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German ▪ Institute of Global and Area Studies
Leibniz-Institut für Globale und Regionale Studien

GIGA Working Papers

Upgrading in Agricultural Value Chains:
The Case of Small Producers in Honduras

Abstract

Local producers, in their interaction with local processors or exporters and international retailers have the possibility to acquire new skills and knowledge. The type of trust relationship and coordination pattern can determine how information flows and how firms upgrade. In addition, the implementation and compliance with standards provides opportunities for learning and acquiring skills and knowledge. Focusing on this kind of interactions, the study explains how local producers in Honduras engage in upgrading and whether this had an impact on the sales of those firms. The majority of the producers in the sample upgraded their products and internal processes. A limited number of producers engaged in functional upgrading. Most of the producers were aware of the important role of standards. They affirmed that in the process of implementing and complying with standards, they have gained new knowledge and were convinced that they succeeded in securing at better position in the value chain.

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Zusammenfassung

Upgrading in landwirtschaftlichen Wertschöpfungsketten am Beispiel von Kleinprozenten in Honduras

Lokale Produzenten haben durch ihre Beziehungen zu lokalen Verarbeitern oder Exporteuren und internationalen Händlern die Möglichkeit, sich neue Fähigkeiten und neues Wissen anzueignen. Die Art der Vertrauensbeziehung und die Koordinationsmuster haben Einfluss auf den Informationsfluss und das Upgrading von Firmen. Zusätzlich liefern die Befolgung und Anwendung von Standards Chancen, Fähigkeiten und Wissen zu erlangen. Fokusierend auf Interaktionen dieser Art erklärt die vorliegende Studie, wie lokale Produzenten in Honduras im Upgrading-Prozess tätig sind und ob sich dies auf die Entwicklung der Umsätze der Unternehmen auswirkte. Die Mehrheit der befragten Produzenten führte ein Upgrading der internen Unternehmensprozesse und Produkte durch. Eine begrenzte Zahl der Unternehmen vollzog dabei ein funktionales Upgrading. Die meisten Produzenten waren sich der Wichtigkeit von Standards bewusst. Sie bestätigten, dass sie sich bei der Umsetzung und Befolgung der Standards neues Wissen angeeignet hätten, und waren der Überzeugung, dass sie sich dadurch eine bessere Position in der Wertschöpfungskette sichern konnten.

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Ingrid Fromm

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1   Introduction

Agriculture is a key economic sector in Honduras, accounting for 13.6 percent of the GDP, 56 percent of total export earnings, and employing 34 percent of the labor force (Banco Central de Honduras 2006). Yet recent changes in sourcing, production and marketing of agricultural products as a result of increased globalization have impacted the agricultural sector in Honduras. Declining commodity prices and the increase in demand in developed countries for differentiated products has created opportunities for growth in non-traditional food products[1]. Production patters have also changed and become more 'globalized'. Nowadays,

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[1]   Banana production has dropped in the last decades, but there has been an increase in production and export of jalapeño and bell peppers, melons, watermelons, sweet potato, yucca, shrimps, and tilapia, among others (BCH 2007).

different production, processing and marketing stages are located in several geographical regions of the world and are linked through various forms of coordination. The implications for producers in developing countries are numerous. Participants in these value chains are forced to compete; otherwise their participation may be compromised. Producers in developing countries are also faced with changes in consumer concerns for food safety and quality. Consequently, the requirements for standards increased. All these changes in market structures and consumer behavior pose challenges for agricultural producers in Honduras and other developing countries.

At the local level, changes in the retail sector, particularly the greater share of supermarkets[2] has affected producers participating in agrifood chains. With the increase in urbanization[3] and remittances flows[4] in Honduras, consumer behavior becomes more complex and producers in value chains must respond to these changes as well. Demand for non-staples, convenience and processed foods have increased, thus increasing the need for value added and standards. In short, the whole procurement system requires other forms of coordination, pressuring local producers to comply with certain regulations. Competitive pressures require these SMEs to upgrade, otherwise their participation in value chains cannot be ensured.

Empirical research in a number of countries and sectors (Humphrey 2003; Humphrey and Schmitz 2000; Pietrobelli and Rabellotti 2004; Gibbon 2003; Humphrey and Memedovic 2006) provide evidence of the importance of upgrading to SMEs, particularly in the agricultural sector. Globalization has changed trade opening market opportunities and increasing the competitive pressures for producers in developing countries. Given these market conditions, firm-level upgrading can facilitate the participation of SMEs in wider markets. By upgrading processes and products, producers can enhance value chain productivity and competitiveness, increasing the benefits to SMEs. Upgrading entails not only improvements in products, but also investments in people, know-how, processes, equipment and favorable work conditions.

The paper is structured as follows: the first part explains the theory on value chains, upgrading, governance, buyer power and coordination, trust and standards. The second part presents the case study on small producers in Honduras. Specifically, the opportunities for upgrading, the relationship with buyers and the implementation of standards are addressed.

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[2] Berdagué et. al. (2004, 2005) and Reardon and Berdagué (2002) provide an analysis of the changes in the retail sector in Central American and other developing countries and the impact on local farmers.

[3] Urban population has grown 4.2% annually since 1970. In 2005, 46% of the population was urban (UN Population Division 2006).

[4] Total remittances in Honduras increased to US$ 2359 million in 2006 from US$ 409.6 million in 2000. Remittances accounted for 25.5% of GDP in 2006 (BCH 2007). According to national statistics, 83.4% of the money received is spent on daily necessities such as food, clothing and housing (BCH 2007).

2   Upgrading, Governance and the Role of Standards

According to Kaplinsky and Morris (2001) the value chain describes the full range of activities that are required to bring a product from its conception to its end use and beyond. This includes activities such as design, production, marketing, distribution and support to the final consumer. These activities can take place within a firm or among different firms in one or several geographical locations. This characteristic of physically transforming products over time and their distribution over geographical locations is known as *input-output* relations.

Early studies on chains were conducted already in the 1960s. The *filière* concept was introduced after analyzing the value added process in U.S. agricultural research and the processes of vertical integration and contract manufacturing in French agriculture (Raikes *et al.* 2000). Although the *filière* approach was applied in the French colonial policy on the agricultural sector at the time, it was the later work that gave the *filière* analysis an additional political economy dimension, since it studied the role of public institutions. Nevertheless, the *filière* was viewed as having a static character because it only reflected relations at a certain point in time and generally stopped at national boundaries.

The Global Commodity Chain concept was introduced by Gereffi in the mid-1990s. As opposed to the *filière* concept, there are three key dimensions in the chain analysis. First of all, there is a specific physical input-output structure and geography. Raw material is the input on one side of the chain, and this material moves from one link to the next, where it is processed and value is added. There are one or several geographical locations in any given chain. The second dimension is the 'governance structure'. In other words, which type of company played the 'driving' or 'lead' role in their elaboration and management and also how they performed this role. The final dimension is the 'institutional framework' or environment for subordinate firms to learn about markets, and possibly to acquire new knowledge and technology. In recent years, the Global Commodity Chain literature has abandoned the term 'commodity chain' and has taken up that of 'value chain' in its place because the latter is thought to better capture a wider variety of products, some of which lack 'commodity' features (Gibbon and Ponte 2005).

Gereffi focused on vertical coordination and the role of governance in his work. Chains are characterized by a dominant party, known as the lead firm, which coordinates the interaction between the links in the chain and becomes responsible for upgrading activities in the individual links. This role of 'governance' can either be undertaken by buyers (buyer-driven chains) or producers (producer-driven chains). Two distinct types of international economic networks can be identified: producer-driven and buyer-driven commodity chains (Gereffi 1999). In a producer-driven commodity chain, large, usually transnational manufacturers play the central role in coordinating production networks. In a buyer-driven commodity chain, production networks are decentralized in a number of exporting countries, typically

located in developing nations. Yet in further work (Humphrey and Schmitz 2002; Gibbon and Ponte 2005) it is argued that governance, in the sense of a clear dominance structure, is not necessarily a constitutive element of global value chains and power and coordination within chains is not necessarily found in one firm; rather certain chains are decisively marked by different actors.

Nevertheless, coordination and having a role of governance involves considerable cost in monitoring and enforcement. The question is, why do firms incur in such expenses? According to Humphrey (2005) the reasons for governance lie in three factors. First of all, the purchase of non-standard products requires monitoring and enforcement. When buyers pursue a strategy of product differentiation (i.e. packaging, labeling, varieties, processes), the need to work directly with suppliers on issues such as product design, specifications, delivery schedules and handling is increased. Second, failures by suppliers create risks for buyers and thus, costs increase. Humphrey adds that the increasingly complex standards environment puts retailers' reputations at risk, particularly when they are legally responsible for applying due diligence along the supply chain. In supply systems a reliable and frequent delivery of products is expected, thus increasing the need for assurances about supply performance. The final reason is that innovation requires simultaneous changes at various points in the value chain. Vertical coordination tends to increase in agribusiness systems as innovation requires vertical coordination. Because of the costs associated with vertical coordination, the greater the degree of vertical coordination, the greater the tendency to rely on a small number of suppliers. Nevertheless, supplying from only a number of firms also increases the risks and costs associated with their failure. When a buyer is sourced from many suppliers with standardized products, the failures of one can be compensated by other suppliers. The more that supply chains are concentrated, the more difficult it is for failures to be offset by other suppliers (Humphrey 2005).

One notable characteristic of agricultural value chains is buyer power. Agricultural production has a structure which includes many small-to-medium-size farmers[5] and thus the coordination mechanism is found in developed countries (Gereffi and Memedovic 2003). Yet this coordination mechanism tends to exclude producers (see Dolan *et al.*, 1999 and their finding on the Kenyan fresh fruit and vegetable chain). Humphrey (2005) argues that the reason is that there are economies of scale in governance. Large firms have the management capabilities required to coordinate complex relationships with suppliers and customers, but dealing with a few large suppliers or customers is easier than dealing with many small ones. Large

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[5]   A clear distinction must be made at this point between traditional small-holder agricultural production and plantation production. Some examples of small-holder production include coffee, cocoa, fresh produce, and exotic fruits and vegetables. In Central America, plantation-grown bananas or pineapples do not present the structure presented by Gereffi and Memedovic (2003) because of the participation of trans-national companies, which exclude small producers.

buyers have more buying power and therefore more opportunities to enforce compliance with their standards and manage logistics. Small producers must accept and comply with these standards imposed on them by larger firms. Examples of this can be found in several agricultural value chains (i.e. coffee, cocoa, horticultural, fresh cut flowers), where retailers in industrialized countries coordinate small producers in developing countries. The role of governance is associated with buyer power.

What are the implications of this increase in buyer power (i.e. lead firms in industrialized countries) for producers in developing countries? Humphrey (2005) summarized these implications in four points. First of all, the concentration in agri-food chains is associated with rising barriers to entry and thus there is the threat of exclusion for small farmers in developing countries. Access to export markets is limited, and securing contracts with the small number of firms that control significant amounts of global trade is critical. Second, one of the ways that developing economies can increase returns to involvement in global value chains is to take on new activities. There are real opportunities for upgrading arising from the outsourcing of activities by enterprises in developing countries. Humphrey (2005) states that one example of this is the transfer of post-harvest processing of fresh vegetables to producer countries. New jobs are created as the levels of processing in fresh vegetables increases. Because the cost of labor in developing countries is lower, increased processing is much more cost-effective, further stimulating it. A third point is systemic competitiveness. Competing in global markets requires new efficiencies which are to a large extent systemic. A complex system of logistics infrastructure and supporting enterprises is required to meet the service requirements of large customers. Finally, the risks and returns that suppliers obtain from participation in global value chains will depend upon the incidence of monopoly or oligopoly power in value chains. Large firms exert pressure on small buyers and suppliers therefore increasing the pressures on small producers.

Gibbon (2003) argues that in most tropical countries, two distinct agro-commodity production systems existed. The first was plantation agriculture. Examples include tea, bananas, sugar and also tobacco, rubber and palm oil. The second was smallholder agriculture. This system is dominant for cocoa, coffee and cotton production. Smallholder production accounted for a majority of developing country exports from the 1940s through the 1980s as a result of public intervention. Since producing country governments lost the ability to participate in the management of the international markets for coffee, cocoa and sugar, as well as much of their ability to participate in the shaping of their own domestic supply markets, there have been changes in virtually every dimension of the value chains for these crops.

2.1   Upgrading

Upgrading refers to the acquisition of technological capabilities and market linkages that enable firms to improve their competitiveness and move into higher-value activities (Kaplinksy and Morris 2001). Upgrading in firms can take place in the form of:

- *Process upgrading* - increasing the efficiency of internal processes such that these are significantly better than those of rivals, both within individual links in the chain, and between the links in the chain.
- *Product upgrading* - introducing new products or improving old products faster than rivals. This involves changing new product development processes both within individual links in the value chain and in the relationship between different chain links.
- *Functional upgrading* - increasing value added by changing the mix of activities conducted within the firm or moving the locus of activities to different links in the value chain.

Difficulties with this classification include that of distinguishing product and process upgrading in specific instances (especially for agricultural products, where for example the introduction of organic processes generates a new category of product) (Gibbon 2003). Kaplinsky and Readman (2001) underline that there is a hierarchy or a trajectory that is important for SMEs. It is one which begins with process upgrading, then moves to product upgrading, to functional upgrading and last of all, to chain upgrading.

Gibbon (2003) suggests that a first step in understanding upgrading opportunities available to producers in particular global value chains (in this case: producers in developing countries) is to spell out the reward structures of these chains, and the nature of the roles that currently trigger rewards. A second step is to outline preconditions or mechanisms for achieving these roles. As argued by Humphrey and Schmitz (2002) a significant problem for firms which had successfully managed to integrate themselves into value chains characterized by quasi-hierarchical relationships is the danger of 'lock-in'. Firms find that a large part of their output is going to one or a small number of customers, and they become specialized in one particular activity, usually production, and they either do not develop design or marketing capabilities, or allow such capabilities to diminish because of the strength of the relationship with the global buyer. As such, they become heavily dependent on this relationship. Humphrey (2003) proposes three main strategic options for combating a lock-in: market diversification, excellence in manufacturing and effective use of knowledge acquired from within the value chain.

The body of literature on upgrading opportunities for firms in developing countries addresses buyer-supplier relationships and coordination as a mechanism for access to global markets and upgrading. Humphrey (2004) states that insertion into value chains can facili-

tate the entry of developing country firms into export markets as they can specialize in production and do not have to be concerned about such issues as product design, logistics or market requirements in importing countries because these issues are already addressed by the buyers and their agents. Furthermore, the increasingly stringent requirements (i.e. standards) of global buyers in areas such as quality and delivery may offer firms opportunities to add value to products. However, specialization in production activities within the value chain may leave developing country suppliers with a limited understanding of market requirements and few opportunities to develop capabilities in the areas of design and marketing. Humphrey (2005) also warns that there is danger of developing country producers being trapped in narrowly-confined value chain activities with low skills and low returns.[6]

Humphrey (2004) argues that there are several implications for upgrading agricultural and manufacturing capabilities in developing countries that cannot be overlooked. Learning and the acquisition of technological capabilities can be stimulated through involvement in global value chains. However, there is no guaranteed path to upgrading as a result of this involvement. Upgrading involves the development of both technological capability and market access by the firm, but complementary efforts at the local and national levels are needed to stimulate both. Learning requires investment by firms and other support agencies. Insertion into global value chains provides opportunities for learning, but these have to be acted upon. Humphrey (2004) explains that one of the most important lessons of the East Asian experience is that firms and enterprise development policies must consider integration into global markets as a learning opportunity that has to be maximized through explicit effort and investment by the firms concerned, supported by public and public-private agencies. 'Learning by exporting' or 'learning by doing' is not enough.

In a study conducted on natural resource-based (i.e. agrifood chains) clusters[7] in Latin America (Pietrobelli and Rabellotti 2004), upgrading opportunities tended to be confined to products and processes in quasi-hierarchical chains. In other words, upgrading did occur in most of these clusters but process and product upgrading was more common, while functional upgrading was rarely achieved. According to this study, intersectoral upgrading was only detected only in the Chilean salmon chain, with salmon firms venturing into different patterns of governance within biotechnology and genetics. Gibbon (2003), however, warns that there are difficulties with the classification of upgrading (i.e. product, process, functional, intersectoral) in distinguishing product and process upgrading in specific instances

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[6]   See Gibbon, 2001: Upgrading Primary Production: A Global Commodity Chain Approach. He analyzes upgrading opportunities in the cotton and fish chains in Africa. His findings indicate that developing countries have upgrading difficulties even in primary production.

[7]   The clusters studied were: Salmon in Chile, milk and dairy in Nicaragua, fresh fruits in Brazil, and wood in Mexico.

(especially for agricultural products, where for example the introduction of organic proc-esses generates a new category of product), and the status of 'inter-chain upgrading'.

Pietrobelli and Rabellotti (2004) point out that the literature on functional upgrading shows that although inclusion into global value chains facilitates product and process upgrading, it also means that firms become tied into relationships that often prevent functional upgrading and leave them dependent on a small number of powerful customers. Gibbon and Ponte (2005) draw attention to the fact that lead firms often sought to explicitly block their suppli-ers from undertaking functional upgrading. At the same time, lead firms encouraged sup-pliers to undertake process and usually also product upgrading. Gibbon and Ponte (2005) argue that combining internationalization and functional upgrading in the form of moving into multiple downstream functions or processes is often extremely resource-demanding. Humphrey and Schmitz (2002) observe also that the process of acquiring new functions (i.e. functional upgrading) which generates higher incomes is potentially a critical part of an up-grading strategy.

A critical question is, however, how value chain relationships affect the process of learning, innovation and the acquisition of technological capabilities. It is important to analyze if up-grading is relatively easy once firms are within global value chains. Furthermore, one can question whether technological learning is 'a dynamic, difficult and costly process' or one that needs strategic interventions by firms and support from governments and international agencies. These upgrading strategies require not only the acquisition of capabilities, but also involve changing relationships with buyers and markets (Humphrey 2004).

2.2   Power Relations, Coordination and the Role of Trust

Although governance, coordination and buyer power have been discussed, it is important to note that governance and coordination sometimes appear as synonymous or interchange-able terms in the literature. Already in the 1980s, Williamson (1979, 1985) used the term gov-ernance to define the set of institutional arrangements in which a transaction is organized. As Gereffi's work on Global Comodity Chains and the role of governance appeared, the term coordination took on a new meaning, basically, the vertical organization of activities. In the work of Raikes *et al.* (2000), coordination is approached under the conditions of post-Fordism and the convention theory and thus propose the following forms of coordination:

-   In *domestic coordination*, uncertainty about quality is solved through trust (long-term relationships between agents or use of private brands which increase the quality reputation of products). In this case, the definition of quality is resolved internally, and the identity of a product is guaranteed or 'institutionalised in the repetition of

history' by its region or country of origin (i.e. Champagne) or by a brand-name (i.e. Chiquita).

- In *industrial coordination*, uncertainty about quality is solved through the actions of an external party which determines common norms or standards and enforces them via instrument-based testing, inspection and certification.

- In *market coordination*, differences in price are equated with quality, and price is the main market management form. Therefore, there is no uncertainty about quality, and prices are sufficient indicators.

- In *civic coordination*, there is collective commitment to avoid conflicts, and identity of a product is often related to its impact upon society (i.e. fair trade coffee) (Raikes et al. 2000).

According to Raikes et al. (2000), trust-based coordination is central for goods and services, whose characteristics change frequently, making a standardized quality determination for the purposes of industrial coordination difficult. This applies to the manufacturing industry as well as agri-food chains. It is possible to identify in one industry several coordination forms used by different firms where the choices rely on the trust existent between the firms.

There is ample empirical evidence suggesting that trust has a role in economic development (Humphrey and Schmitz 1996; Furlong 1996). Market economies characterized by high levels of trust appear to perform better than those with low levels. Trust affects the ways in which people and enterprises engage in economic activity. In the exchange goods and services trust is needed. Raiser (1999) affirms that this is particularly the case for incomplete contracts, where one party is unable to fully monitor the other party's fulfilment of his or her obligations taken under the contract, a typical problem in transactions that take place over time. The risk of opportunistic behaviour could be so great as to prevent the exchange taking place altogether (see Williamson 1985). A lack of trust may thus impose prohibitively high transaction costs on contracting parties, thereby limiting mutually beneficial transactions. Ideally, the value chain could create relationships were all the participants benefit through the establishment or expansion of secure markets. Thus trust is one of the biggest issues in the value chain analysis.

Nevertheless, despite the existence of extensive literature on trust and its role in economic activity, one of the critical points in research is measuring it. According to Kaplinsky and Morris (2001), it is possible to identify a number of data points which will help in assessing whether the links in the chain are imbedded in a high-trust or a low-trust environment. Some of the variables used to assess a low or high-trust category are: the length of contracts, the nature the ordering procedure, the nature of the contractual relationship, the degree of dependence which firms have on each other, the types of technical assistance which flows along the chain, the nature and methods of communication (i.e. exchange of information) along the

chain, the determination of prices, the nature of credit extended along the chain especially to exporting firms and the modalities of payment to outsourced informal economy producers.

2.3   Standards

Producers participating in global value chains are increasingly required to conform to a number of standards (Kaplinsky 2004). These standards can be set by international bodies (i.e. ISO9000, ISO14000, SA8000 and HACCP) or private sector lead firms[8]. Reardon *et. al.* (2001) point out that in developing countries these changes have tended to exclude small producers from participating in market growth, because of the implied investments. According to Humphrey (2005) the necessary enforcement of increasingly important standards leads to learning processes along the chain. For developing countries above all, learning processes in the area of backward linkages are important in this connection.

Ponte (2002) sought to classify standards in three broad categories: mandatory, voluntary and private.

Mandatory standards are set by governments in the form of regulation (i.e. technical requirements, testing, certification and labelling). In any given market, participants can seek voluntary standards and go through the formal certification process. Consumers might also request these voluntary standards or NGOs such as the fair trade labelling in the coffee sector in developing countries can also promote certification. Voluntary standards are verified through third-party auditing, as is the case of ISO (International Standard Organization). Finally, the author points out that private standards are developed and monitored internally by individual enterprises and that there is a lack of third party verification and a lower degree of transparency and participation of the affected stakeholders.

In agri-food chains, some standards are more relevant, such as Good Agricultural Practices (GAP), Hazard Analysis of Critical Control Points (HACCP), EurepGAP, and International Standard Organization (ISO). GAP promotes standards for production and storage of agricultural products. It covers the optimal use of pesticides, maintenance of water quality, sanitation, post-harvest handling and transportation. HACCP (Hazard Analysis of Critical Control Points) identifies, evaluates and controls the steps in food manufacturing that are critical to product safety. Used at all stages of food production and preparation processes, HACCP is being applied to industries other than food, such as cosmetics and pharmaceuticals. HACCP is almost the universal basis of most food safety systems. The European Union, the US food legislation and most private standards for example, require all food businesses,

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[8]   These are known as private sector standards. These standards enable lead firms to determine quality, delivery schedules and traceability of pesticide use, for example. Many of these standards are arguably also entry barriers for small and medium-sized businesses in developing countries because of the high cost of compliance or the lack of knowledge or resources needed to comply with these requirements.

except primary producers, to operate food safety management procedures based on HACCP principles. Independent of any specific industry, the scope of ISO is broader than GAP and HACCP because it focuses on managing all activities and establishing procedures, which must be followed by assigning responsibilities and authorities. Recently ISO 22000 has been accepted as a new standard covering the entire food supply chain and using HACCP and GAP requirements as a basis. Following Ponte's classification, EurepGAP would fall in both the private and voluntary category, as it is a private sector body that sets voluntary standards for the certification of agricultural products. EurepGAP started in 1997 as an initiative by British retailers in conjunction with supermarkets in continental Europe reacting to growing concerns by the consumers with product safety, environmental and labor standards. Common certification standards were in the interest of many producers and retailers who had to undergo multiple audits against different criteria every year. These standards and procedures were also based on Good Agricultural Practices in conventional agriculture.

2.4   Research Objectives

The objective of the investigation was to analyze the upgrading opportunities small producers in Honduras have. Local producers, in their interaction with local processors or exporters and international retailers have the possibility to acquire new skills and knowledge. The type of trust relationship and power dependence can determine how information flows and how firms upgrade. Second, the implementation and compliance with standards provides opportunities for learning and acquiring skills and knowledge. The framework for this investigation (Figure 1) relied on these interactions and sought to explain how upgrading took place in local firms. First of all, there is a flow of materials taking place and starting from the producer side. The material is transformed as it passes through different links in the chain, where value is added (hence the term value chains) until it reaches the final consumer. On the other side of the chain, there is tacit knowledge that is passed down through the different links in the form of codified information. Transactions are taking place between the different actors. One or more links in the chain have a role of governance and coordinate the activities in the chain through different mechanisms. In this interaction, trust relationships may or may not be formed, and an opportunity to learn and upgrade is opened up to the producers.

Figure 1: Interactions in a Value Chain
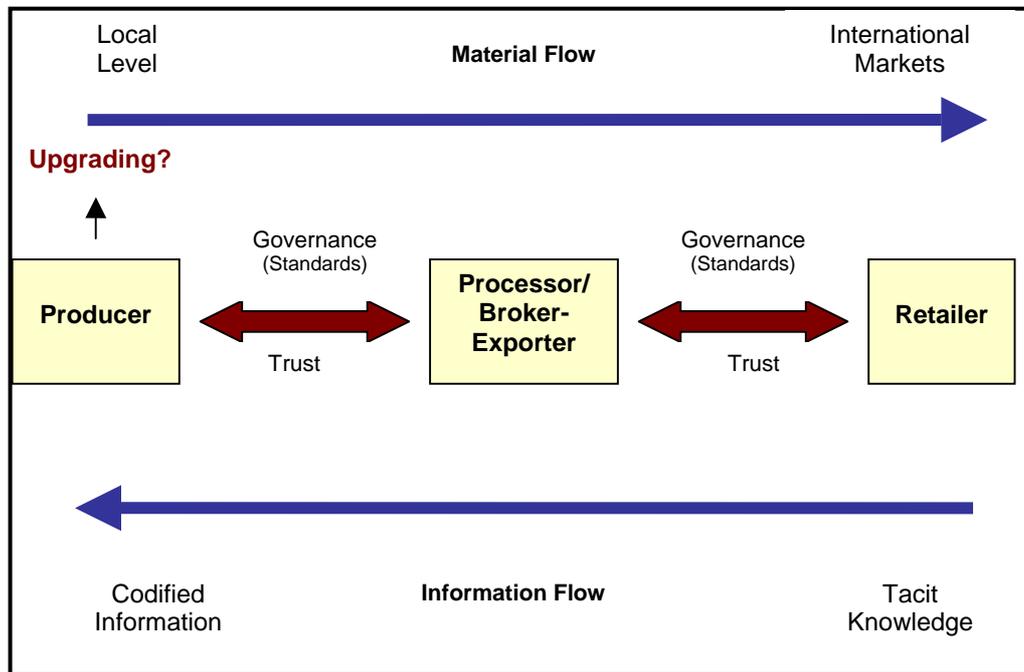
Source: Author's compilation.

3   Case Study: Upgrading of Small Producers in Honduras

In order to analyze the upgrading opportunities producers in Honduras have, a systematic sample of agricultural producers was taken. As a pre-condition, producers in the sample had to participate in value chains. Subsistence farmers were not part of the sample for a number of reasons. The purpose of the study was to examine the interaction of the producer with local processors or exporters and international retailers in order to determine if they have the possibility to acquire new skills and knowledge through this interaction. Furthermore, trust relationships with the lead firms were examined to determine how information flows and how firms upgrade. Finally, the implementation and compliance with standards and the impact on the acquisition of skills and knowledge was studied.

For the purpose of this study, three different groups were analyzed. These groups were the traditional primary commodity chain, the plantation product chain and fresh produce chain. Producers from these three different types of chains were chosen according to the characteristics described in Table 1. These chains were chosen because they are representative of the situation in which Honduran producers find themselves. Furthermore, most of the agricultural production of the country can be divided into these groups. Fewer producers find

themselves in organic chains, for example. Therefore, this schematisation seemed resonant with the current situation of the agricultural sector throughout the entire country.

Table 1: Types of Agricultural Chains and their Characteristics

Type of Chain	Characteristics
Traditional Primary Commodity Chains	Chain governed by internationally operated traders Traders exercise little control on production and quality Quality enforced through price Chain coordination loose and indirect Profit lies in volume, not margins Examples: Coffee, cocoa, cotton
Traditional Plantation Product Chains	High level of integration Production carried out in large plantations in developing countries, owned by international traders Traders outsource production by contract farming Traders introduce innovations in production and processing Quality assured by traders Developing countries profit mostly from employment in primary production but not from value added generated Examples: Bananas, pineapples, melons[9] palm oil, sugar, rubber
Fresh Product Chains	Retailers in high value markets in developed countries or supermarkets in developing countries set quality standards Suppliers profit from high margins Production organized under contracts Not many producers in developing countries able to comply with standards Participation requires rigorous application of cutting-edge technology in production, storage and transportation Examples: Off-season and exotic fruit and vegetables, fresh fish and crustaceous, special beef products

Source: Author's compilation.

The field research was conducted from May to August 2006 in Northern Honduras. Some producers were located in San Pedro Sula, while others were located in the surrounding Sula Valley. A total of 102 producers were interviewed (Table 2).

Table 2: Size and Location of Sample

	Horticulture	Coffee	Oil Palm
Samples	38	42	22
Location	Comayagua, Valle de Sula, Bajo Aguán	Santa Barbara, Copan, San Pedro Sula	Guaymas

Source: Author's compilation.

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[9]   Banana, melon and pineapple production classified under traditional plantation product chain because of the structure of production takes place in plantations and seldom under small-holder ownership.

3.1   Product Upgrading

Process, product and functional upgrading can enhance value chain productivity and competitiveness of a firm. Upgrading entails not only improvements in products, but also investments in people, know-how, processes, equipment and favorable work conditions.

In the study of small producers in Honduras, at least 64% of the producers sampled had engaged in product upgrading activities. The other 36% did not implement any type of product upgrading activities. Table 3 presents a summary of the changes or improvements made to the product. These changes were defined as a new variety grown. Perhaps because of the nature of agricultural products, more than half of the firms (55%) had changed the type of product. In the case of palm oil producers, many had changed the variety of the palm they were using for production. Furthermore, horticultural producers had changed in several occasions the varieties as improved seeds become widely available in the local market. Few firms (12%) had changed the formulation, because many of them sell unprocessed products. About 25% of the firms have improved the packaging.

Table 3:   Changes Product Upgrading

Response	Type Product	Formulation	Packaging
Yes	56 (54.9%)	12 (11.8%)	26 (25.5%)
No	46 (45.1%)	90 (88.2%)	76 (74.5%)
Total	102	102	102

Source: Author's calculations (Survey 2006).

Producers evaluated if and how the upgrading activities had impacted their performance. Of all the firms that had experienced changes in the performance, 80% said their productivity had improved and 67.2% saw an improvement in profits. Only 1.5% of the firms had not seen any improvement since the changes had taken place. A measure of how much a firm is engaging in product upgrading is the investment in upgrading activities (as a percentage of the total costs). Most firms that have implemented changes made investments of either 1-3% or 4-6% of the total costs (Table 4).

In order to understand the driving factors behind product upgrading, the producers were asked to state the reasons that drove them to implement changes and improve their products. Most of them agree that it was competitiveness that pushed them to upgrade (65.7%). However, 22.4% responded that the customer demanded these changes and therefore they had to upgrade. Other driving factors were to explore new markets (7.5%) and to 'survive',

in other words to stay in the business and not fail (1.5%). A small portion of the interviewed firms stated they had other reasons for upgrading (3%).

Table 4: Investment in Product Upgrading

	Percent
0	34.3
<1%	5.9
1-3%	31.4
4-6%	21.6
7-9%	5.9
>9%	1.0
Total	100.0

Source: Author's calculations (Survey 2006).

3.2   Process Upgrading

Almost all of the producers interviewed had implemented changes that would improve their production processes. These changes were oriented towards field practices (77.5%) and post-harvest management (88.2%). A good portion of the sample also implemented quality standards that resulted in process upgrading (71.6%). The observed producers were less likely to implement any changes that would result in improved logistical processes (15.7%) or buy new equipment in order to create a more efficient environment for production (26.5%). Marketing activities are less of a preoccupation for most producers, as only 9.8% of the cases have carried out any marketing activities (Table 5).

Table 5: Changes Process Upgrading

	Field Practices	Post Harvest	Standards	Logistics	Equipment	Marketing
Yes	79 (77.5%)	90 (88.2%)	73 (71.6%)	16 (15.7%)	27 (26.5%)	10 (9.8%)
No	23 (22.5)	12 (11.8%)	29 (28.4%)	86 (84.3%)	75 (73.5%)	92 (90.2%)
Total	102	102	102	102	102	102

Source: Author's calculations (Survey 2006).

At least 68% of the producers in the sample have reported improvement in productivity since implementing changes in the production processes. Only 1% did not notice any improvements in the productivity. Slightly over one tenth of the firms agree that these changes have significantly improved the productivity and 20% reported that the changes have slightly improved the productivity. Over half of the firms (64%) have seen profits grow, whereas only

1% have not seen any profit growth. At least 12% of the firms have seen significant improvements in the profits. Over 20% have noticed only slight changes in the profits. Just as in product upgrading, the motivating factor behind process upgrading has been competitiveness (73% of the producers affirmed this was the reason). Only in few instances (14%) did the firms agree that it was because of customer demand. Other reasons included new markets, but few of them (6%) have been motivated by the idea of exploring new markets.

3.3   Functional Upgrading

Functional upgrading can be defined as increasing value added by changing the mix of activities conducted within the firm or moving the locus of activities to different links in the value chain. Thus, this section focused on variables such as the new activities absorbed or outsourced, new marketing or logistics functions or a change in management. The producers were also asked to explain why and how these changes took place. Only 30% of the firms visited had undergone such changes. Most of the firms visited had added value to their products or increased the efficiency of their processes but functional upgrading had not taken place. Furthermore, it remains unclear whether or not these firms had added value faster or significantly better than the competition. In essence, upgrading refers to the acquisition of technological capabilities, skills and market linkages that enable firms to improve their competitiveness. In the case of agricultural producers in Honduras, the tendency was towards product or process upgrading but not functional upgrading.

One can observe from Table 6 that the cases in which producers found new market functions were rare (4.9%). The locus of activities appears to not be moving to other links in the chain. However, the mix of activities within the firm is more likely to change. At least 27% of the cases have absorbed new activities that have led to value added. At the same time, 16.7% have outsourced low-return activities while concentrating on more profitable activities. For example, one firm decided that it was no longer profitable to produce vegetables in greenhouses, so they are now buying from other producers and they work the logistics and marketing channels themselves, while also providing the producers with options to package their products and supply this company. Because this is a perishables market, the supply has to be guaranteed and steady. On the other hand, new logistics functions and new management functions were found in 11.8% of the times.

Most of the firms agree that the reason motivating them to implement improvements that lead to functional upgrading is competitiveness. Other factors such as customer demand and new markets appear to be almost irrelevant.

Table 6: Changes Functional Upgrading

Response	New Activities Absorbed	New Market Functions	New Logistics Functions	New Management Functions	Outsourcing Certain Activities
Yes	28 (27.5%)	5 (4.9%)	12 (11.8%)	12 (11.8%)	17 (16.7%)
No	74 (72.5%)	97 (95.1%)	90 (88.2%)	90 (88.2%)	85 (83.3%)
Total	102	102	102	102	102

Source: Author's calculations (Survey 2006).

3.4 Trust, Power Relations and Coordination

The proposed framework for this study looks at the interaction between the links in the chain in order to determine if through this interaction there is any chance for upgrading and learning. The variables that are closely looked at include the number of buyers, significance of largest buyers, price determination, contractual relationship, frequency of contact, perception of trust, type of information received, and contact to end consumer. Most of the producers interviewed had few buyers, on average only 5 buyers. It seems that most companies are dependent on just a few clients. Over 80% sell more than 80% of their total production to just 3 clients. Those firms that have a more diversified client base are few; a mere 2% sells less than 50% of their production to more than 3 clients. These chains exhibit a quasi-hierarchy type of relationship because the lead firms are exerting a high degree of control their suppliers, in these case the Honduran agricultural producers, frequently specifying the characteristics of the product be produced, and sometimes specifying the processes to be followed and the control mechanisms to be enforced. A significant problem for these firms is the danger of 'lock-in'. A large part of their output is going to one or a small number of customers, and they are specialized in one particular activity, in this case production. They are heavily dependent on this relationship.

It appears that the producers in the study have limited bargaining power, especially those in the coffee sector. In the case of the coffee producers, over 35% of the producers had to accept the price offered by the buyer, even when this price was lower than the average market price for the coffee. In the case of the palm oil and horticultural producers, most agreed that the prices were market-based prices (Table 7).

The frequency of contact between the firm and the buyers was studied. From Table 8 one can observe that most of the firms interviewed have frequent contact to the buyers. In the case of the palm oil producers, this contact is frequent in all cases. Some coffee producers said they seldom have contact with the buyers because they deal in these cases with intermediaries.

Table 7: Price Determination

Type of Chain	Price Negotiation			Total
	Firm	Buyer	Market-based	
Horticultural	2	8	28	38
Coffee	2	15	25	42
Palm Oil	0	0	22	22
Total	4	23	75	102

Source: Author's calculations (Survey 2006).

Table 8: Frequency of Contact

	Con- stantly	Often	Seldom	Total
Horticul- tural	13 (12.7%)	18 (17.6%)	7 (6.9%)	38 (37.3%)
Coffee	15 (14.7%)	16 (15.7%)	11 (10.8%)	42 (41.2%)
Palm Oil	17 (16.7%)	5 (4.9%)	0	22 (21.6%)
Total	45 (44.1%)	39 (38.2%)	18 (17.6%)	102 (100%)

Source: Author's calculations (Survey 2006).

The type of contractual relationship a firm has with the buyer is a coordination mechanism in the value chain analysis. Lead firms coordinate activities in the chain and one way of doing this is through contracts. At least 45% of the producers studied have formal contracts with the buyers. About 34% have written orders and 20% receive sporadic, informal orders (Figure 2).

Figure 2: Contractual Relationship
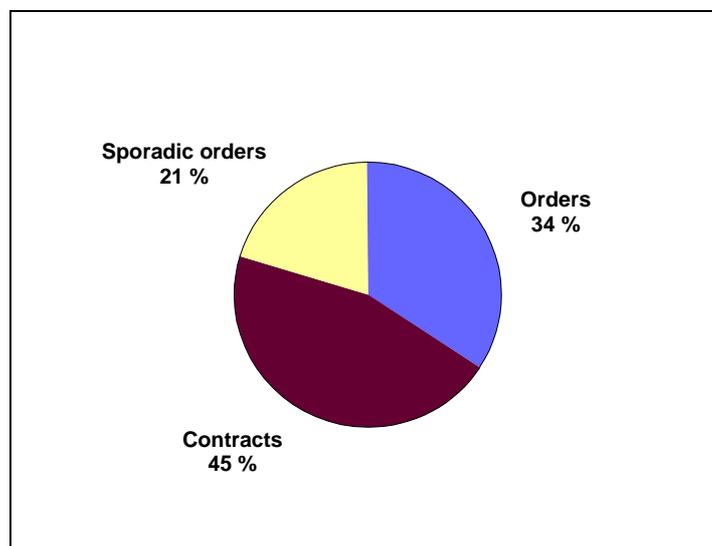
Source: Author's calculations (Survey 2006).

The perception of trust was measured. Firms were asked how much trust they had in their buyers. The results vary according to the type of product (Table 9). Most of the producers in the palm oil industry agree that they have trust in their buyers. The answers the horticultural producers gave were also skewed towards more trust. The coffee producers were almost equally distributed between much trust in the buyers and little trust. In very few instances did a case answer that there was no trust between the firm and the buyer.

Table 9:   Perception of Trust

	Much trust	Moderate trust	Little trust	No trust	Total
Horticultural	16 (15.7%)	13 (12.7%)	8 (7.8%)	1 (1%)	38 (37.3%)
Coffee	15 (14.7%)	15 (14.7%)	12 (11.8%)	0	42 (41.2%)
Palm Oil	18 (17.6%)	4 (3.9%)	0	0	22 (21.6%)
Total	49 (48%)	32 (31.4%)	20 (19.6%)	1 (1%)	102 (100%)

Source: Author's calculations (Survey 2006).

Given that many of the firms interviewed agreed that they trusted the buyers, then a higher availability of information flowing would be expected. In the case of the palm oil producers, this is the case. All of them agreed that they do receive information from the buyers. About 26% of the coffee producers do not receive any type of information from the buyers and only 13% of the horticultural producers are in this category as well. Firms were asked to describe what type of information they receive (Table 10). Sixteen of the producers affirmed that they don't receive any type of information. The rest of them do receive information about product specifications (37.3%), quality standards (20.6%) or market information or more (7.8%).

Table 10: Type of Information Received

	Percent
Product Specifications	37.3
Quality Standards (QS)	20.6
Product Specifications and QS	18.6
Product Specifications and Market Information	2.9
Product Specifications, QS, and Market Information	4.9
None	15.7
Total	100.0

Source: Author's calculations (Survey 2006).

Finally, the contact with the end consumer was addressed. Because of the position of the firms interviewed at one end of the value chain (i.e. the producer side) the instances where the firm had any contact to the end consumer were few (11.8%). Even fewer were the instances when any type of marketing activity involving the end consumer was done. Only 9.8% of the cases reported marketing activities to the end consumer (Table 11).

Table 11: Contact and Marketing to End Consumer

Response	Contact End Consumer	Marketing End Consumer
No	90 (88.2%)	92 (90.2%)
Yes	12 (11.8%)	10 (9.8%)
Total	102	102

Source: Author's calculations (Survey 2006).

3.5   Standards

The enforcement of standards is becoming increasingly relevant in the value chain analysis and the discussion on integration of developing country firms in global value chains. As a matter of fact, firms – no matter the size – are aware of the importance of standards. This is reflected by the number of firms that had implemented standards, a total of 81 firms, representing 79.4% of the sample. Although a few firms had not complied with standards, they were aware of the importance of standards and knew that this could be a determining factor in their success in the business or better yet, in their survival in a competitive market. Although not all firms export directly, many of them have to comply with standards because in the end, their products could be exported. This is particularly true in the coffee chain, since most of the coffee production is exported. There are numerous standards a producer can comply with. More often than not, producers had to comply with more than one standard (Table 12). There is also a greater variety of standards because this study was conducted across different production sectors and thus different standards are required.

Most of the firms stated that the regulating body promoting or sometimes even imposing the standards is the customer (94.1%). In few instances the government agencies or public institutions, be it local or foreign, had anything to do with standard imposition or promotion (1.2% and 3.5% of the cases). Whether or not a buyer can impose standards gives an idea about the coordination mechanism of the chain. The other options were added because of the fact that certain compliance with standards must be met before exporting to the EU or

USA. This regulatory mechanism was not deemed as relevant by the firms; it appears that the real coordinating body is the buyer.

Table 12: Type of Standards

	Percent
Quality	30.4
Environmental	14.7
Food Safety	1.0
Environmental and Quality	6.9
Origin	1.0
Quality, Origin	17.6
Quality, Environmental, Origin, Good Agricultural Practice	5.9
Fair Trade	2.0
Organic	3.9
Total	83.3
None	16.7
Total	100.0

Source: Author's calculations (Survey 2006).

If a firm complies with standards, then audits have to be carried out regularly. Most firms (85.9%) agree that these audits take place with every order that is placed. It happens on a regular basis. A few (12.9%) said the audits take place on a yearly basis. Most auditors are external agents (91.8%). Firms cited different reasons for implementing standards (Table 13). The answers are equally divided among those firms that believe this is the best strategy to remain in the market (45.9%) and those who think they do this out of competitiveness (48.2%).

Table 13: Reasons for Standard Implementation

	Percent
To remain in market	45.9
Competitiveness	48.2
Customer demand	5.9
Total	100.0

Source: Author's calculations (Survey 2006).

Producers were asked if the implementation of standards has led to a gain in new knowledge and 82% of those firms asked agree that they have acquired new knowledge (Table 14). They were also asked if they have acquired new technology because of these changes and if they feel that they have a more secure position in the chain as a result of the implementation of standards and upgrading. More than half of the firms (66.7%) have acquired new technology and over half (64%) also feel that their position in the value chain is more secure.

Table 14: Gains from Standard Implementation

Response	New Knowledge	New Technology	Secure Position Chain
Yes	84 (82.4%)	34 (33.3%)	66 (64.7%)
No	18 (17.6%)	68 (66.7%)	36 (35.3%)
Total	102	102	102

Source: Author's calculations (Survey 2006).

The framework for the investigation took into consideration the interactions between the firm and the buyers (i.e. local processors, exporters, international retailers) and sought to explain how upgrading took place in local firms. It was stated that the type of trust relationship and power dependence can determine how information flows and how firms upgrade. The implementation and compliance with standards provides opportunities for learning and acquiring skills and knowledge. One or more links in the chain have a role of governance and coordinate the activities in the chain through different mechanisms. In this interaction, trust relationships may or may not be formed, and an opportunity to learn and upgrade is opened up to the producers.

Did upgrading have an effect on the sales of the firms? From the correlation results, several conclusions can be drawn. First of all, there is a significant positive relationship between product upgrading and total sales. The point-biserial coefficient of 0.426 indicated that the effect was medium. In the case of process upgrading, the effect was small, but the correlation was significantly positive. Firms engaging in functional upgrading activities had greater sales, as the r_{pb} shows. The correlation analysis indicates that there is a positive correlation between upgrading activities and increase in sales. Producers implementing and complying with standards can also expect greater sales. It appears that the trust relationship between the producers and the buyers has a significant effect on the total sales (Table 15). Firms that have greater trust on their buyers also have greater sales. The trust relationship seems to be an important factor. The type of contractual relationship (a more binding relationship was a contract, a less binding relationship was a sporadic order) also has an effect on the total sales. There is a positive relationship between the type of contract and total sales, although the effect is small. Another variable analyzed was the investment in R&D. Firms with a larger investment in R&D also had larger sales. The effect of Spearman's coefficient is large. There is a positive relationship between the frequency of contact between the buyers and producers and the total sales. Those firms having more frequent contact with the client also

had greater sales. The coefficient of 0.639 indicated a large effect. Likewise, those firms receiving more and better information from the clients had greater sales. The effect was also large for this variable. Finally, one can conclude that the longer a firm is in a business relationship with the buyers, the greater the sales.

Table 15: Correlation Results

Variable	Spearman's r_s	Point-biserial r_{pb}	Effect
Trust Buyers	0.546**		Large
Type of Contractual Relationship	0.273**		Small
Investment in R&D	0.569**		Large
Frequency Contact Buyers	0.639**		Large
Information Received	0.604**		Large
Years in Business Relationship	0.223*		Small
Product Upgrading		0.426**	Medium
Process Upgrading		0.225*	Small
Functional Upgrading		0.484**	Medium
Implementation of Standards		0.468*	Medium

** Correlation significant at the 0.01 level (2-tailed).

* Correlation significant at the 0.05 level (2-tailed).

Source: Author's calculations (Survey 2006).

Humphrey and Schmitz (2002) observed also that the process of acquiring new functions (i.e. functional upgrading) which generates higher incomes is potentially a critical part of an upgrading strategy. Nevertheless, this requires large investments.

4   Conclusion

This investigation sought to explain the upgrading opportunities of SMEs participating in agri-food chains. It focused on the local producers analyzing how their interaction with local processors or exporters and international retailers opened up the possibility to acquire new skills and knowledge. In particular, the type of trust relationship and power dependence was scrutinized to determine how information flows and how firms upgrade. The implementation and compliance with standards was observed to see if new opportunities for learning and acquiring skills and knowledge were present.

In agrifood chains in export markets, it is imperative to comply with standards and the producers studied are well aware of the risks of not complying with standards. Roughly half of the people questioned understand this as a 'rule of the game' -- if you comply, you're in, if you don't you're out. The other half understands this as 'competitiveness'. These producers think that in order to be competitive, they have to change and adapt and comply with standards. They believe they are one step ahead of the others by initiating all the process re-

quired to comply with standards. Over 70% of the firms in this sample had implemented standards. These included quality, food safety, and environmental standards, among others. Most of the producers studied had engaged in upgrading activities, particularly process upgrading. As suggested by Kaplinsky and Readman (2001), this upgrading trajectory begins with process upgrading, then moves to product upgrading, to functional upgrading and last of all, to chain upgrading. The producers evaluated in this study are in the first stages of upgrading, as the majority has upgraded processes or products and fewer have undergone functional upgrading. Because of the nature of agricultural production, it is perhaps not surprising that these SMEs seek to improve production processes. Changing a method of production, such as implementing drip irrigation, has a stronger effect on the productivity and profits than growing a new variety of a crop. Only a number of producers had engaged in functional upgrading activities, citing high investments as the reasons for not pursuing any change. Given the conditions of the financial market in Honduras, credit is difficult to access and the conditions are often not favorable for small producers. Yet the producers that did engage in functional upgrading had done so in stages, strategically improving over time. They had normally started out producing undifferentiated agricultural products, and then they had found a more profitable activity and focused on it, outsourcing the less profitable activities. As an example, a horticultural producer in the Comayagua region started out producing fresh vegetables sold in the local market. He spotted the opportunity of moving into logistics and began buying products from other producers, packing them and selling them to higher-end supermarkets not only in the region, but also in the major cities. The investments he had to make in a processing facility and in delivery trucks was significant. It is important to point out that only monetary investments were made. His firm had to acquire knowledge and expertise and had to build up strong business relationships with the buyers, where information was exchanged. He also had to comply with certain requisites and standards demanded by the buyers.

In the case of the horticultural producer from Comayagua, building a trust relationship with the buyers was part of the success of his business. Over time he established a high trust relationship that helped him acquire new information and knowledge from his client. Trust and the type of business relationship a firm has with the buyers appear to be important factors for firms in value chains. Firms in high-trust relationships with the buyers could expect higher sales. The flow of information, the type of business contract and the frequency of this contact with the buyers was also influential in the performance of the producers. Many firms received information not only about the product or product specifications, but also information on quality and the market.

Globalization has changed trade opening market opportunities and increasing competitive pressures on producers in developing countries. In empirical studies on value chains, up-

grading is studied in a wider context, one in which the relationships with lead firms and other actors is included. Instead of simply analyzing the firm, the inter-firm relationships within value chains are observed to determine how they affect different types of upgrading. In the case of agrifood chains in Honduras, the interaction with processors and exporters, as well as the type of trust relationship between the firm and other actors appear to determine whether small-scale producers have opportunities for acquisition of knowledge and upgrading or not. The compliance with standards also appears to be a critical factor for small producers in value chains.

Bibliography

Banco Central de Honduras (2006). Exportaciones por Producto. Available at: www.bch.hn/ esteco/bpagos/exporta.pdf . Acessed March 2007.

Banco Central de Honduras (2007). Remesas Familiares Enviadas por Hondureños Residentes en el Exterior y Gastos Efectuados en el País Durante sus Visitas, Subgerencia de Estudios Económicos, Tegucigalpa.

Bazan, L. and Navas-Aleman L. (2004). 'The Underground Revolution in the Sinos Valley: A Comparison of Upgrading in Global and National Value Chains', in H. Schmitz (ed.), Local Enterprises in the Global Economy: Issues of Governance and Upgrading, Cheltenham: Edward Elgar

Berdegué, J. A., Reardon, T. A., Balsevich, F. and Flores, L. (2004). Supermarkets and Agrifood Systems in Latin America: An Overview, Available at: www.regoverningmarkets. org/en/filemanager/active?fid=88. Accessed March 2007.

Berdagué, J. A., Balsevich, F., Flores, L. and Reardon, T. A. (2005). Central American Supermarkets' Private Standards of Quality and Safety in Procurement of Fresh Fruits and Vegetables, Food Policy 30(2005): 254 - 269.

Dirven, M. (2001). Dairy Clusters in Latin America in the Context of Globalization, International Food and Agribusiness Management Review, 2 (3/4): 301 – 313.

Dolan, C., Humphrey, J. and Harris-Pascal, C. (1999). Horticulture Commodity Chains: The Impact on the UK Market of the African Fresh Vegetable Industry, IDS Working Paper 96, Brighton.

Furlong, D. (1996). The Conceptualization of Trust in Economic Thought, IDS Working Paper 35, Brighton.

Gereffi, G. (1995). 'Global Production Systems and Third World Development', in B. Stallings (ed.), Global Change, Regional Response: The New International Context of Development, Cambridge: Cambridge University Press.

Gereffi, G. (1999). International Trade and Industrial Up-Grading in the Apparel Commodity Chain, Journal of International Economics 48(1): 37-70.

Gereffi, G. and Memedovic, O. (2003) The Global Apparel Value Chain: What Prospects for Upgrading by Developing Countries, UNIDO Sectoral Studies Series, Vienna.

Gereffi, G., Humphrey, J. and Sturgeon, T. (2005). The Governance of Global Value Chains, Review of International Political Economy 12(1): 78 – 104.

Gibbon, P. (2001). Upgrading Primary Production: A Global Commodity Chain Approach, World Development 29 (2): 345-363.

Gibbon, P. (2003). Commodities, Donors and Value-Chain Analysis and Upgrading, DIIS. Paper prepared for UNCTAD.

Gibbon, P. and Ponte, S. (2005). Trading Down? Africa, Value Chains and the Global Economy. DIIS, Copenhaguen.

Humphrey, J. (2003). Opportunities for SMEs in Developing Countries to Upgrade in a Global Economy, ILO SEED Working Paper No. 43, Geneva.

Humphrey, J. (2004). Upgrading in Global Value Chains, ILO Working Paper No. 28, Geneva.

Humphrey, J. (2005). Shaping Value Chains for Development: Global Value Chains in Agri-businesses, GTZ, Eschborn.

Humphrey, J. and Memedovic, O. (2006). Global Value Chains in the Agrifood Sector, UNIDO Working Paper, Available at: www.unido.org/filestorage/view/unido_fs_5388_user_folder/pdf_full_text/01_global_value_chains_agrifood_sector.pdf. Accessed April 2007.

Humphrey, J. and Schmitz, H. (1996). Trust and Economic Development, Institute of Development Studies, Brighton.

Humphrey, J. and Schmitz, H. (2000).Governance and Upgrading: Linking Industrial Cluster and Global Value Chain Research, Institute of Development Studies Working Paper No. 120, Brighton.

Humphrey, J. and Schmitz, H. (2002). How does insertion in global value chains affect upgrading in industrial clusters? Institute of Development Studies, Brighton.

Kaplinsky, R. (2004). Competitions Policy and the Global Coffee and Cocoa Value Chains, Paper prepared for UNCTAD, Geneva.

Kaplinsky, R. and Morris, M. (2001). A Handbook for Value Chain Research, International Development Research Centre, Ottowa.

Kaplinsky, R. and Readman, J. (2001). Integrating SMEs in Global Value Chains: Towards Partnership for Development, Report Prepared for UNIDO, Vienna.

Pietrobelli, C. and Rabellotti, R. (2004). Upgrading in Clusters and Value Chains in Latin America: The Role of Policies, IADB, Washington.

Ponte, S. (2001). The 'Latte Revolution'? Winners and Losers in the Re-Structuring of the Global Coffee Marketing Chain, CDR Working Paper 01.3, Copenhaguen.

Ponte, S. (2002). Standards, Trade and Equity: Lessons from the Specialty Coffee Industry, CDR Working Paper 02.13, Copenhaguen.

Raikes, P., Jensen, M. and Ponte, S. (2000). Global commodity chain analysis and the French *filiére* approach: comparison and critique, Economy and Society, 29 (3): 390-418.

Raiser, M. (1999). Trust in Transition. EBRD Working Paper No. 39.

Reardon, T. and Berdegué, J. A. (2002). The Rapid Rise of Supermarkets in Latin America: Challenges and Opportunities for Development, Development Policy Review 20: 371-388.

Reardon, T., Cordon, J. M., Busch, L., Bingen, J., and Harris, C. (2001). Global Change in Agri-food Grades and Standards: Agribusiness Strategic Responses in Developing Countries, International Food and Agribusiness Management Review, 2(3/4): 421-435.

Williamson, O. E. (1979). Transaction-Cost Economics: The Governance of Contractual Relations, Journal of Law and Economics 22: 233-261.

Williamson, O. E. (1985). The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting, New York: The Free Press.

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