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The Socialist Republic of Vietnam

Coffee Sector Report

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ACRONYMS AND ABBREVIATIONS

ACPC	Association of Coffee Producing Countries
ADB	Asian Development Bank
AFD	Agence Française de Développement
CIRAD	Centre De Coopération Internationale En Recherche Agronomique Pour Le Développement
CRMG	Commodity Risk Management Group (headquartered World Bank)
DANIDA	Danish International Development Agency
FAO	Food and Agriculture Organization of the United Nations
GSO	Government's General Statistics Office
GTZ	Gesellschaft für Technische Zusammenarbeit
ICA	International Coffee Agreement
ICARD	Information Center for Agriculture and Rural Development
ICO	International Coffee Organization
ITF	International Task Force on Commodity Risk Management
LIFFE	London International Financial Futures Exchange
MARD	Ministry of Agriculture and Rural Development
NYBOT	New York Board of Trade
NIAPP	National Institute of Agriculture Planning and Projection
NPK	Nitrogen-Phosphorus-Potassium Fertilizer
OAMCAF	Organización Africaine et Malgache du Cafe
PPA	Participatory Poverty Assessment
SOCB	State-Owned Commercial Bank
SOE	State-Owned Enterprise
USDA FAS	U.S. Department of Agriculture Foreign Agriculture Service
VBARD	Vietnam Bank for Agriculture and Rural Development
VFU	Vietnamese Farmer Union
VICOFA	Vietnam Coffee and Cocoa Association
Vicopex	Vietnam Coffee Trade Promotion and Agriculture Extension
Vinacafe	Vietnam Coffee Corporation
VBSP	Vietnam Bank for Social Policy

EXECUTIVE SUMMARY

Vietnam's Coffee story is marked by fast-paced change. Its meteoric rise to become one of the world's largest coffee producers has been matched by equally fast changes in policies and market structure. In the past decade it has moved from a planned economy to a much more open market orientation. As a result, it is one of Asia's fastest-growing countries. While many benefits can be attributed to the coffee sector's growth, there are also questions about how equitable the socioeconomic impact has been and about the overall sustainability of the sector.

Vietnam's dramatic coffee expansion in recent years occurred as a result of the intersection of three series of events: (1) an overwhelming, and at least partly unexpected, response to the government's initial direct stimuli, which was combined with (2) agricultural liberalization and spurred by a (3) uniquely favorable set of developments in the world market for coffee. Its closest volume competitor, Colombia, took nearly 75 years of growth to achieve the volumes reached by Vietnam in about a decade. Vietnam's large production of low-priced Robusta coffee has partly contributed to fundamental change in the structure of the global coffee industry.

BRIEF CONTEXT

Vietnam's coffee sector experienced explosive growth throughout the 1990s. Government mandates and incentives for export crops—in the form of favorable credit, subsidized inputs, and low-cost land—led to the cultivated area increasing at an annual rate of approximately 15 percent while output grew at an even faster rate. Vietnam's newly liberalized agricultural input markets and emphasis on intensive, high-input production soon resulted in some of the highest yields in the world, averaging in excess of two tons or 34 bags (60 kg) per hectare by the year 2000. Growth was simultaneously fueled by two external factors. Weather problems in Brazil led to substantial global price hikes in 1994 and again in 1997. This coincided with the increased willingness of roasters to utilize more Robusta coffees in their blends due to technological processing improvements that softened Robusta's harsher flavor characteristics.

Vietnam is no longer primarily an agricultural economy although agriculture still plays a very vital role contributing 24 percent of GDP in 2001. Coffee is an important part of the rural economy. Although it accounts for only 4.2 percent of total agricultural output (2002) it is the second largest agricultural export earner after rice, and directly employs 600,000 workers, rising to nearly 800,000 workers at the harvest season or nearly three percent of the agricultural labor force. The agricultural labor force overall represents about 65 percent of total labor in Vietnam. Only one percent of coffee farms are larger than five hectares and 85 percent of all farms are smaller than two hectares.

IMPACT OF THE COFFEE CRISIS

The changes in recent years have in part contributed to a coffee crisis that affects more than 50 coffee producing countries, several of which are very dependent on coffee as their predominant source of export revenues. The size of Vietnam's economy has meant that the macroeconomic impact of the crisis was only very modest. However, Vietnam has experienced three sets of direct impacts as a result of the coffee crisis:

1. Some regional economic shocks resulting from the significant fall in coffee revenues, combined with increased government expenditure toward sectoral support such as debt moratoriums and tax reductions. This has helped to stimulate the pilot restructuring of state-owned enterprises (SOEs) in the coffee sector.
2. Socioeconomic impacts in the primary coffee-producing regions have resulted in the partial dismantling of services like a health-care and education that were primarily provided by the coffee producing SOEs in these areas and recent human development measures show them lagging far behind other rural areas. This condition is magnified among the ethnic minorities in these regions.
3. Post-crisis changes in the business environment, even after the crisis has subsided, feature increased risk aversion, reduced credit availability, and a more cautious use of purchased inputs like fertilizer and water.

INSTITUTIONS

Any discussion of institutions in Vietnam's coffee sector must be focused on the government. For decades the state has been an integral part of the coffee sector's development. Not only have policies and regulations governed the sector, but the government has also directly participated in every aspect of the coffee industry. From input and credit markets to production, processing, and marketing, its influence has been all-encompassing. Government and parastatal organizations increasingly embrace free market structures but still have a presence in the sector. Government is the primary and most influential institution and has created nearly the entire sector's other institutions.

The coffee sector has relatively thin institutional structures to support it in the civil sphere. Shifts in the last decade have led to the sector now operating primarily through private channels and with decreasing levels of state support. The state's former pervasiveness—although often benign in terms of farmer benefits like providing social services and a high percentage of international coffee prices—has nonetheless retarded the development of independent and civil institutions. Civil society organizations like farmer cooperatives or trade associations are notably absent in most areas, and these will be increasingly critical as government transitions away from direct intervention.

A disorderly retreat by government can destabilize the sector and leave a vacuum in place of the considerable services it provided through the state-owned coffee enterprises. As these SOEs restructure or are phased out, rural benefits such as health, education, research, marketing, and extension will inevitably alter as they are increasingly placed into the general budgets of provincial governments or disappear altogether. For most participants—particularly farmers and the sector's small and medium enterprises—this is likely to have a negative impact because they are less likely to make up for this change with their own resources.

STATE-OWNED ENTERPRISES

SOEs are still important in the sector, and all of the state plantations use long-term sharecropping arrangements with their tenants. Since the early 1990s, most of the production has steadily moved into private hands and, as the process of restructuring Vinacafe's coffee-growing SOEs moves forward, it is proposed that nearly all of the production will be private within a few years. SOEs currently account for much of the coffee service industry, such as processing and irrigation, and handle a significant percentage of the exports. Vietnam is currently implementing a pilot project to restructure its coffee SOEs, but their longer-term ability to compete with the private sector as government's support is reduced remains to be determined.

The most frequently used process in Vietnam by which SOEs are reformed is called *equitization*. It involves the sale of equity stakes to managers, employees, and outsiders plus the independent registration of the enterprise under the new Enterprise Law. Vinacafe's currently approved plans do not make large-scale use of this process, but the reform of SOEs generally in Vietnam is currently subject to change as all the principal parts of the legislative framework are being amended. The thrust of the changes is towards more accelerated reform rather than slowing the process down.

CREDIT

Government encouragement since the late 1970s included preferential credit to growers and exporters, but this has been severely curtailed as a result of the price crisis and its concomitant defaults. There is nevertheless a range of financial intermediaries for nearly everyone in the supply chain. Although few countries have such extensive financial offerings for their rural sectors, there are still gaps in coverage resulting from extensive and not necessarily efficient bureaucracy and an inability to cope with the needs of ethnic minorities. A series of innovations, including mobile banking and new institutions directed at the poorest, attempt to ensure that financial offerings increasingly cover most rural areas.

The main formal source of credit for agricultural producers is The Vietnamese Bank of Agriculture and Rural Development (VBARD), which is wholly owned by the state and has 1,600 branches in rural areas and 24,000 staff. By its own estimates, VBARD has a 75 percent share of the credit market for coffee growers—a formal market that in 2002 exceeded VND 4.35 billion (US\$277 million). In the main coffee-producing region, it is estimated that there are nearly US\$170 million in open loans to farmers with at least 25 percent classed as non-performing. To prevent widespread default and to keep some money circulating in the rural economy, the government has authorized that loans to coffee growers be frozen temporarily.

The government's continued intervention, particularly in the credit markets, provides a valuable service that would otherwise be unlikely to reach most rural producers. It may actually slow the negative impacts of the painful adjustment that they will inevitably face. There is concern that this solution crowds out private sector solutions.

ENVIRONMENT

In many cases forests were cleared for new coffee plantings. This encroachment of the agricultural frontier is part of a dramatic deforestation in some areas and a 38 percent overall increase in cultivated land area between 1990 and 2000. The availability and fair pricing of water

is increasingly becoming an important issue not only for coffee but also for many agricultural crops. The operation of processing facilities without adequate enforcement and incentives for water recycling and without regulations preventing contamination will be highly problematic for all water users because the uncontrolled effluent from these facilities can produce a surprisingly large and detrimental impact. Finally, there is concern over the impact of excessive fertilizer use (some of the highest in the coffee world) and the sustainability of its environmental impact. There are no studies in this area for Vietnamese coffee production, but some general environmental studies have pointed out contamination of waterways from agrochemical use in other crops. A related concern is how soil may respond to high fertilizer applications over time but none of the research has so far noted such a problem.

SOCIAL

Coffee-producing regions experienced rapidly increasing well-being during the 1990s. Those areas with marked dependence on this single crop have suffered severe setbacks since then, particularly among ethnic minorities and the poorest people. Poverty indicators clearly show that, despite earlier advances, the dominant coffee-producing region is still one of the poorest regions of Vietnam. Recent household living standard surveys and consumption expenditure data confirm that there was no improvement between 1999 and 2003. In the same timeframe, the percentage of poor people was declining elsewhere in Vietnam from an average of 37 percent in 1998 to 29 percent in 2002. In 2002, more than half the population in the Central Highlands region was still living in poverty (using Vietnam's own US\$0.30/day figures), and 30 percent had expenditures below the lower food poverty line indicating the likelihood of hunger and malnutrition.

School enrollments, child nutrition, and reproductive health indicators also lag behind national averages. In all cases, the figures for ethnic minorities in these regions lag even further below these averages.

In some regions, Land Use Rights (LURs) are still problematic. The position of ethnic minorities in terms of LURs is sometimes precarious. The government is beginning to recognize and respect the differing concept of ownership intrinsic in the customary forms of land use that traditionally recognizes communal use of land more than individually registered "titles" that are the basis of governmental registration.

COMPETITIVENESS, STANDARDS, AND PRODUCTION POTENTIAL

Vietnam must realistically assess its comparative advantages and disadvantages in light of reduced government intervention and its increasing integration into the global trade arena. Its future competitiveness will depend on an understanding of these new trade dynamics and on preparing itself with well-functioning institutions that are both transparent and agile.

Much, though not all, of Vietnam's gain in market share has been the result of gains against less competitive origins (i.e., Africa and some Asian neighbors). Increased competition will mean that Vietnamese coffees will probably need to seek new markets and market channels as well as contest existing ones. By fully recognizing and carefully exploiting its comparative production advantages, it is likely to be very competitive in its core business: the production and delivery of basic quality coffees. An exclusive reliance on being the lowest-cost provider of bulk product with little added value leaves the country open to eventually being replaced by others as

currencies and other competitive factors change. Although it has improved, the Vietnamese coffee industry still faces significant obstacles to develop a reputation as a provider of consistent quality, container after container, with minimal variation and without its too frequent contractual defaults.

These three key factors: lack of added value, consistency, and trust are areas in which Brazil, its major competitor, already does well. In order to be competitive in the future, Vietnam must foster an environment that is conducive to private sector development and it must address its standards.

Today, many coffee producing nations are focusing on improved quality. Indeed, as the ICO and others have consistently maintained, poor quality coffee is less appealing to consumers and ultimately harms the entire industry. For many countries that lack a low-price advantage, quality and other forms of differentiation will be absolutely critical to their future success. While it is clear that for most countries, including Vietnam, a measure of quality improvement will be necessary to remain competitive, it is not clear that competing in the increasingly contested higher end of the quality market will be to Vietnam's advantage. In the ever more industrialized and homogenized commodity processes pursued by 90 percent of today's coffee industry, once an acceptable baseline quality standard is met, consistency and price are the key drivers of competitiveness. Typically, coffee buyers through their purchasing choices establish that baseline quality. It has proven difficult to establish quality norms that are not supported by the industry. At the moment, the major coffee roasters clearly indicate that the existing price quality ratio suits them and whether this is short-sighted in terms of benefits for the entire industry—as some industry pundits have expressed—remains to be seen.

Vietnam has some of the lowest Robusta production costs of any country and among the highest average yield levels per hectare. Margins for intermediaries are thin leaving, on average, 96 percent of the FOB price to reach the farmer. Due to some market factors involving the competition for coffee, it is not uncommon for farmers to actually receive as much or more than the FOB price. Its marketing channels are reasonably transparent and efficient except in more remote rural areas.

There is a discrepancy on coffee statistics among various sources. According to official figures, the coffee production totals about 720,000 tons during 2003/04. The figure is estimated at nearly 900,000 tons by many traders and the USDA. This estimation is very close to its peak 2001 production. Accounting for various likely production factors, it seems likely that near-term production will increase and may rise above the level of 900,000 tons although total acreage is not expected to increase significantly. Despite plans to quadruple Arabica acreage, most predict that it will climb, but only slowly, from its current acreage and its production levels of approximately 270,000 bags (16,000 tons) in 2003/04. Although Vietnam exports to most consumer countries, its primary trading partners are Germany and the U.S.

ADDING VALUE IN EXPORT AND DOMESTIC MARKETS

There is considerable scope to further Vietnam's soluble manufacturing and distribution, especially because it can create both low-cost and customized blends (with its Arabica production). It will also require continued investments in the high-volume end of the business, such as infrastructure and processing equipment. New areas that are already being tested, such as ready-to-drink coffee beverages, merit being pursued further given the expected growth of such

product categories. Exploring more sustainable cultivation practices and certifying these could be a strong point of differentiation in the future and would also provide necessary environmental benefits. In the long-term, as Vietnam improves its offerings and adds increasing value to its raw materials, it may eventually move into some of the differentiated market niches. In the near to mid-term, it appears wise to focus on strengthening its core business of basic quality production and improving its consistency and reputation.

Many of Vietnam's 82 million people are familiar with coffee and a considerable number drink it. The popularity of cafes, not only in cities but also in rural towns, is a clear testament to the considerable potential of developing a domestic market. A strong domestic market can offer farmers many new outlets and also help to somewhat buffer the sector from international volatility. Brazil has a well-documented recent history of doing this and is now the world's second-largest consumer. Its experiences and those of Colombia and Mexico, among others, can serve as useful lessons to guide a cohesive policy approach.

POLICY-REGULATORY ISSUES AND PRIVATE SECTOR DEVELOPMENT

As the state's active participation diminishes, in recent years the government has pursued a series of nationwide reforms, a number of which have also benefited the coffee sector. These include removing restrictions and allowing private firms to participate more fully in the market. Credit policies have been generous, perhaps sometimes excessively so in the past. Import taxes on fertilizers have been reduced to five percent or less. Farmers incur few formal costs for complying with government regulations apart from those incurred to navigate the bureaucracy. Government has actively supported the sector during this crisis primarily by temporarily freezing debt repayment while encouraging credit to successful coffee businesses and those with professional and credible diversification plans.

By the late 1990s, many coffee-producing nations blamed, Vietnam's low price/baseline quality formula for contributing to a rapidly expanding global oversupply. Of course, Vietnam was not the only factor in oversupply. Other countries were also increasing production and in some cases Brazil's expansion was even greater than Vietnam's. Given the speculative nature of commodity markets it is difficult to attribute price changes to a sole source and Vietnam may have been unfairly targeted as a scapegoat. While Vietnam may or may not have historically determined that the short-term pain of such an expansion might be worth the long run gain in international market share, such expansion has imposed extensive costs that have been to the detriment of Vietnam's own farmers, its financial institutions, and the government, as well as to most other coffee producing countries. It is not yet clear whether the long-term impact on Vietnam's farmers will be positive or negative but it must be noted that there has been no global surplus of Vietnamese coffee (nor in 2004, of coffee overall). The ultimate measure of Vietnam's expansion may not be clear for a few years.

There is a concern that policy and other incentives to stimulate production may not have adequately taken into account the market forces for individual agricultural products. It is now better understood that the nature of commodity markets make it difficult for producers to determine whether a price shock is temporary or is evidence of a more permanent paradigm shift. When governments make the wrong assumptions, they can waste precious resources supporting parts of the coffee sector that are not competitive. Vietnam's government therefore has a clear

role to play in improving the flow and analysis of international production and trade data as well as facilitating closer linkages to the international institutions that are most familiar with the field.

There is evidence that such market lessons may not have been applied to other products whose recent rapid expansion has also resulted in a reduction in prices. Pepper, cashew, shrimp, and fish are among the fast-growing commodities for which this issue has already proved to be costly and disadvantageous—particularly to domestic producers. As government moves toward a greater market orientation, improving its analytical capacity and mid to long-term strategy development will be indispensable.

Development of the private sector depends partly on ensuring that there is a “level playing field” for the private sector and engenders the need for policy decisions on the respective roles of the private and public sector. In light of government intention to retain significant ownership of SOEs, it may indicate that government wants to be in business while also regulating business. Other factors may mitigate these choices but it remains important to carefully consider the form of planned equitization because the creation of even stronger integrated parastatal business entities may well give rise to uncertainty over policy that imposes additional costs on the private sector or crowds out private sector development.

PRICING DISTORTIONS AND SUBSIDIES

An analysis of the distribution of trading margins might initially suggest that the pricing system is heavily distorted by various forms of unfair competition, even if these apparent distortions often actually benefit the farmers who—in comparison to other coffee producing countries—receive the highest share of the FOB price. However, the evidence suggests that there are a number of other factors that may contribute even more to the high share of the FOB price the farmer receives. These include:

- Lower barriers to entry for trading allow widespread non-professional speculation.
- Trading, even at low margins is acceptable in order to acquire foreign exchange that is valuable for other trading purposes.
- Exporters (in 2003) received a government subsidy of two percent for the portion of export value increased from the prior year.
- SOEs still conduct some international barter through which additional profits from the differential values are possible.
- Differences in price on the futures exchange between the spot months and subsequent months can be captured with the lower cost storage in domestic warehouses.
- Significantly reduced operating costs through vertical integration and greater efficiency.
- Sorting and grading for product and price differentiation in external markets.

RISK DIVERSIFICATION

After the difficult lessons of the recent coffee crisis, there has been a noticeable increase in risk aversion. Farmers are more cautious with their input investments. Traders have become much more careful both in the way they lend money, and how they trade, with a greater reliance on

back-to-back trades rather than extended speculative holding periods. Financial institutions are also more risk-averse and have throttled credit. Lending is more clearly tied to structured and validated business propositions. SOEs, in the absence of active risk management measures and with uncertainty about the government's continued willingness to write-off their debt, have diminished their role in the market. This has allowed the private sector to expand its operations.

Introducing modern financial risk management techniques to the coffee sector will reduce the government's need to support the sector and enhance its ability to compete internationally. Yet, formal risk management practices are little used by farmers in Vietnam due primarily to a lack of knowledge at the local level about instruments such as futures and options. Even local traders working in the coffee areas only make limited use of such financial tools although this is beginning to change.

The over-dependence of some regions on coffee as a monocrop has led to unfortunate but unsurprising consequences as a result of the recent price crisis. More coffee farmers are now intercropping with other agricultural products to smooth the transition through current low prices. Yet diversification of crops on the farm is not yet actively fostered in many rural areas. The government is however beginning to support more options to shift over to other crops or livelihoods—especially at the provincial level—by making attractive financing available to farmers that shift to other pre-selected crops. While this may be initially successful, it does not address the inherent dependence risks for small farmers in cultivating only one or two crops.

RECOMMENDATIONS

Institutions. It is essential for government to actively foster the development of institutions—particularly public-private partnerships—to help fulfil vital needs in technical training, extension, research, trade and market information, infrastructure, finance, and even policy. As such they can minimize the difficulties and maximize the opportunities inherent in the transition to a market economy. Promoting and strengthening producer and trade associations as well as sectoral institutions with public and private membership to carry out technical training, extension, research, market information and intelligence would be very important. Example of such private-public partnerships in the coffee sector can be found in several Latin American countries (e.g., ICAFE in Costa Rica, ANACAFE in Guatemala, etc.).

Government policy and capacity. The unbridled push to increase agricultural productivity and production has had outcomes that are positive and some that are negative. As government moves toward a greater market orientation, improving its analytical capacity, understanding of market dynamics, and mid to long-term strategy development will be indispensable as will the need for public institutions to be more open and service oriented toward their clients. The government would need to devise a forward-looking strategy and formulate a vision for the future of the sector. It would also need to develop the capacity to analyze policies and better anticipate their positive and negative consequences of their implementation. Finally, the strategy for the coffee sector needs to be integral to a broader rural development strategy given the strong links between the coffee sector and other parts of the rural economy, including the non-farm rural economy.

Social Needs. The state must better understand its shifting social needs in rural areas as well as the unique needs of ethnic minorities and actively develop the institutions necessary to serve them. With the shifting of the roles of SOEs away from the provision of social services the

government needs to devise a strategy of how to address the social needs and develop and strengthen the local institutions to carry out these functions.

Competitiveness and Markets. Three key factors: adding value, consistency of products, and reliable transactions are shortcomings in the coffee sector that will be vital to address as global competitive pressures increase. Vietnam must focus on strengthening its core business of basic quality production and improving its consistency and reputation. There is considerable scope to further Vietnam's efforts to add value to its production with investments in soluble, ready-to-drink, and certified sustainable cultivation practices. Excellent opportunities also exist in the domestic market that is large and receptive to coffee.

Public-Private. Private sector development depends in part on ensuring that there is a "level playing field" and engenders the need for clear policy decisions on the respective roles of the private and public sector, especially concerning SOEs.

Risks and diversification. Clear risks are inherent in over-dependence on any monocrop model; therefore on-farm as well as off-farm rural economy diversification must be actively fostered. Coffee started as a crop for diversification but its fast growth and dominance in some areas have increased the exposure of certain farmers to price and production risks. Overall, as a part of its rural strategy, the government needs to address the issues of vertical and horizontal diversification in rural areas. Finally, introducing modern financial risk management techniques will reduce the government's need to support the sector when international prices decline and enhance its ability to compete internationally (particularly the local private companies).

Environment. The availability of water and its contamination will increasingly be issues that the government must address. Another issue to better address is the assessment of the impact of pesticides and fertilizers on soil fertility and longer-term productivity of coffee trees.

INTRODUCTION TO REPORT

This study of the Vietnamese coffee sector is divided into seven parts. Part 1 provides an overview of the macroeconomic and agricultural context for the sector. It provides a brief historic background to coffee's development and presents the basic data on acreage, yields, and exports.

Part 2 offers an assessment of the institutional structures that affect the coffee sector, particularly government's influence in the form of policies and SOE involvement. It reviews what is working as well as what is distorting the sector's development and presents a view of the private sector's emerging role. This section explores structures necessary for the sector's optimal function, including property rights, information, and research and extension services.

Part 3 provides an overview of the current structure of supply and demand by examining the supply chain, farm sizes, production costs, and the emerging trends for both Robusta and Arabica varieties. It evaluates the prominent challenges that face the sector in both the domestic and export markets. It also covers the financial instruments available to the sector for credit and financing.

Part 4 looks at the risks throughout the trade chain, highlighting the serious problem of a lack of facilities to manage price risk in particular, but also default and climate risks. The importance of informal risk management systems, such as diversification, is also examined.

Part 5 investigates the social and environmental impacts of coffee production, including effects on the ethnic minorities that represent a considerable proportion of coffee growers.

Part 6 concludes with a summary and recommendations for further action and possible investment opportunities.

This analysis benefited from three sets of field visits between 2002 and 2004. Interviews were conducted with government, many private sector firms and traders, NGOs, and donor agencies. The study used a number of data and information sources. Government data comes from a number of official sources, including Vicofa and the Agricultural Census conducted by GSO in 2001 (GSO, 2003). Due to some disagreements between different data sources, this report generally accepts those that can be confirmed or verified independently. Various data sources were used for the social component of this analysis. The Vietnam Household Living Standard Survey (VHLSS) 2002, implemented by the General Statistics Office—and with a sample size of 30,000 households, with about 1200-4000 households per region—was a primary source of raw data. ActionAid and ADB's Participatory Poverty Assessment (2004) conducted with four communes in Dak Lak—one of the main coffee production areas—was widely used as was a study by Oxfam-GB&HK and ICARD conducted in Dak Lak in 2002, which was based on a formal survey among 900 households and informal surveys covering about 50 poor households and 50 government officials and traders.

1. VIETNAM BACKGROUND

Vietnam is one of the world's most important coffee producers. Its meteoric rise to prominence as one of the major high-volume/low-cost producers has had a singular impact on the global coffee industry as well as in its own rural areas.

The Socialist Republic of Vietnam is divided into 64 administrative units that consist of three large municipalities and 61 provinces that are further subdivided into districts. It has a total land area of 329,560 square km, about 17 percent of which is cultivated, more than half by irrigation. Much of the south and most coastal areas are low, flat delta with central highlands and hilly or mountainous regions in the far north and northwest.

Economically, agriculture contributes about 22 percent of GDP, industry adds 40 percent, and services supply 38 percent. More than half of its population of 81 million make up its labor force, the majority of which are involved in agriculture.

Through the 10 years ending in 2003, agricultural GDP (including forestry) has shown an average 4.1 percent annual growth rate. After rice, coffee is the country's second most valuable agricultural export. Although the value of coffee exports has reached nearly seven percent of the country's export totals, its average for most of the last decade has been about four percent.

After being subdued at near zero or even slightly negative levels for several years since the late 1990s, signs of inflation surfaced in 2001. Although The State Bank of Vietnam has adopted a more restrained credit policy, credit growth has remained robust. A good portion of the new agricultural credit from 2001-02 enabled commodity traders to stockpile rice and coffee in anticipation of a price recovery in global markets. This only modestly helped to maintain domestic prices. The Consumer Price Index has also shown stronger increases since 2001, particularly in food prices that have fueled these inflationary tendencies. The coffee sector has been directly affected by higher prices on imported fertilizer and fuel to run irrigation equipment, and also, by higher agricultural wages.

Both inflation and consumer prices have held steady and at a very low rate near zero since 1996 although some inflationary pressures surfaced from 2001-02.¹ Currency depreciation has been modest in favor of exporters. The Vietnamese dong lost 3.5 percent against the US dollar in 2000, nearly 4 percent in 2001, and about 1 percent in 2002 and in 2003. Property was very inexpensive during the early reforms of the late 1980s and early 1990s. By 1997, land values reached their peak in coffee producing zones.

Credit growth in the economy has slowed since the late 1990s to about 20 percent in 2001 and less in 2002. Much of this credit has taken the form of directed lending to enable commodity traders to stockpile rice and coffee while waiting for prices to recover in world markets,

¹ Inflation measured by annual GDP implicit deflator growth rate (ratio of GDP in current local currency to GDP in constant local currency) to show the economy's rate of price change. Source is *Vietnam Economic Monitor 2002* using World Bank national accounts data and OECD National Accounts data files.

effectively taking pressure off domestic prices. Banks have also been asked to freeze both interest and principal repayments for troubled coffee farmers that request it.

Vietnam is densely populated and agricultural land officially accounts for 28 percent of its 33 million hectares. In the past decade, however, the rapid growth of cultivated areas, including forestland used for perennial crops like coffee, rubber, and tea, has increased estimates of cultivated land area to about 12.5 million hectares, or 37 percent of total land area (Vietnam Environment Monitor 2002). Vietnam is now a major exporter of agricultural products like rice, rubber, pepper, cashews, and, of course, coffee.

Vietnam is no longer primarily an agricultural economy, although agriculture still plays a very vital role. In 1991, 39.5 percent of total GDP came from the agriculture sector. By 2003, agriculture had grown at a very strong pace, but industry and services have grown even faster, so that proportionally, agriculture contributed only 22 percent of GDP. It is, nevertheless, particularly important for the majority of its 81 million citizens, approximately 75 percent of which live in rural areas.

COFFEE'S ECONOMIC ROLE IN RURAL AREAS AND AT THE NATIONAL LEVEL

In less than two decades, Vietnam has moved from being a net agricultural importer to being one of the world's significant exporters. In the last decade, agricultural exports grew strongly with 1990s agricultural production gains averaging 4.3 percent a year, with export values growing on average 13 percent per year. Its major export crops include rice (ranking as the second largest exporter in the world), coffee (ranking as the second to third largest exporter worldwide), pepper (the second largest exporter), and cashew kernels (the third largest exporter).² It also has strong potential in other products, such as straw mushrooms (where it is the third largest exporter), and rubber. Coffee exports grew at an average rate of approximately 29 percent per year in the two decades from 1981 through 2001, and then, slowed for two years as a result of the price crisis.

Coffee is cultivated primarily in the central highlands and occupied 4.16 percent of total agricultural cultivating area of Vietnam (2002). It represented 4.3 percent of the total value of agricultural output in 2002. Coffee is an important part of the rural economy—it is the second largest agricultural export earner after rice: its exports account for 2.5 percent of total Vietnam exports in 2003.

Recently, Vietnam's dependence on commodity exports has been strongly felt in rural areas as world prices for rice, coffee, and pepper hit historical lows. The agricultural labor force represents about 65 percent of the total labor in Vietnam. Poor farmers have been particularly hurt by these sharp declines in commodity prices because most participate in these products and have no effective financial risk management strategies.

Coffee directly employs 600,000 workers, rising to nearly 800,000 workers at the peak of the season or nearly three percent of the agricultural labor force (about 1.9 percent of the total labor force). According to the General Statistics Office (GSO 2003) about 2.6 million people (or about 561,000 households), in Vietnam cultivated coffee, making it the most common perennial cash

² Ministry of Trade March 2003

crop (rice is considered a staple crop) in Vietnam, followed by coconut products (468,000 households) and tea (392,000 households).

HISTORIC PERSPECTIVE OF VIETNAM'S COFFEE DEVELOPMENT

Coffee was first planted in Vietnam in 1857. The land area dedicated to coffee remained minimal at just a few thousand hectares until the 1970s. Vietnam's coffee trade from the mid-1970s until the 1990s was with other Communist countries. Much of trade was conducted on a barter basis with the former Soviet bloc wherein Vietnam traded its coffee and other agricultural commodities for industrial products. Modest growth in the planted area—totaling about 30,000 hectares—occurred as a result of this trade and the technological support of the former Soviet Union and Eastern Bloc countries. It is only since the early 1990s, however, that its production increased dramatically to now make it the world's second largest exporter of coffee (or third largest, depending on the year) and the single largest exporter of the Robusta variety.

Development of the Private Sector in Coffee

The initial impetus to significantly increase coffee production was partly the result of a 1986 policy decision—*Doi Moi*—that allowed the establishment of the private sector in agriculture. This shift from communal to private ownership began a significant land reform process. In 1988, Vietnam established its own form of the Chinese Household Responsibility System (Benjamin and Brandt 2002) that gave farmers the rights to keep some of their production. At the same time, farm prices were steadily increased, before being liberalized, and input prices dropped as Vietnam liberalized its import regime. In the first five years of reform, the average output-input price ratio rose by about 35 percent (Rozelle and Swinnen, 2004).

The deliberately sequenced deregulation process, unlike many transition economies, reduced the shock to agriculture and provided a strong stimulus to its development. From 1991, the deregulation of input markets permitted state-owned companies that produced export crops to import fertilizers at considerably lower world market prices. The subsequent 50 percent drop in the nominal prices of fertilizer led to a large swing away from organic fertilizer and toward imported chemical fertilizers. This resulted in a large overall gain in agricultural productivity and some indications of excess use of agrochemicals that contributed to environmental degradation.

The government created incentives for farmers to switch to cash crops and to export crops in particular by maintaining some controls on basic foodstuff prices. These policy stimuli were supplemented by active government support for coffee expansion in the form of subsidized land and preferential loans as well as extension packages that in some select cases even included seedlings, fertilizer, irrigation, and agronomic support. The private sector's participation in processing was slower to materialize primarily because of inadequate infrastructure and limited access to technology.

The average annual growth rate of coffee production area was approximately 15 percent in the 1990s, officially reaching 397 thousand ha in 1999 with private estimates being even higher. Actual output gains grew much faster with heavy emphasis on high-input intensive production that resulted in average yields sometimes exceeding two tons or 34 bags (60 kg) per hectare. This extraordinary productivity puts it at the forefront of the producing countries.

Growth was simultaneously fueled by two external factors. Weather problems in Brazil led to substantial global price hikes in 1994 and again in 1997. This coincided with the increased

willingness of roasters to utilize more Robusta coffees in their blends due to technological processing improvements, which softened the harsher flavor characteristics of this coffee variety. This considerably increased the demand for Vietnam's coffee, and created a unique market opportunity for its Robusta coffees to capture a considerably larger share of the market.

There is no evidence to support some claims that donors or multi-lateral organizations are responsible for the impetus or the financing of coffee area expansion. Documentation from Vietnam's primary donors indicates that funding earmarked for coffee totalled about five percent of the costs of expansion.³ It is apparent, therefore, that Vietnam's coffee expansion occurred as a result of the intersection of two independent series of events: an overwhelming, and at least partly unexpected response by a motivated and industrious group of producers to the government's initial stimulus; combined with uniquely favorable developments in the world market for coffee.

Robusta coffees thrived in many of the upland areas and were quickly recognized as lucrative crops. The initial expansions of the coffee growing areas occurred in and around Dak Lak province with government encouragement of the internal migration of ethnic Vietnamese (Kinh) in to the western parts of the Central Highlands, the so-called New Economic Zones of these provinces. Some other ethnic minorities also settled agricultural areas in response to government urging.

These perennial coffee crops provided a lucrative cash income and also reduced slash and burn migratory patterns in favor of stable land tenancy—although this tenancy has not been without its problems. A similar trend is evident in the nearby eastern provinces of Cambodia where coffee growing is also spreading. Although it is clear that coffee was not the only stimulus for this migration, there is a close relationship between the expansion of the coffee areas and migration (Tan 2000).

Up until the late 1980s, the state owned and operated most farms, but by the early 1990s, about half of the coffee farms were in private hands, mostly, as long-term leases to farmers. In 2003, only approximately five percent of the coffee acreage is still state owned and operated.

Coffee Sector Statistics

Coffee sector statistics vary quite widely among different sources. To some extent, the Department of Land Use, The Ministry of Agriculture and Rural Development (MARD), and the General Statistics Office (GSO) gather and research land use and production information. According to 2001 GSO data, as cultivated land area increased by more than 30 percent during the 1990s, the average size of landholdings (as measured on a per capita basis) actually fell about four percent. Estimates of the land area sown to coffee in 2002 varied, depending on the source, but range from 500,000 hectares to 600,000 hectares. For 2003-04, this figure has become even more difficult to estimate, due to the extent of land taken out of production, or simply “stumped” but left productive, is difficult to assess and not formally measured in government statistics.

³ The vast majority of the expansion from about 40,000 hectares to more than 500,000 hectares occurred from the late 1980s to the late 1990s. The approximate costs of establishing coffee production (primarily land preparation, seedlings, fertilizer, and labor) on this land area total more than US\$1 billion. Donor funding – mostly bilateral – earmarked for coffee projects in this time period came after most of the existing planting had already occurred and, in any case, totalled less than US\$60 million representing only about 5 percent of the establishment costs.

Table 1.1 shows a general overview of key statistics for the Vietnamese coffee sector based on official data sources that are current to mid-2004. Additional data from other sources have suggested that productive capacity remains higher. In particular, the USDA estimates in December 2004 that production may have reached 900,000 tons in 2004 (2003/04 crop), and may reach in 850,000 tons in 2005 (2004/05 crop).

Table 1.1 Official coffee acreage, yields, and exports

<i>Year</i>	<i>Total Area</i> (ha)	<i>Productive Area</i> (ha)	<i>Avg. Yield</i> (tons/ha)	<i>Total Production</i> (tons)	<i>Export</i> (tons)	<i>Value</i> (US\$m/ln)	<i>Average Export Price</i> (US\$/ton)
1980	22,500	10,800	0.78	8,400		n/a	n/a
1981	19,100	9,500	0.49	4,630	4,600	n/a	n/a
1982	19,800	9,100	0.51	4,600	4,600	n/a	n/a
1983	26,500	9,100	0.44	4,000	3,400	n/a	n/a
1984	29,500	19,100	0.65	12,340	9,400	n/a	n/a
1985	44,600	19,800	1.03	20,400	23,500	n/a	n/a
1986	65,600	26,500	0.84	22,140	26,000	n/a	n/a
1987	92,300	29,400	1.15	33,820	30,000	n/a	n/a
1988	119,900	44,700	1.07	48,000	45,000	n/a	n/a
1989	123,100	65,600	0.95	62,100	56,900	n/a	n/a
1990	135,500	92,300	1.00	92,000	68,700	59.2	861
1991	135,000	111,900	1.06	119,000	76,800	65.4	852
1992	135,000	123,000	1.11	136,000	87,500	63.7	727
1993	140,000	135,500	1.04	140,500	124,300	113.0	909
1994	155,500	135,000	1.34	181,200	163,200	320.0	1,960
1995	205,000	135,000	1.81	245,000	222,900	533.5	2,393
1996	285,500	140,000	2.00	280,000	248,500	366.2	1,473
1997	385,000	155,500	2.57	400,000	375,600	479.1	1,275
1998	485,000	205,000	2.00	410,000	387,200	600.7	1,551
1999	529,000	285,000	1.75	500,000	646,400	563.4	871
2000	533,000	385,000	1.87	720,000	705,300	464.3	658
2001	535,000	485,000	1.86	900,000	844,452	338.1	400
2002	500,000	450,000	2	750,000	702,017	300.3	428
2003	450,000	420,000	1.71	720,000	693,863	446.6	644

Source: Authors' calculations using Vicofa data. Tons are metric throughout

2. INSTITUTIONAL STRUCTURES AND FRAMEWORK

Government has for decades been an integral part of the coffee sector's development. Not only have policies and regulations governed the sector, but government has also directly participated in every aspect of the coffee industry. From input and credit markets to production, processing, and marketing, its influence has been all-encompassing. Government is the primary and most influential institution by far, and has created nearly the entire sector's other institutions. Douglas North's comments that: "Institutions and the technology employed determine the transaction and transformation costs that add up to the costs of production" (1993) are particularly valid in the case of Vietnam.⁴

For several years, Vietnam has increasingly embraced free markets while slowly reducing the state's influence. Its pervasiveness—although often benign in terms of farmer benefit—has nonetheless retarded the development of independent and civil institutions. A disorderly retreat by government can destabilize the sector and leave a vacuum in place of the considerable services it provided. Benefits such as health, education, research, marketing, and extension will inevitably alter as they are increasingly placed into the general budgets of provincial governments. For most participants—particularly farmers and the sector's small and medium enterprises—this is likely to have a negative impact. The government's continued intervention, particularly in the credit market, has served to slow the negative impacts of the painful adjustment that they will inevitably face; it has also led to the crowding out of private sector solutions.

After the difficult lessons of the recent coffee crisis, there has been a noticeable increase in risk aversion along the entire supply chain. This has taken distinct forms throughout the sector. For farmers, efficiency and optimization of inputs have reportedly increased, as have the levels of on-farm diversification. Small traders have also changed their behavior, and discussions with village traders suggest that they have become much more careful both in the way they lend money, and how they trade, with a greater reliance on back-to-back trades than extended speculative holding periods. Financial institutions are also more risk-averse and have throttled credit. Lending is more clearly tied to valid business propositions. For example, VBARD's Dak Lak operations say they no longer lend to farmers who lack a credible business plan or whose productivity is below 1 ton/hectare. Small farmers, especially those that are less well-off, are increasingly constrained by these developments and without working rural institutions have little recourse. With increasing emphasis for reforms, the private sector is expanding its operations, both in terms of new participants coming into the market, and greater volumes handled by some of the private traders than before. At the same time, it appears that the SOE's role in the coffee market is starting to diminish.

⁴ North, D. 1993. Economic Performance Through Time. Presented as the 1993 Nobel Prize Lecture to the Alfred Nobel Foundation.

HOW GOVERNMENT POLICY AFFECTS THE COFFEE INDUSTRY

Government encouragement since the late 1970s included preferential credit to growers and exporters, export bonuses, and a national program to facilitate land access, especially in some of the more remote Highlands areas. At the provincial level, technology and extension support were provided and disseminated primarily through the state-run farms that dominated coffee production until the late 1980s.

As the coffee sector began to stabilize its expansion at the turn of the millennium, subsidized credit became less important. By then, however, banks had already made significant loans to the coffee sector, and soon afterward, falling prices quickly stifled farmer profits and their default rates began to rise. In many cases, the lack of savings or adequate investment prevented many from weathering the price drops. By mid-2001, in the face of a considerable number of non-performing loans, the government ordered banks to freeze repayments for up to 3 years for coffee growers. These are due to be reassessed in July of 2004. The banks also provided no-cost government subsidized loans for exporters to purchase, and warehouse coffee in order to provide relief.

The government has consistently supported parts of the coffee sector when prices have been low, with a variety of different measures and subsidies. During most of the 1990s, coffee exporters contributed to the Price Stabilization Fund operated by the Ministry of Finance's Government Pricing Committee. A fee was levied on coffee (US\$150-300 per ton in the mid-1990s, when prices were above US\$1500 per ton) and a number of other commodities like rice and tea. This fund was then intended to provide a baseline price support when farmer prices fell below the cost of production. The calculation for the cost of production was not explicit, and was left up to government discretion using information from the taxation service, provincial governments, and their own internal assessment. This fee has not been collected since 1998. The subsequent Export Support Fund is primarily oriented toward assisting the exporters, mainly SOEs that contributed to the Funds. Farmers have incurred very few external costs such as complying with government regulations. A very modest levy of US\$0.3 per ton is levied on exporters. In most cases, especially since the year 2001, the actions of government and the financial institutions have been favorable for coffee farmers.

Coffee sector development has been almost exclusively carried out with domestic investment, both public and private. Most farms have for several decades been smallholder operations. Although there was a legal limit for a maximum size of private farmers, this is not strictly enforced. There are approximately 130,000 farms—of all types not just coffee—that hold more than 3 hectares of land. Their situation is precarious because they are not officially recognized in the official Red Book registries. Even though these farms may have been legally acquired, their legal status is uncertain so they may have difficulty using their land as collateral for credit.

The dissemination of technology and production advice have helped to fuel strong agricultural growth, although in the coffee sector much of this has come from a combination of farmer-to-farmer learning as new arrivals in the producing areas have sought to learn from those already established. NGO's and agencies working in the coffee-producing regionals report extensive experimentation among farmers. While information has increasingly become available on important topics such as productivity and standards, there has been much less information available on ecology and marketing. This initial myopia toward a market orientation has changed considerably; nevertheless, it has left its mark, as many producers have suffered from over-

supplied markets. Vietnam, like many coffee producing countries, experienced poor transmission of production and price signals to farmers. It appears to have been unprepared for the impact of its production policies on both domestic and global markets.

Evidence from other sectors, particularly fisheries, pepper, and some horticultural products, like cashews, would indicate that the lessons of market economies have not yet been fully assimilated into the policymaking process. All of these sub-sectors have in the last few years pursued a pro-growth policy, which has resulted in dramatic production growth without a corresponding market demand. This has created considerable difficulties for producers as market forces imposed harsh lessons. Nevertheless, government sources indicate that a pro-growth policy is still typically rewarded at both local and national levels. This occurs even though the government has had to recently provide support to prop up some of the producers and exporters of these products.⁵

Role of State-Owned Enterprises

The coffee industry is composed of both private sector and State-owned Enterprises (SOEs). While some of these enterprises are still quite powerful, many are saddled with heavy debts. For some, productive capacity may be large but much of the equipment and infrastructure is at the end of its useful life. Others have public infrastructure such as schools and roads as their main fixed assets; having built and maintained these with coffee incomes. Some of the debts result from non-performing loans to farmers. Discussions with both SOEs and private sector companies revealed that they are able to exploit a number of commercial advantages but also face some intrinsic disadvantages.

SOEs have traditionally had relatively easy access to credit, from state-owned commercial banks. Lending managers are reportedly not blamed for granting loans to the state sector that subsequently do not perform, but feel that they can be penalized heavily for lending to a private firm that defaults. Nonetheless the banks are now looking more critically at loan applications from SOEs, particularly where those SOEs already have debt repayment difficulties. Bureaucracy is regarded as a problem in Vietnam, and there are clear differences in the way the bureaucratic system treats private and state firms (Tanev et al. 2003).

SOE's business plans may be developed in conjunction with the Peoples Committee and other interested stakeholders, and so must deal with vested interests, public needs, and an inflexibility that restricts their ability to maneuver according to changes in market conditions. Complex managerial structures and central directives mean that SOEs may work separately and not provide cross-support or capture economies of scale by working with related companies.

The close linkage with the government can be detrimental to their profitability. SOEs can be called on to fulfill costly social and economic government objectives that might not be profitable. For example, some of the SOEs report having undertaken stock retention at the request of the government when prices were falling, for which they claim to have not been paid.

Most are increasingly unable and unwilling to provide their traditional social services since the 2001 price collapse. Vinacafe is one of the few SOEs that are still able to act as a conduit for

⁵Under newly issued government decision No. 0271/2003.QD -BTM, 18 items will be benefited from this year export assistance credit namely rice; peanuts; coffee; tea; pepper; processed cashew (Vietnam Net updated on 20/03/03 <http://www.agroviet.gov.vn/en/default.asp>)

certain social objectives of the government such as subsidizing input costs in remote or very poor areas. The government is also able to help Vinacafe in other ways—in late 2001, it delayed the collection of VND 38 billion (US\$2.53 million) for the social insurance contributions of 24 member companies that were in trouble due to low prices. Part of the rationale is that these enterprises have been providing a number of public services, such as education and clinics, in their zones of influence.

Human resource issues are noted as a significant problem for SOEs. At the managerial level, senior managers may be political appointees; at lower levels, pay and promotion is based on age and time served, not on performance. This is making it difficult to attract and keep good staff that otherwise prefer to work for the private sector.

The Vietnam Coffee Corporation⁶ (Vinacafe) is the General Corporation 91 with administrative authority over most of the coffee SOEs (see box 2.1).

Vietnam is implementing a project to restructure its coffee SOEs with the support of The World Bank and DfID. This involves transforming Vinacafe and its loose administrative association of independent SOEs into a unified group under a Holding Company and possibly divesting some of the units.

This reform of Vinacafe is not an isolated example of SOE reform in Vietnam. Nationally coordinated plans have approved the equitization of hundreds of SOEs. Equitization, which is regarded as being distinct from privatization in Vietnam, involves the sale of equity stakes to managers, employees, and outsiders, plus the registration of the enterprise under the Enterprise Law. Thus, the entity ceases to be an SOE, although much of the equity, often a majority, remains in state hands.

Box 2.1 SOEs in the coffee sector: the case of Vinacafe

Vinacafe and the SOEs that it administers represent Vietnam's largest state-owned coffee enterprise (SOE) grouping. It was established in its current form in July 1995 to take over the coffee activities that had been run under the umbrella of the Agriculture Ministry since 1982. It currently includes 59 subsidiaries of which 40 are farms that cover 27,000 hectares and have an average production of about 60,000 tons. Subsidiaries include 27 processors, traders, and service providers that offer everything from credit, fertilizer, and irrigation to research, roasting, and soluble manufacture. It employs about 27,000 people (most of whom are involved in coffee growing), adding another 300,000 at peak seasonal periods.

Vinacafe SOEs also process and market coffee for many private farmers. One of its more successful SOEs market approximately 3 million bags of coffee every year making it (in some years) the world's largest single coffee exporter. There are only a handful of coffee producing nations that export more than this single company does.

Source: Authors' interviews of Vicofa and various exporters

Although a few SOEs are diversified both upstream and downstream in the coffee sector, many tend to be either plantation (production) or export (trading) companies. These have distinct sectoral functions.

⁶ Vinacafe is a General Corporation established under Decision No 251TTg of April 1995.

Plantation Companies

Although the state only holds about five percent of the coffee acreage, state-owned plantation companies still hold prime land and wield considerable influence. These farms are mostly located in Dak Lak and Lang Dong provinces. Although few, they account for about 15 percent of the productive capacity, and about 40 percent of all coffee is marketed by state-owned companies. Although few, state-owned plantation companies produce about 15 percent of all coffee. Furthermore, about 40 percent of the total amount is marketed by state-owned companies.

The state-owned plantation sector has been through its own period of reforms. In particular, it has moved from an operational form under which all workers were employees to one in which a contracting system is in place. The former period lasted until about 1995, and was characterized by employees paid according to time in attendance, not according to productivity. The SOEs typically provided most public benefits such as infrastructure, schools, and clinics. In the early years, coffee was delivered to the government for use in barter trades, particularly with other parts of the communist world, and outside of the International Coffee Agreement. By the mid-1980s, all of the coffee was collected by the plantation company to sell in the market.

In 1995 they shifted to the more productive contracting system in which farmers have a sharecropping lease for small plots ranging from about 0.7 to two hectares. They have the benefit of extension services and generally easier access to credit but they are obligated to produce the crops that the farm dictates. This is usually coffee but in some cases diversification has meant that some farmers are retrained to enable them to produce new crops such as maize.⁷

In this system, farmers are typically free to market their production that is in excess of their leaseholder requirements. However, the system is not uniform, and according to an independent study (PWC 2004), there are two dominant models:

1. Farmers are both employees and lessees of the land. The company pays a salary and provides some social insurance benefits. The farmers procure all their own inputs at their own expense, and at harvest, pay a land and coffee tree rental to the company with a pre-fixed quantity of coffee.
2. In the second model, the plantation company pays for everything, and the farmer delivers a pre-agreed quantity of coffee in return. Remaining production may either be sold to the plantation (some insist on this), or to external buyers.

Vinacafe, the leading SOE, estimates that it receives modest amounts of coffee from state-owned farms, and much larger quantities from independent producers. Most SOEs purchase coffee from private producers and traders in addition to what they receive from their leasing farmers, and consequently, are finding more lucrative profit centers—particularly in processing and exporting- that are independent of the production land that they themselves control.

It is not clear what the cost benefit analysis would be for farmers that are part of a SOE. Given the steady trend toward independent private farming, it would appear that the costs may outweigh the benefits. In particular, some of the state plantation companies have attempted quite

⁷ One SOE estimated that some small private farmers experienced yield decreases during the period of lowest prices of as much as sixty percent, due to their inability to secure financing for necessary inputs like fertilizer and irrigation, while SOE farmers were able to maintain inputs and yields because of access to credit.

detailed assessments of the productive capacity of the farms, and the ability of farmers to profitably extract further coffee from their farms may be limited, given the high marginal costs of further production increases. However, for smaller farmers without access to land or credit, SOEs might provide a useful service. The improved access to social services and health insurance are also valuable benefits. Given the contractual obligations to deliver a considerable proportion of coffee, it may be difficult for these farmers to earn enough to eventually establish their own operations. By restricting the disposal title to the land through the Green Book registration system,⁸ the SOE ultimately holds the reins of power.

For the plantation companies, there is a very real price risk that arises from the fact that all its revenues are price sensitive, as both the land rental and input supply agreements (when appropriate) with the farmers are expressed in coffee volume, rather than value terms and contractors can still get their benefits, even if the value of the coffee delivered in return may be insufficient to cover their land rent.

Recently, the government has embarked on plans to restructure its coffee SOEs. These include a recommendation to transfer farmlands to farmers, so that eventually, production functions would be in private hands.

Export Companies

The export companies are responsible for the processing, transportation, and exportation of coffee. These companies are often conglomerates that process and trade a wide range of products, including manufactured goods. Coffee helps them to generate the foreign exchange necessary for their operations. In fact, most of their export sales are to agents of multi-national traders who take over coffee at the port and ship it to their clients. Most of the domestic SOEs companies have no international relationships with buyers, who reportedly prefer to use multi-national traders because these can better assure specified quality, volume, and delivery schedules.

As part of the pre-equitization restructuring plans for both Vinacafe and some other of the state's General Corporations, a policy has been developed to move the responsibility for social services (such as education and local infrastructure) directly to the municipal and regional governments. The restructuring plan calls for setting up a number of Social Asset Management Companies to manage these assets after transfer, gradually transferring responsibility for the running costs to the government.

Regulation and Taxes: Government and the Private Sector

In recent years, the government has pursued a series of nationwide reforms, a number of which have also benefited the coffee sector. Among these was the 1998 decision allowing private firms to import fertilizer and, in subsequent years, further decisions have removed quantitative import restrictions (Decision 242/1999/QD-TTg) and quotas (Decision 46/2001/QD-TTg). A 2002 ruling for the first time permitted foreign-owned firms to undertake coffee exportation (Circular

⁸ The so-called Green Book registration is a different category of land ownership for lease-holders of the state-owned Enterprises. Compared to the Red Book registration it limits transfer rights in particular to a party that is approved by the SOE. This can make it difficult to sell or transfer. Additionally, the ownership period is much shorter than for Red Book rights, even though there is an assumption that upon expiry, these Green Book rights will automatically renew.

26/2001/TT-BTM). Import taxes on fertilizers have been reduced to five percent or less. The national government has also authorized an extended moratorium on loan repayments for coffee farmers.

In 1999, the Enterprise Law was passed to create a consistent framework for private sector development. This should have helped to resolve the issues of private farms emerging as business operations. For example, problems with Land Use Rights make it easier for international companies to do business with SOEs than with the domestic private sector. The Enterprise law has already abolished 200 out of 400 planned license restrictions. The law took effect in the year 2000, but so far, its impact has been felt almost exclusively in urban areas. The inconsistent application of laws to private and public sector companies remains a major complaint of the private sector in Vietnam, and this is highlighted in a recent Consultative Group paper (Ministry of Planning and Investment 2003). A deeper discussion of this issue can also be found in Tanev et al. (2003). The Ministry of Planning and Investment (MPI) manages the Enterprise Law's application, and, in conjunction with the Central Institute for Economic Management (CIEM), is planning to promote its use and application in rural areas. These changes should lead to a more level playing field between the public and private sector.

Another program with potential usefulness for coffee farmers as they diversify and adopt new business practices, is the Start and Improve Your Business program that is affiliated with the Chamber of Commerce and is already operating in 40 provinces.

Export levies are very modest. Only a fee of US\$0.3 per ton is currently levied on all shipments made by coffee exporters for funding Vietnam's yearly dues to the ICO. The Government's stipulations to levy a fee to form the Price Stabilization Fund and the subsequent similar Export Support Fund only affected coffee around the mid 1990s when coffee prices were high. The funds cover several commodities and do not try to support a minimum floor price for coffee as they reportedly sometimes do for rice and tea. The primary method of support is to help provide subsidized credit on extended terms for their contributors, mainly state-owned operations. To encourage diversification from coffee production, some People's Committees have also recently reduced or eliminated land taxes in their areas during the initial transition periods.

In the realm of inputs, the government wants to encourage the production of more sophisticated fertilizers and levied a small tax on their importation in 2003 of three percent for NPK and five percent for processed phosphorus.⁹

The taxation structure is still a deterrent to private sector development. Value-added tax that is paid on purchases often cannot be recovered when coffee is sold and shipped, as the law prescribes. Each district has its own tax office, and, because data and payments are not centralized, difficulties in recovering money are a constant problem. This fragmentation of the tax structure also inhibits the development of franchising in the internal market—a particular complaint of the increasingly popular coffee bar chains. Each individual shop is required to be registered as a wholly separate business and meet the (often very disparate) sets of criteria relative to its district, thus, considerably adding to business costs.

⁹ Local Fertilizer Producers Prepare to Take on Regional Competition. In Vietnam News Vol. 13 No.4150, March 10, 2003

Property and Land Use Rights

In 1993, changes to the Land Law allowed for Land Use Rights (LUR) to be traded, inherited, and used as collateral, although actual ownership remains with the State. Perhaps the single most important change in the legal environment for agriculture was the recognition of farmers' residual ownership rights over their output, their land, and their other productive assets. This incentive has helped to make Vietnamese agriculture among the world's most productive, and led to what appears to be a relatively smooth transition from state ownership to a free market. The transition is by no means complete.

LURs come in two principal forms, more commonly known as either Red Book or Green Book registrations. Red Book LURs are for private land, and are assigned for up to 50 years for perennial crops, and 20 years for annual crops. They can be reassigned, and so they can be used as collateral. Green Book rights devolve from land used by the SOEs. The ownership period is much shorter and they limit transfer rights to a party that is approved by the SOE. This limits their use as collateral.

While in many cases, the initial allocations of land use rights had a political dimension, favoring better-educated male heads-of-households long established in their communities (Deininger and Jin, 2003); the change in the land laws gave rise to some opportunities for reallocation to those who could best use it. In particular, many landowners found it to be more efficient to rent out or sell their land to other farmers than to hire workers to work the land for them. This was particularly true in areas where credit markets worked well, but it was also dependant on the availability of other off-farm employment opportunities.

Land Use Rights can have specific applications assigned to them that can only be changed by the Peoples Committee or central government, so that although residual rights to the land exist on paper, sometimes these rights can be curtailed by government action. In the San La province, for example, (an Arabica area) VBARD was reported to have refused to accept Land Use certificates as collateral because the Peoples Committee would not permit the re-assignment of foreclosed land use rights from the farmers. In some cases, there are even doubts over the validity of some SOEs' claims to the LUR on which their plantations are based.

A specific problem that emerges for coffee is that land, which is considered to be part of a forest cannot be changed for agricultural use, ostensibly as a forestry protection measure. This has left many groups of farmers that were part of the informal migration to the highlands, and who cleared forestland, without the ability to register their land. This leads to additional problems, because a primary determinant of access to formal credit above basic minimums by the farmers is that they have these rights and that they are properly registered. The new Land Law approved in late 2003 allows the conversion of production forestland and "unused" land for agricultural use without prior approval of the relevant government authority so long as the land user registers the conversion with the land office of the authority. The conversion of special-use and protected forestland into other use has to be approved by the authority.

The position of ethnic minorities over their LURs may be more precarious. The government may attempt to overcome this problem by recognizing customary land use rights but that is not certain. One of the challenges intrinsic to this solution will be the differing concept of ownership among some of the minorities. This will make it difficult—although not impossible—for the state to recognize a legal structure for ownership by communes or any other recognizable entity

that could manage the land. Other countries, such as Brazil, have successfully tackled this challenge.

INSTITUTIONAL FRAMEWORK

The coffee sector has relatively thin institutional structures to support it. Originally stimulated by government through policy, SOEs, and financial institutions, the sector now operates primarily in the private sector with only modest support. Although government and parastatal organizations still have a presence in the sector, civil society organizations like farmer cooperatives or trade associations are notably absent in most areas.

The most visible sectoral association is the Vietnam Coffee and Cocoa Association (Vicofa) that was formed in the late 1980s to help organize the coffee sector and help government to formulate policy. Now formally established as a Business Association, it has 110 members, only two of which are private enterprises, and is managed by a 21 member board that includes the Ministers of Trade and Agriculture. Although it was formed ostensibly as an NGO, it might more appropriately be characterized as a government affiliated organization because it represents Vietnam in international fora and its modest budget is financed by the government and its members through contribution of a small export levy. Its chairperson, Mr. Doan Trieu Nhan, is Vietnam's foremost coffee expert and a former vice-chairman of the state's Vinacafe.

Vicofa gathers data from the country's two major research centers, provincial offices, and various national agencies and serves as the basic repository of information on the coffee sector. Because they operate with limited funding and a very lean structure, they are very much dependent on outside data gathering sources that are not always attuned to the specific necessities of the coffee sector. Like many countries developing new crops with limited infrastructure and support systems, this sectoral data is sometimes contradictory, and not always accurate. Many of the traders and exporters do not to rely on this data, claiming that it is politically manipulated, and most of the industry considers Vicofa to have lost its credibility. Consequently, they are forced to do their own research, and this, of course, puts smaller operators—particularly domestic ones—who cannot afford these costs, at a disadvantage against the larger companies.

The old-style cooperative production systems controlled by the government are today judged by most observers as having been inefficient and not sufficiently agile to respond to the shifts in supply and demand. The state farms are the closest Vietnam currently has to cooperatives, although with some significant differences: the farmers do not participate in either the management or the decision-making processes of the state farm. As described in earlier sections, the state-owned companies do provide some services, such as processing and marketing, but these may have survived in part by hindering the emergence and growth of new businesses. Farmers and farmer groups have not formed as enterprises despite the new enterprise law that was passed in 1999 and became effective in 2000. The new enterprise law has been primarily promoted in urban areas although there are now plans to promote it more in rural areas. While this law is under the purview of the Ministry of Planning and Investment, the Central Institute for Economic Management (CIEM) is one of the main drivers and promoters of the new law.

The Agriculture Ministry believes that the development of cooperatives is a good idea. Other industries, namely those for fish and shrimp, have recently formed successful trade associations among their members but there is very little in-country experience or expertise to help form and

manage cooperatives or farmer associations. In 1995, a new law was passed that contained two key differences from the previous cooperative statutes. First, cooperative structures are now categorized as voluntary rather than mandatory, and second, they are to be managed in a fully democratic manner. While this should help provide an impetus to new rural institutions, they have been slow to develop. They have been somewhat supplanted by other non-production oriented organizations like Youth Unions and Woman's Unions, although these are often not coffee-oriented. Indeed, Woman's Unions have facilitated a number of improvements in rural areas, including the early development of micro-credit schemes.

There are few, if any, coffee cooperatives or other types of independent farmer organizations. The Vietnamese Farmers Union, covered in the next section, is a partial exception.

EXTENSION SERVICES

Until recently, extension services were centrally controlled by MARD, with primary decisions made at the national level, and the information, training, and policy then passed down through the provincial, and on to the district level. These services are now more decentralized, with the central government providing the general budget, but allowing the provincial and district authorities to exercise full control over their extension services. This allows for greater flexibility and the possibility of adapting to local needs. However, there may be some difficulties with this approach because each of the districts does not have equal access to the most current research and up-to-date technology. More recently, Vicofa has set up an external agency: Vicopex, with a responsibility for coordinating aspects of some of the extension work across the different agencies such as MARD and the Vietnamese Farmers Union on the technical aspects of coffee production and processing.

A typical example of what is available can be seen in the Dak Lak Agricultural Extension Center. This organization is funded by both MARD and the Peoples Committee. MARD funding is used to provide programs and services that are common to all regions, as well as to offer training to the extension staff of other organizations, such as the Vietnamese Farmers Union, the Vietnamese Women's Union, amongst others; moreover, additional services are funded by the Peoples Committee. The Dak Lak office has just 20 people with expertise in coffee, and this group has to provide extension services to the entire area with nearly half a million coffee farmers. Many of the useful support services such as Farmer Field Schools were phased out during the period of low prices after a decision by the Peoples Committee to encourage diversification out of coffee. There are farmer field schools for other crops. The extension service is now restricted to very limited site visits and the publication of technical material. When the materials are only available in the Vietnamese language, it restricts the ability of non-Vietnamese speaking ethnic minorities to benefit.

The Vietnamese Farmers Union (VFU) plays an important role in coordinating aspects of government interaction with the rural sector, including part of the agricultural extension service. While technically not part of the government, it regards its role as representing the interests of farmers to the government and acting as a conduit for the government's messages and priorities. It provides both extension services and a two way communication tool between the farming sector and the government.

The VFU is particularly active at the commune level and below, but their extension staff is dependant for funding either on MARD or on the farmers themselves. In some cases, VFU staff

also undertakes some informal functions, such as marketing agents, for inputs or production. Given the limited resources, most training they conduct is administered to the commune leaders, who are in turn responsible for transmitting the message onwards through farmer-to-farmer networks.

State-owned coffee enterprises also offer their own extension services to member farmers, but these represent less than 5 percent of all coffee farmers. Vicofa has also established some support/extension centers at the provincial and sometimes district level where there is significant production, but these are typically under-funded and their field visits are quite limited.

Extension in remote or mountain areas has been particularly problematic, especially where policies strongly encourage sedentary or fixed cultivation and discourage the traditional nomadic cultural practices. Extension agents for these areas often have an inadequate understanding of local production methods and often lack regular contact with their "clients." Although government has attempted to strengthen these services, in minority areas, the communication and infrastructure links to these district-level extension services are often underdeveloped.

A recent report (Beckman 2001) suggests that vulnerable groups—ethnic minorities, people in remote or mountain areas, people in drought-prone areas, and those no longer affiliated with SOEs—“will require more adequate attention in extension services.” The ODI report cautions that:

Households exhorted by extension agents to focus on export production have been badly hit by slumps in world market prices.

Extension messages often concentrate on strategies for income generation which require resources and knowledge not available to the poor.

In many communities, the poor tend to have limited social capital, and may experience difficulties in having their voices heard, accessing official credit, and getting invited to participate in extension activities.

Coffee Extension Opportunities

Field reports suggest that where extension services are still available, they sometimes use an outdated top-down lecturing approach that severely limits their effectiveness. Extension studies have illustrated that this is ineffective, and suggest that farmers learn best with an interactive or peer level approach. Suggestions to maintain and improve extension services include the adoption of the Farmer Field School models that exist for rice and other crops in Vietnam, or the public-private models that have already been piloted in countries like Indonesia and Uganda to complement the approach in Vietnam. The development of appropriate farming curricula that could be delivered through agricultural secondary schools might also be useful in many agricultural areas, as would combining farming education with extension and the provision of credit because many ethnic minorities and the poor often lack necessary numeracy skills and fluency in the national language. Promoting food security, particularly in remote areas, should take precedent over the riskier, strictly market-oriented production methods.

Research and its Relevance to Current Needs

Coffee research has been centered at the West Highlands Agro-forestry, Science and Technology Research Institute (WASI) under the auspices of the Ministry of Agriculture and Rural

Development. A new research center (BAVI) is focused on Arabica and is operating in Ha Tay Province with the additional support of the Ministry of Science and the French government.

Three institutes in the Ministry of Agriculture and Rural Development also contribute to coffee research. They are the Institutes for a) Soil Fertility, b) Integrated Pest Management, and c) Post Harvest. These, however, have very few programs dedicated exclusively to coffee. Several universities, such as Thu Duc, Thai Nguyen, and Hue, also occasionally produce coffee research. This is, however, usually intermittent and most often in the form of individual theses or dissertations rather than ongoing programs. Given the economic value of this crop and its importance to the rural poor, it would be appropriate to increase investment in this area. Colombia's Cenicafe offers an excellent example of targeted research with farmer-friendly applications and useful systems of farmer dissemination and adoption. In recent years, several NGOs and international organizations have also conducted independent coffee research in Vietnam. These include FAO, Oxfam, CABI, CIRAD, and GTZ.

Some perceptions gleaned from limited field work indicate that much of the official research is still focused on intensive output systems and less on the needs of poorer and very small producers. There may also be a significant decoupling between the official research and its practical dissemination to the farmer at the field level. There were several reports concerning the limited effectiveness of extension services, confirming that these are conveyed more in a perfunctory or academic manner than in the practical terms needed by many farmers.

One of the most discussed priorities in research is how to increase the long-term sustainability of production. This is particularly relevant in areas that have been focused on intensive production of coffee as a monoculture and have suffered considerably during the recent price drops. Among the topics being discussed are improvements in quality, intercropping, and a more rational input program. Although an apparently increasing number of farmers choose to intercrop coffee with other crops, most do this as a personal experiment, or sometimes copy the approach of nearby farmers. Very little research is dedicated to ideal intercropping selections for the different agro-ecological zones. This would be a worthy topic with relevance for both poor and better-off farmers alike.

With a few exceptions, there is little professional training and education in coffee (cultivation, processing, and commercialization). Investment in a professional education in coffee, similar to the Brazil model, would help create a more professional sector and serve to generally improve its competitiveness.

TRANSACTION COSTS, PRICING, AND COMPETITION

The principal concerns in the sector's market operation can be divided into 3 broad areas:

Information and Information Flows

Pricing and Competition

Contract Law and Enforcement

Market Information and Transaction Costs

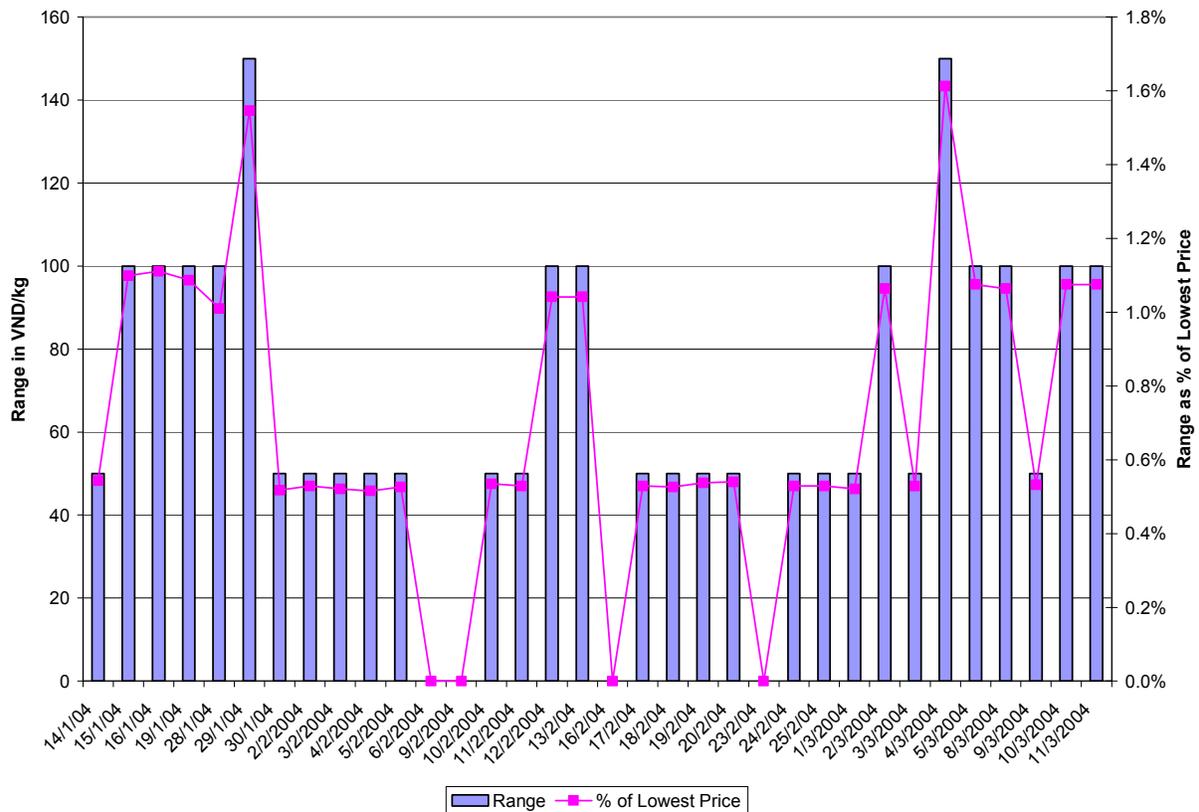
Farmers receive information on prices through TV, radio, print media, and personal networks. Coffee collection stations and traders also provide competitive information. Consequently, both

market information and its use are very well-developed, at least in the prominent coffee-producing regions. Many farmers have access to land or cellular telephones, and many farmers in the more productive areas have apparently learned to calculate farm gate prices from the exchange listings or from FOB prices. Interviews with farmers indicate that prices are generally considered to be very transparent and as a consequence, search costs are currently quite low. In Buon Ma Thuot, for example, farmers report finding price differences between different potential buyers of no more than 45,000-50,000 VND (US\$3) per ton or 0.05 percent of the total price.

The value of search costs is particularly important during periods of low prices when the marginal returns on search costs will be high because even a small difference in price can be meaningful. Studies in other coffee producing countries such as Uganda (Fafchamps, Hill, and Kauhda 2003) indicate that in high price periods, farmers are less willing to expend time in searching for the best prices because the small incremental increase in income that results has lower value (utility) when income is already high.

In the major producing areas, it appears that spatial variations in prices remain small. Although data is limited, the figure 2.1 shows price differences gathered by the Agricultural Extension service during the peak of the 2003/03 crop. The range of difference between the highest and lowest price being offered at different receiving stations in Dak Lak Province is narrow, and as a percentage of the farmer price, it remains small.

Figure 2.1 Price differences received by farmers in Dak Lak Province



Source: Authors' calculations from Dak Lak Agricultural Center data

In the higher production areas (usually Robusta) where there is considerable competition among the buyers for coffee, there is market transparency and information mechanisms work well. Traders report that farmers also have clear ideas about their selling price expectations, and that even small changes in prices quoted can lead to changes in availability. As an example, in March 2004, traders in the town of Buon Ma Thuot could readily predict that no coffee would move at prices below VND 9600, small amounts of up to 3 tons/day at VND 9600-9650 per kg, and up to 20 tons per day if prices moved above VND 9700. However, in the Arabica producing areas and areas where volumes are lower and buyers fewer, the situation is quite different. The institutional mechanisms for market information are not designed for those areas. In these often poorer areas, information costs are greater and producers are at a disadvantage. Interviews with Arabica producers consistently revealed farmer suspicions of collusion and market-rigging by the traders.

The lack of credit reference information on individuals and companies has meant that all parts of the sector report having to invest significant amounts of time in first assessing business partners and then monitoring their financial exposure to them. This affects all parts of the chain, from the smallest traders in the villages to the largest international buyers. This latter group also report having to expend considerable time and resources in gaining information through social and business networks on potential business partners, and then in monitoring their business through informal information sources. These social capital resources can be time consuming and expensive to maintain, but become an important business transaction cost when credit reporting systems are unavailable.

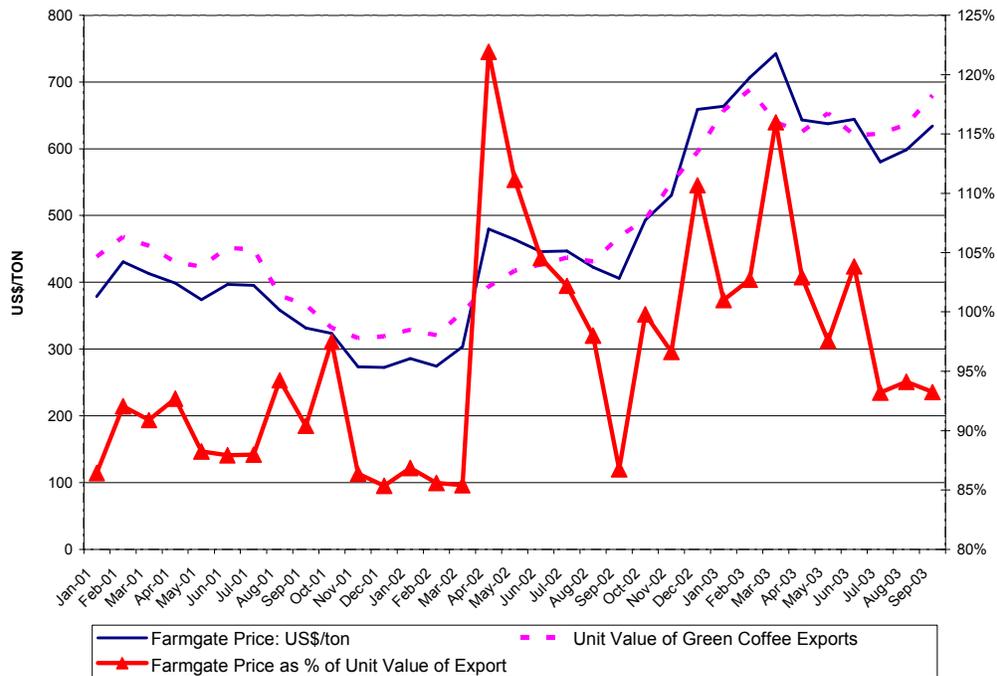
Domestic Pricing and Competition

An analysis of the distribution of trading margins initially suggests that the pricing system is heavily distorted by various forms of unfair competition. Surprisingly, these distortions often actually benefit the farmers who receive among the highest share of the FOB price in comparison to other coffee producing countries. Sometimes the farmers' price can be even higher than the spot FOB price.

Figure 2.2 shows farm gate prices as percentage of the unit value of exports of green coffee in the following month (allows for transport times). It can be seen that for the period for which data is available, farm gate prices averaged 96 percent of the unit value of green coffee exports, and frequently exceeded it. The remaining 4 percent average profit would appear to be insufficient to cover ex-farm processing, transport and other costs¹⁰.

¹⁰ True processing costs were not available from traders but an available margin can be calculated from the difference between an implicit factory gate price, which is considered to be usually more than US\$90/ton below the LIFFE futures price, and farm gate prices from available sources. The identifiable costs that can be added are (1) Transport from Central Highlands to Ho Chi Minh port: US\$10/ton and (2) Grading costs of a further US\$1/ton.

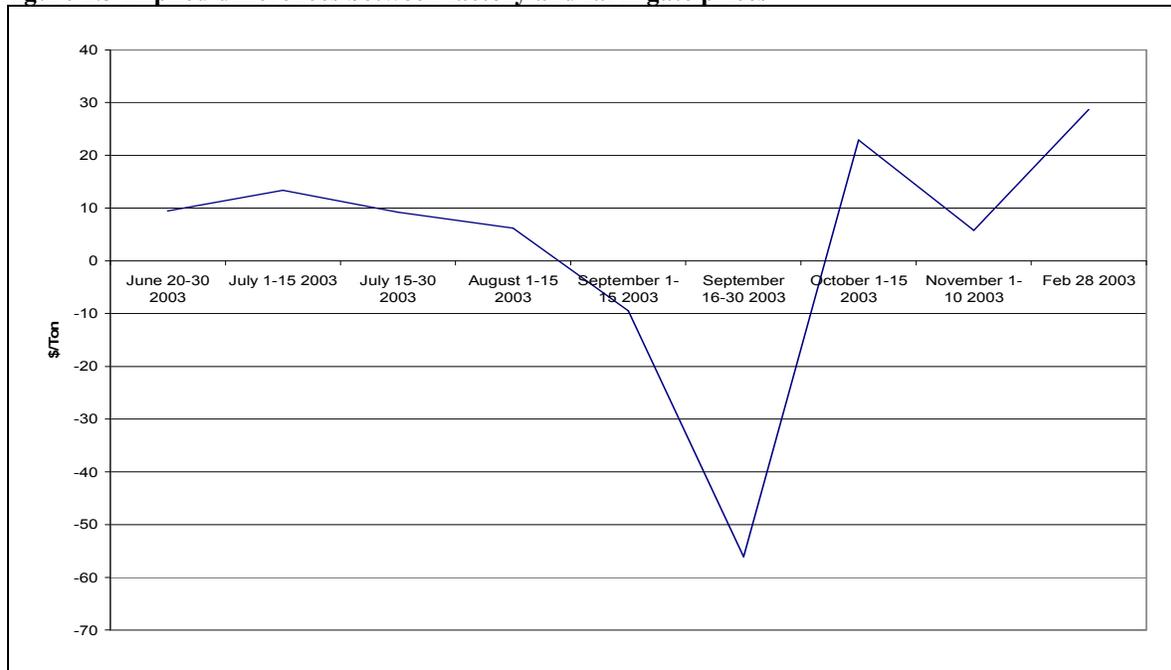
Figure 2.2 Farmer earnings as a percentage of export value



Source: Authors calculations ICO customized subset of data sent to author, taken from ICO database;

Figure 2.3 captures the price differences between the farm gate and export for the 2003/04 trading season. Assuming that post-harvest costs are at least US\$20/ton, it can be seen that during the 2003/04 period these costs were not covered by the differential between producer and export prices, until only late in the season (after October).

Figure 2.3 Implied differences between factory and farm gate prices



Source: Authors calculations from data provided by Dak Lak Agricultural Extension Center

The common explanation of this phenomenon is that SOEs, with subsidized credit and other government support, have little incentive to maximize profits and can therefore even operate at a loss. This explanation is supported by the considerable losses made by these companies in recent years. However, recent interviews suggest that the picture may be more complex.

At the same time that SOEs are able to survive because of government support, international private traders are starting to move further up the marketing chain. This may be an indication that the coffee business can be profitable even with the farmers achieving their current share of the FOB price, but that other factors are involved. These include:

1. Lower Barriers to Entry for Trading and Speculation

There are few barriers to entry for traders other than access to cash and storage space. Robusta coffee has fewer processing and storage requirements than washed Arabicas, and dried coffee is easily purchased from farmers for cash. It can then be stored as a speculation or perhaps sold immediately if a profit margin exists. Storage conditions are often not ideal, leading to quality deterioration. Many of these traders have lost money in recent years and there appears to be quite a high turnover of these traders.

2. Trading for Foreign Exchange

There is some evidence of coffee trading for purposes other than immediate profits. SOEs and other enterprises that need foreign exchange to maintain other more profitable business are believed to have set up coffee trading business that barely break even, but whose volumes are determined by their need for foreign exchange to facilitate their trade in other products.

3. Trading for Subsidies

Exporters and traders in 2003 received government support in a program that allows them 300 dong (US\$0.02) for every US\$1 of increased export value. In 2002, the bonus was 220 dong (US\$0.014) for every US\$1 of export value. The formula was more generous in 2002, with the bonus applying to every export dollar, not just incremental dollars over the previous year. Some traders regard this as a sufficient margin to make the business worthwhile, and so, pursue export volume to gain the subsidy. There is speculation that this will be eliminated during 2004.

4. Barter Transactions

State-owned enterprises retain the function of buying coffee to satisfy international debt commitments with the former Soviet Union and Warsaw Pact countries. These purchases are believed to be less sensitive to international prices and to have some influence on farm gate prices. However, it is not clear to what extent the state-owned exporters are paying higher prices only to state-owned plantation companies or also to free market suppliers.

5. Risk Management and Use of Financial and Forward Markets

Conversations with growers, traders, and domestic exporters reveal the inability to manage price risk as the single most important concern in their trading activities. Consequently, in extended periods of falling prices, such as from 1998 onwards, losses on almost every ton sold were almost inevitable except for those fortunate to catch one of the few upward price spikes, and those losses could have increased based on the length of the holding period. The experienced ability to hedge allowed the multi-national firms to better protect themselves from falling prices. Such operations are closed to domestic traders who often have only a limited understanding of futures markets and do not have the regulatory approval to use them.

6. Lower Costs through Vertical Integration and Greater Efficiency

As private traders move up the marketing chain, they can not only apply greater efficiencies learned from global operations but they are also able to integrate parts of the chain into one coordinated process, thus saving the margins and transaction costs encountered at each part of the marketing operation by separate traders.

7. Product Differentiation and Access to External Markets

This feature of the market has manifested itself in two ways: the first is demonstrated by international traders' ability to select and sort for more exacting and higher specifications when required. This has enabled them to capture more of the trade and add value to them when processing for export. Second, the state-owned enterprises are also hampered in accessing these markets not only by poor technology but also by the lack of external marketing skills and contacts, often exacerbated by language difficulties. This can be compounded by importer concerns over the higher level of business risk in dealing with domestic traders.

Some of these distortions may be derived from policies. For example, access to overseas risk management markets for domestic traders requires open foreign exchange regulations, which the government of Vietnam has closed. This also provides perverse trading incentives to generate foreign currency, even in loss making activities involving commodity trade.

Contract Enforcement and Default Risk

This issue has proved to be most damaging to Vietnam's international reputation as a reliable supplier of coffee, and the problem imposes costs on the domestic traders in particular in terms

of both higher transaction costs and lost opportunities. Default risks arise with some frequency, particularly when prices rise and a seller of coffee prefers to find another buyer at higher prices than the original contract.

Traders report extensive difficulties in getting contracts enforced. When default is involved, there may be little collateral available and judgments are not easy to secure. When collateral includes land use rights, there may be formal or political restrictions in accessing these, particularly when they belong to government organizations. At the domestic trade level, traders report being reliant on informal institutions such as building social networks to expand their business as the only way to determine who is (or is not) a reliable potential business partner.

These problems for the domestic traders extend to their involvement in international marketing. Roasters and other buyers will prefer to buy from international houses who have developed local networks, and who can replace coffee lost to default through other sellers. However, international traders also report needing to develop these networks, and to having to invest considerable time in doing so.

In addition to using futures to limit losses, international traders can buy spot and sell forward thus being able to capture the price differential between spot and forward prices. This can be an important source of profitability for these international traders, but this is also something that domestic traders cannot do due to performance risk and regulations.

3. STRUCTURE OF THE COFFEE SECTOR

Vietnam can be roughly divided into two different coffee regions divided by the Hai Van mountain pass. This natural border, in general terms, splits Vietnam into two different climatic areas: the south, where Robusta is well adapted, particularly to the basalt soils of the Western highlands, and Dong Nai province and the north, whose higher altitudes are better suited to Arabica production. Arabica experiments in the more arid Lang Son province and frost-prone areas, like Son La province, have been disappointing. Robusta coffees have not done well in the rich low land soils, particularly when far from water sources. Vietnam's most productive areas for coffee growing are around Buon Ma Thuot- Buon Ho in the Western highlands.

THE EVOLUTION OF SUPPLY

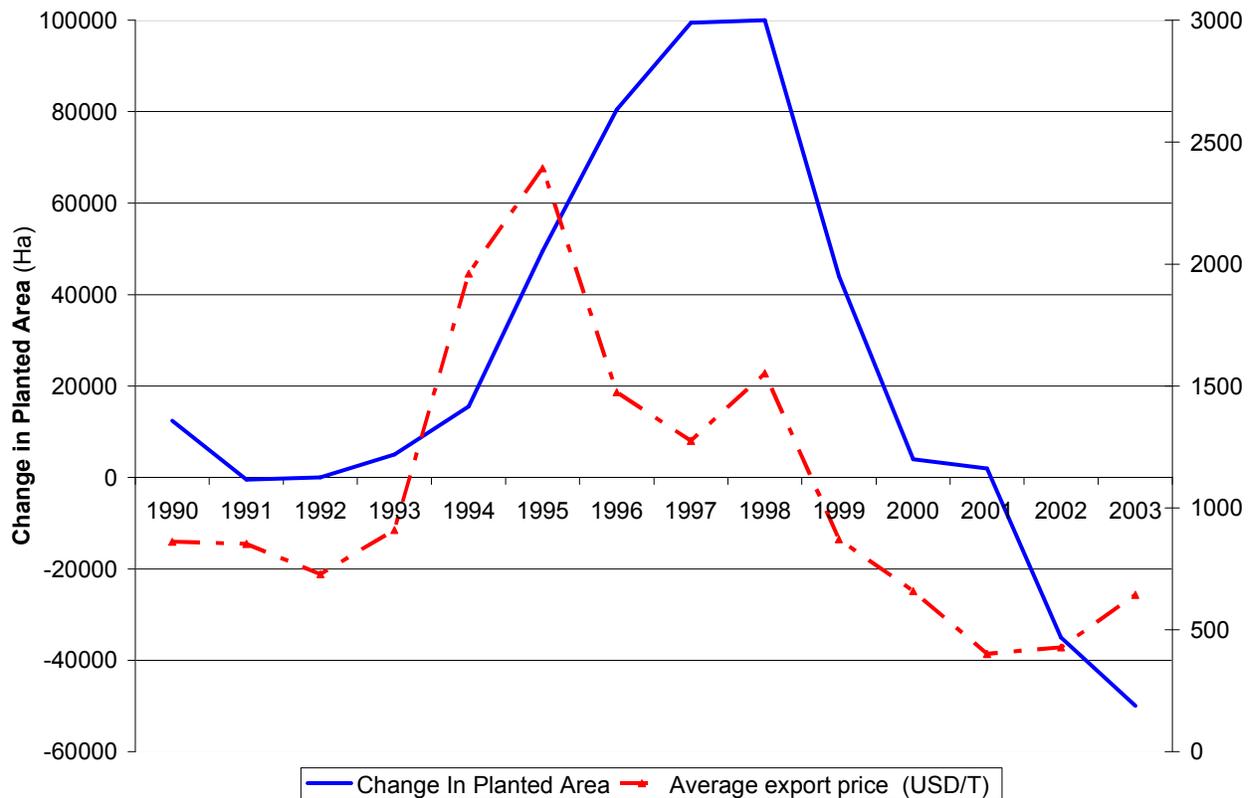
Planted Area

The most recent published figures are that 506,000 hectares are planted to coffee, nearly all of it Robusta with the exception of 26,000 hectares in Arabica. Some private estimates of planted area had put the total coffee production area close to 600,000 hectares from 2001-02, prior to the start of any uprooting. This seemed to concur more closely with survey data conducted by a joint government (NIAPP) and university team using satellite imaging and on-the-ground verification at the time. Due to considerable variations among different sources, the historical data on planted area estimates should be treated as generally indicative rather than exact.

The government has suggested that it would like to reduce the total planted area by about 100,000 hectares over the next seven years in an attempt to rationalize production with market demand. This includes a greater reduction in Robusta acreage and an increase in Arabica. However, most agree that it would be difficult to mandate such a reduction and, that ultimately, such decisions would be taken on an individual basis by farmers. There has been more success with the on-farm diversification to other crops than with the actual uprooting of coffee, although uprooting has happened to a limited extent, mostly in less productive areas or with older trees.

There is evidence that market signals have reached farmers and impacted their decisions. The data on planted areas have shown a fairly close correlation to major price changes in the international markets. Figure 3.1 compares recent government figures on planted areas with the annual average price of Robusta (recalculated as Vietnamese Dong). It demonstrates the extent to which the price movements may have been a separate cause, distinct from government encouragement, for the further expansion of the planted area. Vietnamese banks report that after the 1994 price spike, the 95/96 planting year resulted in the highest-ever borrowing for new plantations. When prices picked up again in 1997, there was a renewed expansion as well.

Figure 3.1 Vietnam: changes in planted area and Robusta prices



Source: Adapted from Vicofa and ICO data

The 2001 production lows have resulted in an effective end to most new plantings. However, there is evidence that some farmers reacted to low prices by radically cutting back all of the foliage and branches or “stumping” their coffee trees and these areas are now growing again.

Most of Vietnam’s coffee production—about $\frac{3}{4}$ —is in the Central Highlands region where approximately 477,000 hectares are currently planted.¹¹ The largest producing provinces are Dak Lac and Lam Dong (see table 3.1).

Production Technology

Vietnam’s production is characterized by the attempt to pursue an intensive high-input strategy. The de facto production policy has exclusively promoted this one method that has been the predominant model for all producers, both large and small. Only those farmers who lack resources or access to credit fail to apply considerable quantities of fertilizer. This heavy reliance on inputs has successfully raised output yields to extraordinarily high levels. However, this has come at a considerable cost. These costs can be measured both in monetary terms and in a potentially risky dependence on continued high input use to achieve these yields. The vast majority of fertilizers and other inputs are imported and increasingly costly for most farmers especially as government increasingly liberalizes. Recent global hikes and energy costs have

¹¹ Lam Dong, an important producing region, was considered part of the Central Highlands until 2002

further increased fertilizer prices while coffee prices remained relatively low. Failure to continue high-level applications—something that is commonplace when coffee prices are low—tends to cause a dramatic decrease in outputs and this volatility further hurts farmers, particularly those who are very dependent on coffee.

Vietnam’s use of synthetic fertilizers more than doubled during the 1990s to about five million metric tons in the year 2000. There was a 93 percent increase in imported fertilizers during the 1990s and a 277 percent increase in local production.¹² Domestic fertilizer production—primarily urea and simple phosphates—totals approximately 1.5 million tons and is dominated by a handful of larger companies although nearly 200 enterprises comprise the sector. Vietnam also produces relatively low cost NPK (nitrogen, phosphorus, potassium) blends but these are most often imported, allegedly due to quality concerns. The government wants to encourage the production of more sophisticated fertilizers and levies a small tax on their importation of three percent for NPK and five percent for processed phosphorus.¹³

FARM SIZE

The vast majority of Vietnamese coffee farms are small-scale. Table 3.2 shows that approximately 85 percent of all coffee farms are smaller than two hectares. Those farmers that are affiliated with SOEs can take advantage of considerable economies of scale, but most do not have that option. There is, however, increasing evidence of informal purchasing cooperatives to help reduce the costs of inputs like fertilizer and irrigation equipment and even to help manage scarce water resources. An informal study by the General Statistics Office attempted to capture national data on farm size and available technologies. For a number of years throughout the 1990s—during the heyday of expansion—many small farmers focused exclusively on single crops such as coffee. A good number of these have learned that this is risky in the absence of other sources of income or livelihood, especially during market downturns. Today, an increasing number of small farmers opt for at least some on-farm diversification into complementary crops that can also be marketed.

Table 3.1 Primary coffee producing areas

<i>Province</i>	<i>Planted Area in Hectares</i>
Dac Lak	234,000
Lam Dong	100,000
Gia Lai	75,000
Kon Tum	11,000
Dong Nai	60,000
Robusta Total	480,000
Son La	3,500
Lai Chau	500
Lan Bai	700
Thanh Hoa	4,100
Ngho an	3,000
Quang Tri	3,500
The Thien Hoa	500
Dak Lak	2,200
Gia Lai	500
Lam Dong	8,000
Arabica Total	26,500
GRAND TOTAL	506,500

Source: VICOFA, 2004.

¹² data from the General Statistical Office (2000) as noted in "Vietnam Environment Monitor 2002.

¹³ Local fertilizer producers prepare to take on regional competition. In Vietnam News Vol. 13 No.4150, March 10, 2003

PRODUCTION COSTS, YIELDS, AND PROFITABILITY

Estimates of production costs vary widely between the regions and also according to production methods. State farms appear to have the highest costs of production, and, in some cases, claim costs reaching up to US\$1000/ton. Their calculations typically included some of the costs of social benefits they provided to farmers and the community. Production costs for private farms range from about US\$300 up to around US\$600 per ton. These figures do not include establishment or replacement costs. Farmers differ in the extent to which they have borrowed heavily to cover their establishment costs and, in some cases, land was acquired for little cost, meaning that some farmers, particularly early adopters, have relatively few fixed or carrying costs. The national price support fund to which coffee farmers contributed during the 1990s, was discontinued toward the end the decade. Since then, farmers have incurred relatively few and low non-production costs such as taxes, interest rate costs, and complying with government regulations and standards.

One possible indicator of the real costs of production is to observe the price point that triggers a sharp increase in farmer defaults on their bank loans. From 2001-02, the farm gate price below which banks registered a dramatic increase in defaults was approximately US\$450 per ton. In 2002-03 this happened when prices fell below US\$500 per ton.

Vietnam has achieved extraordinary yields that have risen from just over 1 ton per hectare in the early 1990s to more than 2 tons in the late 1990s and averaging about 1.85 tons per hectare in the first years of the century (see table 1.1). As the remainder of the planted area reaches maturity, the yield potential will be approximately 2 tons per hectare. To put this in a global perspective, Brazil's yields in the record 2002 Robusta crop were estimated at approximately 1.8 tons per hectare.

These high yield figures are very much dependent on a high-input production system that most farmers were unable to sustain during the recent spate of low prices. Yields figures also suggest that the sensitivity of production to input changes varied with input levels. For example, 1 ton of NPK produced 1 ton of coffee but with 1.5 tons of NPK the output rose to 2.5 tons of coffee and with 2.5 tons of NPK the yield was 3.5 tons of coffee. One unsubstantiated report claims that several farmers have achieved yields up to 6 tons/ha.

Figure 3.2 illustrates how the yields on mature trees may respond to the likely resources that a farmer has available from one season to pay for inputs in the next, given the generally low level of access to credit. The substantial limitations of the data make an exact elasticity calculation impossible, however it does suggest that either a period of low prices or raised costs that leads to inputs being withdrawn, could lead to the types of productivity drops that occurred in the 2001/2 crop, and also the level of recovery into 2003/04 resulting from the higher prices in the early part of 2003.

Table 3.2 Size of coffee farms in Vietnam

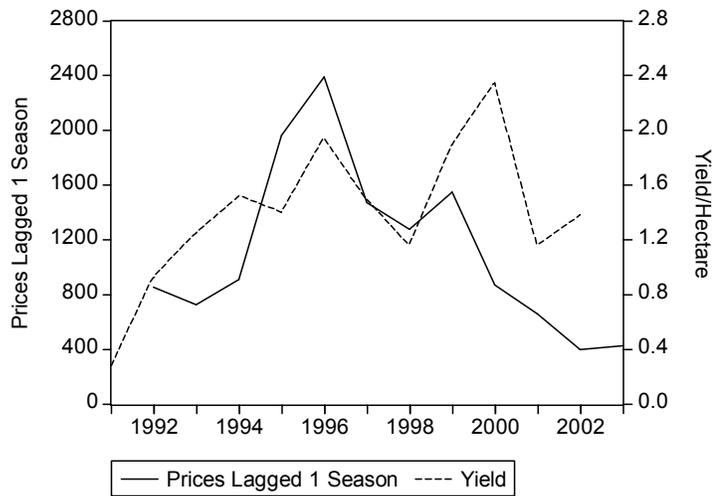
Size Distribution of Coffee Farms (% of total farms)					
>0.2 ha	0.2=1 ha	1-2 ha	2-3 ha	3-5 ha	>5 ha
3%	50%	32%	10%	4%	1%

Source: General Statistics Office preliminary analysis of unpublished 2002 research

Productivity at this level is going to depend heavily on the ability to maintain both irrigation and input usage—examples of the scope of productivity decline when fertilizers are withdrawn can be seen in Colombia, where there was a 30 percent production drop in the two years following the ending of fertilizer subsidies. The prevailing low price trend has clearly accentuated the difference between well-funded farmers who can maintain high input levels and many less well-off private farmers who have had to sacrifice some or all of their inputs. The latter have seen very dramatic yield reductions of about 50 percent in some cases and higher levels of defects in the harvested product as less care is invested in the crop.

Figure 3.2 Robusta prices inputs and impact on yield of mature trees

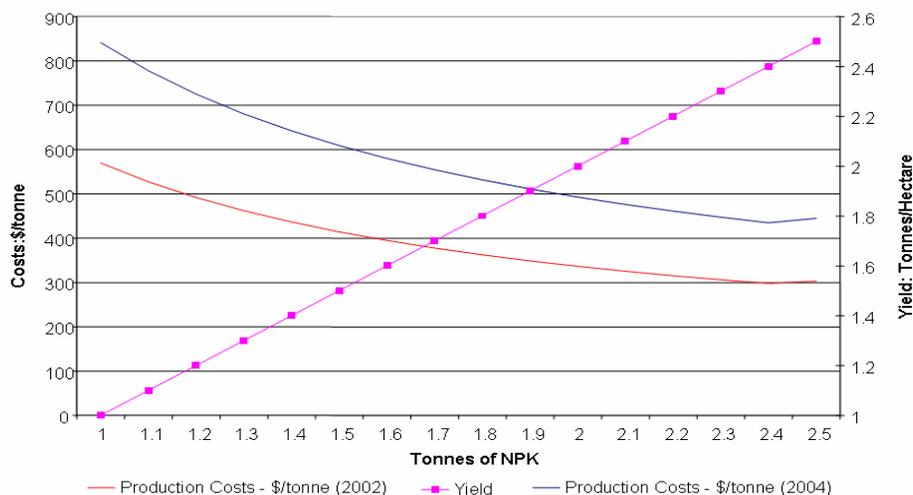
(measured season after price measurement on trees >5 years-old)



Source: Authors calculations based on data provided by DakMan, 2004.

Figure 3.3 shows the costs encountered by a small farm in 2002 and then in 2004 assuming linear responses to fertilizer use. The labor costs used in this calculation are for subsistence living only, with no money for clothing, education and investment—a largely unsustainable approach that farmers uses during the lowest price periods. With farm gate price below US\$300/ton in the peak of the 2003 season, no farmer with productivity in this range would have made profits. However, given the sharp upward swing in input costs, farmers unable to produce more than 1.5 tons per hectare may have a problem.

Figure 3.3 Range of production costs and yields
(As a Function of Fertilizer Use)



Source: Authors calculations based on interviews with farmers in Dak Lak Province, 2002-2004.

The water and environmental issues discussed previously are having an effect in some areas in that wells are having to be dug deeper, or are further away from the farms—both resulting in higher production costs, particularly when combined with rising labor and input costs.

Table 3.3 shows the cost structure of a competitive coffee farming operation. This 25 hectare farm has average yields of 3 tons per hectare and is located in central Dak Lak. At a claimed cost of around 2mln VND per hectare for irrigation because local wells have dried up, this farm barely broke even in 2002 and will have limited returns in 2003/04. It points to the need for better analysis of ideal growing areas and more careful management of water resources. State Plantations

State farm costs are difficult to clearly ascertain because some contract with the farmer for a fixed volume of coffee in exchange for farm inputs or for predetermined salary payments against the delivery of coffee. The cost figure of up to US\$1,000/ton that is attributed to the ‘social costs’ incurred by state farms, is difficult to confirm and are now less relevant because they are now being taken over by the provincial governments and the state. Analysis of labor costs undertaken at one state farm by independent consultants suggests that social insurance and holiday costs, for example, add nearly 30 percent to labor cost calculations (PWC 2004), while for two of the larger state plantations in Dak Lak, total production costs were about US\$520/ton, with a further US\$30/ton for processing.

ARABICA

Production of Arabica coffee, known in Vietnamese as *ca phe che*, is divided between 3 distinct regions. About 30 percent of Arabica acreage is found as far south as the southern provinces of Lam Dong and Dak Lak and Gia Lai but Arabica development is now more concentrated in either the former demilitarized zone northwest of Hue, such as Quang Tri province, and in Vietnam’s northern highland areas such as Son La, Len Bai, and Lai Chau, which are the main sites of recent expansion. It should be noted that the expansion in these areas has been relatively modest, and will likely continue to be quite slow in comparison to Vietnam’s earlier Robusta growth.

From 2003/2004, about 18,000 MT were produced. North Vietnam yielded approximately 45 percent of the total, while Central Vietnam contributed about 25 percent, and the Central highlands added 30 percent. The domestic market consumes nearly 40 percent or approximately 5,000 MT, while the 13,000 MT balance is exported. Thai Hoa is, by far, the largest exporter followed by Vinacafe Nhatrang.

The government’s research program to support Arabica development has focused on five main characteristics in selecting areas for expansion. These include soil depth, soil characteristics, altitude, rainfall levels, and slope of the land. The soil characteristics sought include acidity and nutrient levels. This work is undertaken on behalf of MARD by the National Institute of Agriculture Planning and Projection (NIAPP).

Table 3.3 Actual farm costs: year-to-year comparison

Production Profit and Loss 2002 - Production P/L 2004

Production Profit and Loss 2002	Production P/L 2004
---------------------------------	---------------------

Table 3.3 Actual farm costs: year-to-year comparison

Production Profit and Loss 2002 - Production P/L 2004

Yield	3 tons					
Area	25 ha					
Production	75 tons total					
	<i>Quantity</i>	<i>Price</i>	<i>Total</i>	<i>Quantity</i>	<i>Price</i>	<i>Total</i>
Fertilizer	3 tons	1,750,000	131,250,000		2,750,000	206,250,000
Irrigation	4 app.	1,500,000	150,000,000		2,000,000	200,000,000
Chemical/ha	4 app.	130,000	13,000,000		130,000	13,000,000
Subtotal						
% Borrowed	50	147,125,000		50	209,625,000	
No. of Months						
Interest Cost			11,770,000			20,962,500
Fixed Labor	20	15,000	109,500,000	20	20,000	146,000,000
Variable Labor	2,200	18,000	39,600,000	2,200	23,000	50,600,000
Total Cost			455,120,000			636,812,500
Cost/Ton			6,068,267	Cost/Ton		8,490,833
			\$398			\$539
Current	75	6,000	450,000,000	75	9,650	723,750,000
Income						
Household			-5,120,000			86,937,500
Profit						
Profit as a			-\$336			\$5,520
Share of			-1%			14%
Expense						
Exchange Rate	15,250			15,750		
Borrow Rate	1.00 Month			1.25 Month		
Labor Worksheet						
Assumed						
Number of Man						
Days to harvest						
1 ton GBE		40				
Harvest Period-days		40				
Total Labor Requirement for		3000				
Harvest						
Daily Labor Requirement		75				
		20				
Fixed Labor in Harvest Period		800				
Balance		2200				

Source: Authors' calculations from farmer interview data

Vietnam's diversification into Arabica is driven by several factors:

- It helps to diversify export offerings.
- In certain areas, particularly the north and the highlands, it is better suited than Robusta to the particular soil and microclimate.
- In some of the remote and hill areas it provides one of the few income sources for the poorer minorities that live there and is a tool in the settlement policies pushed by government.
- The government believes it can be a useful alternative to prevent the spread of opium cultivation.

Currently, the total planted area is estimated at about 26,500 hectares, but with production of little more than 18,000 tons (300,000 bags). While many trees are relatively new, others are much older stock from earlier expansion, hence, farm yield data is very variable.

The Vietnamese climate has been a limiting factor on both the volume and quality of Vietnamese Arabicas. In 1999, a devastating frost in Son La Province destroyed about 3,000 hectares and may have led farmers to consequently be more cautious about adopting Arabica coffee varieties. The government now recommends planting these varieties only in identified zones where the risk of frost is minimal. In the DMZ areas, the rainfall patterns are not aligned with the harvest season, and a problem of rainfall during the harvest tends to requiring more costly mechanical solutions which can cause drying difficulties that lead to early fermentation problems.

In those areas in which Arabica expansion has served to diversify from a dependence on Robusta there have been numerous incentives for small farmers. Those affiliated with state-owned enterprises could potentially receive free land (with up to 50 year leases), low-cost loans, and technical support. Some of these diversification efforts since the late 1990s were supported by Agence Française de Développement (AFD) loans for the state-owned enterprises, particularly for five key provinces that currently total about US\$32 million. These have focused on the provision of technical support and extension, low-cost loans, and the provision of low-cost seedlings. The project goal was to help plant 40,000 hectares of coffee in some of the northwest and central coast provinces over about 6 years. However, the responses from farmers have been limited; in 2002, only about half the 5,800 hectare target for new plantings was met. The actual demands for disbursement from AFD have been much slower than planned, and this program is now due to end in 2004, possibly without fully disbursing its loans.

A major challenge has been the development of sustainable production systems that include the ability to manage production risks. Farmers are reported to be willing to experiment with varieties and planting densities, particularly with shade-grown coffee using fruit trees that produce cash crops.

Arabica Production Costs

Costs are somewhat higher for Arabica production than for Robusta, with much of the difference coming from the additional labor required to conduct several pickings during the harvest season. Private sector production costs have been estimated to range from US\$510 to US\$600 per metric ton. Vicofa estimates that the cost of production for Arabica coffees, exclusive of establishment costs or financing and renewal costs, are approximately US\$0.23 per pound (US\$506 per ton). Some estimates for state plantations are closer to US\$0.32 per pound (US\$704 per ton).

Arabica Processing

Arabica remains a much more difficult product to wet process than dry process Robusta, and the consequences of getting it wrong can cause greater proportional loss in value. Dry processing techniques similar to those used for Robusta in which the cherries are dried and hulled result in a product whose value is little more than that of Robusta. Washing can be expensive and difficult to control without adequate expertise and infrastructure. Wet processing techniques are often simpler than those used in other countries. For example, that used in Quang Tri appears similar to the semi-washed or 'pulped natural' system, wherein water is used to separate unripe coffee and initially remove the pulp. Dry hulling is used to remove the mucilage, rather than a full fermentation. In a full washing process, correct fermentation time is a major issue in improving

quality consistency, but in Vietnam, the total time in the tanks appears to be shorter than that used in Latin America. The issue of toxic water wastes is a particular problem because a midsize wet mill can reportedly produce as much water pollution as a small town.

Arabica Marketing

Vietnamese Arabica have been traded at heavy discounts vis-à-vis. traded coffees at NYBOT.¹⁴ There was initial hope that Vietnamese Arabica could serve as a substitute for some of the lower grade washed coffees or pulped naturals, but some members of the trade report that because of inherent quality issues, Vietnamese Arabicas would probably only work as potential substitutes for unwashed or “natural” coffees.

There is reportedly one producer in Lam Dong that is organic and exports a few containers annually with a considerable premium to Japan. There are very few other independently certified coffees for organic, fair trade, or eco-friendly production methods. One partnership between a multinational roaster and GTZ has introduced more eco- friendly cultivation and processing methods. There are some producers who do otherwise differentiate their coffees through higher quality production methods. Nevertheless, the total volume of higher quality coffees remains limited.

A considerable portion of Vietnam’s Arabica production is consumed in the domestic market, and this seems to be growing strongly. In the north, one Hanoi based exporter, Thai Hoi, is responsible for almost 90 percent of Arabica exports and dominates the field, while smaller European buyers are also present in the southern areas.

OVERALL PRODUCTION POTENTIAL

The most recent public statements by Vicofa on production targets suggest that Vietnam is targeting to have a Robusta area of 400,000 hectares, and to replace a portion of the reduced Robusta area by expanding its Arabica area from the current 26,000 hectares. However, there are reasons to believe that the total Robusta acreage could ultimately be much higher. Field visits indicate that such a shift to Arabica will be difficult to create.

Medium to Longer-Term Robusta Outlook

For the medium to longer-term, the government has said it would stabilize annual Robusta production at about 10 million bags (600,000 tons), and increase current Arabica production to 2 million bags (120,000 tons). Some land has clearly been removed from production, but much of the land that was removed from coffee production had old trees, inappropriate agricultural conditions, or poor access to water. There is also considerable evidence of fields where the trees, rather than being removed, have only been cut or stumped close to the ground to permit more vibrant new shoots to eventually emerge. This was a good strategy to weather this price crisis because other crops were planted while the coffee trees grew back again.

However, reducing Robusta output to the government’s target level would actually require eliminating substantially more hectares of current production assuming continued output of at least two tons per hectare and with the census of productive coffee trees rising from 750 million

¹⁴ Coffees traded at NYBOT mainly reflect prices for Central American mild arabica coffees.

to 900 million trees. While this may theoretically be possible in the long run, most observers believe it is unlikely to occur in the near future. Vicofa estimates that in the two largest coffee producing provinces, no more than 10 percent of the planned reduction has been met.

There is no simple mechanism to achieve this change, especially in the face of continued government support such as loan repayment extensions. Perhaps more importantly, while in 2001 and 2002 there was evidence of tree removal taking place, at the current (March 2004) price level in excess of US\$700 per ton, it is unlikely that any farmers that did not remove trees when prices were lower would remove them now. As more inefficient producers may have been the first to exit production, there are reports that the remaining producers learned how to optimize input usage and manage their farms more efficiently. The remaining farmers will therefore be better placed to manage another price fall or to resist incentives to stop producing.

Medium to Longer-Term Arabica Outlook

Some private industry figures suggest that the mid-term 2010 government target is a total planted area of about 100,000 hectares yielding an annual crop in excess of 2 million bags (120,000 tons). The results are likely to be considerably lower if the current rate of planting continues. The current planted area is estimated at 26,500 hectares, with very slow growth. Production in the 2003-04 coffee year was projected to be 270,000 bags (16,000 tons). Few experts expected more than a 20-30 percent increase in Arabica production for the medium term.

QUALITY AND PROCESSING ISSUES

Quality Issues on the Farm

Harvest and post-harvest processes are often identified as critical quality control points. Without the proper on-farm infrastructure, it is difficult to maintain high-quality, regardless of the attention paid to earlier cultivation practices. In many areas, inadequate drying facilities are a constraint to improving Vietnamese quality standards.

Most farmers harvest and dry their own coffee cherries and then sell them either to collectors/traders and buying agents or deliver it themselves to processing stations. During particularly wet harvest periods, their limited natural drying capacity means that they must either bring their coffees to a processor for costly mechanical drying or suffer the diminished quality that tends to occur in very humid post-harvest conditions. Very few farmers have access to the most costly but most reliable method—mechanical drying. Solar-assisted mechanical dryers that are economical and environmentally preferable have been tested in several countries but have not yet been tried in Vietnam, possibly due to the typically overcast harvest conditions in some parts of the country.

In addition to the climate affecting drying capability, two other problems persist. First, many farmers have insufficient space on which to dry the coffee. Second, while many rely on plastic sheeting, planks, cement, or woven mats, others simply spread the beans onto the bare ground, thereby increasing off-flavors, foreign matter, and diminished quality.

Besides the possibility of mold and fermentation that negatively affect the value of the beans, in the worst-case scenario, particularly noxious fungal pathogens like Ochratoxin (OTA) can develop. The Food and Agriculture Organization of the United Nations (FAO) has designed a Technical Cooperation Program to educate farmers about OTA and help implement ways to

reduce the risk of its occurrence. FAO documentation indicates that Vietnam has a quality image problem due to OTA which has already resulted in shipments being rejected at ports of entry. The project summary document notes that, “Many of Vietnam’s coffee quality and OTA contamination problems derive from poor harvesting, processing, drying, storage, transport, and quality assurance methods.”

Ex-Farm Processing

Buying stations are common in many production areas and are the usual receiving point for most farmers. Many farmers deliver their coffee already hulled, some bring their coffee as parchment or as dried cherries, and a few deliver fresh cherries especially when humid conditions require mechanical drying. The stations bulk together larger volumes and perform basic grading, usually into Grade 1 or Grade 2. Coffee is then further processed at coffee factories that further clean, grade, and polish to the individual buyer’s specifications. Coffee factories—many of them state owned—transport the processed coffee either to warehouses for storage or to one of the two main coffee export ports: Haiphong in the north, or Ho Chi Minh City in the south.

Both foreign and domestic investment has significantly improved the quality of equipment among processors, and consequently, the potential for more efficient and better-quality coffee processing. In recent years, many foreign technologies have been imported, adapted, and then copied by local manufacturers.

Quality Improvement Incentives

After the quality decline resulting from the price collapse in 2001-02, interviews with a number of traders reported that the situation was improving, as prices recovered somewhat from 2003. Proportions of defective black and broken beans fell below 5 percent, and foreign matter became much less of a problem. Price incentives seemed to clearly affect quality. The recent improvements are confirmed by the data from the quality control companies. However, farmer investments in basic de-pulping and processing equipment was severely curtailed by the price collapse in the late 1990s, and has not shown signs of improvement. International traders are increasingly establishing their presence in the rural producing areas. Combined with increasing sophistication among domestic traders and companies, this has resulted in prompt quality assessments and has led to payouts for quality separation at point of purchase.

Some farmers are able to get an advance payment—usually 5-7 days before sale, in order to pay for harvesting costs, but this tends to be only those that have established relationships with the intermediaries. In informal interviews, small traders divulged trading margins of about 200VND/kg or about US\$and13/ton.

There are divergent views on the role of coffee quality in Vietnam. One side holds that steadily improving the overall quality can strengthen Vietnam’s competitiveness and will likely nudge prices upward. According to the ICO, reducing the lowest quality coffee will improve prices and also improve consumer demand as quality improves. Another side—supported by several large traders and roasters—argues that there is a high demand for the lower quality coffee currently being produced. They claim that raising the overall standards would reduce sales to buyers that seek lower-cost coffee. Several buyers apparently rate cost—more than quality—as the predominant factor in their purchasing decisions for Vietnamese coffee. These buyers have developed very specific grading requirements and are reportedly not willing to pay much more for improved grades. In some areas, as the overall level of black and broken beans has dropped

to 3 percent, which is above the Grade II specification, there are reports that lower-grade coffee was being mixed with higher quality lots in order to rebalance it to the demands for the popular Grade II specification.

GRADING AND QUALITY STANDARDS

Vietnam's Robusta coffees are most commonly known by the Grade 2-5 percent black and broken beans, with 13 percent moisture. Data from the largest quality control company shows that about 65 percent percent of the country's production falls under this category. This particular standard can include large numbers of defects that would otherwise be eliminated by other grading systems, but it has been widely accepted as the dominant standard for many years.

Vietnam's traditional standards for black and broken beans were officially replaced in September of 2002 when the Ministry of Agriculture and Rural Development launched an initiative to improve and stabilize quality with new grades based on international standards. The ruling TCVN 4193 identifies possible defects, assigns a point system for each, and sets a limit of 150 defects. The TCVN 4193 also identifies normative references and five possible grades along with clear guidelines for defects and grading.

This new government initiative intends to help the industry work with a higher baseline specification and a grading system that is internationally recognized. While this is short of the ICO Resolution No. 407 on standards, it is a strong step in that direction. However, Vicofa's chairperson, estimated that an immediate halt to shipments of under-grade coffees would mean as much as US\$150 million in lost revenue for the country. Earlier reports noted a bottleneck in the availability of modern grading equipment. This has changed and there is sufficient processing capacity for better grading but, without market demand or government mandate, it will be difficult to raise the current baseline standard.

Many, but not all of the international buyers express a lack of interest in these new standards. For most of the export coffee, specifications are determined by the requirements of the international buyers whose specifications are very distinct. Most claim that new Vietnamese standards are not aligned with their business needs and would add to their costs.

Many of these buyers prefer specification levels that are below the new standards and less costly because they can use further processing, including steaming, to remove some of the worst taste characteristics of low quality coffees. U.S. roasters reportedly prefer the lowest specification while southern European buyers in particular tend toward a somewhat higher standard and purchase much of the limited offering of washed and semi-washed Robustas.

Vietnam's leading quality certification and inspection service, CaféControl notes that foreign matter is the most commonly found defect in Vietnamese coffee and believes that the new standard could help to make grading more transparent.

The most transparently available data set on the evolution of export standards comes from the grading results of the terminal market, which grades each lot to be tendered in order to test that it conforms to the Exchange's delivery standards. From 1995 to 2003, the monthly pass-fail rates show a dramatic improvement in the approval of tendered Vietnamese coffees. A good portion of this must be credited to a 1999 change in the grading standards that allows lesser grades of coffee to pass. However, even allowing for the change, there is still a noticeable trend of improvement evident in these results.

Other indications of improvements come from internal contract rejection rates. CaféControl reports a significant reduction over the last 2 years of the quantity of coffee they reject and which needs to be reprocessed. There are more than a dozen certifiers in Vietnam, but CaféControl reportedly handles more than two-thirds of all exports and is by far the leading institution in this field. Difficulties, as elsewhere, are more pronounced during extended wet periods. The most common cupping defects in such cases are: phenolic, earthy, smoky (from improper drying), and fermented.

Other standards besides quality are increasingly looming on the horizon for Vietnamese producers. Sustainable production methods that provide not only long-term benefits for Vietnamese producers but also assure buyers of good agricultural practices are a pressing consideration. One of the world's largest coffee roasters—a major buyer of Vietnamese coffee—recently noted that there are further demands for traceability of coffee and accountability for sustainable production practices.

DOMESTIC MARKETS

Despite the apparent concerns about the quality of Vietnamese coffee, demand for it remains strong, and there are no excessive stocks. Demand has developed well within Vietnam, while the neutral taste and clean cup (i.e., no off-flavors or related problems) has made it popular with a number of international roasters as the Robusta of choice.

Although Vietnam, like its neighbors, has traditionally been a tea drinking market, its domestic coffee consumption has had periods of high growth. While many estimates put the domestic market at approximately 35-40,000 tons, some recent research indicates that it could be as high as 70,000 tons with a good portion of the domestic small-scale trade presumably not being captured in the official statistics.¹⁵ A conservative estimate of per capita domestic consumption based on official volumes would therefore be approximately 500 grams per person, whereas the more optimistic estimate is 875 grams per person. While this range is quite low by consumer country standards and lower than some of the other major producers like Brazil and Colombia, it is on par with its neighboring producing countries such as Thailand and the Philippines, and higher than regional producers with similar per capita incomes such as India and Indonesia. Most coffee is consumed as ground and roast rather than soluble, and there is an increasing out-of-home consumption in cafes.¹⁶ It is worth noting that unlike domestic markets in the majority of producing countries, Vietnam reserves some of its best coffees for domestic consumption.

Soluble

Many countries utilize Vietnam's production as a basic raw material for their coffee products but in recent years two soluble operations have started in Vietnam itself. One, the Bien Hoa Coffee Factory, is part of government-owned Vinacafe. The other is a subsidiary of Nestlé Thailand. At least one of the SOEs is seriously considering the possibility of producing liquid coffee in single

¹⁵ A portion of the information on domestic markets comes from private research conducted by Viet Thai International Co. Ltd presented at the GTZ/Vicofa Coffee Conference in Hanoi, March 2003.

¹⁶ One of the café chains claims a 90 percent annual growth rate for this segment between 2000 and 2002.

serving cans; a style that is very popular in the Japanese market. Some lower grades of coffee are also used for some domestic consumption, particularly for soluble production. There is still relatively little soluble consumption in the domestic market. Soluble coffee is estimated to be not more than 10 percent of the total domestic consumption but may be growing at around 40 percent per annum. Nestlé entered the market in 1997 with Nescafe and has a 60 percent market share; Vinacafe's own brand of soluble has a small share of the market, despite a quality oriented reputation.

Coffee Imports for the Domestic Market

Vietnam imports both green and roasted coffee. Arabica coffees are imported from Indonesia and elsewhere to supplement local Arabica coffees when they are not available and to assist in providing stability for domestic blends. Import tariffs are relatively low, at about 5 percent, but domestic roasters regard the tariffs as unproblematic due to their low level and the relatively small amount of Arabica imported. One of the best channels for Vietnam's Arabica production may be its own domestic market.

Although tariffs on finished products are much higher than for green coffee, a cursory review of supermarket availability turned up a number of distinct international brands including imports from France, Italy, Germany, Singapore, and even single-origin products from countries such as Colombia and Ethiopia.

Branding and Product Differentiation

The internal market is partly driven by a number of home-grown brands that have achieved considerable popularity in the last few years. The most widespread of these is a coffee brand that has diversified from cafes and whole bean offerings into branded and packaged coffee products as well as into franchising. The 'Trung Nguyen' range of cafes and coffee products have grown to become Vietnam's most visible coffee brand. This company opened its first cafe in 1998, and today, its name and presence are ubiquitous throughout the country. A second company that is expanding rapidly is Highland Coffee, which is seen more in the larger urban areas.

Domestic and Retail Prices of Coffee

Farmers in early 2004 received approximately VND13-15 million (US\$900 to US\$1000 per ton) for Arabica coffee, and VND 9.6 million (US\$615) per ton for Robusta coffee. At retail, high-quality coffees cost, on average, approximately 8500 dong (US\$0.65) for 100 grams. Mainstream coffees sell for about 10-12,000 dong (US\$0.65-0.78) per 200 grams

VIETNAMESE EXPORT MARKETS AND COMPETITIVENESS

Vietnam's coffee is now exported to over 50 countries. Table 3.4 analyzes Vietnam's top 10 markets. The U.S.A and Germany are its primary trading partners. Although Western European markets are among its strongest, there is also a growing demand in newly expanding markets such as Poland and Hungary. In Asia, Japan is its most important client, followed by South Korea, but there is also notable demand from other producing countries, particularly for soluble manufacturing and re-exports. Australia is also a notable purchaser.

Table 3.4 Top ten markets for Vietnamese coffee at its export peak

Countries that import Vietnamese coffee (2001-2002)				
Country	Volume (mt)	Avg. price (US\$/mt)	Share of total (%)	Share of all origins**
Germany	112,739	363	15.8	13.6
United States*	89,288	355	12.5	14.8
Spain	59,777	352	8.4	30.1
Italy	56,263	375	7.9	14.4
Belgium	51,170	375	7.2	
Poland	47,500	376	6.7	32
France	33,956	361	4.8	19.6
Japan*	29,517	419	4.1	7.1
South Korea	26,162	364	3.7	39.4
United Kingdom	25,799	338	3.6	31.1

Source: Authors calculations based on data provided by F.O. Licht and ICO

* Before adjustments for stock changes

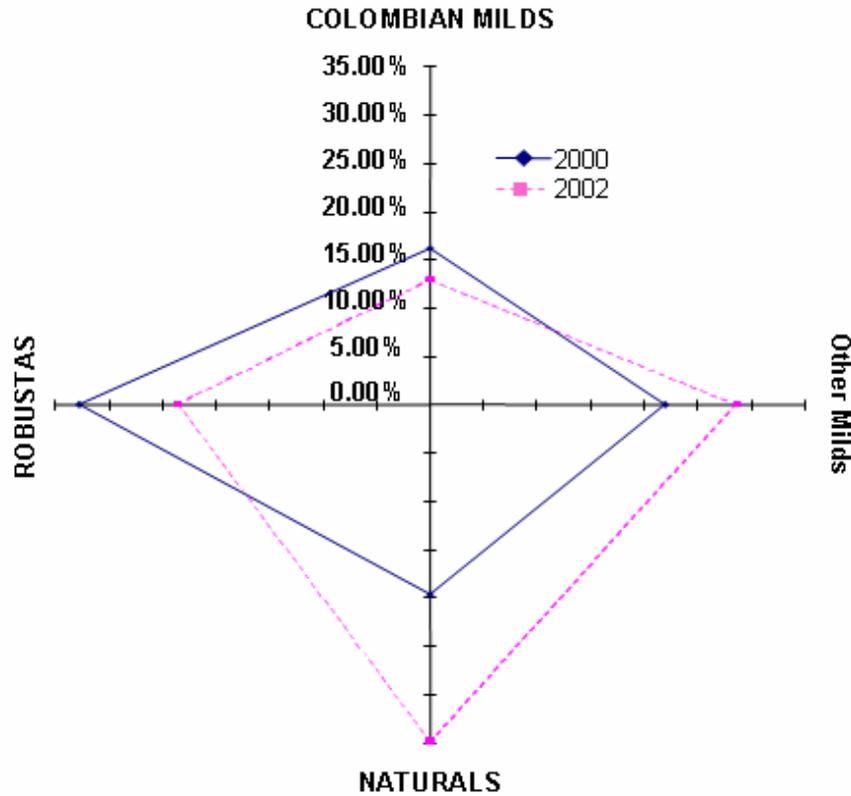
**Share of all origins based on 2001 imports. Those countries for which full-year 2002 import data is available indicate that Vietnam's market share has fallen as Brazilian coffee availability has increased and exports from Vietnam have declined.

Export Competition and Substitution

In the export markets, Vietnam faces competition based on two inherent aspects of the Robusta coffee trade. First, it is a much more generic product than washed Arabica, and consequently, one country of origin can easily be substituted for another when a preferred origin is unavailable or too expensive.

Second, Robusta is subject to competition from other coffees in two ways. In periods when the price difference between washed Arabica and Robusta widens, roasters may seek to reduce their washed Arabica usage and increase their Robusta usage—perhaps steaming the Robustas first. The second form of this is that as the price of natural Arabica falls relative to the price of a basket of washed Arabica and Robusta coffees, there will be a tendency for roasters to lower both their washed Arabica and their Robusta usage in favor of more natural Arabicas. The substitution rates will vary according to the preferred taste profile of the different geographic regions. Figure 3.4 shows this effect in Germany, where high Robusta usage and some high-grade washed Arabica usage was lost to Brazilian and other lower cost Arabicas.

Figure 3.4 Changes of German imports 2000 to 2002 by origin



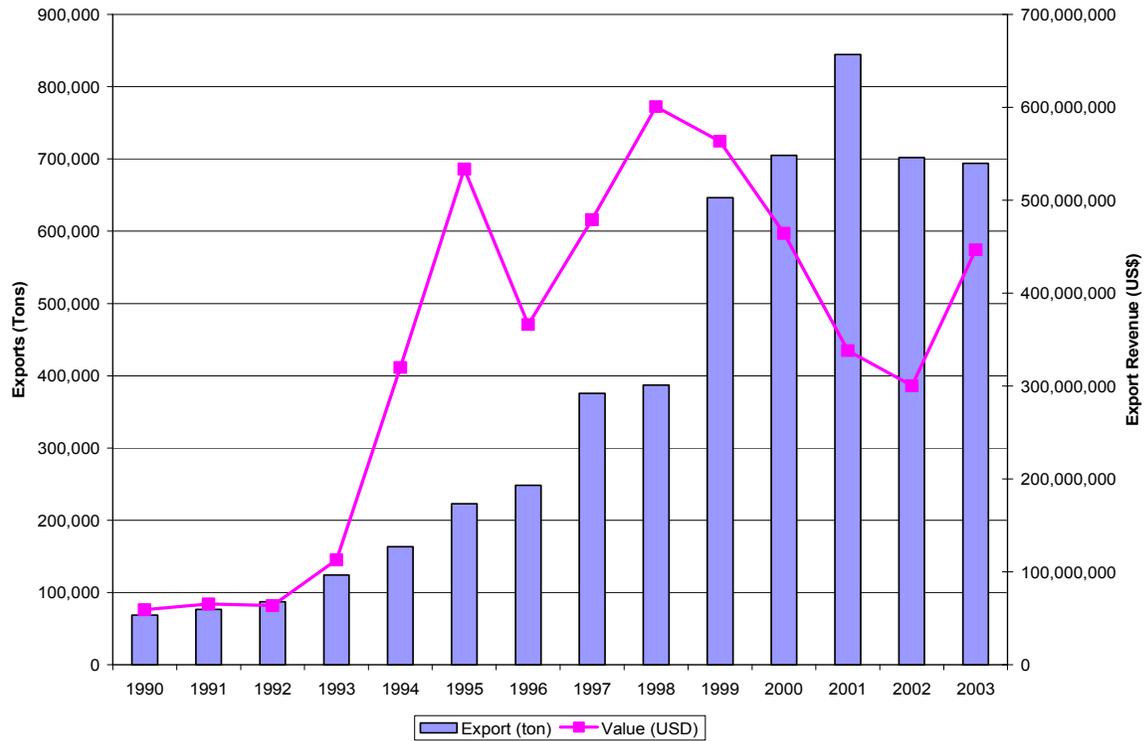
Source: Authors' calculations based on ICO data

This has quite distinct implications, in that it defines Robusta as a primarily price-driven market. Roasters appear to largely want a standardized grade that is easily recognizable and will seek to buy it from the lowest cost producer. However, it has to be consistent, and this leads some buyers to suggest that Vietnam's competitiveness is best advanced by working on improving consistency, not on raising baseline specifications above demand levels.

Export Volumes and Value

Figure 3.5 shows total export volumes and values, indicating that while export revenues peaked in 1998 (indicated by lines in Figure 3.5 below), export volumes (indicated by bars in Figure 3.5 below) continued to grow until 2001. Marginal revenues turned negative in 1998.

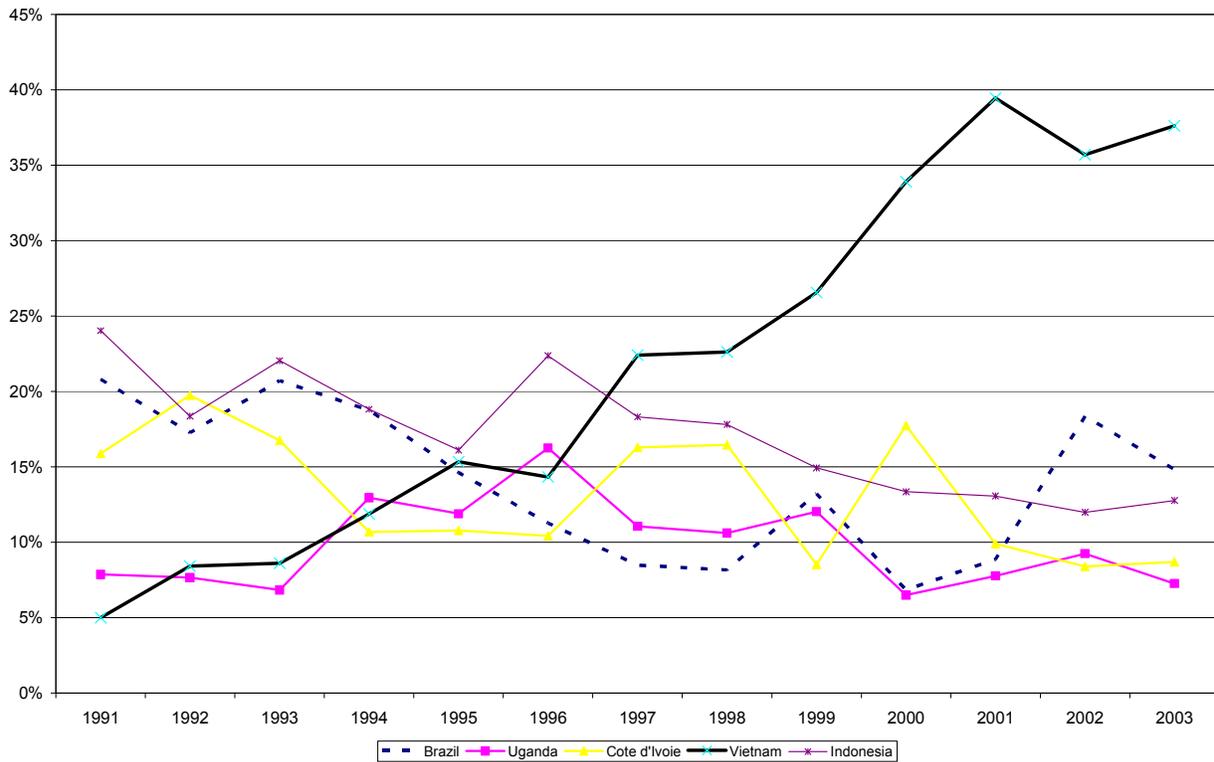
Figure 3.5 Vietnamese coffee export volumes and values



Source: Authors' calculations based on ICO data

Figure 3.6 shows Vietnam's coffee export growth in world markets against all of the primary exporters. Vietnamese share of total Robusta exports has consistently increased in most of the last 12 years compared to its major competitors. Even when accounting for the Robusta component of soluble exports from competing countries, Vietnam had a 40 percent share of all Robusta exports by 2001 and is currently hovering between 35 and 40 percent.

Figure 3.6 Vietnamese shares of global Robusta exports compared to other large producers

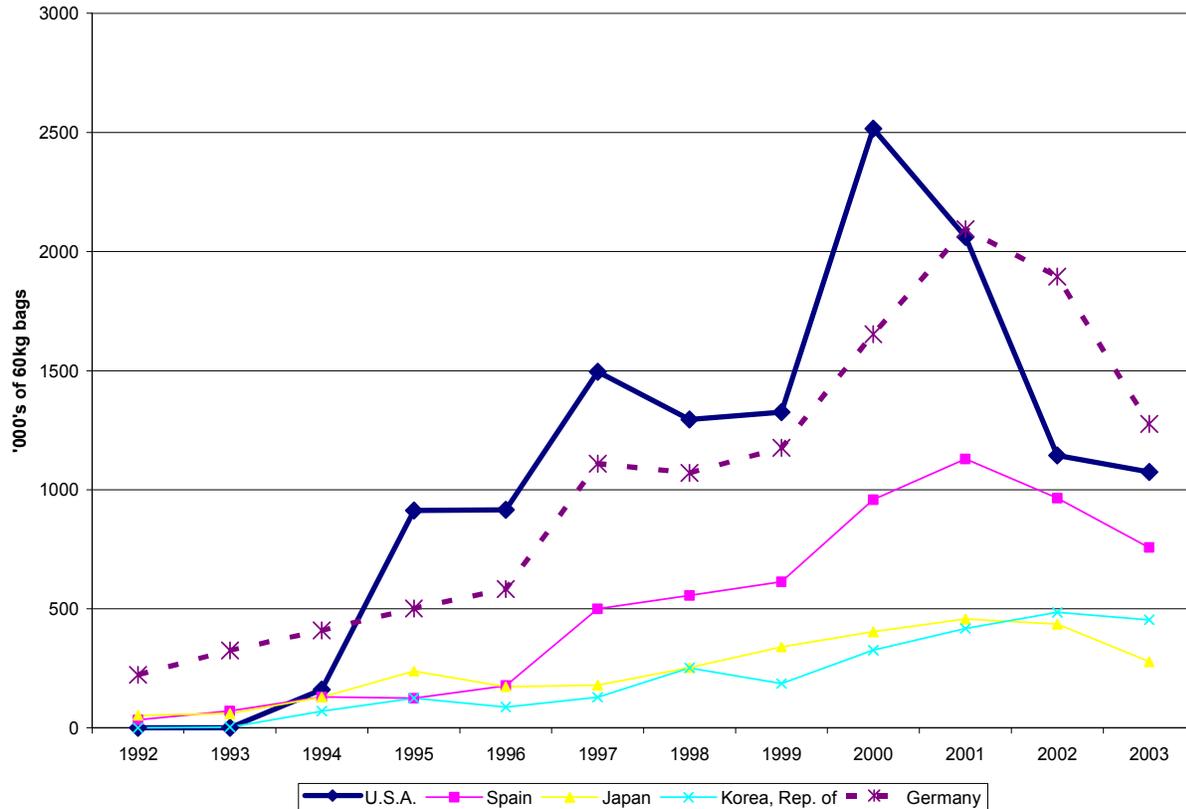


Source: Author's calculations based on International Coffee Organization data

Vietnam has been able to expand its export share at the expense of other traditional Robusta exporters (see Figure 3.6) and increase export volumes in major consuming markets both in developed and developing countries (see Figure 3.7).

However, in 2002 (the most recent year for which complete data is available) it is clear that other Robusta producers were able to exploit the fall in Vietnamese exports. Perhaps the clearest indication of substitution to other producers is the case of the United States, where imports of Brazilian Robustas (known as conillon) have overtaken those from Vietnam (see Table 3.5). In 2003, there was an overall reduction in the market share of Robustas in US imports, resulting from the increased availability of Brazilian natural Arabicas. This has occurred partly because the conillon crop is harvested and shipped after the Vietnamese season is over, but also because of the huge increase in Brazilian Robustas as noted earlier.

Figure 3.7 Vietnamese green coffee export trends to principal destinations



Source: Authors' calculations based on data provided by ICO

This increase in Brazil can be considered a permanent shift in the dynamics of the Robusta market, further exacerbated by developments in Brazil's internal market where substitutions to and from Robustas can be quite volatile,¹⁷ as can production. Consequently, there may be considerable year to year fluctuation in market size for Vietnamese RRobustas that is very much driven by availability of substitutes.

¹⁷ There has been both considerable growth in Brazilian domestic consumption as well as a swing towards higher RobustaRobusta usage by Brazilian roasters (Lewin, Giovannucci, and Varangis 2004). An ambitious plan by the Brazilian Roasters Association (ABIC) has targeted a further 3 mln bag increase in domestic consumption in the next few years. If achieved, this would only reduce availability of export RobustaRobustas by about 1.2 million bags. Consequently, Brazil's current higher level of RobustaRobusta exports looks likely to be maintained along with its consequent competitive pressures on Vietnam.

Table 3.5 US Robusta imports from Brazil and Vietnam (2001-2003)

<i>Country</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>
Brazil	299	1,840	1,379
Vietnam	2,897	1,889	1,819

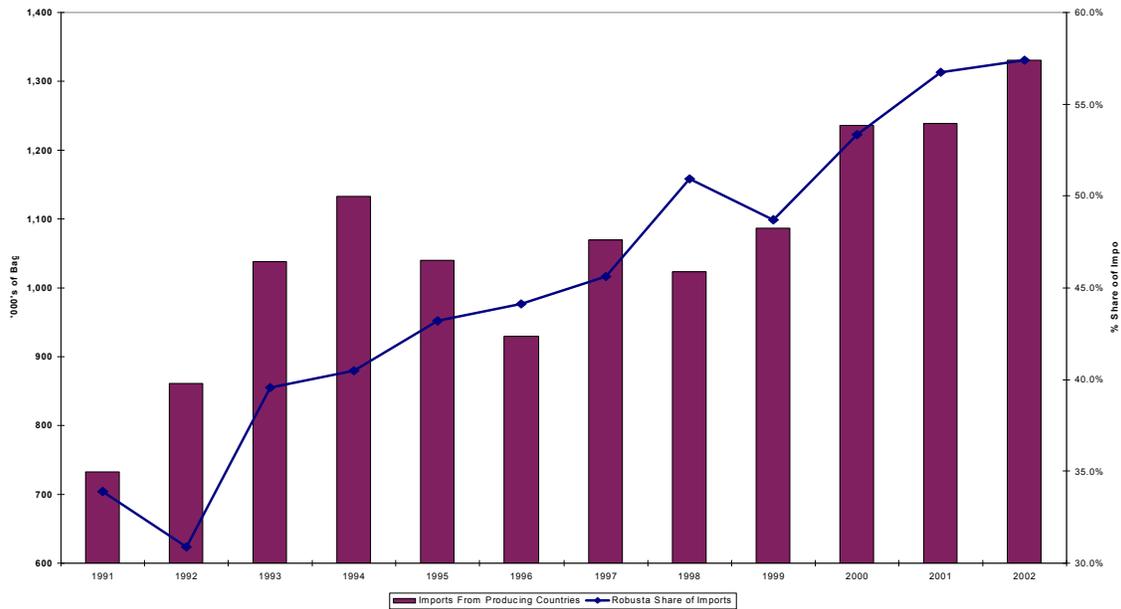
Sources: F. O. Licht; authors calculations based on Cecafe export data

In many traditional European markets, the main losers in Vietnam's expansion have been the Organización Africaine et Malgache du Cafe (OAMCAF) countries, particularly Cameroon and Madagascar. In Spain and Italy, for example, the expansion of imports from Vietnam almost exactly matches the increase in Robusta imports overall, although there has been a significant fall in imports from Uganda. This is particularly problematic for Uganda because some of the higher quality grades that are being shipped from Vietnam are directly replacing the higher value coffees from Uganda that have traditionally dominated this market for some time. In France, the increase in Vietnamese exports has replaced most other Robusta sources, with the OAMCAF countries particularly losing market share. In 2002, Vietnam was able to maintain its strong exports to this region, but Brazilian exports replaced even more of those from the OAMCAF region, which consequently experienced a further loss of market share.

In northern Europe, overall consumption of Robustas increased, enabling Vietnam to increase its exports to this region by approximately two million bags and increase its market share from 9 percent of total Robusta imports in 1992 to 50 percent in 2001. This was partly replaced by Brazilian Robustas in 2002 as Vietnam's volumes dropped. In Northern European markets, the OAMCAF countries shipped about one million bags less in 2001. Vietnam has grown dramatically in both absolute terms and as a share of the Robusta total.

In Eastern Europe and the Far East, the situation looks different. In South Korea, for example, the increase in Vietnamese imports almost exactly matches the increase in imports, and is a good example of how, in formerly tea drinking countries, the availability of cheap Robustas has helped expand consumption—often with soluble coffee because of its ease of preparation. Robusta's market share in South Korea has increased from 30 percent in the early 1990s to nearly 60 percent in 2001.

Figure 3.8 Imports into South Korea: 1991 to 2002



Sources: Author's calculations based on data from International Coffee Organization and F. O. Licht

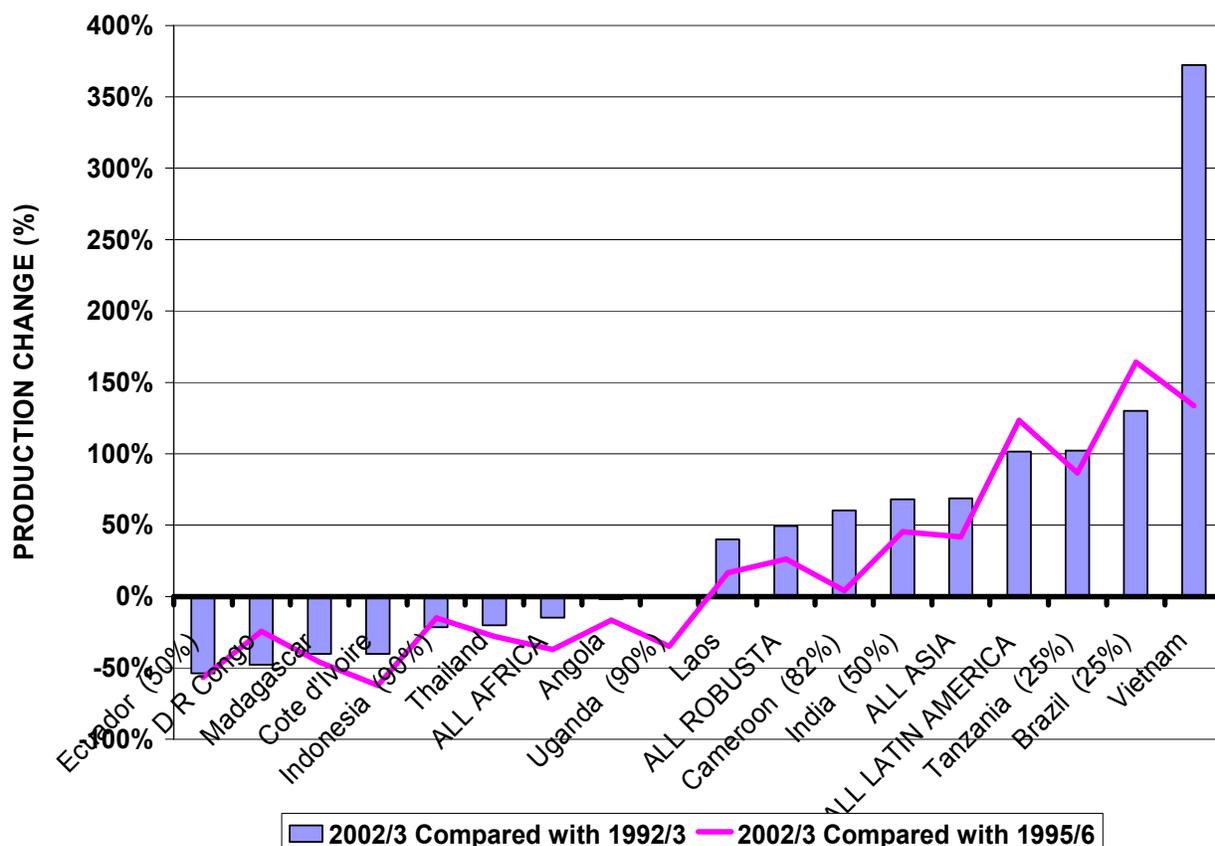
The data from other emerging markets such as Poland and Hungary shows the same basic trends. Vietnamese imports achieved significant volume in Hungary in 1999, and occasionally replaced some coffees from Uganda or secondary washed Arabicas. Vietnam retained most of its imports to these markets in 2002.

Production and Competitiveness

Given the difficulty in calculating production profitability for a large number of Robusta producing countries, the best indicator of relative competitiveness may be production change because this accounts for not only cost competitiveness but also the presence of other factors, including domestic stability and policy environment. Figure 3.9 shows two perspectives on the proportional change in production for all Robusta producing countries: overall totals and regional totals.¹⁸ The bars show 2002/3 production compared to the 1992/3 production (a full cycle between two low-priced periods) and the solid line shows 2002/3 production compared to 1995/96 (a period of declining prices).

¹⁸ Per percentage figures inside parenthesis for some countries indicate the share of their Robusta production in their total production. These countries produce both Robusta and arabica.

Figure 3.9 Relative change in Robusta production



Source: Author's calculations from USDA data

It is clearly evident from the chart that the Asian and Latin American producers have expanded Robusta coffee production, and that African countries have lagged behind, although there are some exceptions in each group. Producing countries face different challenges. For example, in Africa, Uganda is struggling with Tracheomyces, and Cote d'Ivoire from incomplete reforms and more recently, civil unrest. In Asia, Indonesia faces a combination of high production costs and periods of civil unrest that have contributed to their production decline. In Latin America, Ecuadorian production suffers from very low yields and planting on the eastern side of the Andes, thus leading to higher transportation costs.

Value-Added Markets

According to USDA FAS and Vicofa reports, Vietnam exported only 597 metric tons of soluble coffee worth nearly US\$1.7 million in 2001, and very minimal quantities of roasted coffee. Taiwan is currently the most important buyer by far, but there are also other promising markets in Asia, like Korea and Malaysia as well as Australia. Outside of Asia, Poland and the U.S. are currently the most significant clients. Table 3.6 illustrates the relative exports of soluble coffees from Vietnam and two world leaders: India and Brazil. Clearly, there are considerable opportunities in this field.

There are also other promising avenues for higher value products such as liquid coffee and ready to drink 3 in 1 combinations with milk and sugar (and sometimes additional flavorings). These are increasingly popular in the growing markets of the region and already make up a significant part of consumption in Japan.

Table 3.6 Vietnam's soluble exports comparison

Export of Soluble (tons)				
<i>Year</i>	<i>Vietnam</i>	<i>India</i>	<i>Brazil</i>	
1999	N/A	186,820	668,162	
2000	227	269,721	570,647	
2001	597	281,831	701,322	
2002	235	263,563	64,037	
2003	594	N/A	1,104,031	

Source: Vicofa, ICO, and Cecafe, Brazil

CREDIT

The overall credit situation in Vietnam's coffee sector has been undoubtedly positive. Although the easy credit of years past may be changing as a result of the price crisis and its concomitant defaults, there is still a range of financial intermediaries for nearly everyone in the supply chain. Although few countries have such extensive financial offerings for their rural sectors, there are still gaps in coverage resulting from inefficient bureaucracy and an inability to cope with the needs of ethnic minorities. However, in a series of innovations including mobile banking and new institutions directed at the poorest populations, the government is attempting to ensure that their financial offerings cover all of their rural areas.

The main formal source of credit for agricultural producers in Vietnam is The Vietnamese Bank of Agriculture and Rural Development (VBARD) which is wholly-owned by the state, and supervised jointly by the State Bank of Vietnam and the Ministry of Finance. It was formed in 1988 out of a pre-existing department of the State Bank of Vietnam, initially to focus just on agriculture. Responsibilities for wider rural development were added in 1996. VBARD has 1,600 branches in rural areas and 24,000 staff.

VBARD reports that the credit and savings markets have become much more competitive in recent years, and estimates that while it has a 75 percent share of the credit market for coffee growers, it has only about 25 percent of the total credit for traders. The remaining lending comes from other major banks such as Vietcombank, Incombank, the Vietnamese Bank for Social Policy, and informal credit sources. There are even new innovations in Vietnamese lending services such as mobile banking. Specially-equipped trucks (159 to date) visit the more remote rural areas beyond the reach of traditional bank branches and provide credit and savings facilities to all interested farmers (not just in coffee areas) thereby reducing the inaccessibility for the poorer and more remote rural areas. One remaining hurdle that growers referred to, beyond accessibility, is difficulty with the application processes — a particular problem for ethnic minorities who are more fluent in their own language.

With a coffee portfolio of 3.48 billion VND, this would have put the total value of all coffee debt at about 4.35bln VND (US\$277 million). VBARD's largest borrowing sector is rice, followed by coffee, rubber and pepper. In these latter markets it lends primarily to households but for coffee

the 2002-03 portfolio was split with 2.61 billion VND for households and small enterprises and the remainder 0.87 billion VND loaned via the SOEs.

In coffee, VBARD lends for both crop finance and for developing new plantations, although this is now restricted to Arabica. Crop finance loans are currently at 1-1 ½ percent per month and are for a period of less than 1 year. Development loans are currently charged at 1.1 percent and are available for one to five years. In the mid-90s, farmers report having paid off loans for new developments in two years following the price rises in that period.

A notable factor in the expansion of credit markets was the 1993 change to the Land Law which allowed for Land Use rights to be traded, inherited and used as collateral, although actual ownership remains with the State. An important determinant of access to formal credit by farmers is that they have these rights and that they are registered in the so-called Red Book of registered land use rights. However, due to the informal expansion of agriculture, some of the agricultural land remains without formal registry as noted by official government statistics and a joint study by the State Bank in conjunction with DFID. Financial institutions are able to make exceptions and grant loans up to 20 million VND (c. US\$1275) without this collateral. Government support to the banks for these loans makes this risk possible. VBARD will also lend against coffee stocks and even sometimes against production at 70 percent of its market value.

It can be argued that the maximum rates chargeable by VBARD do not sufficiently reflect real credit conditions in the coffee sector, and this has served to crowd-out the development of smaller, private credit institutions, thus, potentially restricting farmers' access to private credit markets.

Farmers who lease land from SOEs appeared to be more likely to receive credit given their contractual agreements with the state and clear land use rights under those agreements. A sampling on two state farms demonstrated that about 50-70 percent of their farmers borrow money for their production needs. Some credit market distortions in favor of SOEs remain. According to a World Bank report (World Bank 2002), lending to the SOE sector represents between 50-60 percent of all lending. In fact, non-performing loans seem to be particularly problematic for coffee SOEs. However, some evidence suggests that credit to SOEs is not growing because of outstanding frozen loans.

In some cases, tripartite agreements have been reached wherein banks provide input loans to farmers, but pay these out directly to the input suppliers, who then provide the product to farmers. In these agreements, the risk of default is smaller, but the transaction costs are considerably higher.

In the main coffee-producing region, it is estimated that there are nearly US\$170 million in open loans to farmers with about twenty-five percent being non-performing. To prevent widespread default and keep some money circulating in the rural economy, the government has authorized that loans to coffee growers be frozen from July 31, 2001, to July 31, 2004, unless they have other means to repay. During the 2001-02 crop year, the farm gate price at which banks began to see a sharp increase in defaults was approximately US\$470 per ton. In 2002-03, a strong increase in defaults was registered when prices fell below US\$500.

The non-profit Vietnam Bank for Social Policy (VBSP) lends to those that fall outside eligibility for normal banking relationships, usually because they are too small; the VBSP can be seen as a large-scale microfinance institution. It was formed by separating subsidized credits from state-

owned commercial banks on the basis of the Vietnam Bank for the Poor¹⁹ and is underwritten by the government. Mandatory contributions from two percent of the deposits of the state-owned commercial banks serve as its primary source of funding.

In the coffee sector, VBSP lends only to the smallest growers and not to traders or other intermediaries. Prior to the period of low prices, most coffee farmers were regarded as too well-off to be included in their target lending group, but this changed as prices fell. The bank experienced increasing defaults during this period and was left exposed when the government introduced a debt moratorium to help farmers. It is still restructuring those loans that were frozen. (VBSP loans were only frozen until December 2003, unlike others that were frozen until July 2004).

Much of Vase's initial lending to new clients is through self-help group lending. Potential clients are typically identified through local contacts in the communities, such as the Women's Union or People's Committee. Social knowledge and concerns play a big part in determining eligibility, and bank management claim that they screen out many potential clients (i.e., the unemployed, those with a record of drug use), due to such knowledge.

Informal credit is also available, particularly at the micro-level (less than a few hundred dollars). This typically comes from family networks, rotating credit funds, and private moneylenders. Such credit is particularly important for ethnic minorities and the poor. Farmers interviewed describe that financial institutions have difficulties lending to the ethnic minorities and the smaller farmers.²⁰ In some areas, there are emerging Farmers' Unions that have access to small-scale loans at very reasonable rates (currently 6 percent per year). Unfortunately, none were identified in the coffee sector.

Trade financing is increasingly less available within the supply chain from coffee traders, agricultural inputs traders, or collectors who have traditionally advanced cash to growers in exchange for their coffee at harvest time. An increasing rate of default on these informal agreements, especially as prices dropped, has left many of these intermediaries in financial difficulties. This may also have had the effect of allowing wealthier farmers more flexibility in determining to whom and when to sell their coffee.

Although new formal credit is currently very tight for Robusta producers, farmers can still borrow money from banks under certain conditions. New credit can be available to proven producers with high output systems in areas that are approved by the government. Banks have a perverse incentive to lend to SOEs because they are not held accountable for non-performing loans to the state sector, whereas, they can be penalized for lending to a private firm that defaults. There is money available, at reasonable terms, for the Arabica coffee growing program under the terms of the AFD loan. Financing is also available for diversification plans but only if the new product(s) under consideration is part of the People's Committee master plan and the borrower has both a sound business plan and a committed buyer. In some cases, there are also

¹⁹ Following the collapse of the Traditional Credit Cooperatives, the government set up a network of People's Credit Funds, which are small, farmer-owned credit unions that work at the commune level and provide members with small-scale loans usually less than US\$1000.

²⁰ Restrictions on the ability of RFI's to change interest rates appears to have led them to adopt a more risk-averse approach to lending which restricts smaller borrowers' access to credit.

some subsidies available to VBARD from the Ministry of Finance that help them lend for this purpose.

Exact borrowing rates are difficult to ascertain because bank branches draw funds from different sources that each have different lending limitations and costs of capital, which are passed on to borrowers along with some service costs.

For coffee, loan terms are typically for one year, with three payments. The first disbursement typically occurs in January or February, for about forty percent of the loan to cover irrigation costs. The second disbursement, also for about 40 percent, occurs in April or May and covers fertilization costs. The final disbursement, twenty percent, usually between October and December, covers labor costs for harvest. Repayment is usually expected after the first sales in January.

Longer-term loans are available for up to 15 years for capital expenses like drying platforms or irrigation equipment. Proven farmers with land use rights can usually secure loans for less than US\$700 without collateral. Policy issues still remain over the acceptable forms of collateral. Although loans are sometimes granted against stocks, there has been little development of warehouse receipt financing due to legal restraints on the use of primary commodities as collateral.

4. Risks, Risk Management, and Diversification

Within Vietnam, the entire trade chain—from producer to roaster—faces a variety of risks. The ways in which these risks are manifest and handled are quite different between the state or province-owned enterprises and the private sector.

PRODUCER RISKS

The principal risks faced by coffee producers are production risks and price risk. Recent surveys of coffee farmers undertaken by the World Bank's Commodity Risk Management Group (CRMG),²¹ show that price and yield risk are the two major concerns of farmers. In the case of Vietnam, these two risks and others described below are all interlinked with the pattern of input use, particularly in the more marginal producing areas. Vietnamese production models are typically dependent on high input usage and are promoted by researchers, special services, and even credit institutions. High rates of fertilizer use can both smooth yield fluctuations and lower sensitivity of production to natural weather variations. While these can be very profitable, they also heighten the producer's risk of not receiving adequate returns for the substantial investments in inputs.

The contract farmers on state-owned farms do not face price exposure on the volumes contracted to the SOE. Although they do have some yield risks, these are muted, because shortfalls are typically made up in following years. To the extent that the full use of inputs can somewhat help reduce yield volatility, there is a risk management component here. These contract farmers have the same price risk exposure on their 'surplus' production that they have in excess of what they have contracted for.

At the farm level, risk aversion increasingly occurs, as farmers respond to the uncertainty in commodity prices. This makes it difficult for producers to allocate resources efficiently, limits their access to credit for productivity-enhancing inputs, and leads them to adopt low-yield, low-risk production technologies, thereby possibly lowering their average incomes.

Variable climactic conditions make production uncertain, and although this can be partly resolved by techniques such as irrigation, the impact of extreme weather conditions is unavoidable. Data suggests that some areas experienced a large fall in productivity as a result of the 97/98 El Nino phenomenon, although this was offset by many newer trees coming into production. Northern conditions can be different from other producing areas. Some of the northern Arabica zones have suffered from frost, while drought can be a problem in the Central Highlands. El Nino and La Nina both affect Vietnam, with El Nino causing droughts in the Central Highlands.

Climate risk is interlinked with two other risks: quality and pests or diseases. Excess rainfall or humidity, for example, can affect quality by inducing fungal disease, fermentation in freshly

²¹ Surveys of note can be found in the CRMG reports on The Dominican Republic, India and Nicaragua. These reports containing the surveys can be found at www.itf-commrisk.org.

harvested coffee cherries, or mold in stored coffee. This can be particularly acute in the central parts of the country. In the Robusta areas there is evidence of the coffee mealy bug (*Planococcus lilacinus*) which leads to losses, lower screen sizes, and reduced coffee quality. Some farmers in Dak Lak have reported both quite significant reductions in yields and high control costs that have put in doubt the economic viability of their farms.

Leaf rust has also occurred during periods of high rainfall—particularly in the Arabica areas. While this will disappear in extended periods of dry weather, the burden of control increases production costs. To date, there has been no report of coffee borer in Vietnam.

Risks for State-Owned Enterprises

The SOE bears the risk of providing certain levels of inputs and other supports such as technology and extension services, in return for a predetermined level of production. During the recent period of low prices, many SOEs experienced costs greater than their revenue from the sale of coffee beans. The government has instructed the banks to carry the debts of these SOEs, effectively providing a subsidy on their operating losses, and removing some of the incentive for them to use active risk management policies. In the past, their storage and trading has also been somewhat decoupled from the financial consequences of inadequate risk management.

Risks to Small Traders

Traders have default risks from farmers and price risks from their markets. As elsewhere in the trade chain, default risk is a function of price risk, because its occurrence increases as prices rise. Traders have downside price risks during the period between the buying/collecting phase and selling it on to either larger intermediaries or exporters. They can partly manage this risk by doing all their contracting “back-to-back,” buying and selling simultaneously. They will experience some residual price risk as these are imperfectly matched.

Default risk can be a serious problem throughout the trade chain, particularly in times of rising prices, when sellers may find it preferable to sell in the spot market at higher prices than at previously agreed forward prices that were contracted when prices were lower. There are very few effective means of legal recourse in such cases. Default risk arises for small traders in Vietnam because of the tendency to give farmers advances based on current market prices, between 5 and 7 days prior to the delivery of the coffee, in order to help pay harvesting costs. If prices rise between the agreement to purchase and the transaction itself, the farmer may sell for cash to another trader.

Risk Management

Approaches for managing price risks can be many, but generally could include:

- On-farm diversification to include other products or efforts to differentiate their coffee (i.e., specialty or certified products).
- Off-farm diversification to non-farm enterprise or offering rural labor.
- Developing long-term contracts with buyers.
- Formal risk management mechanisms such as Options or Futures markets.
- Reducing price exposure by limiting costly external inputs (i.e., organic or avoiding credit).
- Financed inventories to extend the sales periods and allow greater flexibility.

Sometimes risks are traded off. For example, irrigation and input usage can lower yield volatility but may leave the producer more exposed to price risk due to their higher costs. Other techniques such as long-term contracts may simply be closed to smaller farmers because in the absence of information about the producer and his credit record, the buyers are unable to distinguish between those producers who will honor forward sales in the event of a price rise, and those that may default. Working credit bureaus can help reduce these risks, but are difficult to apply in the often informal credit environment of many rural areas.

Both formal and informal risk management practices are being used in Vietnam, but formal risk instruments, such as futures and options, are utilized almost exclusively by the international traders.²² Some use of risk management is in evidence by private traders working in the coffee areas, but this is primarily through price-to-be-fixed contracts where risk management is done by international buyers.

Informal risk management techniques have developed as producers have been forced by the severity of the downturn in prices to find other solutions. In particular, there has been some abandonment of monoculture and producers have begun planting food crops between coffee trees. Diversification as a risk management technique is discussed in the next section.

Constraints to the Use of Risk Management Instruments

A number of factors are limiting the access of local companies and producers to such instruments. These include policy and regulations, lack of familiarity with or even awareness of the instruments, and transaction costs.

Vietnam's current regulatory position on the use of risk management is best described as ad hoc because the State Bank of Vietnam does not have pre-defined rules. Instead, applications to use risk management instruments by Vietnamese corporations are being considered on a case-by-case basis. Few if any domestic coffee traders have permission to participate in these markets because the financial regulatory structure does not currently permit either the use of derivatives or give the foreign exchange rights needed to implement such a strategy. Recently, approvals have been given for the use of Over the Counter instruments for both commodity raw materials and for financial risks such as foreign exchange. This clearly indicates that there are a number of international financial institutions willing to participate in Vietnamese risk management.

The government has consistently supported parts of the coffee sector when prices have been low, with a variety of financial measures. These measures introduce moral hazards into the system by isolating managers from the consequences of business risks and probably crowds-out parts private sector insurance-based solutions.

Insurance and risk management are relatively new concepts in Vietnam, and some of the SOE are starting to make available other types of insurance, such as health and motor insurance. However, both SOEs and farmers have little understanding of how risk management instruments work, and how to integrate them into their business practices. This lack of both awareness and technical understanding affects other parts of the domestic trade chains as well.

²² Futures and options markets give traders a means to either fix the price for their product (using futures markets), or to guarantee a minimum sales (or maximum purchase) price for their products by paying a premium for an options contract.

There are currently no financial institutions in the coffee growing areas able to provide access to risk management instruments to farmers. This is a problem that occurs in most other countries as well. Part of the problem lies in the high transaction costs that would be incurred in dealing with large numbers of small customers. The alternative solution could be for farmers to combine their demand for such instruments into a larger block and place them in the market. This can be done through cooperatives, traders, or financial institutions, and the success of each will depend on the level of outreach that these can make available to farmers. In Vietnam, the nature of the trade chain makes this very difficult because with the exception of State-Owned Farms, there are very few organizations that have such direct working relations with groups of farmers.

DIVERSIFICATION AS RISK MANAGEMENT

Diversification is seen by farmers as a way of reducing their dependency on coffee and the associated income risk. There are many anecdotal signs of increased risk aversion among parts of the coffee trade chain after experiences of the period of low prices. Diversification out of coffee represents an acknowledgement that the coffee was planted in areas that are unsuitable either because of climate or soil conditions, or because of a lack of appropriate infrastructure.

At the macroeconomic level, the government of Vietnam wants to diversify not only its types of production to include more Arabica, but also wants to diversify its exports through various value adding initiatives like canned liquid coffee and more soluble coffee, and to explore diversification into niche markets like organic, eco-friendly, or specialty coffee for a small portion of their producers.

The official process of crop diversification involves a decision-making structure that includes MARD and the Peoples Committees and is supposed to incorporate financing from banks and technical services. This includes production plans that are drawn up for each province by the Peoples Committee in conjunction with MARD and NIAPP, that provide technical assessment of climate and soil conditions. These plans are then disseminated by the People Committee in each district through extension workers and the Vietnamese Farmers Union. Of course, many farmers autonomously choose to diversify without direct government support.

Diversification does have costs, and in each district, VBARD is asked to give preferential credit access to farmers who wish to follow the plans that are orchestrated by the People's Committee. This credit is sometimes partially underwritten by the Committee. Currently, bank lending to replace coffee with other crops is also restricted to those with formal land use certificates (Red Book) or for crops approved by the People's Committee Master Plan. Some Peoples Committees have reduced or eliminated land taxes in their areas during the initial transition periods. The costs of removing coffee trees, approximately 2000 dong (US\$0.15) each, must be paid by the farmer before the new crops are planted.

While this planned diversification can be a considerable aid to farmers, it has its own difficulties. Some report that the rationale of these plans is not always clear and that they are sometimes supply driven, such as for sugar and dairy production. In other cases, the results may be more crisis-oriented rather than long-term planning-driven.

The level of economic analysis of the consequences of decisions being made is unclear, both from the perspective of individual crops, and from the way crops are combined. The Peoples Committee in some regions also prefer to retain higher levels of autonomy from the central

planners and make their own decisions. There are also reported differences between provinces in the degree to which they want to either impose a plan or give greater autonomy to the farmers.

Diversification Options

A limited number of farmers are switching to higher value Arabica coffees, particularly where micro-climatic and soil conditions are appropriate. More commonly, they plant additional crops on their land. Where trees are young, or older trees have been stumped, intercropping commonly occurs. In other cases, especially where coffee productivity is low, some farmers are choosing to diversify to completely new crops. One SOE has chosen to uproot ten percent of its land or two hundred hectares and replant with maize.

Among the main long-term diversification options, rubber, cashews, and pepper are being promoted in the Central Highlands by the Dak Lak Peoples Committee. Pepper has proved interesting to those seeking purely to reduce their dependency on coffee rather than as a replacement because the soil and rainfall conditions for pepper are regarded by NIAPP as being similar as those for coffee. Cashews and rubber have been seen as outright alternatives to coffee. Cashews, in particular, can be grown in poorer quality soils and without irrigation, making it especially suitable as a replacement crop for those growing coffee in marginal areas.

In some cases, short terms solutions are being sought and the Peoples Committees are favoring food crops such as cassava and corn, and also cotton. These are particularly favored solutions for those who chose to totally stump older trees because these crops can act as an income replacement for the 3 year period before the coffee trees become productive again.

In some areas, cocoa is also being considered, although the better areas for cocoa are not necessarily the same as the marginal areas of coffee. Dak Lak province has targeted 10,000 hectares for cocoa production. Some of the cocoa development in Vietnam is being supported and funded by the American Cocoa Research Institute.

Other popular diversification options such as aquaculture and dairy farming require considerable capital and expertise. With commercial aquaculture, possibilities may be close to saturation; while dairy is getting a big push from government at both the provincial and national levels. This production could possibly substitute the large quantities of milk powder that are currently imported. However, there are reports of poorly planned projects such as milking cows in the less than ideal climate of the Mekong delta and concerns about the potential for overall overproduction given that fresh dairy markets are still limited.

It may not be clear to farmers how to choose the most appropriate crops. They have traditionally looked toward official guidance but can no longer count on this from extension agents or government offices. Many are entrepreneurial and seek other sources of information, but others find their new market economies difficult to cope with.

Diversification: Issues of Post Harvest Processing and Marketing

Two sets of problems are emerging with post-harvest processing and marketing. First, in common with the expansion of coffee, the production of some crops is expanding faster than the ability to process it. In the case of cashews, for example, there are reports of poor quality that is unsuitable for export. Second, with the exception of the crops being promoted by the People's Committee, there is little information available to farmers about the availability of a processing or marketing chain. In addition, there does not appear to be an information process through

which farmers interested in a crop can coordinate with other farmers to get production to a level of critical mass at which a processing chain or marketing economies of scale could emerge.

5. The Social and Environmental Aspects of Coffee

SOCIAL ASPECTS OF COFFEE PRODUCTION

SOEs in Vietnam usually offer both productive and social programs, including healthcare services and education. But the reduction of coffee income in the last few years has forced coffee SOEs involved to cut back on these services and to transfer responsibility for them to government authorities.

The large-scale government planned migration toward coffee growing areas of the 1980s continued beyond the start of the Doi Moi period. This particularly affected a number of ethnic minorities many of whom populate the higher altitudes toward Vietnam's borders with Cambodia, Laos, and China. Spontaneous ethnic migration into the Central Highlands region, primarily from the east and far north, soon exceeded plans, and was already quite substantial by 1991. In many cases, both private farmers and emerging state-owned enterprises took over communal lands of the ethnic minorities. Many of these new farmers followed the lead of earlier émigrés and took to coffee. The land disputes that emerged from these changes even led to some tension between the ethnic minorities and the ethnic Vietnamese in some coffee-growing areas. Moreover, government programs “to completely stop nomadic lifestyles and swidden agriculture by the end of the decade”²³ and attempts to “settle” all nomadic tribes continue to be implemented by the Commission for Ethnic Minorities. Until 2003, the Ministry of Agriculture and Rural Development carried out this mandate.

During the 1990s, the socioeconomic conditions of many farmers in Vietnam improved significantly. Real rural per capita consumption expenditures increased by 47 percent between 1993 and 2002, and the rate of poor households (nation-wide) dropped from 58 percent in 1993 to 29 percent in 2002. Rural poverty rates dropped from 66 percent to 36 percent over the same period. (GSO, 2000; World Bank and others, 2003; GSO, 2004) These poverty rates are based on poverty lines calculated on a constant set of basic food and non-food needs defined by the GSO and the World Bank. The average value of this ‘goods basket’ in 2002 was VND 1,916,000 per person per year or VND 5300 (US\$0.30) per person per day. After more than a decade of strong rural growth and declining poverty rates, the recent price drops in several agricultural commodity markets have put pressure on Vietnamese rural incomes, particularly in areas where monoculture is common.

According the 2001 agricultural census (GSO, 2003b) there are 561,000 coffee growing households in Vietnam. The 2002 Vietnam Household Living Standard Survey (VHLSS) data show that about 46 percent of these coffee farmers are poor, defined as having per capita expenditure levels below the poverty line mentioned above. About a quarter are extremely poor and living below the basic food poverty line of VND 3790 (US\$0.24) per person per day. Thirty percent of all coffee growers in Vietnam belong to an ethnic minority, which accounts for more than half of the nation's poor coffee growers. About three quarters of ethnic minority coffee

²³ In March 2003 at: <http://www.agroviet.gov.vn/en/default.asp>

growers are poor. Coffee production is part of the livelihood of many poor people and many have suffered severe setbacks in the past few years.

In 2002, coffee was grown by 3.4 percent of Vietnamese households but cultivation tends to be somewhat more common among the poorest groups of the population than for the better-off. According to the VHLSS data (2002) about five percent of the poorest fifth of the rural population is involved in growing coffee as compared to about two percent of the richest quintile.

Coffee production in Vietnam is largely concentrated in the four provinces—Dak Lak, Gia Lai, Kun Tum and Lam Dong—that together form the Central Highlands. According to the 2001 Agricultural Census (GSO 2003b), 79 percent of all coffee farmers live in the Central Highlands.

The recent Vietnam poverty assessment conducted by the World Bank and other donors and NGOs (2003) showed that this region is one of the poorest regions of Vietnam. Only the North West region is poorer. The findings showed that poverty in the Central Highlands, using the GSO definition mentioned above, came down fairly rapid in the mid 1990s, improving from 70 percent in 1993 to 52 percent in 1998. However, there was almost no improvement over the four years that followed. In these same four years, elsewhere in Vietnam the percentage of people living in poverty was declining from an average of 37 percent in 1998 to 29 percent in 2002. In 2002, more than half the population in the Central Highlands region was still living in poverty, which is almost double the proportion of Vietnam as a whole. Thirty percent had expenditures below the food poverty line, which is almost three times higher than for all of Vietnam (see table 5.1). And poverty is also deeper: on average, the expenditures of the poor were almost 17 percent below the poverty line, which is more than double the figure for the nation as a whole (World Bank and others, 2003). The Central Highlands includes a number of pockets of high poverty, but also includes communes with much lower poverty levels.

Table 5.1 Poverty trends in the Central Highlands (% of total population)

	<i>1993</i>	<i>1998</i>	<i>2002</i>
General Poverty			
All Vietnam	58.1	37.4	28.9
Central Highlands	70.0	52.4	51.8
Food Poverty			
All Vietnam	24.9	15.0	10.9
Central Highlands	32.0	31.5	29.5
Poverty Gap			
All Vietnam	18.5	9.5	6.9
Central Highlands	26.3	19.1	16.7

Note: Poverty gaps reflect the average distance between the expenditures of the poor and the poverty line, in percentage of the latter. Source: GSO (2003a).

Poverty has a strong ethnic dimension in this region, which accounts for almost a fifth of Vietnam's ethnic minority population. Four fifths of all ethnic minority people in the Central Highlands—which includes groups such as the Gia Rai, E-de, M'ngong and Ba-na—live in poverty, and this percentage has actually not changed since 1998. Other social indicators are a source of concern too. Enrollment rates at all levels of education are below the average for rural areas nationwide. In 2002, net primary school enrollment rates were 89 percent for rural Vietnam as a whole, 86 percent in the Central Highlands, and only 74 percent for its ethnic minorities. For

secondary schools, these figures show even greater disparity, with enrollment rates of 70 percent for all of rural Vietnam, 61 percent for the Central Highlands, and only 36 percent for the ethnic minorities that live there.

Child nutrition and reproductive health indicators also lag behind national averages. Table 5.2 shows that 40 percent of women in the Central Highlands gave birth at home with no qualified assistance. Although this is not reported in the table, disaggregating the findings by ethnicity indicates that three quarters of the ethnic minority women in the Central Coast and Central Highlands delivered their children at home without medical help, compared to only 17 percent at the national level. This data provides a good example of general levels of isolation from public services and possible cultural marginalization that many people in the Central Highlands face.

Table 5.2 Social health indicators for the Central Highlands in 2002

<i>Ethnicity</i>	<i>Boys</i>	<i>Girls</i>	<i>Urban</i>	<i>Rural</i>	<i>Total</i>	<i>1998</i>
Proportion of children under 5 who are wasted (low weight for age)						
All groups	25.1	26.3	14.8	28.4	25.7	35.6
Central Coast and Central Highlands ethnic minority	45.5	45.1	33.8	46.7	45.3	
Proportion who gave birth at home with no assistance from qualified health workers						
<i>Region</i>	<i>Rural</i>	<i>Urban</i>	<i>Total</i>	<i>1997</i>		
All Vietnam	20.2	3.0	16.6	23		
Central Highlands			40.3	36		

Source: Figures for 2002 are from the Vietnam National Health Survey (preliminary results); figures for 1998 are from the 1998 Vietnam Living Standard Survey; figures for 1997 are from National Committee for Population and Family Planning (1999).

The Participatory Poverty Assessment (PPA) discussions in Dak Lak, which were conducted by ActionAid and the ADB (2004) as part of the 2003 Vietnam Poverty Assessment supported by donors, NGOs, and the government, confirmed the recent lack of progress in poverty reduction and provided insight into some of the underlying causes. Many poor discussants mentioned that poverty levels had remained unchanged in the past five years, or had worsened. All rural informants agreed that inequality within their rural areas had increased in the past five years. This is in fact confirmed from the VHLSS 2002 data. With a Gini coefficient of 0.36, the Central Highlands is the most unequal of Vietnam's eight regions, after the South East (GSO, 2003a).

While recognizing the benefits obtained from improved infrastructure such as roads, schools and electricity, the discussants mentioned that the most important reasons they are unable to move out of poverty relate to lack of assets. These include lack of secure arable land, lack of access to capital, and also lower levels of education and health. Ethnic minority villagers also relate inequality to poor governance in their areas, such as lack of transparency in the state commune budgets and lack of opportunity to participate in planning and decision-making at the commune administrative level or at local schools (ActionAid/ ADB, 2003).

Social characteristics of coffee growers in the Central Highlands

About 45 percent of all rural households in the Central Highlands are involved in coffee growing. The proportion of households involved in cultivating coffee is somewhat higher for richer expenditure quintiles compared to the poorest quintile, but is still fairly common among the poorest, with 38 percent of them planting at least some coffee (see table 5.3). This differs

with the national picture presented in table 5.1, which shows coffee production is slightly more common among the poor than among the rich.

Of all coffee growers in the Central Highlands, 54 percent are poor and 29 percent are also hungry (extremely poor). Ethnic minorities form about 34 percent of all coffee growers in the Central Highlands, but they form half of all poor coffee growers and two thirds of the extremely poor coffee growers.

Coffee is commonly grown on perennial cropland, of which the poor have much less than the better-off. On average the poorest fifth (quintile) has about 0.4 ha of perennial cropland, compared to about 1.3 ha for the near richest and about 1 ha for the richest quintile (see table 5.3).

Table 5.3 Coffee production characteristics of Central Highlands rural households (by expenditure quintile)

<i>Household Category</i>	<i>Poorest</i>	<i>Near Poorest</i>	<i>Mid</i>	<i>Near Richest</i>	<i>Richest</i>	<i>All</i>
Average holding of perennial cropland (ha per household)*	0.42	0.72	0.79	1.3	0.99	0.67
Households growing coffee (%)	38	48	49	62	49	45
Average number of trees per household (for households growing coffee)	6253	9186	8884	13286	9403	8709
Net income from coffee (in percent of total household consumption expenditure for <i>all rural households</i>)	33	51	46	70	43	43
Net income from coffee (in percent of total household consumption expenditure for <i>households growing coffee</i>)	68	93	73	97	68	79

Source: Based on VHLSS 2002 GSO (2003a); * excluding the 4 percent of rural households without land

The number of trees planted is also lower for the poor, according to data of the 2002 VHLSS. Coffee farmers in the poorest population quintile have, on average, about 6,250 trees. Those in the second-richest quintile have more than double this number. Discussions conducted with poor communities as part of a study on coffee in Dak Lak Province by ICARD and Oxfam GB/HK (2002) revealed that many of the poorest ethnic minority households, even if they grow coffee, often have land of below-average quality and cannot afford the inputs needed (fertilizer, water pumps) to make their coffee trees highly productive. Thus, because of the sometimes low productivity of their coffee land and because they have smaller coffee-growing areas, the poor tend to rely somewhat less on coffee for their livelihood than the better off. Net income from coffee sales, as a proportion of total household expenditures, varies between 68 percent for those in the lowest quintile to 93 percent of total household expenditures for the second-poorest quintile and similarly high numbers for the near-richest quintile (see table 5.3).

In the four Central Highlands' provinces, coffee farms tend to be small with more than two thirds of coffee production areas being smaller than one ha (see table 5.4). Less than three percent are larger than three ha.

Table 5.4 Size distribution of household coffee production areas in Central Highlands

	<i>< 0.2 ha</i>	<i>0.2-0.5 ha</i>	<i>0.5-1 ha</i>	<i>1-2 ha</i>	<i>2-3 ha</i>	<i>3+ ha</i>
All Central Highlands	10.6	26.1	30.9	24.1	5.7	2.7
Kon Tum	26.1	25.7	21.8	18.9	4.8	2.7
Dak Lak	8.6	25.1	32.2	25.4	6.0	2.7
Gia Lai	14.4	28.8	27.8	21.7	4.9	2.5
Lam Dong	9.7	26.6	31.5	23.5	5.8	3.1

Source: Agricultural Census of 2001 (GSO, 2003b)

However, to understand a coffee-farmer typology, it will be important to make a distinction between favorable and less favorable coffee growing areas, in addition to the poor/better-off distinction of households. Instead we need to. Favorable coffee growing areas have witnessed a large number of households specializing in coffee production over the past years, with a substantial portion of their income coming from coffee. The ICARD/Oxfam study (2002) shows that the proportion of households specializing in coffee appears to be higher for the medium to rich group (with 65-83 percent of their total income coming from coffee) compared to the poor and very poor groups, with 45-71 percent (see table 5.5). The latter range is compatible with the figure of 68 percent found in the earlier data above (see table 5.3). In favorable growing areas, the poorest groups in particular seem to grow little else aside from coffee. In terms of overall income dependency on this one crop, the better off appear to have a greater tolerance for such risks, while the poorer may depend more on income from their labor on other farms.

Table 5.5 Coffee farmer typology in Dak Lak Province

<i>Relative Ranking</i>	<i>Area Favorable for Coffee Growing</i>			<i>Area Less Favorable for Coffee Growing</i>		
	<i>Coffee income (as % of total income)</i>	<i>Typical coffee area (ha)</i>	<i>Other land (ha)</i>	<i>Coffee income as % of total income</i>	<i>Typical coffee area (ha)</i>	<i>Other land (ha)</i>
Rich-medium rich	65-83	1.8-1.9	0.4	9-31	0.7	0.6-1.0
Poor-very poor	45-71	1.2-1.7	0.1-0.4	13-18	0.4	0.2-0.4

Sources: ICARD/ Oxfam GB&HK (2002)

In the less favorable coffee-growing districts, farmers tend to have relatively more non-coffee income sources such as paddy, maize, beans, cotton, and cattle raising. Most of the poor farmers in these districts do not plant much coffee, or plant only small areas (less than 0.5 ha), and apply low levels of inputs. Thusly, they tend to not suffer as much from collapses in coffee pricing. Many of these were already marginalized at an earlier stage from mainstream development in the Central Highlands.

In Dak Lak, nearly all coffee-growing households sell their produce to local private middlemen. Access to market information, although widely available in the favorable coffee growing areas, is guarded by traders in poorer and remote areas. Producers in these areas seem to receive a relatively smaller proportion of the export price. Only 10-15 percent of coffee-growing households produce coffee under a contract with state, farm, or state-owned enterprises such as Vinacafe.

Winners and losers from the expansion of coffee production

The Central Highlands economy grew quickly in the 1990s, thanks largely to economic reforms and the rapid expansion of cash crop production, notably coffee. High coffee prices encouraged local farmers to expand coffee production and claim new land. This period also attracted large amounts of migrants, including ethnic minorities from elsewhere in the country, and the population of Dak Lak increased from 35,000 people in 1975 to more than two million in 2003. These settlers moved in to buy pieces of land, fell trees, and set up new coffee farms. During the PPA discussions in 2002, local villagers often mentioned that due to inadequate land zoning, the development of the coffee sector caused severe deforestation and natural resource degradation, negatively affecting those that depend most on these resources: the poor (ActionAid and the ADB, 2004).

The poor and indigenous inhabitants of the area have, in many cases, been unable to benefit from the fast development of the coffee sector as they usually lack the productive assets. They often have less and poorer quality land and have neither the technical information nor the financial capacity to undertake the needed investments. In fact, high land prices that resulted from the coffee boom were an incentive for many poor ethnic minority households to sell their land to wealthier migrants and move to start new farms deeper in the forested hills. These were usually less favorable areas with steep slopes, low fertility, and no irrigation.

Not surprisingly, these rapid changes in land ownership, which often took place in an environment of traditional customary land use regulations that emphasized community tenure arrangements, have led to many complaints on how land use rights were transferred when ethnic minority land was taken to allow new farmers and the plantation companies to get established. The Dak Lak PPA indicates there have been a number of land conflicts between indigenous groups and more recent migrants, and between migrants and the forestry enterprises (ActionAid and ADB, 2004). Land use rights of ethnic minority communities were never clearly formalized, partly because of the differing concept of ownership between government and some of the minorities. The government did not recognize customary land use that emphasized community ownership; this has changed with the new land law.

Farmers in favorable coffee growing zones appear to have the largest coffee growing areas, have specialized most in coffee production, and are most dependent on coffee for their income. They thus benefited most from the coffee boom. But they have seen their incomes fall sharply following the collapse in the price of coffee in 2001 and 2002. It is these areas that have witnessed the most serious reduction in income and drop in welfare. While both poor and better-off farmers have suffered, the poor seem to have found it most difficult to cope with this situation because they have little savings and assets to fall back on (see box 5.1).

Poor households that rely on coffee for a large part of their income cannot survive these price shocks without suffering severe consequences including having to sell their land and/or their livestock. In some areas, more than 60 percent of farmers are now heavily indebted. And these poor farmers are faced with growing food insecurity. When coffee prices were high, many of them moved away from producing their own food to focus instead on cultivating coffee and purchasing their food and other necessities from the coffee revenues obtained. With the sudden collapse in coffee prices, many poor farmers that specialized in coffee are now unable to buy sufficient food. Over time, this might lead to serious protein deficiencies for farm households'

members. In contrast, the better-off have enough extra to see them through the bad times or might find it easier to rollover bank debt (see box 5.2).

Box 5.1 Poor households who rely on coffee for most of their livelihood suffer most

Mr N, 45 years old, is the head of one of the poorest households in Ea Sut village in Cu Mgar district, Dak Lak Province. His family has 7 children who have all quit school. He has one hectare of coffee. Previously, when coffee prices were high, his family had a cassette player, enough rice for food and enough money to buy fertiliser and water for their coffee trees. But now his family has to eat cassava (though three times, he has received state support of rice, each time five kg/person). He has never borrowed money and knows nothing about loans. He has no intention of cutting down his coffee trees even though he has no more money to buy fertiliser (he is too poor, so agents do not allow him to buy it on credit). Along with his wife and two older children, he must now work as a hired laborer.

If coffee prices continue to drop in the coming years, Mr. N. may not be able to grow more coffee, as he will not have the money to irrigate or fertilize his coffee trees. This year, he intends to plant durian and sweet potato along with coffee. He wants to borrow money without paying interest for three years in order to have money to take care of his coffee. In addition, he wants to receive technical support.

Source: ICARD/ Oxfam GB/HK 2002

Many household members of poor coffee farmers have reverted to working as hired laborers on other people's coffee. But following the coffee crisis, the demand for hired labor on coffee farms has decreased. As a consequence, people have seen their wages reduced from VND 20.000/ day to VND 15.000/day.

Essentially, coffee production seems to work less well for the poor than it does for the better off. This problem is also related to the difficulties the poor have in interacting with markets in general, which is caused by their poor knowledge of the Vietnamese language, their low levels of education, and their physical isolation leading to a profound lack of information and understanding on how to deal with markets. Trading relations are not balanced with traders and buyers controlling most market information. The impacts of these conditions are exacerbated in an extremely volatile market such as coffee.

Box 5.2 The better-off with diversified income source are not very affected by low coffee prices

Mr. P. is the head of a rich household in Buon Nieng two village, Buon Don district, Dak Lak Province. He has four children, three of whom are pursuing their studies. He has 0.2 ha of garden land; 1.2 ha of coffee fields; 0.3 ha of other fields for planting cotton, green beans, and maize; and 0.1 ha of wetland paddy. He also raises two cattle and one pig.

In 2001, he earned VND three million from maize and beans. Since 2001, he has planted cotton on 0.3 ha and harvests from July to November. He signed a contract with a cotton company (the village head keeps the contract). For every 1 kg of seed he planted, he was provided by the company with two bags of fertiliser and one bottle of fungicide. In 2001, he harvested seven quintals of cotton, receiving VND 1.7 million.

His family has not cut down their coffee trees, but have reduced their investment in them. In this difficult period, he does not hire workers and does all the work by himself. He said, "lower coffee prices do not much affect my family's income."

Source: ICARD/ Oxfam 2002

For a number of years, the government has issued Land Use Rights Certificates (LURCs), locally referred to as Red Books, to households in upland areas. With the new Land Law of 2003, these LURCs can also be used to sell or transfer the land, use it as collateral for mortgage or credit, and pass it on as inheritance. Even those leasing from SOEs can, to some extent, pass on these rights.

Unequal access to Land, Coffee and Poverty Implications

The development of a pattern of unequal access to perennial cropland in the coffee areas gives rise to a concern of a poverty cycle that is linked to the coffee price, as employment and incomes rise and fall with the price of coffee. The government is reportedly considering transferring some SOE lands and some forestlands to the local households, but has not developed a solution to prevent this from becoming a cyclic problem wherein, for example, the land is soon re-sold especially as prices rise. Simple solutions such as blocking transfer rights to this land would mean that it could not then be used for collateral.

There are modest alternatives for such farmers, as noted above in the Credit chapter, but with the exception of the Vietnam Bank for Social Policy, the options are almost exclusively in the form of micro credit. Both the Woman's Unions and Youth Unions are useful vehicles for small-scale financial support although these too have been hard hit, especially in rural areas that are heavily dependent on one single crop.

As noted in the chapter on risk, for many farmers, diversification is a rational way to both reduce risk and improve overall income. This is, however, difficult for most farmers without adequate financing to weather the unproductive period of transition and the costs of switching. For farmers that are somehow organized or associated, the learning curve could be reduced and certain common costs, such as for marketing, could also be diminished. On-farm diversification, to more than one or two crops, can also have potentially positive environmental consequences.

COFFEE AND THE ENVIRONMENT

The coffee plant is naturally a forest denizen, thriving under the canopy of larger trees. Because of its compatibility with the natural environment, it is often recognized as one of the more environmentally friendly forms of agriculture. However, this is much less true of the Robusta varieties that are bred for copious yields to thrive under full sun exposure and intense fertilization regimes. Vietnam's production is almost exclusively oriented (95 percent) toward these Robusta varieties. Their cultivation favors dense monocropping and is similar to other forms of conventional modern agriculture and shares their intrinsic environmental issues. Issues such as forest destruction, soil erosion, fertilizer contamination of water resources, and depletion of deepwater reserves are already a concern for rural sustainability in some of Vietnam's major production areas. Today, 64 percent of agricultural land is irrigated and agriculture accounts for nearly 90 percent of Vietnam's water use. Given the expected expansion of cultivated lands, agricultural demand for water is expected to increase considerably.

In many cases, rather than replace existing agricultural land, forests were cleared for new coffee plantings. This repeated encroachment of the agricultural frontier is part of a dramatic 38 percent overall increase in cultivated land area between 1990 and 2000. The extent of land clearance gives rise to environmental problems and concerns about sustainability. Information collected during the Dak Lak PPA indicates that one million hectares of forestland has been converted to other uses (primarily coffee) since 1975. In Dac Lac province, the clear-cutting of forested land is still taking place, even in erosion-prone areas, and, according to local sources, there appears to be a very little government management of this situation. A joint MARD/Danida project has been launched to look at this, but, as yet, no substantive research has been done.

In increasing instances, coffee cherries are processed by a washing method, where there is a tendency to dump considerable quantities of toxic effluent into the surface water. The

environmental effect of wastewater from wet processing in a smallholder environment is normally moderate because waste discharges are low and spread over larger areas. For example, assuming a production of 30 tons of cherry/year/farmer (15 tons x 2 ha x 10 cubic meters water/ton cherry) equals 300 cubic meters waste water per year. With 50 percent of the total crop processed in the peak month, discharge is 150 cubic meters, which can be stored in a 75 square meter holding lagoon (two m deep) for one month to significantly reduce pollutants levels. However, few farmers do this and there is relatively little incentive to reduce water usage or discharge of waste water directly into rivers and other waterways.

The situation is much graver with a factory, where at peak times, 100 tons of cherry are processed. Most processors—with a few notable exceptions—do not use ecologically-sound water treatment methods. These would require very large holding basins that are expensive to build and maintain. Most have inadequate wastewater treatment systems. The factories set up in and around coffee plantations have a greater incentive to reduce both water consumption and pollution because their environmental impacts are more locally felt.

The only practical solution for most processing plants is to reduce their water consumption per ton of cherry and thereby diminish the need to invest in treatment facilities. Water recycling is also important. Another promising approach is to speed up biological breakdown of the coffee waste in order to reduce holding time and thereby also reduce the infrastructure needs. By using low tech biogas technology to speed up biological breakdown, some innovators are able to keep these toxic storage ponds relatively small.

Despite the fact that much of the Arabica is closer to a semi-washed or pulped natural in style water usage is extraordinarily high (see table 5.6).

Table 5.6 Comparison of water use in Vietnamese processing

Water Used to Process Vietnam’s Semi Washed vs. Other Washed Coffee	
(Cubic Meters per ton raw)	
Kenya (fully washed)	4-6
Colombia (range from environmentally friendly to conventional)	1-6
Papua New Guinea (fully washed)	4-8
Vietnam (semi-washed)	4-15

Source: Von Enden 2003

There is apparently little attempt to balance the differing needs of groups at different points along water channels. As water is being appropriated higher up the rivers, less is available downstream, and water quality can suffer. A potentially far more serious impact is on the level of the underground water table. In the dry season, this is fast becoming more of a problem, as the quantities of water being taken continually increase and subsequently require deeper wells. The February 2004 mission found examples of wells that were productive two years earlier, but that are now quite dry. Although the loss of such public goods is a very costly, government has failed to foster equitable or market mechanisms to value this resource. Its mismanagement results in higher irrigation costs for some farmers and potential loss of livelihood should the situation worsen.

Although Vietnam’s pesticide use has increased by about 200 percent in the last decade and contributes to water pollution (Vietnam Development Report 2002), coffee uses relatively little.

Coffee does, however, use considerable amounts of synthetic chemical fertilizer. The overall use of chemical fertilizer has more than doubled during the 1990s as coffee grew exponentially.

While there are some farmers that pursue eco-friendly production approaches—including a partnership supported by a European roaster and GTZ—there are very few efforts to certify these types of cultivation and processing methods. Recent roaster interest has induced some broader scale certification. At least one producer in Lam Dong is certified as organic and exports a few containers annually with a considerable premium to Japan. There are, otherwise, very few other independently certified coffees for organic, fair trade, or eco-friendly production methods.

6. Key Recommendations and Conclusions

To take advantage of coffee's significant potential for enhancing rural well-being and improving exports, Vietnam must realistically assess its comparative advantages and disadvantages in light of reduced government intervention and its increasing integration into the global trade arena. Its future competitiveness will depend on an understanding of these new trade dynamics and on preparing itself with well-functioning institutions that are both transparent and agile.

Vietnam is an economy in transition and the coffee sector is representative of the new directions and the new challenges that face it. Although coffee is one of the agricultural commodities most linked to global markets, its lessons may well apply to other agricultural sectors—even domestically oriented ones. Today, even though the private sector has an increasingly important role, the coffee sector's fortunes still pivot around the state. This dependence is especially notable for the poorer farmers, who, —in the absence of a working institutional framework—are at risk of losing vital support systems as the state transitions.

ROLE OF THE PUBLIC SECTOR

Policy Issues

The unbridled push to increase agricultural productivity and production has had outcomes that are positive and some that are difficult. As the Government's Comprehensive Vietnam Poverty Reduction and Growth Strategy Paper (CPRGS) notes, "Reforms in agriculture and rural areas helped to increase rapidly agricultural output. Per capita food production was boosted from 303 kg in 1990 to 444 kg in 2000." In the case of increased coffee output, however, the picture has not been necessarily positive. While Vietnam may or may not have historically determined that the short-term pain of such an expansion might be worth the long term gain in international market share, such expansion has imposed extensive costs that have been to the detriment of Vietnam's own farmers, its financial institutions, and the government, as well as to most other coffee producing countries.

There is a concern that policy and other incentives to stimulate production may not have adequately taken into account the market forces for individual agricultural products. It is now better understood that the nature of commodity markets make it difficult for producers to determine whether a price shock is temporary, or is evidence of a more permanent paradigm shift (Lewin, Giovannucci, and Varangis 2004). When governments make the wrong assumptions, they can waste precious resources, supporting parts of the coffee sector that are not competitive. Government, therefore, has a clear role to play in improving the flow and analysis of international production and trade data, as well as facilitating closer linkages to the international institutions that are most familiar with the field.

There is evidence that such market lessons may not have been applied to other products whose recent rapid expansion has also resulted in a reduction in prices. Pepper, cashew, shrimp, and fish are among the fast-growing commodities for which this issue has already proved to be costly and disadvantageous—particularly to domestic producers. As government moves toward a

greater market orientation, improving its analytical capacity and mid to long-term strategy development will be indispensable.

Rather than taking all the responsibility for making such decisions, the government's best role should be to facilitate the capacity for such decision-making and strategic action among the private sector. It can do this in part by fostering farmer and trade associations. Government can also help improve the accuracy and timeliness of trade and market information that is vital for the sector to adequately respond to market signals and trends. This can be done with improved international linkages and more efficient internal data collection and dissemination processes. The private sector's ability to respond is a prime determinant not only in its competitiveness, but also in its ability to avoid crises by adapting its production and tactics.

Institutions

In line with the CPRGS's recommendations to: "ensure equal and non-discriminatory access for all types of enterprises to capital, credit, land, new technology, and information," it is essential for government to actively foster the development of new institutions—particularly civil ones—to fulfill these vital needs.

The fact that many coffee traders and exporters claim to not rely on coffee related data from the government and related institutions, asserting that it is politically manipulated, is evidence of institutional gaps. Such difficulties have contributed to some loss of credibility among those institutions entrusted to provide this information. Consequently, the private sector is forced to conduct its own research, and this, of course, puts smaller operators at a disadvantage—particularly domestic ones who cannot afford these costs. Although improving, the private sector often claims that such information is still closely guarded, and institutions like the GSO and Vicofa must strive for increased openness, better dissemination, and a service orientation, as well as improvement in their data collection and their analytical capabilities.

Historically, technical training in coffee production happened through government, extension services, and SOEs. Now, with ever more private farmers, these delivery mechanisms have a much more limited influence. Maintaining effective extension services—perhaps integrating a public private model like Indonesia's—will be important for the dissemination of technology and information that is necessary, not only for long-term competitiveness, but also for the viability of smaller farmers for whom the services are often a primary source of information. Currently, with few exceptions, there is little professional training and education in coffee (cultivation, processing, and commercialization). Decentralized investment in professional education for coffee, similar to the Brazil model, would help create a more professional sector and serve to generally improve its competitiveness. The on-farm research model that has been well developed by Colombia's Cenicafe would serve Vietnam's farmers well.

In order to maintain farmer income and also meet basic quality requirements, there are significant opportunities at the harvest and post-harvest stages. The single most important aspect of this is adequate drying infrastructure, and many farmers suffer from insufficient drying capacity. This shortcoming is further exacerbated by limited or costly access to mechanical drying facilities. Investing in this infrastructure and improving farmers' understanding of the necessary drying procedures can be a relatively low-cost investment, with considerable yields in terms of improved production standards.

Competitiveness

Much, though not all, of Vietnam's gains in market share has been the result of gains against less competitive origins (i.e., Africa and some Asian neighbors). Increased competition will mean that Vietnamese coffees will probably need to seek new markets and market channels as well as contest existing ones. A sole reliance on being the lowest cost provider of bulk product with little added value leaves the country's coffee open to being replaced by others as currencies and other competitive factors change. The Vietnamese coffee industry also still faces significant obstacles to develop a reputation as a provider of consistent quality, container after container, with minimal variation and without its too frequent contractual defaults.

Three key factors: lack of added value, consistency, and trust are areas in which Brazil, its major competitor, already does well. In order to be a competitive market in the future, Vietnam must foster an environment that is conducive to private sector development and it must address its standards (see below).

Transition to Private Sector Development and the Role of SOEs

Vietnamese farmers have benefited from a unique competitive landscape in which they can earn as much as—and sometimes even more than—the export price. It is likely that the farmers' current extraordinary share of the export price will erode as the state recedes from active market participation and intervention. This is a source of rather considerable concern, and should be a primary focus of policy considerations. As SOEs are equitized, the farmers' share of the FOB price will increasingly depend on the level of competition for the coffee.

Development of the private sector depends partly on ensuring that there is a “level playing field” for the private sector and engendering the need for policy decisions on the respective roles of the private and public sector. In light of government intentions to retain significant ownership of SOEs, it may indicate that government wants to be in business while also regulating business. Other factors, such as maintaining competitive purchasing in rural areas, may mitigate these choices, but it remains important to carefully consider the form of planned equitization. In accordance with the World Bank's rural strategy and the view of the consulting team helping to restructure Vinacafe, the creation of even stronger integrated business entities may well give rise to uncertainty over policy that imposes additional costs on the private sector, or crowds out private sector development.

Minimizing transaction costs is a good way of ensuring a competitive private sector and greater scope for high levels of farmer remuneration. Inadequate regulations or unenforceable contracts are a common complaint of coffee traders. This leads them to develop informal and sometimes costly institutional arrangements in their place.

There are some costs as well as benefits inherent in the state's measured pace of reform and SOE transformation. The danger of lengthy transition is that the state continues to impede the development of private services and institutions. While some government institutions may be unwieldy and unresponsive to the needs of their constituents, some—such as the financial institutions—also appear to be reducing, at least for the short-term, the difficulties of transition that, if not properly orchestrated, can leave a dangerous vacuum where the poorest are likely to suffer most. It will, therefore, be increasingly important to invest in the institutions and infrastructure that will help farmers develop their business and retain their necessary share of the export price.

Standards of Quality and Consistency

In the February 2003 issue of *Vietnam Economic Times*, the former Vice Minister of MARD, Cao Duc Phat, commented that to improve its competitive position, Vietnam must move away from its traditional concentration on quantity rather than quality. The attempts to induce this shift have met with limited success and will likely prove to be difficult. Vietnam's dramatic coffee expansion in the 1990s occurred as a result of a strong response to the government's stimulus and the expansion of roasters' demands for low-cost (and relatively low quality) coffee. Both the domestic and global contexts have changed. The government's willingness to stimulate such a considerable shift today is clearly dampened by its better understanding of the substantial resources that this would require and by the increasing understanding of the market forces that drive this commodity and impact its farmers.

Today, many coffee producing nations are focusing on improved quality. Indeed, as the ICO and others have consistently maintained, poor quality coffee is less appealing to consumers and ultimately harms the entire industry. For many countries that lack a low-price advantage, quality and other forms of differentiation will be absolutely critical to their future success. While it is clear that for most countries, including Vietnam, a measure of quality improvement will be necessary to remain competitive, it is not clear that competing in the increasingly contested higher end of the quality market will be to Vietnam's advantage. It has invested heavily in the low-cost/high-volume model. In the ever more industrialized and homogenized commodity processes of 90 percent of today's coffee industry, once an acceptable baseline quality standard is met, consistency and price are the key drivers of competitiveness. Typically, coffee buyers establish that baseline quality through their purchasing choices. It is difficult to establish quality norms that are not supported by the industry. At the moment, the major coffee roasters clearly indicate that the existing price quality ratio suits them and whether this may be short sighted, as some industry pundits have expressed, remains to be seen.

Adding Value

Export Markets. There is considerable scope to further Vietnam's soluble manufacturing and distribution, especially because it can create both low-cost and customized blends (with its Arabica production). It will also require continued investments in the high-volume end of the business, such as infrastructure and processing equipment. New areas that are already being tested—such as ready-to-drink coffee beverages—merit being pursued further given the expected growth of such product categories. Exploring more sustainable cultivation practices and certifying these could be a strong point of differentiation in the future and would also provide necessary environmental benefits. In the long-term, as Vietnam improves its offerings and adds increasing value to its raw materials, it may eventually move into some of the differentiated market niches. In the near to mid-term, it appears wise to focus on strengthening its core business of basic quality production and improving its consistency and reputation.

Domestic markets. Most of Vietnam's 82 million people are familiar with coffee and a considerable number drink it. The popularity of cafes, not only in cities but also in rural towns, is a clear testament to the considerable potential of developing a domestic market. With per capita income reaching US\$2350 (measured in purchasing power parity) in 2003, buying power is robust. Germany, with the same population size, consumes more than a half million tons each year. A strong domestic market can offer farmers many new outlets and also help to somewhat buffer the sector from international volatility. Brazil has a well-documented recent history of

doing this and is now the world's second largest consumer. Its experiences and those of Colombia and Mexico, among others, can serve as useful lessons to guide a cohesive policy approach.

Managing Risks

After the difficult lessons of the recent coffee crisis, there has been a noticeable increase in risk aversion along the entire supply chain. These harsh lessons have been most painful for poorer farmers. However, in some cases, they may have served to rationalize certain aspects of the sector and bring it more into alignment with market realities. However, two aspects of the sector's future have not been well addressed: the environment and the social implications of sectoral change.

The availability and fair pricing of water will be important, not only for coffee, but also for many other agricultural crops. The operation of processing facilities without adequate incentives and enforcement of water recycling and contamination rules will be highly problematic for all water users because the uncontrolled effluent from these facilities can produce a surprisingly large and detrimental impact. The over-dependence of some regions on coffee as a monocrop have led to predictable but nonetheless dire consequences as a result of the recent fall in prices. Therefore, on-farm as well as off-farm diversification must be actively fostered with an appreciation of the natural resource implications. The primary coffee-producing region has consistently lagged far behind other rural areas in general measures of human development since the price crisis. This condition is magnified among the ethnic minorities. Since price troughs typically last longer than price peaks in commodities, and such cycles are inevitable, the social situation will only show temporary improvement if efforts to diversify the production options and to introduce both formal and informal risk management techniques are not a more important part of the government's strategic plans for these areas. Introducing modern financial risk management techniques will also serve to reduce the government's need to support the sector and enhance its ability to compete internationally.

Appendix: Chronology Of Recent Government Reforms Related To Agriculture

1998

Lowering the maximum import tariff to 50 percent (exceptions remain for six groups) and reducing the number of tariff-rates to 15;

Liberalizing trading rights of domestic firms by allowing them to export and import goods directly, without a license, though residual restrictions remain for importers;

Allowing private firms to import fertilizer;

1999

Allocating rice export quotas to non-state firms for the first time (by listing 5 private firms and 4 joint-ventures among the 47 authorized primary rice exporters Decision 273/1999/QD-TTg, December, 24, 1999) and allowing foreign firms to buy rice directly from farmers for export purposes;

Auctioning 20 percent of garment export quotas;

Encouraging trading activities by reducing the foreign exchange surrender requirement from 80 percent to 50 percent of foreign exchange earnings (Decision 180/1999/QD-NHNN1, August 30, 1999);

2000

Removing quantitative import restrictions on 8 out of remaining 19 groups of products, including fertilizer, liquid soda, ceramic goods, plastic packaging, DOP plasticizer, ceramic sanitary ware, electric fans, and bicycle (Decision 242/1999/QD-TTg, December 30, 1999, effective April 1, 2000);

Signing the bilateral trade agreement with the US in July, paving the way for MFN access of Vietnamese exports to the US market, gradual opening up of Vietnam's economy, for goods and services as well as investments;

Approving a roadmap for AFTA tariff reduction during 2001-2006 wherein most tariff lines will have their tariff reduced to 20 percent by early 2003 and to 5 percent by early 2006;

2001

Enhancing the scope for long-term planning among traders by drawing up export and import plans for the period 2001-2005, instead of the hitherto one year schemes (Decision 46/2001, April 4, 2001);

Removing QRs multilaterally on all tariff lines of the following groups of products: liquor, clinker, paper, floor tiles, construction glass, some types of steel, and vegetable oil. (Decision 46/2001 dated April 4, 2001);

Reducing the foreign exchange surrender requirement from 50 to 40 percent (Decision 61/2001/QD-TTg, April 25, 2001);

Abolishing the quota allocation for rice exports and fertilizer imports (Decision 46/2001/QD-TTg April 4, 2001);

Moving 713 tariff lines from the Temporary Exclusion List (TEL) to the Inclusion List (IL) (Decree 28/2001/ND-CP)

Permitting all legal entities (companies and individuals) to export most goods without having to acquire a special license by revising the implementing decree of the Trade law (Decree 44/2001/ND-CP, August 2, 2001);

Establishing an export support credit sourced from the State Development Assistance Fund, aiming to support enterprises, economic organizations, and individuals to promote exports (Decision 133/2001/QD-TTg, September 10, 2001);

Reducing the number of items that FIEs have to export from 24 to 14, including items such as tiles, ceramics, footwear, electric fans, plastic products, and common paints (Decision No. 718/2001/QD-BKH);

Permitting FIEs to engage in the exports of coffee, minerals, certain wood products, and certain textiles and garments (Circular 26/2001/TT-BTM, December 2001);

2002

Detailing a list of goods and tax rates for implementing the Agreement on the Common Effect Preferential Tariffs (CEPT) Scheme of ASEAN countries for the year 2002. Based on the schedule, 481 items were moved in to the Inclusion list with tariff lower than 20 percent. To date, there are 5,558 lines in the Inclusion List, 770 in the Temporary Exclusion List, 53 in the Sensitive Agricultural List, and 139 in the General Exclusion List (Decree 21/2002/ND-CP, February 2002);

A government negotiations team has started working sessions on WTO accession in Geneva (April 2002).

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