participation of coffee growers, agents and government has to be adopted for sustenance of this sector for mutual benefits.
Chapter 5 .SUMMARY AND CONCLUSIONS

The study was carried with the main intension to analyze the value chain of coffee in Karnataka, India. The study intended to answer the question to improve the livelihood of mall coffee growers in Coorg region.

Major proportion of agricultural production is been taken by the small farms. Coffee, being a commercial crop in the tropics is playing an important role in the economy of the people. Coorg district in Karnataka accounts for higher production of coffee with large number of farmers involvement in its cultivation. More than fifty per cent of the total population in this region is involved in coffee cultivation making it as major source of income. There have been various developments in the coffee marketing. Prior to liberalization, coffee was marketed through Coffee board wherein the producer’s coffee was pooled and then auctioned in two separate auctions for the domestic market and the export market. This scenario was changed after liberalisation making an end to the monopolistic behaviour of coffee board. This opened a free market to producers to sell their produce. This was beneficial to the farmers in one way, however made it easy for the entry of intermediaries. Coffee follows a complex chain from crop to cup wherein a coffee bean goes through various processes which adds value at each stage involving different actors. Coffee supply chain also works in an International way. Hence the present study made an attempt to understand the position of the famers in the value chain and help them to improve their livelihood focussing mainly on i) To describe important marketing and actors involved in coffee value chain. ii) To analyse the co-ordination among different actors in the coffee value chain iii) To analyse how value added is distributed between the different actors. Furthermore based on the above objectives last objective aims at discussing for the improvement of the livelihood of thee small producers.

The study was carried out in Virajpet and Kushalnagar taluk of Coorg district in Karnataka. The study involved interviewing various actors in the chain. In the study area, 30 famers were randomly selected from Virajpet taluk and were interviewed with a semi-structured questionnaire. Furthermore, three small curing works and five local roasters
were selected and interviewed with semi-structured questionnaire. An Exporting company was also been selected in Kushalnagar. Additionally, expert interviews were carried out from the officials of the Coffee Board.

5.1 Summary

Based on the literature reviewed, a conceptual framework was developed to study the different objectives. This framework focused on different dimensions in the value chain like production and marketing aspects. The study was mainly focused on marketing side analysing the governance factor and the distribution of profit margin in the chain.

The first objective relies on the identification of different marketing channels and actors in the chain. The study showed that there existed channels for both domestic and international markets. The different actors from coffee to cup include producers, hullers, agents, curers, exporters, roasters and retailers and finally consumers. Intermediaries had a major role in the chain. Most of the producers sell their produce to the agents at the farm gate price. Further, quality attributes was also important during the time of selling. Main quality parameters checked were for moisture content, out turn of coffee, berry borers, and for the presence of Blacks and bits. However, it was also seen that curers directly purchase the produce from the farmers. At the curer level, coffee is further graded according to standards set by the Coffee Board. From the curer level, it is either sold in domestic market or the international markets. Five percent of the trade also takes place through ICTA auctions also take place after curing stage wherein cured coffee is sold either to domestic roasters or the exporters. Domestically, coffee was sold through local roasters and instant coffee manufacturers.

Second objective focused to analyze the co-ordination between the actors. The study found that the coffee producers were operating in a market based global value chain. However, trust between them also played a major role in the transaction. The co-ordination at the international level involving exporters was of modular in nature. There was less transparency between suppliers and buyers. Small producers had less bargaining power in the chain. The Governance structure found in the chain was the buyer-driven mainly the roasters played an important role in the chain. The asymetricity in the
information flow was clearly in the chain as the producers were not aware of the end point where their produce reaches and its corresponding price.

Third objective was focused on the distribution of the value addition among the actors in the chain. The study revealed that the roasters had a huge share in the value addition. However, the costs involved by them were higher. Nevertheless, their net margin was found to be higher. Following this, grading practices practiced at the farm level was found to be simple methods revealing the importance of upgrading opportunities at the producer level. Major entry barriers to the international market were found to be consistence in the quality and Quantity of supply.

The study also made an attempt to understand problems associated with the production and marketing of coffee. They include access to credit, irrigation problem, affordability to machine, labor scarcity and pests and diseases, climate. While marketing problems include asymetricity of information, price variation, lack of storage and infrastructure facilities.

Further, last objective focused on some policies to improve the livelihood of the small producers. First and foremost measure focuses on the institutional developments in terms of research and extension activities. The role of Coffee Board, in Regaining its role in marketing, will be able to reduce the effect of middlemen to some extent. Further, the study also focuses on the need for the co-operatives and farmers association in the transfer of knowledge and to increase the bargaining power of the producers. The study also throws light on the importance of collective action of producers to obtain easy access to the international markets. Financial support to the producers not only helps them to increase productivity as well as to makes a way to come out of the clutches of the middlemen.

5.2 Conclusions

Coffee undergoes various processing stages by the time it reaches the consumer. At each stage the value added to it increases and takes a new form. It is clear that although, market is the major player, trust between producers and intermediaries play a major role
in the transaction. In Indian coffee market, most of the produce is intended to exports. Quality standards play an important in reaching the gaining access to international producers. However, small producers are yet to reach the standards required for the international market and are getting a smaller share in the profit of the value addition process. Hence, there is a need to improve the livelihood the small producers to make them their position in the global market. Indeed, Collective action of the producers helps them to increase the bargaining power and to get a higher share in the value chain process.

5.3 Further research scope

The study overviews the process of the value chain and the actors in the chain. The major focus in the study is the small producers. Hence there is a scope for further studies focusing on the deeper insights of each actor in the chain. Further, the study is confined to one district with limited sample size and majorly intended in the domestic market. Hence similar studies can be carried focusing in the export markets.

5.4. Limitations in the study

The study is carried a single student investigation with time and resources being the major constraints, it is limited to one district in Karnataka. Primary information obtained is mainly based on the interviews. Hence there may be bias in the opinions given by the respondents. Further, the study is confined to only two taluks in Coorg District in Karnataka(India). Thus generalizations made based on the findings of the present study have limited application in the non-study area.


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OXFAM . (2002 b) : Poverty in a coffee cup, Market trade fair.


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http://www.ifpindia.org
ANNEXURE

Annexure 1: Production of different growing region in 2009/10 (post monsoon estimates)

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>State/district</th>
<th>Arabica</th>
<th>Robusta</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chikmagalur</td>
<td>37450</td>
<td>32700</td>
<td>70150</td>
<td>24.2</td>
</tr>
<tr>
<td>2</td>
<td>Coorg</td>
<td>21550</td>
<td>89650</td>
<td>111200</td>
<td>38.4</td>
</tr>
<tr>
<td>3</td>
<td>Hassan</td>
<td>14400</td>
<td>9950</td>
<td>24350</td>
<td>8.4</td>
</tr>
<tr>
<td>4</td>
<td>Kerala</td>
<td>1375</td>
<td>57875</td>
<td>59250</td>
<td>20.5</td>
</tr>
<tr>
<td>5</td>
<td>Tamil Nadu</td>
<td>14650</td>
<td>4700</td>
<td>19350</td>
<td>6.7</td>
</tr>
<tr>
<td>6</td>
<td>Non traditional areas (Orissa)</td>
<td>5100</td>
<td>85</td>
<td>5185</td>
<td>1.8</td>
</tr>
<tr>
<td>7</td>
<td>North eastern region</td>
<td>75</td>
<td>40</td>
<td>115</td>
<td>0.0</td>
</tr>
<tr>
<td>8</td>
<td>Total</td>
<td>94600</td>
<td>195000</td>
<td>289600</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Coffee Board

Annexure 2: Marketing Cost incurred by farmers (Rs/tonne)

<table>
<thead>
<tr>
<th>Sl. no</th>
<th>Particulars</th>
<th>Amount in Rs.</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Packaging material cost</td>
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<td>9.85</td>
</tr>
<tr>
<td>2</td>
<td>Loading</td>
<td>180.8</td>
<td>11.84</td>
</tr>
<tr>
<td>3</td>
<td>Transportation</td>
<td>280</td>
<td>18.33</td>
</tr>
<tr>
<td>4</td>
<td>Unloading</td>
<td>150</td>
<td>9.82</td>
</tr>
<tr>
<td>5</td>
<td>Weighing charges</td>
<td>160.2</td>
<td>10.49</td>
</tr>
<tr>
<td>6</td>
<td>Labour charges</td>
<td>280.5</td>
<td>18.36</td>
</tr>
<tr>
<td>7</td>
<td>Commission charges</td>
<td>325.5</td>
<td>21.31</td>
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<tr>
<td></td>
<td>Total</td>
<td>1528</td>
<td>100</td>
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Source: Own compilation
Annexure 3: Marketing cost incurred by Intermediaries

<table>
<thead>
<tr>
<th>Sl. no</th>
<th>Particulars</th>
<th>Amount in Rs.</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transportation cost</td>
<td>226.6</td>
<td>24.25</td>
</tr>
<tr>
<td>2</td>
<td>Packing material cost</td>
<td>150.01</td>
<td>16.05</td>
</tr>
<tr>
<td>3</td>
<td>Weighing loading &amp; unloading cost</td>
<td>180.5</td>
<td>19.32</td>
</tr>
<tr>
<td>4</td>
<td>Tax</td>
<td>7.53</td>
<td>0.81</td>
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<tr>
<td>5</td>
<td>Rent</td>
<td>15.01</td>
<td>1.61</td>
</tr>
<tr>
<td>6</td>
<td>License fee</td>
<td>2.2</td>
<td>0.24</td>
</tr>
<tr>
<td>7</td>
<td>Commission charge</td>
<td>352.6</td>
<td>37.73</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>934.45</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Own compilation

Annexure 4: Schematic view of coffee processing

Wet processing
(Delivers washed coffee)

- Cherry sorting
- Floatation-wet feed
- Pulper
- Fermenting
- Skin drying- removal of all free/ excess water
- Sun / mechanical drying

Dry processing
(Delivers natural coffee)

- Cherry sorting
- Flotation and skin drying
- Sun drying
- Storage and conditioning
Annexure 5: Coffee curing

- Pre cleaning / Desorting
  - Milling / hulling
    - Air cleaning (catador)
      - Grading by bean size (screening)
        - Grading by bean density (gravity table)
          - Machine sorting
            - Quality evaluation and classification
              - Bagging off for sale
                - Rubbish water and stones to waste
                - Husk to composting pods to repass
                - Dust to waste shells to bagging off
                - Removal of foreign matter
Annexure 6: Schedule for Coffee Producers

A. General Information

1. Name of the producer: ......................

2. Sex ....................... Age ....................... 

3. Village: .................

4. Family members(number): ......................

5. Educational Level .................

   a. Year of starting the cultivation: .........................
   b. Kind of coffee cultivated( whether Robusta or Arabica or both): .........................

7. How did u learn about coffee cultivation
   a. Family
   b. Extension training/visit
   c. School education
   d. others

8. What is the average yield of coffee in your plantation? (‘bags/acre’ or ‘kgs/acre’ or ‘tones/acre’)

9. What are your overall production costs for coffee (calculated per acre and season) ............... 

10. What are your revenues from coffee (calculated per acre and season) .................

11. What are the major challenges that your coffee plantation is facing?
   a) d) 
   b) e) 

12. Do u grow intercrops with coffee……
   If yes, mention them and the costs and returns from the intercrops .................

13. Do u know about the certification? .................Yes or No
    If yes, mention them (Organic/Fair trade/Shadow grown ) .................
B Marketing of Coffee

1. Where do you sell your coffee and in which form (Also, specify amount of coffee sold and price per kg)
   a. Agents .....................
   b. Curers.....................
   c. Exporters.....................
   d. Local roasters.....................
   e. Others (specify).....................

2. Do you know any requirements necessary for coffee marketing........(Y/N)
   a. Moisture content(%) 
   b. Uniformity
   c. Colour
   d. Others (Please specify)

3. Marketing costs involved........
   a. Bagging
   b. Packing
   c. Loading and unloading
   d. Transportation
   e. Agents

4. Are you updated with the coffee prices........
5. Do you grade your produce according to the quality…(Y/N).....
   If yes, describe grading criteria...
   a. Size
   b. Uniformity
   c. Colour
   d. Others(specify):

6. Do you have any storage facilities....... Yes/No
   If yes, kind of storage....... 

Framework conditions
1. Are you a member of any producer organization....Yes/No
2. Are there any service providers in your area from which you can have any kind of support? Is yes, whom and what kind of support
3. Did you participate in an extension/ training program of coffee?........(Yes/No)
   If yes, please specify how many times and by whom
4. How is the relationship between you and your buyer
   a. Contracts
   b. Informal: only verbal
   c. Informal: trust based
5. Since when u trade with them
6. Are the payments done immediately or partially
7. Is there any advance payments
8. Is there any case such case of non-payment
9. Is there any problems associated with marketing

10. What are your benefits from supplying directly to the exporters
   a. Higher and more reliable income
   b. Diversification of income sources
   c. More regular cash flow
   d. Others (please specify)

**Others**

1. Do u have access to credit…(yes/No)
   If so specify whether formal or informal
   Rate of interest

2. Lastly do u have any suggestions/ comments on:
   Production
   Marketing
   Increasing income
   Others (please specify)

---

**Annexure 7: Questionnaire for Intermediaries**

1. Name ………………..
2. Sex…………………..
3. Age…………………..
4. Education…………………
5. How did you come to this business
6. Do u have any to other source of income? If yes (please specify)
7. Where do you get your raw materials from (please name district, too)?
   a. single smallholders at their farmgate
   b. other

8. Do you always buy from the same suppliers? ….. yes /no
   If yes, how is the relationship between you both

8. How did you came first in contact with your suppliers?
10. Do you have special requirements for your suppliers? (yes, please specify /no)

11. How much do you pay per kg?

B. Marketing and processing

1. How do you process the raw material?

2. Do you weigh your products? (Y/N)

3. How do you do the packaging (kind of packaging)? And costs involved in it………

4. Do governmental requirements exist? (Y/N)
   If yes, please specify

5. To whom do you sell your products (please specify region)?

6. What is your selling price after processing is done?

7. What are the consumer preferences are there any special requirements? (Y/N)
   yes (please specify )

8. What is your profit margin per tonne of processed product?

9. How often u buy the product…

10. Do you have storage possibilities?
    yes /no

11. Do you get any kind of support? yes (please specify) / no

12. What would you mention as your biggest problems in processing?