

Kenya Coffee: A Cluster Analysis

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Table of Contents

EXECUTIVE SUMMARY	2
HISTORY OF KENYA.....	2
OVERALL ECONOMIC PERFORMANCE OF KENYA.....	4
ASSESSMENT OF NATIONAL BUSINESS ENVIRONMENT	6
MACRO, POLITICAL, LEGAL, AND SOCIAL CONTEXT	6
REGIONAL CONTEXT	8
COMPOSITION OF ECONOMY	9
NATIONAL DIAMOND.....	11
WORLD COFFEE MARKET.....	12
KENYA COFFEE CLUSTER.....	15
HISTORY	15
INDUSTRY STRUCTURE	17
PERFORMANCE	18
CLUSTER ANALYSIS	19
IMPACT OF RECENT POLITICAL CRISIS.....	25
RECOMMENDATIONS	25
KEY PRINCIPLES	25
STAKEHOLDER ACTIONS.....	27
BIBLIOGRAPHY.....	31

Executive Summary

Kenya has experienced slow but steady growth since independence and has been more stable politically than many of its neighbors. However, Kenya's overall competitiveness has been on the decline. The government must address three critical issues in order to improve its development prospects. These include: corruption, political instability and aging transportation infrastructure.

The coffee cluster has been an important part of Kenya's economy since the early 1900s. However, its performance has been on the decline as shown by the drop in coffee exports, coffee quality and yields. Three focus areas emerge as key in the improvement of the competitiveness of the coffee cluster: (i) creating a differentiated strategy for Kenyan coffee; (ii) improving the functioning of the value chain; and (iii) addressing the disruptions created by liberalization. In addition to these specific recommendations, we identify actions the government, institutes for collaboration, coffee estates, cooperatives and smallholders can take to improve the business environment.

In spite of the fact that Kenya controls a very small and declining share of global coffee exports, we believe there is a market opportunity for Kenya to pursue a differentiated coffee strategy, given the country's natural endowments. To do this, the cluster must open itself up to increased competition and coordinate the efforts of well-developed but poorly linked players.

History of Kenya

Since independence from Great Britain in 1963, Kenya has had a somewhat checkered political and economic history. It has had three presidents: Jomo Kenyatta (1964-78), Daniel arap Moi (1978-2002), and Mwai Kibaki (2002-present). Immediately following independence, Jomo Kenyatta pursued an export-oriented growth strategy that included incentives for private industrial investment (including foreign investment). The coffee, tea and tourism industries boomed and the government made large investments in infrastructure and education. Kenyatta also supported a massive land redistribution of white settler land to Africans—first to a group of primarily Kikuyu elites and then to hundreds of

thousands of smallholders to help ensure continuing support for his government (Library of Congress, 2007). During this first decade of independence, Kenya's real GDP grew 7.9% on a compounded basis with only one year of economic decline in 1970 (WDI).

Vice President Daniel arap Moi succeeded Kenyatta after his death in 1978. Towards the end of Kenyatta's presidency, wealth had become increasingly concentrated in the hands of Kenyatta's family and the Kikuyu people. Moi promised to review land allocation policies, tackle corruption, limit foreign ownership of industry, and abolish primary school fees. However, the economy weakened, and Moi was unable to follow through on his early promises. As the economy faltered, political opposition grew until June 1982 when the constitution was amended to make Kenya a single-party state. In the same year, Moi withstood a coup attempt by the air force, which he subsequently dismantled. Throughout the 1980s, Moi consolidated power, tightening control over the civil service, and corruption continued to be rampant. Reports of human rights violations, including torture were common. (Barkan, 2004)

In response, international donors suspended aid to Kenya in 1991—the first of many such intermittent suspensions. Moi agreed to reinstate a multi-party system, but the 1992 and 1997 elections failed to dislodge him from power, amid rumors of widespread election irregularities. By 1993, Kenya suffered from high inflation and a public deficit of more than 10% of GDP (US State Department, 2008). These problems, and pressure from the World Bank, forced the government to begin to liberalize its economy, albeit sporadically. In 1994, the government removed controls on imports and foreign exchange. It also privatized a range of state owned companies, reduced the number of civil servants, and introduced more conservative fiscal and monetary policies. In 1995, foreigners were allowed to invest in the Nairobi Stock Exchange.

In 1997, Kenya failed to meet its commitments to the IMF on governance reforms. The IMF subsequently suspended lending for three years and put a \$90 million structural adjustment credit on hold. Kenya responded by establishing the Anti-Corruption Authority (ACA) in 1999 along with other

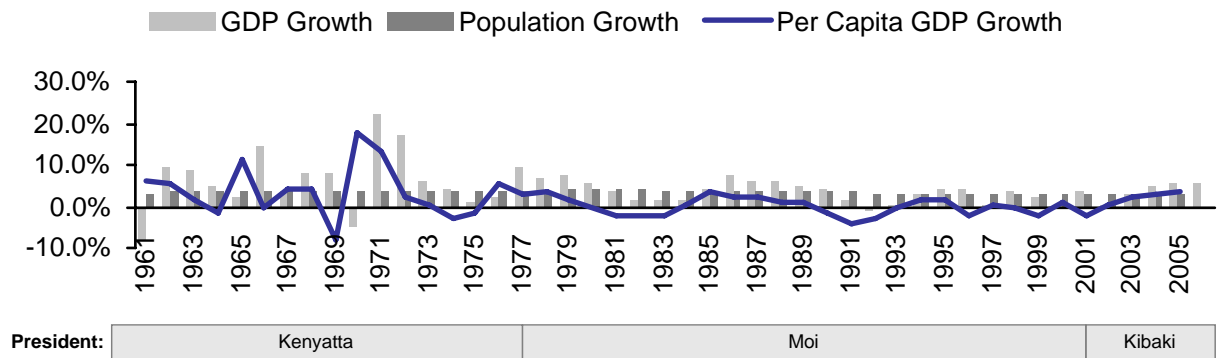
measures to improve transparency. In 2000, the IMF committed to a \$150 million Poverty Reduction and Growth Facility and the World Bank to a \$157 million Economic and Public Sector Reform credit. However, after the ACA was declared unconstitutional in December 2000, the IMF and World Bank again suspended their programs.

In 2002, multiparty elections were held and Mwai Kibaki, the leader of the opposition coalition, won a decisive victory over Moi's chosen candidate Uhuru Kenyatta, Jomo Kenyatta's son. Kibaki spearheaded a number of progressive policies including: introducing universal free primary education, implementing anticorruption measures, and launching efforts to clean up the judiciary. International donors responded positively by resuming aid. However, the implementation of these policies has been weak and with no legal action against Moi or his associates, the anti-corruption efforts have not been credible.

Overall Economic Performance of Kenya

Since independence, Kenya's economy has grown slowly but steadily at 4.6% compounded annually—slightly more than population growth (3.2% CAGR). Kenya's per capita GDP is still very low at \$602.85 or just \$1.65 per day (WDI, 2006). Poverty is a growing problem in Kenya with the number of Kenyans classified as poor increasing from 29% of the population in the 1970s to 57% in 2000 (Library of Congress, 2007). While Kenya experienced some early growth as a result of its export-orientation, it was also subject to international commodity price volatility. Growth slowed in the 1980s and 1990s due to poor macroeconomic management, mismanaged implementation of economic liberalization policies, and increased corruption and cronyism.

Exhibit 1: Kenya's annual growth over time



Source: WDI (1960-2006).

Inequality is a significant problem in Kenya, as it is in neighboring countries. Kenya's GINI coefficient was 42.5 in 1997, while Rwanda's was 46.8 in 2000 and Uganda's was 45.7 in 2002 (WDI). The richest 10% of households control more than 42% of Kenya's income, while the poorest 10% control less than 1% (UNDP, 2006). A major driver of inequality is the high unemployment rate of 40% (CIA, 2000). Furthermore, inequality is particularly evident across cities and provinces. The life expectancy of a person born in Meru is double that in Mombasa at 68.6 and 33.1 years respectively. About 93% of women in North Eastern Province have no education at all, compared to 3% in Central Province. Even within Nairobi, inequality is high with 60% of residents living in slums (UNDP, 2006). Large and growing inequality makes it increasingly difficult for Kenya to manage its economic and political stability. Deep poverty and perceptions of unjust resource distributions leave Kenya even more vulnerable to political instability.

Kenya has a significant patenting advantage in the region. Between 2002 and 2006, Kenya received 24 patents, compared to Ethiopia's 0, Tanzania's 1, and Uganda's 1 (US Patent and Trademark Office, 2006).

Assessment of National Business Environment

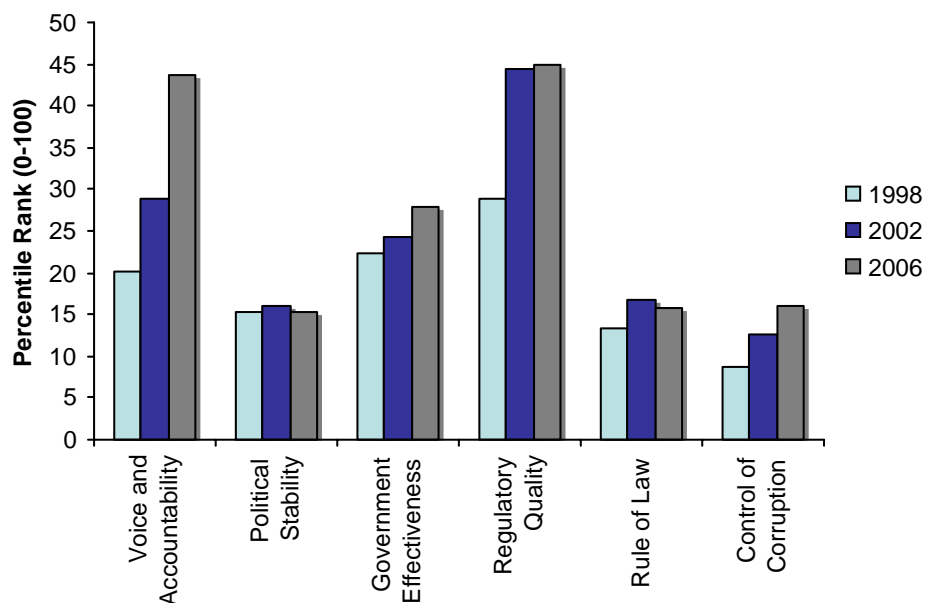
Macro, Political, Legal, and Social Context

Political instability in the country is common but not usually severe and, until the recent political crisis, Kenya was known for its relative stability in the region. However, the violence that erupted after Kenya's contested Presidential elections in December 2007, did some damage to the country's reputation. In January and February 2008, supporters of Kibaki and opposition leader Raila Odinga, who are split along tribal lines, took to the streets; 1,200 people were killed and more than 300,000 were displaced (Ottawa Citizen, 2008). The majority of violence came to an end on February 28, 2008 when the two factions agreed to a power sharing agreement after intense international pressure and mediation by former UN Secretary General Kofi Annan. Kibaki named Odinga as Kenya's new prime minister and announced a new 41-member cabinet with representation from both parties. Since then, the parties have been working to finalize the agreement.

The political instability has had a significant negative impact on Kenya's economy. Tourism, one of Kenya's largest industries, fell by 90% in February 2008 due to post-election violence (Reuters, Jan 2008). Given that tourism represents 10.8% of GDP and 8.7% of employment, a 90% decline could do serious damage to the country's economic health (World Travel & Tourism Council, 2008). Moreover, the chairman of the Kenyan Manufacturers Association stated on January 30, 2008 that GDP could fall by 260 billion shillings (\$3.5 billion) or more than 3% this year if post-election violence continues. Other negative effects of the crisis include damage to the railway network, roadblocks that stalled the movement of goods throughout the region, and a general loss of investor confidence in Kenya.

Corruption pervades the Kenyan economy, and hurts the overall business environment. Kenya is ranked 150th out of 179 countries in the Corruption Perceptions Index (Transparency International, 2007). Several attempts to curb corruption have not borne significant fruit, due to the endemic nature of the problem at all government and social levels.

Exhibit 2: Kenyan Political and Governance Rankings



Source: World Bank Governance Indicators

Kenya's legal system is weak and is ranked 107th out of 178 countries, by the World Bank's Doing Business survey, in its capacity to enforce contracts (World Bank, 2008). The current Constitution has also been under review since 1997 with land reform and power distribution between various branches of government at the center of reform efforts. The recent National Accord and Reconciliation Act, arguably the most significant amendment to the Constitution, was enacted in March 2008 for the creation of the Prime Minister post to share executive power with the President and build more checks and balances into the system. Voice and accountability and government effectiveness has improved from 1998 to 2006 (World Bank, 2008).

Like many of its neighbors, Kenya's social context is extremely troubled by its public health crisis. In 1999, the HIV/AIDS pandemic was declared a natural disaster. Life expectancy at 52.1 years is above the sub-Saharan African average, but is declining due to HIV/AIDS (WDI). In addition, Kenya is ranked 148th out of 177 countries in the Human Development Index (UN, 2006). On the education

front, however, improvements have been made. In 2003, free primary education was introduced leading to a sharp rise in primary school enrollment. In 2008, free tuition was expanded to secondary education.

Kenya's macroeconomic context is characterized by low investment rates, moderately high inflation, and high public debt levels. However, increases in privatization and new remittance streams may help to improve the economy. Kenya has the lowest investment rate in East Africa at 15% of GDP and an 8% domestic savings rate (WDI). Kenya's relatively high inflation rate of 9.3% prompted the Central Bank to institute monetary policies that target a 5% inflation level (EIU, 2008). In 2003, the IMF determined Kenya's risk of debt crisis was minimal and as a result Kenya did not receive debt relief under the highly indebted poor countries (HIPC) initiative. Since then, Kenya's public debt level has increased to 50% of GDP (CIA, 2007).

Privatization has been one of the central themes of the Kibaki administration. With the passing of the Privatization Act in January 2008, the momentum is expected to increase. However, privatization efforts started in the 1990s have been plagued with implementation problems. In 2006, remittances to Kenya were \$796 million or 3.8% of GDP and outstripped overseas development aid and foreign direct investment (IFAD). This significant income inflow has prompted the government to begin formulating a remittance strategy to harness returns and encourage its growth (Central Bank of Kenya, 2007).

Regional Context

Kenya's location has both positive and negative implications for development. It is located in a neighborhood known for political unrest and corruption making it difficult to attract long-term investment. While, its proximity to water makes it the prime gateway for exports and provides access to its landlocked neighbors. Regionally, Kenya is part of three economic communities. First, the East African Community (EAC) which is a regional intergovernmental organization of Kenya, Tanzania, Uganda, Rwanda and Burundi. Its main accomplishment to date has been the creation of a unified customs union that facilitates free trade between the member states and charges a common external

tariff. Second, the Common Market for East and Central Africa (COMESA), is comprised of twelve member states aiming to form a large economic trading unit. The EAC works within the framework of COMESA for eventual integration; however COMESA lacks the political commitment and stability to credibly enact policies. Third, the African Union (AU) is the most ambitious of the communities as it aims to effectively replicate the European Union in Africa with a parliament, central bank, single currency, and court of justice. As with COMESA, the AU lacks has authority and has proven ineffective.

Beyond these three regional organizations, Kenya is also part of the US Africa Growth and Opportunities Act (AGOA). AGOA was enacted in 2000 to provide incentives for African nations to open their economies. To date, AGOA has mainly supported the textile industry in Kenya, while it has supported the coffee markets in Ethiopia and Rwanda.

Composition of Economy

Since 1995, investment and trade levels in Kenya have significantly declined as a percent of GDP (WDI). Kenya's FDI levels continue to represent an insignificant portion of the country's total investment. Poor infrastructure, a high cost of doing business, security issues, unfavorable labor conditions, and a weak legal environment have contributed to this low level of FDI. Also noticeable is a small move away from agriculture and towards services and industry. Kenya's economy now most resembles that of Uganda.

Exhibit 3: Composition of Kenya's economy compared to its neighbors

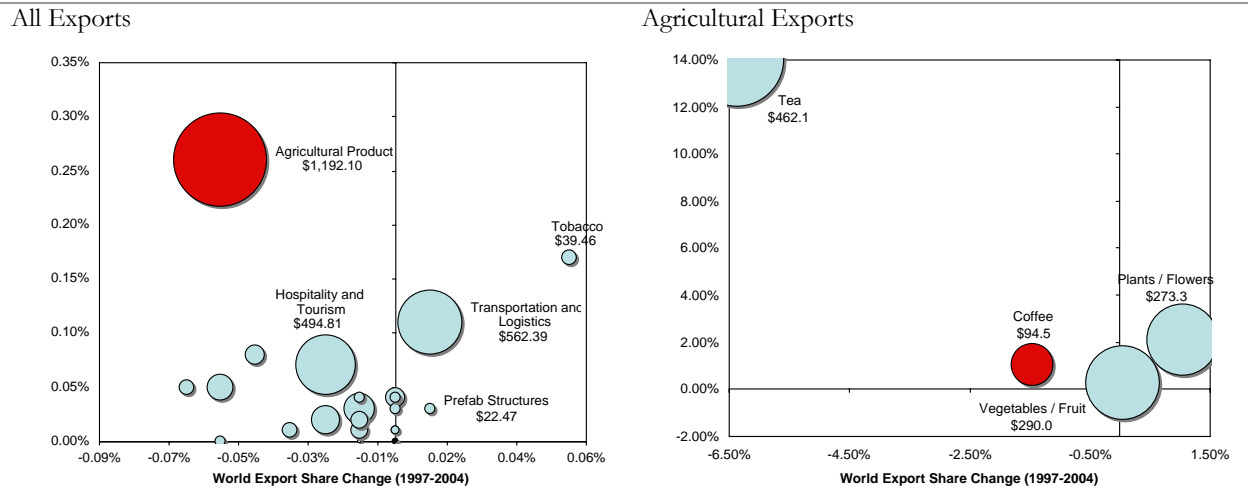
	1995 Kenya	2005 Kenya	Ethiopia	Rwanda	Tanzania	Uganda
<u>By Spending Source (% GDP)</u>						
Consumption	70%	74%	88%	85%	72%	78%
Government Spending	15%	17%	14%	13%	17%	14%
Investment	22%	16%	20%	22%	18%	21%
<i>FDI (% Investment)</i>	0%	0%	12%	0%	26%	0%
Exports	33%	27%	16%	11%	24%	13%
Imports	39%	34%	38%	31%	31%	27%
Net Exports	-6%	-7%	-22%	-20%	-7%	-14%
<u>By Sector (%GDP)</u>						
Agriculture	31%	27%	47%	42%	46%	33%
Services	53%	54%	40%	37%	37%	48%
Industry	16%	19%	14%	20%	17%	18%

Source: WDI (1995 and 2005).

Kenya's position in the global economy is not only declining on the investment front, but also across most of its export sectors. Kenya's export cluster map shows that most of its exports represent less than 0.10% of the world export share and have lost world market share over the past decade. The exceptions to this decline are transportation and logistics, tobacco, and prefabricated structures. Kenya's largest exports are agricultural products, transportation and logistics, and hospitality and tourism.

Agriculture plays a critical role in Kenya's economy; it represents 28% of GDP (WDI, 2006), 38% of total exports (UN Commodity Trade Statistics Database, 2004), and 75% of the labor force (CIA, 2003). Within agriculture, the largest export is tea, followed by vegetables and fruit, plants and flowers, and coffee. The only agricultural area that is gaining world market share is plants and flowers—driven by the cut flowers industry.

Exhibit 4: Kenya's cluster export maps (export volume in \$ millions)

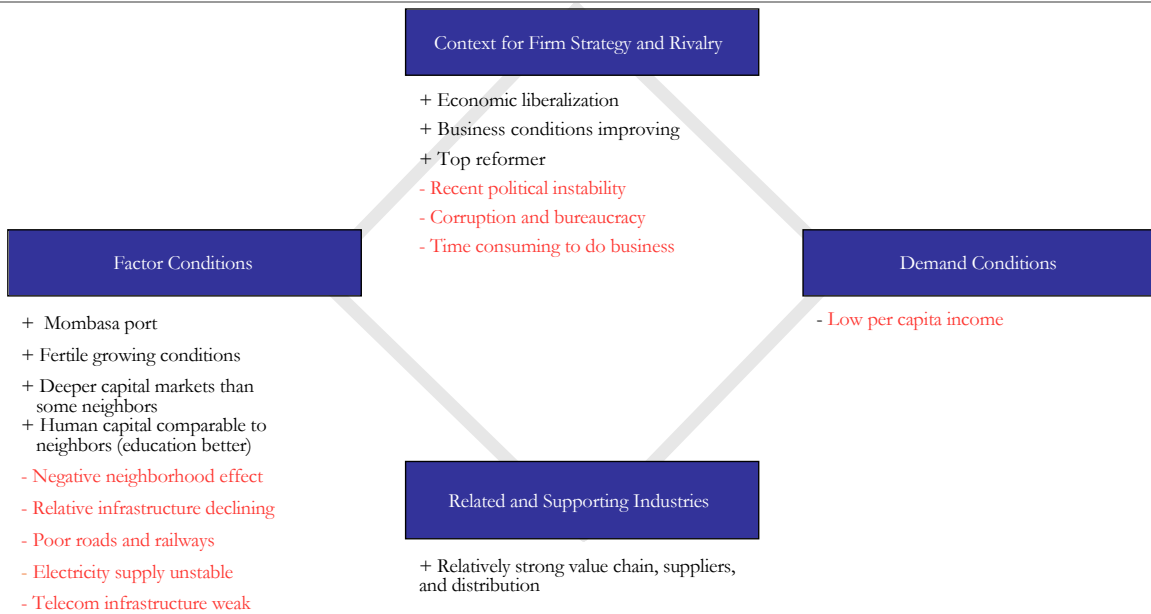


Source: Institute for Strategy and Competitiveness. UN Commodity Trade Statistics Database.

National Diamond

Kenya's national diamond benefits from the Mombasa port, fertile land, educated population, and some improvement in the business conditions. However, aging infrastructure, public health problems, corruption, and low per capita income are holding the economy back.

Exhibit 5: Kenya's National Diamond



Source: Team Analysis.

Kenya's factor conditions include fertile land for crop production, relatively deep capital markets and a well educated workforce. Kenya has the 11th largest endowment of arable land in sub-Saharan Africa, 12.4% on which is planted permanent crops such as coffee, sisal and tea (WDI). The publicly owned, deep-channel port of Mombasa serves East and Central Africa. While its usage is increasing, inefficiencies are rampant and high taxes at the port drive up transportation costs. Furthermore, Kenya's poor roads and railways prevent the port from reaching its full potential.

The context for firm strategy and rivalry has improved with market liberalization efforts. Kenya is listed by the Doing Business Survey of 2008 as the 8th largest business reformer in 2008 and, though it still takes relatively longer to do business in the country, there have been significant improvements in the areas of starting a business and dealing with licenses. The Nairobi Stock Exchange continues to do well with the recent Safaricom (Kenya's largest company) IPO in late March 2008. Wages in the agricultural sector have been flat, growing only 1% between 2005 and 2006, yet in the financial and trade sectors, wages have seen a 5% annual growth over the same period (Kenya Statistical Abstract, 2007).

Demand conditions in Kenya are hampered by the low per capita GDP which results in unsophisticated demand for products. But the related and supporting industries have a strong value chain of suppliers and distributors (Global Competitiveness Report 2007/08).

World Coffee Market

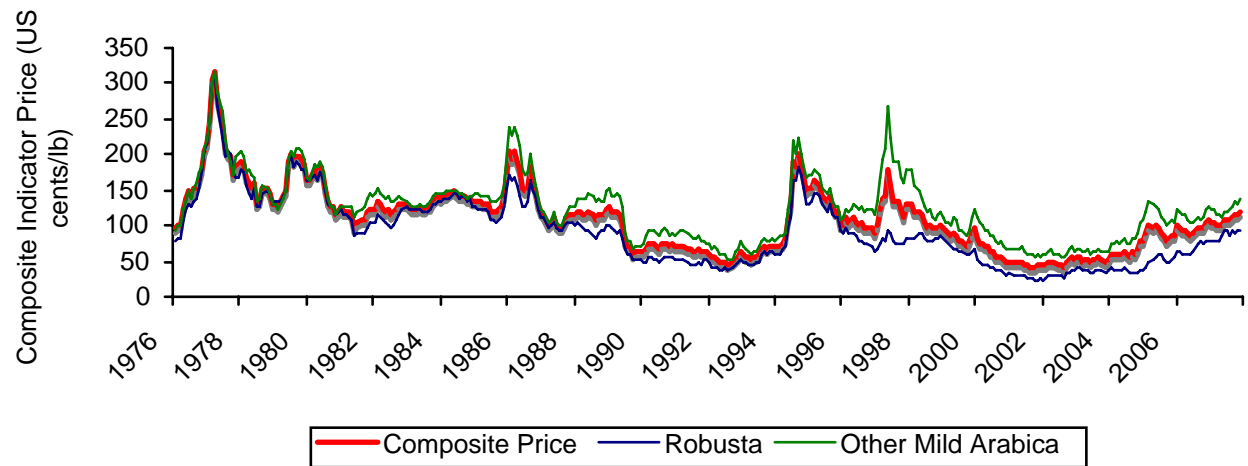
World coffee consumption has been increasing at a steady compound annual growth rate of 1.6% over the 1993-2003 period, with total consumption at 6.8 million metric tons in 2003 (World Resource Institute, 2005). The United States is the largest coffee consuming country in the world, accounting for 18% of world consumption (World Resource Institute, 2005). However, recent consumption growth has been driven by other countries such as Brazil, Russia, Poland and Ethiopia. Within the United States, the specialty coffee segment is the major growth area with a 20% annual growth rate and total sales in 2006 of \$12.27 billion (Mintel, 2007).

Coffee requires specific temperature, rainfall, and altitude conditions that limit the growing region to tropical areas. There are two primary types of coffee, Arabica and Robusta. Arabica accounts for 70% of world production with a growth rate of 8.5% from 2005-07. Robusta comprises only 30% of the total market, but has been growing at a higher rate of 11.5% from 2005-07. Arabica is considered to be the higher quality and more aromatic of the coffees, while Robusta has a more bitter taste and is typically used in low-quality instant blends. Due to the quality difference, Arabica sold at \$1.24/lb in 2007, while Robusta sold at only \$0.87/lb (ICO). However, recent genetic modifications and steam cleaning technologies that improve Robusta's taste profile may allow growers to increase sales and price levels over time. Moreover, Robusta offers a unique advantage to farmers—it generates higher yields, can be harvested mechanically, and is less susceptible to pests and disease.

The coffee market is dominated by a few large producing countries, with the top five producers accounting for 2/3 of the world's coffee exports. As of 2006, the top three producers in terms of export volume were Brazil (30%), Vietnam (15%) and Colombia (12%). Brazil is the largest Arabica producer in the world, while Vietnam, a relatively new entrant, is now the world's largest Robusta producer (ICO).

Coffee is a commodity and is subject to extreme price volatility. Short-term shocks are usually due to supply-side conditions in major exporting countries, such as frost in Brazil or rains in Central America. Over the long-term, prices have fallen for two main reasons: deregulation and supply increases (see Exhibit 6). In 1989, the International Coffee Agreement, which had kept prices high between 1975-1989, collapsed leading to a decline in world coffee prices. During the 1990s, there were supply increases in the world coffee market, led by the expansion of Brazil's plantations and Vietnam's entry into the market in 1994. As a result, by 2001, the world price of Arabica coffee fell to below 60 cents a pound from highs of over \$2 a pound (ICO).

Exhibit 6: World Coffee Prices



Source: International Coffee Organization; literature search

These low prices created an especially difficult environment for growers. Compounding the situation, coffee growers capture only a small and ever declining share of the value of the total coffee market. While coffee growers used to capture about 30% of the value of the final retail price of coffee in 1975, by 2000 they captured just 10% as downstream players became increasingly consolidated (Talbot, 2004). Coffee is typically harvested by farmers, processed by wet and dry millers, exported as a green bean, roasted, and then retailed (see exhibit 2). In the export stage, four companies - Neumann Kaffee, Volcafe, Ecom, Drefyus - control 40% of exports. Similarly, four roasters - Nestle, Kraft, Procter & Gamble, Sara Lee - control 45% of that market. As a result, the bargaining power in this value chain rests with the exporters and roasters (Talbot, 2004).

Exhibit 7: Coffee Value Chain



Source: Talbot, 2004.

Kenya Coffee Cluster

History

Coffee was the first major export in Kenya and has remained an important part of the Kenyan economy throughout its history. It was first brought to the region by French missionaries, in 1893. Simultaneously the British, who controlled the coffee industry throughout much of the 20th century, encouraged settlers to invest in coffee farms in and around Nairobi. By 1910, coffee had become Kenya's largest export and the local industry had built a reputation for quality.

Many of the same local institutions that support the cluster today developed in the early 1900s, including the Planters Union of Kenya in 1917, which organized large estate holders to lobby the British government, and the Nairobi Curing Company, which built the country's first mill. These institutions allowed Kenya to move up the value chain and export fully-processed coffee. The Coffee Board of Kenya (CBK) was established in 1931 to help stabilize the local industry after it experienced sharp declines in production during the Great Depression. The CBK was given tremendous power including the ability to issue licenses for land and commerce, to take over underperforming farms, and to levy taxes. Its board included the Minister of Agriculture, a Senior Coffee Officer in the government, and three representatives from large estates.

Until 1934, production was concentrated in a small number of large estates, and Kenyans were not allowed to own or manage coffee farms. In 1934 the British Colonial Board in London, wanting to diversify the industry, launched a formal "local growers experiment" testing the ability of Kenyans to manage small-scale coffee farms. However, under pressure from local settlers, the government enacted the "Native Coffee Growers Act" regulating smallholder production. Limits were placed on farm size, restricting production to 100 trees grown on less than ¼ acre of land, as well as on farm locations, only allowing them to be established away from existing estates. These restrictions limited the ability of smallholders to benefit from the infrastructure that the cluster had developed around Nairobi, such as

training and financial institutions and the Coffee Board of Kenya. They also prevented small farms from competing with British estates for labor (Barnes, 1979).

In 1944, smallholders were required by law to join local growing cooperatives, which were run by the government under the Coffee Board. This gave large estates power over the smallholders, as the estates controlled the Board. The Kenya Planters Cooperative Union (KPCU) was formed in 1937 to represent the interests of small farmers. However it took on dual status as a private company and a non-profit union in 1941 when it purchased the Nairobi Curing Company. This dual status raised conflict of interest questions that remain today.

While Kenya's coffee industry had been dominated by estates pre-independence, the Kenyatta government worked hard to expand smallholder production by providing farmers with land and financial support. The government established the Coffee Development Authority (CDA) in 1964 to support cooperatives and small farmers, providing farmers with technical assistance and raising \$3.98 million from local financial institutions to provide loans to cooperatives to build new processing factories. Unfortunately, this created excess capacity and left the cooperatives in deep debt (Waters, 1972).

In 1966, shortly after the loans were issued, Kenya joined the International Coffee Agreement. The agreement set production quotas on each country based on average production volumes in previous years. The Kenyan quota did not reflect planned capacity because it did not include smallholder volume in its calculation and the Coffee Board had to use its regulatory power to set quotas on individual farms and cooperatives. The Board also increased its control over the pricing and marketing of coffee, setting a price range within which all exporters had to bid for Kenyan coffee. During this period, some of the large estates left the coffee business. International quotas were lifted in the 1970s and by 1978 smallholders production exceeded estate production for the first time. The industry thrived in the early 1980s with production peaking at 129,000 tons, 40% of total exports in Kenya, but has been in a steady

decline for the past twenty years with several large estates closing or laying off large portions of their labor force (ICO, accessed April 2008).

Under pressure from the World Bank, the government took a series of steps between 1990 and 2001 to loosen its control over the cluster. Such steps included: pulling out of cooperative management (1991); ending financial support to cooperatives, the KPCU and the Coffee Research Foundation (CRF) (1991); relaxing regulation of upstream processes (1999); allowing growers to choose among pulping factories, millers, and marketing agents (1999); limiting the role of the CBK as regulator (2001); privatizing the coffee auction and allowing a portion of coffee to bypass the auction and be sold directly to exporters; and increasing the number of marketing licenses issued from three to twenty-five (2006).

Industry Structure

Kenya's coffee value chain is characterized by extreme fragmentation at the grower level and a heavy concentration of powerful players further upstream. This fragmentation is less extreme for estate owners who are vertically integrated, owning their own processing factories, and whose size allows them to have some negotiating power with marketing agents. Furthermore, since liberalization estates have been able to bypass marketing agents and the coffee auction entirely, selling up to 30% of their production volume directly to exporters (Dada, 2007). Smallholders, however, bring product to market through a much more complicated structure.

There are 700,000 small coffee farms in Kenya (Kinoti, 2005). Smallholders are required by law to sell their coffee through local growing cooperatives. While there are 569 cooperatives, there is limited competition between them, because farmers have to process cherries within 24 hours of harvest (Mude, 2006). With limited access to transportation, they are forced to work through the closest cooperative. Cooperatives are meant to provide extension services and farming inputs to farmers, run processing factories, provide access to credit and to manage the marketing of coffee, but their performance is highly variable.

Coffee milling is managed by five mills. The KPCU runs the largest mill and controls 70% of milling capacity in the country. The other four mills are run by private estates but have been open to growing cooperatives since 1999. The mills sell coffee at the coffee auction through marketing agents. Prior to 2002 the CBK acted as the sole marketing agent. After liberalization it stepped out of this role and issued licenses to “marketing agents” to represent growers at the auction. However, one of these licenses went to the KPCU (Export Processing Zone Authority, 2005) further expanding their power. Since 2006, the CBK has issued another 25 licenses but rumors of patronage have tainted the process. These agents are the only groups that are legally allowed to participate in the coffee auction, which is held weekly. While coffee from individual farms is processed separately, it is often mixed together with cherries from other farms at the milling stage and sold by lot to exporters. This reduces incentives for smallholders to produce quality coffee, because they are paid based on revenue generated from the lot and not for the quality of their own produce.

Performance

The performance of the cluster has been steadily declining in terms of both output and quality since its peak in 1987. Exports fell from 2.1 million to 0.9 million bags between 1987 and 2007 and world market share has declined from 3.1% in 1986 to 0.6% in 2006 (ICO, April 2008). Moreover, the quality of Kenyan coffee has fallen, making it harder for Kenya to demand a premium over commodity prices. Approximately 20% of Kenya’s coffee production was premium grade in 1993; this proportion fell to about 10% by 2003.

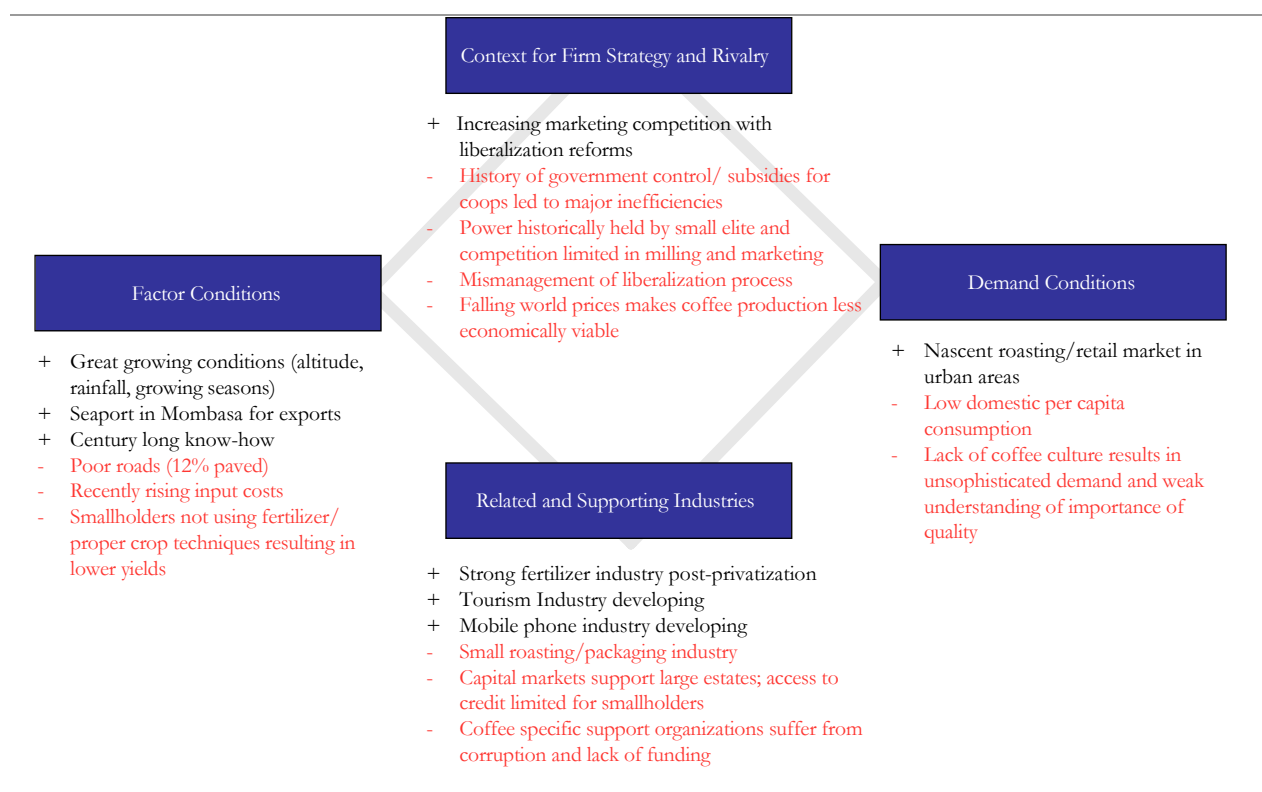
Declines in production volume have been driven, in part, by declining crop yields as farmers stopped investing in fertilizers. Yields fell from 892 kilogram/hectare in 1980 to 284 kilogram/hectare in 2006 (FAO, accessed April 2008). These recent yields are very low compared to average yields for Arabica coffee worldwide of 698 kg/ha and yields of 1160 kg/ha in neighboring Rwanda and 995 kg/ha in neighboring Ethiopia (FAO, accessed April 2008).

There have also been sharp declines in industry profitability with falling world prices and rising production costs squeezing margins, particularly for growers. Oxfam estimates that the breakeven price for smallholders internationally is around \$0.84 or 52 kshs while the breakeven price in Kenya is closer to 70 kshs (Damore, 2004); (USDA, 2004).

Cluster Analysis

The coffee cluster was built on the back of strong factor inputs, including good growing conditions and access to the port of Mombasa.

Exhibit 9: Cluster Diamond



Source: Authors

However, the strength of its factor conditions has eroded over time due to underinvestment in basic infrastructure, poor knowledge transfer and the underdevelopment of financial institutions.

Furthermore, the context for rivalry, characterized by heavy government intervention, a complex market structure (particularly for small growers), high levels of corruption, and mismanagement in the face of

liberalization has limited competition and led to declining profitability in the cluster. Finally, weak linkages with related and supporting industries and poor demand conditions have hampered cluster development.

Factor Conditions

Basic factor conditions in Kenya are strong and have historically given the cluster a comparative advantage. Kenya has extremely strong growing conditions for coffee. In the four designated growing regions, vast swaths of farming land are located 1400- 2000 meters above sea level, mineral rich volcanic soil is plentiful, and rainfall is evenly distributed throughout the year, allowing for continuous flowering and two harvest seasons (Coffee Board of Kenya, June 2005). The Port of Mombasa was a critical factor in the development of the coffee trade in the early 20th century, but inefficiencies at the port and high taxes have decreased its attractiveness. Furthermore, neighboring Tanzania has recently privatized its port in Dar es Salaam and seen major gains in turn-around time and capacity, lowering Kenya's transportation advantage (African Business, June 2006). Technical know-how has traditionally been a strength for the coffee cluster but has decreased with the underinvestment in institutions for collaboration. Furthermore, access to credit is limited for smallholders, preventing investment in key inputs like fertilizer and leading to lower quality and lower yields.

A history of government protectionism and intervention in the coffee cluster has created a context for rivalry characterized by a low-level of competition and a lack of urgency among industry players to improve quality, efficiency and to control costs. The privatization of the industry was meant to increase the rivalry among domestic players but high levels of corruption, weak management capacity at multiple levels of the value chain, and a complex market structure have limited the effectiveness of reform.

First, corruption in the cluster prevents market forces from selecting the strongest players to carry the cluster forward. Rumors of patronage and cronyism exist at multiple levels of the value chain

and allow rent-seeking by powerful players. At the government level, the CBK is rumored to issue marketing licenses to political allies who may or may not have the capacity to operate effectively, and to groups who pay bribes. At the cooperative and grower levels, corruption takes multiple forms, including the election of unqualified but politically connected cooperative managers who sometimes unduly influence union election meetings, continued relations with the KPCU in spite of increased competition, and the investment of cooperative resources in unprofitable side projects (Mude, 2006); (Karanja, 2002).

Second, the management and financial support provided for decades by the government to grower cooperatives, the KPCU and the CRF prevented those groups from building the management capacity needed to efficiently manage their operations and finances. After privatization the government immediately stopped providing oversight and technical support; little thought was given to building the necessary institutional capacity for the industry to operate effectively.

Finally, an unnecessarily complex market structure, particularly for smallholders, prevents good information flow between buyers and farmers and allows for mismanagement and corruption. Small farmers must work through several layers of bureaucracy to get their products to market with little information about how payments are made or when their coffee will actually reach the auction. They have little choice in selecting a cooperative because they do not have reliable access to transportation or to good information comparing the performance of different cooperatives. This prevents them from demanding high levels of service and prevents industry consolidation. With little incentive to improve their performance, cooperatives are highly inefficient with average capacity utilization rates in their factories of 21% and payment terms to farmers of 12 months (EDE Consulting, June 2005). These inefficiencies drive up system costs and limit value capture for farmers; smallholders capture approximately 20% of the auction price for coffee which is much lower than the 75% captured by large estates (EDE Consulting, June 2005). Similarly, the KPCU is underutilized and in deep debt but is the only miller with facilities in all growing regions and has deeply rooted relationships with farmers. While growers are now legally able to sell directly to exporters, few have relationships with them and most still

work through marketing agents. The payment process for smallholders is particularly problematic as every agent is paid before the farmer, including loan payments to SACCOs and Cooperative Union dues. Furthermore, farmers rarely have insight into the breakdown of payments, making it easy for money to be siphoned off before it reaches the farmer. These inefficiencies drive up total production costs, which are higher in Kenya than in any of its direct competitor nations (Lewin). As a result, growers are highly susceptible to declines in world prices and the industry has been unprofitable over the past several years (USDA, 2004).

Farmers are now caught in a downward spiral whereby low levels of profitability and poor cash flow management leave them unable to invest in good crop husbandry and in needed fertilizers and pesticides. This lowers crop yields and quality, while smallholders are left extremely susceptible to coffee berry disease, which has been prevalent over the past several years (FAO, accessed April 2008). These yield and quality declines lead to lower levels of profitability—and the cycle continues.

Demand Conditions

Demand conditions are also weak in Kenya further limiting the pressure put on producers to improve quality. Kenya has a tea rather than a coffee culture and consumption is low relative to other coffee producing countries; while Ethiopians consume 50% of the coffee they produce, Kenyans consume only 1% (World Resource Institute, 2005). Large estates and local roasters have made some effort to encourage the development of a coffee culture opening retail shops throughout Nairobi but the retail industry is not yet fully developed.

Related and Supporting Industries

Related and supporting industries exist in the cluster, but linkages are weak and potential efficiencies are not exploited. Other agricultural clusters are strong and provide the potential for research, training and procurement efficiencies but these are untapped. Furthermore, the infrastructure that has been developed to support other agricultural groups, such as a strong retail distribution network

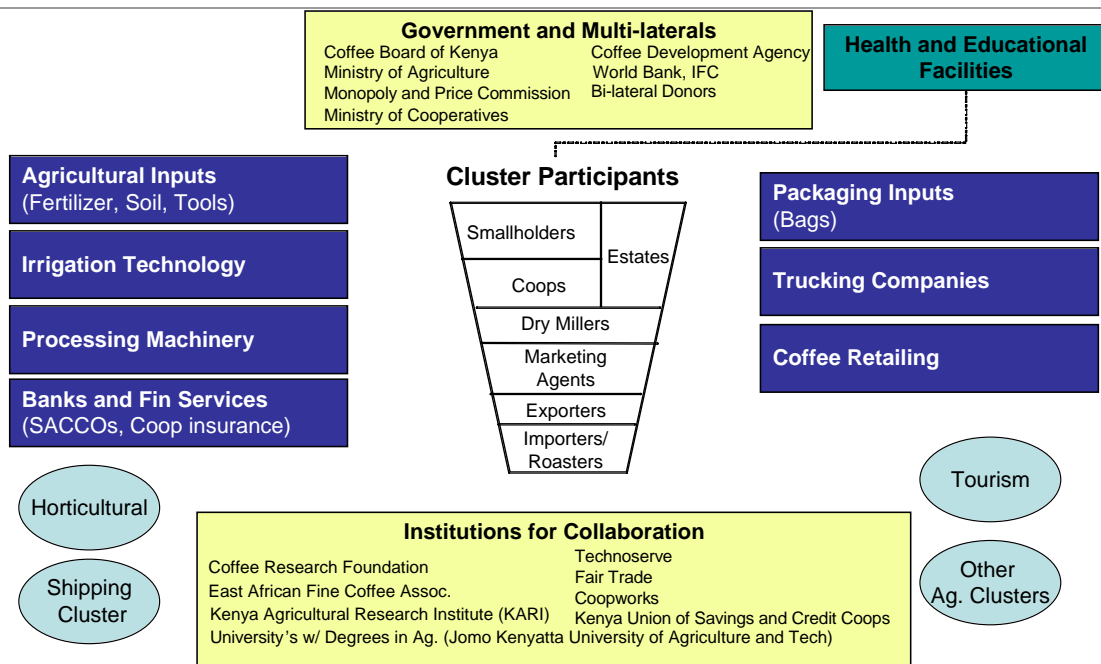
for fertilizer, is largely not accessed by coffee farmers because they are beholden to growing cooperatives that continue to buy directly from importers at prices that are higher than those available through retail outlets (Ariga, 2006).

Given its long history, most of the relevant players required for a functioning coffee cluster are present in Kenya. However, an underinvestment in critical institutions and the management void left by government after privatization, particularly at grower cooperatives, has left the cluster without much depth and with weak linkages between suppliers, cluster participants, and institutions for collaboration. The main supply inputs required for coffee growing (highlighted in blue on the cluster map) include: coffee seedlings, fertilizer, and financing. Seedlings are grown by local nurseries and are purchased directly by estates and growing cooperatives. Nurseries are fairly well developed and are supported by the Coffee Research Foundation (CRF). Fertilizer is imported through twelve large importers and sold either directly to cooperatives or through wholesalers and retailers, which as of 2005 numbered 500 and 8000 respectively. While there is a fairly well developed retail chain for fertilizer, most cooperatives lack access because of poor credit histories (Agriga, 2006). Credit and other financing is provided by commercial banks for large estates, and special credit and insurance facilities have been developed for the agricultural sector. However, few commercial banks will lend to smallholders who are left to access financing through poorly run Savings and Credit Cooperatives. Processing machinery is the main additional input required for both dry and wet milling and is mostly produced locally. Packaging material (mostly bags) are required throughout the process. Sisal bags are currently manufactured locally, but industry participants are pushing for the CBK to allow them to import jute bags from Asia, which would save growers \$0.23 per bag (Business Daily, March 2008). The CBK has been slow in responding to the industry's request.

Institutions for collaboration have grown up around the central growing region supported by the government of Kenya and large estate owners. While there are numerous institutions for collaboration, few play an active role in the sector. One of the most critical institutions for collaboration is the Coffee

Research Foundation (CRF). It has historically been the research hub for the cluster conducting research directly, disseminating new technology and information, training growers and nursery managers including providing direct assistance to small farmers, analyzing soil samples from small and large farms, and bringing together research institutions and industry players. Its board is comprised of representatives from grower groups, the Ministry of Agriculture, and other research universities. However, its performance has declined since privatization, because the government subsidies have not been replaced with an adequate alternative funding source. After privatization, the government issued a 2% tax on all coffee sales to fund the CRF, but in the face of production declines its budget has been cut by 50% and its staff by 70% (Dada, 2007). It now operates entirely on a pull system and is unable to do much proactive research or training. The other local IFCs that have been set up to support the industry are under funded and lack the technical skill to be effective. There are functioning NGOs and multi-lateral agencies that provide financial and technical support to the sector, but their work is poorly coordinated and rarely reaches small farmers directly.

Exhibit 8: Cluster Map



Source: Authors

Impact of Recent Political Crisis

While some industries have been very badly affected by the political crisis, the direct impact on the Kenyan coffee industry has been relatively small. According to Etienne Delbar, managing director of Socfinaf, a leading producer and miller, coffee beans in the area affected by political violence only accounted for 15% of the country's total coffee production (Reuters, May 2008). The coffee growing areas affected included those in the Western and Nyanza provinces rather than those in the Central province where most of the coffee is grown. Given that the political crisis affected only one of the two annual growing cycles, the direct impact of the crisis is estimated at a maximum of 7.5% reduction in coffee production in 2008. However, coffee has also been impacted by indirect factors, such as the difficulties transporting beans across the country and a general loss of confidence by foreign buyers of Kenyan coffee. These in addition to the effects of farmer displacement after the violence, leaves the full impact of the political instability on Kenya's coffee sector to be seen.

Recommendations

Key Principles

Kenya should focus on three areas to improve the competitiveness of its coffee cluster: (i) create a differentiated coffee strategy, (ii) improve functioning of the value chain by increasing competition, clamping down on corruption, and reforming governance structures; and (iii) address the disruptions created by liberalization of the sector in the 1990s such as managerial voids in cooperatives and reduced access to credit and agricultural inputs for farmers.

First, Kenya should pursue a differentiated coffee strategy to leverage its balance sheet strengths (i.e. high quality growing conditions) and neutralize some of its disadvantages. Kenya is positioned ecologically to produce some of the highest quality coffee in the world at a time when the specialty coffee market is booming. Over 90% of coffee from Kenya is high-grown Arabica cultivated at altitudes ranging between 1400 meters and 1950 meters above sea level. A differentiated strategy will require a

more efficient value chain that rewards quality and deeper linkages with related industries in order to promote the Kenya coffee brand. In addition, stimulating domestic demand through urban retail channels will help to raise quality awareness.

Second, to address the power imbalance in the value chain, efforts must be made to increase competition, clamp down on corruption and reform governance structures. Recent rules that allow farmers to sell their coffee through direct sales methods rather than solely relying on the auction are stimulating competition. The next step will be to introduce more market discipline at the cooperative level. This will require gathering and distributing information about cooperatives to farmers, so farmers can make informed choices and better monitor their cooperatives through elections of managers. Eventually, the goal is to eliminate poorly performing cooperatives and have farmers support the most efficient cooperatives. With the opportunities presented by the second auction window, better connections needs to be made between cooperatives and foreign importers so that there is a significant benefit for cooperatives in improving their performance.

The third prong of this strategy will require addressing the disruptions created by liberalization of the sector in the 1990s. Farmers are suffering from reduced access to credit and agricultural inputs; cooperatives/IFCs are suffering from an absence of management capacity. While in the long-term these institutions need to be self-sustaining, they need support to build capacity in the short-term. The government should partner with and provide subsidies, where necessary, to support IFCs and other private sector players that can help build the capacity within the cluster. For example, the government could provide interim support to banks so that they can experiment with agricultural credit practices, with the ultimate objective that the banks will take over this function. The government could also enlist the support to international coffee companies like Starbucks to take the lead on an information-gathering study on the state of cooperatives; this would help them assess which cooperatives they want to source from, and would help the government in disseminating market information.

Stakeholder Actions

Government

To improve the coffee cluster, Kenya must first address fundamental challenges in its national diamond, particularly in its factor conditions and the context for firm strategy and rivalry. We believe there are three key issues the national government must address to create an enabling environment that will allow the coffee sector to flourish: corruption, political instability and aging infrastructure.

First, Kenya must aggressively fight corruption at all levels of government. Specifically, the Kibaki administration should pursue long awaited investigations of corruption within the highest levels of government and push through reforms to increase accountability for public sector employees. Within the coffee sector, the government must actively stamp out corruption in relevant ministries and institutions. The government must ensure that licenses granted by the Coffee Board of Kenya are based on fair and transparent procedures rather than on patronage. This will require carefully selecting leadership of government agencies, running anti-corruption training programs, and increasing salaries of key government officials to reduce incentives for corruption. Regional government also has a role to play in reducing corruption at the cooperative level by providing police support during cooperative elections, particularly in areas where reports of election rigging and violence are common.

Second, the government must bring political stability to the country. The key lever to effectively address political stability in Kenya is the strengthening of its institutions particularly those for governance, the rule of law and the constitution. On governance, some steps have been taken to strengthen the National Assembly and to share power between the President and Prime Minister. However, political promises must be fulfilled, including: holding civil servants accountable to their constituents and ensuring fair representation of tribes and genders in the National Assembly. The court system also needs to be strengthened by ensuring respect of term limits, disciplining judges and lawyers for inappropriate conduct, and increasing transparency around the legal system. The constitutional

review process must also be expedited. Having already engaged in public consultations and one referendum, it is critical that political leaders come together to ensure approval of the constitutional reforms. These three institutional enactments will be instrumental in restoring investor confidence.

Third, Kenya's transportation infrastructure is aging and must be upgraded. Kenya should privatize the Kenya Ports Authority to improve its operational performance and encourage further development. To reach the full potential of the port, railway and road linkages within Kenya and from neighboring countries must also be improved. Recent reforms in the rail system are extremely promising—in 2004, Kenya and Uganda merged their railroad corporations and jointly sold the consolidated corporation to a consortium of investors led by South Africa's Sheltam Rail Company. In contrast, Kenya's road network is in need of significant investment with just 13% of its roads paved and the highest rate of road accidents and deaths in the world (Library of Congress, 2007). Recent work on building a beltway, several overpasses and dual, multilane carriage-ways in Nairobi are underway and should widen the transportation bottleneck, if followed through. While the World Bank approved more than \$165 million to support a road improvement project in the north, more public investment is needed. This is especially important for smallholders who rely on internal road systems to get their coffee beans to the market.

Beyond these broad-based reforms, the Kenyan government can play a more targeted role within the coffee sector. At the national level, the government can implement regulation, such as minimum governance standards for cooperatives and licensing processes, that will eventually increase competition in the sector. At the regional level, the government can convene a broad range of cluster players, including related industries such as banking and tourism, to suggest cluster improvement strategies.

Institutions for Collaboration

Kenya's coffee cluster has many IFCs, but they lack capacity to drive the needed collaboration. We believe IFCs should serve four primary purposes: branding, providing technical assistance, and

information sharing. A first step in the creation of a differentiated Kenya coffee brand will involve collaborative efforts with the Brand Kenya Board which started operations in 2008. The coffee sector is fast shifting towards specialty appellation brands with a single source (e.g., Jamaican Blue Mountain, Ethiopian Campessina Oromia Yirgacheffe, Rwandan Karaba Iakaka) which are commanding price premiums (Sylvestre, 2008). IFC's such as the East African Fine Coffee Association can be utilized to promote Kenyan brands. IFCS can also play a role in stimulating demand within Kenya by helping to change consumer perceptions. Demand is currently low, in part, because there are misperceptions about the health effects of coffee (Sylvestre, 2008).

Second, IFCs such as the CRF should redouble their efforts to provide management assistance, market information, and technical training to smallholders and cooperatives. This will require increased financial support, likely from the international community, until production levels rise to a point where the CRF can be fully financed through the tax of coffee sales earmarked for them and through revenue generated from training fees. Information provided should include market prices for coffee and information on the capabilities of market players at different levels of the value chain.

Finally, IFCs should play a role in linking major specialty coffee companies with functioning cooperatives. Given the poor reputation of Kenyan cooperatives it is unlikely that large specialty coffee companies are going to work in Kenya. IFCs could play a critical role connecting coffee companies with high performing cooperatives by "certifying" cooperatives based on a set of well defined criteria including good accounting practices and good quality procedures. Cooperatives then would have a strong incentive to improve their performance because specialty coffee companies pay a premium above average national prices and provide ongoing technical free of charge. IFCS could also play a role in publicizing the positive results from successful partnerships and ensuring that information reached other small farmers, hopefully increasing the competitive pressure placed on all coffee cooperatives.

Estates

Kenya's coffee growing estates are best positioned to deepen linkages with the large tourism cluster. Estates should develop plantation tours and sell branded coffee in tourist destinations. In addition, estates should sell their branded coffee beans to local roasters. To the extent that estates are located on land not suited to growing high quality coffee, they should explore switching to other crops that benefit from economies of scale, including produce and cut-flowers. We believe such crop changes are already beginning, as estate production has been steadily declining since 2001.

Smallholders and Cooperatives

Smallholders are best positioned to grow the highest quality coffee, because of their land characteristics. Since coffee growing does not have significant economies of scale, an efficient high quality coffee value chain could increase the incomes for thousands of smallholders in Kenya. To implement this strategy the following three proposals should be considered. First, the government or international development organizations must supply fertilizer and pesticides to smallholders in order to stimulate high yield production. Given the potential welfare boon associated with increasing production yields, a government subsidy is likely the best first step. Already the Minister of Agriculture in April 2008 promised to provide free fertilizer to farmers to stem production shortages. Once smallholders begin to generate savings from these welfare gains, then the government could move from a subsidy to microcredit strategy. Second, cooperatives must facilitate the tracking and separate storage of high and low quality coffee beans. Many developed countries have instituted tracking systems to track farms that produce the different qualities of produce in order to adequately compensate these farmers for the quality of their produce. In the same fashion, Kenya should work on creating a tracking system so that farmers who produce the high quality coffee are correctly identified, appropriately reimbursed, and thus incentivized to continue to improve their coffee. Finally, high performing coops should proactively make connections to high profile institutions such as Technoserve and TransFair to ask for assistance in improving their quality practices so that they become more attractive to specialty coffee manufacturers.

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