MASTER THESIS: ENHANCING THE PARTICIPATION OF TRUNG NGUYEN COFFEE IN THE GLOBAL VALUE CHAIN (GVC)

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ABSTRACT

This study is conducted to determine how innovations in the supply chain can enhance the participation of Trung Nguyen Coffee in the Global Value Chain (GVC). Trung Nguyen Coffee is selected in this case study because Trung Nguyen's low-level participation in the GVC of coffee despite its capacity and quality.

The study employs the case study method to investigate the supply chain of Trung Nguyen and current position and participation of Trung Nguyen in the GVC of coffee. Interview, document research and search on the Internet are recruited to collected data related to the supply chain and the participation of Trung Nguyen in the GVC.

The study provides a theoretical review of innovation, innovation system, national innovation system, global value chain and supply chain to make the theoretical framework for the research.

The outcomes of the analysis point out that for the deeper participation of Trung Nguyen in the GVC, Trung Nguyen are recommended to focus on innovations in international research and development and new purchasing technology. National Innovation System of the Vietnam coffee industry also takes a key role in the enhancement of participation of Trung Nguyen into the participation in the GVC. The support from the National Innovation System can be disseminated to the whole coffee industry in Vietnam.

Keywords: innovation, innovation system, national innovation system, global value chain, supply chain, participation in the GVC.

DECLARATION OF PLAGIARISM

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LIST OF ACRONYMS

CIRAD: The French Agricultural Research Centre for International Development

CSCMP: The Council of Supply Chain Management Professionals

DA: The Department of Agriculture

GCC: Global Commodity Chain

GVC: Global Value Chain

ICO: International Coffee Association

INRA: The French National Institute for Agricultural Research

MNCs: Multinational corporations

NIS: National Innovation System

NPD: New product development

OBM: Original Brand Manufacturer

ODM: Original Design Manufacturer

SC: Supply Chain

SCM: Supply Chain Management

SI: system of innovation

VCA: Value chain analysis

CHAPTER 1: INTRODUCTION

1.1 Research Context

Globalization processes, particularly from the 1980s onwards, intensified flows of people, capital, goods and information. In this new configuration, learning and the ability to innovate became a key to competitiveness and growth of countries and firms (Pietrobelli & Rabellotti, 2011). To face the issues presented by this new world, the phenomenon of integrating countries and regions through international chains of production and trade was observed. The phenomenon has been recognized by the name of global value chains (Rugman & Verbeke, 2004).

The global value chain is understood as a set of inter-organizational networks, around a commodity or product, connecting families, firms and countries in the global economy (Gereffi & Korzeniewicz, 1994). Firms that connect to GVCs aim beyond profits: they search for competences, to develop more complex tasks with more added values.

Trung Nguyen Group is the best-known Vietnamese coffee brand name where the CEO and President has been called “Coffee King” starting up coffee processing business from empty hands. In Vietnam market – home market of Trung Nguyen, currently, Trung Nguyen is the largest Vietnamese coffee company with many delicious and well-known types of coffee such as Chon Coffee, Mocha or G7 which make customers “be addicted to” and attract more and more foreign tastes. Along with the domestic market, Trung Nguyen Coffee has been in the attempt to strengthen its position in the market and enhance the role and participation in the global value chain of coffee. Trung Nguyen now markets its coffee in more than 60 countries, including the US and the UK (Trung Nguyen, 2016). However, most of the coffee is sold online through franchises; and sales volumes are very small compared with those in Vietnam. Generally, despite its success in Vietnam, the Trung Nguyen brand is not well-known elsewhere.

In terms of NSI analysis, the research will focus of linkages in the Vietnamese coffee sector. According to Agwu, et al (2008), the analysis of NSI highlighted the connections and relationships between different actors in the coffee supply chain to find out how the collaboration is helping in knowledge creation and dissemination, providing different inputs, creating an overall conducive environment for innovation and so forth.

Trung Nguyen coffee, which is very popular in Viet Nam and the whole world, is settled up in 1996. To create a perfect cup of coffee roasters and satisfy all customer needs it requires a combination of links such as supply chain of raw materials, manufacturing, distribution and product line feedback from the consumers. In order to enhance the position of Trung Nguyen Coffee in the global value chain, it requires both the improvement in terms of policy of the authorities, involvement of different actors in the value chain and the innovations in the supply chain of Trung Nguyen Coffee. The enhancement of the NSI of the coffee industry in Vietnam has significant impacts on the uplifting position of Trung Nguyen in the GVC.

1.2 Objectives of the Research

The aims of this thesis are to examine the current participation of Trung Nguyen in the GVC and to propose the recommendations for upgrading the position of Trung Nguyen in the GVC.

In order to achieve the overall aims of the thesis, the specific objectives are as follows:

i. To address and assess the impacts of the NSI of the coffee industry in Vietnam on the players, particularly Trung Nguyen Corporation;

ii. To identify the current position of Vietnam coffee and Trung Nguyen Coffee in the global coffee market;

iii. To identify the driving point of Trung Nguyen which is used to improve competitiveness, increase sustainability and respond to market demands;

iv. To discuss the intra-chain upgrading of Trung Nguyen toward the downstream, marking a transition from an OEM to an OBM enterprise;

v. To review the product upgrading of Trung Nguyen to make more sophisticated product lines with higher value;

vi. To analyze the governance structure of Vietnam Coffee Companies in general; and

vii. To propose recommendations for the Vietnam Coffee Industry to make Vietnam a favorable environment for coffee companies and innovations of the supply chain of Trung Nguyen Coffee to enhance the participation of Trung Nguyen Coffee in the GVC

The research is conducted to answer the question “How to upgrade Vietnam Coffee products in general and Trung Nguyen Coffee’s products in particular in the Global Value Chain?”

1.3 Methodology

1.3.1 Research Design

There are two main methods which resolve a research problem: quantitative and qualitative methods. The choice of method depends on the researcher and the research problem. Qualitative method is a subjective approach which includes examining and reflecting on perceptions to gain an understanding of social and human activities (Hussey J & Hussey R 1997). Quantitative method is an objective approach which includes collecting and analyzing numerical data and applying statistical tests (Hussey J & Hussey R 1997). In this thesis, the qualitative method is employed to collect data. It is regarded that a qualitative method was the most suitable to understand the role of supply chain to enhance the participation of Trung Nguyen in the GVC. The researcher sought the flexibility of qualitative instruments to obtain findings more than the rigidity of quantitative methods. The researcher has focused the investigation on several established aspects and factors. The qualitative method has allowed the researcher not only to find the data the research looks for, but also to locate complementary information that was relevant for the study.

Research design is defined as the link between the collected empirical data, its research questions, and the conclusions generated by a study (Yin, 1989). This thesis employs single case study design. Case analysis design, which describes a single case as a specific location, an organization, a person or an event. It uses different sources of data because a unique source of evidence is not enough to achieve validity (Gillham, 2000). The category of case study in this research was exploratory. The exploratory case study sets to explore any phenomenon in the data which serves as a point of interest to the researcher. This thesis conducts an exploratory case study on the enhancement of participation in the GVC by innovations in the supply chain at Trung Nguyen; the researcher can ask general questions such as “Does innovations in the supply chain enhance the participation of Trung Nguyen in the GVC? and “if so, how?”. These general questions are meant to open up the door for further examination of the phenomenon observed. In this case study also, prior fieldwork and small-scale data collection may be conducted before the research questions and hypotheses are proposed. As a prelude, this initial work helps prepare a framework of the study. A pilot study is considered an example of an exploratory case study

(Yin, 1984; McDonough and McDonough, 1997) and is crucial in determining the protocol that will be used.

1.3.2 Research philosophy

Research philosophy refers to the systematic search for existence, knowledge, values, reason, mind, and language. This research requires an open mind in order to establish facts to both new and existing mysteries. Saunders et al. (2009:109) points out that upon embarking on a research, one develops knowledge in a particular field. Further, the research philosophy one adopts contains important assumptions about the way in which one views the world. These philosophies as explained by Saunders et al. (2009) are as follows:

i. Positivism is an ontological position which something can be positive, truthful or known.

ii. Realism is the belief that reality exists unconventionally of observers.

iii. Interpretive states that as people interact with the world around them, they create and associate their own subjective and inter-subjective meanings.

iv. Pragmatism philosophy is concentrated on the connection of practice and theory.

Hence the pragmatism philosophy will be adopted as the study strives to understand the practical implications of innovations in the supply chain of coffee in Trung Nguyen which enhances the participation of Trung Nguyen in the GVC.

1.3.3 Sources of data

This research employs the qualitative methodology with both primary and secondary data sources were used. Data from various sources on the coffee industry and Trung Nguyen Coffee was collected. Secondary data included company and industry reports, books, academic papers, articles, databases, and websites related to the Trung Nguyen's supply chain and participation in the GVC. Value chain analysis was chosen as the methodology to examine the current position of Vietnam Coffee and Trung Nguyen Coffee in the GVC and the supply chain operated in Trung Nguyen Coffee business. Value chain analysis based on both literature on the coffee industry and secondary data. The case study methodology was also executed in in-depth interviews with key players in the supply chain of Trung Nguyen. These research participants included Human Resources manager, Marketing manager, Sales manager, Representative of the Vietnam Coffee and Cocoa Association and farmer related to the supply chain of Trung Nguyen

Coffee. The result of in-depth interview will illustrate in further detail the participation of specific players in the supply chain of Trung Nguyen Coffee and their contributions to the enhancement of the participation of Trung Nguyen Coffee in the GVC.

1.3.4 Research strategy

According to Saunders et al. (2009:141), the choice of strategy is guided by the research questions, objectives, the extent of existing knowledge, the amount of time and resources available, as well as the researchers' own philosophical underpinnings. There are various research strategies that can be employed, and these are:

i. experiment: to study causal links;

ii. survey: associated with deductive approach and obtained by using questionnaire administered to sample, popular in descriptive and exploratory research;

iii. case study: research which involves an empirical investigation of a particular contemporary within its real life context using multiple sources of evidence;

iv. action research: four main purposes of research- research in action as purpose of research, involvement of practitioners in research, diagnosis and clarification that results should inform other texts;

v. grounded theory: theory building through a combination of induction and deduction to predict and explain behavior;

vi. ethnography: researching a phenomenon within the context in which it occurs and in addition not using data collection techniques;

vii. archival research: makes use of administrative records and documents as the principal source of data whether exploratory, descriptive or explanatory research.

Saunders et al. (2009) further emphasize that no strategy is inherently superior or inferior to the other. Consequently, what is most important is not the label that is attached to a particular strategy, but whether it will enable the authors to answer the particular research question(s) and meet the objectives. Yin (2003) further suggests that there are three criteria used in the selection of research strategy these include:

i. Form of research question

ii. The extent of control an investigator has over behavioral events

iii. The degree of focus placed on contemporary events.

In addition, when case strategy has been chosen the researcher can choose between single case study and multiple case studies. Yin (2003) also points out that a single case study is employed when the researcher aims to test one case against theory allowing for deep research, in order to test numerous variables. On the other hand a multiple case study is when the researcher compares and contrasts cases increasing validity and allowing for comparison and generalization.

Based on the form or nature of the research question of this study, the research will adopt a case study strategy since it will concentrate on one specific company (Trung Nguyen Coffee) for the empirical evidence, which will be based on real life context.

1.3.5 Research instruments

There are several instruments that can be used to carry out our qualitative method. The research has chosen to develop the investigation through interviews and documentary research. Both methods are suitable to obtain the data for the thesis' investigation. Interviews have provided us information directly from the company, and documentary research has provided information indirectly.

Interviews: The researcher considered that it was important to obtain information directly from Trung Nguyen' managers for our research. Interviews are the most reliable research instrument in order to obtain information for the case study. Furthermore, they provide the researcher new and unknown information that would be impossible to get through other sources such as books or annual reports.

The researcher conducted interview with Human Resources manager, Marketing manager and Sales manager of Trung Nguyen. Due to the limitation of distance, the researcher obtained a telephone interview. The researcher, firstly, contacted with them for their permission and arrangement for interview. After the second contact, they agreed to participate in the interviews by the researcher. The questionnaires and the responses are transcribed and included in the Appendix.

Documentary research consists of using text and documents that come from journals, reports, videos and other research sources (Bryman & Bell 2003). Documentary research also has some

advantages and limitations in research. The main advantage is that there are many sources which we can use to obtain information. The documentary research can also provide different perspectives from a number of different people. However, this research instrument has some limitations such as the data might be unreliable. Also relevant information for a specific company is often difficult to find.

The researcher has chosen this data collection method because we considered that documentary sources could provide us relevant information for our research. This form of research offers a variety of means to obtain information such as journals, document files, reports, books and so on. Trung Nguyen is a successful company which has been the target of a huge amount of studies. There are many documentary sources concerning Trung Nguyen and its strategies and policy. In addition, documentary research enables the researcher to complement the scarce information available with the researcher's own interviews.

Information sources on the Internet: At the present there are a multitude of resources available on the Internet for many types of investigations. Among the numerous available sources for research are catalogues of important libraries, databases, e-journals and company homepages. In addition, the researcher can consult and read completed versions of textual materials in virtual libraries and e-journals. However, to use the Internet as an information source can be a double-edged sword. The researcher had to be careful when choosing documents. The researcher had to regard which documents are useful and which are not. Furthermore, the reliability and rigor of Internet sources should always be considered.

1.3.6 Validity and Reliability

The validity of data is the extent to which data collection method(s) can accurately measure what they were intended to measure. The reliability of data is the extent to which data collection technique(s) will yield consistent findings, similar observations would be made or conclusions reached by other researchers or there is transparency in how sense was made from the raw data (Saunders *et al.*, 2009).

According to Yin (2003) four tests have been founded in order to test the quality of the empirical study. These tests are as follows:

i. Construct Validity: creating operational measures for the concepts being studied.

ii. Internal Validity: creating a causal relationship, which means; that certain situations are revealed to lead to other situations, as distinguished from unauthentic relationships.

iii. External Validity: creating the area to which a study's findings can be generalized.

iv. Reliability: demonstrating that the processes of a study for instance, the procedure of the data collection is able to be repeated and conclude with the same outcomes.

This study employs methodological and scientific method of collecting and analyzing and the expert interview from the managers and representative of the Coffee and Cocoa Association in Vietnam; therefore, it is expected that the study will meet requirements of validity and reliability.

1.3.7 Ethical considerations

During the research process, the research highly regards and commits to ethical considerations including informed consent, deception, privacy and confidentiality.

Consent: At the beginning of the research, a consent letter was developed and sent to the managing director of Trung Nguyen for the permission to conduct the research with three managers in the Company. Additionally, a consent formed was sent to participants including HR manager, marketing manager and sales manager for their involvement in the research. The consent form covers the rationales and purposes of the research and the commitment to not affect the activities of Trung Nguyen (Cico et al, 2011).

Deception: Deception involves various actions by the researcher. Deception occurs when the researcher provides false expectations for research process or participants' performance during the research (Halai, 2006). This research ensures to produce no deception to participants during the research process.

Privacy: The participants have the right to protect themselves from interference and intrusion. Participants require privacy in personal information, bodies and occupied spaces (Kerkale & Pittila, 2006). Another important aspect of privacy is the right to express and control their thoughts and opinions and the use and disclosure of information.

Confidentiality: The research assures not to use names of participants to keep their identity confidential. Their numbers are used to replace their names. All information of participants' identity is not available to anyone without the permission form participants (Halai, 2006).

1.4 Organization of the Research

Chapter 2 is a literature review on the innovation system and the global value chain. The discussion is continued with the National Systems of Innovation (NSI) analysis on the Vietnam coffee Industry, then followed by the Global value chain (GVC) analysis on Trung Nguyen case. Chapter 5 is the conclusion and recommendations for upgrading Trung Nguyen Coffee in particular and Vietnam Coffee Industry in general in the GVC of coffee.

CHAPTER 2: LITERATURE REVIEW ON INNOVATION SYSTEM AND THE GLOBAL VALUE CHAIN (GVC)

2.1 Innovation and Innovation System

The innovation concept used in this paper is wide and includes product and process innovations. Product innovations are new - or better – material goods and new intangible services. Process innovations are new ways of producing goods and services. They may be technological or organizational (Edquist et al. 2001).

Lundvall argues that "the structure of production" and "the institutional set-up" are the two most important dimensions that "jointly define a system of innovation" (Lundvall 1992, p.10). In a similar way, Nelson and Rosenberg (1993) single out organizations supporting R&D, i.e., they emphasize those organizations that promote the creation and dissemination of knowledge as the main sources of innovation. Organizations disseminating knowledge include firms, industrial research laboratories, research universities, and government laboratories. Lundvall's broader approach recognizes that these narrow organizations are "embedded in a much wider socio-economic system in which political and cultural influences as well as economic policies help to determine the scale, direction and relative success of all innovative activities." (Freeman 2002, p.195).

Organizations and institutions are often considered the main components of SIs, although it is not always clear what these terms mean. For the purpose of our analysis, the researcher defined organizations as formal structures that are consciously created, have an explicit purpose, and act in the systems of innovation (Edquist and Johnson 1997). Some of the important organizations in SIs are firms, universities, venture capital funds, and public agencies responsible for innovation policy, competition policy, regulation (of drugs, for instance), and so on. And then, we define institutions as sets of common habits, norms, routines, established practices, rules, and laws that regulate the relations and interactions between individuals, groups, and organizations (Edquist and Johnson 1997). In essence, institutions defined in this way reflect the rules of the game. Examples of key institutions in SIs are patent laws and the rules and norms influencing the relations between universities and firms. Obviously, our definition of institutions and organizations is 'Northian' in character (North, 1990), discriminating between the rules of the game and the players in the game.

Innovation and innovation systems are becoming increasingly interesting to policy-makers for achieving their economic and social goals. Europe 20202, the European Union's key strategy for the current decade, aims to foster a smart, sustainable and inclusive economy. "Innovation has been placed at the heart of the strategy", as it provides the "best means of successfully tackling major societal challenges"(European Commssion, 2010: 2)

2.2 National Innovation System

Innovation is the offspring of the combination between social activities and science & technology breakthrough. It is not strictly limited to technological oriented creativity, as the developed and developing gaps in technological and economic development draw and shape national and regional characteristics. Therefore, the understanding of innovation varies from place to place. The general perception of the characteristic of innovation is that it generates more productivity, new jobs and better material welfare to serve the needs of specific communities (Edquist 1997).

Firms do not innovate in isolation but in continuous interaction with their environment, including the users but also other actors such as universities, suppliers, or other firms. The main focus of the systems-of-innovation (SI) approach is, therefore, the operation of the system and the complex interactions that take place among the different organizations and institutions in the system (at regional, sectorial, national, and supranational level).

The term ‘national system of innovation’ (NSI) was, in published form, first used by Freeman (1987). He defined it as “the network of institutions in the public and private sectors whose activities and interactions initiate, import, and diffuse new technologies” (Freeman 1987. p.1). Two major books on national systems of innovation are Lundvall (1992) and Nelson (1993), which use different approaches to the study of NSIs. Nelson (1993) emphasizes empirical case studies more than theory development, and some of the studies focus narrowly on nations’ research and development (R&D) systems. By contrast, Lundvall (1992) is more theoretically oriented and seeks to develop an alternative to the neoclassical economics tradition by placing interactive learning, user-producer interaction, and innovation at the center of the analysis.

Both Nelson and Lundvall define national systems of innovation in terms of determinants of, or factors influencing, innovation processes. However, they single out different determinants in their definitions of the concept, presumably reflecting their judgment about the most important

determinants of innovation. Hence, they propose different definitions of the concept, but use the same term. This reflects the lack of a generally accepted definition of a national system of innovation.

A more general definition of (national) systems of innovation includes "all important economic, social, political, organizational, institutional and other factors that influence the development, diffusion and use of innovations" (Edquist 1997, p.14). If an NSI definition does not include all factors that influence innovation processes, one has to argue which potential factors should be excluded – and why. This is quite difficult since, at the present state of the art, we do not know the determinants of innovation systematically and in detail. But obviously one could miss a great deal by excluding some determinants since they might prove to be very important once the state of the art has advanced. For example, 25 years ago, it would have been natural to exclude the interactions between organizations as a determinant of innovation processes. Included in this general definition are the relationships among the factors listed and the actions of both firms and governments.

2.3 National System of Innovation Approach

The most widely used definition of systems of innovation is the National Systems of Innovation (NSI). The concept started to be used within the construction of industrial policy in Europe in the 1980s and was adopted afterwards by international organizations such as OECD, the World Bank, Unctad and the EU Commission as a recommended analytic and political approach to be applied to national contexts (Lundvall, 2007). It emerged to challenge the Washington Consensus and mainstream neoclassical macroeconomics to bring a different perspective on economic policy by recognizing the role that innovation and knowledge generation and exploitation had in the economic growth of nations (Lundvall, 2007). The approach was born and used simultaneously in academic and political circles, given the overlap of academics who for the first time mentioned it) with positions within the OECD. As Sharif states: "The NIS concept had the advantage of proponents who inhabited the academic and policy realms, thereby easing the concept's movement between the two worlds." (Sharif, 2006, p. 752)

There are many definitions of National Systems of Innovation. These definitions were conceived first as a description of national frameworks supporting and promoting innovation in industrialized countries, so we could say that represents an ex-post account of a perceived reality

identified through empirical cases. Later on, the NSI approach was promoted by transnational organizations like the OECD, Economic Commission for Latin America and the Caribbean (ECLAC), and the Organization of American States (OAS), so it was disseminated to developing countries as an ex-ante framework to build STI policy (Arocena & Sutz, 2000).

The innovation system research have been understood and applied in two different perspectives: a narrow and a broad one. The narrow perspective has an emphasis on the science and technology side of innovation (STI) and its measure through national performance in research and development activities and academic production. The broader one also encompasses learning and competence building at different levels of aggregation and focuses on learning through structures and relationships mediated by Doing, Using and Interacting (DUI). The former is the one that has been widely disseminated in policy circles since with this perspective it is easier to measure policy results, neglecting what seems more difficult to assess. This perspective also provides formal measures that can be used to compare countries' performance and so can easier guide resources allocation. The latter, requires a deeper and contextualized analysis of tacit and formal knowledge, learning interactions between and within firms, and analysis of cooperation and competition relationships between innovation players. This perspective requires the analyst to examine social institutions between customers and suppliers and formal and informal links between research and production subsystems (Lundvall, Vang, et al., 2009).

Given its multiple uses, understanding and action frameworks, we agree with Sharif that the NSI is a boundary object diffused by epistemic communities' part of the academic and the political worlds (Sharif, 2006). Given its flexible nature, the approach has been used and even abused, using it as a label for all sort of policy initiatives or even academic discussions related with the study of innovation within geographical, sectoral or technological boundaries. In this respect Lundvall states that: "The wider implications of an innovation and learning perspective on general economic policy have not been seriously considered and worked out. Innovation policy has been added to an economic policy based upon static economic theory. Policy implications have been worked out on the basis of a narrow definition of innovation system where the focus is on science-based innovation. The wider setting that has a major impact on interactive learning and on the performance of the innovation system has not been given sufficient attention. (Lundvall, 2007, p. 98)

Although the NSI is an approach in the sense that it does not represent a right way to understand innovation and to apply economic policies based on technological change, in most developing countries where the concept has been embraced, policymakers and even local academics have understood and followed an ideal model following the pioneer studies made in industrialized countries. It is true that the precursors of the NSI approach avoid such a thing as an ideal system, but it does not mean that there are not expectations of how a good NSI should operate and what results should achieve. It is in that sense that Arocena and Sutz express that "the NSI concept carries a normative weight." (Arocena & Sutz, 2000, p. 58)

Several scholars working with the SI approach have also problematized the national dimension of the NSI. Nelson and Rosemberg problematize the concept of national because it is difficult to demarcate a system as national, given the broader connections it has with the international context: "Indeed, for many of the participants in this study, one of the key interests was in exploring whether, and if so in what ways, the concept of 'national' system made any sense today. National governments act as if it did. However, that presumption, and the reality, may not be aligned." (Nelson, 1993, p. 5) Still, they stress that the concept is valid when the subsystems inside the system are defined clearly.

When a sectoral view of the whole system is performed, boundaries are visibly stated and consequently the concept of national can be better demarcated. That is why Lundvall (Lundvall, 1992b) argues that the concept of National System must remain flexible and open according to the subject studied. The emphasis on the national level has an explanation. Since the approach emerges as a reaction to the national macroeconomic policies promoted by the Washington consensus, the national dimension was crucial to bring another analytic dimension where learning, interaction between innovation players and technical change were the centre of the national economic measures (Sharif, 2006). Nevertheless, the concept remains diffuse and short in analytical tools when existing networks between the NSI and other broader and more specialized systems of innovation are part of the picture. The

NSI keeps being developed to connect different levels of analysis with the national level but given the steady growth of global links between users and producers, it is more difficult to keep the analysis at the national level. "The concept of national system had a well-defined meaning in

the past when basic decisions concerning the science, technology, and innovation policies of a given country were taken essentially at a national level." (Galli & Teubal, 1997, p. 345)

In terms of its suitability for developing economies, less developed countries (LDC) or countries from the South, there have been extensive debates about the appropriateness of the NSI approach. (Delvenne & Thoreau, 2012) present three main deficiencies of the NSI approach, particularly for developing economies: (1) NSI approaches do no pay sufficient attention to the regimes of science and technology and fail to integrate effectively broader socio-political landscapes and global contexts; (2) The approach reproduces the balance of power between richer and poorer countries, with many of its studies centered on OECD countries; (3) It is highly focus on GDP generation and economic growth as the main outputs of catching-up and progress.

On the other hand, Arocena and Sutz develop a southern perception of what the NSI implies for Latin American countries that they formulate in four statements. The first two were already mentioned: the ex-ante nature of the concept for LAC countries given the lack of systemic socio-economic patterns towards the creation, and encouragement of technical change and innovation; and the normative weight that the concept brings when applied to LDCs. The third aspect is related to the relational character of the approach where connections between innovation players are crucial to generate virtuous innovation cycles. However, although bridge institutions or intermediaries between the research and industrial systems have been created in the Latin American countries, most of the intended NSIs of the region lack of systemic connections between actors. Fourthly, they state that the NSI is a policy subject intended to design policy mixes that can contribute to the promotion of innovation through science and technology capabilities. However, S&T have never occupied a high position on the political agenda of Latin America, which has made failed many initiatives when it comes to their implementation (Arocena & Sutz, 2000).

Even though (Alcorta & Peres, 1998) base their analysis of LAC countries from the origins of the strengthening of S&T capabilities from the 1940s until the 1990s using the NSI approach as analytical device, their findings clearly contradict the existence of NSIs in the region. They analyze the Latin American countries in terms of technological infrastructure, interactions between organizations, public and enterprise investment in innovation, human capital formation, and public policies. Among the most notable deficiencies they found in the region are:

limitations in physical infrastructure (roads, energy and water supply, ports, telecommunications, among others); mismatch between demand and supply of research services; highly hierarchical functional lines of management and activities in firms; low and ineffective support organizations to link the research and productive systems; lack of cooperation among domestic firms and among national and international firms; no interaction between blocks of the innovation systems; little interest of cooperation between universities and firms; low levels of investment in R&D and innovation activities from the public sector and mostly from the private sector; low quality and variety of human resources required for technological upgrading; and overall lack of clarity about the objectives of the so-called systems of innovation. In other words, all the structural components and functional setting that constitutes a National System of Innovation, were missed in the countries of the region. This creates a paradoxical situation, where scholars stress the pressing need to develop an innovation agenda for Southern countries with a 'Southern mindset', while at the same time they continue to heavily rely on a reductionist version of the NIS-approach. (Delvenne & Thoreau, 2012, p. 212)

In words of Sagasti: "Building science and technology capabilities in developing countries appears to be a Sisyphean task. Time and investments are made, people are trained, institutions are built, and policies are designed and implemented – often with33 considerable effort – only to see them fall apart and disappear without trace." (Sagasti, 2004, p. xvii). Perhaps a different approach needs to be taken both to cope with complexity and uncertainty in policy-making processes and to understand and analyze innovation in developing economies that have very particular historical and cultural pathways that shape their current realities.

The response to scholars working with the broad definition of NSI about these shortcomings is that the SIs in developing countries are emerging rather than mature and so on should be analyzed in a different way. "If we consider that an IS exists only when all its systemic aspects are in place, it would be impossible to trace and identify any IS in developing countries" (Chaminade et al., 2009, p. 365). This suggests that for emerging systems the general principles still apply but some of the blocks are still being developed or are non-existent, and the connection and interactions between components are weak.

2.4 Internationalization of Innovation System

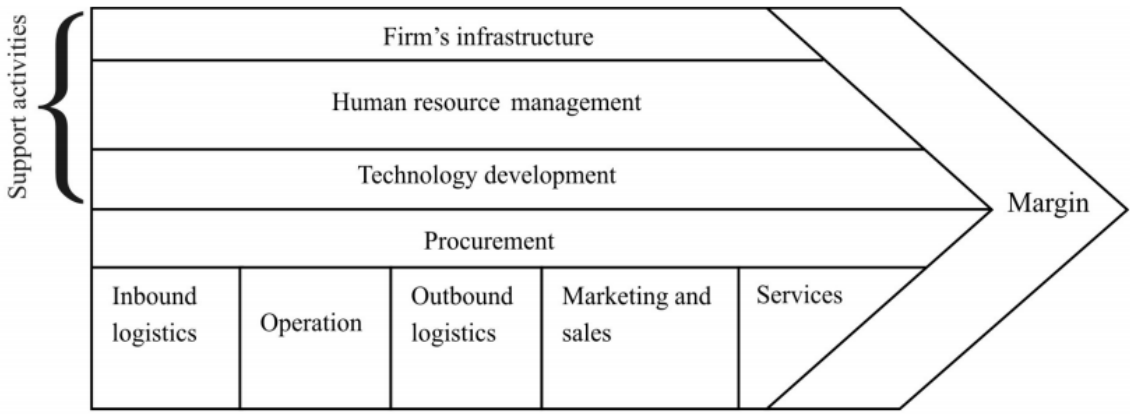
The era associated with the emergence of the NIS coincides with the need for globalization theory. In the context of increased globalization of scientific and technological activity, it is necessary to review the international dimension of the NIS (Niosi & Bellon, 1994). The term "techno-globalism" is used to describe the phenomena of globalization experienced by the world of invention and innovation (Archibugi & Michie, 1995). Some 10 years later, the critical meta-literature on the internationalization of innovation systems shows that there are four aspects, including empirical studies of internationalizing innovation systems, internationalization of R&D, institutional barriers to internationalization and other related studies (Carlsson, 2006). In order to respond to "techno-globalism", the "national system of innovation historical perspective" (241) argues that national and regional innovation remains essential domains for economic analysis. NIS derives from networks of relationships which are necessary if firms are to innovate, while external international connections as part of the firm's network are of growing importance and influence.

2.5 Theory of Global Value Chains

2.5.1 Introduction to the value chain concept

As a starting point it is important to outline the value chain concept. According to Michael Porter, a value chain "disaggregates a firm into its strategically relevant activities in order to understand the behavior of costs and the existing and potential sources of differentiation" (Porter 1985). This value chain allows us to diagnose the competitive advantage of a firm or industry and to enhance this advantage by tailoring the value chain (Porter 1985). Nevertheless, the value chain concept has evolved over the years since Porter's definition.

In the narrow meaning, a value chain includes the range of activities performed within a firm to produce a certain output. It refers to the work by Porter (1985) on competitive advantages. Porter (1985) utilized the framework of value chains to assess how a firm should position itself in the market and in relation to suppliers, buyers and competitors.



Source: Porter (1985)

Figure 1: Porter's (1985) representation of a value chain

The 'broad' approach to value chains looks at the complex range of activities implemented by various actors (primary producers, processors, traders, service providers, etc.) to deliver a raw material to retail of the final product. The 'broad' value chain starts from the production system of the raw materials and moves along the linkages between enterprises engaged in trading, assembling, processing, etc. This broad approach does not only look at the activities implemented by a single enterprise.

Rather, it includes all its backward and forward linkages, up until the level at which the raw material produced is linked to the final consumer. In a more contemporary sense, a 'simple' value chain could be defined as the description of a full range of activities necessary to carry a product or service from conception, through the various production stages (including physical transformation and other producer services), distribution to the final consumer, and removal after its use. Nonetheless, in real life applications, value chains tend to be more complex, involving several producers, creating manifold links within the value chain. Therefore, it can appear that one value chain may be composed of several smaller value chains (Kaplinsky and Morris, 2001).

In the context of globalization, the word fragmentation is used to depict the physical separation of the elements of the production process, considering the international separation of production as a new phenomenon (Arndt & Kierkowski 2001). According to Feenstra (1998) this "disintegration of production" is highly connected with the "integration of trade" in the global economy. Indeed, Brulhart (2008) estimates that 44 per cent of global trade is intra-industry.

As noted by Korzeniewicz and Smith (2000), relative political progress and the institutional configurations of a state and structural forces are necessary to profit from globalization. However, the distribution of the income generated by globalization is not even among the countries that participate in the value chain. Thus countries may increase their participation in global trade but experience a decline in their relative share of income (Kaplinsky, 2000).

2.5.2 Global Value Chain

The global economy is increasingly structured around global value chains (GVCs) that account for a rising share of international trade, global GDP and employment. The evolution of GVCs in diverse sectors, such as commodities, apparel, electronics, tourism and business service outsourcing have significant implications in terms of global trade, production and employment and how developing country firms, producers and workers integrate into the global economy. Humphrey & Schmidt (2002) stated that GVCs link firms, workers and consumers around the world and often provide a stepping-stone for firms and workers in developing countries to participate into the global economy. For many countries, especially low-income countries, the ability to effectively insert into GVCs is a vital condition for development. This supposes an ability to access GVCs, to compete successfully and to "capture the gains" in terms of national economic development, capability building and generating more and better jobs to reduce unemployment and poverty. Thus, it is not only a matter of whether to participate in the global economy, but how to do so gainfully.

According to Fernandez-Stark, Bamber and Gereffi (2013), the value chain describes the full range of activities that firms and workers perform to bring a product from its conception to end use and beyond. This includes activities such as research and development (R&D), design, production, marketing, distribution and support to the final consumer. The activities that comprise a value chain can be contained within a single firm or divided among different firms. In the context of globalization, the activities that constitute a value chain have generally been carried out in inter-firm networks on a global scale. By focusing on the sequences of tangible and intangible value-adding activities, from conception and production to end use, GVC analysis provides a holistic view of global industries – both from the top-down (for example, examining how lead firms "govern" their global-scale affiliate and supplier networks) and from the bottom-

up (for example, asking how these business decisions affect the trajectory of economic and social "upgrading" or "downgrading" in specific countries and regions).

A global value chain refers to the full range of cross-border, value-added business activities that are required to bring a product or service from the conception, design, sourcing raw materials, and intermediate inputs stages to production, marketing, distribution, and supplying the final consumer (ESCAP, 2007).

There are four basic types of GVCs (ESCAP, 2007; Gereffi, Humphrey, and Sturgeon, 2005):

(i) International supply markets, where transactions are made based on arm's length relationships between buyers and sellers across borders, requiring minimal coordination and cooperation (e.g., commodity markets);

(ii) Producer-driven networks, where the lead firm (such as an automobile or consumer electric appliance assembler) plays a central role in exercising control over the international network of subsidiaries, affiliates, and suppliers;

(iii) Buyer-driven networks, where large retailers, marketers, and brand manufacturers (such as Levi's in the apparel industry and Walmart as a multinational retailer) source from the decentralized network of suppliers across borders; and

(iv) Integrated firms, where hierarchical governance systems are implemented throughout the international networks, and produce all major goods and products in-house, characterized by vertical integration and strong managerial control (this type has become rare these days, but can still be found, for example, in the American automobile industry).

Among the four GVC types, both inter-firm coordination and power asymmetry within the networks are lowest at the supply markets and high at the integrated firms. On the other hand, the basic characteristics of GVCs are presented in Table 1.

Characteristics	**Descriptions**
Multinational	GVCs operate across borders, with a wide range of networks which comprise a variety of firms with different nationalities.

Outsourcing	A variety of supplies, services, and functions can be outsourced through the net of international production networks, including numerous smaller firms which are categorized in higher- and lower-tier suppliers of inputs.
Policymaking	The lead firm predominantly decides items/products to be outsourced, quality/quantity, timing of supplies, and pricing.
Capacity building	The lead firm typically demands and helps suppliers (as well as distributors and retailers), which are often SMEs, to implement improvements to their products/services, productivity, and human resources.
Standardization	The lead firm ensures consistency and reliability of supplies or services, based on private, national, or international quality standards or certifications.
Global status	A smaller firm can become a global firm by becoming a vital GVC player over time.

Source: Developed by the researcher

Table 1 Global Value Chain Approaches

2.5.3 The Global Value Chain Approach

Gereffi (1994) originally identified four key dimensions of Global Commodity Chains: input-output structure; geographical coverage; form of governance; and institutional framework. However, he gave no indication as how to measure dimensions, nor the potential benefits of participating in one chain as opposed to another. Since then the Global Commodity Chain (GCC) approach has become better known as Global Value Chain (GVC) analysis. The problem with the phrase Global Commodity Chain (GCC) is that the concept of a commodity does not refer to the product itself but the markets in which it is produced and sold (Kaplinsky, 1998). Thus the same product may be a commodity in some cases, but not in others.

GVC analysis describes the full range of activities required to bring a product or service from conception through the intermediate phases of production to delivery to consumers and final disposal after use (Kaplinsky, 2000). This implies that the GVC approach is all about value creation and management. As will be argued later, integrating aspects of new trade/new growth theories within GVC analysis gives us a better insight into what products countries import and export; what rewards accrue to whom; similarly how and why lead firms go about setting up and maintaining production and trade networks.

2.5.4 Global Commodity Chains

A commodity chain is "a network of labor and production processes whose end result is a finished commodity" (Hopkins and Wallerstein 1986, p. 159). True commodity chains may be defined as those in which basic agricultural products are grown, processed and marketed. These are usually driven by commodity traders (Gibbon 2001). Nevertheless, a commodity chain may also be buyer- or producer-driven (Gereffi 1994).

The global commodity chain (GCC) concept was developed by Gereffi in the 1990s and attached the value-added chain concept to the global organization of industries (Gereffi, 1994). The value-added chain refers to "the process by which technology is combined with material and labor inputs, and then processed inputs are assembled, marketed and distributed" (Kogut, 1985, p. 15). In this context, a firm may constitute one link or be vertically integrated (Kogut, 1985).

Global commodity chains are an analytical approach to understanding the mechanisms of trade. This approach was developed primarily for the analysis of industrial commodities from production to consumption. Gereffi (1994) defines GCCs as "systems that give rise to particular patterns of coordinated international trade, rooted in transnational production systems" (Gereffi 1994, p. 215). They have three dimensions: (a) input-output structure, (b) territoriality and (c) governance. The idea of GCCs was first introduced by Hopkins and Wallerstein (1986), who referred to them as "a set of inter-organizational networks clustered around one commodity or product, linking households, enterprises, and states to one another within the world-economy" (Gereffi, 1994, p. 2).

Supply chains are central to the GCC analysis. Urminsky (2005) identifies three unequal relationships in supply chains: first, between buyer and supplier, which in general favors multinational companies, with suppliers having little chance to negotiate their contracts and

constantly being pressured to cut costs; second, between management and workers; and third, between states and multinational corporations (MNCs), expressed in the tendency of MNCs to displace the state and assume the role of labor inspectors through the adoption of private mechanisms.

A variation, the filière (chain) tradition, was developed by researchers at the French National Institute for Agricultural Research (INRA) and the French Agricultural Research Centre for International Development (CIRAD) as an analytical tool applied mostly to agricultural commodities such as rubber, cotton, coffee and cocoa, generally in francophone Africa (Raikes et al. 2000).3 The filière approach, rather than a theory, is a practical tool of analysis for applied research (Raikes et al., 2000) focusing on the technical side of commodity flows. It does not focus on the role of social actors within the chain.

Producer-driven commodity chains are defined by Gereffi (1994) as those industries in which MNCs or other large integrated industrial enterprises control the production system, and control is exercised from their administrative headquarters (Gereffi, 1994). In producer-driven commodity chains, barriers to entry are, determined by capital and technology within production, and by the ability to coordinate top-down and bottom-up linkages between suppliers and retailers.

Buyer-driven commodity chains refer to those industries in which brand-name merchandisers, trade companies and retailers have a central role in decentralized production networks in a diverse range of exporting countries, generally located in developing countries (Gereffi 1994, p. 216). In other words, buyer-driven commodity chains operate in a more decentralized way than producer-driven commodity chains, and they are a result of a global trend towards geographic expansion and integration of distribution, marketing and consumption (Korzeniewicz, 1995). Particularly in the case of specialty coffees and increased quality demands from the buyer, there can be a strong control element, i.e. that many things are prescribed by the buyer. Buyer-driven commodity chains are dependent on brands and marketing for market entry. Therefore, brand value and the consolidation of brands in consumer markets play a critical role (Gereffi, 1994)

2.6 Value Chain Analysis

2.6.1 Definition

Value chain analysis (VCA), or commodity chain analysis, disaggregates the global structure of fabrication, trade and consumption of commodities and allows for the identification of actors and geographical divisions (Tuvhag, 2008). Firstly, at its most basic level, a VCA systematically maps the actors participating in the production, distribution, marketing and sales of a particular product (or products). This mapping assesses the characteristics of actors, profit and cost structures, and flows of goods throughout the chain, as well as employment characteristics and the destination and volumes of domestic and foreign sales (Kaplinsky & Morris, 2001). Such details can be gathered from a combination of primary survey work, focus groups, informal interviews and secondary data.

Secondly, VCA can play a key role in identifying the distribution of benefits to different actors in the chain. That is, through the analysis of margins and profits within the chain, one can determine who benefits from participation in the chain and which actors could benefit from increased support or organization. This is particularly important in the context of developing countries (and agriculture in particular), given concerns that the poor are particularly vulnerable to the process of globalization (Kaplinsky & Morris, 2001). One can supplement this analysis by determining the nature of participation within the chain to understand the characteristics of its participants. The distribution of benefits between actors is explained by a number of factors; the VCA focuses on the dynamics of rent, and thereby transcends different economic branches and sectors. Through a full view of the whole chain the "rent-rich activities" can be traced with greater ease. Besides, the global focus of VCA accounts for the global dynamics of returns, not only on a national level. This allows for the identification of opportunities to increase income more accurately than analysis at a purely national level would (Kaplinsky, 2000).

Thirdly, VCA can be used to examine the role of upgrading within the chain. Upgrading can involve improvements in quality and product design that enable producers to gain higher value, or through diversification in the product lines served. An analysis of the upgrading process includes an assessment of the profitability of actors within the chain as well as information on current constraints. Governance issues play a key role in defining how such upgrading occurs. In addition, the structure of regulations, entry barriers, trade restrictions and standards can further shape and influence the environment in which upgrading could take place.

Finally, VCA can highlight the role of governance in the value chain. Governance in a value chain refers to the structure of relationships and coordination mechanisms that exist between its various actors. Governance is important from a policy perspective for identifying the institutional arrangements that may need to be targeted to improve capabilities in the value chain, remedy distributional distortions, and increase value added in the sector. Here a distinction is made between two types of governance: those cases where the coordination is undertaken by buyers ('buyer-driven commodity chains') and those in which producers play the key role ('producer-driven commodity chains').

Value chain analysis has three key elements: (a) barriers to entry and rent, (b) governance, and (c) systemic efficiency (as opposed to point efficiency, meaning that the links of the complex value chain need to be integrated to make them efficient) (Kaplinsky, 2000).

2.6.2 Methodological Aspects of Value Chain Analysis

There are several methodological aspects that have to be considered when undertaking value chain analysis (Kaplinsky & Morris, 2001). First, the adequate point of entry must be chosen, as it defines the chain or chains that is or are the subject of the analysis in accordance with the objective of the study (Kaplinsky & Morris, 2001).

Product positioning and key success factors in final markets are aspects of high importance, as global markets show key characteristics (or critical success factors) that are derived from their segmentation. Another methodological feature to take into account is the question of how the producer gains access to the final market. It is therefore necessary to identify the key buyers of a determined chain and the dynamics of the buying function, in order to identify the critical success factors of the market (Kaplinsky & Morris, 2001).

Benchmarking production efficiency is another aspect tied to the methodology of VCA, where the efficiency of the different parties of the value chain is measured. The governance of the value chain is a critical aspect, where the rules that govern the value chain are identified. Another important feature is upgrading. At this point it is important to highlight that upgrading practices and performance needs to be analyzed and recorded for VCA (Kaplinsky & Morris, 2001).

Finally, distributional issues have to be analyzed, not just competitiveness issues. Distribution has both power and income components. In this context the different types of rents and barriers

to rent have to be analyzed, the unit of account of the variables in question has to be determined, as well as the circumstances under which the value added and the turnover data are illustrative for the analysis. It also has to be determined whether profits are the adequate measure for distribution and how the distribution of skills can be incorporated into the analysis. The local, national and global dimensions, the decomposition of the income streams and the presence of small and medium sized enterprises have to be taken into account (idem) as well.

2.6.3 Upgrading in Value Chains

According to Fitter and Kaplinsky (2001), globalization has forced producers to upgrade their production, for manufactured as well as primary products, through differentiation of their products. Gereffi (1999) defines upgrading in value chains as the process by which industries in developing countries obtain new skills through export manufacturing and create links with new commodity chains that can use these skills (Gereffi, 1999).

Upgrading can also be seen as innovating in order to receive increased added value (Gereffi, 1999). However, upgrading is not the same as innovation. In order to upgrade, the speed of innovation relative to the competition has to be taken into account (Kaplinsky & Morris, 2001).

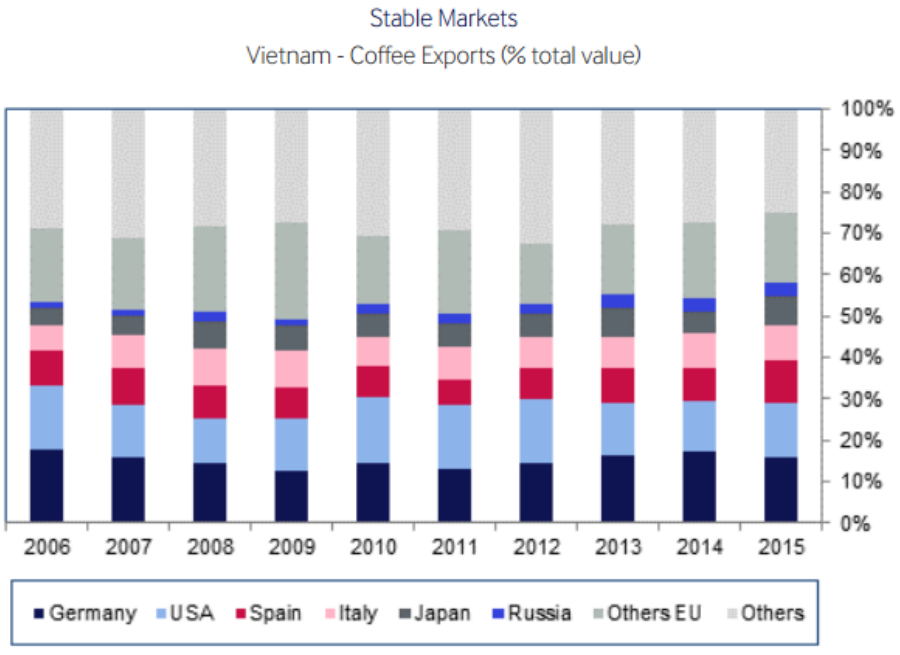
Upgrading can occur at the process, product, functional or inter-sectorial level (Giuliani & Bell, 2005). Product upgrading refers to moving into more refined product lines with increased value added. Process upgrading involves transforming inputs into outputs with increased efficiency by reorganizing the production process or using superior technology (Gwynne, 2008). Regarding functional upgrading, the firm moves along the value chain in order to realize a function different from that previously. Finally, inter-sectorial or chain upgrading refers to the movement of the firm from one sector into another so that it participates in several value chains (Giuliani and Bell 2005).

For primary commodities, according to Gibbon (2001), non-volume-related upgrading (quality upgrading) can be realized either by capturing higher margins for unprocessed commodities by improving the quality of the product, or by producing new forms of existing commodities. Nevertheless, in practice, upgrading in global commodity chains exhibit practical difficulties and complexities (Gibbon, 2001).

CHAPTER 3: NSI ANALYSIS

Coffee was first brought to Vietnam by French colonists in 1857. The Arabica was used for trial plant in the North and Central region (Quang Binh, Bo Trach provinces…). At the beginning of the 20th century, coffee plantation became popular in Dak Lak and Lam Dong provinces and was managed by French plantation owners. After the agreement between Vietnam and other countries such as the former Soviet Union, Hungary, Slovenia, Poland…, funding for coffee planting surged since 1975. In 2009, there was 500 thousand hectares of coffee all over Vietnam (Roldán-Pérez, et al., 2012). This number was up to 664 thousand hectares in 2017 (Vietnam Ministry of Industry and trade, 2017). Most of plantation are owned by individual household with an area of 2 to 5 hectares each.

Coffee has proven to be the main agricultural export product of Vietnamese economy. Most of Vietnam's coffee production is for export, only 10% left for domestic usage. At present, Vietnam coffee is exported to more 80 countries worldwide and accounts for 20% to 22% of the world's total export (BMI, 2018). In the future, Vietnam is expected to remain a key member on the international market. Following bar chart is the biggest markets of Vietnam coffee:



Source: Business Monitor International, 2018

Figure 2: Export destinations of Vietnam Coffee

As could be seen from the chart, Germany, USA and Japan are the top three destinations of Vietnam coffee, accounting for around 50% of total exporting value. The demand in Asia markets, in particular Vietnam, is forecasted to grow strongly in upcoming years thanks to rapid urbanization speed and the widely spread of Western-style coffee shops. To prepare for the new phase, Vietnam coffee industry must compete not only in terms of production output but also the quality of coffee. This goal could not be done by a single player in the value chain but need all relevant parties' effort. In this chapter, the thesis is going to analyze the relationships of members in coffee value chain and the impacts they make on the coffee industry of Vietnam.

3.1 Cluster analysis

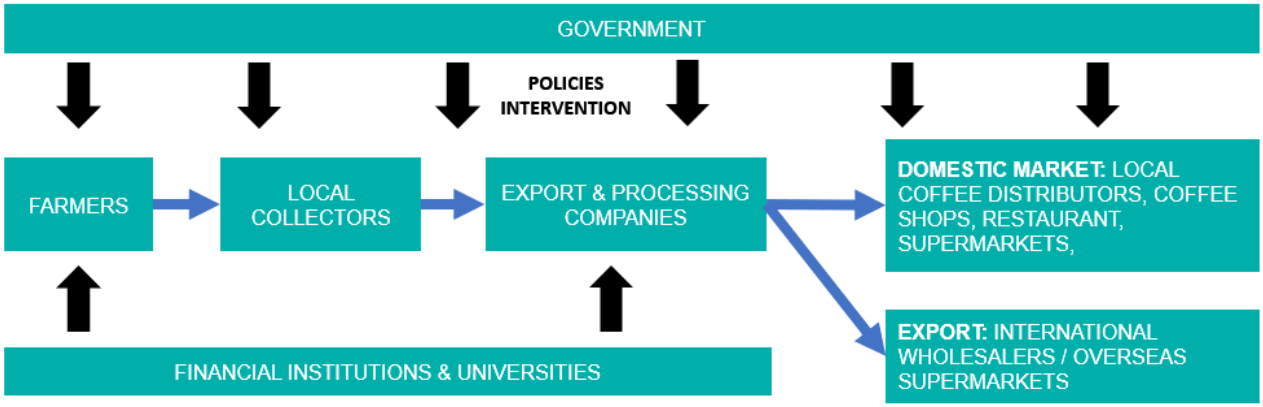
According to Porter (1998), "clusters are geographic concentrations of interconnected companies and institutions in a particular field" and it is a vital source for innovation because each actor needs the others' competencies to operate and innovate successfully. The stakeholders of a cluster include suppliers of input materials, machinery and services, complementary products manufacturers, government, universities, training vocational schools, and trade associations... As the nature of including various type of members, cluster generates both competition and cooperation. Rivalries compete aggressively to win the market shares, whereas cooperation, often exists in the vertical chain, occurs between companies in related industries and local authorities and associates.

Companies within cluster benefit more as a member than being isolated. The advantages range from cost and time savings, productivity improvement, easier access to specialized knowledge, institutions and public goods to continuous innovation creation. When it comes to staff hiring, actors within a cluster get access to the pools of experts in the industry, thus reducing the searching costs. An intensive cluster also contains profile of local suppliers which help companies save inventories costs, shorten delivery time and improve communication efficiencies for working with local partners. The flow of information within a cluster meaning communication between companies and government authorities or other public institutions is enhanced. Not only does employees could be trained at local training institutions but also companies are better-informed of changing policies, technological updates, new machinery system, new services and marketing trends… (Porter, 1998). These set of information support the preparation of companies for the future strategies and operations. It could be said that the

enhancement of productivity is the result of companies' effort in pushing up the efficiencies, creating breakthroughs, or in other words, creating innovation.

On the basis of theory mentioned in the literature review, the following section analyses in-depth the status of coffee cluster in Vietnam, how actors interact with each other to figure out how that affects the innovation creation.

3.1.1 Main actors



Source: Adapted from IPSOS (2012)

Figure 3: Main actors of Vietnam's coffee value chain.

Farmers

There are around 300,000 households with more than 600,000 farmers work full-time in the coffee industry, which is about 1.83% of total Vietnamese workforce and 2.93% of labour force in the agricultural sector (Vietnamese General Statistics Office, 2008). Farmers are the most important members of the value chain because they are mostly in charge of producing stage. Coffee farms operate under three models: farmers cultivating their own land by themselves, Sate-run farms and farms having land-property rights in 50 years given by the State. Farmers having their own coffee land live mostly by income from coffee planting on an averaged area of 4.3 hectares. In the State-run farms, farmers sign contracts with the authority agreeing on specific responsibilities in terms of finance, land managing responsibility, plantation commitment… Some of them are paid by the Government and provided with fertilizers and irrigation, others pay

a land rental fee periodically to the Government, spend their own money to invest in plantation and earn profit or suffer losses from selling coffee (Roldán-Pérez, et al., 2012).

Middlemen / Local collectors

After harvested by farmers, green coffees of various farms are gathered by collectors. Collectors are often individuals who go to farms' warehouses frequently to buy from few kilos to a hundred kilos of coffee berries. The buying process between farmers and collectors mostly is based on mutual trust and history of long-term relationships. Coffee-collectors then conduct rough processing activities to remove pulp and impurities (if rush coffee is already processed by farmers) or dry grind and polish (if they collect green coffees) to make rush coffee. Those rough-processed coffee is sold to agents in bulk. Agents are private companies or the subsidiaries of professional processing or exporting companies. (Roldán-Pérez, et al., 2012)

Processing and exporting companies

After having enough coffee for their bulk production, processing or exporting companies reprocess them to meet export requirements and categorize coffee according to its quality levels. However, due to outdated technology and low-skilled labour, processed coffee of those companies is of low quality with humidity, black and broken beans and impurities issues. Therefore, exporting price of coffee is significantly low. A small portion of rush coffee (around 3 – 6 percent) are roasted and grinded for domestic consumption.

On the Vietnamese coffee market, top two players are Vinacafe Bien Hoa and Trung Nguyen Corporation (Nguyen, 2017). Those market leaders have invested heavily on improving raw material quality, machinery system and distribution channels both locally and globally. On the domestic market, marketing and distribution activities of the two companies remain strong, therefore their products are well-known by Vietnamese generations. Local consumers trust the brand name and choose their products over other international brands such as Starbuck, Nestle... To enter international market, Trung Nguyen sell their products via two channels: wholesale for local giant supermarkets, e.g. Costco in the U.S. and E-mart in South Korea and franchising. As for the latter, Trung Nguyen sign contracts with partners in 59 countries. In case of Vinacafe, the company pays more attention to the Asian markets, e.g. Singapore, China and Taiwan. However, due to shortage in marketing activities and strategies, products of those two companies have not successfully reached to end-users and still struggle on overseas markets. (Nguyen, 2017)

The Vietnam Coffee and Cocoa Association

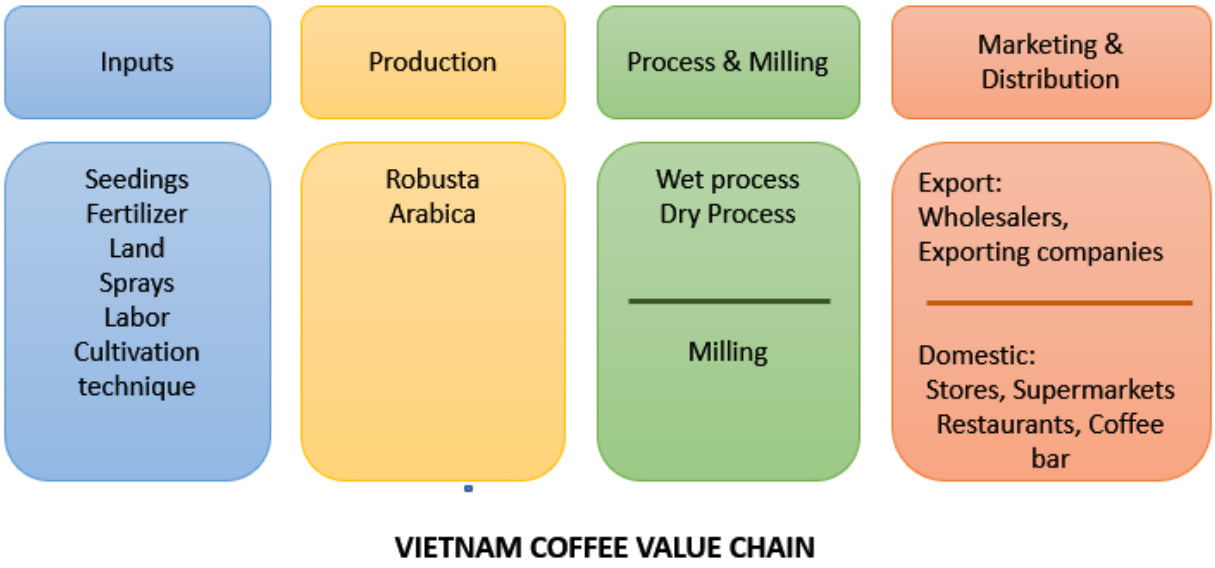
The Vietnam Coffee and Cocoa Association ("VICOFA") was found in 1990 and has more than 100 members who are traders in the coffee industry. Except for a state-owned company, i.e. Vinacafe, which is both a producer and a trader, farmers and coffee producers are not member of the organization. Some private companies do not want join VICOFA since they do not see benefit of that. As a result, VICOFA mainly acts as a host social organizer and statistics compiler rather than a group for "the exchange of ideas and a focal point for collective action in overcoming obstacles to productivity and growth" (Porter, 1998).

Buon Ma Thuot Coffee Exchange Centre

In 2008, the Buon Ma Thuot Coffee Exchange Centre ("BCCE") came into operation with the idea of trading agricultural commodities such as Robusta coffee, black peppers and rubber with international exchanges such as the Chicago Mercantile Exchange ("CME"). Dealing directly with international commodity traders supports Vietnam traders to update coffee price fast, therefore eliminate the low-price pressure middlemen put on producers. However, this model does not attract the interest of farmers and agents. Firstly, farmers and agents get used to cash payment system for tens of years, so the electronic payment system, advanced deposit, clearing banks concepts are complicated to them. Secondly, the fact that most labour in the rural area is low-skilled creates an obstacle for them to understand trading rules on the international exchange center and communicate with potential overseas partners. Thirdly, policies on tax, payments methods, and operational model…for commodity exchange are poorly constructed, making it hard for traders join the exchange.

3.1.2 Status of linkages in Vietnam coffee industry

In the following part, this thesis analyses further the status of linkages among those actors at different stages in the value chain. From this, a picture of coffee Vietnam industry with pros and cons could be revealed clearly.



Source: Adapted from Gereffi & Fernandez-Stark (2016)

Figure 4: Vietnam Coffee Value Chain

Input stage

As the above chart shows, inputs of the chain include seedings, fertilizers, land, insect sprays, human and cultivation technique. Fertilizer takes an important role for the whole value chain because it comes in the first phase of the chain and decides the success of crop. Changes of fertilizer's price have tremendous impacts on coffee price. However, the linkage between fertilizers and coffee industry is so loose that farmers face erratic fertilizer price during the season. Nguyen (2017) argues that even though domestic fertilizer production increases markedly every year, reaching nearly USD 1.5 billion revenue in 2014 and the output is enough for export, farmers have to buy imported fertilizer, mostly from China. According to the Vietnam Fertilizer Association (2016), price of Chinese fertilizer is lower than Vietnamese ones whereas their quality is not as high as Vietnam's. As a result, farmers tend to choose cheap fertilizer without considering long-term effects of its quality. Another disadvantage of using imported fertilizer is that the supply and price are not as stable as that of Vietnam fertilizer. Therefore, it is difficult for farmers to proactively planning their cultivation.

Although the local fertilizer supply is enough for coffee plantation, the low productivity makes fertilizer's price unaffordable for farmers and reduces the competitive advantages of Vietnam coffee.

Production

Besides input, production process is also the determining factor for success of value chain. In Vietnam, coffee production focuses more on the quantity than value added of coffee types.

In 2016, total output production of Vietnam was 1.530 tons, down from 1.590 tons in 2014. This led to a decrease of the contribution of Vietnam coffee production in the world production from 17.8% to 16.8% (Ministry of Agriculture and Rural Development, 2017). The reason was climate changes leading to drought and off-season rains. Unpredicted weather patterns caused severe damages to coffee planting season. This fact requires Vietnam to develop technology and quality of production to reduce nature's impacts on plantation and gain competitiveness on the market.

It is worth to note that Vietnam's planting focus on Robusta instead of Arabica means Vietnam is missing opportunity of producing products with higher selling price. By statistics, Robusta area accounts for 96% of coffee planting area in Vietnam, the rest 4% is of Arabica. Since Arabica is more difficult to cultivate, less disease and insect resistant than Robusta but has higher quality and better taste, Arabica's price is substantially higher than Robusta's. In mid-May 2018, while Robusta coffee is 1.725 USD per ton on the ICE Europe – London exchange, Arabica coffee is priced 2.400 USD per ton. Vietnam's biggest competitor – Brazil only spends 20% of its coffee planting area for Robusta in 2013 and is the largest Arabica producer on the world (Business Monitor International, 2018).

Quality improvement and quality consistency are long-term goals that the Government set for coffee industry. However, farmers are not provided information about exporting standards that their coffee is supposed to meet and how to achieve them, there is no reliable source of knowledge updating about international market, consumers' taste, no experts coming to guide them proper cultivation methods…In other word, this is proving hard to achieve the long-term goals since those smallholders only have their own cultivation experiences for use without any training or updating on changes of modern coffee world…making coffee beans quality fluctuate.

Overall, Vietnam is the second largest coffee producer on the world, however the focus is still on the quantity rather quality of coffee. Although the Government has plans to move to higher yielding varieties, and better processing practices to improve quality of coffee bean, the result is not significant.

Processing and Milling

The processing and milling stage is the next phase in the value chain that generates the highest added value in the whole chain. However, this stage has not been researched and developed properly in Vietnam. There are 100 millers in Vietnam with production capacity from 5,000 to 60,000 tons of coffee per year (Le, 2013). Machinery and equipment are mostly made domestically long time ago with some imported from Brazil. The processing technology is simple and outdated, so coffee is roughly processed and sold at low price. In addition, since farmers use many different seeding varieties and cultivation process, the berries' quality is irregular, making the coffee quality after processed and milled not stable. According to the Agro Processing and Market Development Authority (2017), 80% of coffee cherries are only dried under the sun at the yards of farmers while the standard requirement is they must be dried by the machine. Although the Government has set plan for the coffee industry to replant higher yielding varieties and adopt better processing practices to improve bean quality, the fragmented market makes it difficult to invest on updating technology, expanding value chain and utilizing economic of scale.

Marketing and Distribution

Marketing and distribution of Vietnam coffee firms depend remarkedly on overseas wholesale partners. Members of this distribution network includes Vietnam coffee companies, international millers, international wholesalers, and end-users. Due to technology shortage, exported coffee is only roughly processed for further treatment occurring overseas. At present, Trung Nguyen and Vinacafe are the two players being able to make rough coffee into high quality products on the shelves (Le, 2013).

3.2 Access to Financial resources

In 2015, out of 500,000 hectares of coffee trees in Vietnam, 25% was trees aged from 20 years old. Those old trees bear smaller number of coffee cherries, so farmers should replant new ones.

However, since requirement of replantation is waiting three years after cutting down old trees for the land to recover and insects completely die, then another three to four years for the trees to begin to bear coffee cherries, farmers do not want to take risk cutting trees and lowering their production output during nearly 10 years. Besides, farmers seem to have other plantation choices rather than coffee that gives them high return and less waiting time. Some of examples are peppers and avocados which have similar weather and location preferences with coffee trees but shorter cultivation period and high return. Furthermore, planting new coffee trees asks the farmers spend more money on caring soil and trees, whereas their budget is so tight.

Acknowledging difficulties farmers have to face, the Government requested Bank of Agriculture and Rural Development to lend coffee farmers with favorable interest rate and loan terms to support the coffee replantation from 2015 to 2020 (Anh, 2015). Although loan fund for coffee farmers is ready to lend, bank and farmers could not come to final loan agreement due to several reasons. From farmers' perspective, they think loan's terms are too complicated for them, interest rate is rather high, some even are not informed of the loan scheme. Processing coffee companies explain the reasons they cannot access favorable loan fund because they need high value of loan with long-term lending which bank could not agree with them. Some reasons sourced by representative of banks include cultivation method is outdated so weather's effects on the crop are tremendous which is high risk for them, farmers and small companies do not satisfy collateral terms, difficulty in managing collateral, time consuming to conduct credit assessment while loan amount is small (Nguyen, 2013)

3.3 Linkage with Vocational training programs

Although coffee is the main exporting agricultural product of Vietnam, the society has not given much attention to develop this highly potential products. Linkage of the coffee industry with University in Vietnam is so low that no training program is designed specifically for coffee farmers. From the early days, Vietnam has competed on global market by plentiful and cheap labour force. However, these advantages gradually become bottleneck for the development of Vietnam since in the high-tech industry world, those cheap labour has to compete with automotive machine while it takes long time and great investment to turn unskilled labour force without professional and technical skills into high-skilled ones.

According to the World Development Report (2008,p.202):

"*An active policy agenda for the rural labour market, in agriculture and in other sectors, can produce long-term sustained reductions in rural poverty. Perhaps most important is a better rural investment climate for agriculture and the rural non-farm economy. Improving it will not be enough, however. Investments in schooling and training to convert unskilled to skilled labor are essential. Skilled workers can take advantage of better local opportunities or migrate. For those who cannot, only social protection can ease their poverty*"

Understanding the necessity of labour training, in 2009, the Ministry of Agricultural and Rural Development (MARD) has announced an ambitious plan to modernize the coffee field in the period of 2009-2020 in Decision 1956 of the Prime Minister (BMI, 2018).

According to Vietnam Union of Science and Technology Associations (2011), 74% of labour in agriculture sector of Vietnam is low-skilled and number of labour in the field has reduced from nearly 50% of labour force in 2010 to nearly 40% in 2016. Decision 1956 aims at training rural labour professionally so that they can improve their skills and work in the area they wish for. However, two years after the Decision was issued, not many labours participated in those training programs. The reasons are given in following table:

No.	**Reasons**	**Percentage (%)**
1	No courses organized locally	6.4
2	Family is not on priority list to participate in the courses	0.6
3	No family member participates in the course	19.3
4	Time of the courses is not suitable	6.9
5	Cannot afford course fees	28.0
6	No demand for participation	40.5

Source: Vietnam Union of Science and Technology Association, 2011

Table 2: Reasons for not taking part in vocational training programs

As could be seen from above table, the majority of responses were households had no demand for vocational training, occupying 40.5%. When asking for more details, they said that the program content was unsuitable (84.1%), training was ineffective and outdated (7.3%), they were satisfied with their occupation (8.8%). On the other hand, those having demand for vocational training said the main reason was they wanted occupation transformation (40.4%). Only 11.8% of surveyed households wanted to keep their farming work, other 39.3% wanted to be trained to get new job as workers in the factories.

Another difficulty for authority to organize vocational training courses at rural area was the young-aged labour was not consistent on their vocational choices. For example, speaking of a young labour in Ha Nam province: "Initially, he said that he wanted to learn this occupation, but when class was opened, he changed his idea and said that he did not want to learn this occupation any longer. Therefore, it is difficult because there is no control or engagement." (VUSTA, 2011). The authority argued another reason for indecisiveness of labour in attending the courses and demand to change to new occupation as worker in factories associated with other socio-economic factors. During 2001 – 2007 period, Vietnam lost 500,000 hectares of agricultural land for construction of factories, residential areas…following a master economic structure changing plan of the Government. The farmers received a large amount of money as compensation, so their living was well-off, and they were not motivated to improve their skills, others own no land, so they considered moving to urban areas.

As for those who participated in vocational training program, 77.1% of households having members trained have experienced an income growth (VUSTA, 2011).

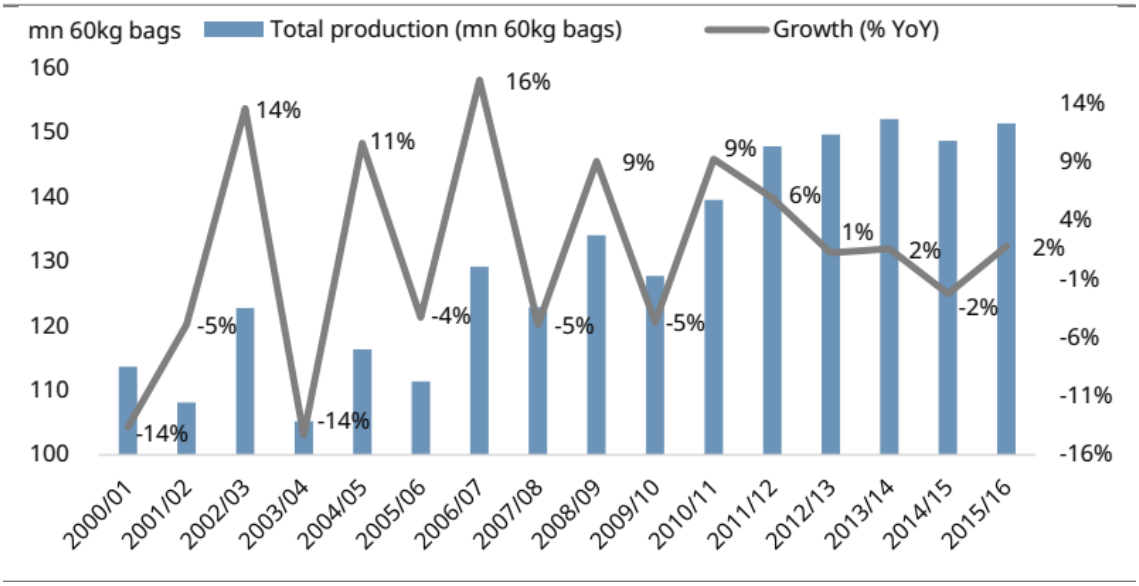
It could be said that linkage between labour of coffee industry and training programs is rather weak because content of training courses is ineffective, outdated, and most importantly does not meet the demand of farmers and labour in the coffee sector. On the other hand, due to changing economic structure of Vietnam economy, many farmers lost their land and found other jobs in urban area to survive instead of staying in the countryside.

CHAPTER 4: GVC ANALYSIS

Waldron et al., (2014) stated that "the application of GVC theory to the study of agricultural value chains is reflected in five themes". This analysis follows those themes. Firstly, the International coffee trade is analyzed as export is considered a motivation for development of the industry. Secondly, the driving point of the chains – the coffee beans production and processing stage of Trung Nguyen Corporation are researched to find out how this vital phase affects the position of Trung Nguyen on the global value chain. Next, the intra-chain upgrading toward the downstream of Trung Nguyen, marking the shift from an Original Equipment Manufacturing (OEM) model to an Original Design Manufacturing (ODM) one is analyzed. The forth theme concerns how Trung Nguyen upgrades its product line to be more sophisticated higher added value to strengthen its positions on the GVC. Lastly, Trung Nguyen's governance structure is investigated.

4.1 The International coffee market

4.1.1 Global coffee production

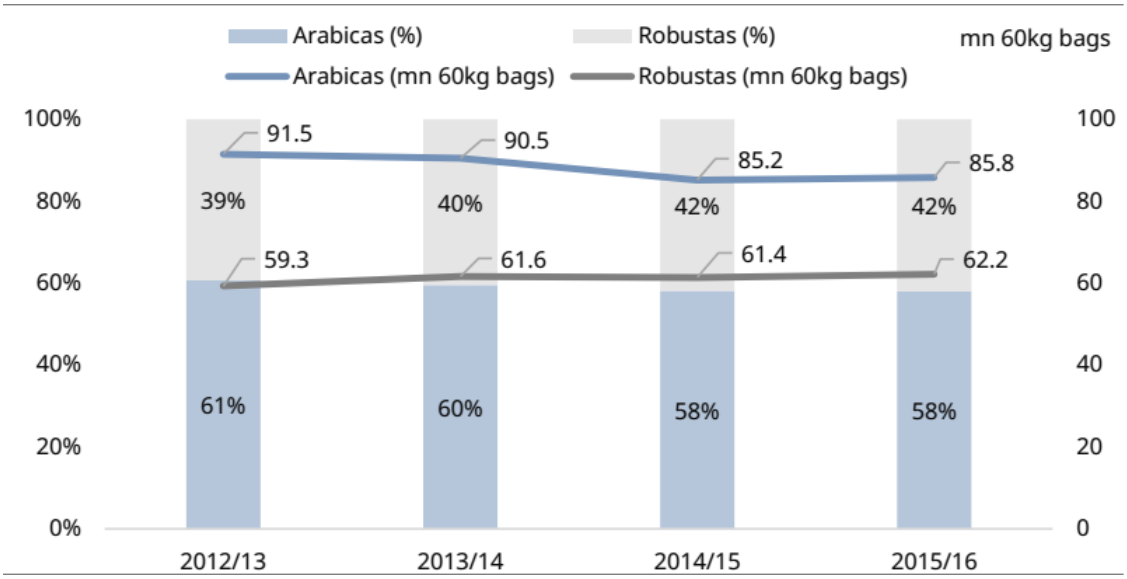


Source: ICO, Mirae Asset Daewoo Research

Figure 5: Global coffee production per crop year

Global coffee production for the 2015/16 crop year amounted to 151.44mn 60kg bags. While global coffee production has been on an uptrend since 2000, the momentum has stalled over the

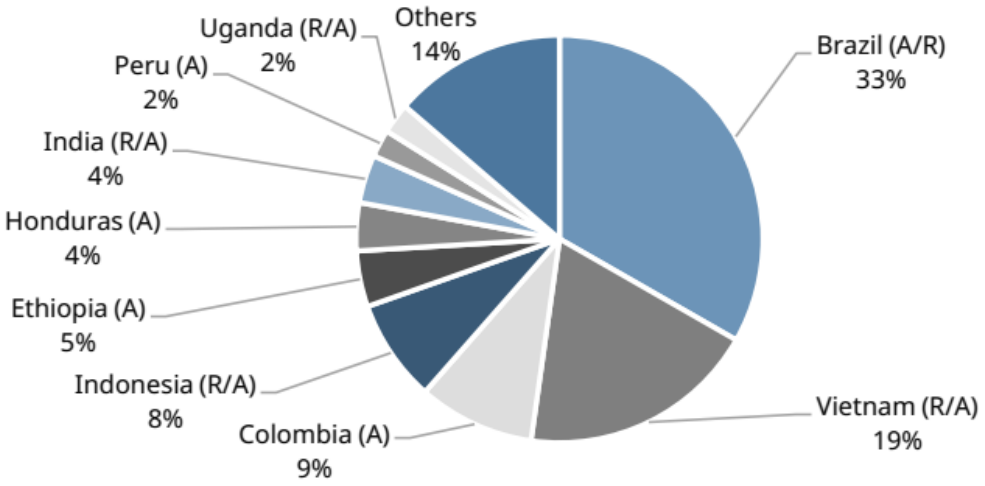
last five years. There are many reasons for this, including prolonged drought conditions, disease (leaf rust), etc. Global coffee production peaked in the 2013/14 crop year, (152.13mn 60kg bags), with production slightly down in the two subsequent crop years.



Source: ICO, Mirae Asset Daewoo Research

Figure 6: Global coffee production by type

Over the last four crop years, Arabica coffee has accounted for more than half of total global coffee production. However, Arabica production has fallen slightly in recent years due to the drought condition in Brazil, the world's largest producer of Arabica coffee.

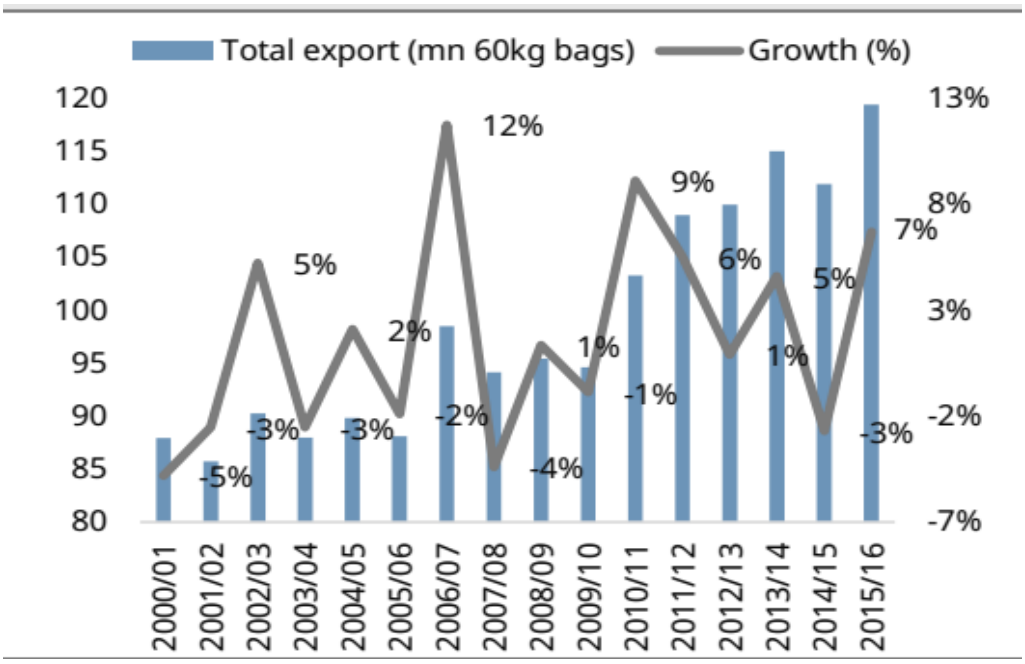


Source: ICO, Mirae Asset Daewoo Research

Figure 7: Total production in 2015/16 crop year

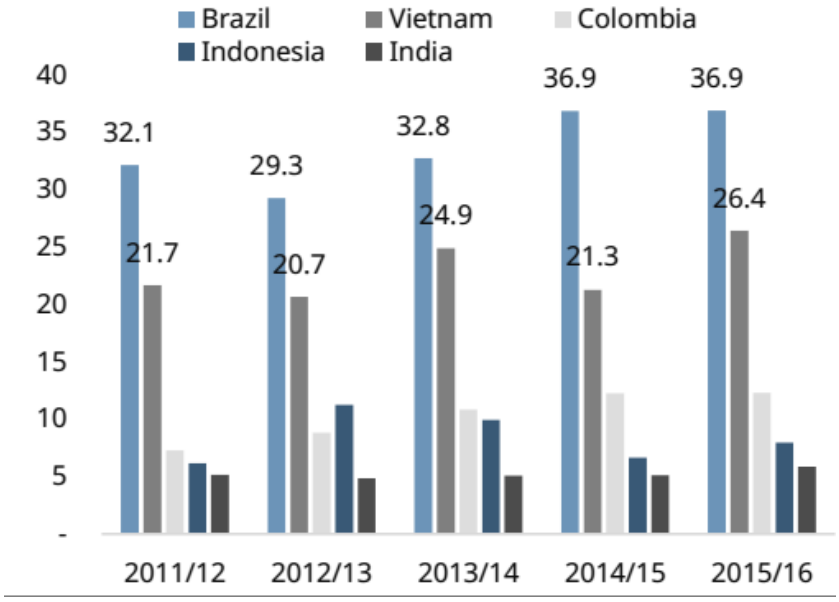
According to ICO data, Brazil has remained the largest coffee producer in the world since 1990. In the 2015/16 season, Brazil contributed 33% of global coffee production (over 55mn 60kg bags). In second place was Vietnam, with 19%. In 1999, Vietnam officially surpassed Colombia as the world's second largest coffee producer and has maintained that rank ever since. In the 2015/16 season, production in the four largest coffee-producing countries was generally higher, with the exception of Brazil. In Brazil, coffee production fell mainly as a result of dry weather in coffee-growing regions (due to El Nino). Except for Brazil, the main coffee-producing countries saw heavy rainfall in the summer of 2015/16, leading to high yields and somewhat improved output. Heavy rain is a pivotal factor for the flowering and fruit-bearing season of coffee. Vietnam's coffee output increased by more than 2.2mn 60kg bags, reaching more than 28.7mn 60kg bags. Colombia's Arabica output increased from 0.67mn 60kg bags to 14mn 60kg bags. And in Indonesia, coffee output increased by 0.9mn 60kg bags to over 12.3mn 60kg bags. In Brazil, meanwhile, Robusta coffee productivity failed to recover following the severe drought of the 2014/15 season; the country's coffee output fell by 2mn 60kg bags to nearly 50.4mn 60kg bags.

4.1.2 Import and Export picture



Source: ICO, Mirae Asset Daewoo Research

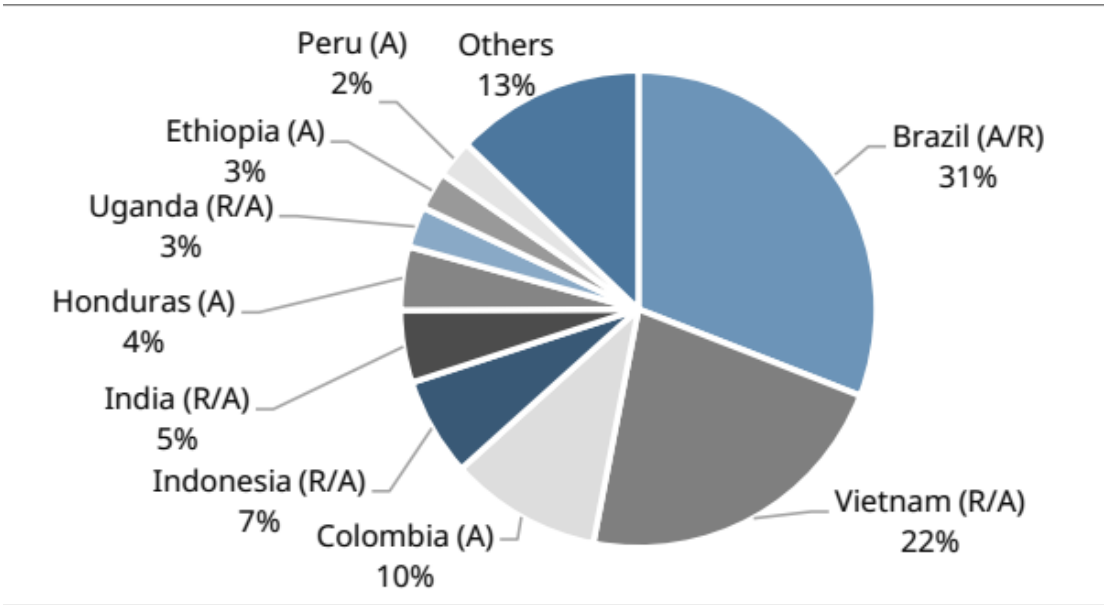
Figure 8: Total global coffee export volume per crop year



Source: ICO, Mirae Asset Daewoo Research

Figure 9: Five largest coffee exporters (mn 60kg bags)

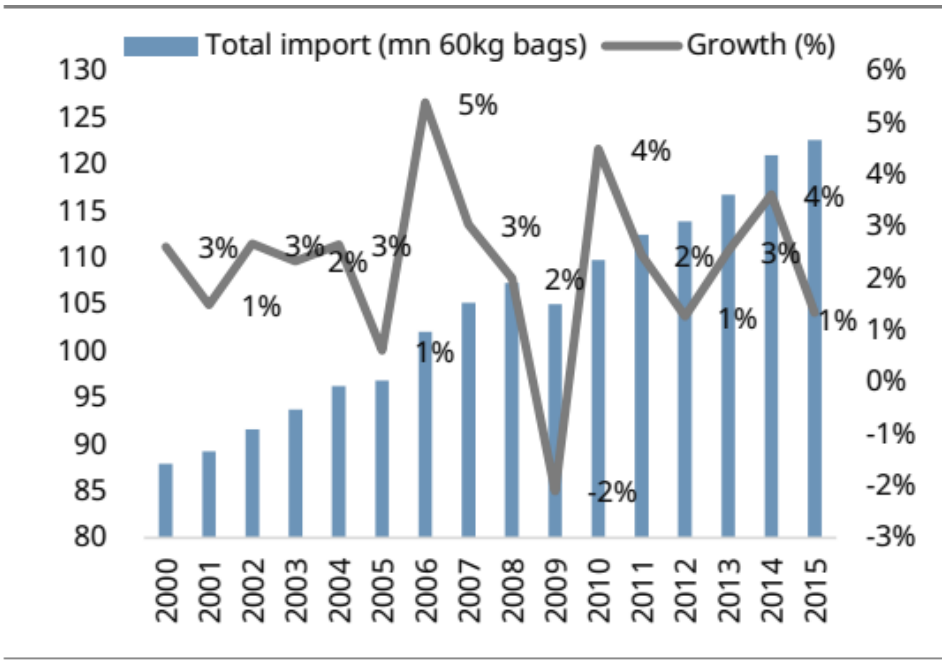
According to ICO statistics, since 2000, Brazil, Vietnam, Colombia, and Indonesia have remained the four largest coffee exporters in the world, with Brazil continuously ranked first.



Source: ICO, Mirae Asset Daewoo Research

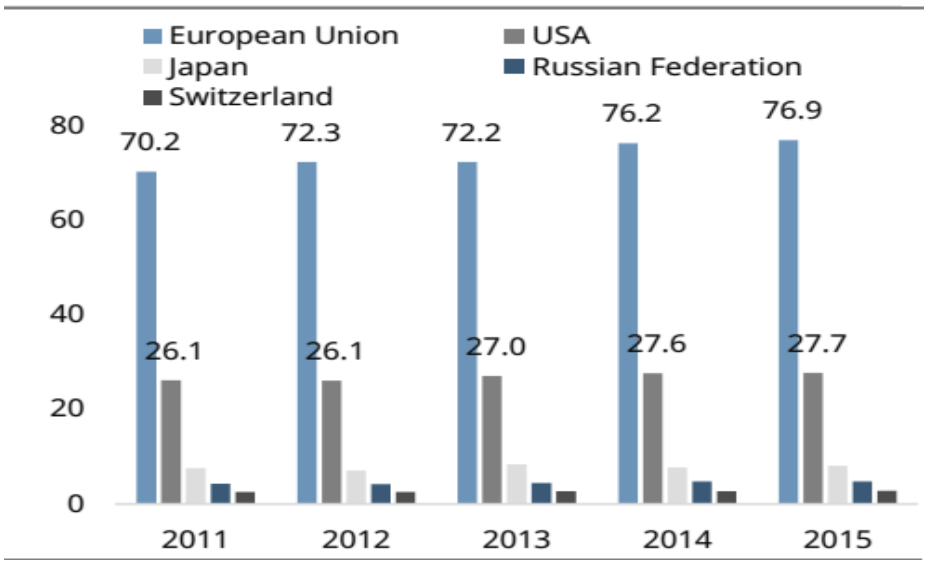
Figure 10: Largest coffee exporters in the 2015/16 crop year

Total export volume in the 2015/16 season was nearly 120mn 60kg bags, comprising 74.9mn 60kg bags of Arabica coffee (compared to 69.2mn 60kg bags in the previous crop year) and 44.5mn 60kg bags of Robusta coffee (compared to 43.8mn 60kg bags in the previous crop year). Specifically, Brazil accounted for 31% of total exports with nearly 37mn 60kg bags, a slight increase (1.08%) from the previous season. Vietnam's export volume reached 26.4mn 60kg bags, surging 24.15% compared to the previous season. Colombia contributed 10% (12.3mn 60kg bags) and Indonesia accounted for 7% (8mn 60kg bags).



Source: ICO, Mirae Asset Daewoo Research

Figure 11: Total global coffee import volume per calendar year

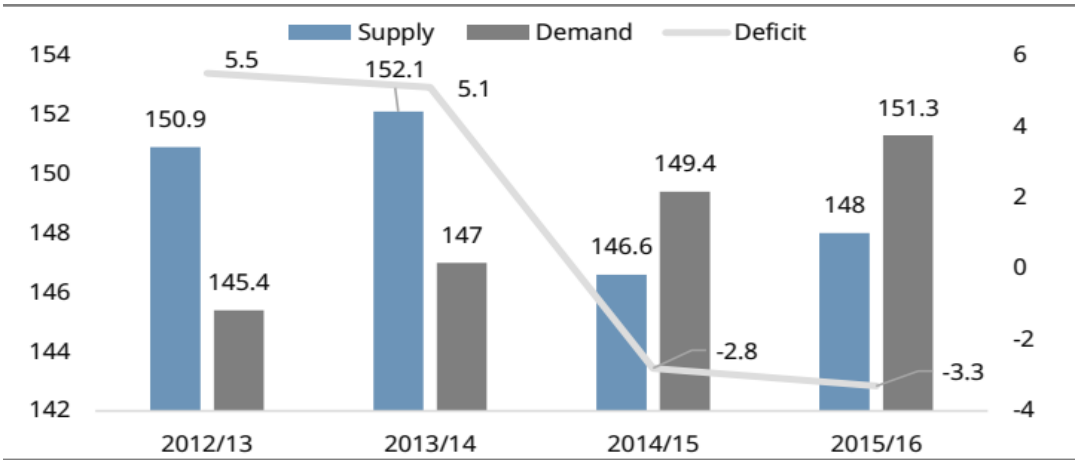


Source: ICO, Mirae Asset Daewoo Research

Figure 12: Five largest coffee importers (mn 60kg bags)

The EU has been the world's largest coffee importer since 1990, according to ICO statistics. In 2015, the EU imported 76.9mn 60kg bags of coffee, accounting for 63% of total global imports. In second place was the US with 27.7mn 60kg bags, or 23% of total global imports.

Supply and demand balance



Source: ICO, Mirae Asset Daewoo Research

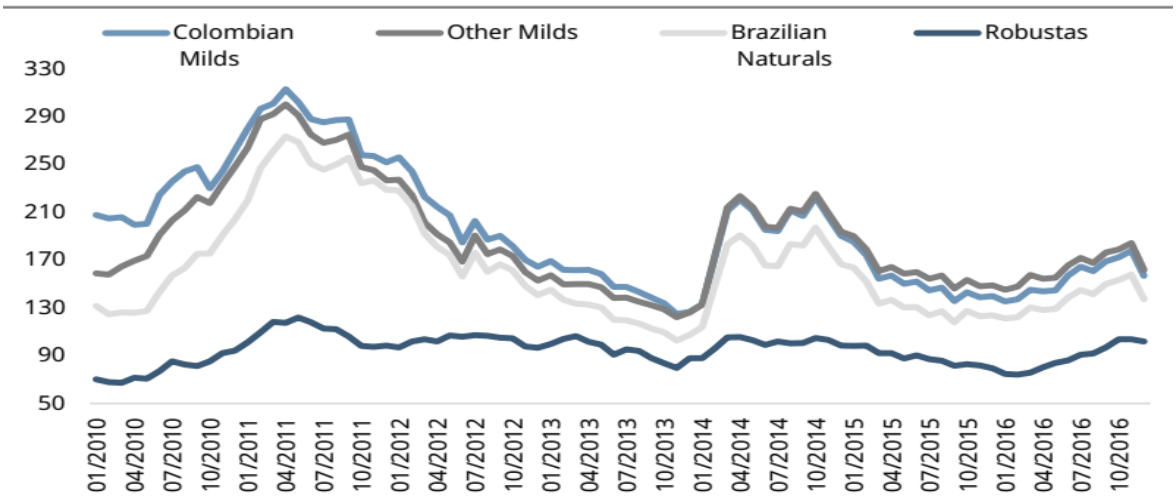
Figure 13: The deficit between supply and demand (mn 60kg bags)

The 2015/16 season was the second consecutive season of supply shortage in the coffee market, with a 3.3mn 60kg bag deficit between supply and demand. Prior to that, there had been surplus

production in 2012/13 and 2013/14. As mentioned, El Nino and La Nina strongly affect global coffee production and were the main factors causing the past two years' supply shortage.

4.1.3 The International Coffee Organization and Coffee Prices

Coffee is an important commodity for many economies; it has experienced periods of oversupply and low prices and other periods of short supply and high prices, where the former have been longer than the latter. After price fluctuations in the 1950s and the 1960s, an intergovernmental initiative came into effect to stop the fall in prices and avoid negative political and economic consequences for developing country producers (Roldán-Pérez, 2007). For this purpose, the International Coffee Organization was initiated in London in 1963 with the support of the United Nations, due to the high economic significance coffee had for developing countries. At its inception, the main function of the ICO was to establish coffee export quotas and the level of coffee market prices. In July 1989, however, the system collapsed under the pressure of competing demands by exporters for market share. The consequences were the suspension of coffee export quotas and the start of negotiations on a new International Coffee Agreement (Roldán-Pérez, 2007). The price trend can be observed in Figure 11 below.



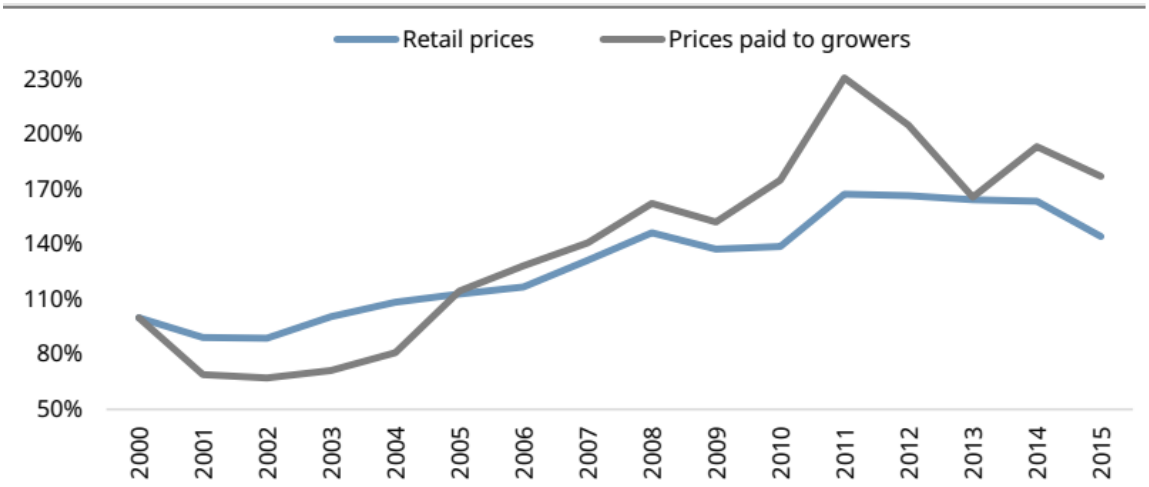
Source: ICO, Mirae Asset Daewoo Research

Figure 14: Monthly average price of coffee (US cents/lb.)

The price of coffee fell sharply after peaking in 2011. The cause of the decline was excessive global coffee inventory, with supply exceeding demand continuously. In the 2014/15 season, El Nino and disease (leaf rust) had a strong impact on coffee production, causing a supply shortage in the world coffee market and leading to a strong recovery in coffee prices in early 2014. Less

than a year later, coffee prices fell sharply again while the market was still facing a supply shortage. Early in 2015, amid news of impending US Fed rate hikes, speculative funds had to sell off coffee to avoid the possibility of losses due to coffee price weakness against a strengthening USD. This led directly to a sharp drop in coffee prices in 2015.

Since early 2016, coffee prices have recovered quite well. Short supply of Robusta coffee along with the recovery of the BRL/USD exchange rate has pushed up global coffee prices. For 2016 as a whole, Robusta coffee prices increased sharply, by 28%, while the price of Arabica coffee increased by only 8.2% due to the uptrend in Arabica supply in major producing countries. As a result, the price gap between Robusta and Arabica has been narrowing. Industry experts believe the prices of Arabica and Robusta products will soon be on par.



Source: ICO, Mirae Asset Daewoo Research

Figure 15: Relative change in retail prices vs. prices paid to growers

In addition, since 2005, the growth of prices paid to growers (farmers) has exceeded the growth of retail prices.

4.1.4 Mapping the Global Value Chain of Coffee

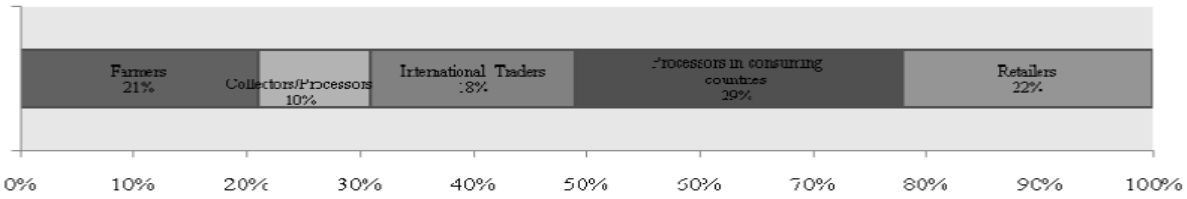
The coffee industry has, following recent trends in the primary products market, become more differentiated (Fitter & Kaplinsky, 2001). For example, the Fair-trade share of the coffee industry has been growing: in 2007, imports of Fair trade coffee increased by 19 per cent, whereas coffee imports increased by only 2 per cent (FLO 2008; ICO 2008). Whilst the coffee trade has been

liberalized, the industry has developed several self-regulatory systems. These governance systems mainly improve the reputation of its members, which are the coffee-growing farmers, and facilitate the relationship between roasters or traders and coffee growers. National coffee institutes in coffee producing countries have had a particular impact on improved coordination along the links of the coffee value chain (Muradian & Pelupessy, 2005).

According to Kaplinsky (2006), the coffee value chain can be upgraded through product development and positional consumption. Producers have focused mainly on productivity improvement, whereas roasters and retailers have emphasized product innovation. Regarding functional upgrading, growers have been blocked from moving up the value chain to the processing stages by tariff escalation policies (Talbot, 1997). Regarding other value chains, many producers have been forced out of coffee production because the variable costs are not being covered (idem). As drawn by Fitter & Kaplinsky (2001), a general value chain for the coffee industry can be described as follows:

i. First, farmers pick and dry- or wet-process the coffee cherries. They receive a farm-gate price for the coffee beans;
ii. The coffee cherries are continuously processed, with a factory-gate price paid for both the dry- and wet-processed coffee cherries;
iii. The beans are passed to an intermediary for exportation, at the 'free on board' (FOB) price;
iv. The beans are sent to the importing countries, where they arrive at the 'cost, insurance and freight' (CIF) price;
v. They are then sold at wholesale prices;
vi. The beans are then roasted and sold at factory-gate prices;
vii. Finally, retailers sell the beans at retail prices to the public for domestic consumption, or for out-of-home consumption by restaurants, caterers and coffee bars (Fitter & Kaplinsky, 2001).

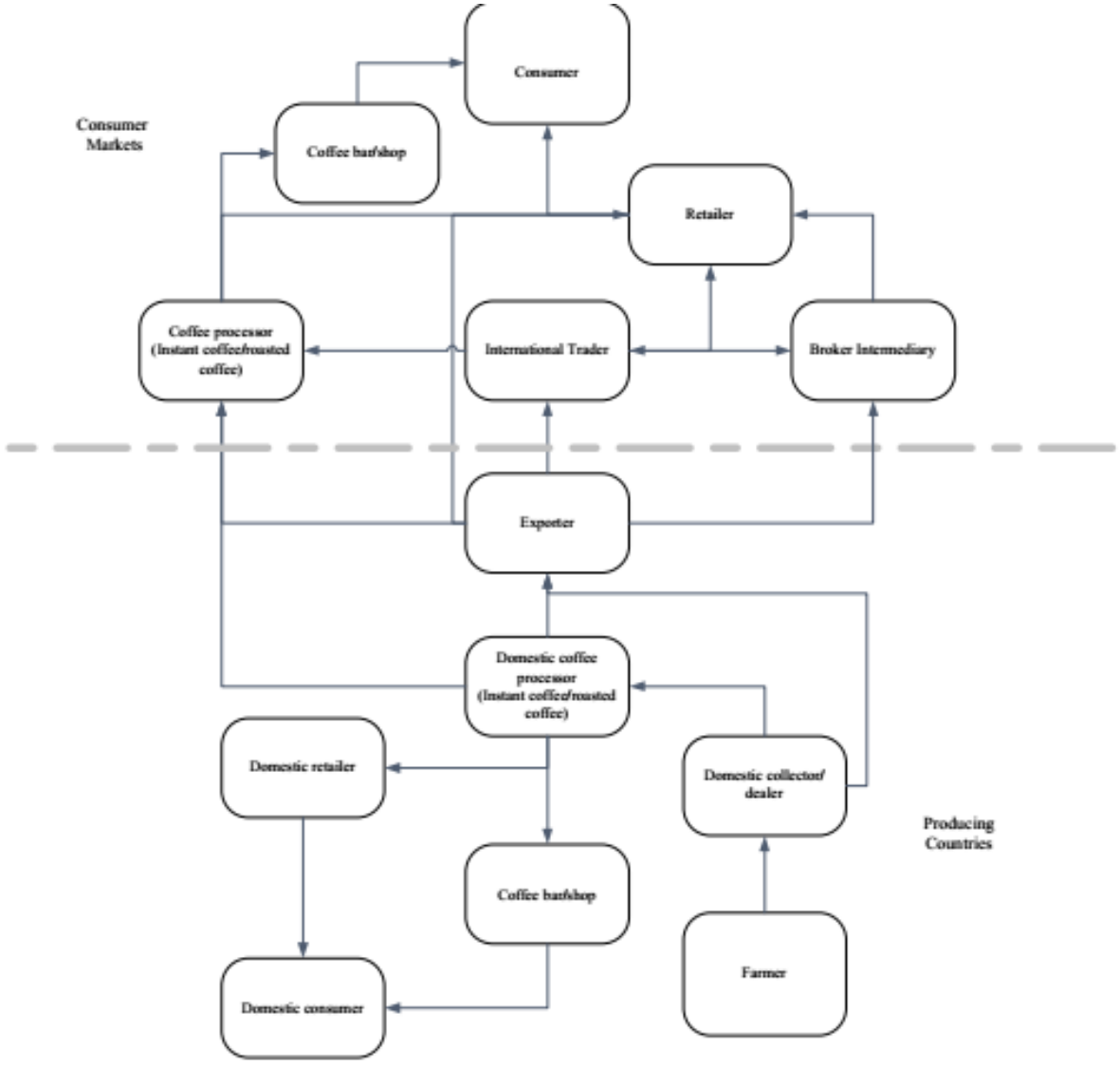
The following graphic, based on Keane (2008), illustrates the value added at each stage of the coffee chain.



Source: Kaplinsky & Fitter (2001)

Figure 16: Value added created at each stage of the coffee GVC

The following graphic represents the global value chain of coffee.



Source: Developed by the researcher

Figure 17: The global value chain of coffee

Globally, the coffee industry is valued at approximately US$77 billion with trade amounting to US$66.5 billion in 2016 (ICO, 2016). It is characterized by production that is concentrated in developing countries in the so-called “coffee belt” around the equator, while consumption is concentrated in northern regions.

The coffee GVC can be divided into five categories namely production, processing, trade, roasting and marketing. The production stage of the chain that is usually carried out in developing countries in the “coffee belt” gains the lowest value. Meanwhile, the marketing stage of the chain remains concentrated in developed countries.

The two main species of coffee are Arabica, which is considered to exude superior taste and commands higher market price; and Robusta, which is typically used in lower-value segments of the market like instant coffee. In terms of emphasis in production, quality and marketing are key factors in Arabica profitability, while high productivity and farm efficiency are critical determinants of Robusta profitability.

There are important structural evolutions in the global coffee industry in recent years. These include the following:

The de-commoditization of the coffee sector in the last two decades: Today, coffee is no longer classified as simply Arabica or Robusta. Marketing strategies have raised consumer awareness not only in the quality of coffee, but also about its specific origin, type and flavor profile as well as the social and environmental conditions under which it is produced.

Instant coffee has been losing market share to fresh coffee in mature markets, leaving Asia as a key source of demand. Companies are shifting to Asia, where coffee consumption is still in its relative infancy. Instant coffee is used as an inexpensive way to draw consumers. Key emerging markets in the Asia Pacific region, such as China, Indonesia and Philippines, are expected to become important sources of growth for the global coffee industry. The said countries are expected to add US$1.5 billion in new sales in the next five years.

Traceability and sustainability have become increasingly important. These characteristics are highly valued in specialty coffee and certified coffee. In specialty coffee, products are sold based

on their specific origin and quality that is attributed to its production location. In certified coffee, on the other hand, products are sold based on reassurance to consumers that the product has been produced based on a specific set of economic, social and environmentally sustainable norms. As an effect, this has led to the restructuring of the supply chain as roasters are now purchasing coffee directly from farmers in producing regions.

4.2 Overview of Trung Nguyen Corporation

Trung Nguyen Coffee Corporation, which was found by Dang Le Nguyen Vu in 1996 in Buon Ma Thuot– the capital of coffee in Vietnam, is the biggest domestic coffee brand in terms of production, processing, and distribution of coffee. Trung Nguyen Coffee is imported by more than 60 countries over the world, including the Asian markets, such as Japan and Singapore. Trung Nguyen Coffee Corporation is composed of six members: Trung Nguyen Corporation JSC, Trung Nguyen Instant Coffee Company JSC, Trung Nguyen Coffee LLC, G7 Commercial Services Company, Dang Le Tourism Company JSC, Trung Nguyen Franchising Company JSC, and G7 Ministop Joint Venture Company (Trung Nguyen, 2016).

Trung Nguyen also selected distribution channel, by opening coffee shops in different cities to spread-out its products. There are currently more than 1,000 shops in Vietnam. The first coffee house ever was operated in Ho Chi Minh City in October 1998, and two years later, by which time 100 outlets had already been established, the first one was opened in Hanoi. With the development the years after, Trung Nguyen successfully entered markets in Japan, Thailand, Cambodia, Malaysia, China, Germany, and New York City. The company plans to further grow and emphasize its international appearance in China, the US, and Europe (ICO, 2016).

Most coffee bean growers in Vietnam are small private farmers, which provide 95% of the total production. Around 85% of those farms own less than 1 hectare. Only 1% of farms have more than 5 hectares. After the coffee is harvested, farmers will sell their crop directly to collectors, who will re-sell to larger coffee processors. The relationship and mutual trust between the growers and the collectors determine how the buying process will go. Usually, collectors will select the coffee beans according to their own criteria, such as smell, moisture level, and appearance. The collectors may process the beans by drying and grading them; to ensure the moisture content and size of the coffees beans are better suited to the standard (ICO, 2016).

Processors and exporters are the last two stakeholders in this supply chain. Vietnam currently has about 150 registered coffee processors and exporters. They consist of thousands of small local businesses, as well as join ventures with international companies. Leading processors, exporters in the market are Vinacafe, Nestle and Trung Nguyen (ICO, 2016).

4.3 Trung Nguyen's position in the Global Coffee Market

4.3.1 Export Output

Trung Nguyen coffee has already become one of only a handful of Vietnamese brands that have gained international recognition, with high-profile political leaders asking for it by name. Trung Nguyen products are exported to 60 countries all over the world and featured at international events in Vietnam such as the ASEAN summit and the Miss Earth 2010 pageant. Its G7 instant coffee can be found at major supermarket chains around the world, such as Costco in the United States. Trung Nguyen recently opened its fifth factory, a US$110 million G7 instant coffee plant in Bac Giang province. The factory will operate at a capacity of more than 100 tons a day and employ more than 300 employees during its first phase.

Export coffee output reached 931 million tons in 2004 but decreased rapidly to 722 million tons in the following year. Output in the following years increased and reached a peak in 2016. The average growth rate of coffee exports in the period 2004-2016 was 19.43 per cent. 1994-2007

4.3.2 Export Turnover

Trung Nguyen's turnover from coffee has increased continuously. Trung Nguyen exported 212 million tons of coffee in 2006 and this figure increased to 1,209 million tons in 2016, with a turnover of USD 1.87 million (a record in both quantity and price). The average growth rate of export coffee turnover was 10.94 per cent between 2004 and 2016. Trung Nguyen has exported to 60 countries in 2016 (Trung Nguyen, 2016).

Export turnover increased more slowly than output growth because of fluctuations in export prices. In the period 2004 to 2016, in particular, export turnover did not increase much and even decreased, despite a sudden growth in export output. In 2011, for example, export output reached 931 million tons (an increase of 26.8 per cent on the previous year) but export turnover fell to USD 391 million, equivalent to just 78 per cent of the previous year's turnover.

4.3.3 Export Product Structure

According to Trung Nguyen (2016), 95 per cent of Trung Nguyen's coffee exports are green coffee beans, 1-2 per cent is roasted ground coffee and 3-4 per cent is instant coffee. The reasons for this are weak processing capacity and a lack of brands.

Robusta accounts for nearly 95 per cent of Trung Nguyen's total output and Trung Nguyen's output accounts for 41.3 per cent of Robusta produced in Vietnam. The price of Arabica is much higher than Robusta, but it accounts for only 5 per cent of Vietnam's exports. The quantity of processed coffee, such as roasted coffee and instant coffee, which is exported, is too small. Roasted coffee and instant coffee exports accounted for only 0.43 per cent of Trung Nguyen's total turnover from coffee in 2016, despite its high added value and profit level. Instant coffee's added value is 3.41 times that of green coffee beans, whilst the export value of roasted coffee is 4.38 times that of green coffee beans (Trung Nguyen, 2016). Whilst Trung Nguyen's processing ratio is too low, it is difficult to increase the quantity of processed coffee exported because Trung Nguyen does not have a large market and is not strong enough to compete with famous coffee brands.

4.3.4 Export Prices

The period from 2004 to 2010 was a period of depression for Vietnamese coffee, particularly for Trung Nguyen Coffee, with a price reduction of 7.49 per cent per year, from USD 2,393 per ton in 2004 to USD 400 per ton in 2010. Low prices were the reason that coffee output in 2001 was high but export turnover was low.

The export price gradually raised to USD 1,548 per ton in 2010-2016, four times that of 2010. However, it was not as high as the price in the golden age of coffee (2004). The average export price in 2016 increased by 25.12 per cent on the previous year, by 128.37 per cent compared to 2015, and by 265 per cent compared to 2010 prices. The main reason that Trung Nguyen's coffee export turnover in 2016 was its highest ever is that the world price and Vietnam's export coffee price increased sharply.

4.3.5 Export Markets

In terms of market structure, Trung Nguyen has exported to 60 countries and territories, among them the ten leading importing countries in the EU and US. They have been Trung Nguyen's main markets from 2004 to 2016 (Trung Nguyen, 2016).

Two big markets in Asia, Japan and Korea, are also important customers for Trung Nguyen. The permanent markets among Southeast Asian nations are the Philippines and Malaysia, and recently Indonesia. Other countries, such as Poland, Russia and China, also buy coffee from Trung Nguyen, Vietnam.

Trung Nguyen also has some new customers in Latin America, such as Ecuador, Mexico, Chile, Paraguay and Nicaragua. It is noteworthy that Brazil – the leading coffee producing country in the world – intends to buy Vietnamese coffee to increase domestic consumption and establish a cooperative relationship with Vietnam. This market expansion may imply Vietnam's comparative advantage in Robusta coffee.

In 2016, European countries continued to be the primary importers of Trung Nguyen's coffee, accounting for more than 40 per cent of the total (mainly Germany, Spain, Italy, Poland and Belgium), followed by the US (over 9 per cent) and Asia (over 7.5 per cent).

In general, Germany and the US have lately been Trung Nguyen's largest customers. This is in contrast to 1996 - 2004, when Trung Nguyen's export markets were mainly Singapore, Hong Kong and Japan. This proves that the reputation of Trung Nguyen's coffee is improving.

4.4 Production and Processing phase

Trung Nguyen has invested a lot of money to import coffee processing lines from Germany and Brazil, including roasters and cleaning machines, but it still lacks a packing chain machine. Products are now packaged by hand or simple machine. It is currently considering importing a packing chain machine. Trung Nguyen also concentrates on research and development so that they can develop product lines for the international market which enhances the participation of Trung Nguyen on the international market.

Despites great efforts to enhance the position in the GVC, Trung Nguyen has still encountered challenges on the way. Varied constraints have prevented the upgrading of the sector, and at different phases of the chain. Together, these cause low production volumes and low coffee

quality, and restrict the country's possible upgrading trajectories. Most prevalent are the Trung Nguyen' low production levels; its emphasis on Robusta, and its lack of wet washing stations.

The limited stock of quality seedlings and lack of modern production technique constrain upgrading of the industry. While the Department of Agriculture' s (DA) seedling program has had some successes in increasing input distribution to producers, the quality of the plants can be substandard, with offices other than the DA issuing deficient varieties. Meantime, aging farmers with little formal education and training and the lack of extension services over the past decades continue to produce coffee using outdated agricultural techniques.

There are a handful of wet processing facilities around the country compared to dry processing facilities. This is brought about by the emphasis on lower quality Robusta. Because of crude post-harvest processing methods, farmers do not benefit from the higher value Arabica, which require wet processing methods. For farmers to engage in process upgrading and improve their postharvest capabilities, further training should also be conducted on the benefits of sorting coffee species based on optimum post-harvest processing.

4.5 Industrial Upgrading

Original Design Manufacturer – Original Brand Manufacturer Transition

At the beginning, Trung Nguyen Coffee was a small business on the overseas market, operating as Original Equipment Manufacturing (OEM) enterprise. That means Trung Nguyen Coffee enters the GVC in a buyer-driven model, acting as manufacturer to make products ordered by other companies with their owned design and specifications. In this approach, the OEMs take care of the R&D, product concepts, testing and manufacturing. According to Gereffi (2002), the OEM model gives advantages to small business in some ways. Firstly, it creates opportunity for local business to learn the preferences of international consumers including standard requirements for quality, price, and trading terms. Secondly, it enhanced the backward linkages in the local market because the OEM contractors must develop reliable supply sources for various inputs. Finally, the OEM partners generates expertise team of different stages in both the downstream and upstream segments of coffee industry from the buyers. These later become powerful competitive strengths for corporation like Trung Nguyen.

Having expertise experiences in the coffee industry, Trung Nguyen shifted downstream from OEM to OBM (Original Brand Manufacturing) enterprise by integrating its own manufacturing expertise with the design and sale of its owned branded goods.

OEM and OBM businesses are very different business models. The former takes the form of B2B (business-to-business) – a buyer-driven model, while the latter - deals directly with customers (B2C, business-to-customer). Companies in OBM business sell their products directly to final consumers. They bear more risk, but the return is higher. On the domestic markets, OBM

OBM business has a higher gross margin than those of OEM. According to Trung Nguyen reports (2012-2016), the average gross margin of Trung Nguyen with the transition into OBM is 29%, 9% higher that the model of OEM.

The transition of Trung Nguyen from OEM to OBM is attributed to some reasons including enhancement of competitiveness, brand building and higher profit margin. The most important reason for OBM is the enhancement of competitiveness. It shows that Trung Nguyen realize the keen competition of low value-added business and try moving upward along the value chain. Brand building helps create a unique identity and quality image so that Trung Nguyen may differentiate their products with those of competitors. It is also revealed that developing brand can increase direct sales to consumers. By doing so, Trung Nguyen is enabled to be able to get direct feedback from the market and respond fast. Lastly, the higher profit margins of the OBM business are tempting to Trung Nguyen.

4.6 Product upgrading

Product development is systematic, commercially oriented research to develop products and processes satisfying a known or suspected consumer need. Product development is a method of industrial research in its own right. It is a combination and application of natural sciences with the social sciences of commodity good science and processing with marketing and consumer science into one type of integrated research whose aim is the development of new products.

The most widely referenced normative product development models are those of Booz, Allen and Hamilton Inc. (1982) and that of Cooper and Kleinschmidt (1986). There are essentially four basic stages in these models for every product development process. These are:

i. product strategy development;

ii. product design and development;

iii. product commercialization;

iv. product launch and post-launch.

Each stage has activities which produce outcomes upon which management decisions are made. In practice, some of the activities performed in the product development process can be truncated, or some stages can be omitted or avoided based on a company's accumulated knowledge and experience.

Having defined product development it is now necessary to examine the issue of what constitutes a new or innovative product. Newness of a product may be judged differently according to those who perceive it. In the context of Trung Nguyen coffees products, there are three groups of actors: consumers, distributors, and producers. Each may have a different view of whether a product is new.

A more technical assessment has been given by Earle and Earle (2000). They defined the innovation spectrum as "new to the world", "product improvements" and "cost reductions". They then defined three broad levels of innovations: incremental, major and radical. Product platforms were then used to group similar products. Changes to products made within a platform are "derivative" changes. It is also possible through radical changes to form new platforms of products

The international product development of Trung Nguyen coffee also covers: strategy for international development, constant innovation, product diversification and consistency in the brand experience.

i. International product strategy development

In the follow-up interview with the Marketing manager of Trung Nguyen, it is stated that Trung Nguyen Coffee uses the broad differentiation generic strategy. In this generic strategy, the goal is to make the company different from other competitors. It is such difference that makes Trung Nguyen stand out. The company's emphasis on specialty coffee easily differentiates Trung Nguyen cafés from many other establishments that offer coffee. However, the application of the broad differentiation generic strategy also extends to other areas of the business. For instance, Trung Nguyen uses its sustainable and responsible sourcing policy to differentiate its products

from competitors. This generic strategy is also manifested in the company's culture. While competitors like Starbucks emphasize on the environmental surroundings of the outlet, Trung Nguyen can emphasize the unique and distinguished flavor by Trung Nguyen Coffee. An implication of the broad differentiation generic strategy is that Trung Nguyen Coffee must continue innovating to ensure differentiation in the long term. This generic strategy could lose its strength when competitors also find ways to stand out. To address this issue, Trung Nguyen keeps innovating its product mix and supply chain. In applying the broad differentiation generic strategy, Trung Nguyen focuses on specialty ingredients and products, such as baked goods that do not have high-fructose corn syrup. Trung Nguyen also innovates its supply chain to satisfy its generic strategy through a continuing search for the most sustainable and finest ingredients. Thus, based on this generic strategy Trung Nguyen Coffee's strategic objective is to innovate products and its supply chain.

ii. Constant innovation

The Sales manager of Trung Nguyen claims that Trung Nguyen needs to have a strong innovation strategy in place to compete effectively in international markets. Innovation seems to have become a buzzword that is as much misused by the popular press as it is by many brands. Although innovation can be conceptualized in myriad ways, in this context it is used to mean a continuous, organization wide process that allows companies to simultaneously make incremental improvements to existing products and/or services, while investing in the development of breakthrough and significant inventions (Ernst, 2002).

Given such a nature of innovation, it is a fundamental building block of iconic brands. Leading brands create their corporate strategies with an inherent strategic element encompassing innovation. Brand strategies that are envisioned with innovation as one of the core elements affords the brand a long lasting competitive advantage that would even withstand system level shocks such as recession.

Competitors easily copy the innovation concepts in the coffee drinking industry, which include different origin espressos, season specific drinks, new flavors and additives and promotions. For Trung Nguyen, innovation should not be limited to bringing new products to markets but should be extended to encompass many internal functions such as innovation in channel communication (with customers and other stakeholders), innovation in organizational cultures (work practices

and internal brand practices) and innovation in implementing cost-cutting and efficiency-enhancing strategies. Such an inclusive notion of innovation facilitates achieving dual purposes that eventually supports a brand's competitive advantage. Most of these are not new processes for Trung Nguyen to administer but there is a need for consistent implementation across their global operations.

First, innovation will allow Trung Nguyen to refine and redefine its core brand philosophy in line with changing customer needs. The core brand promise can easily get lost in the competitive clutter in the marketplace. Such a scenario will become even more plausible when the brand experiences an external shock. In such cases, the brand has to reach out to the customers to reinforce that aspect of the brand that earned the loyalty of the customers in the first place.

Second, innovation will allow Trung Nguyen to continually adapt to the changing needs of customers, thereby protecting its competitive advantage. Whenever competitors challenge with either lower priced products or imitation of the overall branding experience, innovation will allow Trung Nguyen to reach out to its customers in novel ways that would reiterate the core brand promise.

iii. Product diversification

There are various flavors of customers all over the world; the diversification of products by Trung Nguyen will enhance the success of Trung Nguyen outlets in the international market. So, there are sure signs that the brand is taking diversification as a strategy to identify and unlock growth opportunities seriously.

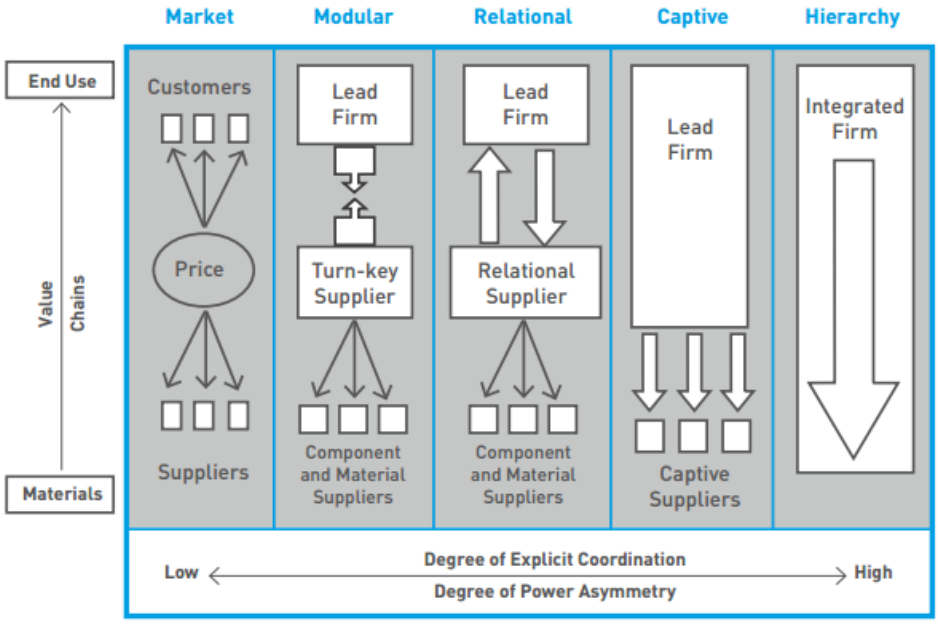
In addition to expanding the coffee portfolio to include flavor in the coffee depending on the targeted markets, the next opportunity lies in innovation of the food products served in its stores. Many of Trung Nguyen's global competitors position themselves as not only coffee outlets but also more like cafes. Innovation in food is specifically important for Trung Nguyen to establish foothold in emerging markets or where the coffee drinking culture is in its nascent stage. In many Asian and Latin American countries, coffee drinking is a mealtime ritual, where the importance of food consumption is high. To consolidate in such markets, having a differentiated food offering in its stores will be critical for Trung Nguyen.

iv. Consistency in the brand experience

Trung Nguyen is not a stranger to creating a coffee drinking experience or even educating a consumer segment in how to drink coffee outside home and work in its own country, Vietnam. But the concept of cultural differences in terms of how time is spent outside and for what activities need to drive the local marketing strategies for the brand. So, if the core brand values are to create a third place to have a coffee, meet and greet your friends and have a relaxed experience, then these experiences should match with the local culture. The key for this issue is market research. To make its menu more relevant to international consumers, Trung Nguyen should introduce beverages that included local ingredients. Responding to this, Trung Nguyen initiated partnerships with local coffee companies to better understand the intricacies of local tastes and preferences.

4.7 Governance structure

Gereffi et al. (2005) introduced the five global value chain governance types which are determined by three variables: the complexity of knowledge shared among actors in the chain, how the production information is systemized and the level of supplier competence. Those models are markets, modular, relational, captive and hierarchy (Figure 18)



Source: Gereffi et al. (2005)

Figure 18: Governance structure

Market: Market governance features a rather simple transactions. Production information is easily transferred, and suppliers can produce with minimal inputs from buyers. These arm-length transactions require little formal cooperation between actors and the central governance factor is price rather than a powerful lead partner.

Modular: In modular governance, a more complex structure of transactions involves. Suppliers make products according to buyers' specifications and take full responsibility for process technology. The machinery and technology investment are spread across several customers. Therefore, switching costs are low and there is little specific investment for a single transaction. The interaction inter-firm is more complex. Information technology and standards for exchanging knowledge are the key element for modular governance model to work.

Relational: Relational governance features a complex information exchanges between buyers and sellers that are not easily transmitted or learned. This requires frequent contact and interactions between actors. The linkage is built based on trust, long-term relationship and mutual reliance. Producers provide differentiated products with unique characteristics for buyers, therefore, the costs and difficulties to switch to new partner might be high.

Captive: In captive model, the buyer has great power in the field that could highly control and monitor contractors. Since the core of buyer is not in the production phase, helping providers to upgrade production capabilities does not affect the core competency.

Hierarchy: The firm develops in-house production. This happens when product specifications cannot be transferred, products are complex to make, or no suppliers meet the requirements.

Given the features of different governance types, the Vietnam coffee industry is of the Modular group. Except Trung Nguyen which is exporting its fully processed and packed products, other companies in Vietnam are selling roughly processed coffee to international buyers. With specific requirements and standards set by overseas partners, Vietnam enterprises conduct the simple processing stage and ship them abroad.

Even with the government's focus on the sector and existing cooperation among individual segments of the chain, communication often falters between the various nodes. Lack of coordination among industry stakeholders becomes evident at the national level, for example,

with multiple government agencies offering similar services when these could be coordinated and streamlined to result into a more cohesive and effective initiative.

Gaps in collection and distribution of research and technical knowledge are apparent as data collected by the DA and the IPSARD (Institute on Policy and Strategy for Agriculture and Rural Development) about the country's production volume are inconsistent with the estimates offered by international organizations such as the ICO. Furthermore, there is limited transfer of knowledge and technology from R&D centers to producers, with best practices not being adequately communicated.

CHAPTER 5: CONCLUSION

The thesis uses both NSI and GVC analysis to identify the position of Vietnam coffee industry, in general and Trung Nguyen Corporation, in particular in the coffee GVC.

The first stage of the research accesses the nature of linkages among actors in Vietnam coffee industry. While production and processing are two vital stages making coffee have high added value, farmers and processing entities are not educated properly but mostly use their cultivation experiences. Outdated machinery, low technology, no research and development on seeds, cultivation and processing methods are all obstacles for the industry. Moreover, growers have no access to market data, and they do not know how to approach potential partners but only rely on collectors and middlemen who are people in their neighborhood going around to collect coffee beans and resell to companies. The linkages between farmers and universities are loose in the sense that universities' training programs do not meet demand of farmers whereas due to economic restructure plan, farmers want to learn new skills and knowledge to change to new career such as workers in factories. The non-transparent market without support in terms of technology, cultivation method, and trading together with negative impacts on coffee harvest of global weather…make farmers unassured in the future of coffee, therefore they want to switch to other jobs or plant different trees.

The next stage is GVC analysis of Vietnam coffee industry and Trung Nguyen Corporation in the value chain.

All informants affirmed that product innovation and the trend to globalization are two important dimensions driving business today, and a firm's global new product development (NPD) strategy is a primary determinant of performance. The greater interdependence of world markets has changed competitive dynamics profoundly, such that the success or failure of firms is now judged on a global rather than a national basis (Porter, 1986). Significant opportunities due to reduced trade barriers, advances in technology and communication, and globalization of demand mean that firms in most industry sectors can gain an advantage by embracing international markets. But succeeding in this competitive and complex market arena with products that both profit from economies of scale/scope and respond to diverse customer, business, and cultural environments calls for resources and capabilities as well as a global NPD strategy by which

firms can effectively tackle these challenges (Graber, 1996). The international research and development of Trung Nguyen is illustrated by innovation interest of Trung Nguyen.

Innovation interest in research is the first and foremost concern of Trung Nguyen. Since its establishment, the managing director of Trung Nguyen has started to learn 'all about coffee'. Trung sets up an R&D facility since the very beginning of business, but probably unique initiative in the retail coffee business. More recently the Annual Report notes that Trung Nguyen research and development teams are responsible for the technical development of coffee line products and new equipment. The Company spent approximately $0.5 million, $1.2 million and $1.7 million during fiscal 2014, 2015 and 20167, respectively, on technical research and development activities (Trung Nguyen, 2016). This is in addition to customary product testing and product/process improvements in all areas of its business. Trung Nguyen demonstrates a long- term interest in R&D. Innovation interest in emerging technologies Trung Nguyen had made the point that it wishes to be the 'coffee authority', meaning that it needs to have a definitive and deep knowledge – know how - of the complete supply chain for coffee. The company needs to be the best in the business.

Innovation interest is used by Trung Nguyen in a defined market in order to differentiate product/service. Trung Nguyen applies it's know how to provide product (and services) which clearly differentiates Trung Nguyen from its competitors. R&D works to develop higher-quality but less-expensive soluble quality powders. Planning, research and testing had gone into the development of coffee with a view of minimizing the 'smell' by product. The introduction of 'ethically sourced coffee' differentiates Trung Nguyen from many of its competitors. Innovation interest in common-use technologies to keep up to date Trung Nguyen has demonstrated that it is quite capable of not only going beyond common- use technologies but is able to keep up with the latest process technologies appearing on the market. Its acquisition of equipment supplier Clover is a case in point. Acquisition of the technology allowed the company to keep up to date and advance its product and service quality. Other examples include Trung Nguyen has the best 'combination of original technology and knowledge for procuring beans, roasting, blending and serving on a global scale. Trung Nguyen builds on the 'craft' involved in the growing of coffee. The passing down of knowledge from generation to generation is another form of keeping up to date on current technology. No one in the industry has more control over the roasting process. The roast curve is the match between time and heat applied to a range of blends of coffee bean.

Trial and tasting is used to get the best result; science and art. In the Ho Chi Minh plant Trung Nguyen uses 11 different roast curves to meet unique roast and flavor profiles. The Clover brewer equipment manufacturer is acquired but turns out to be best applied to exotic, smaller-batch reserve coffees.

In terms of coffee beans, Trung Nguyen has maintained its direct ordering process via email, telephone and face to face meetings for years. Due to the huge value in finance of orders, these purchasing methods are most favorable. However, with the entry into the international market, it is required that Trung Nguyen should research and implement the new ordering and purchasing technology to suit with the increase in the volume of orders.

Regarding the purchasing order at the coffee shop, there are several practical things that Trung Nguyen Legend managers do to keep customers happy during unexpected service delays, such as being short on staff:

i. Give customers clear and conservative information that will help them estimate their wait time: This reduces their level of anxiety caused by the uncertainty of the situation.

ii. Under promise, over deliver: The restaurant host can give customers a longer than expected waiting time, say 20 minutes. If customers end up waiting just 10 minutes, they will feel happier since they expected to wait twice as long.

iii. Fill “empty time”: By giving customers something to do while they wait, it can seem like time goes by faster. This is what magazines in waiting rooms are for, but the best option today is to provide free Wi-Fi access to patrons.

iv. Do not give the impression of making the same mistake twice: Apologizing to a customer a second time about additional delays will only make them more upset than if you admit to service delays just once.

Due to the development of technology and the expansion of Trung Nguyen to the global market, Trung Nguyen has the plan to develop new purchasing technology for its expansion.

CHAPTER 6: RECOMMENDATIONS

From the NSI analysis of the Vietnam coffee value chain, there are some weaknesses that have to be addressed and enhanced:

(i) Communication between actors in the cluster is ineffective so knowledge is poorly transferred within the cluster;

(ii) Low level of technology and research and investment invested in seeding, cultivation process, commercial activities;

(iii)Most farmers/ growers, processors are low-skilled.

Vietnam has a favorable nature for coffee plantation and hard-working labour which are the advantages for the industry. However, those are not enough for the industry to boom. To make breakthroughs, innovation is the answer. It is critical for the Government and companies to acknowledge the importance of innovations to the development of the industry so that solutions are built to support this core. The nature of cluster is that there is mutual dependence and collective responsibility of all actors for making advantageous environment for productivity enhancement (Porter, 1998). Therefore, both the public and private sectors must actively invest their effort in improving the cluster. For example, not only governments and universities work to educate farmers, companies have a responsibility in education. They are the best source for updating requirements of the industry for and giving feedbacks on training programs. The following paragraphs are some recommendations for improving the linkages of actors in Vietnam coffe value chain.

Innovation in choosing location

In Vietnam, coffee is only grown on the Central Highland which is far away from big cities. With limited access to talent pools, big companies in the field, and universities, the coffee industry hardly receives attention to develop. The Government should take a lead role in stimulating high-skilled labours and leading corporations to move closely to Central Highland. As Porter (1998) suggests: “move groups of linked activities to the same place….can facilitate internal efficiencies in sourcing and in sharing technology and information…..to extend deeper roots into local clusters, improving their ability to capture potential benefits”. Besides stimulation policies such as imposing favourable tax rate, lower utility rates, quality of living

standards and infrastructures are basic demand of individuals and organizations. Easy access to the locations, high quality residential buildings, ranges of supermarkets, commercial centers, supportive government bodies exist in the close area…are some examples of those demand.

Innocation in enhancing quality of network

To enhance the network of suppliers, farmers, companies, and associations, face-to-face contact, frequent information exchanges, and a sense of sharing mutual interest are the glue that binds actors in the cluster more closely. Therefore, companies must make their local present more significant, even if their headquarter is in another city, to establish a strong and on-going relationship with the government bodies, universities, suppliers… In such way, the government authorities are frequently updated on the challenges faced by companies, farmers; universities are informed about new requirements of the industry, suppliers can be supported quickly in terms of technology and operations…

Trade assocications work more proactively

The Vietnam Coffee and Cocoa Association (VICOFA) now acts mainly as a statistics compiler, press conference answerer, but not involve in making connection with the policy makers, research institutions, universities… To stimulate information flow in the value chain, VICOFA should organize forums for farmers, growers, traders and companies in the industry to exchange ideas and knowledge to overcome bottlenecks in cultivations, production and operations. Besides, VICOFA can inform farmers, growers, small businesses in coffee industry about education activities such as university training programs, research programs specialized for coffee industry, managerial courses and environmental solutions for small- and medium-enterprisese; organize tradefairs, exhibitions where local actors can meet traders, international companies and experts in the industry.

Furthermore, the Buon Ma Thuot Coffee Exchange Centre must be an active provider for farmers, traders and companies to update information on international coffee prices, market trends and to connect local companies with overseas enterprises.

Innovation in issuing Industrial Policies

In the long term, productivity determines the suceess of business. Acknowledging this, the authorities should work to create a favourable environment to enhance productivity at both

national and local scope. Firstly, they should strike to create high-quality inputs for industries such as educated labour, well-developed infrastructure. Secondly, innovators must know that they are supported and protected by the country, therefore, law on protecting intellectural property, antitrust, Talent acquisitions policies…must be issued and strictly applied.

Moreover, the Government should work collectively with companies in the sectors to solve current obstacles of the cluster, form a better form of coffee clusters with more parties from technology and research side to join. A cluster is developed much better and more quickly if there is good link with related activities in the sector so that knowledge flow is smooth.

Given the findings of GVC analysis, following suggestions for Trung Nguyen corporation are meant to improve its position in the global value chain:

International Research and Development

The international research and development is extremely importance for the enhancement of participation of Trung Nguyen in the coffee GVC. All key players stated that global NPD strategies are essential for ensuring successful NPD for international markets. The following recommendations give directions for NPD strategies for Trung Nguyen.

Global product harmonization strategy, a strategy that effectively integrates the company's worldwide product-, market-, and skill-based knowledge to focus NPD on the ''globalization'' end of the globalization localization spectrum, was found to positively affect global NPD program performance, with the impact both indirect through windows of opportunity and direct in terms of financial outcome. There was no significant relationship with time to market. The direct effect on financial outcome is easily explained.

By focusing on the commonalities of worldwide demand and limiting product localization to only the essentials, Trung Nguyen can reap the benefits of economies of scale and scope. The impact of global product harmonization on windows of opportunity is more complex.

One reason this global NPD strategy can be seen as opening market/product opportunities is that what may appear to be an undifferentiated, one product for all, approach in reality is often what makes a global product distinct from local alternatives. A new product that is similar in all markets with one quality standard, a worldwide brand identity, and potentially a lower price is truly different from local products and, as suggested by this study, is positioned to achieve an

advantage. Further, as markets become more internationalized they increasingly demand products that are also global in scope (Levitt, 1983). This is particularly true in Trung Nguyen when it entered the global market where key concerns are product reliability and quality. Global product harmonization strategy was not significantly linked to time to market. One explanation is that while a standardized product can simplify and speed up worldwide new product launch (e.g., same production, one image and branding program), seamlessly implementing such an endeavor can be more complex than expected.

Additionally, Trung Nguyen should concentrate on market adaptation product development so that Trung Nguyen products can attract customers in the international markets. The case of Starbuck in Chins is the most successful case of market adaptation product development. Starbucks are a great example of how an American firm can successfully launch and remarket itself in a way which is appealing to the Chinese consumer. China is currently the second largest market for Starbucks outside of the U.S. The corporation has plans to open 500 new stores in China by the end of the year. The company currently has locations in 90 Chinese cities and employ over 25,000 people in China. This success is partly because Starbucks caters for the Chinese market effectively. A range of Chinese tea's is sold as well as moon cakes and traditional deserts. Management has also factored in Chinese social dynamics and expectations. There has always been a very strong emphasis on the family in this society with management making an effort to get to know employee's families. The company said in a statement that; "family forums have been held for parents of store partners to hear managers discuss gratifying career paths at Starbucks." This is intelligent and reflects a high degree of research into wider Chinese society and the importance of Confucian values. This type of specialized, local knowledge is invaluable for any western firm. Trung Nguyen can learn from Starbuck for its expansion to the international market to enhance its participation in the GVC of coffee. The strategies Trung Nguyen can apply to make its products meeting the requirements of customers in different foreign markets are product standardization and product adaptation.

Product standardization strategy refers to a uniform representation of all aspects of the product such as the quality, the materials that had been used, product name and packaging for all markets, regardless of the location around the world. In the contrast, the most challenging decision that a company may face in internationalization is the degree of standardization or adaptation in its operations. The question of standardization or adaptation affects all avenues of

a business' operations, such as R&D, finance, production, organizational structure, procurement, and the marketing mix. Whether a company chooses to standardize or adapt its operations depends on its attitudes toward different cultures. These attitudes are defined by three orientations toward foreign culture: ethnocentric, polycentric and geocentric. Further, standardization is a practice of setting identical characteristics for a particular good or service. Also, it suggests a standardized approach as a "one size fits all" approach.

Product standardization is an efficient method to reduce costs and increase quality. By minimizing the differences in Trung Nguyen products, Trung Nguyen can rapidly increase production, streamline distribution, decrease raw material costs and reinforce product branding. The best product standardization strategies allow Trung Nguyen to balance the need for targeted adaptation with the cost savings of standardization.

Product adaptation is the changes and special modifications are made to adjust to each market. Adaptation is a marketing strategy where new products or services are modified based on existing products and services. However, this is not to suggest that in doing so they pioneer in innovation. To meet the needs of international customers, Trung Nguyen may need to adapt its product to suit individual or regional markets. Trung Nguyen will also need to establish a brand that can be applied globally or tailored to fit into the local market. Product adaptation strategies are also being considered as perhaps the most influential aspect for Trung Nguyen. There are many factors affecting to use adaptation strategies. Some of them are product, target market, package & design, ingredients, language, culture, religion etc. When applying product adaptation strategy; Trung Nguyen should carefully consider these factors.

Last but not least, Trung Nguyen should develop plant genetics for its development in the global market. Genes are the future of coffee. Not nitro cold brewing or beans pooped out by civets, but genes. And coffee's gene-fueled future just drew nearer, now that scientists have sequenced the genome of the Coffee Arabica coffee plant, the species that makes up the vast majority of global production and made the data public. That means the world is in for a coffee renaissance, as breeders use the information to develop new plant varieties and think new flavors and better resistance to cold and disease. That means more coffee grown in more places, a big deal as global warming throws local climates into chaos. Therefore, in order to enhance the participation

in the GVC, Trung Nguyen is required to research and develop new coffee genes to satisfy the requirement of customers in different markets.

New Purchasing Technology

Since Trung Nguyen's very beginning, it has been serving customers high-quality coffee with personalized service offered in an upscale yet inviting store atmosphere. During that time, the company has adjusted to changes in consumer lifestyles and behavior by offering single-serve coffee for home or office use, drive-through windows for convenience, and offering food items to complement its beverages. For the expansion to the international market, the following recommendations are proposed for Trung Nguyen. Trung Nguyen should invest heavily in purchasing technology to enhance operations and improve the customer's experience.

Mobile Order and Pay and Digital Loyalty Program

Mobile and online ordering solutions are becoming much larger parts of the competitive landscape across restaurant, quick serve, and beverage shops. These technologies allow Trung Nguyen to connect directly with customers and provide a level of convenience that has been shown to improve order accuracy and frequency. With these major benefits, larger chains are taking notice and starting to leverage mobile ordering and payment solutions to build their bottom lines.

Trung Nguyen should develop and released its Mobile Order & Pay, a smartphone-based application that enabled customers to do two things: (1) submit an order in advance via the app, and (2) pay using the app when picking up the order at the store. This method of ordering will significantly improve the sales and the convenience for customers as well. Operationally, Mobile Order & Pay is helping Trung Nguyen accomplish the following three things:

i. Reduce the bottleneck—taking orders and processing payments
ii. Smooth demand and increase employee utilization
iii. Decrease customer wait times

In addition to be the platform for Mobile Order & Pay, the digital loyalty program has enabled Starbucks to engage more directly with customers, for example, offering birthday rewards or promotional pricing during inclement weather or slower mid-day periods. Trung Nguyen

customers also earn loyalty “stars” when using services from technology-drive companies with which Trung Nguyen has partnered.

The bottom line is that today's technology makes it easier to serve customers better. Adding integrated mobile and online ordering is more affordable than customers might think in addition to being easy to use with subscription options. Paired best with Coffee Shop Manager features like enterprise reporting, gift card, and customer loyalty marketing, taking advantage of mobile ordering and payment solutions is a no brainer for Trung Nguyen business.

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APPENDIX

Appendix 1: Transcript of interviews

1. HR Manager

Q: Do you understand the meaning of Value Chain and Global Value Chain?

A: Actually, I know, however I don't pay attention to value chain and GVC. We will mention about Value Chain, right? Can you tell me in detail about it? Maybe it will be easy for us to talk together.

Q: Of course, I will give you the definition by World Business Council for Sustainable Development (WBCSD) about value chain and GVC. The concept of a value chain has been used to analyze international trade in global value chains which comprises "the full range of activities that are required to bring a product from its conception, through its design, its sourced raw materials and intermediate inputs, its marketing, its distribution and its support to the final consumer" Specifically, when activities must be coordinated across geographies, the term global value chain (GVC) is used.

Q: Do you know the Value Chain of Trung Nguyen

A: Depending what you have just mentioned, I think it includes individuals and activities participating in delivering our products to ultimate customers.

Q: Do you know the Supply Chain of Trung Nguyen?

A: Our supply chain consists of 5 factors: farmers, processors, retailers, coffee shops and customers

Q: From your point of view, how is your department involved in the supply chain and the value chain of Trung Nguyen (I mean the roles in the supply chain and value chain)?

A: We are responsible for staffing in thee company. It seems that we don't relate to the supply chain or value chain. However, we recruit employees in charge of these activities, so I think we take the most important role.

Q: Form your point of view, which position does Trung Nguyen have in the global coffee value chain? Do you think Trung Nguyen should take measures to enhance its position in the global value chain?

A: Obviously, you can see our products everywhere in Vietnam so you know our position in the domestic market. However, almost no one know who we are in the international market. So I think what we should do now is to develop global competitive strategies.

Q: Do you think innovation in the supply chain is the prerequisite for the enhancement of Trung Nguyen Coffee position in the global coffee value chain? If do? Why?

A: Innovations is essentially required at Trung Nguyen in order refresh itself. Of course, innovations in the supply chain are included. An efficient supply chain is vital for our businesses to deliver our products to the consumers who want or need them. As the global marketplace continues to evolve, supply chain managers in our company must think more innovatively and proactively to balance product flow and costs throughout a product's life cycle.

Q: In the supply chain of Trung Nguyen Coffee, which actors need to make innovation to enhance the participation of Trung Nguyen in the GVC?

A: For years, Trung Nguyen maintains traditional lines of products; however, from my point of view, if Trung Nguyen would like to enhance the participation in the GVC they should develop new product lines. I mean luxury product lines. This change requires the cooperation of farmers and processors.

Q: How do the cost, availability and skills of labor affect Trung Nguyen business operations and its value chain?

A: You know employees are people who function all business operations of any business. They are persons in charge of innovations in supply chain. Therefore, if my company would like to make innovations in the supply chain to enhance its participation in the GVC, HR development should be the first priority.

Q: Do you think that upgrading worker skills and closing the technology gap are necessary for the deeper participation of Trung Nguyen in the GVC? which actions can HR of Trung Nguyen do?

A: Of course, there is no dispute for this. Upgrading worker skills and closing the technology means increase the success possibility of innovations. Training and technology transferring for farmers should be emphasized at our company.

2. Marketing Manager

Q: Do you understand the meaning of Value Chain and Global Value Chain?

A: Normally, I understand value chain as a series of activities required to turn a product or service from conceptuality through various stages of production into finished product for the ultimate customers and disposal. Global value chain for agricultural products is a system of activities that provide value to customers. These activities range from research, development, design, production, distribution and marketing. The main components in the coffee value chain include: growers, primary collectors and coffee processing enterprises. In addition, there is the presence of supporting components, supply of inputs, scientific and technological services, market information and production organization; service providers; agencies promoting investment, trade promotion; commercial banking system, management system and trade association.

Q: Quite exactly, however, I would like provide a standard concept so that it is easy for us to work in this interview. The concept of a value chain has been used to analyze international trade in global value chains which comprises “the full range of activities that are required to bring a product from its conception, through its design, its sourced raw materials and intermediate inputs, its marketing, its distribution and its support to the final consumer” Specifically, when activities must be coordinated across geographies, the term global value chain (GVC) is used.

Q: Do you know the Value Chain of Trung Nguyen

A: I know. Our value chain consists of product development, material collection, processing, distribution, storefront and take-home products.

Q: Do you know the Supply Chain of Trung Nguyen?

A: Our supply chain includes coffee growers, processor, distributors and exporters, retailers and customers.

Q: From your point of view, how is your department involved in the supply chain and the value chain of Trung Nguyen (I mean the roles in the supply chain and value chain)?

A: We are responsible for marketing strategies for our products to penetrate into any markets. The development of our products in any market also depends on us. Additionally, the brand recognition and reputation which greatly affects the participation of Trung Nguyen in the international market and the GVC.

Q: Form your point of view, which position does Trung Nguyen have in the global coffee value chain? Do you think Trung Nguyen should take measures to enhance its position in the global value chain?

A: Although for years we have tried to expand to foreign market, our brand recognition with international markets is really small. We would like to enhance our participation in the GVC.

Q: Do you think innovation in the supply chain is the prerequisite for the enhancement of Trung Nguyen Coffee position in the global coffee value chain? If do? Why?

A: Innovations should be firstly made with the supply chain of Trung Nguyen. The supply chain is the determinant of success of products. Thus, if we would like to make our products successful in the international market and upgrade your position we should start with our supply chain innovations.

Q: In the supply chain of Trung Nguyen Coffee, which actors need to make innovation to enhance the participation of Trung Nguyen in the GVC?

A: In my opinion, product development and marketing should be renovated initially. Innovations in technologies of coffee cultivation and processing should be emphasized. Also, we should develop creative marketing strategies and measures to make contributions to enhance our position in the GVC.

Q: How are marketing strategies supporting Trung Nguyen's expansion in both domestic and international markets? Do you think changes should be made on marketing practices?

A: Our success in the domestic market proves our strategy efficiency. The inspiration story is the key for our marketing strategy in the domestic market. However, regarding international markets, other marketing strategies and practices should be developed to meet different requirements and characteristics of customers. Take Starbuck in the Chinese market as an example. You think which are the keys to their success? They are development of products and marketing strategies which are up to the expectations of Chinese customers.

Q: Can you access the transition from ODM to OBM of Trung Nguyen and changes it brought about in enhancing the participation of Trung Nguyen in the GVC?

A: This transition is the most important step in our attempt to enhance the participation in the GVC. Previously, we produced and sold our products under other brand names; therefore, no one

knows about our presence. Although they enjoy pour products, they don't know they are Trung Nguyen' products. With the transition from ODM to OBM, both financial and brand values are improved which leads to the deeper participation of Trung Nguyen in the GVC.

3. Sales Manager

Q: Do you understand the meaning of Value Chain and Global Value Chain?

A: Of course. I have worked in this position for years. How I couldn't know about Value Chain and GVC. Uhm… Value chain in our industry consists of all activities related to bringing finished products to our customers.

Regarding, GVC, every company would like to expand to the foreign markets. There are some activities will exceed the geographic borders. This forms the global value chain.

Q: Can you clarify about activities you mentioned?

A: Activities? Ok. For example: coffee farming, bean processing, manufacturing, distributing… they are all activities included in the value chain in our industry

About GVC, besides activities above, we can add international market development activities or oversea transportation something like that. I mean activities in the process of delivering products to customers which do not occur in Vietnam.

Q: The concept of a value chain has been used to analyze international trade in global value chains which comprises "the full range of activities that are required to bring a product from its conception, through its design, its sourced raw materials and intermediate inputs, its marketing, its distribution and its support to the final consumer" Specifically, when activities must be coordinated across geographies, the term global value chain (GVC) is used.

Q: Do you know the Value Chain of Trung Nguyen

A: I know, we develop our value chain every year depending on the current situation. For years our value chain includes product research and development, bean selection, distribution, store display and take-home products

Q: Do you know the Supply Chain of Trung Nguyen?

A: Our supply chain consists of farmers, processors, distributing and exporting companies and coffee shops.

Q: From your point of view, how is your department involved in the supply chain and the value chain of Trung Nguyen (I mean the roles in the supply chain and value chain)?

A: Our department is the department which directly works with the retailers and distributors of our products. Therefore, our department plays a crucial role in the value chain of Trung Nguyen Coffee.

Q: Form your point of view, which position does Trung Nguyen have in the global coffee value chain? Do you think Trung Nguyen should take measures to enhance its position in the global value chain?

A: Although, in Vietnam no one can deny the first leading position of Trung Nguyen; however, in the international market, not many people are aware of our brand. The brand value is still low. We have currently generated initiatives to enhance our position in the GVC. The transition from OEM to OBM is an example.

Q: Do you think innovation in the supply chain is the prerequisite for the enhancement of Trung Nguyen Coffee position in the global coffee value chain? If do? Why?

A: Yes, innovations in the supply chain will become the determinants for the enhancement of Trung Nguyen's position in the GVC because innovation can greatly impact supply chain performance to meet consumers' needs and save on costs. New technologies can completely redefine the nature of competition and improve the position of Trung Nguyen.

Q: In the supply chain of Trung Nguyen Coffee, which actors need to make innovation to enhance the participation of Trung Nguyen in the GVC?

A: In order to stay competitive in the international markets, quality of products should be developed. The root of our product quality is from coffee cultivation. Therefore, innovations should start from coffee cultivation and selection. Additionally, product development should be renovated because products should be customized and localized depending on customers' characteristics.

Q: Can you describe what innovations in the value chain of Trung Nguyen you would like to make, regarding your department functions? And why?

A: Regarding our role in enhancing our company position in the GVC, we have developed a plan of online storefront customization. This customization will enable us to investigate the customers' demand and requirements; which leads to image and reputation improvement.

Q: In the near future, Trung Nguyen should concentrate on domestic or international market? Give your reasons?

A: Both domestic and international markets are so important in our business. For years, we are recognized as the leader of Vietnamese coffee industry. In the international market, although we export our products to the US and European countries, our brand value is still low. Therefore, in the near future we should concentrate on developing products for international markets.

4. Representative of the Vietnam Coffee and Cocoa Association

Q: Do you understand the meaning of Value Chain and Global Value Chain?

A: Because we are the organization which manages and support businesses with their operations therefore we understand the standard concept of value chain and GVC.

Value chains are an integral part of strategic planning for many businesses today. A value chain refers to the full life cycle of a product or process, including material sourcing, production, consumption and disposal/recycling processes.

The value chain describes the full range of activities that firms, and workers do to bring a product from its conception to its end use and beyond. This includes activities such as design, production, marketing, distribution and support to the final consumer. The activities that comprise a value chain can be contained within a single firm or divided among different firms. Value chain activities can produce goods or services and can be contained within a single geographical location or spread over wider areas.

Q: Do you know the Value Chain of Trung Nguyen

A: Trung Nguyen is the giant in this industry, it is the legend of Vietnamese Coffee Industry. Basically, it shares the same value chain model with other enterprises which includes product design, material selection, material processing, product distribution, storefront and take-home products.

Q: Do you know the Supply Chain of Trung Nguyen?

A: Like Value chain, I think Trung Nguyen have the supply chain similar to other enterprises including farmers, middleman, processors, distributors, retailers and customers.

Q: From your point of view, how is your organization involved in the supply chain and the value chain of Trung Nguyen (I mean the roles in the supply chain and value chain)?

A: Maybe many people are not aware of our role in the business operations of enterprises in our industry. Not only Trung Nguyen we support all enterprises in the Association in many aspects to develop their business in domestic and international markets for example: technology transfer, product development, training, policies and practices for international trade.

Q: Form your point of view, which position does Trung Nguyen have in the global coffee value chain? Do you think Trung Nguyen should take measures to enhance its position in the global value chain?

A: Indeed, the brand value of Vietnamese products including Trung Nguyen is really low. Trung Nguyen's presence in the GVC is too little to recognize

Q: Do you think innovation in the supply chain is the prerequisite for the enhancement of Trung Nguyen Coffee position in the global coffee value chain? If do? Why?

A: In this period, innovations in the supply chain can "change the blood" of Trung Nguyen which can lead to substantially huge transformations in the production and operations of Trung Nguyen. This change can improve the presence of Trung Nguyen in the international markets and upgrade it participation in the GVC.

Q: In the supply chain of Trung Nguyen Coffee, which actors need to make innovation to enhance the participation of Trung Nguyen in the GVC?

A: I think innovation should be generated in all processes and activities. The focus should be placed on product development and marketing because demands and requirements are different from one market to another market. Thus, products and marketing strategies should be developed appropriate with each market.

Q: Can you give your own evaluation on the position of Trung Nguyen in the domestic and international markets?

A: Uhm how to say? It quite contradictory. Imagine in Vietnam Trung Nguyen is a dragon but in the international market, it is just an ant. You know right?

Q: Does the Vietnam Coffee and Cocoa Association have any promotion policies designed to support GVC participation and upgrading?

A: Every year, we develop policies and practices to support our enterprises. For years, Vietnamese enterprises have started their expansion to the international market. We support them in legal procedures to penetrate into foreign markets. Along with that, product development and technology are always our concerns in the attempt to support enterprises.