



Value Chain Upgrading Strategies for Sustainable Coffee Industry:- A Visionary SWOT Approach

C. G. Yadava^{a#*}, M. Arun^{a#}, K. M. Santhosha^{b†},
B. H. Manohar^{b†}, C. Chandrarekha^{ct} and M. D. Gagana^{ct}

^a Department of Agricultural Economics, University of Horticultural Sciences, Bagalkote, India.

^b Department of Agribusiness Management, University of Agricultural Sciences, Dharwad, India.

^c Department of Agricultural Economics, University of Agricultural Sciences, Dharwad, India.

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ABSTRACT

The government of India believes boosting exports of agricultural commodities is a sure-shot way to enhance the farmer's income in the country [1]. Indian coffee is primarily an export-oriented commodity with over 75 per cent of the annual production being exported to various destinations around the world [2]. Small coffee growers dominate coffee production in the country. The study comprised both qualitative and quantitative data collected for coffee value chain actors in Kodagu districts of Karnataka during the study period. The main objective of the study is to develop strategies to upgrade the value chain for the sustainable coffee industry. The results of the study indicate that value chains for coffee are largely diffuse, with limited coordination in terms of quality and specifications in the conventional chain. For up gradation in the value chain in the study area

Assistant Professor;

† Ph.D. Scholar;

*Corresponding author: E-mail: cg.yadav@uhsbagalkot.edu.in

farmers has to adopt Branding and Labeling, value chain through bio-dynamic farming, Sale through direct auction, Collectivization, Direct Sale of ripe cherries to a Corporate, Internet Marketing, organic certification etc [1]. This study suggests that upgrading strategies could be difficult at the level of the chain without any institutional support. Hence, the government needs to develop policies for effortless adoption by the coffee planters of identified upgrading strategies.

Keywords: Coffee value chain; SWOT; value chain mapping; marketing strategies.

1. INTRODUCTION

Coffee is a highly traded commodity next to petroleum products across the globe. Over 2.25 billion cups of coffee are consumed in the world every day [3]. Coffee production (over 90%) takes place in developing countries while 70 per cent of it is consumed in developed countries [4]. The total global production of coffee stood at 169 million 60 kg bags and consumption at 168.39 million 60 kg bags in 2019-20 (ICO, 2019-20). The coffee industry engages about 100 million people of which 26 million are small growers [5]. The reports of the International Coffee Organization detail that coffee is supporting millions of small farmers and creates enormous employment opportunities in rural areas.

The major coffee growing countries have been distinguished under four regions: South America, Asia and Oceania, Mexico and Central America and Africa (ICO, 2019-20). Across these regions, Brazil, Vietnam, Columbia, Indonesia, Honduras, Ethiopia, Peru, India, Guatemala and Uganda are being recognized as the top 10 coffee growing countries in the world (ICO, 2019-20).

The coffee sector in India is at an important transition point in its development. Traditionally, India's coffee has targeted low-value, commodity markets for products such as instant coffee, facilitated by state management in the form of the Indian Coffee Board. With the emergence of economic reforms especially concerning liberalization in the 1990s and the emergence of Vietnam as a strong competitor in the low value side of the market, the Indian coffee sector finds itself squeezed in a market increasingly bifurcated between high-value specialty coffee and commodity sectors dominated by Brazil and Vietnam. To compete in this environment, India not only needs to improve the quality of its product offerings but also the diversity of products to tap into emerging growth segments because 70 per cent of Indian coffee is exported [6]. This is also important from the standpoint of rural development, as smallholder production dominates the sector.

There were many studies conducted on value chain of coffee in India. But, there is a research gap in up gradation strategies for sustainable coffee industry. Moreover, the present study analyzes the integration of coffee producers into potential conservation oriented market segments. The major goal is to couch our analysis through the lens of the value chain, mapping the different stakeholders present in the coffee sector as well as the governance structures that influence interactions and strategies for upgrading the value linkages.

2. MATERIALS AND METHODS

The study comprised both qualitative (involving extensive field observations on production and marketing practices) and quantitative data collected for coffee value chain actors in Kodagu districts of Karnataka during the April-July, 2018 period. A semi-structured, pre-tested survey with both open and closed ended questions was used to collect relevant information. The survey addressed information related to production, processing and marketing practices. For other downstream actors, separate checklists were used, with information to map the value chain elicited through facilitated discussions. Overall, the sample included 52 planters; five traders; three hullers; three curers; four roasters; and eight retailers.

2.1 Value Chain Mapping and Analysis

The study adopted the Value Links methodology of GTZ [7] in analysis that expands the value chain tools and methods explicated by Kaplinsky and Morris [8] in a manner that better operationalizes the mechanisms for chain upgrading. In this context, firstly identified the key players/operators involved in the marketing channel, mapping these relationships graphically and identifying supporters, enablers and disablers in the chain. Further assessed governance relationships based on methods motivated by Gereffi et al. [9] and Riisgaard et al. [10].

The Value Links methodology differentiated between the processes in the chain (top part of each figure, denoted by block arrows), actors associated with the different processes (denoted by rectangles) and various institutional supporters (denoted by trapezoids). Wherever an actor undertakes more than one function, a larger rectangle is used to depict this (e.g. domestic companies and MNCs undertaking aggregation, curing, and export). The study also identified constraints by boxes with a call-out arrow and a lightning bolt, while opportunities have a similar shape with a star instead of a lightning bolt. An advantage of the Value Links approach is the visual disaggregation between processes, people and supporters to illuminate complex systems more transparently. Based on this analysis, the study identified different conservation-oriented upgrading strategies and analyzed their feasibility.

2.2 Visionary SWOT Application

The coffee value chain has many stakeholders from the production of beans to a cup of ready coffee. The study utilized the stakeholders' analysis concept by employing SWOT analytical framework adapted by GTZ (2008). Major stakeholders were analyzed for their strengths, weakness, opportunity and threat in the value chain. Moreover, a visionary concept has been developed by introducing the short term, medium term and long term strategies to upgrade and sustain a value chain.

3. RESULTS AND DISCUSSION

3.1 An Assessment of the Coorg Coffee Value Chain

The main purpose of mapping of value chain coffee is to draw the different stakeholders from crop to cup. The conventional coffee value chain is consist of producers (referred to as planters), village level consolidators, traders, hullers, agent aggregators domestic companies, multinational companies (MNCs), curers, exporters, importers, domestic and international roasters, wholesalers, retailers and consumers (Fig. 1). To know producers share in the value chain, it is very much important to understand the actors involved in the chain. In the Kodagu district over 80 per cent of the growers sell their produce at the farm gate level due to easy accessibility to the local traders or village level consolidators [11] and [12]. Hence, growers are not involved in the

marketing of coffee and are not much benefitted in terms of value addition and prices [13]. The growers sell their produce to village level consolidators, traders and agents/facilitators of Multi-National Companies. Besides, in some regions of the district, there are companies also involved in the production of coffee that markets their products in bulk to domestic and international markets.

Primary level processing (at the estate level) of coffee involves wet and dry processing. In the Kodagu district, a majority of the farmers practice the dry processing method where the coffee beans are spread over in the drying yard or floor (mud/cement/tile) subject to sun drying. Fresh beans are also pulped by a wet process to get parchment coffee. However, the small growers are unable to produce parchment coffee as they reported a lack of the required infrastructure on their own farms. But, few have ventured in to get it processed in their neighboring farms where facilities for making parchment coffee are available. After dry or wet processing it flows to village level consolidators or traders, who further sell them to bigger traders, hullers, curing works, facilitators/agents of MNC's and exporters.

The traders further pass on their produce to hullers, curers, and Multi-National Companies. Some of the producers directly sell their produce to these intermediaries to earn a better producer share in the consumer rupee [14]. The hullers further process dried cherries to clean coffee. The hullers market their produce to local curers, companies and agents. However, the agents normally work on behalf of curers. In the coffee value chain agents/facilitators are identified as "powerful local actors" who are involved in the collection of coffee from producers, village level consolidators and hullers. They pass the product to curing works, MNC's and exporters. They are acquainted with updated price information, in addition to financing facilities. They hugely dominate the local market and act as prominent middlemen between the growers and curers.

The secondary processing is carried out by the MNC's and local private companies. These companies purchase coffee and sell it to the domestic wholesalers, rosters and large sized retailers and they are also involved in export. The role of curing works an important role in the coffee value chain. These players practice systematic vertical integration involving in marketing activities such as sourcing coffee from producers, local traders and hullers. Thereupon,

they cure the coffee received, and store and sell it in domestic and international markets. The word curer is a misnomer as it is no longer their main activity where trading is their main activity. Some of them are adding certification of coffee to the bag of their activity by expanding their marketing functions and moving towards a higher degree of vertical integration it's a global trend. We are moving towards an oligopoly market with few players in the market. So, we are really witnessing the typical "price leader-price follower" relationship in coffee marketing. So, the move from many to few is buyers not to the advantage of coffee farmers. The nodal points in the coffee marketing network are the agents who operate at the local level and curing works that operate at the regional level are largely controlled by the exporters. The exporters have high access to market information and are highly benefitted from the information provided by the agents in the international markets [8]. These local curers, in turn, sell their coffee to export markets and domestic roasters, wholesalers and retailers which in turn are consumed by the local consumers.

The exporting of coffee is largely undertaken by Multi-National Companies and few domestic companies. They export to countries like Italy, Germany, Switzerland, Spain, Greece, Australia, Russia and West Asia. These companies supply quality coffee to the wholesalers of importing countries which is then distributed to the roasters and retailers. The roasting process usually takes place near the consumption center. The roasting of coffee takes place both at the domestic and international level to obtain a desirable flavor and taste suiting the tastes of the consumers. The roasters, traders and retailers exert a high degree of control in the value chain of coffee even though they do not own production and processing facilities. In the case of International markets, roasting is usually carried out by the importing countries close to the place where coffee is finally disposed off to the consumers. After roasting, the roasted or ground coffee is then sold to wholesalers at the international level, retailers and finally disposed of off with premium to the international consumers through retailers and commercial outlets.

3.2 Huller-cum-block Level Trader

Most of the hullers are those who were involved in coffee trading earlier, who have diversified into hulling activity. Hullers are mostly concentrated in the southern Coorg where robusta coffee

cultivation is predominant and most of its procurement is thus robusta cherry. 60-70 per cent of total procurement happens during the peak months of January to March. The subsidy is offered by Coffee Board to install hulling units, to boost local processing.

3.2.1 Roasters

Roasters process the beans and sell them at factory gate prices. Roasting transforms green coffee into the aromatic brown beans that we purchase in retail stores. The most common roasting types are drum and hot air although there are others including packed bed, tangential and centrifugal roasters. There are two groups of roasters. The first are roasters who are roasters and retailers. They roast beans and own coffee shops where they grind and sell coffee locally. The second are wholesalers who roast beans and then distribute the beans to retailers locally, regionally or nationally. Procurement of quality coffee beans, roasting machines, branding, blending and certification are the aspects considered for upgrading at the roasters level. Roasters purchase green beans from planters, commission agents, hullers and curers. While most green coffee beans are purchased by roasters under long-term contracts with curers and estates.

3.3 Generalizing Value Chain Upgradation Strategies: A Better Future for the Coffee Industry

Value chain upgradation is the movement from "low value-added" activities to "high value-added" activities within the value chain. It helps to earn a good share in the consumer rupee through vertical linkage. The coffee production sector is dominated by small growers. There are 2,20,825 coffee holdings in the country (2019-20), of which 2,18,116 (98.80%) are small growers [15]. The scenario of Kodagu is no way different. 'Small scale production' and 'lack of superior quality of coffee' meeting the demands of the consumers are the two major constraints among the small growers to upgrade their products and market them at the global level.

It cannot be business as usual as consumers need a safe product and are willing to pay a premium. Value chain upgrading among individual small coffee growers in Kodagu is a challenging task but is doable. There were instances where few large entrepreneurial farmers have successfully moved up in the value

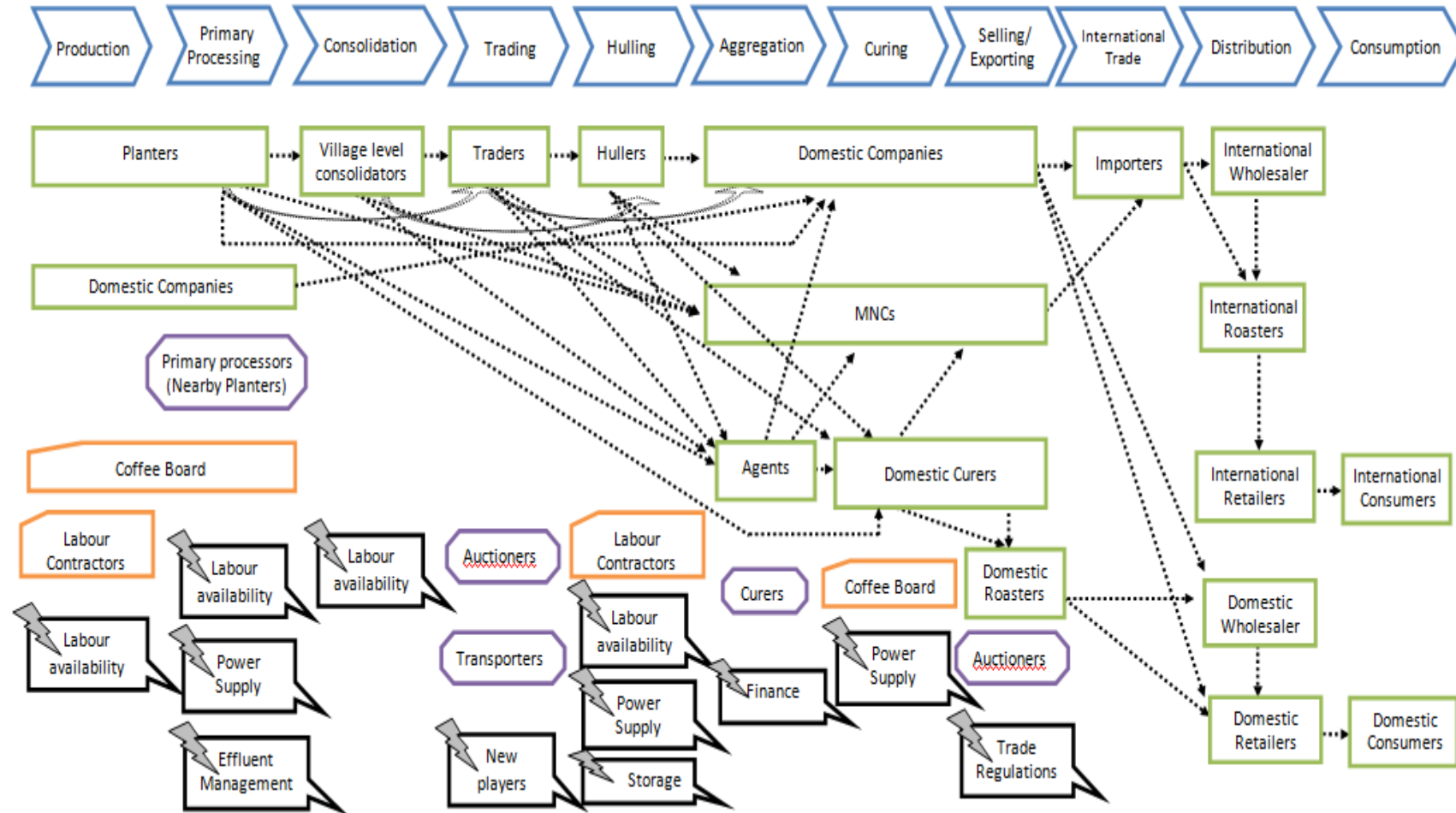


Fig. 1. Value chain for conventional coffee in Coorg

Source: Compiled by the authors from fieldwork

Table 1. Returns and share in the consumer rupee to actors in the conventional coffee value chain (Rs/tonne)

Actors		Planters	Village level consolidators	Hullers	Agents	Curers	Roasters	Retailers
Particulars								
Costs	Production/procurement	61153.3	155506	158600	165100	167700	185900	208000
	Fixed Cost	520	-	354.9		634.4	267.8	780
	Transportation	585	617.5	-	286	1418.3	1387.1	2730
	Storage	32.5	-	80.6	-	126.1	211.9	26
	Value added/processing	850.2	-	435.5	-	223.6	3662.1	3151.2
	Others	-	39	65	97.5	110.5	104	299
	Total	63142.3	156162.5	159537	165484	170212	191532	214284
Returns	Main product	155506	158600	165100	167700	185900	208000	235300
	By-products	-	-	1560	-	-	-	-
	Total	155506	158600	166660	167700	185900	208000	235300
Margin	Rs/tonne of dried cherry	92363.7	2437.5	7122.7	2216.5	15688.4	16468.4	21015.8
	Rs/kg of dried cherry	92.3	2.47	13.39	4.16	29.64	31.07	39.65
	Share of total margin (%)	43	1.1	6.3	2	13.9	14.6	18.6

Note: * Unit is not applicable for margin
Source: Computed by the authors from fieldwork

Table 2. SWOT application and strategies for sustaining value chain Farmers (especially small and marginal)

Activities	Strengths	Weakness
A. Production	A. Long experience; shade cultivation; tree diversity	A. Small holding size; Slope land terrain; difficult activities; labor intensive - increasing wages; Lack of access to credit
B. Technology	B. Using the best available technology	B. Yield levels are low compared to other countries
C. Processing	C. Least cost because dried in front of the house.	C. Lack of proper drying yard;
D. Marketing	D. Immediate realization; no risk of transport. Substantial reduction in drudgery (bags, Trans, labor, waiting, etc.)	D. Village sales; No reliable quality testing facilities, hence malpractices (Weighment, moisture %, outturn). Lack of price info
E. Value-addition	E. Educated planters having info on global trends in coffee.	E. No value addition done as such
		F.

Opportunities	Short-run strategies	Medium-run strategies
<p>A. Cost reduction; Credit facility</p> <p>B. Developing Labour saving technology and high yielding varieties</p> <p>C. Improve coffee quality through improved practices; avail coffee board subsidies</p> <p>D. Creating infrastructure convenient to improve marketability</p> <p>E. To go for hulling the beans; use husk as manure; to look for selling the graded coffee to access higher prices.</p>	<p>A. Properly promote shade coffee – GI, Bird friendly (BFC), certified, eco-friendly, etc.; optimizing labor cost</p> <p>B. R&D support for mechanization</p> <p>C. Identifying and provisioning government wastelands for creating processing infrastructure- thus improving quality.</p> <p>D. Producer collectives to be formed and strengthened; create processing and quality testing facilities; NGOs to be tied up with.</p> <p>E. Collectives to create hulling infrastructure; use husk as manure.</p>	<p>A. Mechanization needs to be explored (fertilizer application, and harvest are major labor costs); innovation in credit provisioning</p> <p>B. R&D to improve yield and mechanization</p> <p>C. Converting government land into good quality drying yards; putting up jointly owned pulping units.</p> <p>D. Creating community facilities for quality testing; directly selling to curing companies. NGO support</p> <p>E. Add curing facilities (helps in grading); sell graded coffee to access higher prices.</p>
Threats	Medium-run strategies:	Long-run strategies:
<p>A. Increasing cost – declining competitiveness. Irregular monsoon – need for external irrigation – falling yield</p> <p>B. Improving technology in countries like Vietnam (our yield remains the same, their yields have increased)</p> <p>C. Lack of knowledge on the importance of quality</p> <p>D. MNCs dominating procurement</p> <p>E. Lack of finance and knowledge/exposure</p>	<p>A. Adopting gradual transformation to organic; bio-dynamic practice seems promising.</p> <p>B. Taking examples from countries like Vietnam, there is scope to increase yield levels (recall Nestle presentation) – Need for R&D.</p> <p>C. Awareness programs – on quality; exposure visits to overseas production centers</p> <p>D. Organizing producers a must</p> <p>E. Knowledge needs to be taken into action – encourage value addition at the producer's level</p>	<p>A. Stabilize yield through organic practices – expand BFC, thus differentiating quality</p> <p>B. Continued R&D to increase yield levels</p> <p>C. Popularize raised table drying to improve quality; encourage collectivization</p> <p>D. Eliminate unwanted intermediaries – access curers/roasters/MNCs directly to increase returns</p> <p>E. Estate branding, packaging, roasting, online sales, exports, etc.</p>

Table 3. SWOT application and strategies for sustaining value chain huller-cum-block level traders

Activities	Strengths	Weakness
A. Procurement B. Pricing strategies C. Storage D. Processing E. Labour management F. Selling – coffee and husk	A. Good supply base (Agents/local traders, Farmer); facilities for quality testing, transport, bags, credit facility. Consignment sale facility. Cash payment B. Moisture and outturn based (premium and deduction) C. Own go downs, low cost D. Low cost technology E. Labour Contract (payment on processed tonnage basis – Rs.260/tonne); migrant labour; partial automation in Weighment and movement.	A. Procure even if moisture is higher B. Planters doubt the accuracy of test results C. Unscientific storage. Stored in open space when there is excess stock D. The lower efficiency of the unit; high labour requirement; erratic power supply, costly diesel; Need for finance E. Increasing wage rate, non-availability of labour. F. Bulk coffee sold; pricing does not include a premium for higher grades
Opportunities	Short-run strategies	Medium-run strategies
A. Direct procurement from planters (avoid intermediary) B. Third party agency to certify quality parameters C. Improve quality D. Improve efficiency; diversify to curing E. Expand Mechanization/automation.	A. Holding purchase contract; maintaining a long-run relationship B. NGO/professional body should play a role; producer groups can create their own facilities. C. Adopt systematic storage practice D. Adopt modern technology E. Optimize labour use	A. Scientific storage structure and practices B. Think of installing a small curing unit C. Reduce labour use through automation
Threats	Medium-run strategies	Long-run strategies
A. Entry of MNCs into curing activity B. International price volatility C. High capital requirement to diversify D. Training migrant labour E. Bulk coffee	A. Strengthen direct procurement from planters B. Utilize CB subsidy to upgrade and diversify C. NGOs to involve in capacity building of labour D. Value addition of coffee husk; grading/curing can be thought of.	A. Strictly adhere to quality standards B. Identify with some certification program C. A rural godown scheme can be sought D. Curing facilities can be created E. Maintain minimal labor base; mechanize F. Curing facility to be created

Table 4. SWOT application and strategies for sustaining value chain coffee curers

Facilitators in the coffee curing works	Strength	Weakness
<ul style="list-style-type: none"> • Coffee Board for technical information • The government program for financial assistance • Institutional credit for curing works • All India Coffee Curers Association for collective action 	<ul style="list-style-type: none"> • Strong bondage between curers and suppliers • The flow of market information – International and domestic • Existence of multiple distribution channels • Existence of consumers for various grades of cured coffee • Free marketing of coffee • Professional inputs from coffee board to enhance quality • Flexible and multifarious grading mechanisms 	<ul style="list-style-type: none"> • Understanding price mechanisms in international markets • Availability of skilled labors • The increased cost of processing • Long and inefficient value chain • Seasonal industry • Quality of procured beans – moisture content • Purchase tax
Opportunity	Short - term strategies	Medium term strategies
<ul style="list-style-type: none"> • Upgradation of existing technology • Direct procurement from planters • Reduction in cost of processing • Continuous expansion of coffee consumption in domestic as well as the global • The niche market for estate brands and specialty coffee 	<ul style="list-style-type: none"> • Processing of coffee as per consumer needs • En-cashing existence of multiple distribution channels of coffee • Making use of market information for analyzing trends in the international coffee market • Making use of information provided by the coffee board to enhance the quality of the product 	<ul style="list-style-type: none"> • Reducing the cost of procurement by direct procurement • Joint procurement and marketing ventures
Threats	Medium – term strategies	Long – term strategies
<ul style="list-style-type: none"> • Entry of new firms (illegal units) • Escalation in prices of the global market • Reduced earnings over the years • Increased biotic and abiotic pressure causes a reduction in the supply of raw materials • Poor professional standards. 	<ul style="list-style-type: none"> • Developing grades as per consumer needs • Developing plans for efficient use of manpower and machinery in which there is capital investment • Developing standardized processing techniques for quality up-gradation to match global standards 	<ul style="list-style-type: none"> • Up-gradation with available modern technology to compete with new firms • Increase risk aversion capacity to sustain price fluctuations • Vertical linkage or alternative plans for making use of existing infrastructure in the off season • Self-regulation to avoid entry of illegal entities

Table 5. SWOT analysis and upgrading strategies for coffee roasters

Aspects covered	Strengths	Weakness
<ul style="list-style-type: none"> A. Procurement of quality coffee beans B. Roasting C. Branding D. Blending E. Certification 	<ul style="list-style-type: none"> A. Roasters are the key intermediaries in the coffee value chain and have a significant profit margin B. Large roasters usually have multiple blends C. Larger volumes of transaction D. Good knowledge of International market dynamics E. Strong linkages between roasters and suppliers/retailers 	<ul style="list-style-type: none"> A. High procurement cost and poor quality green beans B. High transportation cost due to larger distance between producer and roasting unit C. Using conventional roasters/ grinders results in poor quality coffee D. Limited capital to take up new business initiatives like certification E. Lack of technical guidance from the coffee board on quality aspects F. Conventional roasting machineries are air pollutants
Opportunities	Short-run strategies	Medium-run strategies
<ul style="list-style-type: none"> A. Purchasing coffee beans at coffee board auctions B. Adopting improved technologies- Subsidies from the Government C. Creating their niche by brand loyalty D. Providing high quality coffee E. Opting for certification with financial assistance from the Government F. Cupping of coffee to purchase quality green beans 	<ul style="list-style-type: none"> A. Procurement at roasters nearest place from reliable suppliers(coffee board auctions) B. Branding the roasted beans C. Cupping of coffee while procuring D. Technical training programs from the coffee board E. Providing high quality coffee to consumers F. Preparing blends based on consumer preferences 	<ul style="list-style-type: none"> A. Adopting improved roasted technologies B. Developing long term contracts with reliable suppliers C. Getting certification for the roasting unit D. Setting up emission standards for roasting units
Threats	Medium-run strategies	Long-run strategies
<ul style="list-style-type: none"> a. The growing impact of MNCs in the coffee industry b. Increased trends in labor and fuel cost c. High cost of advanced roasting/grinding technologies 	<ul style="list-style-type: none"> a. Subsidies from Government/Coffee Board for the purchase of machineries 	<ul style="list-style-type: none"> a. Special scheme from Coffee Board/Government to provide financial assistance to roasters

chain by 'preparing and presenting coffee differently' through the improved or modern techniques of production, diversification, quality enhancement, professional management and post-harvest processing and value addition. These instances show large farmers can reorient and adapt to capture a significant gain from up gradation. But the challenge lies in bringing the small farmers into this process to enhance their livelihoods. Unless we develop sustainable business models inclusive of small coffee growers to move them up in the value chain the sustainability of the coffee industry in Kodagu is a distant dream [16].

3.3.1 Value chain upgradation

Based on the interview in the study area with 52 coffee growers revealed that about 11.53 per cent of the growers were involved in some kind of upgradation process. Over 57 per cent of the respondents indicated their willingness to move up in the value chain, whereas 31 respondents were not keen or indifferent to take additional activities due to many reasons.

3.3.2 Upgradation of value chain through branding and labeling

In the survey, it was found that 4 farmers in Kodagu have undertaken estate level branding. The domestic and global consumers recognize these brands and are willing to pay higher price premiums for such 'Estate Branded coffee'. These estate brands have augmented traditional coffee sales to a more affluent market and are certainly the way to move up in value chains.

3.3.3 Upgradation of the value chain through bio-dynamic farming

During the survey, we studied two of the planters who were practicing bio-dynamic farming in coffee. They focused on bio-dynamic practices to achieve sustainable economic yields. One producer has started his retail outlet where he blends 80 per cent of Arabica and 20 per cent of Robusta. He undertakes to roast and grind and served coffee to customers. They export coffee to Spain and Germany. It is a clear example of moving up the value chain, realizing profit almost three times higher than conventional coffee in the open market. It is a case of the high degree of vertical integration of production, processing, exporting, blending, roasting and retailing.

3.3.4 Sale through direct auction

This channel provides an opportunity to sell coffee at a competitive price by reducing intermediaries.

3.3.5 Internet marketing

A farmer in Valnoor is involved in online marketing. The prospective consumers look for the product information through the website and place orders. He sells the produce as 'Estate Branded coffee'. By doing so he received 25 per cent more premiums for Arabica parchment.

3.3.6 Direct sale of ripe cherries to a corporate

One company buys fresh ripe fruits from the planters. Farmers who do not have facilities for wet processing can use this channel.

3.3.7 Collectivization

By forming collective market structures like co-operatives, the producers' associations and producer companies' economies in scale can be achieved and increase access to both domestic and global markets. This also shortens the value chain between the growers and consumers. A homogenous, like minded group of small farmers from a vicinity or cluster of villages, can form Growers Collectives through which coffee can be collected, processed and marketed both in domestic and global markets by creating their brand. By adopting such a collective marketing system, small growers have ample scope for moving up in the value chain. Under this system creating appropriate processing and storage infrastructure will support the coffee growers in a big way. In this manner, planters can gain higher revenue due to economies of scale and value addition. Such collective action eliminates the middlemen in the value chain and helps the farmers to gain a higher share of the consumer's rupee.

3.3.8 Certification obtaining

Certification for coffee such as organic, Utz, Fair trade, Rain Forest Alliance and 4C promotes differentiated, superior quality coffee which meets the demand of the consumers. Certification for sustainable coffee should be seen as a market based tool to move up in the value chain. These certification programs should help small scale

producers to adopt the global market standards. Small farmers have to upgrade their production and processing practices to increase their competitiveness and profits. By focusing on the promotion of specialty coffee, group approach to marketing and developing contextual quality norms farmers can move up the value chain.

4. CONCLUSIONS

India's coffee value chain is about to undergo a significant change [17]. Due to market constraints, traditional marketing and production methods are becoming more and more vulnerable. This necessitates the development of new strategies for the diversification of sources of revenue and output. The analysis outlined some of the difficulties encountered along the value chain and considered whether farmers might benefit from engaging in conservation-based activities like protecting butterfly habitats. With the diffuse nature of coordination in the various value chains, adding another brand with a conservation focus may be difficult on a large scale. However, integrating straightforward, reasonably inexpensive activities, like the establishment of butterfly gardens, may be feasible and accessible for a variety of stakeholders, especially smallholders. Scaling this up will require collaboration with numerous stakeholders in conservation and tourism, but it has the potential to rebrand Coorg as not just a destination for coffee, but responsible environmental stewardship as well.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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