Microeconomics of Competitiveness
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THE APPAREL CLUSTER IN HONDURAS

FINAL PAPER

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One of the team members is a native of Honduras having lived in the country for most of his life until undergraduate education. He traveled to Honduras during the project period for a different purpose, but used the opportunity to access individuals and consult them about the current challenges of the apparel cluster in the country.

1. Country Analysis: About Honduras

Geography Honduras is located in Central America, bordering Guatemala and Belize in the north, El Salvador in the west, and Nicaragua in the south. Honduras has direct access to the Atlantic Ocean, and is connected to the Pacific Ocean through the Gulf of Fonseca. Located on the northwest corner of the country's Atlantic shoreline, Puerto Cortes is the most active port in Central America and serves as the regional center for maritime trade and commerce after the Panama Canal. Although its location has helped Honduras develop a strong base of economic activity, it also exposed it to hurricanes, floods, and other natural disasters. In 1998, Hurricane Mitch destroyed 70% of crops and 80% of the transport infrastructure resulting in $2 billion damage (CIA Factbook). The country's pronounced tropical season often leaves many without homes due to flash floods and torrential downpours. Natural resources include timber, gold, silver, copper, lead, zinc, iron ore, antimony, coal, fish, and hydropower. Silver played a key role in the Spanish conquest, but only a minor role today.

Size and Population With a total land size a fifth of that of Spain but slightly larger than Portugal, Honduras is the second largest country in Central America after Nicaragua. It also ranks second in population after Guatemala, with a population of 7.3 million people. Its population is very young with a median age of 19 years. Because roughly 81% of Honduras is mountainous, the population is heavily concentrated in the lowlands (CIA Factbook).

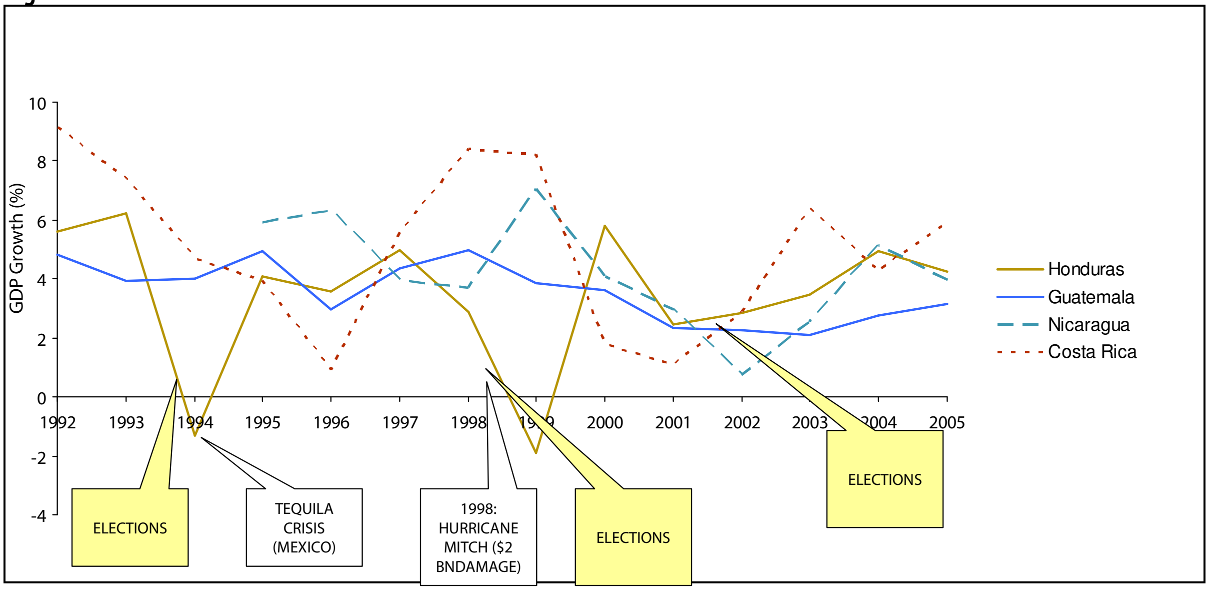
Society Despite its rich multi-ethnic history, modern Honduras today is fairly homogenous – 90% of the population is *mestizo* (Amerindian and European), and 97% is Roman Catholic. (CIA Factbook) The homogeneity provides Honduras with the potential to reach consensus on policy shifts more easily. It also helps prevent ethnic and religious unrest.

Politics Honduras is a democratic constitutional republic, independent from Spain since 1821. Since then, despite relative tension with El Salvador, Honduras has overall peaceful relations with its neighbours. The country is currently ruled by the Liberal Party of Honduras, under President Manuel Zelaya. There are five main political parties, and for the past decades, the National Party of Honduras and the Liberal Party of Honduras have ruled alternatively. The election swings and policy inconsistency between these two parties have made policy reform progress very difficult. This is recently compounded because the current administration lacks majority in the National Congress.

1.1 National Economic Performance

GDP and Growth Honduras has the second lowest GDP per capita in the region ($3,000 as of 2006), on close par with the poorest country in the region, Nicaragua. Over the past 15 years, with an average growth of 2.9% Honduras has ranked practically last in compound annual growth rate (CAGR – see **Figure 1**). (EIU, 2007) That has been in part the result of intense volatility in the annual GDP growth, due to natural disasters, political cyclicality, and international crisis. At the same time, however, other countries such as Mexico, Costa Rica, and the Dominican Republic have been quickly sprinting, with annual compounded growth rates of up to 6%. As shown below, Costa Rica has been almost as volatile as Honduras, but that has not prevented it from growing at a CAGR of 4.8%, and reaching a GDP/capita close to that of Mexico (more than $10,000 per capita annually). Honduras' poor performance can be explained by a failure to target the major constraints in the economy, which have been made worse by unfavorable macroeconomic circumstances (see Section 1.2). Unleashing the economy from these constraints is crucial for the development of the apparel cluster and the country as a whole.

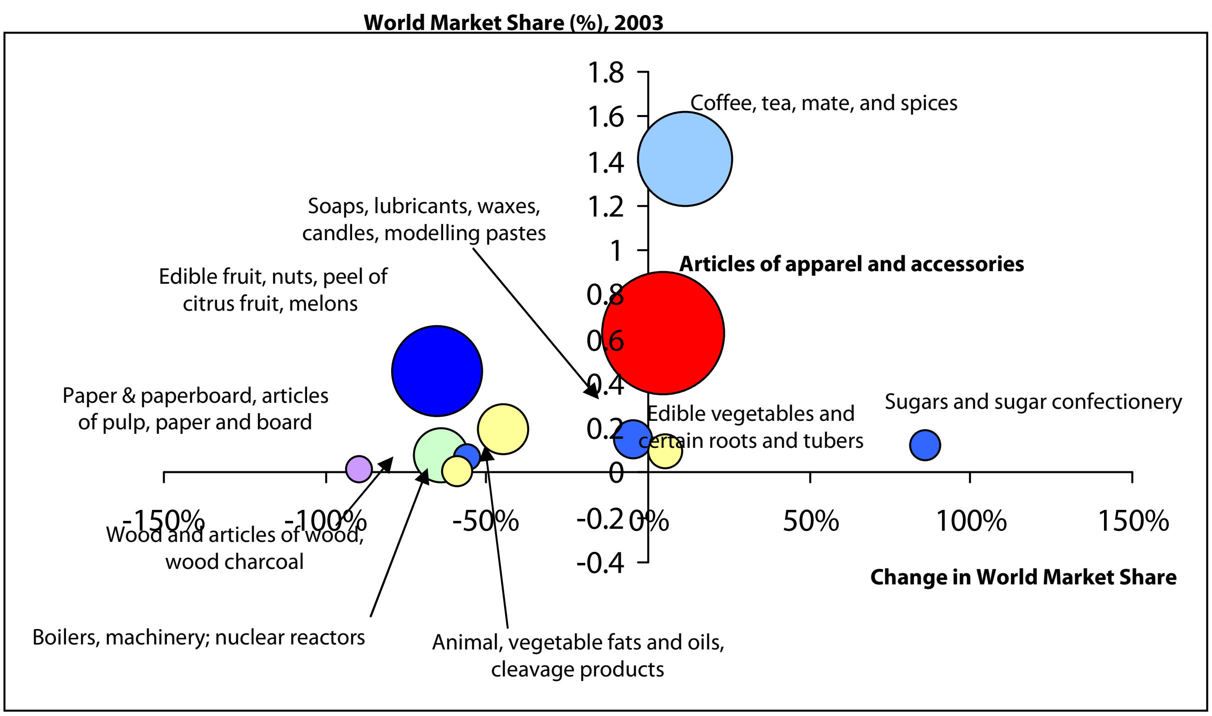
Figure 1: GDP Growth – Honduras and Peers



Source: EIU and Team Analysis

Economic Profile The service sector contributes to GDP with a share of 55%, followed by industry (31.4%), and agriculture (13.6%). More than 40% of the labor force is also employed in services, roughly 25% in industry, and 35% in agriculture (EIU, 2007).

Figure 2: Honduras Export Portfolio



Sources: WTO ITC Center; OTEXA; team analysis

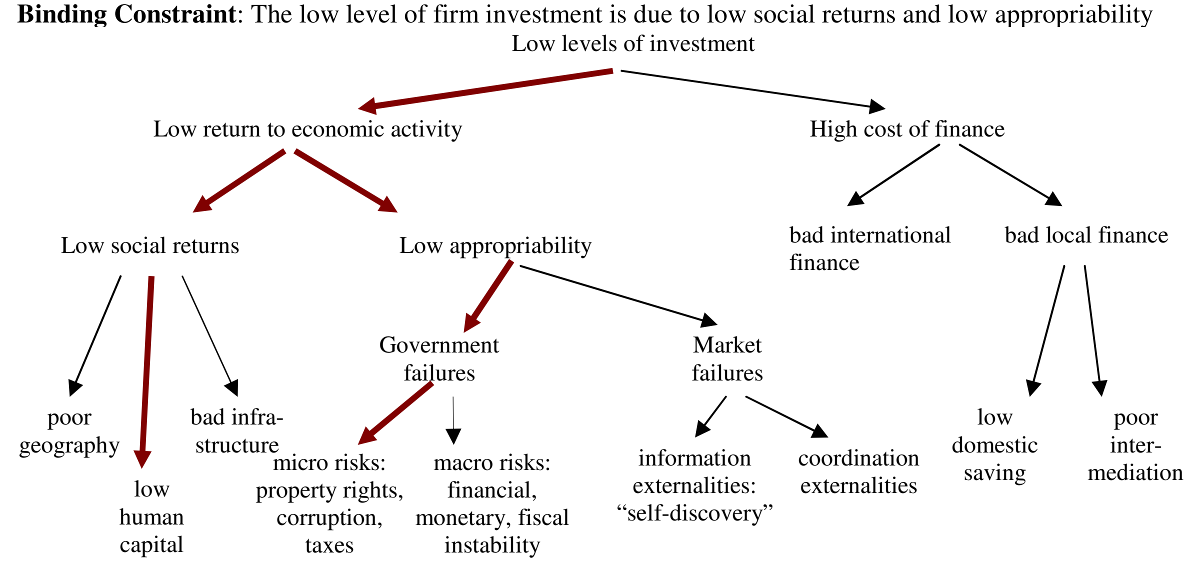
The Honduran export portfolio is poorly diversified, and the country is slowly losing share in its top clusters. The largest industries in terms of value are apparel and accessories (with a total export value of $2 billion) followed by agricultural products (coffee, tea, mate, and spices, and edible fruit, nuts, peel of citrus fruit, melons), wood and wood articles, animal, vegetable fats and oils, and cleavage products. The best performing sector in terms of growth in world market share has been sugars and sugar confectionery. The two most important clusters in the Honduran economy (apparel and coffee, tea and mate) have been stagnating, and many others are losing market share (see **Figure 2**). (WTO ITC, OTEXA, 2003)

1.2 Major Constraints to Growth

The low levels of firm investment are primarily due to low returns to economic activity. The low return is due to low social returns and low appropriability. In terms of social returns, Honduras fares badly on labor utilization and quality of labor. In terms of appropriability, the country is constrained by corruption and policy uncertainty (see **Figure 3**).

Figure 3: Binding Constraints to Honduran Growth

Binding Constraint: The low level of firm investment is due to low social returns and low appropriability



Source: Team analysis, Ricardo Hausmann’s and Dani Rodrik’s “Growth Diagnostics,” 2005

Cost of Finance Even though the cost of finance continues to be a major challenge, Honduras has made important inroads in attracting foreign direct investment (FDI) and in decreasing the cost of finance for domestic investors. FDI has been growing over the past ten years, from $91 million in 1996 to $464 million by 2005. Nonetheless, it lags behind Costa Rica (twice the FDI of Honduras) and El Salvador, whose FDI more than tripled from 2003 to 2005 (EIU, 2007). The lending interest rate has declined from 32.1% in 1997 to roughly 18% by 2005 (EIU, 2007), but is still among the highest among regional peers. Not surprisingly, more than 60% of surveyed firms identified access and costs of financing as one of the major obstacles to investment in Honduras (Enterprise Surveys, 2003).

Returns to Economic Activity The binding constraint at the country level is low return to economic activity, due to low social returns and low appropriability. In terms of **social returns**, Honduras faces two major problems: underutilization of labor and low-skilled human capital. Unemployment has remained at a record high level of 28% over the past ten years, and is likely to remain constant in 2007 (EIU, 2007). That is all the more regrettable in view of Honduras' very young population, which provides the country with a great potential.

The 70% of the labor force that is employed is very low skilled. That is directly linked to high drop out and repetition rates in school – only 32% of primary school students finish primary education without repeating grades, 43% of all students complete primary school, 30% of those continue to secondary school, and only 8% pursue tertiary education. Drop out is severe at the tertiary level, where more than 80% of students fail out. This dismal performance is due to the low quality of education; in the sixth grade, for example only 10% of students have proficiency in language and only 8% in mathematics. (UNESCO; De Jong et al; Country Studies, 2006)

Whereas quality of education is key, the major component of public education spending has been on teacher salaries. Further, while the government invests 7% of GDP in education, only 16% of that investment goes to higher education – compared to 30% in Costa Rica and Singapore. The government has attempted to change the system, but at the current rate of reform it will take an estimated 23 years to reach the level of the educational systems in other countries in the region, such as Costa Rica and Panama. (De Jong 2006)

In terms of **appropriability** of returns to economic activity, the Honduran economy is severely constrained by corruption and policy uncertainty. More than 60% of firms surveyed opined that corruption is a major obstacle to investment, while close to 50% pointed to policy uncertainty (Enterprise Surveys, 2003). According to the World Bank, "corruption and mis-governance are regarded as the most serious problem in Honduras" (World Bank Institute, 2002), while in economic freedom, Honduras fares worst in freedom from corruption, property rights, and investment freedom (Heritage Foundation, 2007)

It is estimated that Honduras loses more than $500 million to corruption annually – a figure larger than the country's FDI, and that in 2006 alone the Honduran government lost more than 100 million lempiras in taxes due to corrupt officials (Villalobos, 2006) Moreover, investors have not perceived improvements in the past five years. Currently, Honduras ranks 107 of 158 countries in terms of corruption (Transparency International, 2006). The most corrupt are deemed to be customs officials and the judicial branch (weak property protection), and bribery is particularly high in the approval of export/import permits. (World Bank Institute, 2002) Furthermore, when it comes to control of corruption, less than 10% of all countries fare worse than Honduras (World Bank Institute, 2002).

1.3 National Competitiveness: Country Diamond

Factor Conditions In addition to low social returns, Honduras faces challenges in terms of road infrastructure, connectivity and technology penetration, and electricity. Only 20% of all roads are paved, compared to more than 30% in Guatemala and Mexico. The percentage of telephone mainlines for every 1000 people is 5%, and barely 3% of total population has a cellular subscription. Only 2% of manufactured exports are high technology. Furthermore, companies experience frequent electricity outages. (UNDP, 2006)

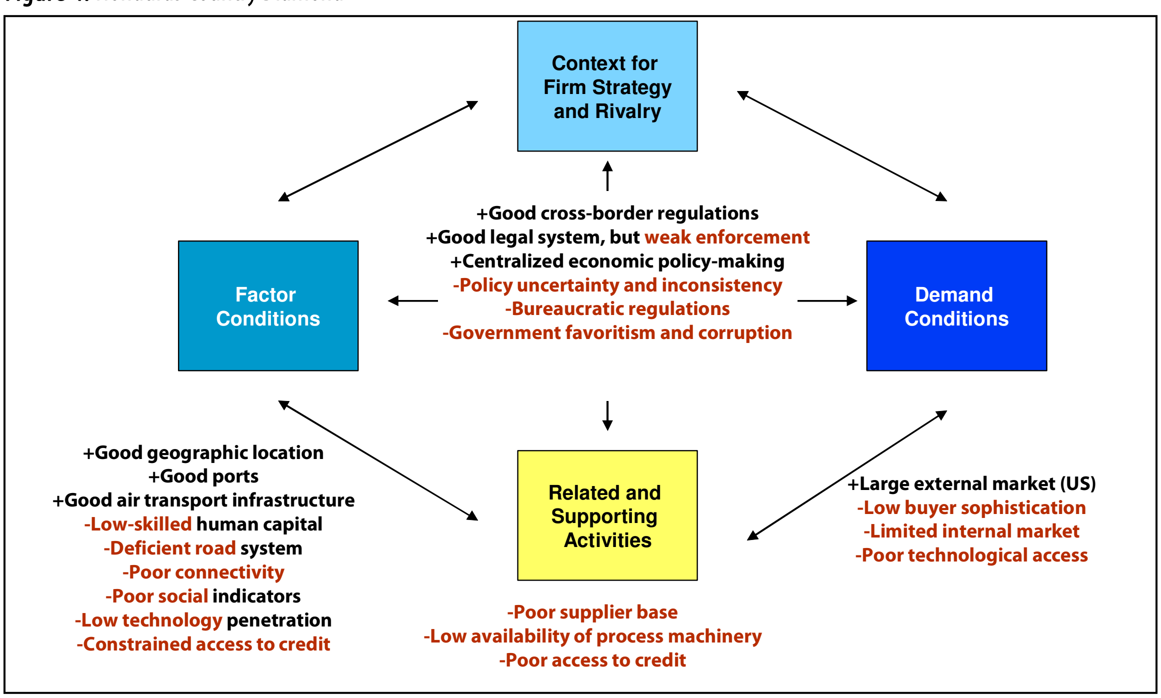
On the positive side, Honduras is in very close proximity to the United States, and it has a very good port and air transport infrastructure. Since 2003, Honduras has moved up more than 10 percentage points (p.p.) in port infrastructure quality (37th as of 2006) and air transport infrastructure quality (57th as of 2006). (World Competitiveness Report, 2006) San Pedro Sula International Airport has become the 3rd busiest in Central America.

Furthermore, President Callejas built a modern highway in 1994 that connects the Sula Valley with Puerto Cortes and other Atlantic ports. The government also significantly improved customs procedures by certifying Puerto Cortes and thus expediting the export process. Construction is currently in place for a major highway that will connect Puerto Cortes with El Salvador, and will thus facilitate movement of containers in the high traffic-corridor extending from the Pacific ports to the Atlantic ones. Technology penetration is expected to improve with CAFTA and the recent Law of Communications, which liberalized and promoted the development of the telecommunications and cellular infrastructure.

Context for Firm Strategy and Rivalry Between 2003 and 2006, Honduras moved up more than 10 p.p. in labor-employer relations, and more than 5 p.p. in business costs to corruption, but has performed worse in favoritism in decisions of government officials and prevalence of trade barriers. (World Competitiveness Report, 2006) The latter reflects the high level of corruption earlier mentioned. This is particularly relevant at the judicial level, where judges are frequently subject to bribes. In addition, the existence of large conglomerates operating in various industries as family-run businesses, has created conflicts of interest and resulted in the protection of these influential firms. Honduras has made, though, significant steps in reducing the cost of export and import procedures to the extent that today it leads the region, with costs that are less than half of those in other countries such as Guatemala, and Mexico. (World Bank Doing Business Report, 2006) All in all, however, Honduras ranks 105th of 116 countries in competitiveness, on close par with Guatemala and Nicaragua, but seriously behind Costa Rica, Mexico, and El Salvador. (Business Competitiveness Index, 2006)

Related and Supporting Industries and **Demand Conditions** Honduras has weak related and supporting industries as well as poor demand conditions, ranking 74th in local availability of process machinery, 72nd in local supplier availability, and 74th in buyer sophistication. (World Competitiveness Report 2006) The low degree of buyer sophistication is reflected partly in low internet penetration (10% of the total population uses internet). (UNDP, 2006)

Figure 4: Honduras Country Diamond



2. Cluster Analysis

2.1 Cluster Development: External – Trade Climate

Trade Incentives The global textiles and apparel industry has been shaped by multiple trade agreements that regulate differential tariffs and quotas to major apparel importers. In this backdrop, the Honduran apparel cluster did not develop organically, but was significantly stimulated by the global and regional trade climate that made Central America a natural candidate to be competitive in the industry, given its low labor costs, geographical proximity to the US and preferential trade treatments to the US vis-à-vis more cost efficient Asian competitors (Hall, 2007; Mortimore, 2003). The Multi-Fiber Agreement (MFA), the Caribbean-Basin Initiative and CAFTA are among the trade agreements that have been important catalysts for cluster growth and development.

Figure 5: Cluster Development – Influence of Honduras and US Incentives

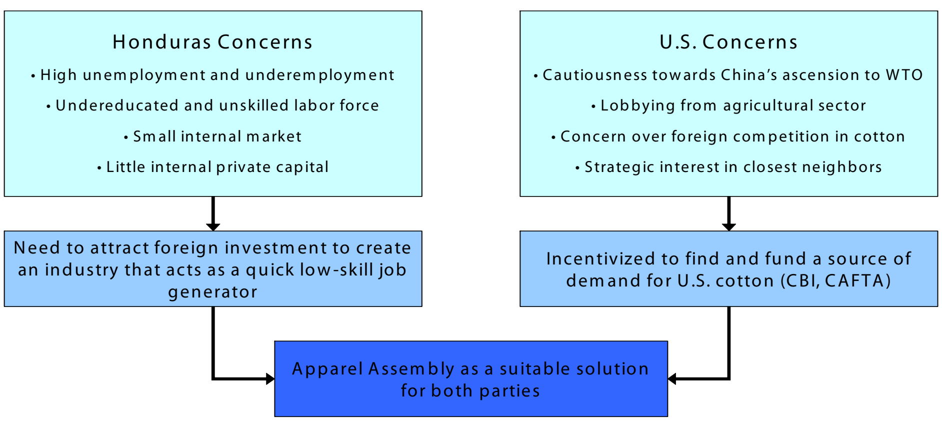


Figure 5 illustrates the way Honduras and US incentives were aligned and resulted in the development of the apparel cluster.

The MFA The Multi-Fiber Agreement (MFA) was established in 1974 to regulate global trade in apparel and textiles by creating and distributing differential trade quotas for each exporting country (World Trade Organization, 2007). Honduras and the larger Caribbean region received favorable treatment in the MFA vis-à-vis lower-cost Asian countries, creating a stepping stone for cluster development in terms of cost competitiveness against

Asian competitors (Maquila Solidarity MFA Factsheet). Starting in January of 2005, the MFA system of quotas begun a gradual phasing out, posing a significant shock to the global textile and apparel industry which has grown up shielded by trade distortions in many nations. While the phasing out of quotas was predicted to be beneficial for some countries (low-wage countries such as China and India), for Honduras this meant that they would be unable to compete only on low export and wage costs (MFA Factsheet).

Export Promotion in Honduras The Honduran government shifted to a strategy of export promotion in the late 1970s, with legislation to establish a free trade zone (FTZ) adjacent to Puerto Cortes. In the decades that followed, FTZ benefits were expanded significantly, at first by expanding FTZ's geographically, and ultimately by allowing companies in existing FTZ's to retain their benefits even if they expanded operations to anywhere in the country. Despite the multiple incentives that arose from trade agreements and export promotion in Honduras, the apparel manufacturing cluster only began to expand output significantly in the 1990s. This expansion coincided with legislation enacted in 1986 to promote investment in industrial parks in order to attract FDI in manufacturing industries (Interiano, 2004).

As of today, the Honduran government provides multiple benefits to companies situated in FTZ's. Exporting companies are exempt from export, local and federal income taxes, and taxes on raw material purchases (provided the materials are needed in manufacturing). Companies that operate in Industrial Parks are also awarded unrestricted currency conversion benefits, which allow them to hedge currency risks with more ease.[1]

The Caribbean-Basin Initiative (CBI) In 1974, the United States enacted the Caribbean Basin Economic Recovery Act, in order to help promote economic development in its troubled neighboring region. The Act was revisited in 2000 in the form of the Caribbean

[1] Pineda, 2007

Basin Trade Partnership Act or Caribbean Basin Initiative (CBI), and the region was granted further preferential treatment for apparel products that superseded those included in the MFA, thereby sustaining its attractiveness in apparel manufacturing (Hall, 2007).[2] The new set of quotas would be applicable provided that apparel complied with an expanded set of rules of origin – certain raw materials could now be sourced from anywhere in the Caribbean Basin beneficiary countries as well as the US (U.S. Customs, 2001). Given that cluster output was significant by this time, the AHM created a special commission to take charge of distributing this quota among the multiple apparel manufacturers (Interiano, 2004).

Liberalization of textiles and apparel trade In 1994, the World Trade Organization enacted the Agreement on Textiles and Clothing (ATC) in an effort to liberalize world textiles and apparel trade. The ATC was a transitional instrument that replaced the MFA, and outlined a gradual removal of MFA-imposed quotas. To this end, quotas would be gradually phased out over a ten-year period which ended on January 1, 2005 (WTO, 2007). China, the world's largest and lowest cost T&A producer, would not reap full benefits of trade liberalization until it completes its ascension to WTO member status. Nevertheless, the US signed a bilateral Memorandum of Understanding with China in 2005 in order to regulate and gradually extend quotas for Chinese apparel exports to the US. Many of the categories with expanded quota benefits coincide with those on which the cluster traditionally focused, including bras and cotton and man-made fiber knit shirts (Office of the USTR, 2005).

[2] CBI was established in 1983 and granted non-communist Central American countries duty-free access to the US market for a variety of products, including many manufactured goods. The 1986 amendment included apparel products with fabrics made and cut in the US. The preferential trade treatment for apparel products was a significant factor in spurring the maquiladora industry in Central America and consequently in Honduras (Hall, 2007).

CAFTA[3] The implementation of DR-CAFTA free trade agreement represents another expansion of Honduras' duty-free access to the US market, thereby further lessening the negative impacts of trade liberalization (CRS, 2005; Hall, 2007). Under CAFTA, textiles are duty and quote free if they comply with the rules of origin based on yarn-criteria whereby the yarn has to fall into the origin criteria.[4]As Honduras is very dependent on the US for exports, CAFTA is crucial in maintaining the cluster, but not sufficient for sustaining its competitiveness. Given that Honduras' cost benefits are largely a result of trade distortions, the liberalization of trade represents a significant challenge to the apparel manufacturing cluster. In the near future, Honduras has been shielded from the full shock of China's WTO ascension, both because of the CBI quota benefits, and the bilateral restrictions on Chinese garments in the US. Yet, the cluster must prepare itself for a new level of competition, as its cost advantage will be nullified if and when US-China trade relations are further realized.

2.2 Cluster Development: Internal: Institutions for Collaboration[5]

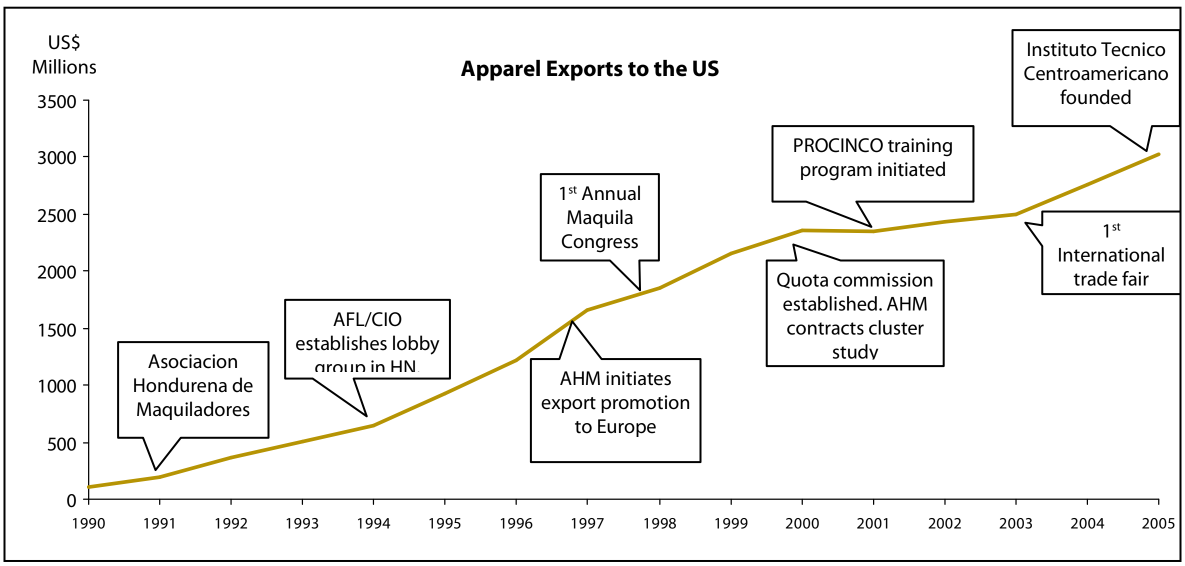
Asociación Hondureña de Maquiladores (AHM) In 1991, key individuals in the nascent apparel manufacturing cluster joined to charter the AHM. In its initial configuration, the AHM was a coalition for lobbying purposes, intended to promote the cluster's interests in the national regulatory environment.[6] As the cluster expanded, so did the functions of the AHM.

Labor Coalition In 1994, the US trade union AFL-CIO initiated a public relations attack against the Honduran apparel cluster, wherein two apparel factory employees were encouraged to make allegations of improper working conditions in Hondurans. These

[3] Central American Free Trade Agreement
[4] This is labeled as the "yarn-forward" criteria
[5] Porter stresses the importance of institutions for collaboration (IFCs) in cluster development as "formal and informal organizations that facilitate the exchange of information and technology and foster cooperation and coordination" thereby being able to improve the business environment. (Porter, 2007)
[6] Interiano, 2007

allegations were broadcast in US mass media. More than a threat of labor rebellion against cluster management, these allegations threatened to tarnish the country's image in the US, which could result in public boycotting of Honduran-made apparel with devastating consequences for the cluster. In response, the AHM served as a catalyst for the cluster to unite with labor organizations that represent the interests of most cluster employees. The result was a labor-management coalition that served dual purposes of ensuring appropriate work standards, and propagating a positive image of the cluster (Interiano, 2004).

Figure 6: Apparel Export Growth and Cluster Origins



Source: Asociación Hondureña de Maquiladores; team analysis

Functional Development of the AHM Other critical functions of the AHM are centered on value-adding activities that are cost-prohibitive for individual firms. As such, the AHM collects industry information for distribution among its members, also serving as the historical archive of cluster performance. In addition, the AHM has fostered benchmarking in the cluster, and propagation of technology and best practices, by organizing an annual conference started in 1998. It also serves as a promotion agency, embarking on a promotion initiative towards European markets in 1997, and organizing the first international trade fair in Honduras in 2003. Most critically, the AHM continually strives to understand the strategic issues facing the cluster – for example, the AHM contracted a consulting firm to conduct a study of the cluster in 2000, educating member firms of future challenges (Interiano, 2004).

Investment in Human Capital Although apparel manufacturing requires limited education in its employees, operating the relevant machinery does require a number of technical skills. In addition to in-house employee training in each individual organization, the cluster has promoted the creation of several training programs. In 2001, the AHM helped coordinate the creation of PROCINCO, an effort to provide specialized technical skills to 30,000 cluster employees (Interiano, 2004). More recently, the Central American Polytechnic Institute was opened in San Pedro Sula, with course offerings tailored to cluster needs as well as English language training.[7]

2.3 The Global Textile / Apparel Market and Value Chain

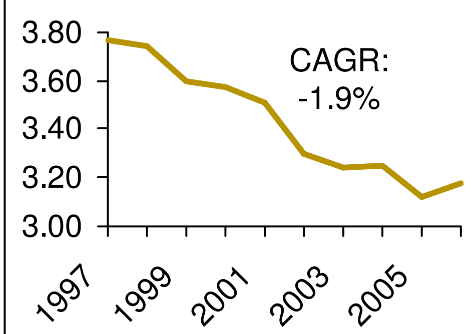
Global Trends The textiles and apparel cluster has experienced three major global trends. First, low-labor cost producers, such as China, Bangladesh, Cambodia, and Vietnam have developed production capacity and quality and increased productivity (Emerging Textiles, 2007). As a consequence, competition has increased on a global scale, leading to a decline in prices (see **Figure 7**).

Second, trade barriers have been removed with the creation of free trade areas and the expansion of the World Trade Organization (WTO), what has drastically changed the major global trade flows. For example, China's ascension to the WTO was followed by a huge surge of Chinese exports to the American market (see **Figure 8** for a comparison with Honduran exports to the U.S.). As a result, some of these trade barriers were re-imposed by

[7] Interiano, 2007

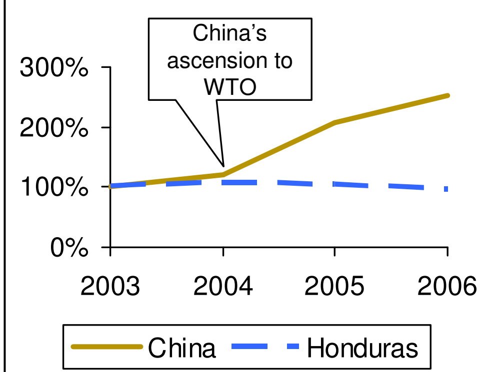
the U.S. (Emerging Textiles, 2007). Third, retail-oriented branded apparel chains, such as Zara and H&M, have gained become more powerful and relevant (IFM et al., 2004). Their strategy is based on a "fast fashion" model, in which the value chain is leveraged in order to produce trendy, fashion-oriented apparel at affordable prices. Thus, companies such as Zara and H&M place high importance on lead times and quality (Ghemawat & Nueno, 2003).

Figure 7: Average Price of U.S. Apparel Imports (US $)



Source: Datamonitor; OTEXA; team analysis

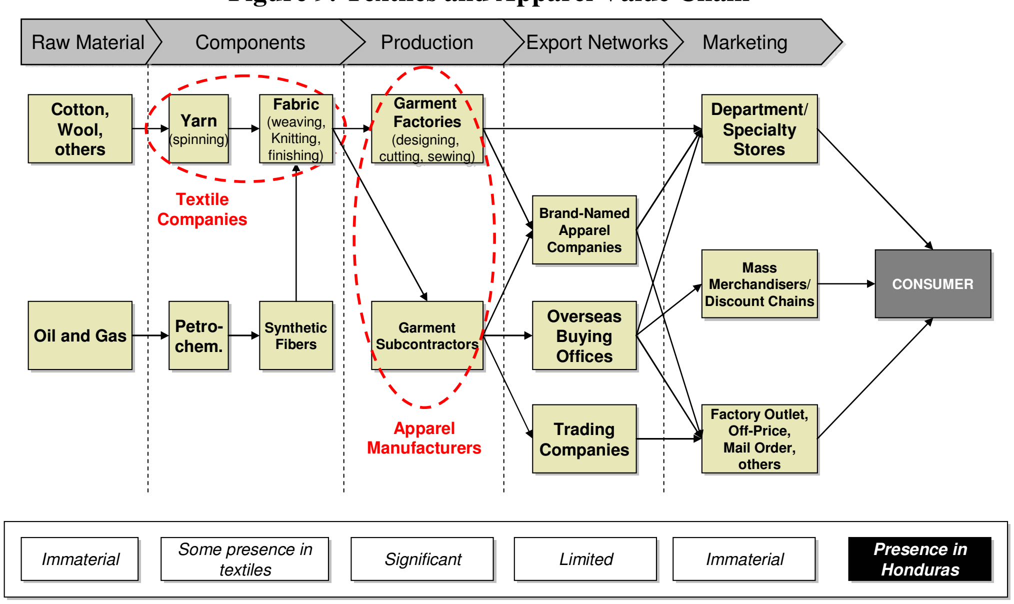
Figure 8: Apparel Exports to the U.S. (2003 = 100%)



Source: OTEXA, U.S. Trade Association, team analysis

<u>Value Chain</u> The textiles and apparel value chain is composed by five main parts: raw materials, components, production, export networks, and marketing, as shown in **Figure 9**.

Figure 9: Textiles and Apparel Value Chain

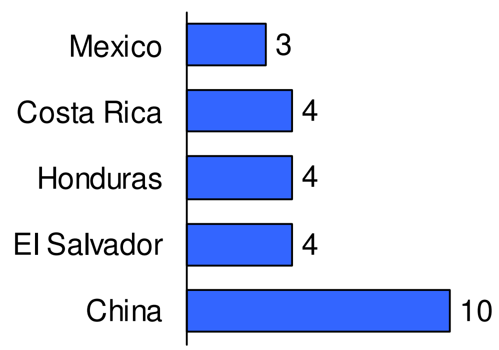


Source: Gereffi & Memedovic (2003); team analysis

Moreover, the value chain is highly consumer-driven: consumer tastes and trends change very quickly, and retailers are focused on gathering information about demand. This information is rapidly passed upstream to apparel manufacturers and textile companies, which adjust their production to meet consumer tastes.

Therefore, lead and shipping times are critical for this cluster. As a consequence, location plays a very important role in global trade flows. For instance, 79% of the Eastern European exports go to Western Europe, and 74% of the Latin American exports go to the U.S. market (USDA, 2007). Given that Honduras has a significant advantage over Asian competitors on lead times to the U.S. market (see **Figure 10**), it is no surprise that the Honduran textiles and apparel clusters have been focused on exports to the U.S. Nevertheless, the advantage of being geographically close to the U.S. also brings some challenges to the cluster in Honduras. As a requirement of trade agreements with the U.S., Honduras has to import raw materials (such as cotton) from American suppliers. Consequently, Honduras is relegated to the production part of the value chain, with no presence in raw materials. Moreover, since the Honduran market is very small when compared to the American market, local companies have little expertise in branding, marketing, and retailing.[8]

Figure 10: Lead Time to the U.S. Market (Weeks)



Source: USITC; team analysis

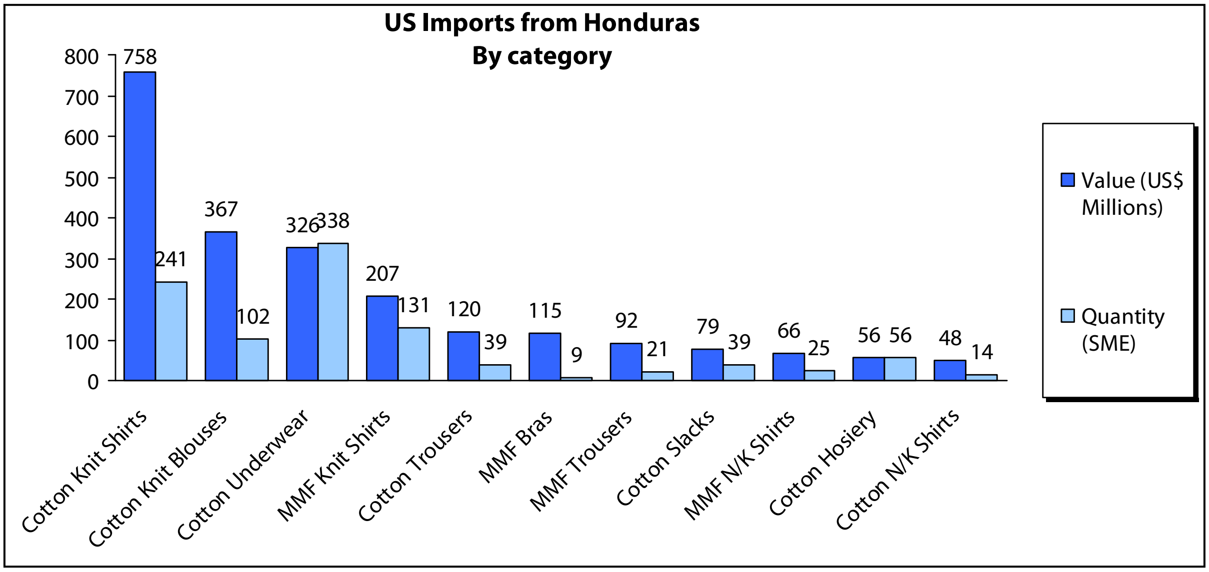
[8] Argüello, 2007

2.4 Cluster Positioning, Product Specialization and Cluster Diamond

Cluster Production As discussed above, the majority of cluster output continues to be exported to the US. Honduras apparel exports to the US increased by a 25% CAGR between 1990 and 2005, placing Honduras as the third largest exporter of apparel to the US behind China and Mexico (Interiano, 2004). In 2005, Honduras apparel exports to the US were in excess of $2.5 billion, of which approximately $1.5 billion were value added in Honduras (Banco Central de Honduras, 2005). In 2005, 84% of Honduras apparel entered the US in utilization of trade agreement quotas, utilizing fabrics originated from the US (Office of Textiles and Apparel, 2007). The cluster's contribution to the national economy is also largely significant. In 2006, the cluster contributed 7% of the country's total GDP, compared with 18% for all other industries combined. Apparel exports constitute almost half of all exports to the US. It has also been a significant contributor to job creation – 5% of the Honduran workforce was employed in "maquila" in 2006 (BCH, 2005).

Product Classification In 2006, 42% of total cluster exports to the US were knit shirts and blouses (55% of exports in terms of value), and 30% was cotton underwear (13% of total value). The low value of these items suggests commoditization: on average, the US pays $2.77 per square meter equivalent (SME) of shirts or blouses from Honduras, and $0.97 per SME of cotton underwear, compared to $21 per SME of wool suites and $11 per SME of bras made out of man-made fiber (MMF). In aggregation, the prices of these products from all exporting countries are $4.54 for equivalent shirt and blouse categories, and $1.22 per SME of cotton underwear, reflecting the current cost-competitiveness of Honduras in these categories. In addition, cotton and man-made fiber products are notably lower priced than other materials such as wool and silk (OTEXA, 2007).

Figure 11: Product Segmentation by Quantity and Value



Source: OTEXA; team analysis

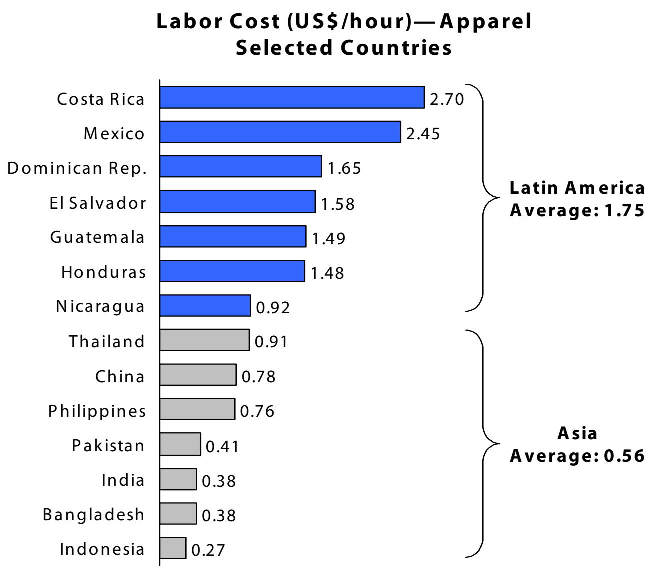
Apparel Cluster Diamond The Honduran apparel cluster mirrors some of the major challenges and opportunities identified in the country competitiveness analysis. In particular, good geographical location, low-cost labor, good port infrastructure and customs procedures and favorable trade and legislative climate emerge as the most valuable competitive advantages for the development of the cluster and echo the competitive advantage of the Honduran economy. Major challenges remain in the human capital domain, in particular the lack of trained managerial talent, underdeveloped financial markets, poor electricity supply hindering firm operations, and dependency on one external market.

Factor (Input) Conditions

Location, Port Infrastructure and Air Transport Mirroring the competitive advantages identified for country's development, close access to the US market, good port and transport infrastructure are crucial in maintaining the operational efficiency of the cluster. However, the deficient transportation system indicates that further improvement in infrastructure is needed.

Labor costs Labor costs account for about 15%-20% of total manufacturing costs in the apparel industry. While labor costs in Honduras are low relative to other Central American countries and Mexico, they are substantially higher than in China, India, and Pakistan.

Figure 12: Comparative Labor Costs in the Apparel Industry



Asian average labor costs are US$ 0.56 per hour, while Central and South American labor costs are three times higher, averaging about $US 1.75 per hour. While labor may be relatively cheaper, efficiency and productivity remain major concerns.

Source: USITC; team analysis

In addition, there is a shortage of trained managers, marketers and expert technicians. The shortcoming of Honduras' educational system earlier discussed compound this issue.

Infrastructure (electricity) Poor electricity supply hinders the productivity of apparel manufacturing firms. Econometric analysis shows that power outages have a big negative impact on firm productivity, indicating that a 1% increase in the duration of power outages (hours per day) implies a 0.02-0.1% decline in productivity (ICA, 2004). Compared to its peers and competitors, Honduran firms suffer a higher percentage of sales lost due to electrical outages (3.62% vs. 2.52 in Guatemala and 1.23 in China) and only compared to Nicaragua does Honduras fare better (Enterprise Surveys, 2003).

Access to Capital Access to finance is a constraint for apparel firms, as the lending interest rate (in local currency) is very high and small and medium sized firms are even more constrained in terms of credit. The liberalization of the banking sector in Honduras during the 1990s resulted in a number of small and weak banking institutions, due to lax regulatory procedures (ICA, 2004). The financial market, especially after the Hurricane Mitch effect, is still plagued with loan delinquency and a high number of non-performing loans (ICA, 2004).

Demand Conditions

Given that companies operating in FTZ's retain their benefits only if their output is exported, the apparel cluster doesn't serve local demand. The only way around it is for companies to establish a separate factory outside of a designated FTZ, literally forging a split between their export and local operations. Yet local demand for apparel is reportedly modest, and its attractiveness as a business opportunity pales in comparison to exporting to the U.S.[9]

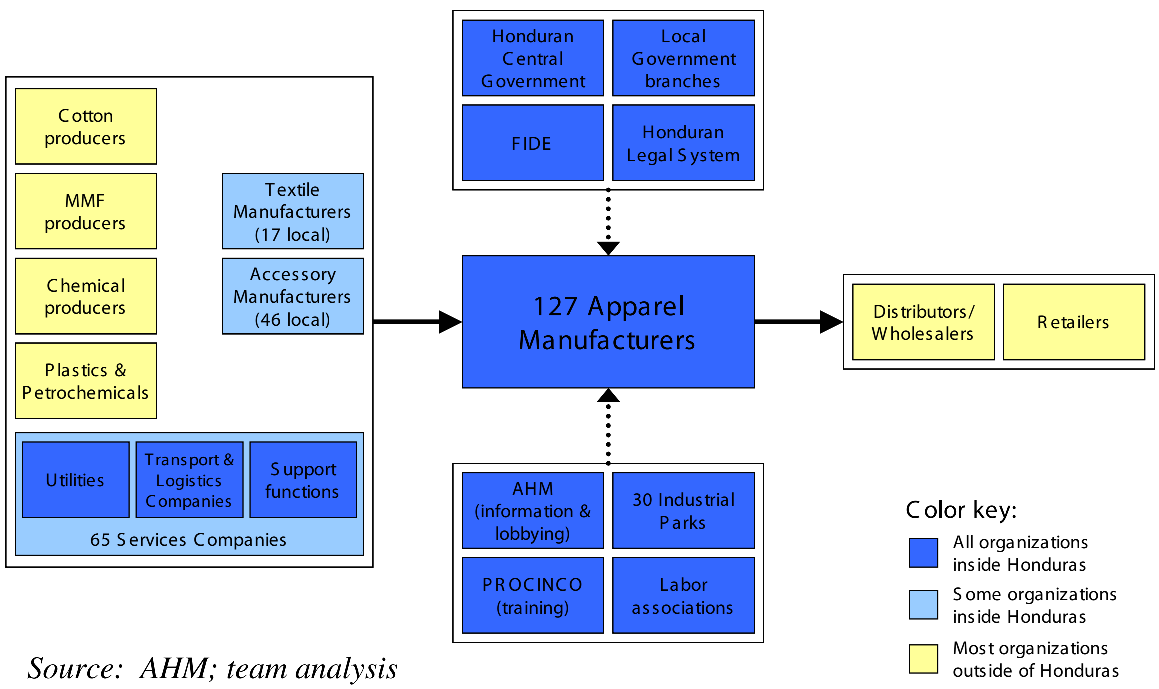
In contrast, \$2.5 billion worth of apparel was exported to the United States in 2006. The principal customers for Honduras apparel are United States brands, some which have invested in wholly-owned factories in Honduras. Other clients usually buy from independently-owned manufacturers, coordinating their purchases from brokers or intermediaries (CLACDS, 2004). In both scenarios, buyer-led sales have a compounded negative effect for cluster development: first, because there is little need for each business to invest in marketing as long as orders keep pouring in; and second, because businesses have limited bargaining power with the buyer as long as they are not differentiated, forcing them to limit their production to the item categories the buyer demands.

[9] Pineda, 2007

Related and Supporting Industries and Cluster Map

The apparel manufacturing link within the apparel value chain is a relatively straightforward operation, requiring few and simple support functions, and linking to few related industries (see **Figure 9**). Furthermore, the apparel cluster in Honduras remains in its infancy, and continues to be shaped by distorted incentives that result from barriers to trade in the global textiles and apparel market. Given the rules of origin embedded within the applicable trade agreements, there is limited financial incentive for private investment in textile and apparel inputs in Honduras. In contrast, the concentration of "maquiladoras" in the district of Choloma has helped stimulate modest growth in the most relevant supporting industries (see **Figure 13**).

Figure 13: Cluster Map



Source: AHM; team analysis

Inputs The growth in apparel manufacturing has yet to incentivize the agricultural sector in Honduras to embark upon cotton production. Much of the textiles used are also sourced directly from the United States, although there is moderate local incursion into textile production – 17 firms as of 2006, mostly concentrated in cotton fabrics – 84% of inputs (yarn and fabrics in different stages of production) were sourced from the US in 2005 (OTEXA, 2007). Machinery used in fabric and apparel production is sourced entirely from abroad (CLACDS, 2004).

A similar picture arises in accessories and secondary materials. Although as of 2006, 46 firms reported producing accessories for the apparel cluster, total accessory production is limited given the relative simplicity of the types of apparel items made in Honduras.[10] The more recent changes to CBI rules of origin, which provide greater allowance for inputs sourced from within the Caribbean basin, should spur faster growth in fabric manufacture in the short term.

Support Several supporting industries have mirrored the growth in the apparel cluster. Given the demanding requirements to reduce speed to market (or in this case, speed to foreign market), local transportation and logistics have experienced significant improvements. Increased demand for these functions, coupled with public promotion and private investment in modern industrial parks and in Puerto Cortes, has contributed to the growth in transportation and logistics in Honduras – transportation, storage and communications grew 13.5% CAGR between 2001 and 2005 (BCH, 2007). Puerto Cortes itself has substantially improved in operations and increased in capacity (Empresa Nacional Portuaria, 2007).

Other relevant industries have also experienced moderate to significant improvement and/or growth, for example telecommunications, the financial sector, and utilities (see Factor Conditions). Although only partially attributable to the cluster, apparel manufacturers are undoubtedly benefiting from these improvements.

[10] Interiano, 2007

Other Finally, other types of "maquila" firms have sprouted alongside the apparel cluster. In 2005, 75 firms assembled products ranging from wood to tobacco. These investments arise from a distinct set of incentives, but share many of the inputs with the apparel cluster. They are generally collocated in the various industrial parks, hire from the same labor pool (requiring similar technical training), and also interact with the transportation and logistics sector (BCH, 2005).

In summary, Honduras exhibits very moderate strength in Related and Supporting Industries. Although there is recent incursion into local fabric production, the majority of material inputs are still sourced from abroad. Impending relaxation in global quota restrictions on apparel will necessarily expose Honduras' weakness in this area, likely forcing an Eastward shift in sourcing. Furthermore, improvements in transportation and logistics have benefited the cluster substantially, but the quality and efficiency of these services remains modest by global standards.

Context for Firm Strategy and Rivalry

The cluster has continuously experienced momentum in the country due to the government's attitude towards it as a "key priority" in the development of the economy. From its onset, the cluster was developed by foreign investors and thus the government has always seen it as a way of signaling to other outside parties the stability and opportunities that await for them in Honduras. More specifically, President Callejas' government in 1994 instituted the "Industrial Parks Act" which protected the trade condition where most of the maquiladoras are located and granted certain exemptions from many of the country's stringent labor laws to these firms.

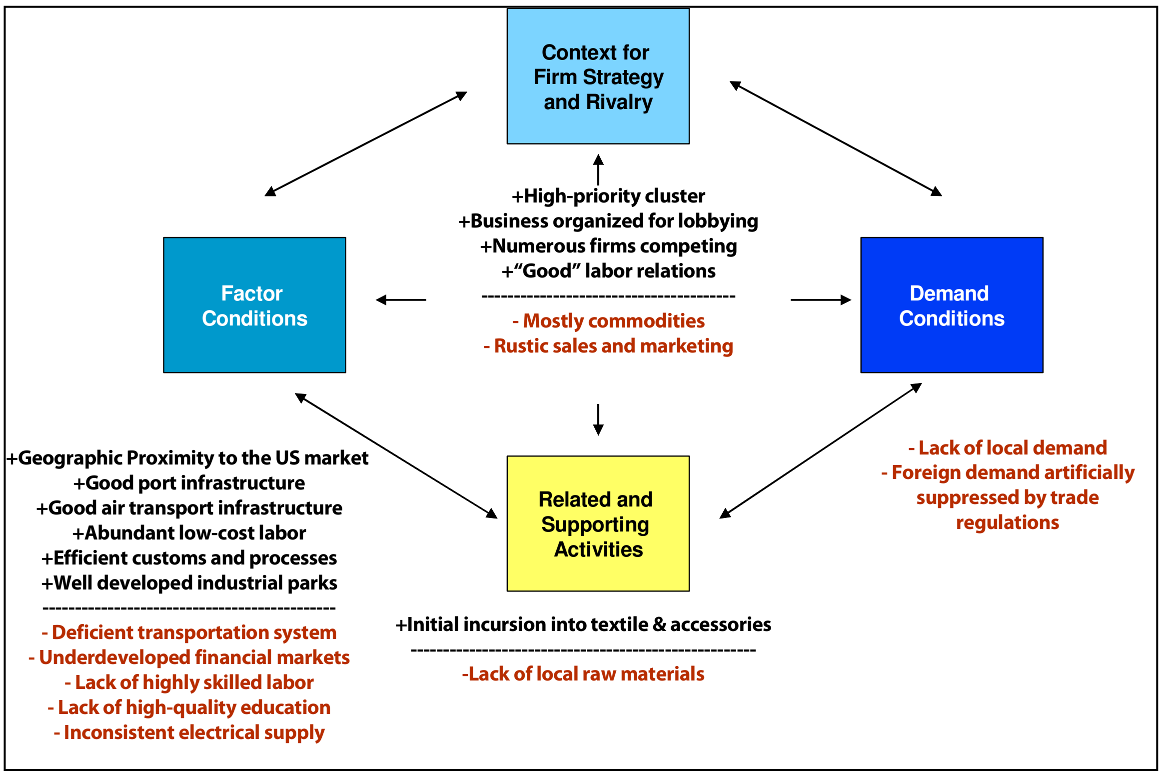
Futher, this particular cluster has an industry-organized association for lobbying, training, information-sharing, and other relevant activities. The so-called "Asociación de Maquiladores" has evolved into a fairly strong institute for collaboration and certainly one which has a tremendous amount of potential to do more for the cluster.

Finally, in Honduras, unlike other Central American countries, there is a strong and formal alignment between business and labor organizations within this cluster. Indeed, unions are for the most part un-organized in most of the firms within the cluster because managers have sought to repeatedly align the worker's interests with theirs. However, tensions have been on the rise since CAFTA was signed and certain maquilas began to defect to El Salvador. In response to such a move, the government decided to set a cap on wages in the southern part of Honduras – giving these firms an incentive to stay in the country by relocating some of their most labor-intensive operations in this region. This exacerbated the tensions between firms such as Lovable and workers in industrial parks located in the south such as Zip Atacama, all of which have resulted in numerous strikes and road blocks in the first half of 2007.

Ironically, the strong set of foreign investors that is present within this cluster has also allowed for certain demand conditions preclude the development of the cluster in the face of increasing competition and ever-liberalizing trade conditions: most of the cluster's firms still have a full dependence on foreign demand, and in particular low-value added commodities where firms such as Fruit of the Loom and Hanes can execute a "diversification strategy" by sourcing their products from countries such as Pakistan and hedging their risk with others such as Honduras. What this has result in is an underdeveloped sales and marketing capabilities throughout the industry. Shockingly, the design departments within these firms are very rudimentary vis-à-vis those in China, especially in well-known firms, as Li & Fung.

Moreover, competition is fierce for the same orders among numerous firms in the cluster. When a firm can't individually fulfill a certain order, they still compete for it because they rely quite heavily on sub-contractors to supplement their production. Thus, what we have is an industry heavily focused on low-value commodities type orders which are highly dependant on foreign demand and where the overall value pie is being continually fought for rather than expanded.

Figure 14: Honduras Apparel Cluster Diamond



2.4 Strategic Issues

The current apparel assembly model in Honduras that is based on low-skilled and low-wage labor, preferential access to the US market via trade agreements and tax incentives reflects more of a so-called "illusory competitiveness" (Mortimore, 2003) than a cluster based on authentic competitive advantages. The dependency on preferential treatment and location is not a sustainable strategy for the cluster. Considering the liberalization of global textiles & apparel trade, and Asian countries' recent investments in improving product quality and lead times, it is clear that Honduras will not be able to compete based on labor costs. These external challenges require a major strategic shift for the textiles and apparel cluster in Honduras.

In addition, the Honduran cluster also faces several internal challenges, such as the lack of managerial capacity and of a skilled labor force, the absence of an innovation and research culture, no marketing, branding, or designing skills, the lack of a long-term vision for the cluster, the dependence on commoditized products, and the overdependence on the U.S. market. Given all these constraints, the strategic alternatives for the Honduras textiles and apparel cluster are very limited. However, a few Honduran firms have made inroads in dealing with these external and internal challenges to shift their business model towards a higher value-added strategy that is less dependent on cost competitiveness (see **Box 1** for company profile). In the next chapter, we propose a comprehensive strategy for the cluster.

Box 1: Higher-Value Added Strategy – *Lovable in Honduras*

Started in 1965 by Mr. Juan Canahuati, one of Honduras' most successful entrepreneurs, Lovable is one of the most influential firms in the cluster both because of its size and its ability to innovate both in terms of production and marketing itself worldwide.

From an initial focus on lingerie to now menswear, children apparel, and other similar products, Lovable has amassed an unparalleled reputation in the apparel cluster in Honduras – it has 9,000 workers and produces more than 3 millions pounds of apparel products for a coveted group of customers that includes JCPenney, Sara Lee, Costco, Jockey, and more. Recently, it has opened operations in the southern part of the country to take advantage of lower wages.

Challenges

- Catering to low-value, commodity type orders
- Competing solely on price and trade protection

Opportunities

- Creating and expanding brand by focusing on retail
- Moving into higher-value added or "fast-fashion" products

Recent Strategy Shifts

- Starting to integrate vertically and control their supply chain better by producing their own fabrics
- Creating a more sophisticated design and marketing department
- Lovable now has retail, catalog, and even online presence

3. Recommendations

3.1 New Strategy: From Commodity-based to Higher Value-Added Offerings

A sustainable strategy can only be achieved by making explicit trade-offs in order to position a competitor in a unique space that will be difficult for others to replicate. In formulating a strategy for the Honduran cluster, we aim to recognize the multiple goals the cluster has with regards to Honduras' economic development. To this end, our strategy incorporates the following aims:

1. Positioning in a market and segment that is large enough to sustain high output and employment. Most Latin American economies are not as immediately attractive as the USA given smaller populations and lower purchasing power. Nevertheless, future spillover effects of brand investment will allow for entry into other markets in Latin America and beyond.

2. Avoiding segments where competition is based on costs, in order to prevent wage and margin erosion, in favor of segments where efficiency and closeness to the customer allow firms to capture more value.

3. Increasing the opportunity to add value within Honduras, by integrating vertically both upstream and downstream to more value-adding activities such as design and marketing.

4. Differentiating Honduras apparel in the eyes of final customers, fostering the consumer loyalty that ultimately leads to the cluster's sustainability regardless of shifts in trade barriers

The new strategy for the Honduran cluster should leverage its unique competitive advantages, and depart from the basic apparel assembly model that is not sustainable in the long run. When compared to its Asian rivals, Honduras has at least three critical strengths. First, the geographical proximity to the largest market in the world constitutes a great competitive advantage in lead and shipping times. Second, the cultural affinity between Latin

America and the U.S. is significantly higher than that between Asia and the U.S.; the Latino population in the U.S. has surpassed 30 million people. Third, the textiles and apparel cluster in Honduras constitutes a high priority sector for the government, and theoretically the government should be more willing to adopt policies that would benefit this sector.

With this in mind, we propose a two-pronged strategy for the cluster:

1. Develop **proprietary mid-market brands** in the U.S., initially targeting the Latino population. Considering the high number of successful Latin American brands in the U.S. market, such as Havaianas, Kosiuko, Carolina Herrera and Oscar de la Renta, and the growing influence of Latin culture over Main Street USA, Honduras can credibly position itself to claim this segment. However, this will require the development of marketing and design skills, substantial investments in country and brand marketing, and investments in product quality and portfolio diversification.
2. Focus on the **fast fashion segment in the U.S.**, taking advantage of low lead times to this market. As a consequence, the cluster will have to diversify its product offering, currently overly focused on commoditized products (such as T-shirts) and underwear, and substantially reduce its time to market. Moreover, the fast-fashion focus requires that the Honduran apparel firms minimize their reliance on intermediaries in order to gain full access to the US market, improve their direct relationships with US retailers and increase their capacity for fashion responsiveness.[11]

Upgrading the apparel cluster towards these two goals is a long-term strategy and represents a 10-year vision for the cluster. It will require collaborative actions from the Honduran government, the apparel firms, as well as institutions for collaboration (educational, trade,

[11] As was discussed in Microeconomics of Competitiveness, internationalization theory of developing country's firms stresses the importance of gaining direct access to foreign markets "rather than relying solely on intermediaries" (Porter, 2007).

and organizational). Discussed below are actions the government should undertake in order to create a more favourable business environment fostering increased productivity of Honduran apparel firms, followed by cluster-specific recommendations for all constituents of the cluster (private sector, IFCs, universities, and government).

3.2 Country recommendations

The Honduran government needs to act on two main fronts so as to create a more favorable climate for the apparel cluster to shift strategy and be more competitive (see **Figure 15**).

First Priority The government should act immediately on easing the costs of doing business. This is an area in which progress can be achieved more easily, as significant improvements do not require a long period of time. However, whereas improvements can be made swiftly, political will is nevertheless crucial.

First, as explained in the country analysis, one of the two major constraints for growth is the high level of corruption. While tackling corruption takes a long period of time and an immense degree of political will, the government can nevertheless make significant advances in areas where corruption is most harmful for the country. In a country that depends largely on trade, corruption is most detrimental in customs. Therefore, the government should focus on preventing corruption at the customs. To do that, the government need not fight corrupt officials head-to-head, as that may cause political instability, but rather fight corruption by making processes more transparent. That will reduce the likelihood of corrupt practices. In this respect, the government should invest in the short-run in investing in automation and simplification of trade procedures. In the long-run, the government can then focus on actions that require a greater overhaul, such as on reducing bureaucracy at the overall government level and on improving legal implementation and enforcement.

Second, the government can work on expanding the efficiency of its port and airport infrastructure to utilities. Significant progress can be done by focusing on reducing electricity costs and stimulating investments in telecom. Specifically, the government should deregulate the electricity sector and provide incentives to investors in the telecom industry.

Second Priority While easing the costs of business can be a quick step to attract investment, it is also important for these investments to be long-lasting. That requires that the government invest in education and foster an innovation culture.

First, the government can partner with association and the private sector in order to tie curricula with the needs of the economy and of the most important clusters in the economy. For the apparel sector, that will help create the needed managerial capacity and higher labor productivity. In the long-run, the government should invest in the quality of primary and secondary education, which as seen in the country analysis is the second major growth constraint in the economy; the government can achieve that by (a) improving teacher training, such as through teacher exchange programs with Costa Rica, and (b) by integrating technology in the classroom setting. With respect to the latter, the Honduran government should invest in acquiring low-cost computers, such as the $100 laptop or the Intel's low-cost laptop. The Brazilian government has already established agreements in this respect.

Second, the government should focus on spurring a culture of innovation, which can act as a platform for moving the economy in the very long-run to an innovation-driven economy. In the short-run, it can do that by integrating technology in the government's operations (e.g. e-government), while in the medium-run it can focus more on providing incentives for companies to invest in R&D and increase access to technology in schools.

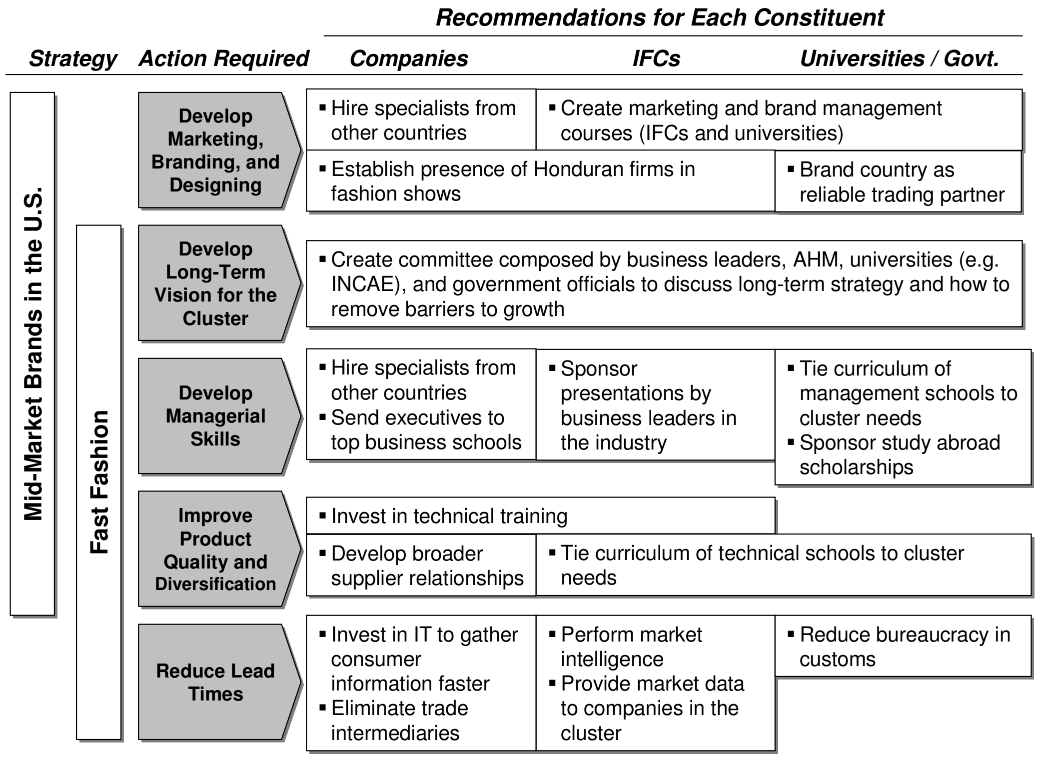
Figure 15: Recommendations for the Government

	Growth Constraint	***Impact on Cluster***	***Short-Term Actions***	***Long-Term Actions***
Decrease Cost of Doing Business	**Poor Business Environment**	▪ Higher cost of doing business in the country due to bureaucracy, corruption, and lack of investor protection	▪ Reduce bureaucracy and corruption in customs – invest in automation, simplify rules	▪ Fight corruption and reduce bureaucracy in all government levels ▪ Improve legal system and enforce legislation
	Poor Infrastructure	▪ Irregular electricity supply reduces productivity ▪ Lack of telecom infrastructure hinders investments in IT and automation	▪ Deregulate electricity sector to attract investors ▪ Provide incentives for investments in telecom infrastructure	
Invest in Human Capital	**Poor Educational System**	▪ Lack of managerial capability ▪ Lack of skilled labor; lower labor productivity	▪ Tie curriculum of universities and technical schools to cluster needs	▪ Increase access to university-level education through grants and fellowships ▪ Significantly invest in primary and secondary education
	Lack of Innovation Culture	▪ Lack of innovation in the cluster	▪ Increase access to technology in schools (e.g. computers and science labs) ▪ Provide incentives to companies which invest in R&D	

3.3 Cluster Recommendations

Apparel firms, IFCs, universities, and the government need to engage in a concerted and focused effort to shift the assembly, commodity-based model of the Honduran apparel cluster into a mid-market niche-focused model that is competitive in the fast-fashion industry. This will require the development of new capabilities for the cluster. As a consequence we propose the following recommendations, summarized in **Figure 16**. Recognizing the implementation challenge of such a strategic shift, we devised an implementation and prioritization guide described in **Figure 17**.

Figure 16: Recommendations for the Cluster



1.Develop Long-Term Vision for Strategy Upgrading

As **Figure 17** indicates, the easiest and highest-impact first step should be to develop and disseminate a long term vision for the cluster. While some companies such as Lovable (see **Box 1**) and Confecciones Internacionales S.A. (full-package production) have on their own taken action to minimize the strategic threats to their businesses and move away from the commodity-based model, a long term vision for the cluster is needed to improve coordination among all the participants of the cluster. The **AHM** should be responsible for carrying this vision, first by creating a committee composed by business leaders, universities (e.g., INCAE) and government officials (e.g., trade negotiators). The public-private composition of the committee should align the political will with the business incentives and create a 10-year plan that requires the participation of all actors. When disseminating this vision to the apparel firms, AHM and the government should provide firms with short-term incentives to subscribe to the new model, such as partnerships with outside retailers or IFCs, special credit lines to meet the investments used for upgrading the company strategy, or more inclusive participation and benefits in cluster organizations. Furthermore, the AHM should develop a system of yearly evaluation by (a) benchmarking cluster performance against China and other Asian competitors, (b) identifying number of firms that are successfully adopting the new strategy and firms that still remain pure commodity-based, and (c) track changes in product segmentation per value and quantity.

2. Improve Managerial Skills

The next strategic action for the cluster should be to improve managerial skills, since these capabilities will be the driving force behind the implementation of the new strategy. Although improving managerial skills is not an easy action to be undertaken, its high impact on the cluster development will certainly pay off the efforts (see **Figure 17**). As short-term measures, companies should hire specialists from other countries and send executives to top business schools, until human capital can be developed locally.

3. Leverage lead times with goal to use position and get into fast-fashion

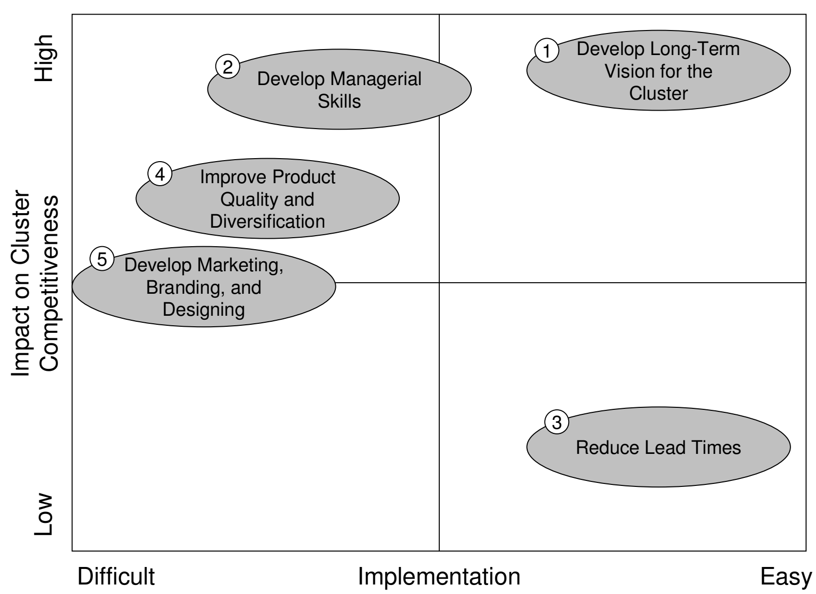
While migrating towards the proposed strategy, the Honduran cluster should keep using its advantages in location, lower shipping costs, and smaller order sizes which can have shorter lead times compared to Asian competitors. These competitive advantages position Honduras perfectly to target the fast-fashion market, and the cluster should aim at being the leading supplier for fast-fashion companies such as Zara and H&M in the region.

4. Vertical Integration

Finally, Honduran firms need to make their presence more significant in the more value-added parts of the value chain – design, production, branding, and retail. However, companies need to be more competitive in product quality, as well as expand their product portfolios. Moreover, firms must develop marketing, branding, and designing capabilities.

Although this piece of the strategy will certainly bring significant value to the cluster, it is also the most difficult to implement. Therefore, companies should focus on shorter-term actions, such as develop stronger links with the full-package suppliers from Mexico. In addition, IFCs (such as AHM) and larger firms can build strategic alliances with East Asian firms that have developed best practices in the fast-fashion segment (e.g., Li&Fung of Hong Kong). This will require a much more integrated cluster approach where the maquilas are not the only strong player in the cluster, but other players (marketing companies, service providers) should emerge as equally significant.

Figure 17: Implementation Priorities



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