



EDRI

Ethiopian Development Research Institute

November 2005

EDRI-ESSP Policy Working Paper No. 4

Does Ethiopia Need a Commodity Exchange? An Integrated Approach to Market Development

Eleni Z. Gabre-Madhin[†] and Ian Goggin[‡]

Ethiopian Development Research Institute, P.O. Box 2749, Addis Ababa, Ethiopia •
Tel.: +251-11- 550-6066 • Fax: +251-11-550-5588 • edri2@telecom.net.et • www.edri-et.org

EDRI-ESSP Policy Working Papers contain preliminary material and research results. They have not been subject to formal external reviews, but have been reviewed by at least one internal and external researcher. They are circulated in order to stimulate discussion and critical comment.

[†] Program Leader, Ethiopia Strategy Support Program, IFPRI

[‡] Chief Executive, Africa Commodity Exchange (Malawi) and former President, Zimbabwe Agricultural Commodity Exchange (ZIMACE)

Table of Contents

1. The Post-Reform Market Challenge	2
2. The Problem of Economic Order	4
3. What is a Commodity Exchange?	5
4. How Does An Exchange Work?	8
4.1 A system that creates integrity and trust	8
4.2 A system that generates market information	10
4.3 A system linked to warehouse receipts	11
4.4 A system that increases market volume and liquidity and reduces risk	12
5. Why an Exchange for Ethiopia?	13
5.1 “Push factors” justifying a commodity exchange in Ethiopia	14
5.1.1 Policy rationale	14
5.1.2 A large domestic market	15
5.1.3 Centrality of Addis Ababa market	15
5.1.4 Presence of established brokers	17
5.1.5 Growth of new cooperatives	18
5.1.6 Increase in commercial farms	18
5.1.7 Launching of national Warehouse Receipts Program	18
5.1.8 Policy and donor momentum	19
5.2 “Pull Factors” Justifying a Commodity Exchange in Ethiopia	19
5.2.1 Regional trade potential	19
5.2.2 Local food aid procurement	20
5.2.3 Cash-based safety net transfers	20
5.2.4 Increasing agro-processing linkages	21
5.2.5 Emergence of exporter firms	21
5.2.6 Livestock-feed linkage opportunities	21
6. Conclusions and Recommendations	21

List of Figures and Tables

Figure 1. Emerging Commodity Exchanges around the world	7
Figure 2. Actors in the Commodity Exchange System	12
Figure 3. Evolving grain market structure in 2005	16
Figure 4. Snapshot of major grain flows	16
Table 1. Brokers’ quality-differentiation of grain in Addis Ababa, 1996	17

1. THE POST-REFORM MARKET CHALLENGE

Like many other countries in sub-Saharan Africa, the Ethiopian grain economy underwent a dramatic market reform in the early 1990s with the nearly complete liberalization of the grain market. Prior to these reforms, for sixteen years until 1990, the Dergue government tightly controlled trade, through cooperatives and its parastatal agency, the Agricultural Marketing Corporation (AMC), initially set up in 1976 with World Bank support for the purpose of purchasing grain and distributing it to consumers (Lirenso, 1993). In this period, policies included fixed pan-territorial grain prices, restricted private inter-regional grain movements, limited private sector participation, and a producer grain quota (Fisseha, 1994; Lirenso, 1987; Franzel, Colburn, and Degu, 1989). Farmer quotas to the AMC amounted to 10 to 50 percent of the harvest at fixed AMC prices that were consistently below market prices, which had the effect of depressing rural incomes and production (Dercon, 1995).

In March 1990, a dramatic market reform lifted, overnight, all restrictions on private trade and eliminated official prices and quotas. Subsequently, in 1992, the Transitional Government continued reforms through eliminating wheat consumer subsidies and downsizing the AMC, through closing all eight zonal offices, reducing its branch offices from 27 to 11 and its grain purchase centers from 2013 to 80. It was renamed the Ethiopian Grain Trade Enterprise (EGTE) with a new mandate of stabilizing prices and maintaining buffer stocks. Unlike most post-reform African states where marketing boards continued to dominate trade, the EGTE plays a relatively minor role, with only a 2 to 5 percent share of the domestic market (Jayne, Negassa, and Myers, 1998). In 1999, further reforms involved merging EGTE with the Ethiopian Oil Seeds and Pulses Export Corporation (EOPEC) and re-establishing it as a public enterprise, no longer required to stabilize grain prices, with the major objective of operating for commercial profitability by focusing on exportable grains (Bekele, 2002). Because market reforms resulted in the nearly total withdrawal of government intervention from the market, it was considered by an MSU study in 1998 that the reforms enacted in Ethiopia constituted a particularly important test of the hypothesis by the international community that the liberalization of markets would reduce costs and catalyze growth in production (Jayne, Negassa, and Myers, 1998).

What then were the impacts of these market reforms? Numerous studies have documented the effects of these policies (Dadi, Negassa, and Franzel, 1992; Lirenso, 1993; Dercon, 1995; Negassa and Jayne, 1997; Dessalegn, Jayne, and Shaffer, 1998; Gabre-Madhin, 2001, Gabre-Madhin et al, 2003). As predicted, these analyses revealed that liberalization did indeed result in a significant re-engagement of the private sector in grain trade, improved market integration, and the reduction of marketing margins. However, very importantly, these studies also pointed out the reforms did *not* have the envisaged impact on agricultural growth and poverty reduction. Why? First, despite the narrowing of price spreads or margins, market reforms did not reduce the volatility of grain prices and may have indeed exacerbated it. Linked to this, significant constraints to market performance remained which led to the persistence of “thin” markets, defined as markets in which there are few purchases and sales¹. Thus, because these market constraints limit the scale and

¹ In technical terms, the responsiveness of prices to changes in supply and demand, or price elasticity, is linked to the functioning of markets. When markets are thin, demand is relatively price inelastic, implying higher price volatility.

scope of market activity, they ultimately limit the potential of the market to catalyze production growth and boost rural incomes in the country.

What are these constraints to market performance? Major constraints can be identified as either linked to weak infrastructure or to missing institutions. In terms of infrastructure, major concerns are the weak access of smallholder farmers to roads, as well as limited telecommunications and storage infrastructure. These weaknesses contribute to the high cost of transport as well as of other physical marketing costs, such as storage, handling, etc. Thus, marketing costs amount to some 40 to 60 percent of the final price, of which some 70 percent is due to transport. However, beyond the infrastructural issues, studies also point to the significance of “transaction costs,” which are equally or more constraining to trade. These costs, distinct from physical marketing costs, are costs related to conducting or coordinating market transactions between actors, such as the costs of searching for and screening a trading partner, the costs of obtaining information on prices, qualities and quantities of goods, the costs of negotiating a contract, the costs of monitoring contract performance, and the costs of enforcing contracts. Because these costs are difficult to identify and to measure, they are often overlooked, yet they offer powerful explanations of the persistence of missing markets or of market failures.² In fact, these transaction costs also influence the extent of the physical, more observable, marketing costs. For example, handling costs in Ethiopian grain markets are roughly 25 percent of the margin, which is far above the norm in sophisticated markets. These costs are particularly high in Ethiopia because the lack of grade and standards and the problem of contract enforceability forces buyers of grain at every transfer of ownership in the chain to off-load the shipment and re-sack every bag of grain. Similarly, because there is little coordination in the transport sector and thus no information regarding whether trucks can load shipment on the return trip, or “backhaul,” this results in very high transport rates.

In the Ethiopian context, the presence of prohibitively high transaction costs, evidenced by the lack of sufficient market coordination between buyers and sellers, the lack of market information, the lack of trust among market actors, the lack of contract enforcement, and the lack of grades and standards, implies that buyers and sellers operate within narrow market channels, that is, only those channels for which they can obtain information and in which they have a few trusted trading partners. Extensive empirical analyses of Ethiopian market behavior thus reveals that market actors conduct business across short distances, with few partners, in few markets, and with limited storage, implying that opportunities for expanding market activity, otherwise known as arbitrage across space (transporting significant distances to market goods) and across time (storing for significant periods), are limited (Gabre-Madhin et al, 2003). This limited arbitrage in turn reduces the responsiveness of the market to changes in supply and demand. The weakness of the market was most starkly highlighted in the food crisis of 2002-2003, when a significant surplus of grain in 2002 led to the collapse of market prices, significantly compromising rural incomes and leading to disincentives to further technology adoption by farmers.

The persistence of these market constraints in Ethiopia points to the fact that market reforms alone, defined as the removal of policy distortions, are necessary but not sufficient to enhance market performance. This suggests that the new development agenda, not only in Ethiopia but throughout post-reform Africa, is to move beyond market reform to market

² A vibrant alternative economic school of thought, known as the New Institutional Economics, attempts to address the neglect of the transaction cost problem generally ignored by neoclassical economics, pioneered by Coase (1937), Stiglitz (1974), Williamson (1985), North (1981), among others.

development. In addition to policy incentives, key interventions are required to develop appropriate market institutions and build needed infrastructure, defined together as the “3 I’s of market development” (Gabre-Madhin, 2005). In recognition of this, the Government of Ethiopia restructured the Ministry of Agriculture and Rural Development and established a state ministry on agricultural input and output markets in 2004. At present, both the government and its international partners are engaged in dialogue on a concerted set of interventions to enhance the performance of agricultural markets.

Against this backdrop, the objective of this concept note is **to highlight and analyze the benefits and challenges of developing an Ethiopian Commodity Exchange**, under the guise of which an integrated market development plan to transform agricultural markets can be implemented. The note focuses on the need for an integrated, rather than a piecemeal approach to market development, in which the key market institutions needed, such as market information, grades and standards, contract enforcement, regulation, and trade and producer groups, mutually reinforce each other. The note continues in the next section by refining the concept of the core market problem in Ethiopia today, and then broadly defines a commodity exchange as a potential solution to this problem in the following section, followed by a discussion of the rationale for a commodity exchange in Ethiopia, and a road map for an integrated market development scheme. This note is intended to generate dialogue on the subject of the appropriateness and relevance of a commodity exchange for Ethiopia, in order to serve as a first piece in an extended study of the feasibility and operationalization of such an integrated market development initiative.

2. 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).

On the other hand, **contracts** and the costs associated with negotiating and enforcing contracts are also at the heart of the problem of economic order. Fundamentally, as Hicks (1969) noted, even the simplest exchange involves a form of contract, where each party is abandoning rights over the things that he sells in order to acquire rights over the things he buys. Thus, all exchange is trading in promises, which is futile unless there is some reasonable assurance that the promises will be kept. Extending this concept, Nobel-laureate Douglass North (1990) has forcefully argued that "the inability of societies to develop effective, low-cost enforcement of contracts is the most important source of both historical stagnation and contemporary under-development in the third world."

To summarize, then, the heart of the problem of economic order facing Ethiopia today is the central question of how market exchange can be coordinated efficiently, at minimum transaction costs, among the myriad of actors in the rural economy, the diverse and spatially dispersed producers and consumers, in such a way as to enhance livelihoods and lead to the optimal allocation of resources. In the post-reform era, rather than take the central planning route, the problem confronting policymakers is how to bring about a "self-coordinating" market order. In order to do so, two core aspects must be addressed: the transmission of vitally needed market information and the low-cost enforcement of contracts among market participants. In the following sections, we elaborate on a particular market institution, with its related institutional components, that has emerged in response to both of these core concerns: a commodity exchange.

3. WHAT IS A COMMODITY EXCHANGE?

To many, a commodity exchange connotes a highly sophisticated market system, with an electronic-based, highly evolved system of trading in future commodity positions, exemplified by markets such as the Chicago Board of Trade, the Tokyo Grain Exchange, or the London Metal Exchange, among others. To many, a commodity exchange is an advanced market mechanism for use in industrialized countries, out of the reach or inappropriate to low-income countries.

However, at its heart, a commodity exchange is simply a central place where sellers and buyers meet to transact in an organized fashion, with certain clearly specified and transparent “rules of the game.” In its wider sense, a commodity exchange is any organized market place where trade, with or without the physical commodities, is funneled through a single mechanism, allowing for maximum effective competition among buyers and among sellers. The fact of having a single market mechanism to bring together the myriad buyers and sellers at any point in time effectively results in the greatest concentration of trading for a given good. This market mechanism, such as a price bidding system or an auction system, results in what is known as “**price discovery**,” that is, the emergence of the true market-clearing price for a good at a particular point in time due to the highest possible concentration and competition among buyers and among sellers.

The difference between a commodity exchange and a typical wholesale or terminal market is that an exchange creates a mechanism for price discovery to occur in an organized manner, through a system of price bidding and through a set of rules governing the products brought to the market, the market actors, and the contracts between buyers and sellers. We will elaborate on these rules in the next section.

A commodity exchange is an institutional response, at a basic level, to the fundamental problem of achieving self-coordinating market order in the trade of agricultural products, which by their nature, are risky. One of the world’s largest and oldest commodity exchanges, the Chicago Board of Trade, was established in 1848 by 82 grain traders in what was then a small Midwestern town, in conditions not too different from that of Ethiopian agriculture today, in response to a bumper harvest when farmers who went to Chicago and could not find buyers had to dump their unsold cereal in Lake Michigan. This strikes a hauntingly familiar chord for those who recall that Ethiopian farmers left grain to rot in the fields in 2002 as prices collapsed. The challenges that US markets faced 150 years ago were not much different from what they face today, or what Ethiopian markets face today: to coordinate the exchange of grains and livestock produced across dispersed locations and dispersed producers to major markets hundreds of miles away (Tafara, 2005).

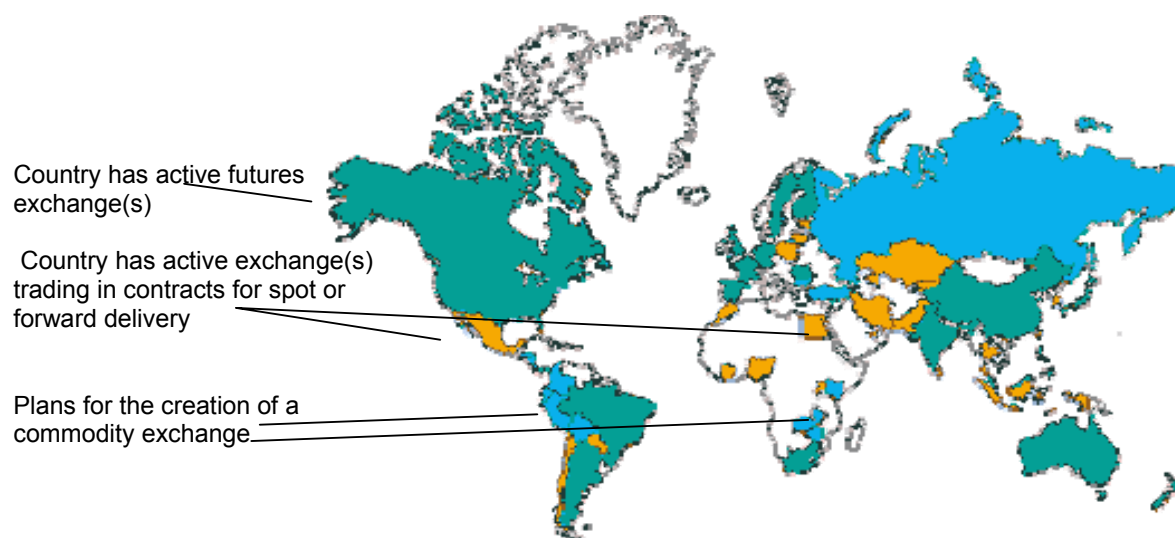
A brief history of the development of the Chicago market reveals that, while responding to the initial problem of coordinating exchange in a low-cost manner, the market system itself evolved as the sophistication of the market increased and as economic growth progressed. In other words, the Chicago exchange did not start as the sophisticated market it is today. In the 1840s, as grain production increased in response to technological innovations in the American Midwest, farmers used to come to Chicago to sell their grain to traders, who would ship it all over the country. When farmers came to the market, they came without prior knowledge of market prices and the city had few storage facilities and no established procedures for weighing and grading the grain, leaving the farmer at the mercy of the trader. In 1848, the Chicago Board of Trade (CBOT) opened as a central place where farmers and traders could meet to exchange cash for immediate delivery of wheat, but with certain established mechanisms by the Board for grading and weighing the wheat, for storing it if no trade occurred, for bidding on its price, and for resolving disputes that occurred. As both producers and buyers experienced the advantages of this system, it was a matter of a few years before farmers and traders evolved the practice of forward contracts in 1851. Thus, a farmer would agree with the trader on a price to deliver a certain quantity of grain at a future time. The deal was advantageous to both parties in that

the farmer knew in advance his market price and the trader knew his costs. As these contracts became common, they began to be used as collateral against bank loans and began to exchange hands before the physical delivery itself. Thus, a farmer might pass on his obligation to deliver to another farmer, with the price going up or down depending on what was happening in the market. As these “forward contracts” became common over a 15 year period, CBOT introduced in 1865 a standard contract known as a “futures contract” with a pre-specified delivery date and a margin requirement to act as a performance bond. This innovation reduced the risks and costs associated with negotiating forward contracts on an individual basis.

Alongside these developments, CBOT was chartered officially by the state in 1859 (a decade after first opening), and therefore mandated to set standards of quality, product uniformity, and undertake routine inspections of the grain traded in the exchange, in order to maintain the integrity of the market. It was not until 1922, some 74 years after the Chicago market first opened, that the government established the Grain Futures Administration, as a regulatory body to oversee the expanding grain market. It was not until 1967 that CBOT began the electronic display of market prices, reducing the price reporting time to seconds. What is salient from this quick historical overview is that the Chicago market was established and evolved to resolve the real problems of transaction costs and risks faced by farmers in the market and the need to coordinate the exchange of agricultural goods across actors, across space and time. It is also important to note that state regulation, increasing in scope as the market grew, followed the market rather than led it.

Following the sweep of market liberalization across the globe, emerging exchanges are rapidly growing in developing or transition countries to fill the gap left by marketing boards and fixed price systems. There are currently more than 100 of these exchanges across developing countries: 28 in Latin America (15 of them in Brazil), more than 20 in Asia, 3 in Africa, 4 in Eastern Europe, and several in Russia. Most of these exchanges have been created since 1992 (Figure 1).

Figure 1. Emerging Commodity Exchanges around the world



Source: UNCTAD, 2002

4. HOW DOES AN EXCHANGE WORK?

Most exchanges, even when they have a virtual or electronic trading system, operate in a physical place, with an exchange “floor” on which trading occurs. The exchange floor is typically organized by commodity. A common misperception is that a commodity exchange determines or establishes the prices of traded commodities. This is incorrect. Prices are determined solely by supply and demand conditions. If there are more buyers than sellers, prices will be forced up. If there are more sellers than buyers, prices will be forced down. Thus, buy and sell orders, which are channeled to the exchange floor for execution, are what actually determine prices. The orders to buy or sell are done by public outcry, rather than by private negotiation, and the prices at which transactions are made are recorded and released publicly by the exchange as soon as possible, generating market transparency. In comparison to an auction where the emphasis is on selling, trading on a commodity exchange is like a continuous two-way auction, in which bids to buy are going on simultaneously with offers to sell. This is possible because the graded product needs no description with a standardized contract and because there is sufficient volume of both buy and sell orders. The exchange itself does not operate for profit, but merely provides an organized marketplace for buyers and sellers.

Clearly, the key to a successful exchange is to bring about the needed highest possible concentration of buyers and sellers into a single market mechanism in an efficient, low-cost, manner. To do so requires that the market operate with certain basic rules and with certain types of actors. These characteristics or operating modalities are precisely what distinguish what is known as a commodity exchange from a typical central wholesale or terminal market.

4.1 A system that creates integrity and trust

A commodity exchange operates with a certain set of rules or conventions that are widely known. These rules pertain to four key dimensions of the market: the product, its price determination, the actors, and the contractual relations that bind them. These rules and modalities together create much needed integrity and trust in the system. To begin, goods traded on an exchange must be standardized according to known standards of quality and quantity. The grading and certification of grade must be done by licensed inspectors that are qualified and regulated. Grading can be done through a laboratory based at the exchange on a sample basis or by other parties, such as the state or private actors. What is critical is that the product grades are widely accepted by the market and are developed with the participation of all market actors, including farmers, traders, processors, and consumers. The certification must be considered by all to be fair and neutral. Thus, whether the grading is done by the exchange or not, a key function of the exchange is to ensure that goods are brought to the market properly graded.

Second, an exchange operates a given system of price bidding that is aimed at publicly displaying buy and sell offers in a transparent and low-cost manner. Some exchanges

operate on the basis of an “**open outcry**” system in which market actors in on the exchange floor cry out their bids and orders in a public fashion. Alternatively, an exchange may operate with an actual or a virtual “bulletin board” on which bids and offers are posted publicly. The key is that the price bidding is done openly rather than privately.

Third, in order to ensure that the rules are followed, exchanges operate with **membership-based trading**, where membership is based on the ability to comply with the rules of the exchange and to meet certain standards. Moreover, since chaos would quickly result if membership were continuously open to increasing numbers, membership in an exchange is fixed. In addition to an annual fee, the actual seat or membership on an exchange floor is paid for with an initial price, much like a share, and can be bought or sold on the market. This ensures that members have a stake in the performance of the market and thus uphold its trust and integrity.

How then can large numbers of buyers and sellers be integrated into the market if the members who trade on the exchange are limited? **Brokers are the key set of actors on an exchange who, as members of the exchange, trade on behalf of an unlimited number of buyer and seller clients.** The function of brokers, whose duty it is to advise their clients, whether buying or selling, as to the best market opportunities and when and where these are likely to occur, provides significant empowerment to market participants. However, because of their central role, brokers must be specifically licensed and inspected in their function. The integrity of brokers is at the core of the integrity of the exchange itself.

Exchanges are essentially self-regulatory systems which prescribe rules and codes of ethics to which all market actors who are registered with them need to strictly adhere to. Their members are required to, among other things,

1. do their very best to foster and promote the operation of the exchange;
2. maintain the highest degree of business ethics and integrity;
3. give precedence to the interest and good will of the exchange;
4. comply with laws, regulations and commonly agreed issues pertaining to the trade;
5. make use of practices that promote the public image of the exchange and the mutual trust between all concerned; and
6. encourage research and the introduction of new methods and practices that promote the efficiency of the market.

Who can become a member of an exchange? In a deregulated market, membership is voluntary. Any individual or business organization that is engaged in the marketing of commodities may become a member of an exchange: traders, brokers, cooperatives, processors, state enterprises, etc. In a nutshell, exchanges are membership organizations that are employed as a vehicle through which their members engage in the business of buying and selling commodities. A key function of the exchange is therefore to ensure compliance of all of its members with the above principles. An exchange is itself registered with and supervised by government agencies established to oversee its activities in line with the law in place.

Fourth, the exchange’s regulations and directives usually make it mandatory for members to make use of **standard contracts** prepared by the exchange to which they belong. Thus, members are required to strictly adhere to the terms and conditions laid down in the

contracts, to keep appropriate records of their transactions; and to submit to be bound by the disciplinary rules of the exchange. The advantages of an exchange are that:

- it permits the development of uniform contracts that would be hardly achievable through private negotiations
- it makes it possible to develop contracts of maximum utility to both parties, and
- it brings certainty of understanding between parties to the contract.

Typically, the terms and conditions specified in most contracts issued by an exchange include:

- The description of the commodity including its origin and certification number where appropriate,
- The quantity in terms of quintals, tons, metric tons or other accepted standards of measurement,
- The quality, as per standards approved by appropriate laws or regulations, or by relevant government agency, or as per adopted standards of the commodity exchange
- Price, including, where circumstances require, value added tax (VAT) and all other lawful levies
- Delivery date and the terms thereon
- Storage, handling and insurance costs
- The name of the broker, if there is one
- Provisions on notice
- Consequences of non-performance, and
- Force majeure, if agreed to include grounds other than those stated in the law.

Another major role to consider for the exchange pertains to enforcement and the consequences of non-performance. In an organized market where all contracts are facilitated through the exchange, most default cases are handled and straightened out by the exchange itself. Exchanges have developed rules, ethical codes and procedures for contract enforcement and dispute settlement. Self-regulation in the market is an integral part of the system. It is employed as a means of assuring that every market participant is living up to his expectations.

4.2 A system that generates market information

A core attribute of an exchange, implied within the four dimensions noted above, is that it enhances market transparency through generating and disseminating information. Through its own functioning, the exchange creates market information about the underlying supply and demand conditions in the economy. Thus, contrary to popular perception, a commodity exchange does *not* require an external market information system as a pre-requisite to its proper functioning. **An exchange becomes the market information system** as it undertakes its function of price discovery based on the public posting of buy and sell orders.

When the volumes of trade on the exchange are sufficiently large to justify that price discovery according to true market fundamentals is occurring, then the dissemination of

that information of market prices provides a great service to the market, and the wider economy. This fact alone is a compelling reason to justify an exchange.

4.3 A system linked to warehouse receipts

By storing their goods in a reliable warehouse, farmers can use the warehouse receipt that is issued as loan collateral and thus access finance without selling their goods. A common misperception is that a warehouse receipts system is primarily a price stabilization system. First and foremost, it is a system of financing, which is its primary purpose. However, it can have positive impacts on price stability by encouraging storage just after harvest, but this is not guaranteed. However, while the receipt is an important mechanism for farmers to reduce their cash constraint, it must be considered that it also entails speculative activity by farmers, with high risk implications, because farmers who are receipt holders are thus taking a position in the market with some judgment about the future direction of prices. This factor alone has led to the demise of many inventory credit schemes over the past few years across sub-Saharan Africa. To overcome this risk to farmers, warehouse receipts can be made transferable, so that farmers can transfer the speculative risk through sale of the receipt. Thus, through linking a receipt program to a commodity exchange, receipts can be traded on the exchange and enable the transfer of risk in an organized fashion. **The chances of success for a warehouse receipts system are considerably higher if it is linked to a functioning exchange on which receipts can be traded.**

The viability of a warehouse receipts system depends on the extent to which there is discipline and trust in the warehouse, like the commodity exchange, integrity is key. In addition, the viability depends on the economies of scale to save costs of oversight and administration, the reduction of costs of financing that are passed on to farmers, finding the correct balance of regulatory oversight by state, and the bond and insurance requirements against default, loss or theft. For a transferable receipts system to be viable, there needs to be specific licensing of warehouse operators, a tracking system to register every change of ownership (to ensure only one party has legal title), and the establishment of clear legal rights for receipt bearers and of receipts as documents of title (mortgageable).

Clearly, a transferable warehouse system is highly complementary to the functions of the exchange. The receipts system goes hand in hand with a commodity exchange in that:

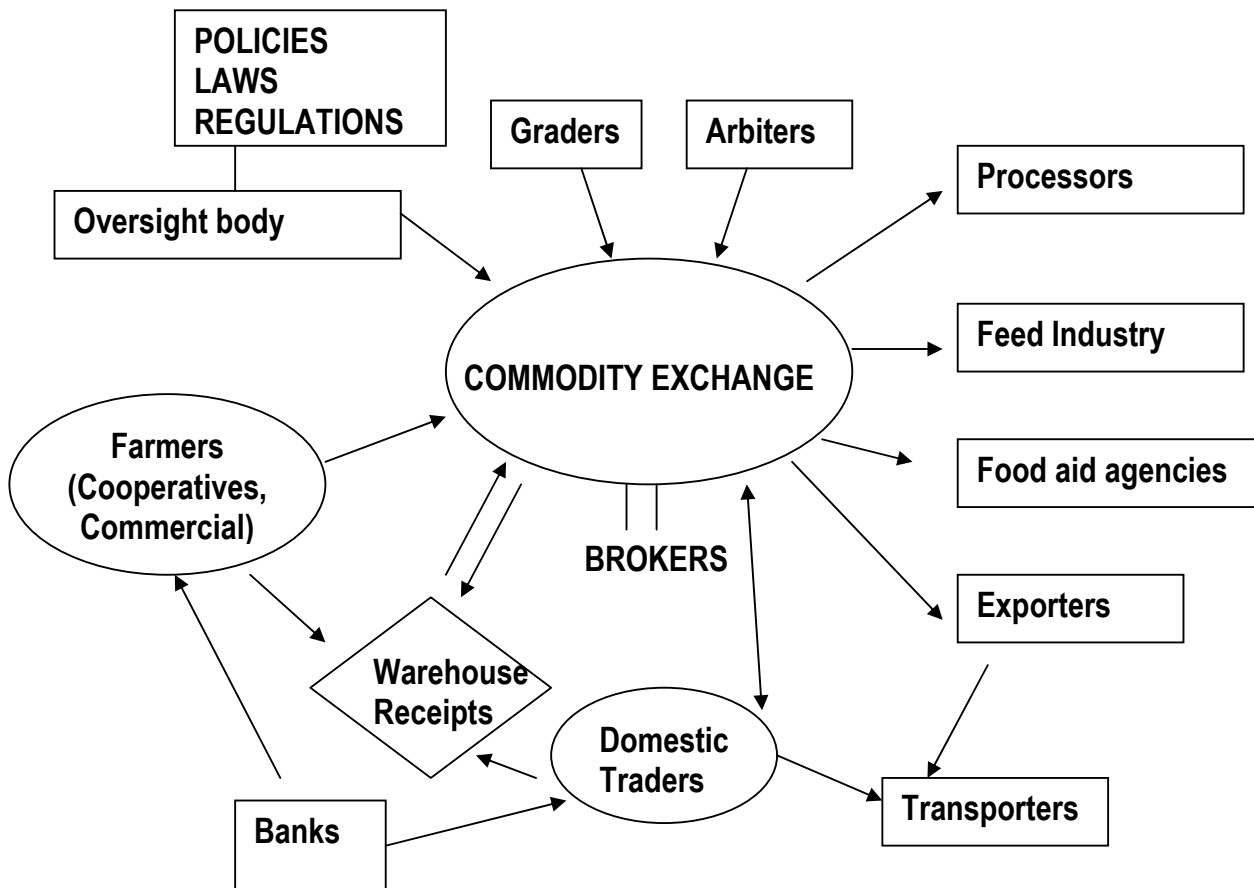
- Grades and standards are essential to warehouse operations as well as to a commodity exchange with standardized contracts;
- Price transparency is achieved because receipts indicate a specific grade, which generates price information that can also be used on the exchange;
- Risk is transferred by selling receipts on the exchange; and,
- Integrity and order: the legal enforcement of quality and of the transferability of the receipt are vital for both the warehouse receipts system and the functioning of the exchange.

4.4 A system that increases market volume and liquidity and reduces risk

A successful commodity exchange provides transactions for its participants --farmers, processors, traders, large 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.

Further, particularly 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. The various roles of market actors and activities are shown in Figure 2.

Figure 2. Actors in the Commodity Exchange System



5. WHY AN EXCHANGE FOR ETHIOPIA?

In the previous section, we have established that the clear benefits of an exchange are that:

- An exchange reduces transaction costs by:
 - facilitating contact between buyers and sellers
 - enabling centralized grading of products
 - ensuring that contracts are enforceable
 - providing mechanism for price discovery
 - simplifying transactions with standard contracts
 - transmitting information about prices and volumes
- An exchange provides a mechanism for increasing market liquidity
- An exchange enables transfer of price risk, and
- An exchange creates trust, order, and integrity in the market.

Properly implemented and regulated, commodity exchanges can contribute greatly to the achievement of a country's economic and developmental goals and strengthen the bargaining power of weak groups such as small farmers. However, there is **no blueprint** for commodity exchange development. They are useful and viable only when **tailored** to the real needs of the country. Commodity exchanges should not be considered status symbols, or copied from other contexts, which have a high failure rate. Finally, the core elements need to be in place or put in place in the course of exchange development.

Despite the seemingly obvious and major advantages, an exchange is not for everyone. To begin, organizing an exchange in such a manner that market needs are met through the system that is created is notably difficult. Over the past century, many exchanges have gone out of business, even some which were successful for some time. Therefore, a critical exercise is to first understand what is the core problem or set of problems that the exchange is trying to resolve. We will proceed to do this analysis in the following sub-sections, but this exercise requires considerable consultation, dialogue, and buy-in by all the stakeholders in the market, including government, private traders and processors, farmer groups and others.

Second, particularly related to the first problem of undefined or misspecified objectives, exchanges can also be at times misunderstood or regarded with suspicion by governments or the private sector itself. Third, commodity exchanges are not necessarily useful or viable in all countries. So a careful evaluation of specific country circumstances is always warranted. Generally, however, exchanges are considered less viable when goods are not easily standardized (highly differentiated); goods are not storable (perishables); trade is highly decentralized with no central hub of market flows; and there is weak volume.

Finally, in considering the creation of an exchange, it is important to build on the collective wisdom in market development acquired globally. Several important lessons emerge from international experience. As regards new developing country exchanges, they are often most viable **if they do not concentrate on introducing futures contracts early on**, but rather, on trading physical goods alongside warehouse receipts or on providing a credit function. Second, they also need to be able to respond to a rapidly changing trading environment, including the integration of their economy into a wider regional or international framework. Thus, **strategic alliances between exchanges** are

often the evident solution, as the experience of exchanges in the industrialized countries has shown. Thus, as exchanges try to develop new approaches to problems in their economies, information on lessons learned in other countries can be very helpful. Moreover, not only do emerging exchanges need to be able to avail themselves of the support of other exchanges and the international community, but governments **need to both ensure a policy framework which allows an exchange to play its role to and to provide additional security to the exchange users** (and those who use the prices generated on the exchange to negotiate contracts) by a proper policing role. Technical assistance from the international community can speed up the development of exchanges, and help to avoid errors.

We now turn to the analysis of specific factors that may either “push” or “pull” a strategic decision to establish an Ethiopian Commodity Exchange, in an integrated manner, in conjunction with the core accompanying institutions of a linked Warehouse Receipts System, a system of grades and standards certification; a market information system; a contract enforcement mechanism; a regulatory framework; and producer and trader associations. Pull factors are defined as circumstances or factors outside of the market itself which justify the development of a commodity exchange in Ethiopia, while push factors are internal circumstances that motivate the development of an exchange.

5.1 “Push factors” justifying a commodity exchange in Ethiopia

Eight major push factors that potentially justify a commodity exchange in Ethiopia can be identified as:

- the emphasis on commercialization of smallholders and quality-based production in the country’s Rural Development Strategy;
- the presence of a large domestic grain market;
- the existence of a significant central Addis Ababa market linking dispersed surplus and deficit areas;
- the long tradition of grain brokers in the Addis Ababa market with established rules and codes of conduct;
- the emergence of new market-oriented cooperatives and unions to bulk up produce and organize farmers’ market participation;
- the emergence of new market actors such as commercial farms and larger-scale traders;
- the establishment of a national warehouse receipts system in 2005; and,
- the current policy momentum or political will for change as evidenced by new market development initiatives at the policy level.

5.1.1 Policy rationale

The Rural Development Strategy of 2001 states:

Our agricultural production can achieve rapid and sustainable growth if it is based on producing more than the producers’ own consumption and supplying the difference to the market. The life of the farmer can be continuously improved if he is able to produce at this level, sell his products and purchase ever-increasing volumes and types of commodities and services.

A very important emphasis the policy direction is to achieve growth through the commercialization of smallholder agriculture. This commercialization depends on a market that is able to play its role in order to benefit farmer livelihoods. This policy thrust thus constitutes an important push for efforts to establish a commodity exchange which can expand the scope and reach of markets, lower transaction costs, and increase farmers' bargaining power through increased transparency and order.

5.1.2 A large domestic market

As the second most populous country in sub-Saharan Africa and with a population that spends the bulk of its expenditures on food items, there is a large and growing domestic market for staples. Thus, the great majority of rural households, some 90 percent, spend more than 70 percent of total income on food and for most of these households, more than 50 percent of total expenditures and more than 70 percent of food expenditures is spent on staples, such cereals, roots, pulses and oilseeds (Diao et al., 2005). Ethiopian agriculture is considered to be weakly commercialized, with an earlier study suggesting that 28 percent of production is marketed (Dessalegn et al., 1998).³ However, despite this relatively low figure, which suggests that Ethiopian rural households are largely in the subsistence economy, the domestic market is actually very important because of the structure of production. That is, because more than 50 percent of food currently is provided by the food surplus area in the country and only 30 percent of rural population lives there, there are nonetheless significant transfers of food from food surplus areas to food deficit areas in the country.

5.1.3 Centrality of Addis Ababa market

Even with one-third of total production reaching the market, the marketed surplus amounts to a domestic market of some 3 to 4 million metric tons annually. The Ethiopian market is thus **one and one-half times the size of total production in the East African community**. Earlier studies of the flow of grain within domestic market channels reveal that of the 3 to 4 million tons of marketed surpluses, **roughly 30 to 40 percent, or roughly 1.5 million metric tons is marketed through the Addis Ababa market** (Dessalegn et al., 1998) (Figure 3). This is a critically important element in justifying the rationale for a commodity exchange. Because of the geographic dispersion of surplus and deficit areas of the country and the radial configuration of the road infrastructure, Addis Ababa is a logical hub or clearing point for the domestic grain market. Thus, Addis Ababa constitutes the primary reference market for the country, as the focal point in which buyers from deficit areas meet sellers from surplus areas (Figure 4). Of course, Addis Ababa is not the only hub in the marketing system, but other terminal markets such as Shashamene, Nazareth, and Bahir Dar have considerably less volumes.

³ This measure is based on a 1996 household survey, which may not reflect current reality. A new study is currently under way by IFPRI/ESSP to evaluate this.

Figure 3. Evolving grain market structure in 2005

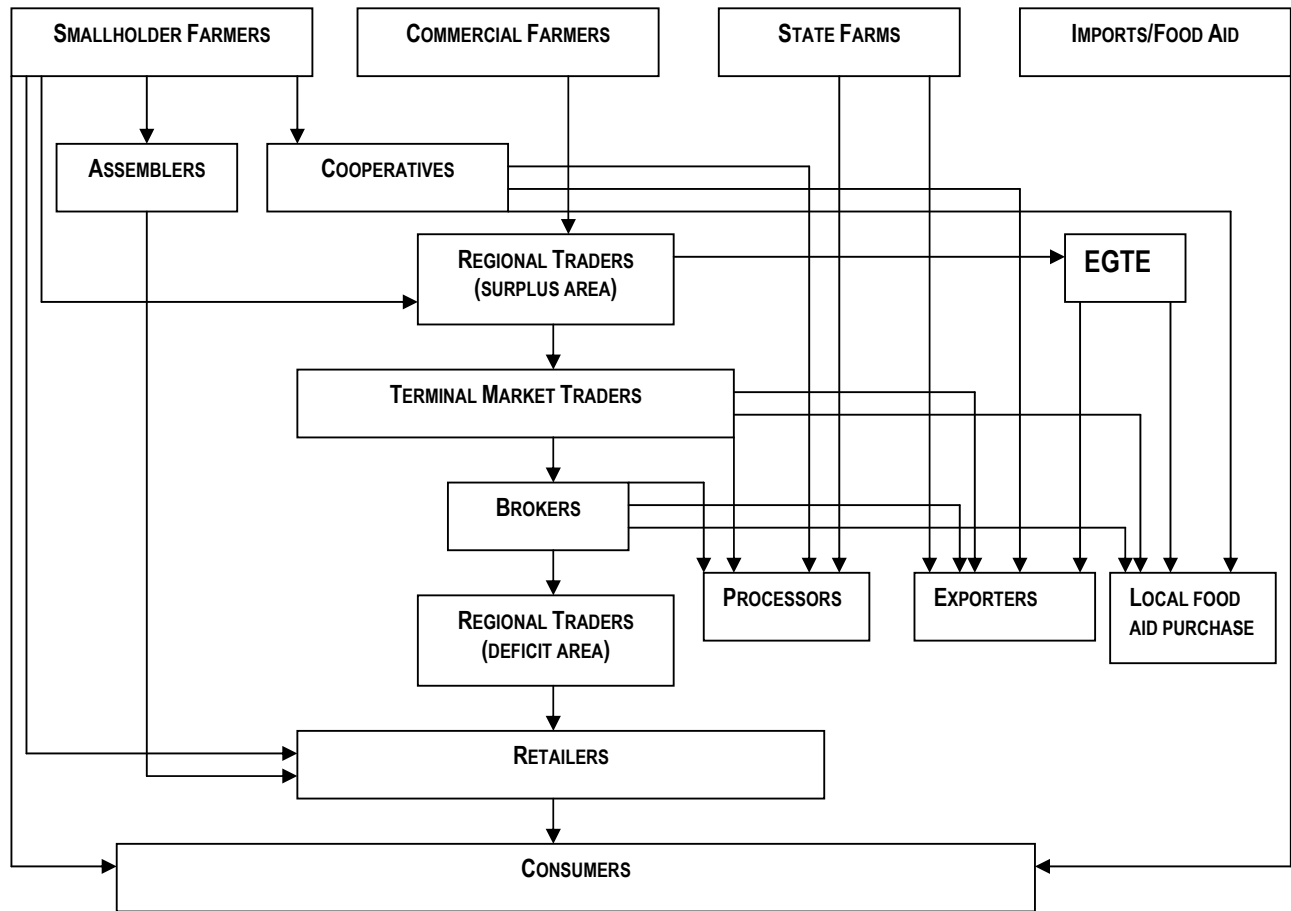
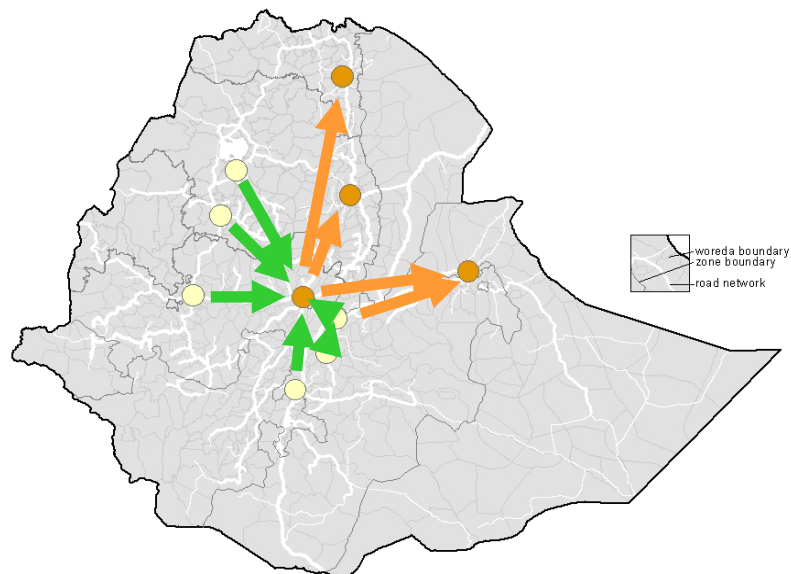


Figure 4. Snapshot of major grain flows

Grain Flows in Ethiopia



5.1.4 Presence of established brokers

A key element is the presence of established brokers with a long tradition, dating to the pre-Dergue era, of handling multiple clients from the regional deficit and surplus areas. These brokers operate also within the Addis Ababa market, handling purchases for large buyers such as processors, government institutions, hotels, and food aid procurement. Lirens (1993) described a system in which some 2,500 wholesale traders around the country worked with 40 established brokers in Addis Ababa to transact nearly 1 million tons of grain annually, thus linking surplus and deficit area market traders.

Further analysis by Gabre-Madhin (2001) reveals that 70 percent of traders transact in the Addis Ababa market with brokers, who operate within the bounds of quite formal “rules of the game.” Although not licensed as brokers distinguished from other traders because of the lack of recognition of their role by the state, they nonetheless have developed long-standing norms such as the practice of only representing one side of the trade, working on a flat rather than percentage commission, specialization in particular regions, establishing the trading hours in the market from 6 to 9 am. Of particular note, in the absence of formally established grades and standards, these brokers also play the role of graders of traded goods, with well-defined quality parameters and price differentials, known only to themselves (Table 1). Another key element regarding the role of brokers in the Addis Ababa market is that, much like brokers anywhere in the world, they provide “trust” or integrity to the system. That is, even when sellers and buyers meet face to face, they nonetheless transact through their brokers, to whom they can turn if there is a quality dispute and who serves as a guarantor to the transaction between otherwise anonymous parties. While this brokerage institution is an important advantage that is not found in many other African countries, efforts are required to bring this group of actors in line with thinking on the development of an exchange. There are those that will resist, as they benefit from the current lack of order and transparency. But, with appropriate sensitization and dialogue, there are others who will emerge as the main visionaries and central actors of a new marketing system.

Table 1. Brokers’ quality-differentiation of grain in Addis Ababa, 1996

Grain	Origin	Variety	Quality	Price (Birr ^a /qtl) ^b
Teff	Ada	Magna	1 st	245
	Ada	Red	1 st	165
	Butajira	White	1 st	215
	Welenkomi	Mixed	1 st	180
	Gojjam	Mixed	1 st	155
	Gojjam	Abolsey	3 rd	140
	Gojjam	Red	1 st	130
	Wheat	Ada	Israel	1 st
Ada		Israel	2 nd	150
Ada		White	1 st	na.
Ada		White	2 nd	160
Ada		Aybo	1 st	175
Ada		Abesha	1 st	175
Ada		Abesha	2 nd	170
Arsi		Favel	1 st	145
Arsi		Favel	2 nd	135
Arsi		Favel	3 rd	105
Arsi		Dashin	2 nd	135
Bale		Favel	1 st	140

^a 1 US \$ 1 = Eth. Birr 6.35 in 1996; ^b Bags are unstandardized and vary between 90 to 120 kgs.

Source: Gabre-Madhin, 2001

5.1.5 Growth of new cooperatives

Another important factor in justifying a push for a commodity exchange is the recent initiative to establish voluntary, market-oriented cooperative unions around the country. If these cooperatives operate with a business orientation, they can stand to greatly benefit from the existence of a well-organized national market. At present, interviews with certain unions reveal a deep mistrust of the market and a desire to “cut out the middleman” through directly contracting between cooperative unions and processors or exporters. However, the experiences of the last two years have revealed the shortcomings of this orientation to the unions themselves. In attempting to engage in forward contracts without reference to a well-functioning national market in which products are graded and priced in a neutral fashion, the contracts are fraught with enforcement problems, as either party has shown a bias in the grading, or has reneged when the market changed. Interviews with the unions reveal a frustration on their part in not being able to work with the market itself, rather than in alternative single channel arrangements, which ultimately increases, rather than decreases their market vulnerability.

It is also been noted that, with these contractual arrangements, it is not clear how sustainable or scalable this orientation is, with the limited number of processors available. Nor is it clear that they necessarily receive better prices, if one believes the basic maxim that “you can’t beat the market.” On the positive side, the organization of smallholders into market-oriented cooperative societies and unions implies that they have a structure or platform from which to participate in a national commodity exchange. More experienced unions may wish to become members of the exchange and trade directly on the floor, while others may work through brokers. The experience of the Zimbabwe Agricultural Commodity Exchange, ZIMACE, was that the majority of trade on the exchange was directly done by smallholders organized into marketing associations.

5.1.6 Increase in commercial farms

Another positive development is the emergence of large-scale commercial farmers in the grain sector, defined as holding more than 100 hectares. At present, the commercial farmers association of Ethiopia boasts membership of some 200 farmers who represent some 2 percent of the domestic market. These are actors who would keenly benefit from an organized market where products would be graded and be channeled into domestic or export markets.

5.1.7 Launching of national Warehouse Receipts Program

The mutual complementarity of a negotiable warehouse receipts system and a commodity exchange has been discussed in the previous section. With the piloting of the warehouse receipts system in 2005-06, the warehouse receipt system thus precedes the establishment of the exchange. The problem of sequencing has been highlighted as a “chicken and egg” problem, with a receipt system requiring a mechanism to clear markets and to transfer the receipts and the accompanying risk in an efficient way as possible. Thus, the success of the currently launched receipts system depends significantly on improving the domestic market through an exchange.

5.1.8 Policy and donor momentum

Finally, a critical factor is the positive steps taken and the current political will to transform the agricultural marketing system of the country. Alongside this will is the recognition of the gaps in capacity on the part of the government and a willingness to engage in dialogue and learning. This is a major factor in determining the success of an exchange which requires an absolute “paradigm shift” from a planning-based mindset to one which aims to achieve “self-coordinating market order.” Developing an exchange requires much learning, much debate and dialogue, in order to develop trust and commitment to the process among all stakeholders.

While these push factors are significant, there are some key gaps as well. One important gap is the presence of organized trader associations which would enable traders to engage in efforts to improve the market system and work alongside and in partnership with the state in promoting self-regulation. Second, major capacity building is required, in terms of skills, infrastructure particularly of telecommunications and storage capacity, as well in terms of financial access by the market actors. Third, industry-level dialogue and a forum to engage the broad spectrum of actors is clearly required.

5.2 “Pull Factors” Justifying a Commodity Exchange in Ethiopia

In addition to the push factors which have been elaborated above, there are also six significant “pull” factors which also justify a commodity exchange initiative. These factors are:

- the potential for reaching an important and growing regional market as well as the international market;
- increased opportunities provided by increasing local food aid procurement;
- cash-based safety net transfers which create more local demand for grains;
- a growing number of domestic processing firms that require a better product;
- the emergence of grain exporters seeking a better organized domestic market, and,
- increased opportunities by the development of the livestock sector.

5.2.1 Regional trade potential

A major thrust of the development strategy that Ethiopia is embarked upon is the focus on export markets to lead growth. Thus, the country seeks to position itself on global markets as a future exporter of agricultural goods, including oilseeds, pulses, and also cereals. The maize and wheat markets in nearby regional markets constitute an untapped export potential. **Ethiopia is the second largest maize and wheat producer in Africa**, with domestic production more than double the volumes jointly produced in the three members of the East African Community (Kenya, Tanzania, and Uganda) in 2004-05. It is also considered the lowest cost producer in the region. On the demand side, there is between one-half to one million tons of grain deficit in the EAC community and nearly 3 million tons deficit annually in the COMESA region for maize. In addition to maize, there is a growing demand for wheat in this region.

Despite this comparative advantage, trade between Ethiopia and the region is virtually non-existent at present. Trade is constrained by the very high costs of transport inland within Ethiopia up to Djibouti. Thus, despite its lower cost of production, available supply, and lower domestic price, Ethiopian grain becomes uncompetitive in the regional market. A clear policy priority for Ethiopia is pushing for the opening of the road from Nairobi to Moyale, which would reduce transport costs. But this only partially redresses the lack of trade.

Very importantly, even when export parity prices with low domestic prices, trade is constrained by the enormous difficulty and risks, and transaction costs involved, in matching sellers in Ethiopia with buyers in Kenya. Neither party has sufficient market information nor contact with potential regional buyers. More importantly, the Ethiopian market cannot deliver the required grades in the quantities and time required, because of the disorder of the domestic market. Moreover, even where trading partners may meet, the costs of enforcing contracts between individuals may be daunting.

Thus, “getting the domestic house in order,” through an organized and efficient domestic market, is therefore a pre-requisite for trade competitiveness, to the region and to the wider global market. An Ethiopian commodity exchange where quality is properly graded, contracts are standardized, market information is readily available, and enforcement mechanisms exist would go an enormous way in promoting trade to the region, through reducing domestic marketing costs and bringing order to the market. Moreover, it is conceivable that an Ethiopian exchange could readily be linked to a regional network of grain exchanges to harmonize standards and establish enforcement mechanisms across countries. At present, COMESA is considering such a regional network or regional exchange and the presence of an Ethiopian exchange would be an important advantage.

5.2.2 Local food aid procurement

Another important pull factor is that the domestic market is also increasingly supplying food aid procurement, a trend which is likely to continue in the near future. At present, the local tender system is a highly cost-inefficient mechanism which results in purchase prices far above the market price (up to 300% of the Addis Ababa price). This is because tendering is restricted to a few traders who can deliver according to specifications of quality and quantity. If procurement were done on an exchange where such quality and quantity could be obtained but at maximum competition, the procurement price could be considered lowered without sacrificing quality, and ensure greater supplies at lower cost.

5.2.3 Cash-based safety net transfers

The Productive Safety Nets Program, which aims to provide 5.5 million chronically food deficit persons with asset-building safety net transfers is currently structured to provide 70 percent of transfers as cash transfers, rather than in-kind transfers of imported food aid. The cash transfers represent a very important injection of demand into the national grain economy. They also represent a very significant opportunity to integrate market development objectives with food security objectives. In order to maximize the benefits to safety net beneficiaries, consumer prices need to be as low as possible. Thus a mechanism to reduce transaction costs maximizes the food security impact of the transfers. Conversely, increased demand in the market represents an opportunity to develop markets.

5.2.4 Increasing agro-processing linkages

The Ethiopian economy is evolving in the direction of increased domestic and foreign investment in agro-processing industries, particularly private investment. These industries stand to benefit greatly from, and therefore demand, an organized market which can deliver adequate and regular supplies of products at the required quality, which is critical to maximizing the utilization of industrial capacity and product extraction ratios. Thus, the rise of industrial demand is an important pull on the domestic market.

5.2.5 Emergence of exporter firms

As exports of oilseeds, pulses, and cereals grow, there is increasing demand by exporters facing international markets for an organized domestic market. Thus, export firms are absorbing an increasing share of the domestic market. However, these firms' competitive edge depends on the availability of supply in proper grades and in adequate supply in a timely manner. Export firms can maximize profit and increase market share with "just in time" delivery, minimizing their storage and inventory costs. This is only achievable with an organized domestic market which can provide accurate information on available supplies, and enable them to contract forward at low cost.

5.2.6 Livestock-feed linkage opportunities

Finally, another pull factor is the emerging livestock industry in Ethiopia, which will eventually absorb a considerable share of the domestic market, if Ethiopia is to compete effectively on livestock products. Therefore, in addition to domestic processors, exports, and food aid, a fourth source of demand that is likely to become important and would benefit from an orderly and low-cost grain market is the livestock industrial sector.

6. CONCLUSIONS AND RECOMMENDATIONS

Does Ethiopia need a commodity exchange? This paper has argued that the fundamental market problem facing Ethiopia today is the rather universal problem of achieving economic order. What is meant by order is the coordination of market exchange in a low-cost manner, in such a way as that increases market liquidity and marketed volumes, and that engages smallholders in the market economy. Market coordination has been seen to depend critically on the efficient transmission of information in all of its complexity and on the ability to ensure the low-cost enforcement of contracts. Moreover, the paper has argued that, in the era of market liberalization, order must be conceived as "self-coordinating" rather than centrally planned.

It has been shown that a commodity exchange can address this critical need through a system that itself generates market information, that enhances the transparency of product grades, qualities, and marketed volumes in addition to the market-clearing price, that promotes self-regulation through a structure that enhances the incentives for preserving order and integrity of the system. It has been shown that an exchange is best suited for commodities that are bulky, storable, and relatively undifferentiated, rather than high-value, perishable products that are better suited to tightly integrated supply chains.

Moreover, because the concept of a commodity exchange is relatively new, the paper has sought to define and de-mystify what is a commodity exchange and to provide a historical and comparative context by which to understand the basic function of a commodity exchange. It has been argued that a commodity exchange is an institutional solution to a concrete problem and that the country-specific nature of the problem to be addressed and specific objectives matter greatly.

The paper has highlighted that 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.

One approach to institutional development might be to develop the building blocks of the market system first, before embarking on the commodity exchange development. But this approach runs the risk that the various institutions are developed in a piecemeal fashion, and do not add up in terms of meeting the needs of the market. Thus, a market information system might be developed with little relation to traded grades of products on the market (which often happens), and similarly, grades and standards might be developed which do not reflect actual market needs. There are many examples of warehouse receipts systems that have failed because of the lack of an organized market, such as an exchange, where receipts could be traded.

Therefore, a key perspective that is recommended is that of an **integrated commodity exchange development initiative** which include developing all the components of the system, including the warehouse receipts system, in an integrated fashion. This holistic approach is much more likely to ensure the success and viability of the exchange.

As the exchange is developed, certain key principles are critical:

- developing market institutions in a coordinated, synergistic manner;
- engaging policymakers, all levels of the private sector, cooperatives, and producers themselves in order to foster dialogue that enables markets to work for everyone; and
- strengthening capacity and building national expertise in order to create a sustainable system.

Going further into the Ethiopian reality, the paper has identified major push and pull factors as well as related gaps that justify an exchange in the specific context of Ethiopia. The major push factors are those to do with the policy context, the size of the market, the type of actors currently present in the domestic grain market, and the political will to push for change. The major pull factors have to do with the various sources of demand for an orderly and low-cost domestic market: the regional market, domestic agro-processing, local food aid procurement, cash transfers, export firms, and livestock feed linkages.

So the answer is a yes. If that is considered an answer to the “what” question, the “how” question remains yet to be addressed. That is, many questions remain for consideration in moving forward to implementation. These questions must be carefully considered and the best thinking must be applied, with a strong comparative learning focus. Thus, *how* does one proceed to establishing the exchange in a sustainable and timely manner? Does one focus on building the basic components individually or starting institutional development in a holistic manner? Does one start with a small number of commodities or all at once? How does one engage the private sector and the span of market actors, farmers, cooperatives, processors, traders, exporters, banks, insurers, transporters, warehouse operators, graders, and others, in a meaningful way? How does one structure incentives in such a way as to capture internal incentives for order, self-coordination, and self-regulation. How does one achieve the correct balance between creating an enabling policy environment without distorting private incentives? Who faces initial risk and how can this be overcome? What are basic infrastructural and other requirements? What is the level of resources and effort required?

In sum, it is recommended that the consideration of the above questions constitute an important and even urgent analytical agenda, with a view that the implementation of an Ethiopian Commodity Exchange initiative will require a concerted, long-term, commitment to achieve the fundamental objectives of transforming the Ethiopian rural economy.

* * *

REFERENCES

- Akerlof, G. A. (1970) "The Market for 'Lemons': Quality, Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* 84: 488–500.
- Bekele, G. et al. (2002) "The Role of the Ethiopian Grain Trade Enterprise in Price Policy," *Agriculture Technology Diffusion and Price Policy: Proceedings of a Policy Forum in Addis Ababa*. 2020 Vision Network for East Africa Report 1, Washington, D.C.: Ethiopian Development Research Institute and International Food Policy Research Institute.
- Coase, R. (1937) "The Nature of the Firm," *Economica*, 4:16, November: 386-405.
- Dadi, L., A. Negassa, and S. Franzel (1992) "Marketing maize and teff in western Ethiopia: Implications for policies following market liberalization," *Food Policy* 17 (3): 201–213.
- Dercon, S. (1995) "On market integration and liberalization: Method and application to Ethiopia," *Journal of Development Studies*, 32(1): 112-143.
- Dessalegn, G., Jayne T.S., and Shaffer J.D. (1998) "Market Structure, Conduct, and Performance: Constraints of performance of Ethiopian Grain Markets," Working Paper 9, Grain Market Research Project, Ministry of Economic Development and Cooperation.
- Diao, X. et al. (2005) "Growth options and poverty reduction in Ethiopia: a spatial, economy-wide model analysis for 2004-2015," DSGD Discussion Paper 20, International Food Policy Research Institute (IFPRI); Washington, D.C.
- Fafchamps, M., E. Gabre-Madhin, B. Minten (2005) "Increasing returns and market efficiency in agricultural trade" *Journal of Development Economics* 78(2): 406-442.
- Fisseha, T. (1994) "Grain markets: Government intervention and liberalization," Paper presented to the Fourth Annual Conference on the Ethiopian Economy, 28–29 November, Debre Zeit, Ethiopia.
- Franzel, S., F. Colburn and G. Degu (1989) "Grain marketing regulations: Impact on peasant production in Ethiopia," *Food Policy* 14: 347-358.
- Gabre-Madhin, E. Z. (2001) "Market Institutions, Transaction Costs, and Social Capital in the Ethiopian Grain Market," International Food Policy Research Institute: Washington, DC.
- Gabre-Madhin, E. Z. et al. (2003) "Institutions for Market Exchange: Defining a Policy Research Agenda," International Food Policy Research Institute: Washington, DC.

- Hayek, F. A. (1945) "The use of knowledge in society," *American Economic Review* 35 (4): 519–530.
- Heilbroner, Robert (1990) "After Communism," *The New Yorker*, Sept. 10: 91-100.
- Hicks, J. (1969) *A Theory of Economic History*. London: Oxford University Press.
- Jayne, T. S., A. Negassa, and R. Myers (1998) "The effect of liberalization on grain prices and marketing margins in Ethiopia," MSU International Development Working Paper No. 68. Michigan State University, East Lansing.
- Lirenso, A. (1987) "Grain Marketing and Pricing in Ethiopia," Research Report No. 28, Institute of Development Research, Addis Ababa University.
- Lirenso, A. (1993) Grain marketing reform in Ethiopia. Ph.D. dissertation, University of East Anglia, Norwich, U.K.
- Negassa, A., and T. S. Jayne. (1997) "The response of Ethiopian grain markets to liberalization," Working Paper No. 6. Grain Marketing Research Project, Addis Ababa, Ethiopia.
- North, D. C. (1981) *Structure and Change in Economic History*. New York: W.W. Norton.
- Simon, H. (1982) "Models of Bounded Rationality," *Behavioral Economics and Business Organization* 2: 239 – 258. Cambridge: MIT Press.
- Stiglitz, J. E. (1974) "Incentives and Risk-sharing in Sharecropping." *Review of Economic Studies*, 41:219-55.
- Tafara, E. (2005) "In Praise of Middlemen," Speech delivered at the Ethiopian Ministry of Agricultural and Rural Development Workshop on, "Unleashing Markets for Agricultural Growth in Ethiopia: Agenda for Action." May 19, 2005, Addis Ababa, Ethiopia.
- Williamson, O. E. (1981) "The economics of organization: The transaction cost approach," *American Journal of Sociology* 87 (November): 548–577.
- Williamson, O. E. (1985) *The Economic Institutions of Capitalism*. New York: The Free Press.