BUILDING INSTITUTIONS FOR MARKETS: THE CHALLENGE IN THE AGE OF GLOBALIZATION

by

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1. DEFINING THE MARKET CHALLENGE IN THE AGE OF GLOBALIZATION

As the twentieth century drew to a close, it can be said that the market had triumphed. The world witnessed, along with the fall of the Berlin Wall, the dismantling of socialist economies in the now transition economies; the celebration of the market-oriented East Asian "miracle"; the integration of global financial markets; broad sweeping liberalization of markets across all continents; and the increased globalization of production and distribution processes.

In the past two decades, there have been enormous changes in the global economy, encompassed in the term "globalization." Although there is no generally accepted definition, the term generally refers to increasing interconnectedness of countries in terms of economic, environmental, and socio-cultural factors (see Morrissey and Filatotchev, 2000). Globalization can be seen as "a state of the world involving networks of interdependence" (Keohane and Nye, 2000). Thus, the combination of two decades of reduced barriers to trade and the considerable increase in the flow of capital are pivotal to globalization.

The globalization of the agro-food system is manifested in several important trends. First, in recent decades, the world has witnessed the increased integration of firms into geographically dispersed networks or "global commodity chains," linking suppliers in one country with customers in another (Dolan, Humphrey, and Harris-Pascal, 1999). For farmers in developing countries, this often takes the form of increased linkages with international markets. Contract farming, in which agricultural production is contracted by processors or exporters, is one way in which these linkages have been strengthened, particularly for perishable, high-value commodities such as horticultural crops (Little and Watts, 1994). Second, within these chains, there has been a shift from homogeneous commodities to increasingly differentiated products (off-season vegetables, exotics) in which the role of grades and standards, particularly private ones, has increased. Third, in these global commodity chains, transnational firms are becoming increasingly important actors in coordinating production and marketing. In the case of fresh fruits and vegetables trade, supermarkets chains play a major role in transmitting quality, food safety, and other requirements from consumers to farmers (Dolan et al., 1999). One reason that vertical coordination is becoming more important, particularly in agricultural exports from developing countries to industrialized countries, is that retailers and consumers are taking an interest not only in the characteristics of the final product but in the way it was produced.

At the same time, there is lingering concern that, despite two decades of structural adjustment aimed at liberalizing markets, agricultural markets for traditional bulk commodities remain weak (Kherallah et al., 2002). The overwhelming evidence suggests that improving price incentives for farmers was necessary but not sufficient to boost agricultural production. Long run aggregate supply elasticities, with respect to prices for the more advanced developing countries, tend to be much higher than for other developing countries with poor infrastructure, weak public institutions, and low levels of human capital and private sector development.

Following the reduced role of the state in the distribution of agricultural outputs and inputs, the development of a reliable private sector and well-functioning markets has been slow, exacerbated by poor infrastructure, weak and highly fluctuating terms of trade, high transaction costs, the lack of market information, and inadequately developed financial markets, particularly in rural areas. In this context, market participants, particularly small-scale farmers, are now exposed to greater risk; market distribution occurs at prohibitively high transaction costs, which are passed on to consumers; the market remains thin and unable to stabilize itself in periods of either surplus or deficit; and the market continues to be weakly integrated, both domestically and externally. Further, the investigation of private sector micro-economic behavior reveals that private operators in the grain market are generally small or micro-enterprises, with limited modern business management skills, limited capacity to take risk, and very weak financial liquidity (Gabre-Madhin and Amha, 2003).

1.1 The Stakes for Smallholder Agriculture

Small-scale agriculture has witnessed a resurgence of interest in the recent poverty reduction debate, as it is presented as a "growth-equity win-win" (Vorley and Fox, 2004). But the evolving global agro-food system and the advances of market liberalization have raised unique challenges for smallholder integration into the global market and have polarized the debate between staples versus high-value agriculture, and between domestic versus export-led market integration.

At one level, it is argued that smallholders need not be marginalized in the changing global agro-food system, as they may may be involved in export horticulture as employees on large plantations, commercial farms, and packing plants, or as independent farmers sometimes working under contracts with exporters. There have been many concerns about the impact of contract farming on poor households, but some recent studies suggest that under certain circumstances there are rewards for smallholder contract farmers (McCulloch and Ota, 2003; Stringfellow & McKone, 1996). In the broader debate on whether smallholders have benefited from globalization, the winners have been those that are vertically integrated with agri-businesses or are organized into farmer organizations for collective strength; have access to better infrastructure and credit; and have benefited from the role played by the public sector and others in capacity building (Narayanan and Gulati, 2002).

At another level, analysts have argued that increased domestic demand for staples, coupled with investments in productivity-enhancing technology and measures to reduce marketing costs, will have significant potential for poverty reduction and growth (Diao and Hazell, 2004). This perspective is in sharp contrast to the view that the growth potential of agriculture lies largely in non-staples production (Maxwell, 2004). At yet another level, the debate has centered on whether interventions in the post-reform era should focus on building market linkages for smallholder through supply chain development or whether broader interventions to build institutions for markets such as warehouse receipts systems and market information are more appropriate.

1.2 The Market Challenge Redefined

Broadly, despite the unprecedented economic prosperity that characterizes the beginning of the twenty-first century, the unleashing of markets has not necessarily lead to the expected spontaneous emergence of order and positive social outcomes. Witness the social and economic chaos following reforms in Russia and other transition economies, continued economic stagnation and persistent ethnic and civil strife following structural adjustment in Africa, the bursting of the Silicon Valley dot-com bubble, and the Japanese and East Asian financial crises following their "miracle." This malaise with the *laissez-faire* or free market approach may be related to three critical issues.

First, there is the problem of creating markets where none previously existed, a problem which concerns the nature, speed, and scope of the marketization of formerly planned economies (Bromley, 1997). The view that markets are not external to society and can only function in the context of appropriate social arrangements invokes skepticism for the scope for rapid expansion of markets in developing and formerly planned economies (Platteau, 1994). Second, there is the problem of allocative impact. Meerman (1997) finds that for a large number of less developed countries, the impact of market reform on agricultural output has been small. In some instances, as in the former Soviet Union, liberalization has led to agricultural output contraction and resource outflow. Third, there are distributional consequences of market expansion. Opponents of globalization contend that the unleashing of market forces has disproportionately hurt the poor. Direct examination of the poverty impacts of agricultural reforms in sub-Saharan Africa, in terms of changes in producers' terms of trade and changes in price volatility, reveal negative or at best mixed outcomes (Dercon, 2001; Sahn, Dorosh, Younger, 1997).

1.3 The New Agenda: From Getting Prices Right to Getting Markets Right

The fundamental market problem in the twenty-first century is *not* whether to free or restrict markets. It is to understand how markets function, what roles different institutions play in supporting market exchange, and how to design, transfer, and maintain these institutions. This implies that a shift in policy thinking is required: from the perspective of "getting prices right," which dominated the market liberalization agenda in the last two decades, to that of "getting markets right." Getting prices right implied that market order will emerge spontaneously or endogenously and that markets will take care of themselves once incentives are aligned. Getting markets right implies that market order depends on an underlying set of institutions and supporting infrastructure, requiring guidance from a "visible hand."

Beyond market liberalization, getting markets right also implies a concerted need and challenge for the public sector to engage with, and ultimately enhance, the role and performance of the private sector. Thus, the role of the state vis-à-vis private actors must be initially defined and re-defined as the market itself evolves.

This paper sets out to address this agenda, with a particular focus on the need to build institutions for markets, in a concerted fashion. In the following section, the paper addresses the task of getting markets right and within that, the role of institutions and why they matter. Section 3 then focuses more narrowly on analyzing institutions and defining them. This is followed by in-depth review of two key dimensions of institutions for markets, market coordination and contract enforcement, in Sections 4 and 5, respectively. This is followed by a discussion of approaches and interventions to building market institutions in Section 6, and conclusions in Section 7.

2. UNDERSTANDING THE MARKET: VISIBLE AND INVISIBLE HANDS

What is a market? Analysis of the market mechanism has always been central to economic inquiry, although the market itself is rarely defined in economics. Hibbard (1921) gave the famous definition that "two women and a goose make a market." Neoclassical economic theory considers the market as an institution in and of itself (Stigler, 1971). However, little effort has been directed at understanding the conditions necessary for it to exist. Within an exogenously determined market, Adam Smith's "invisible hand" directs individual behavior and leads to the Pareto optimal allocation of goods. This view of the market implies that, in a perfectly competitive world, price is all that is needed to coordinate activity. It also implies that the role of government is not to intervene in the regulation of the market, but to leave the market alone.

Alternatively, the market can be viewed as an intricate web of institutions and social arrangements, acting together for the same purpose, which evolve or are designed to facilitate the transfer of rights and titles to ownership in goods and services (Davidson and Weersink, 1998; Bakken, 1953). In this view, prices alone cannot coordinate economic activity and the origins and evolution of specific institutions matter, such as laws, regulations, and social norms, among others. Also, in this view, the role of government is not to leave the market alone but to participate in the design and creation of institutions. At the heart of the difference between these two definitions of the market is the Smithian perception that order emerges spontaneously from market processes themselves (Hayek, 1945), leading to the laissez-faire proposition that the outcome of "free" markets is beneficial both socially and allocatively.

Thus, the alternative to the "invisible hand" or free market view is one that considers explicitly the role of the complex set of institutions that jointly define the market and that determine its outcome. These institutions are those that define human interactions, including the organization of firms, community norms, moral codes, enforcement mechanisms, and formal rules. In this perspective, the analysis of the price as the sole coordinating mechanism is not valid, or is analogous to the study of "the circulation of blood without a body" (Coase, 2001).

2.1 The End of History?

Fukuyama (1992) called the remarkable convergence of political and economic thinking around liberal democracy and free markets in the late twentieth century the "end of History." He did so following the Marxist-Hegelian tradition of history as a broad evolution of societies heading to a final goal. However, following this convergence, it is becoming clear that economic differences between countries, even as they become interlocked in the vast global economy, will be centered on the heightened significance of culture and norms, or "trust," rather than ideology. Thus, while both Japan and the United States practice democracy and capitalism, Japanese firms adhere to the concept of loyalty within business networks, known as *keiretsu*, and are troubled by the litigiousness of American firms (Fukuyama, 1995). An increasing recognition that economic life is bound up in social life has shaped the view that "social capital," defined as the connectedness of human beings, matters for economic performance (Coleman, 1990; Putnam, 1995; Knack and Keefer, 1997). Earlier, a similar perspective was advanced by Karl Polanyi (1957) and extended by Granovetter (1985) and others (Amselle, 1977; Meillassoux, 1971; Geertz, Geertz, and Rosen, 1979) that market exchange is "embedded" in social relations and that the economy is an "instituted process."

Market liberalization implies changing the way that markets are organized through changes in the presence and combination of institutions that define the market's structure and ultimately define human interaction. It also implies changing the rules and incentives governing the conduct of individual institutions in the market (Kuyvenhoven et al., 2000). Despite the vast literature on the reform experiences and their impact, little attention has been given to the actual institutions that support market exchange (Palaskas and Harriss-White, 1993). Nor is there a clear understanding of how institutions emerge and evolve over time.

It is now well recognized that institutions matter. In his presidential address to the Royal Economic Society in 1986, Matthews declared that "the economics of institutions has become one of the liveliest areas of our discipline" (Matthews, 1986).[1] Yet, much remains to be done in furthering our understanding of *why* and *how* institutions matter and how they emerge. Despite the enormous progress in the study of institutions, "we are still very ignorant about institutions" (Williamson, 2000). The causes of ignorance are that institutions are very complex; that neoclassical economics has been largely dismissive of institutions; and that much of the institutional theory lacks scientific ambitions. With regard to the role of institutions in development, Bardhan (1989) notes that

> "It is part of an institutional ritual in development economics, as in much of economic theory, to relegate all institutional matters into a 'black box.' The box is supposed to contain something vaguely important, but it does not usually receive more than a nodding, if somewhat intriguing, recognition in passing" (preface).

[1] In recognition of this, the profession has awarded six Nobel Prizes in this area: Kenneth Arrow, Friedrich Hayek, Gunnar Myrdal, Herbert Simon, Ronald Coase, and Douglass North.

With the increased recognition that institutions matter in a direct and fundamental way and considering the advances in both theory and empirical analysis, institutional issues can no longer be relegated to a black box.

2.2 Getting Markets Right

Privatization, institution building, and infrastructure development are complex tasks that need long-term investment and commitment. These types of reforms are not easy to implement given the short-term nature of policy-making. In addition, these changes are more difficult to incorporate in policy-adjustment lending programs of international donor organizations. In the case of sub-Saharan Africa, in particular, this means that the steps ahead for further reform in Africa will be more difficult to achieve and will require readjustment in government and donor behavior.

In practical terms, getting markets right suggests the following: building markets in which buyers and sellers are well coordinated, transaction costs are low, contracts are enforceable, risks are manageable, exchange can be impersonal, price volatility is dampened, and transactions are liquid and highly responsive to shifts in supply and demand. To achieve the above, efforts to transform the market must occur over a sustained period of time in which market development is progressively achieved.

Experience worldwide cautions against a quick fix solution; market adjustment requires a gradual alignment of incentives and behaviors within the context of institutions and even social norms. Moreover, these efforts require a balance between policy incentives, the broader infrastructural environment, and the development of appropriate market institutions. These can be considered the "3 I's of market development": Incentives, Infrastructure, and Institutions.

Looking more closely at the elements within the framework of the "3 I's", incentives involve the overall policy environment and the stability therein, the general investment climate, the macro-economic framework, as well as tax and trade policies. Infrastructure for markets is comprised of telecommunications, transport, storage, and logistics in terms of physical capacity as well as research, skills, and extension, in terms of technical capacity. While roads are often given the bulk of attention in discussions of market failure, in fact, the wave of globalization suggests that not only are we in the midst of an information revolution but also of a logistics revolution, in which success in the market is ultimately determined by processes such as just-in-time delivery among others. Finally, market institutions, which have been perhaps most obviously neglected and whose role has been least understood in the post-reform era, concern market information, grades and standards, contract enforcement, the coordination of market actors, trade and producer associations, market regulation, industry wide forums for dialogue, and trade finance. While each of these dimensions imply a significant role for the state, the private sector –defined as the producers, traders, processors, and service providers such as in transport and storage— plays a pivotal role (Figure 1).

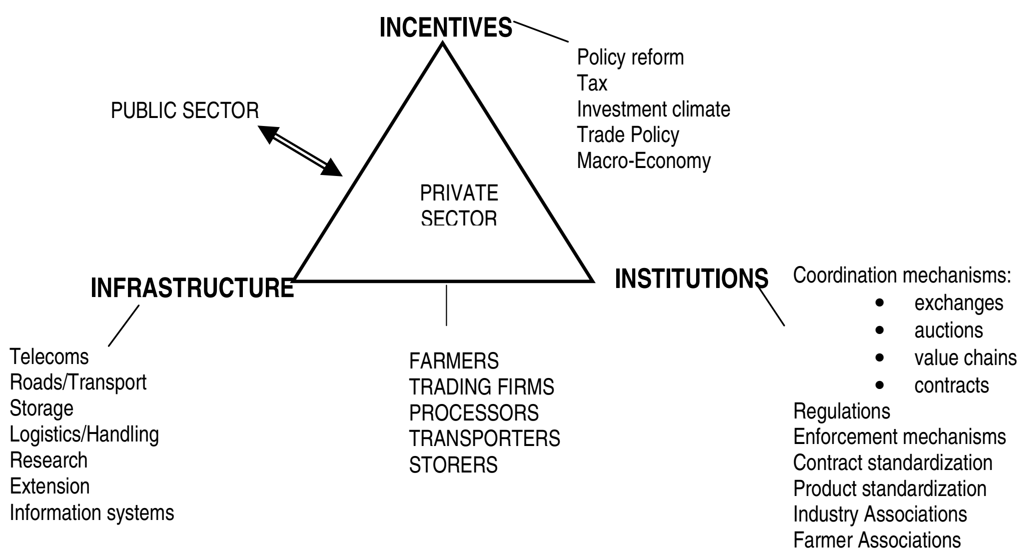
It should also be noted that there are significant interactions between these three dimensions. For example, in the case of transport, while it is common to perceive transportation to be a function of access to good quality roads, in fact, a large part of transport costs are related to the coordination of supply and demand in the transport market. Thus, in contexts where there is weak information regarding demand for transport and frequent delays in the system, costs tend to rise considerably as the costs are mainly covered by the "fronthaul" or first leg of the trip, as the "backhaul" or return trip is frequently under-utilized because of information gaps. Moreover, even with good roads and appropriate coordination, bad policies such as restrictive import policies or licensing or tax disincentives can still result in high transport costs and market failure if these policies result in collusion or thin transport service provision. Thus, the key challenge in market development is not to view these three elements in isolation but rather to approach them in an integrated or holistic manner.

The three dimensions of market development are significantly inter-related and jointly affect market outcomes. This integrated approach also clearly delineates what are the public and private roles in the system and what the relations are between the public and private. The few successes of market reforms in Africa suggest that success depends on precisely adopting this integrated approach in which the public sector creates a space for private actors.

A major weakness of much of the structural adjustment-led market reform agenda was an over-emphasis on the removal of policy distortions and the redressing of policy incentives, at the expense of addressing issues related to the institutional and infrastructural context (Kherallah et al., 2002). Thus, the shift in focus from market reform to market development entails a serious effort to redress the major gaps in particular on market institutions as well as on infrastructure.

At the same time, efforts to reverse this earlier bias should not neglect the policy reform agenda that still remains. A number of policy issues are directly or indirectly linked to the commitment of the state in promoting a successful private sector and the relationship that the state seeks with the private sector. It has been fairly common in post-reform economies for the state to remain highly suspicious of the private sector. The lack of trust between state and private sector has often resulted in policy reversals or reprisals against the private sector on the part of the state and speculative, rent-seeking, or risk-averse behaviors on the part of the private sector, with ensuing negative consequences for market performance.

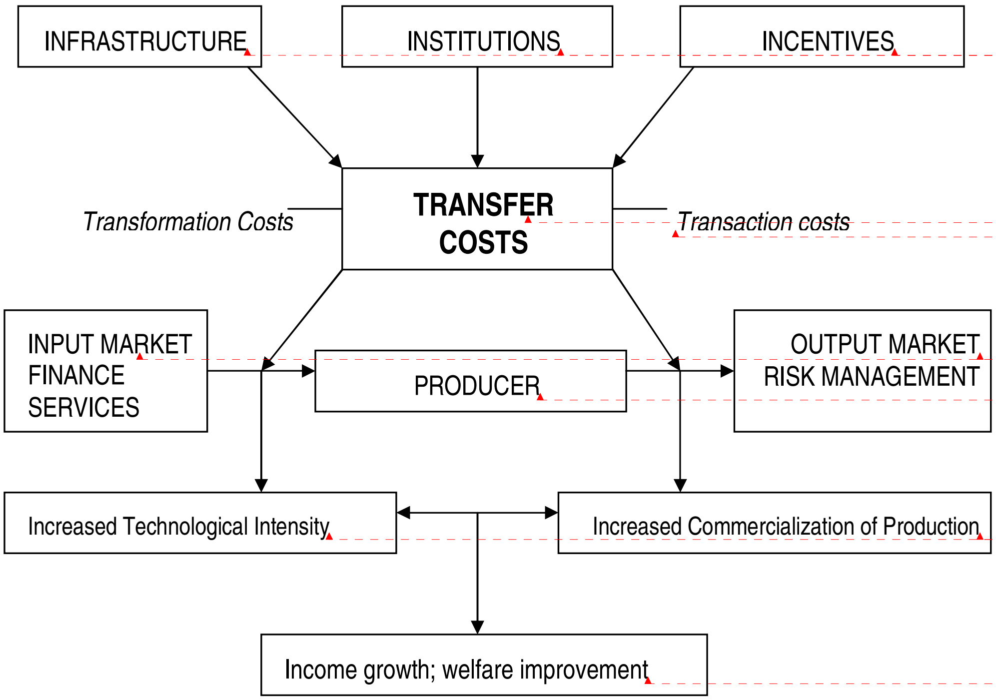
Figure 1. Integrated perspective on market development



2.2. *How* Markets Matter

The mechanism in which the three dimensions influence economic outcomes is highlighted in Figure 2, where it can be seen that the main impact of the 3 I's is on the level of transfer costs. In this case, transfer costs include both the transaction costs of coordinating market exchange costs (such as contract negotiation, search, monitoring, and enforcement costs) as well as the physical or transformation costs, associated with transport, storage, handling, etc. In turn, these transfer costs have an impact on the delivery of inputs and factors to the producer and the uptake of outputs from the producer. Thus, prohibitively high transfer costs result in missing markets, such as for rural credit or private fertilizer markets. Transfer costs represent a wedge, which can erode the competitiveness of particular markets and result in outcomes where there is no trade.

Figure 2. How Markets Matter to Agricultural Development



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3. ANALYZING INSTITUTIONS FOR MARKETS

Broadly, North (1990) defines the structure that human beings impose on human interaction as institutions. The seminal work of Coase (1937, 1960) emphasized that one cannot come to grips with how economies perform without considering institutions and how they affect economic behavior, a view later extended and refined by Williamson (1985), who developed the theory that institutions emerge to minimize the costs of transacting between different actors. When these costs are high, they constrain the ability for human beings to interact and engage in economic activity. In their classic study of the historical growth and performance of nations, North and Thomas (1973) find that the evolution from personalized exchange to impersonal exchange, supported by institutions to enforce contracts, is central to growth.

Within the body of literature known as the New Institutional Economics (NIE), three distinct strands of thought have emerged. One approach sees institutions evolving to reduce transaction costs and views these institutions as the key to the performance of economies (Coase, 1937, 1960; Alchian and Demsetz, 1972; North, 1981; Williamson, 1985). The second strand has grown out of the theory of imperfect information and has adopted a more rigorous framework for analyzing institutions as substitutes for missing markets in an environment of pervasive risks, incomplete markets, information asymmetry, and moral hazard (Akerlof, 1980; Stiglitz, 1985). The third strand in NIE is that market exchange is often embedded in personal relationships (Geertz, 1968; Meillassoux, 1971; Granovetter, 1985). Trust and reputation are important aspects of business decisions, particularly when contracts are difficult to enforce legally and when market transactions require investment in assets that are only useful for this transaction (Kandori, 1992; Greif, 1993; Landa, 1997, Tadelis, 1997; Williamson, 1985; Fukuyama, 1995).

Understanding the role of institutions for market exchange must address all three of these roles or dimensions of institutions:

- to minimize transaction costs
- to redress missing markets, and
- to create or formalize social capital.

3.1 Defining Institutions for Market Exchange

While we start with the presumption that institutions matter, such a statement is only meaningful with a common understanding of institutions. What are institutions? Can they be identified with statutory laws, informal norms, established organizations, contracts, people's mindsets, or some combination of some or all of these? Different theorists use quite different definitions, with emphasis on different aspects. According to Nabli and Nugent (1989), some key differences among the various definitions concern: (i) the degree to which institutions and organizations coincide; (ii) their degree of formality; (iii) their creation at a specific time and place versus their evolution from diffuse sources; and (iv) their universality.

Using the analogy of the economic process as a game, Aoki (2001) distinguishes three distinct though related meanings: institutions as either the *players* in the game, the *rules* of the game, or the *equilibrium strategies of the players* in the game and proposes a fourth: institutions as self-enforcing systems of shared beliefs of players in the game. We will consider briefly each of these and suggest a unifying definition for the present purposes.

(1) Institutions as the Players of the Game. In the first view, in laymen's terms as well as for some economists, institutions refer to specific "players" or organizations such as industry associations, technical societies, courts, and government agencies (Nelson, 1994).

(2) Institutions as the Rules of the Game (Exogenously-driven). In the second view, North (1990) argues that institutions should be identified as the rules of the game, distinct from the players. Thus,

> Institutions are " the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction" (North, 1990).

These constraints can be informal (sanctions, taboos, customs, traditions, and codes of conduct) or formal (constitutions, laws, property rights). Over history, institutions have been devised to create order and reduce uncertainty in exchange (North, 1991). These constraints are necessary because there are costs of transacting associated with the lack of information or a great number of unknown market actors, making non-cooperation a possibility. In game theoretic terms, effective economic and political institutions raise the benefits of cooperation and increase the costs of defection (North, 1991). North makes a critical distinction between institutions and organizations. He distinguishes the rules from the players, noting that while the purpose of rules is to define the way the game is played, the purpose of the players is to win the game. He defines organizations as either political bodies (political parties, Senate, city council, regulatory agencies);

economic bodies (firms, trade unions, cooperatives); social bodies (church, clubs, sport associations); and educational bodies (schools, universities), all as groups of individuals bound by some common purpose. Thus, in his view, the analysis of the strategies of individual players must be separated from the analysis of the underlying rules of the game.

Unlike Williamson (1985), whose transaction cost approach focuses on institutions as efficient solutions to organizational problems in a competitive framework, North's conceptualization of institutions is concerned with both failures and successes in evolving the necessary political and economic institutions to enforce the rules of the game and to induce productivity growth. North's historical analysis of institutional evolution of long distance trade in early modern Europe from the 11th to the 16th centuries highlights how the increasingly complex organization of markets was due to specific institutional innovations that reduced transaction costs. These innovations evolved from the interplay of two major economic forces: the economies of scale associated with growing trade volumes and the development of improved mechanisms to enforce contracts at lower costs. The state played a major role in this process. In explaining why early modern Europe's growth experience diverged from other regions, North suggests that the relationship between the basic institutional framework and institutional change matters and that there path dependency in economic change. In North's view of institutional change, the existing rules of the game shape the incentives of players, ultimately generating effective demand for new rules in response to changes in relative prices. A shortcoming of this view is its failure to define who sets the original rules, to which players then react and which then evolve.

(3) Institutions as Equilibrium Strategies of Players (Endogenously-determined rules). In contrast to North, whose definition of the rules of the game can be considered as exogenously-driven (both in the sense of origin as well as change through conscious third party design), a third view, defined as the "equilibrium of the game" notion of institutions, has been forwarded earlier by Schotter (1981), Sugden (1985), and more recently by Aoki (1995, 2000), among others. This view builds on game theory and evolutionary biology to develop an evolutionary game approach, in which a convention of behavior establishes itself without third party enforcement or conscious design á la North. As a convention evolves, agents develop particular traits (perceptions, preferences, skills) under the pressure of evolutionary selection. Thus, a convention and associated individual traits co-evolve. Sugden (1985) argues that, in the Hume tradition, it is misleading to think of the law as the creation of government imposed on its citizens, but rather that the law reflects the codes of behavior that most individuals impose on themselves. Schotter (1981) considers that institutions are properties of equilibria of games and not properties of the descriptions of the games. Similarly, Uphoff (1986) states that institutions are complexes of norms of behavior that persist over time, by serving collectively valued purposes.

An alternative game-theoretic approach within this third view relies on subgame perfect equilibrium, in which the strategy of each player is comprehensive plan of actions contingent on future states of the game. Each action plan needs to be a Nash equilibrium and is thus self-enforcing (Greif, 1989, 1994; Milgrom, North, and Weingast, 1990; Greif, Milgrom, and Weingast, 1994, *inter alia*). In this equilibrium perspective, beliefs and self-enforceability play an important role. Thus, according to Greif:

> Given the technologically determined rules of the game, institutions are the non-technological constraints on human interactions, and are composed of two inter-related elements: cultural beliefs (how individuals expect others to act in various contingencies) and organizations (the endogenous human constructs that alter the rules of the game, and whenever applicable, have to be an equilibrium. (Greif, 1994, p. 943)

Regarding the question of the origin of an institution, the rules-of-the-game theorists tend to subscribe to the view that rulemaking is susceptible to conscious design by either legislators, mechanism design economists, etc. Among the equilibrium-of-the-game theorists, the evolutionary game approach subscribes to the view of an institution as emerging spontaneously. In the subgame perfect equilibrium approach, players are capable of deductive reasoning and thus select strategies that are mutually consistent and lead to the construction of an institution. However this approach fails to resolve how individual players can choose an appropriate equilibrium strategy before knowing the equilibrium.

(4) Institutions as Self-Sustaining Systems of Shared Beliefs. To overcome this latter problem, Aoki (2001) develops an alternative definition that enables a better understanding of the diversity of institutions and the process of institutional change. This approach views an institution as a "self-sustaining system of shared beliefs." In contrast to the rules-of-the-game theorists, who view the rules as exogenously given, this approach views the rules of the game as determined endogenously through the strategic interaction of agents, held in the minds of agents, and thus self-sustaining. Shared beliefs are a summary representation, or compressed information, of an equilibrium, out of the many possible. As such, an institution is the product of long-term experiences of a society of boundedly rational and retrospective agents (Kreps, 1990). Agents making strategic choices on the basis of shared beliefs jointly reproduce the equilibrium state and thus the institution becomes self-sustaining and the information compressed in it becomes taken for granted. In this way, although endogenously created, the institution becomes objectified (Aoki, 2001).

3.2 A Unified Definition of Institutions for Market Exchange

For the present purposes, institutions for markets are defined as a set of constraints -- formal or informal, exogenously or endogenously determined-- that govern the relations between individuals or groups in the exchange process. Following North, this definition clearly excludes organizations, such as trade unions, producer groups, and government agencies. The set of institutions for market exchange includes: formal and informal contracts between individuals or groups; trading practices, codes of conduct, and social norms, such as repeated interaction, trust, and reciprocity; formal commercial laws and regulations that govern market relations; and institutional arrangements between actors such as vertically or horizontally integrated supply chains. This definition, although relatively broad, is specifically tied to a focus on the *relations between* human beings in the market, rather than focusing on the actors themselves or the market itself. Second, it is concerned with *behavior* rather than outcomes. These relations are influenced by both the extent of transaction costs in the Williamsonian and Northian tradition, as well as the extent of social capital or embeddedness in the Polanyi sense. Using the analogy of a chain, which links individuals and groups, institutions thus constitute the *links* between the various actors. That is, institutions are defined as the structure of relations between individuals within the chain (Figure 3). The set of institutions for market exchange includes:

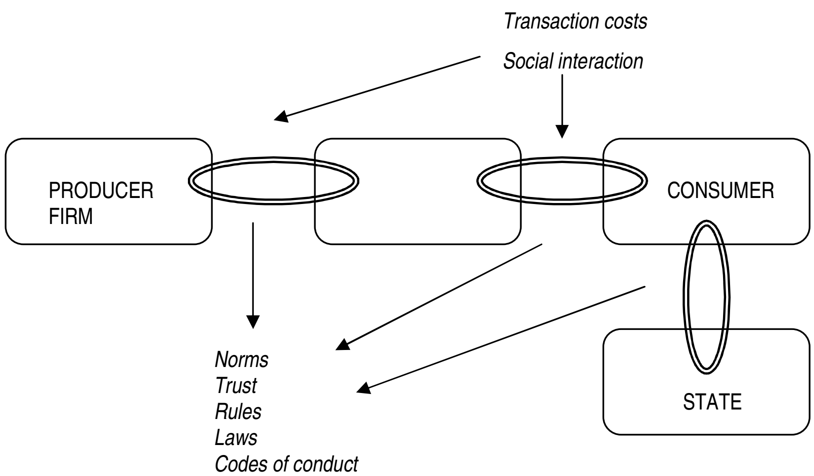
- formal and informal contracts between individuals or groups;
- trading practices, codes of conduct, and social norms, such as repeated interaction, trust, and reciprocity;
- formal commercial laws and regulations that govern market relations; and
- institutional arrangements between actors such as vertically or horizontally integrated supply chains.

This analogy is particularly well suited to the analysis of markets, where the market literature has long elaborated the concept of the marketing chain. In the second half of the twentieth century, industrial organization theory emerged to explain entry and exit conditions and market concentration (Bain, 1956) and the organization of food distribution channels (Scherer, 1971). In analyzing the organization and coordination of U.S. agriculture, a body of work known as sub-sector analysis adapted the Structure-Conduct-Performance paradigm of industrial organization theory to agricultural problems (Henderson, 1975; Marion, 1976) and more explicitly focused on vertical coordination (Mighell and Jones, 1963).

Related to sub-sector analysis, the francophone tradition of the *filière*, or commodity chain, approach also emerged in the same period. This approach, less tied to a particular theoretical construct, focused on the totality of structures and relations around specific commodities, in a "product system" approach (Leplaideur, 1992; Coste and Egg, 1996). In contrast to the institutional perspective, which focuses on the relations between actors in the chain, both the subsector and *filière* approaches are concerned with the organizational structure of the chain.

More recently, a third approach which explicitly acknowledges the importance of human relations within marketing chains is the emerging literature known as global commodity chain analysis (GCC), which emphasizes the shifting bases of power exercised by lead firms in globalized chains linking producers, processors, distributors, and consumers and the impact of the governance structure on shaping outcomes for the market (Greif, 1994). The main focus is on the linkages and co-ordination between economic agents and the outcome for the whole chain (Kaplinsky, 1999).

Figure 3 Institutions as links in the chain of market interactions



3.3 Understanding the Role of Market Institutions

In attempting to understand the role of market institutions, our first objective is to directly explain why and how institutions matter for markets and how these institutions emerge and evolve over time. The second objective is to perceive what role policy might play in the design of functioning markets in low-income countries, through the implementation of sound, empirically oriented institutional analysis.

In understanding the role of institutions for market exchange, we focus on two types of problems. The first is to understand the role and complexity of institutional arrangements and the second is concerned with the mechanism of institutional change over time (Aoki, 2001). The first problem can be viewed from two dimensions. The first dimension is that of coordination. Coordination is primarily viewed as an information problem, or more broadly, as a transaction cost problem. What are the sources and extent of transaction costs related to search, negotiation, monitoring, and enforcing contracts? How do transaction costs determine contractual choices?

How do transaction costs determine the economic organization of the market and the types of hierarchies that exist? How can transaction costs be reduced? What would be the likely impact on market organization and on performance?

The second dimensions concerns enforcement. How are interactions in the market, embodied in contracts, enforced? What are the informal and formal rules that define interaction? How are the rules enforced? What is the role of trust, community norms, morality, and social capital in enforcement? What is the motivation, or incentive-compatibility, of enforcement? What is the impact of breakdown or limitations in enforcement mechanisms on markets?

With regard to the problem of institutional emergence and change, where do the rules of the game come from? Does the current institutional arrangement represent an efficient outcome? If so, in the context of multiple equilibria, how can institutions be designed to achieve a higher Pareto-ranked equilibrium? How context-dependent are given institutions? When and why do institutions emerge spontaneously? When and how can institutions be transferred or externally created?

4. COORDINATION: THE PROBLEM OF ECONOMIC ORDER

A fundamental concern of all societies is how the economy is organized, how market exchange is coordinated. Merchants emerge to buy goods from sellers and sell them to buyers; factories emerge to buy labor services and other factors of production and sell output to buyers. It is often said that Nobel-laureate Ronald Coase (1937) started a quiet revolution in economics when he asked one of the most celebrated questions in modern economics: Why does the firm emerge in the market economy? To extend this question: Why do we observe vertically integrated firms for some goods and services and bazaar-type markets for others? Why do supply chains based on long-term relationships emerge in some arenas in contrast to anonymous, non-repeated transactions in others? Coase's answer was that there are *costs* of using the market mechanism, which may be reduced or eliminated by certain types of coordination in the market. Coase pointed to two kinds of costs: the costs of discovering what the relevant prices are and the cost that may be saved by making a single long-term contract for the supply of goods and services instead of short-term successive contracts.

At its core, then, the problem of economic order can be conceived as essentially a coordination problem, depending integrally on both information and on the nature of contracts. This fundamental concern for economic order has led to major historical debates, extending to the present in different guises, on the role of central planning versus the free market economy. In the early twentieth century, while advocates of central planning had long cited the complexity of economic activity as an argument against what Karl Marx described as the "anarchy of the marketplace," the Austrian economist Ludwig von Mises in the 1920s and later Nobel-laureate Friedrich Hayek (1945) argued forcefully that it was precisely the complexity of the economy that rendered it beyond human comprehension and therefore unable to be perfectly planned, arguing that only by the competitive forces of the free-market regime could the decentralized elements of the economy be appropriately utilized. Thus, price signals and the pursuit of profit lead the vast and varied lines of activity to be self-coordinating. In more recent times, with the emergence of market fundamentalism, Robert Heilbroner (1990) declared, "It turns out, of course, that Mises was right."

How then to achieve this "self-coordinating" market order? On the one hand, **information** seems to be at the heart of the institutional problem of order. That is, the transmission of information on prices, quantities supplied, quantities demanded, actors and their actions, product quality and attributes, and processes is *the* key to market coordination. An important body of economic literature has focused on the problems of imperfect, asymmetric, or incomplete information, which in turn lead to decision-making with "bounded rationality" (Herbert Simon, 1982), missing markets and risk (Stiglitz, 1982; Akerlof,1970), and high transaction costs (Williamson, 1981).

Despite the early beginnings of the institutional analysis of economic organization --with the contributions of Knight (1922) on moral hazard and risk, Commons (1934) on economic organization as harmonizing relations, Barnard (1938) on the processes of organization-- the prevailing view in the thirty year hiatus between 1940 and 1970 was that the technological features of the firm and markets were determinative (Williamson, 1985). Nonetheless, important contributions were also forwarded in this period. Notably, Hayek (1945) noted that the critical economic problem of society is one of rapid adaptation to changes in time and place and that idiosyncratic knowledge is important for local adaptive action. This idea of the importance of information and its transmission across agents was advanced by Coase (1960) in his treatment of social costs and by Arrow (1969) in his analysis of the costs of running the system and of acquiring information as causes of market failure. In organization theory, Simon (1957) extended the Barnard thesis to join rational purposes with cognitive limits of humans to develop the concept of bounded rationality. Chandler (1962) established, through a business history approach, that organizational form had important implications for business performance.

Market coordination for agricultural products also critically depends on the fundamental attributes of production, processing, and the market actors. Jaffee (1985) defines these attributes as the "techno-economic" attributes of agricultural goods. Building on this concept, it is possible to distinguish a typology of market coordination institutions based on the simple attributes of product homogeneity versus differentiation, value to volume, and number of buyers and sellers. Thus, for agricultural goods such as staple grains, which are relatively homogenous, have low value to volume (bulky), and have many sellers (small farmers) and many buyers (consumers), the appropriate coordination mechanism can be a form of commodity exchange in which prices for homogenous goods are discovered through a competitive process, and many buyers and sellers interact quasi-anonymously. In the case of traditional agricultural exports, such as tree and beverage crops (coffee, cotton, tea), the product may remain relatively bulky and homogenous, but the market structure is different in that many sellers interface with a relatively small number of buyers, such as exporters. In this case, the ultimate coordination may take the form of an auction, where prices are discovered efficiently through competitive bidding between the few buyers. Finally, in the case of highly differentiated, high value-to-volume, non-traditional products such as horticulture, dairy, or other high-value products, the ultimate coordination mechanism might emerge as a tightly coordinated or integrated supply chain linking a small number of sellers with a small number or single buyer. This typology is summarized in Table 1.

Table 1. Typology of agricultural market coordination institutions

Product	**Homogeneity**	**Value to Volume**	**Market Structure**	**Coordination**
Staples (domestic foodgrains)	High	Low	Many sellers Many buyers	Commodity exchange
Traditional exports (coffee, tea, cotton, etc)	High	Low	Many sellers Few buyers	Auction
Non-traditional exports (flowers, fruits and vegetables, livestock products)	Low	High	Few sellers Few buyers	Integrated supply chains

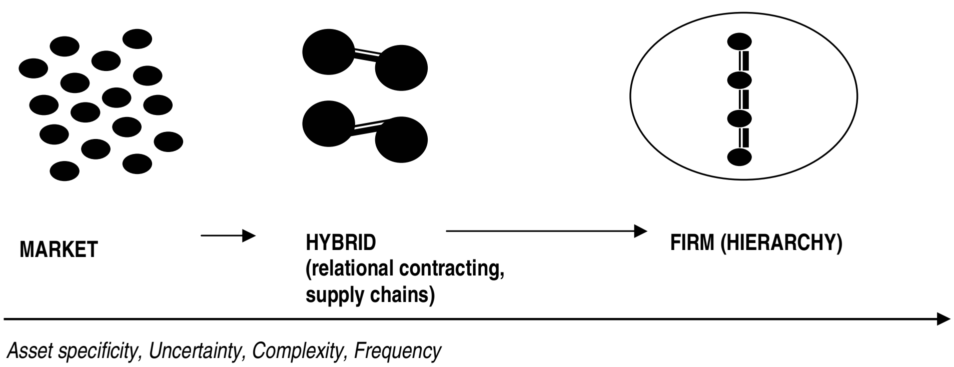
4.1 Transaction cost approach

A coherent theory of economic organization that draws these strands together did not emerge until Williamson's (1975) seminal work on *Markets and Hierarchies*, which initiated the body of work known as transaction cost economics (TCE). Of the two types of costs raised by Coase, TCE was more focused on the coordination costs. Thus, in the TCE approach, market structure responds to the existence and extent of transaction costs (Figure 4).

A separate literature that also emerged in this period focused on the first type of costs, the cost of information. While related to the transaction cost approach, this literature views institutions as substitutes for missing markets and provides a rigorous framework that considers an environment of pervasive risks, incomplete markets, information asymmetry, and moral hazard (Bardhan, 1989). Pioneering contributions in this literature were based on observation of problems encountered in low-income countries: Akerlof's (1970) lemons principle, Stiglitz's (1974) work on screening, and the extensive literature on sharecropping (Cheung, 1968; Bell, 1977; Braverman and Stiglitz, 1982; Braverman and Srinivasan, 1981; *inter alia*), which evolved into contractual choice theory and merged with principal-agent theory (Clague, 1997).

Figure 4. Market organization and transaction costs

Comment: Is this the transaction cost figure?



The foundation for analyzing organization and governance in transaction cost terms is Coase's insight that the costs of reaching, modifying, and implementing agreements restrain the potential gains from trade. Thus, in a world of transaction costs, the relative merits of different organizational forms depend on a comparison of the costs of transacting under each (Masten, 1996). Arrow (1969) defined transaction costs as the "costs of running the economic system." These transaction costs are distinguished as *ex ante* and *ex post*—the first include those of drafting, negotiating and monitoring an agreement, while the latter include the cost of maladaptation, haggling, setup and running associated with governance, and bonding costs to securing commitment (Williamson, 1985). Moreover, unlike market price, transaction costs are unique to each agent or firm and are related to the process of exchange itself.

Transaction costs arise because individuals are limited in their ability to plan for the future and in their capacity to process the complexity and unpredictability of the world. Second, even if perfect planning were possible, it is hard to negotiate about these plans due to the difficulty of developing a common language to describe actions and states of the world (Hart, 1995). Third, assuming that parties could plan and negotiate, it is frequently difficult for them to communicate their plans in such a way that a third party could enforce them. As developed by Williamson (1975, 1985, 1995), Klein, Crawford, and Alchian (1978), Grossman and Hart (1986) and Hart and

Moore (1990), transaction cost economics maintains that the implication of positive transaction costs is that contracts are typically incomplete. Because contracts are incomplete, parties who invest in a relationship-specific asset expose themselves to the hazard that, if circumstances change, their trading partners may try to expropriate the rents accruing to specific assets, otherwise known as the "hold-up problem" (Shelanski and Klein, 1995). To get around this, firms may choose to integrate vertically. More generally, a variety of alternative "governance structures" or institutional arrangements of economic organization exist and are employed, depending on the characteristics of the relationship. The working hypothesis of transaction cost economics is, thus, that economic organization is an effort to align transactions, which have different attributes, with governance structures, with different costs and competencies in a cost-economizing way (Williamson, 1991).

Box 1. Transaction cost analysis of horticultural exports in Kenya

The well-known work of Jaffee (1995) attempts to apply concepts from transaction costs economics to the analysis of organizational forms of the private agri-business industry in Kenya. The study considers that different degrees of *asset* specificity and uncertainty will determine the choice among posits that three possible organizational arrangements: spot market exchange, long-term contracts, and vertical integration.

To operationalize these concepts in the empirical analysis, proxy indicators are developed. Thus, for asset specificity, the indicators are: the length of the crop production cycle, the scope for scale economies in processing and post-harvest handling, and the degree of specialization of material production inputs and technical knowledge. The indicators for uncertainty are: the degree or rate of perishability, the degree of specificity in quality that is required, and the degree of specificity in timing of harvests and deliveries.

Using these indicators, the study analyzes the conditions of asset specificity and uncertainty for each of Kenya's most important horticultural products in order to determine the expected institutional arrangement for linking producers and exporters/processors (Table 17). The study finds that the dominant institutional arrangement for coordination is that of long-term contracts and vertical integration, rather than spot market exchange.

Table 4. Asset-specificity, Uncertainty, and Modes of Coordination for Kenya's Major Horticultural Crops

		Pineapple - processing	Mango	French beans fresh mkt	French beans -processing	Carnation
Asset specificity	Production cycle	Long	Long	Short	Short	Short
	Inputs/technical specificity	Med	Low	Low	Low	Med
	Scale economies	High	Med	Low	Med	Med
Uncertainty	Perishability	Low	Med	Med	Med	Med
	Quality specificity	High	Med	Med	High	High
	Timing specificity	Med	Low	Med	Med	Med
	Mode of coordination	**Vertical Integration**	**Long-term contract**	**Spot/Long-Term Cont.**	**Long-term contract**	**Long-term contract**

Source: Jaffee, 1985

4.2 Global commodity chain approach

Another approach is known as *global commodity chain* (GCC) analysis. This approach focuses on the linkages and co-ordination between economic agents in a value chain and how lead firms are able to shape the value chain to their advantage. Global commodity chain (GCC) analysis derives from the work of Gereffi and Korzeniewicz (1994), which has its origins in dependency theory (Wallerstein, 1974; Hopkins and Wallerstein, 1994). Hopkins and Wallerstein (1994) define a global commodity chain as "a network of labor and production processes whose end result is a finished commodity." Work by Gereffi and his collaborators has mainly focused on industrial commodity chains and the emergence of a global manufacturing system in which economic integration goes beyond trade in raw material to encompass the many activities along the chain. Since the early 1990s, GCC analysis has been applied in a number case studies: apparel exports from East Asia (Gereffi, 1994); tourism (Clancy, 1998), services (Rabach and Kim,1994); automobiles and components (Kaplinsky, 1999); and fruits and vegetables (Dolan et al., 1999).

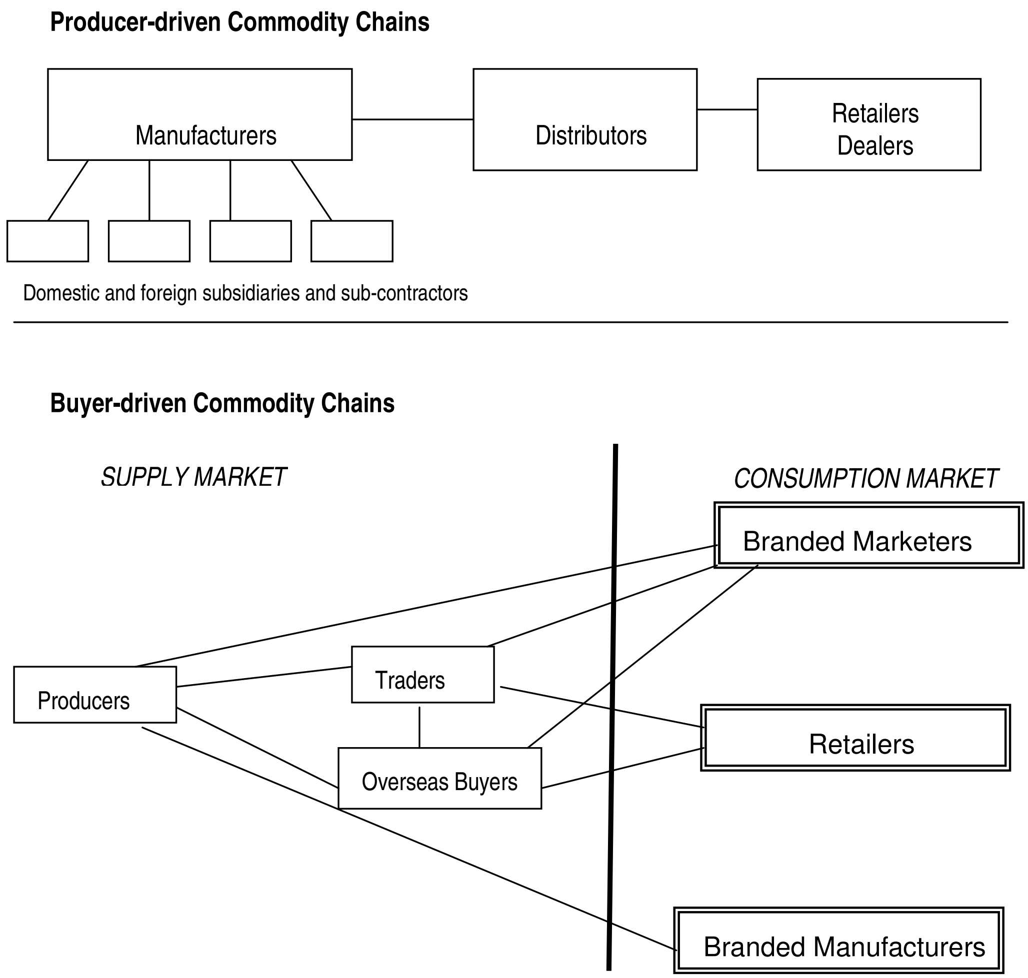
While extending the concept of value chains, the GCC approach differs from related concepts such as business systems or value chains in three ways: 1) the GCC approach is explicitly international in its focus, 2) it focuses on power and power shifts over time, and 3) it views the coordination of the entire chain as a key source of competitive advantage (Gereffi, 2001). Like the NIE approach, GCC analysis focuses on the importance of coordination and the relationships and organization of relations. However, its approach differs from NIE theory, which is more narrowly focused on efficiency-improving institutions and is thus devoid of considerations of power (Bardhan, 1989).

Producer- and buyer-driven value chains

A key distinction made by this literature is the difference between producer-driven and buyer-driven global commodity chains (Gereffi, 1994; 1999). Producer-driven commodity chains are those with large-scale economies and heavy investment, and thus high barriers to entry, in which large, transnational manufacturers play the central role in coordinating production networks (including backward and forward linkages). Producer-driven chains are characterized by capital and technology-intensive industries (automobiles, aircraft, semiconductors). Profitability is greatest in the relatively concentrated segments characterized by high barriers to entry. Thus, manufacturers in producer-driven chains are the key economic agents not only in terms of their profitability but also in their ability to control backward linkages to raw material suppliers and forward linkages to distribution and retailing. Lead firms usually belong to global oligopolies.

In contrast, buyer-driven commodity chains refer to industries with low barriers to entry in production, in which large retailers, marketers, and branded manufacturers play the key roles in setting up decentralized production networks in a variety of exporting countries. This pattern is more prevalent in labor-intensive industries. In buyer-driven chains, profits derive not from scale, volume, or technological differences, but from the unique combinations of design, marketing, and financial services. Retailers, designers, and marketers act as strategic brokers linking overseas producers and traders with evolving product niches in the main consumer markets (Gereffi, 1994). While production has low barriers to entry and is relatively competitive, the companies that develop and sell brand-name products exert control over how, when, and where manufacturing will take place and how much profit accrues at each stage of the chain (Gereffi, 2001). The difference between these two types of chains is illustrated in Figure 5.

Figure 5. Structure of Producer-driven and Buyer-driven Global Commodity Chains



Source: Gereffi, 2001

Concept of power

Another important aspect of the GCC approach is its inclusion of power, which is seen not only as the effect of barriers to entry, but also as the effect of organizational changes and supply chain management by leading firms (Raikes et al., 2000). However, power is not defined formally in GCC analysis and is used in conjunction with high profit. Following the dependency approach of Hopkins and Wallerstein, high-profit sections of the chain are "core-like" while low-profit sections are "periphery-like." This gives rise to circularity in reasoning in that profits are explained by power, which itself is defined by high profits.

What is critical to the understanding of power in the GCC approach is the role of leading firms in strategic decisionmaking within the geographically-dispersed supply networks or commodity chains (Dolan et al., 1999). Moreover, the concept of power is dynamic in the GCC approach in that barriers to entry and rents are themselves constantly evolving, as they are eroded by the process of competition (Kaplinsky, 2001).

Box 2. Application of GCC analysis to African horticultural exports

International trade in fresh vegetables has many of the characteristics of a buyer-driven global commodity chain. Trade between Kenya and the UK has grown rapidly in the past two decades. This trade has been accompanied by a total restructuring of the way in which trade was conducted (Dolan et al., 1999) demonstrates that loose trading relationships in wholesale markets were replaced by tightly structured supply chains. Important elements of this transformation were the development of year-round supply, the expansion of products, and the emergence of sophisticated "cool chains." The Kenya-UK trade is not dominated by transnational corporations but rather on networks of Kenya-based producer-exporters, UK-based medium-sized importers, and large UK retailers. The dominant actors in the governance of the global chain are these large retailers in the UK.

The transformation from wholesale markets to value chains in the 1990s was driven by several factors. UK supermarkets and major retail chains greatly increased their share of total fresh vegetable sales, from 44 percent in 1992 to 76 percent in 1997. Second, the supermarkets by-passed the wholesale markets and worked directly with importers. Third, there was a shift to greater product variety, product innovation, and increasing processing and packaging. Fourth, traceability of products was established, with monitoring and audit regimes (Dolan et al., 1999). The critical driver for increased process control was the change in the regulatory environment. The 1990 UK Food Safety Act required that retailers demonstrate "due diligence" in the manufacture, transport, storage, and preparation of food. In 1993, the EU introduced the harmonization of the maximum pesticide residue levels (MRLs). In addition, consumer concerns about labor rights prompted supermarkets to develop fairly tight standards.

Other key changes included the establishment of logistics parameters by the UK supermarkets, which included strict specifications for post-harvest cooling and storage on farm to packing and airport handling conditions, and finally to processing and cooling at the UK importers level. The supermarkets developed systems of planning crop production with importers and exporters, involving annual supply programs and weekly or daily monitoring.

In turn, the product and process parameters established by UK supermarkets forced exporters and producers to acquire new skills and capabilities to retain their UK business. The need for capital and technical capacity drove many small exporters out of the Kenyan export market, leading to the top seven firms controlling over 75 percent of all exports by the end of 1990s. It also lead to the exclusion of smallholders from the trade and the shift to large farms controlled or owned by exporters (Dolan and Humphrey, 2000). Since 2000, the value chain continues to evolve with the move to category management. Products are grouped into categories and, within each category, the value chain is consolidated and its management is transferred from the supermarket to the "category manager."

The key insights from this analysis are that the requirements of the UK supermarkets act as effective barriers to entry to participation in the chain by small exporters and small scale producers. For those that do participate, the rewards are considerable, involving increasing amounts of value-added activities such as chopped, washed, and packaged products with labeling and bar coding. These activities generate employment in the horticulture industry and the impact of this industry on poverty alleviation is clear (McCulloch and Ota, 2002).

5. CONTRACT ENFORCEMENT: TRADING IN PROMISES

Market exchange is fundamentally the voluntary exchange of private ownership rights over goods and services by individuals. Thus, it is important to recognize all market transactions as a form of contract --be it for the transfer of goods, credit, labor-- with mutual obligations for both transacting parties. Contracts need not be formal or even explicit. However, because of the opportunistic nature of human beings, any form of contract is only as good as the belief that it can be enforced (Fafchamps, 2004). This point is central to the analysis of market institutions and at the heart of the notions put forward by North (1990) and Williamson (1985) regarding transaction costs and their role in shaping institutions. We start with the premise that markets cannot exist without defined and protected property rights over goods and services. Even where property rights are defined and protected, there is room for cheating in the exchange process itself.

The seminal work of Hayek (1945) suggests that all economies are subject to information symmetries, which generate moral hazard and adverse selection problems. Information asymmetry further generates contract enforcement problems because compliance of contracts becomes hard to verify by external agents, such as the courts (Fafchamps, 2005). Thus, the presence of information asymmetry along with opportunistic behavior implies that institutions must and do emerge to enable contract enforcement in the market, without which market exchange cannot take place. These various institutions are the subject of this chapter.

If opportunities to exchange were limited to individuals directly bartering their own goods within their own community where enforcement is more likely, the gains from exchange for economies would remain modest. North and Thomas (1973) conclude in their seminal work on the economic growth of nations that the transition from personalized to impersonal exchange is the key to the performance of economies. Money and merchants emerge as intermediaries and facilitate the expansion of exchange beyond closed communities. However, in order to realize the gains from market exchange, the economic rules of the game must be specified that ensure the enforcement of private ownership rights. Critical questions are: How do trading individuals establish trust? Is a buyer's promise to pay at a future date reliable? Will a seller's promise to deliver certain goods at a certain date in a certain quantity and a certain quality be kept? How can the buyer be sure that the goods are not "lemons" (Akerlof, 1970)?

It is important to develop a thorough understanding of the various institutions that have emerged to enable contract enforcement and to understanding the conditions under which particular institutions emerge. To do so, we will not be limited to the study of formal contracts, but will consider all agreements binding the transfer of goods and services, be they legally bound or informal, implicit or explicit. Nor will we be solely concerned with formal enforcement institutions such as rules and laws, but will consider all forms of enforcement means such as trust, guilt, reputation, repeated interaction, joint sanctioning in communities, *inter alia.*

We will thus address enforcement from a broad, multi-disciplinary approach, drawing on law and economics, contract and contractual choice theory, theory of property rights, legal anthropology, social capital and trust theory, sociological approaches to community norms and generalized morality, and game theoretic approaches to incentive compatibility and self-enforcing strategies. This approach to understanding the market institutions for enforcement thus entails a broad view across a range of disciplines and concepts, where it can be seen that information asymmetry and opportunistic behavior lead to enforcement-related costs which are minimized through a broad range of enforcement institutions.

Thus, in response to information asymmetry and opportunism which act as determinants of transaction costs related to enforcement, various institutions can lower these costs, if they are structured in an incentive-compatible manner, if actors exhibit dynamic strategic behavior, and where the past or history matters. This then is a simple construct for framing the analysis of which enforcement institutions emerge when and how, the subject of the remainder of this chapter. At this stage, we note that enforcement institutions can and do span across the range of private actors, collective actors, and the state. Moreover, this process, which is inherently dynamic, matters enormously for development and growth. According to North (1990):

> The inability of societies to develop effective, low-cost enforcement of contracts is the most important source of both historical stagnation and contemporary underdevelopment in the third world."

Finally, it is also important to recognize that, at the same time, information asymmetries and asset specificity can lead to other, non-enforcement based, transaction costs such as those related to search and bargaining, that can give rise to coordination failure, rather than contract failure, which are treated in the next chapter. However, often the same institutions can redress both contract and coordination failure.

5.1 The Contracts Problem in African Agricultural Trade

In many developing economies in transition in sub-Saharan Africa and elsewhere, traders in liberalized agricultural markets, particularly for foodgrains, operate in a context in which prices are not publicly announced, goods are highly differentiated with no formal standardization and classification system, contracts are oral and non-standardized, there is little inspection or certification, and virtually no recourse to legal means of contract enforcement (Gabre-Madhin, 2001; Fafchamps and Gabre-Madhin, 2002). These constraints cause both producers and traders to be highly vulnerable to being cheated with respect to market prices, qualities and quantities of the delivered good, as well as other contractual terms such as the timing of delivery, and product spoilage or loss during transport, *inter alia*.

Much like grain merchants in the mid-to-late19th century American Midwest, grain traders in Africa can, and do, often cheat their partners by delivering a lower quality of product than was discussed at the time of sale. Since there are no official inspections of grain, a trader who contacts a partner by telephone is forced to take the partner's word at face value. Furthermore, grain quality can deteriorate in the course of storage or transport to the buyer. Traders can deceive partners by misquoting or omitting information on any of the above parameters at the time of the oral agreement of the grain price. Other opportunities for fraud are presented by the lack of standardized bags and the practice of cheating on the weights of traded goods. The commitment problem is also a function of the point at which ownership of grain is transferred between partners. When a seller retains ownership, and concomitant risk, for a shipment of grain until it reaches the final destination, the trader is highly vulnerable to reneging on the buyer's part. Similarly, if the buyer takes ownership of a load of grain at the seller's venue, the buyer is highly vulnerable to fraudulent representation of the grain or damage during transport.

Box 3. Contract Failure in Agricultural Trade in Malawi and Benin

In an extensive survey of traders in Malawi and Benin, two countries with a contrasting history of private commercial exchange, agricultural commodity traders in both countries reported a high incidence of contractual non-performance, by up to 41 percent of traders in Malawi and up to 12 percent in Benin (Table 1). In Benin, where trading networks are more extensive and traders have a longer tradition of commerce, traders only report a handful of cases of bad quality, disagreement over measures, or ex post price renegotiation with suppliers. In contrast, Malawian traders report close to 200 such occurrences per year—roughly 6 % of purchases. For sales contracts, the frequency of payment problems is again much higher in Malawi than in Benin. Malawian traders are also much more likely to mention efforts by clients to renegotiate prices ex post. One means of containing the failure of contracts is through reputation effects. The fear of losing one's reputation vis-à-vis others in the market appears to be a deterrent to non-payment. Thus, the majority of traders in both countries state that other suppliers would get to know if a client fails to pay (Table 1).

Table 1 Contract Enforcement and Commercial Disputes in Benin and Malawi

	Benin		Malawi	
	Mean	Std. dev	Mean	Std. dev
With suppliers:				
Bad quality	3%		41%	
Disagreement over measuring	7%		35%	
Renegotiate price	12%		25%	
Cases of bad quality per year	0.3	2.8	63.9	340.9
Cases of measuring dispute per year	2.3	12.4	99.5	410.9
Cases of price renegotiation per year	1.6	6.0	45.7	217.5
Place orders	6%		32%	
Proportion of purchases on order	1.2	6.4	6.3	12.7
Number suppliers from whom order	0.0	0.4	0.7	3.9
Late delivery	18%		41%	
Partial delivery	20%		31%	
No delivery	16%		27%	
Cases of late delivery per year	5.0	20.8	37.5	197.5
Cases of partial delivery per year	3.1	9.3	19.0	57.7
Cases of no delivery per year	0.3	0.8	31.3	148.0
Number of purchases per year (*)	10	14	3345	12315
With clients:				
Late payment	24%		42%	
Partial payment	21%		34%	
No payment	20%		25%	
Renegotiate price	5%		20%	
Cases of late payment per year	10.8	34.1	15.2	36.5
Cases of partial payment per year	9.8	62.2	14.9	71.8
Cases of no payment per year	0.9	3.4	7.1	62.4
Cases of price renegotiation per year	0.4	2.1	116.0	506.7
Number clients who order	0.1	0.6	0.5	1.6
Number of sales	3102	4433	7898	9140
Others know non payment	53%		70%	
People dealing with debt collection	1.1	1.0	0.7	0.6

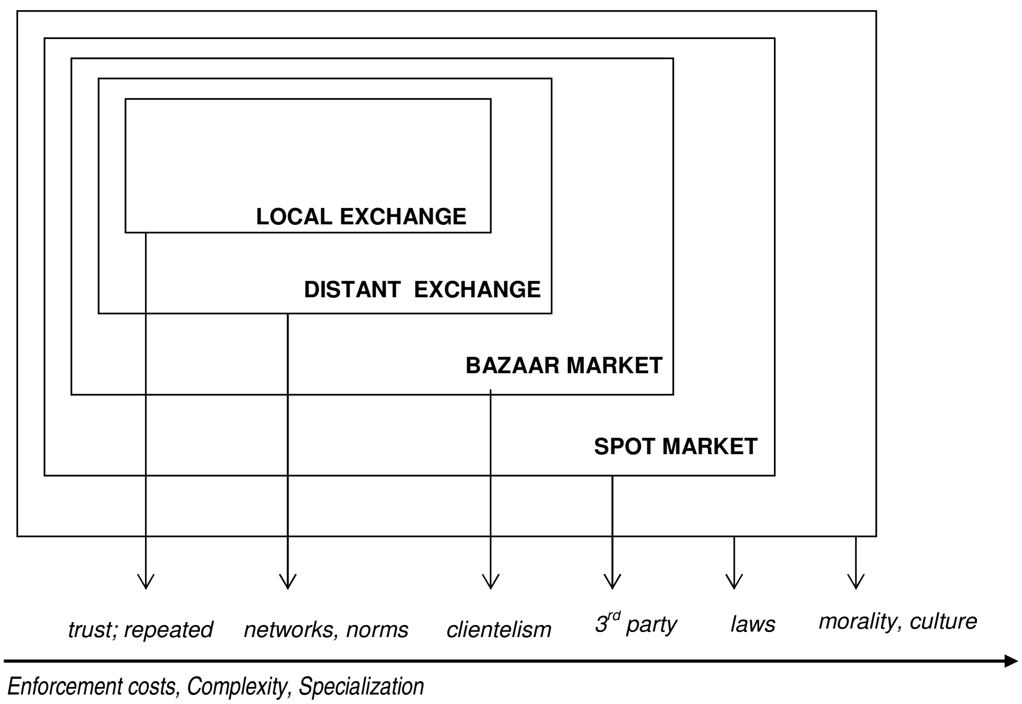
(*) number of purchases with order for Benin.

Source: Fafchamps and Gabre-Madhin, 2001

5.2 Markets and Growth along the Enforcement Continuum

Economic history over time can be seen as a series of staged stories (North, 1991). The earliest economies constitute local exchange within a village. Gradually trade expands, beyond the village, beyond the region, and eventually to much of the world. Each stage involves increasing specialization and division of labor and more productive technology. When trade is local to the village, informal constraints govern exchange and the costs of transacting are low. As trade expands across distance and across time, transaction costs related to monitoring and enforcement increase sharply and the dense social network of the village needs to be replaced by enforcement by the state. In societies in which the expansion of the market has brought about more specialized producers, economies of scale, and specialized merchants, North (1991) argues that effective, impersonal contract enforcement is required because personal ties and informal constraints are no longer effective. Thus market institutions aimed at contract enforcement evolve along the spectrum from highly personalized to highly impersonalized exchange (Figure 6).

Figure 6. Enforcement and Market Exchange Spectrum



Communities and markets can be considered alternative modes of governing transactions (Greif, 1999). A long tradition in economic development and economic history considers the former to be inferior since it entails personalized exchange and limited division of labor. The transformation from community-based to market-based governance requires a transition from contract enforcement based on repeated relations and personal ties within a community to formal, state-mandated legal contract enforcement. This view is largely based on the understanding of market expansion in pre-modern Europe. North (1991) invokes the Western experience in arguing that a legal system administered by the state is a necessary condition for an advanced division of labor and a market economy. Earlier, Weber (1927) argued that for the European capitalistic form of industrial organization to emerge, it must be able to depend upon "calculable adjudication and administration of the law" (p. 277).

In recent years, however, it has been recognized that even in modern, developed economies, contract enforcement based on personal and repeated relations is important for economic efficiency, such as the Jewish diamond merchants in New York (Richman, 2005). It is important because even impartial legal enforcement entails transaction costs due to asymmetric information, incomplete contracts, and verification costs by the court. Within communities, informal enforcement mechanisms may economize on these costs. Greif (1999) argues that, rather than considering communities and markets as substitute forms of governance, they can be considered complementary. the emergence of markets can crucially depend on the existence of appropriate community structures rather than impartial courts. He demonstrates in his analysis of market expansion in pre-modern Europe during the late medieval commercial revolution (between the 11th and 14th centuries) that a particular system of inter-community enforcement enabled impersonal exchange despite the absence of an impartial legal system. In the modern world, there are numerous examples of pervasive business networks that preclude the use of formal legal contracts. The *guanxi* in Taiwan, *chaebol* in Korea, *keiretsu* in Japan are business networks rooted in a deep tradition of personalized relations and reciprocal commitments (Platteau 2000; Fukuyama, 1995).

5.3 Private versus Public Ordering of Enforcement

With regard to third party enforcement, a significant body of legal literature (which is often referred to as 'private ordering') examines connectivity regulation by parties other than government: rules, norms and institutions that are self-imposed by private parties to govern their behavior and transactions. Stuart Macaulay's seminal work in this field observed that few contractual disputes are litigated, and most are settled without resorting to government-enforced laws (Macaulay, 1963).

Much of the research following Macauley's observation on opting out of the governmental legal system examined bilateral, relationship-based transacting, in which reputational investments in the relationship serve as collateral against opportunism, including Geertz (1978) and Belshaw (1965) who noted that traders in traditional markets tend to personalize their exchange relations to mitigate contractual uncertainty (i.e., opportunism). Richard Posner (1980) pointed to a similar pattern of "barter friendships" within primitive societies, which oblige the parties to similar standards of loyalty as they owe their kinsmen. Such a status and its attached obligations serve to mitigate opportunism despite the absence of public enforcement Janet Landa expanded Geertz's and Posner's observations by considering a wider, network relationship, which she identified as an "ethnically homogenous middleman group" (Landa, 1981). This group facilitates exchanges where government enforcement of law is deficient (and therefore the certainty of abiding to contracts is lacking), by taking advantage of the high barriers to entry into an ethnic social group (and therefore the need to stay on good terms with one's existing ethnic group).

As we move down the spectrum to more formal institutions, McMillan and Woodruff (2000) point to the role of private-order organizations in coordinating responses to opportunism while Bernstein (1992) examines mechanisms, such as arbitration and the maintenance of a common culture, by which trade associations, diamond exchanges, and other trading networks enforce their private legal systems.

In the following sections, we consider various contract enforcement mechanisms and the conditions under which they become self-enforcing. We distinguish between private and public-order enforcement mechanisms, including third parties. Because private third parties are not neutral and exogenous, it becomes important to consider how the rules for the third party's actions are incentive-compatible in order to achieve a stable governance mechanism. However, there are important limitations of endogenous, self-enforcing mechanisms for achieving market order (Platteau, 2000). Thus, we also consider public-order third-party governance, such as the rule of law and the state. Thus, in the following sub-sections, we will review private-order enforcement mechanisms such as personal trust, community norms among traders, clientelism, network-based exchange, cultural beliefs and self-enforcing contracts, reputation effects, private third parties, and morality, as well as public-order enforcement mechanisms. Before doing so, we first consider a typology of contract enforcement institutions, particularly in the context of African agricultural trade.

5.4 A Typology of Contract Enforcement Institutions in African Agriculture

In the African context, several key features of the marketing system are important for understanding the evolution of different enforcement institutions. First, agricultural producers are generally small and geographically dispersed. This gives rise to thin markets with dispersed buyers (traders), operating at low levels of working capital, buying in small lots (Staatz et al, 1989; Gabre-Madhin, 2001; Morris and Newman, 1989). With generally small market transactions undertaken by small-scale trading firms, neither small firms nor small-scale farmers have seizable assets in the event of contract failure, making the threat of court action non-viable. On the purchase side, most domestic agricultural markets in Africa are characterized by the marked absence of large processors and therefore a much greater proportion of small buyers, made up of traders, retailers, and consumers themselves. So domestic foodgrain markets in Africa can be characterized as markets with dispersed small producers, many small trading firms, and many buyers. The overwhelming prevalence and persistence of small firms in domestic markets is somewhat a puzzle, perhaps explained by diseconomies of scale in marketing (Fafchamps, Gabre-Madhin, and Minten, 2005). The picture changes somewhat in the case of agricultural exports, both traditional mainly tree crops, and the case of non-traditional, high-value, products. In the case of traditional export crops, such as coffee, cotton, tobacco, among others, smallscale producers still persist but the buyers are often a small number of large exporting firms, or a government monopsony. Export certification and financing requirements often create a single channel at the border. In the case of non-traditional high-value exports, where logistical and process requirements are considerably greater, small-scale producers and large exporters are much more tightly linked into contractual arrangements within supply chains. In each of these three types of commodities, different enforcement mechanisms may emerge in response to the differences in the market arrangement.

Thus, because most market transactions are outside of the reach of the formal legal system, trading practices evolve to minimize the potential for contract failure, such as immediate cash sales rather than long-distance orders, supplier credit, forward contracting, etc (Fafchamps and Minten, 2001; Gabre-Madhin and Negassa, 2004).

There are also features of the agricultural product and production process that matter. In the case of foodgrains, varieties produced are largely indigenous, implying a large number of local varieties and the absence of grades and standards. Moreover, agricultural commodities are largely unprocessed and come to market with highly uneven qualities. Not only are products not standard, but it is also difficult to screen honest and dishonest market actors because there are no viable business registry or certification systems. In the case of both traditional and non-traditional exports, product standard requirements are much more stringent and enforcement mechanisms are more developed. However, for all of the types of products and markets, these constraints lead to significant opportunities for cheating and for contract failure. Without viable enforcement, the prospects for expanded market exchange remain dim, and markets remain within what Fafchamps and Minten (2001) consider a "flea market economy," that is, markets with no placement of orders across time or distance, no credit, no warranty, no check-based payments, essentially cash-and-carry markets with inspection, delivery, and cash payment on the spot.

A typology of contract enforcement which accounts for market and product attributes might look like the following. In the absence of costless legal enforcement, personal trust often prevails where screening costs are high and markets such as those with large numbers of buyers and sellers create significant opportunities for cheating. However, where does trust come from? Trust is based on successful repeated exchange, leading to what is considered relationship-based or relational contracting (Hayami and Kikuchi, 1981). Thus, trust-based exchange based on repeated interaction prevails where collective action opportunities are weak. By definition, this type of enforcement limits the scope for market expansion given it is limited by individual repeated exchange among parties who know each other. This type of enforcement may dominate in markets in which product quality is unknown, with many dispersed buyers and sellers, such as the case of localized foodgrain markets in Africa.

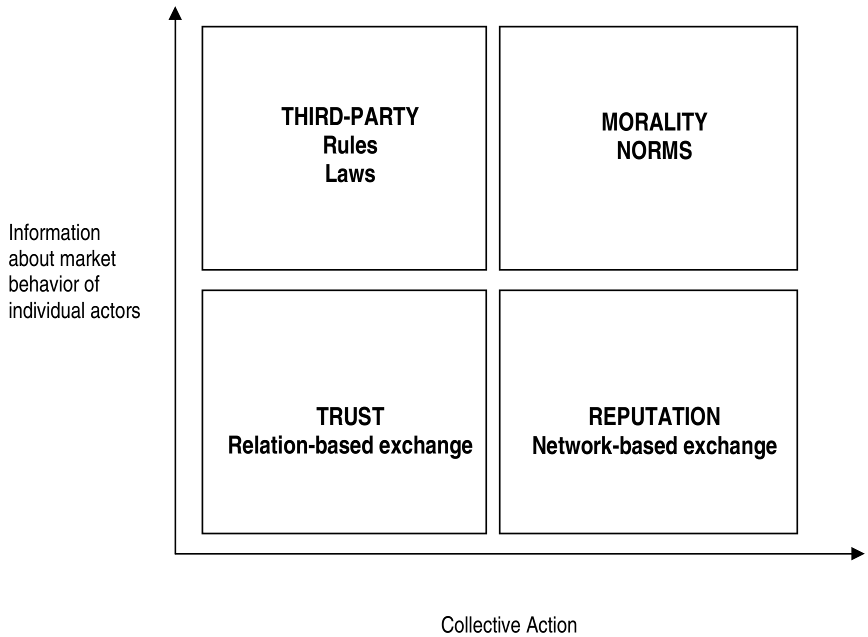
But in markets where information about cheaters can be more easily transmitted and where market actors are willing to collectively sanction or punish the cheater, then another mechanism prevails: the multilateral punishment strategy based on reputation (Greif, 1993). But this type of enforcement is also limited by the fact that it is difficult for the group to know exactly what went on between two parties and gives rise to disinformation. This type of network-based system may dominate where markets such as for long-distance transfers of goods, either to export markets or across long distances within countries. In this case, tightly knit, ethnic-based export networks may emerge, as in the case of high-value agricultural exports from Africa to European markets, much like the ethnic Chinese networks in east Asia.

A third alternative to trust-based or reputation-based contract enforcement is third party enforcement, which arises in the absence of repeated interactions or of dense social networks in which collective action is likely. The third-party institution requires that considerable information exist about market actors but does not require collective action among market actors. This third party mechanism, such as a credit reporting agency or trade can resemble the reputation mechanism in that information about individual cheating behavior but differs in that collective punishment is not required. This system prevails where information about past behavior can be recorded, usually in a centralized market such as an export registration board or export auction.

Finally, where collective action opportunities are high and where information about actors' behavior is also available, contract enforcement can depend largely on a higher-order set of norms and moral authority. This is also the arena in which laws and formal rules governing economic exchange behavior are likely to be meaningful. This type of enforcement may prevail in formal commodity exchanges where many buyers and many sellers collectively agree to abide by rules and laws established by the market (such as the Exchange codes of conduct) and where information on behavior is readily available in a transparent way.

The typology developed is based on two key parameters: the availability and ease of obtaining information about market behavior and the extent to which market actors are willing to engage in collective action. These dimensions determine the extent to which private and public enforcement may occur and also attempt to capture the specificities of the products and markets themselves (Figure 7). We now turn to an in-depth view of each of the various types of contract enforcement institutions.

Figure 7 Enforcement Dimensions



5.5 Bilateral Personal Trust versus Community-based Reputation

Examples of personal trust as an enforcement mechanism are found in local market settings where repeated interaction is common. Empirical research in the context of agricultural markets in Madagascar by Fafchamps and Minten (1999) demonstrates that trading contracts are enforced mainly by the existence of trust-based relationships, where trust is established primarily by repeated interaction. The incidence of theft and breach of contract is low and recourse to the legal system is rare.

However, the bilateral trust based mechanism described above is limited in its enforcement potential since retaliatory sanctioning will only affect the mutual relationship of the two partners without affecting the relations of the cheater with other potential partners in the community. Thus, a multilateral reputation mechanism resolves this limitation (Platteau, 2000). This mechanism requires that information about past dealings circulate effectively within a given social group or community. Thus, even if no two traders exchange together frequently, but if each trades frequently with other community of traders, then transferable reputations as an adequate bond for honest behavior if members of the community can be kept informed about each others behavior (Milgrom, North, and Weingast, 1990). Within small communities characterized by dense networks, this informational condition is easily satisfied. In Hayami and Kawagoe's (1993) analysis of rural markets in Indonesia, this is effectively the case:

> In the village community, everyone is watching everyone. Gossip about one's misconduct is circulated by word of mouth faster than any modern means of communication. In such an environment, a significant cost would be incurred to a person who would violate a contract with his fellow villager, …not only would he lose benefits from the present contract but the resulting contract would deprive him of future opportunities to enter into other contracts with other villagers. (p. 167).

The specification of what is desirable behavior along with rules regarding sanctions within a community may be viewed as a social or a community norm (Kandori, 1992). In small communities where members observe each other's behavior, the Folk Theorem for personal enforcement can apply to community enforcement. The critical piece is the transmission of information regarding past actions.

5.5 When Reputation Fails: Repeated Interaction

We now move beyond small communities in village settings to an expanded market in which traders are no longer bound within dense social networks in which information flows easily. In this setting, where anonymous exchange seems to prevail with the expanded and constantly changing scope of actors, neither the personal trust nor the social norm enforcement mechanisms appear viable. In the famous example of the bazaar economy in Morocco described by economic anthropologist Clifford Geertz (1979), traders make use of clientalization, which he defines as:

> the tendency for repetitive purchasers of particular goods and services to establish continuing relationships with particular purveyors of them, rather than search widely through the market at each occasion of need. The apparent Brownian motion of randomly colliding bazaars conceals a resilient pattern of informal personal connections. (p.30)

Thus, despite the many actors involve in the bazaar, in effect, trade is not impersonal but based on long-term relations and repeated interaction. However, in this case, each trader has little access to information about the partner's past actions. Thus, more emphasis is placed on selecting the "regular" with whom one establishes a long-term relationship. Selection, or the signaling of future honest behavior, could be on the basis of appearance, habit, accent, names of mutual friends or other signals (Aoki, 2001).

In addition to the Moroccan bazaar economy, many examples of clientelization in developing and developed countries have been extensively studied, particularly by an earlier generation of economic anthropologists. These studies have covered: relations between fishermen and dealers in the Maine lobster market (Acheson, 1985); the *pratik* in Haiti (Mintz, 1964); *Onibara* relationships in Nigerian markets (Trager, 1981); *suki* relations in the Philippines (Szanton, 1972), and *cliente* relations between vegetable producers and middlemen in Guatemala (Swetnam, 1978). Generally, these clientele-based relations have been characterized in this literature as a means of risk-sharing, rather than contract enforcement. But, if the concept of risk is clarified as the risk of contractual failure, which is generally true, then these practices constitute an effective enforcement mechanism.

Box 4: Enforcement of Commercial Contracts in Ghana

The enforcement of commercial contracts in Ghana is problematic for two reasons. First there is no mechanism for sharing information about bad payers. As a result, each firm must screen every single firm and individual it wants to deal with. Second, many firms find it impossible to honor a contract, because of shortages of critical inputs, difficulties in transport, and payment delays.

Fifty-eight Ghanian firms were interviewed in 1993 by a team of Ghanian and World Bank researchers. Firms were asked about non-payment and late payment problems encountered with clients. More than half of firms experienced non-payment and nearly all had experienced late payment. Similarly, firms were asked about problems of late and non-delivery and deficient quality by suppliers. While nearly half had experienced late delivery, much less had faced non-delivery. A high proportion experienced deficient quality of inputs delivered.

Table 1. Incidence of Contractual Problems in Ghana

	Number of observations	Number citing problems
Non-payment by client	52	30
Late payment by client	50	41
Non-delivery by supplier	55	14
Late delivery by supplier	55	28
Deficient quality	54	31

Source: Fafchamps, 1996

Means of avoiding problems

Reputation per se plays little role in identifying reliable clients because there is no mechanism to transfer information on past defaults. Use of legal recourse is very rare: 13 percent of firms in the case of suppliers and 8 percent in the case of clients. One fourth of the sample actively screens prospective clients by visiting their client's workplace and establishing a relationship with them. In the case of suppliers, two-fifths of the sample indicated that the best way to avoid problems is to trade repeatedly with the same supplier. Firms deal on average with only 5 suppliers, and have 3 regular suppliers who extend credit to them, with whom they have been working for an average of 8 years. Thus, the use of regular suppliers is considered the dominant form of avoiding enforcement problems. While this institutional response successfully enables firms to develop and gain trade credit, it leads to fragmentation of the market into networks, potentially limiting specialization and firm growth.

Source: Fafchamps, 1996

5.6 Private and Public Third Parties

An alternative solution to the information problem that is posed when traders do not meet repeatedly and dense social networks are not present is that of a third party who monitors cheating and transmits information on past cheating behavior among traders. The well-known historical example of a private third party is the case of the Law Merchant in medieval Europe analyzed by Milgrom, North, and Weingast (1990). During the twelfth and thirteenth centuries, much of trade between southern and northern Europe was conducted at Champagne Fairs, in which merchants from all over Europe entered into contracts for long-distance shipments over time. Without the benefit of legal enforcement, merchants evolved their own commercial code, the *lex mercatoria* (law merchant), which governed commercial exchange and was administered by private judges drawn from commerce on a fee basis. After any exchange, each trader can accuse the other of cheating and appeal to the law merchant, who adjudicates fairly and awards damages. However, the payment of damages is voluntary because the law merchant has no power to enforce payment.

The law merchant keeps a record of any unpaid payments. Finally, prior to finalizing a contract, any trader can query the law merchant for records of previous judgments about any other players. The analysis shows that, if both traders check the records prior to trade and either do not exchange if they find outstanding judgments or play honestly if they find no judgments, a sequential equilibrium can be achieved and the system of the law merchant can enable trade even without the capacity to enforce judgments (Aoki, 2001).

Box 5. eBay.com

Modern corollaries to the law merchant can be found in cyberspace. Founded in 1995, eBay.com is the world's largest online auction website. The eBay community includes tens of millions of registered members around the world. The company's mission is to provide a global trading platform where anyone can trade anything. On any given day, there are more than 12 million items listed on eBay across 18,000 categories. In 2002, members transacted $14.87 billion in annualized gross merchandise sales.

eBay.com maintains a record of trading experiences, positive and negative, of buyers regarding sales agents. These are available to anyone who trades on eBay.com. It also maintains and provides records of buyers' past assessments. Thus, it is possible to obtain a considerable amount of information on the reliability of an otherwise completely anonymous trading partner. Most of the selling on eBay occurs in an auction or "buy it now" format. It all begins when the seller posts the item on eBay for a specified duration. Potential buyers search for items and place bids, which are recorded and available for anyone to see. The person who placed the highest bid or who chooses to "buy it now" wins the items and the seller and buyer make private arrangements for payment and shipping. After the payment and the item is delivered, both buyer and seller leave feedback on each other on eBay's Feedback Forum.

Anyone interested in knowing the seller or buyer's reputation can obtain the partner's trading history on eBay, from voluntary comments and feedback of previous partners. eBay has a feedback ratings star system, based on obtaining either negative or positive points for each comment received, which is used to standardize the feedback. Thus, next to an eBay member's user identification number, there is a feedback rating number. Because the feedback mechanism is critically important to the success of this auction, it has developed a set of rules regarding feedback, including the prohibition of "shill" feedback, which using other identification to artificially one's own feedback, extorting feedback, soliciting or trading feedback, and abuses of feedback. In addition, responses can be given to feedback, which are then also in the permanent record. Finally, users can choose to not make their feedback public. However, this is discouraged because, as the website states, "feedback is your valuable asset as a way to generate trust in you."

Source: Aoki, 2001; http://ebay.com/aboutebay

As the size of markets expands, recourse to a public third party is inevitable. One reason is that private third parties lack enforcement power. While use of private third parties is voluntary, private agents cannot escape from the coverage of the national government without physical exit (Aoki, 2001). Further, in considering *which* law a given country should have, Schmid (1992) cautions against the idea that the rule of law can be externally driven. Thus, countries in transition, which are modernizing their commercial codes patterning them on industrialized country laws. But is all Western legal capital the same? In 1991, Czechoslovakia revised its pre-war code by adding new material from German commercial law. Mali has the same modern commercial code that France does. But did France have this commercial code when it was in the Mali's current stage of development?

6. APPROACHES TO MARKET DEVELOPMENT ON THE GROUND

Market development efforts in the post-liberalization era can be seen as focused on two types of interventions: fostering reliable market linkages for smallholders particularly to export high-value markets and support measures aimed at strengthening the institutional arrangements that govern markets. A brief review highlights the best practices and impacts as well as the gaps.

6.1 Building Market Linkages for Smallholders: Value Chain Approach

The premise for interventions has been that market forces alone will not ensure the integration of smallholders into the global market because of the high transaction costs associated with involving numerous, small-scale, and geographically dispersed producers. A review of interventions by Joffe and Jones (2005) considers that efforts have focused on two areas: establishing rural retail networks for inputs and in creating farmer-based enterprises linked to global markets. In these efforts, either non-governmental organizations or donors have played a very active sponsoring role. Activities included in this effort include the following:

- Identifying and training rural retailers
- Facilitating supply contracts between input suppliers and retailers
- Providing partial credit guarantees to suppliers
- Proving demonstrations to farmers on technologies
- Facilitating the formation or strengthening of farmer marketing groups (associations, clubs, cooperatives)
- Undertaking commodity market studies and providing information services
- Facilitating contractual agreements with buyers.

As noted, non-governmental groups, particularly linked to USAID, have been pioneers in these efforts. What has come to be known as the "Rockefeller model" has focused on establishing rural input retailer networks in eastern and southern Africa. Similarly, what might be considered the "USAID model" through partners such as CLUSA, ACDI/VOCA, and Technoserve have been heavily engaged on the creation of producer market-oriented organizations, operating as business enterprises in both west and eastern and southern Africa.

These approaches have demonstrated early successes in linking smallholders to the global value chains and in developing a business orientation in collective action groups. However, in considering scaling-up of these efforts, it remains unclear to what extent program costs outweigh the benefits or whether the initiatives will survive beyond the lifetime of the projects (Joffe and Jones, 2005).

6.2 Building Institutions for Markets: Market Development Approach

The key issues that have emerged from the experience of traditional or bulk-commodity markets in the post-reform era are:

- The need for mechanisms to transparently grade and standardize products for market, from the production level on throughout the market chain;

- The need for market information that is accessible to all market actors;
- The need to foster competitive practices among all market actors, across all levels of the chain;
- The need for financial markets to respond to market needs for trade finance, for inventory finance, and for alternative financial products;
- The need for dispute settlement and regulatory systems to evolve according to market needs, and in a way that relies also on the private incentives for self-regulation, notably through the potential role of trade associations;
- The need for risk-transfer through mechanisms such as forward contracts and transferable warehouse receipts, and,
- The need for concerted efforts to build capacity throughout the marketing system, including cooperatives, small and medium private traders, and public actors.

Interventions concerning the above have tended to involve the creation of long-term institutions and have thus involved national governments to a greater extent. However, the experience of sustained efforts is limited and the impact has generally been mixed. Efforts have been focused on three of the above areas: market information systems, grades and standards, and warehouse receipt systems.

Grades and standards

With regard to a viable system of grades and standards, which is vital to market development, a key issue is how to translate standards to the very basic level of production in the commodity chain. The biggest challenge in standards implementation is translating standards to farm level. Currently, there is a wide gap in the implementation and enforcement of standards on various products, and many of the prepared standards have been shelved across countries.

Finance

Broadly speaking, the potential sources of formal external finance are banks and microfinance institutions (MFIs). At present, MFIs play a limited role in trade finance. With MFI loans subject to regulatory and group imposed limits and the reluctance of formal banks to provide small loans, there is a significant financing gap for those in the middle category. Banks on their side have been reluctant to engage in inventory finance linked to a warehouse receipts system, because of the high risks in agriculture and an insufficiently secure receipts system.

Market information

In many countries, market information is collected, analyzed and disseminated by a number of organizations-federal and regional government organizations, cooperatives, donors, international organizations and NGOs. The data collection methodologies and procedures considerably vary from organization to organization and must be standardized in order to make such data comparable and commercially valuable. A clear conceptual framework regarding the levels of the market and the quality standards for which price data is quoted by the different organizations needs to be devised and implemented in collaboration with the different organizations engaged in data collection.

Public and private sector capacity

A critical issue across the board is the very low human and organizational capacity of both the public and private sector with respect to agricultural marketing. Concerted efforts to build capacity are required at three levels: public institutions, public actors, and private actors.

6.3 Toward an Integrated Approach

In much of the sub-Saharan Africa, the recent market development agenda remains fraught with internal tensions and critical concerns. At the heart of these concerns is the need to consider market development as an integrated whole rather than the sum of piecemeal interventions targeting different sets of actors. This is as much a matter of perspective as much as of design.

This can be viewed as the "fallacy of composition" argument that considers that the sum of the parts equals the whole. An illustration of this fallacy is the promotion of contractual arrangements between farmer groups and industrial buyers without consideration of the broader whole that is the market mechanism in which buyers and sellers must arrive at an appropriate market-clearing price, determined through an accepted and transparent system of measuring quantity and quality, and within a system that ensures that contracts are enforced and property rights are secure.

A second example might be the tensions inherent in the promotion of a system of inventory credit, a financial instrument, designed to meet price stabilization objectives, in the absence of accompanying measures to provide transparent information on product prices, qualities, stocks, and warehouse performance and a viable dispute settlement mechanism, all of which are essential to providing incentives for the financial system to participate.

How then to achieve the necessary holistic perspective to market development? One promising avenue currently gaining interest, which historically has had tremendous power to transform markets when appropriately designed and implemented, is that of **commodity exchange development.**

A commodity exchange, whether concerned mainly with spot (for immediate physical delivery) or futures (for delivery at a future date) transactions, can be defined as an organized marketplace where sellers and buyers' interactions are governed by a set of specific and transparent rules, related to price bidding, grading, delivery, and dispute adjudication.

A Commodity Exchange has the potential to reduce transaction costs by: facilitating contact between buyers and sellers; enabling centralized grading of products; ensuring that contracts are enforceable; providing a mechanism for price discovery; simplifying transactions with standard contracts; and, transmitting information about prices and volumes. Further an Exchange increases market liquidity, enables the transfer of price risk, and enhances trust, order, and integrity in the market.

Commodity exchanges, generally private organizations, have served to govern contractual relations and enable low-cost transacting between large numbers of dispersed buyers and sellers. Their functions have included commodity measurement and the assignment of given standards, contract enforcement, the policing of theft and fraud, and the public provision of information. While the premise of the commodity exchange as a private-order institution is that the market, made up of private actors, will act on its own internal incentive for order, it does not hold that there is no room or role for public-order intervention. The success of the commodity exchange in privately fulfilling its functions depends to a large extent on the distributive consequences of bringing about order. That is, if the costs or welfare losses to those that benefit from the *lack of order* are significantly greater than the gains, then it will be very difficult for a private institution alone to achieve its objectives. This is notably the case of the world's most successful commodity exchange throughout history, the Chicago Board of Trade.

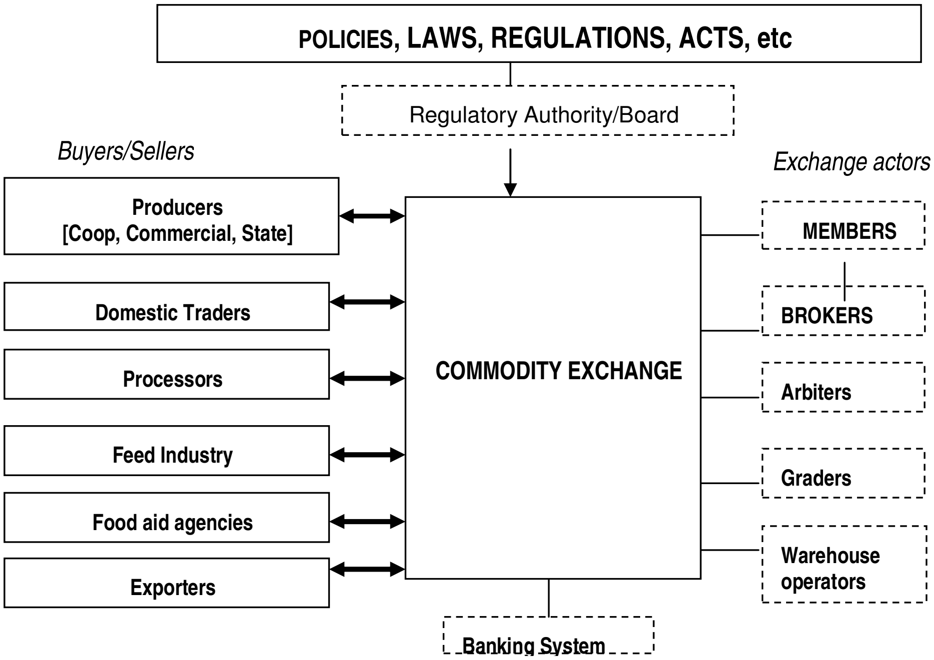
While extremely successful in enforcing contracts, the Chicago market in its early years failed to regularize the grading and inspection and weighing of grain and to reduce the severe information asymmetries in the grain market. While able to do so for other products, it failed with regard to grains specifically because of the immense and powerful interests of one set of actors, the warehouse operators, who stored and graded grain and issued receipts in return. Warehousemen in the 1850s and 1860s eroded the trade by grading erratically and mixing across qualities of graded grain, as well as by acting on private information regarding stocks and qualities of grain under their hand. In order to create a consistent system, the Board of Trade had to appeal to the authorities to ensure a system of inspection that was legally binding over the warehouses. Later, even this system gave way to a full-fledged role for the state in the inspection of all goods traded through the exchange, still the case today. In contrast, other exchanges, such as the Liverpool and London Corn Exchanges, the London Metal Exchange, and others, successfully provided key market services, in a variety of contexts, with little or no state intervention.

These insights suggest that there is no blueprint or silver bullet in commodity exchange development. A successful commodity exchange facilitates transactions between market participants --farmers, processors, traders, consumers, food aid agencies, parastatal agencies, and others-- in a low-cost environment. The lowering of costs is passed on to market actors who can then directly benefit from a higher share of the final price. This in turn generates incentives for increased market volume, and provides an incentive for increased participation in the market.

As an institution, a commodity exchange itself depends on a number of linked institutions, which are critical to its functioning. These core institutions are: a market information system; a system of product grading and certification; a regulatory framework and appropriate legislation; an arbitration mechanism; and, producer and trade associations. In addition, a warehouse receipts system is a very important related institution. A commodity exchange also depends on the functioning of "allied" sectors: banking, insurance, transport, IT services, and even inspection services. Thus, while these sectors are not strictly part of an integrated institutional development plan, they must be nonetheless engaged and involved and brought along as the exchange development proceeds.

When linked to a negotiable warehouse receipts system, the increased liquidity as market transactions increase, over time evolving to futures trading, implies that the thinness of markets lessens, and the market can be expected to enable the transfer of risk from market actors such as farmers to those who are keen to absorb risk, such as speculators.

Figure 8 The Structure of a Commodity Exchange and Allied Institutions



7. CONCLUSIONS

This paper has highlighted that the starting point for appropriate market development intervention is first understanding how markets actually work and in particular how institutions facilitate market exchange. It has also emphasized that getting markets right requires a holistic agenda in which incentives, institutions, and infrastructure are aligned. In terms of institutions, the core agenda is to understand the complexity and diversity of institutional arrangements for facilitating market exchange. In particular, the paper has emphasized that market institutions play out in two vital arenas: bringing order and reducing coordination costs and in the enforcement of contracts and property rights.

With regard to coordination and coordination failure, the paper presented both the transaction cost and the commodity chain approaches, with their relative merits and gaps. A key point is the need to tailor the appropriate institutional coordination mechanism to the underlying transaction costs. With regard to enforcement, the paper similarly presented the spectrum of thinking on how bilateral, community, repeated interaction, and third parties play a role in enforcement. This overview served to present a broader view of enforcement, involving communities, social networks, etc, rather than the often singled out mechanism of legal framework development.

Moreover, in reviewing the market development experiences to date, the paper has shown the dichotomy in approaches between highly donor-driven, short-term, value chain development efforts in contrast to longer-term, state-led, market institution building. To date, the latter has shown less impact, though more sustainable in the long term, than the former. With regard to market institutions, it was emphasized that piecemeal interventions do not have the intended results. Thus, the paper then tried to highlight that market development is a long-term agenda, requiring a progressive and integrative perspective that addresses the 3 I's of market development in a holistic fashion. There is an important role for the state vis-à-vis all of these dimensions of market development and a central role for the private sector. In considering how to achieve an integrated perspective, some thought was given to the concept of a commodity exchange where in all the various elements come together.

Broadly, we conclude by stating that key issues facing policymakers and development practitioners in addressing the urgent issue of market development, both for global high-value chains, as well as for domestic or traditional bulk commodity markets are the following:

- The engagement of the private sector and the respective roles of the public and private sectors in market development;
- Specific efforts to address smallholder engagement in both the global and domestic market;
- The appropriate strategy in terms of building the basic market institutional components individually or starting institutional development in a holistic manner;
- The development of horizontal coordination between producers and traders alongside vertical coordination between actors in the chain
- The mechanisms to capitalize on internal incentives for self-regulation and the creation of a viable regulatory and legal framework;
- The correct balance between an enabling policy environment and private incentives; and,
- Basic infrastructural and capacity-building requirements, to accompany institutional development.

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