Markets, Institutions and Agricultural Performance in Africa

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Acronyms

AU	African Union
COMESA	Common Market for Eastern and Southern Africa
ECOWAS	Economic Community of West Africa States
EU	European Union
GDP	Gross Domestic Product
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
NEPAD	New Partnership for Africa's Development
ODA	Official Development Assistance
SADC	Southern Africa Development Community
WTO	World Trade Organization

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Introduction

Poverty is a pervasive and growing problem in the world. The total number of individuals living in absolute poverty i.e. surviving on less than US$1 per day in Africa, Asia and Latin America has been estimated at 1.2 billion. In Africa alone, the problem is increasing fast. Current estimates indicate that about 300 million people on the continent are living on less than $0.65 per day. The continent is also plagued with deep inequalities in income distribution with a Gini coefficient of 0.459 that is surpassed only by 0.51 Gini coefficient of Latin America. Linked to poverty is growing food insecurity among households. It is estimated that food insecurity rose tremendously from 1960 to 1990 and by 2020 Africa will have a food shortage of 250 million tons (Mule, undated).

Due to poverty and food insecurity, Africa is facing problems of poor nutrition, and widespread incidences of diseases that are stretching already tight health budgets of African countries. Poor health, in turn, leads to physical impairment and poor school performance. In addition to the above problems, it is estimated that about one-fifth of Africa's population resides in areas ravaged by civil conflicts and one-third had had a taste of civil strife in the past 40 years. This has increased the insecurity of an already insecure population (Mule, undated).

Although poverty is spread across the entire geography of individual countries in Africa, the rural population is the most affected. On average, 70% of Africa's population resides in rural areas as smallholder farmers and depends on agriculture for its livelihood. Thus, the poor performance of agriculture in the past years has increased and reinforced poverty in Africa. If the war on poverty is to be won, African countries need to place more emphasis on the agricultural sector.

The causes of the poor performance of agriculture include low and declining investments and low efficiency rates of capital-output ratios that have led to poor infrastructure including markets, ill-conceived policies, weak institutions and poor governance (Mule, undated). The purpose of this paper is to explore markets and institutions and their effects on agricultural performance in Africa.

2. Markets and Institutions in Africa

In Africa, markets can be grouped into local, regional and international. Local markets embrace unregulated transactions between farmers, from farmers directly to consumers or from farmers to private traders and marketing boards. Regional markets have come in the wake of increased recognition of the importance of regional integration to override the problem of small market size in individual countries and to achieve economies of scale and efficiency in production and marketing. These markets are regulated with clearly defined grades and quality standards. International or overseas markets are much more complicated with exacting marketing regulations including grades and standards, quality manufacturing processes and safety regulations. Such markets are much more difficult to penetrate.

In Africa, agricultural marketing is constrained by high transaction costs, high risks, missing markets and lack of social capital or collective action. Transaction costs are linked to problems of licensing; absence of grades and standards; lack of marketing information; poor access to markets; weak entrepreneurial skills and high marketing margins. High risks, on the other hand, embrace weak policy environment, lack of legal frameworks and high price volatility, while missing markets includes lack of value adding or agro-processing, weak infrastructure and lack of credit. Lack of social capital relates to weak farmer organization. These marketing problems are discussed individually and in more detail below.

Transaction costs

Marketing of agricultural products has over the years been the monopoly and monopsony of marketing boards. From the advent of agricultural market liberalization, private traders have been allowed to engage in marketing of both inputs and agricultural products. However, unlike marketing boards, private traders are required to acquire licenses to engage in buying and selling of the smallholder products. The licenses are often issued by the Ministry of Agriculture or Trade and Industry and the process often takes weeks or months, especially when the private traders aspire to export agricultural products or to import agricultural inputs. This adversely increases the transaction costs to prospective traders. In other words, the complex regulatory system acts to exclude any new entrepreneurs, discourage innovations and increase prices paid by consumers. This is contrary to the argument that regulations should be introduced to augment markets other than replacing them (Cadwell, 2002). The issue of licenses is not relevant because of lack of organized markets for horticultural products in Africa. Horticultural products are typically traded without much regulation from the government.

With the exception of crops such as tobacco, cotton, tea and coffee that are auctioned, most smallholder crops have no clearly defined grades and standards. Horticultural crops in rural and even in urban areas are mostly sold using bunch or heap method, while cereals are sold using either the heap method or plateful method without adhering to any weights and measures. However, for those smallholder crops, such as maize and grain legumes, which may be sold through marketing boards, some form of rudimentary grades and standards are instituted but no regulatory body exists to ensure that the grades and standards available for some of the commodities are adhered to. The absence of well-defined grades and standards mean that smallholder farmers just like consumers do not get a fair value for the commodities they trade in.

Labelling is virtually not done for raw agricultural products sold in rural markets in Africa. Some form of labelling is done for processed agricultural products but even for such processed products, there is not much information on the nutritional content or the means to verify any claims made on the product packaging.

Acquisition of marketing information is a serious handicap to smallholder agricultural development in Africa. Farmers rely on friends, relatives and extension agents for market information. Because such individuals may not have up to date and reliable market information, the usefulness of the information is doubtful. Market information needs to be accurate and timely to benefit all the participants in the market. As part of the market liberalization programme, the Ministry of Agriculture in Malawi in the early 1990s instituted a mechanism under a World Bank-supported Agricultural Marketing and Estate Development Project to collect and disseminate market information for the farmers and traders consumption. This initiative was limited to the collection and dissemination of agricultural commodity prices.

The mechanics of implementation involved extension planning area personnel, who were mandated to collect weekly price data on selected agricultural commodities including maize, cassava, sweet potatoes, beans, sorghum, rice and groundnuts. The prices were then transmitted to the Ministry of Agriculture Headquarters in Planning Division. The Marketing Section of the Planning Division in turn summarized all the price information from all the markets throughout the country. The information was then passed on to the Malawi Broadcasting Corporation and Daily News Papers for announcement/dissemination to the whole country. It was hoped that the price differentials would assist traders to go where prices were lower to effect arbitrage to high cost areas. The impact of this initiative was limited because it not only relied on limited channels of information dissemination but it also had limited focus. It appears that no attempt was made in the planning stages to assess the type of information that would be useful to farmers, traders and consumers and also the best ways to disseminate such market information for it to have maximum effect.

Education levels are quite low in Africa such that assimilation of technical and market information is impaired. Farmers, for example, lack entrepreneurial or business management skills especially in areas of financial, marketing and production management. Such information requires that an individual attains a critical mass of education, has requisite knowledge of market opportunities, has greater work experience and has good management capabilities. The supply of individuals with such calibre is limited in the rural areas of Africa. Furthermore, access to services is poorly distributed within communities and the massive poor infrastructure and low effective demand make the introduction of institutions a necessity for risk sharing and for achievement of economies of scale in the provision of the agricultural services in the rural areas.

Good roads, transportation and communication are prerequisites to market access particularly to those potential market participants who reside in rural areas. In Africa, lack of good rural infrastructure constrains farmers' supply response to any incentives in both agricultural production and marketing. Poor market access is compounded by deterioration of rural roads and the collapse or lack of telecommunication networks in the rural areas. This has also increased because of the budgetary cuts and the steep reduction in public investment in infrastructure necessitated by the market liberalization and related structural adjustment programmes that most Governments of Africa have pursued since the 1980s. This development has made traders to operate over short distances, thereby restricting inter-regional arbitrage of commodities. As a result, transportation costs are too high for farmers and traders to get any meaningful benefits from their trading activities (Kherallah and Minot, 2001).

High margins are a serious marketing problem in African countries. Average producer prices expressed as a percentage of the consumer price are as high as 75-90% in Asia while in Africa, the range is from 30-60%. The high marketing margins in Africa are blamed on transport costs, government restrictions and poor communication network. The low marketing margins in Asia are due to the fact that the marketing margins are close to regional price spreads; thereby implying that the markets in Asia are more integrated than the markets in Africa (Harrigan et al., 1992).

Agricultural risks

Issues of high risks in the marketing of maize, legumes, oilseeds and horticultural products are linked closely to the weak policy environment, lack of legal framework and high price volatility, which conspire to weaken agricultural markets and in turn agricultural production in Africa. Studies indicate that government trade restrictions, rules and regulations including licensing that private traders face, help to increase transaction costs as much as 20% of the marketing margin.

Faced with these constraints, private traders are unable to benefit much from economies of scale because they use trains or trucks individually to transport their produce instead of collectively hired trucks. In addition, licensing requirements increase the risk of investing in capital such as trucks and storage facilities. This is particularly the case if the traders feel that there are high chances that the license can easily be revoked.

Under such circumstances, privatization with suffocating regulations may not yield benefits that are significantly different from the public system it is expected to overthrow. Related to risk are the problems of property theft, poor quality, payment problems, and disagreements over measures and ex post renegotiation with suppliers. Furthermore, many elements of market transactions that African farmers engage in are hard to enforce and sometimes out rightly not known. In Kenya, for example, an attempt to commercialize the Kenyan farmer tended to reduce over time the allocative efficiency of resources (Goetz, 1993).

High price volatility is linked to the nature of agricultural commodities. The agricultural commodities are seasonal but consumption is all year round. Farmers, due to immediate cash needs and lack of storage facilities, often sell their produce soon after harvest. This practice floods the market with products leading to unwelcome further reductions in prices, much to the detriment of the farmers' profitability position.

Lack of regular output markets every year can be traced from subsistence requirements and the geographical isolation of the farmers. In Africa, supply and demand functions often move in opposite directions in years of plenty and years of scarcity, increasing the variability of food prices compared to a situation where only one of the functions shifts (Goetz, 1993). This makes African markets not only highly unreliable but also highly unpredictable and provides very little information useful for coordination and to provide incentive signals to entrepreneurs. The research question, therefore, is how regulations can be fine-tuned to enhance marketing activities? Another question is, what incentives should there be for farmers to engage in storage and agro-processing to reduce market risk?

Missing markets

Lack of agro-processing is part and parcel of missing markets. Other components of missing markets include lack of credit/financial services and weak infrastructure.

Although cereals, grain legumes, root crops, oil seeds and horticultural products are important and widely grown in Africa, their potential has not been fully realized because of the rudimentary technology used, especially in production and agro-processing at the rural/farm level. This state of affairs leads to significant product losses during traditional harvesting, drying, storage, processing and marketing. If the technology was improved and the farmers were better organized, most of the post-harvest losses could be significantly reduced and in the process enhance the quality of the products.

The need for transforming the current smallholder agriculture from its current status of being a subsistence way of life into smallholder farm enterprises has not been aggressively pursued. There is also lack of emphasis on adding value to primary products in a local resource based industrialization approach. The development of agriculture as a provider of raw materials for the food processing industry has also not been fully exploited.

When confronted with situations of missing markets, African farmers have tended to rely on extended family and labourers for the entire duration of the growing season or longer periods. Due to unreliability of the markets, the extended family relationship acts as an important insurance policy for the farmers to both spread the non-covariant risk and to allow some form of specialization in the different agricultural tasks that are performed on the farms.

Farmers are able to get cash crop inputs in several ways: purchase from the market; carryover seed and borrowing from marketing boards. Parastatal marketing boards have historically been used as the key conduit for introduction of new crop varieties to farmers as well as for the thorough distribution of inputs either on cash or credit basis to the farmers. The credit that was channelled through the parastatals greatly helped to reduce liquidity constraints among farmers.

The credit was most important because it was provided just before planting. If the credit was provided immediately after harvest, when rural cash balances were quite high, it would have been of much less consequence to farmers. Although parastatals have often been accused of opportunistic behaviour, they assured farmers of crop buying points and a guaranteed price for each crop.

Despite parastatals being involved in credit disbursement, the majority of the smallholders in Africa do not have access to credit. It is estimated that less than 20% of input purchases in Africa are on credit. The most common form of borrowing in Africa is from friends or relatives and usually this is for handling short-term emergencies. Credit is mostly available to cash crop farmers. Thus, available credit institutions have only managed to service a small segment of the population (Kherallah and Minot, 2001).

There is still the problem in Africa on how to service the large majority of the poor rural people who have no collateral. Studies to critically examine how credit can effectively be made available for firm expansion and for securing economies of scale in trading activities of farmers and traders are lacking. For instance, it is useful to study how contract farming and out-growers' schemes can effectively help to link the supply of input credit and the purchase of both export and non-tradable domestic crops. It is also useful to assess how the private and public sectors can be used to increase supply of rural credit to farmers on a sustainable basis.

On the input side, no market exists for wage labour and credit, and no regular market exists for output every year. Under the prevailing situations of low technology, the implication of this is that the employer and the employee's marginal product are equal to each other to the extent that the employer gets no remuneration for supervising his/her labourers. Private credit markets do not exist because land is owned by the community and not by individuals. As such, the land can neither be sold nor be used as collateral to get a loan (Goetz, 1993).

In the face of missing markets, particularly food and labour markets, when cash crops are introduced into the farming community, intra-household specialization takes place where transactions take place within a household as opposed to across markets. Consequently, dominant relationships develop between factor and labor markets.

Introduction of cash crops helps to reduce cash constraints at planting time because such crops usually come with a credit input package. In addition, the price risk as opposed to yield risk is removed because cash crops come with a regular marketing system.

Cash crops are often accompanied by modern technology that may help to improve yields on limited amount of land. With the emergence of cash crops and equipment, such as treadle pumps, ploughs and seeders, access to private credit may be possible since such equipment may be used as collateral. However, private credit continues to be an extreme constraint both from the demand and the supply often due to the absence of land market and the yield uncertainty associated with rain-fed agriculture.

Food crops grown locally do not have reliable or regular markets. Insurance markets in the smallholder sector are often non- existent. Under such situations, households are forced to store their own food. High transaction costs between uncertain food crop production and households, often makes it imperative for farmers to produce a large variety of crops as opposed to specialization. Specialization only occurs internally in terms of labour, other inputs and food.

Institutional constraints

Lack of social capital often has the underlying problem of weak farmer organizations. Farmer organizations empower farmers to effectively manage their own businesses, including processing. On production side, the organizations would work out cost-effective ways of procuring inputs in bulk to enjoy economies of scale in procurement and transportation. On the marketing side, farmers in an organization have a stronger bargaining position that minimizes chances of exploitative tendencies from unscrupulous traders. This also allows farmers to get better prices at the market leading to higher profits and better standards of living.

Africa suffers due to a significant lack of social capital or collective action. Consequently, farmers lack marketing power and are much more vulnerable to exploitation by unscrupulous business persons. Problems of access to capital and markets and high transaction costs are intimately linked to lack of social capital or collective action. About 10% of markets in Malawi, for example, have traders' associations (Kherallah and Minot, 2001).

The high transaction costs and the expenses for organizing and affecting the exchange of goods and services increase the cost of marketing agricultural products. This creates artificial barriers to smallholder participation in a number of agricultural ventures, such as dairy production. In Africa, apart from high marketing costs, markets are often scattered and there is a definite risk of engaging in marketing of time constrained perishable agricultural products such as milk, fruits and vegetables (Holloway et al., 2000). For such commodities, farmer cooperatives would reduce the marketing costs.

3. Response to African Problems

A number of initiatives have been pursued to respond to the problems outlined above. One of them is the development of regional economic groupings, such as the Common Market for Eastern and Southern Africa (COMESA), Southern Africa Development Community (SADC), and Economic Community of West Africa States (ECOWAS). The aim was to increase the market size and capitalize on economies of scale.

Other initiatives have focused on resolving the numerous conflicts in the continent by the African Union (AU), and the commencement of NEPAD. In addition, under the tutelage of the International Monetary Fund (IMF) and the World Bank, most African countries undertook massive economic reforms in the last twenty or more years. The reforms were to bring macroeconomic balance or stability, improve economic efficiency, eliminate price distortions and bolster economic growth. Results of these effects are mixed.

Countries that have gained from reforms are few and far between. Examples include Botswana, Mozambique and Uganda. In agriculture, Mozambique and Uganda have often been cited as success stories, where the growth rate of the agricultural sector was 9% for several years in Mozambique and 14% in Uganda (Mule, undated).

Structural adjustment programmes and ill-conceived marketing policies

The dismal performance of agriculture in Africa can be traced to ill-conceived agricultural policies. In sharp contrast to agriculture in developed countries that enjoys tremendous government protection and huge support in the form of subsidies, African agriculture has since independence been heavily taxed by government through export taxes, commodity cesses and has experienced dwindling government support thanks to World Bank structural adjustment conditionalities. It is estimated that the subsidy to agriculture in developed countries is about $300 billion annually. This is just about the combined gross domestic product (GDP) of all African countries (Mule, undated).

On average, public expenditure on agriculture is estimated at less than 10% in Africa, yet more than 70% of African people depend on agriculture for their livelihood. In addition, for most African countries, agriculture accounts for more than one third of GDP. All this is happening against a backdrop of declining terms of trade and declining official development assistance (ODA). Although net per capita ODA transfer to Africa, for example, was $32 in 1990, it had declined to $19 in 1998, a reduction of more than 40%. This state of affairs has led to capital flight and growing external debt estimated at almost 80 percent of combined GDP of African economies (Mule, undated).

It has been argued that in Africa, particularly in sub-Saharan Africa (SSA), there is absence of interlinked market arrangement that would combine markets for labour, land, credit and insurance within a single contract or transaction. This has led to the emergence of traditional institutions to deal with the apparent market failures (Goetz, 1993).

The market failures are apparent in the absence of land markets due to the lack of the capitalist concept of property rights over land and credit markets. It is important to examine feasibility and efficacy of the traditional institutions in dealing with the market failures. There is need to assess the cost-effectiveness of supporting the functioning of the traditional institutions than to rectify the market failure. It is also important when attempting to rectify the market failure to assess the compatibility and consistence of separate policies aimed at addressing the failures of one or more markets. This is particularly important considering that if markets are interlinked, the outcome of the various policies may not be so clear-cut to visualize.

Under such circumstances, unanticipated results may be experienced which in some cases may be costly to overcome (Goetz, 1993). For instance, in many African countries, such as Malawi, Tanzania and Ghana, structural adjustment programmes of the 1980s and 1990s encouraged governments to liberalize the marketing of agricultural inputs and outputs. The aim was to raise smallholder incomes because it was hoped that liberalization would increase competition, thereby, benefiting farmers. Another objective was to let marketing boards withdraw from uneconomic rural markets. This move would, in turn, reduce government subvention to the marketing boards. It was hoped that this would allow private traders to move in those markets where the marketing boards had withdrawn.

Experience on the ground was far from what was anticipated. When the marketing boards withdrew from the uneconomic markets that predominantly were in remote rural areas, private traders never moved in to fill the vacuum created by the withdrawal of the marketing boards. Instead, the private traders operated in the peri-urban areas leaving smallholder farmers in remote areas with limited marketing options. This had two repercussions. First, farmers resorted to subsistence ways of life. Second, inputs particularly fertilizer and improved seeds became very costly to farmers. Because of distance, the private traders who attempted to purchase crops from smallholder farmers offered the farmers very low prices arguing that they had to meet the cost of transporting the crop or product to the market (Goetz, 2003).

4. Important Lessons

First, successful countries, such as Uganda have shown that to reduce poverty there is need for a substantial and sustained increase in per capita GDP and that its distribution should be widespread in the population to reduce inequality. Since the majority of the poor people in Africa are in the rural areas, there is need to put smallholder agriculture at the top of the development agenda to reduce poverty.

Second, the many conflicts that are plaguing Africa should be resolved because they are responsible for reduction in per capita GDP of Africa. The International Food Policy Research Institute (IFPRI) estimates that civil strife is responsible for 12.4% reduction in food production in countries involved in conflicts. In the absence of conflicts, IFPRI estimates that food production in Africa would increase by 2 to 5% (Mule, undated).

Third, the reforms instituted by the World Bank and IMF have not achieved the intended results of correcting marketing problems. Macroeconomic reform policies are not a panacea for sustainable growth and equity. Despite majority of countries in Africa pursuing economic reforms in the past 20 or more years, per capita incomes have worsened and reform measures aimed at reducing government deficit have led to massive cuts in agriculture, health, rural development and education as well as massive retrenchment of personnel in government ministries. This prevalence has further aggravated poverty contrary to the expectation of the designers of the reform programmes.

It is imperative, therefore, that in future Africans should take responsibility for the design of their own programmes and reform measures. Such designs should consider social, economic and political angles of development. Since it is imperative that resource mobilization, promotion of economic efficiency, and attracting external resources are panacea for leveraging the African economies, emphasis should be placed on measures that would ensure sustained growth of the smallholder agriculture. This would help reduce poverty and turn around African economies, much in the direction of the New Partnership for Africa's Development (NEPAD). There is need to increase public expenditure on agriculture in rural infrastructure and put in place better incentives to farmers, sound economic policies and increased private investment in agriculture.

Fourth, Africans should focus on technological change to shift the agricultural production function outward. Technological change can be achieved through meaningful research.

Fifth, market development should be a priority so that farmers can sell surplus produce to both domestic and international consumers.

Finally, there is need to develop, strengthen or create institutions and organizations that would render appropriate services to farmers (Mule, undated).

5. The Way Forward

Low incomes restrict greatly the scale of the African market. To make matters worse, Africans have a tendency to prefer foreign goods to locally produced ones. To develop African markets and African agriculture, there is need for a campaign to reorient the tastes and preferences of the African consumer to the locally produced goods, especially agricultural products and their derivatives. The South African Development Communities (SADC), the Common Market for East and Southern Africa (COMESA) and the Economic Community of West African States (ECOWAS) should work toward influencing this perspective.

Issues of agricultural subsidies are controversial. In Africa, money is limited to support such programmes because the African agricultural sector is proportionately much larger than that of developed countries. Subsidies may be a good strategy for agriculture but may not work in the African context.

Arguments have been advanced that if developed countries removed subsidies then African countries would compete favourably. This argument is partly true because one reason why Africa may not compete is its reliance on traditional production technologies that limits its competitive position. In addition, international marketing requires grades and quality standards. These are not well-developed in African countries to enhance penetration of developed country markets.

The search for solutions to the problems thus revolves around five broad areas of African-based structural adjustment, infrastructural development, collective action, agro-processing and strengthening market information system.

Failure of the structural adjustment programmes has demonstrated that outsiders cannot prescribe the curative measures for the economic and technological problems of Africa. The people of Africa need to take charge of their own destiny by designing policies that suit African realities. Donors should provide support to initiatives, such as NEPAD, to ensure wide acceptance of programmes within Africa. There is need to move from the project cycle to a more participatory system of project and programme development where the local communities who are to be affected by the programmes have an input.

The infrastructure in Africa is in poor state, and this limits participation of the private sector in smallholder crop marketing. If infrastructure was good, private traders would easily move into the remote areas where the marketing boards withdrew. African governments should, therefore, seriously think about investing in infrastructural development to ensure that the smallholder farmers have easy access to the market. In the absence of infrastructure, there can be no smallholder development.

Collective action would allow farmers to strengthen their position in the market, have access to credit and greatly reduce transaction costs. In Africa, there is evidence that credit institutions are much more willing to lend to farmer groups and clubs, for example, than to individuals. Credit recovery is ensured because of group pressure. As a form of collective action, smallholder farmer associations would allow reduction of transaction costs because the farmers would be able to benefit from economies of scale in marketing their crops as well as in the purchase of inputs and acquisition of information related to both production and marketing. This would in the end ensure that the regional price spreads are, close to the marketing margin. Smallholder associations would increase farmers bargaining power on government taxes and would be an effective countervailing force to super-normal profits accruing to parastatals and private traders that are responsible for most of the observed wider consumer price spread in the range of 48-55% (Harrigan et. al., 1992).

Cooperatives, therefore, increase market access for farmers through bulking and bargaining services and reduce the risk on farmers of holding a time constrained perishable commodity with no rural demand. In short, participatory cooperatives reduce problems of access barriers to assets, information, services and the market where the smallholder farmers are able sell their products (Delgado, 1999; Holloway et al., 2000).

Participatory cooperatives are in some cases similar to contract farming. They provide a processor/ marketer with an assured supply of the commodity in definite quantities, known time intervals, price and quality. In Africa, producer cooperatives have not been successful because of difficulty in holding management accountable to members. This culminates into financial escapades involving people in management. The African experience is that single purpose as opposed to general purpose cooperatives tend to be very successful (Akwabi-Ameyaw, 1997).

Smallholder farmers' association would also help to reduce transaction risks. This would be ensured through guaranteeing good business conduct to all members. Such associations would, for instance, ensure grading and quality certification for products of its members in ways that inhibit falsification of documentations. This would have downstream effect of enhancing consumer confidence in the activities and products of the association.

When such is the case, collective action in the form of farmer cooperatives or associations would help reduce transaction costs and bolster participation. In this situation, it is up to the government to decide what it can support and how it can encourage alternative institutions that would equally provide favourable marketing environment to farmers. Farmers in Africa face differential transaction costs due to asymmetries in access to information, assets, services and profitable markets (Delgado, 1999).

With regard to agro-processing, the globalization of food marketing systems and the increased importance of processed food in all markets have created a new environment for food industry development to harness the new potential. Agro-processing allows smallholder farmers to participate in regional markets and overseas markets as well. In addition, processing and marketing of high value products such as dairy allow fast reduction of rural poverty since dairying ensures that farmers have regular incomes.

The integration of agricultural markets on a global basis and the growing influence of regional and global trade agreements have proven to be a powerful combination for change in world food markets. The Uruguay Round of the GATT set a new path for trade in agricultural products but as the agreements went into effect under the WTO, most African countries lacked the expertise to improve their policies and strengthen their institutions to capitalize on the opportunities for market access afforded under the agreements.

To remain competitive, African exporting countries will have to meet international grades, quality and safety standards set under the auspices of the WTO Agreement on Sanitary and Phytosanitary Measures by the designated standard-setting bodies (Codex Alimentarius Commission and others). Moreover, Africa will need to be able to certify its production systems according to internationally recognized standards of quality assurance (including Good Manufacturing Practices, Good Agricultural Practices, and Quality Management Systems of the International Standards Organization-ISO) and process control.

Although international standards are likely to influence trade in food products for the long term, meeting the grades, safety and quality standards of major markets for imported foods is also an immediate concern for Africa which is intent on accessing those markets with its food and other agricultural products. For example, under the African Growth and Opportunities Act (AGOA), African countries are granted duty free access to the United States market. However, in both the United States and the EU, heightened consumer concern about food safety is changing the regulation and inspection of food products. These changes must be taken into account when developing a plan to export food products into these markets.

Evidence from many countries confirm that as development occurs, the composition of agribusiness changes, and a higher percentage of agricultural commodities are processed rather than consumed directly. Consequently, the post-harvest component of food production becomes increasingly important and can serve as a source of additional income. Post harvest activities, such as post-harvest handling, storage, processing, preservation, marketing, distribution and utilization are rarely a serious part of agricultural development programmes in Africa, in spite of their potential economic and health benefits. Both off and on the farm, post-production activities play a critical role in the food chain by assuring consumers access and availability of an adequate and diverse supply of high quality, low-cost, and safe food throughout the year. Moreover, the industry communities that operate in this agribusiness marketing chain-notably the packers, transporters, processors and packaging manufacturers, and the food marketers/wholesalers/retailers, are increasingly seeing their individual and collective mission as both national and global.

In Africa, adopting and applying agro-processing and marketing systems to create value-added products or improve the safety and quality of processed products for domestic and global markets is a definite need. This is particularly urgent because global trade, now more than ever, looms as a potential choke point for economic growth and market expansion in Africa. Under the World Trade Organization Agreement on Sanitary and Phytosanitary Measures (SPS Agreement), countries will have to adhere to the "rules of the road", including science-based food safety and quality standards to compete in international markets.

Currently, the discussions, which determine these standards, are dominated by consuming countries, setting long-term trade parameters without the optimum, fully informed participation of developing countries that account for much of the raw materials and fresh food exports. Food trade issues are arguably the single most controversial topics in current global trade negotiations. It is therefore in the interest of Africa to reorient its development goals so that value-adding practices are enshrined in all smallholder agricultural development initiatives.

Value adding can be achieved in two ways. First, there is need for concerted development in processing, packing, storage and transporting to processors. Processing and packaging of fruits, vegetables, cassava and oilseeds, meats, fish, dairy products, specialty foods and beverage products can be done using a variety of technologies, including canning, freezing, refrigeration, dehydration and aseptic manufacturing. Second, there is need for agribusiness development, including both retail and wholesale marketing. The purpose of this area of excellence would be to adopt and transfer the various technologies and processes that assure cheaper, higher quality, and safer foods are leaving the farm, getting processed into higher valued products, and being shipped to their retail destinations with minimum damage, transit time, and loss. It is necessary to draw upon the complementary strengths of farmer associations and individual farmers and demonstrate that all these partners have a clearly defined vision of how they can cooperate for their mutual benefit, and to the benefit of the continent as a whole.

Market information failures in Africa compound high transaction costs and poor synchronization of production and supply. Absence of information makes it difficult for producers to know what products are needed at the market, when such products are needed, in what quantities and quality they are needed and at what price.

Producers also in the absence of information lack the ability to make rational comparison between market options. Similarly, consumers are not well informed about products they need. Reliance on friends and relatives or any unorganised method of information acquisition and dissemination increases search costs and ends with sub-optimal decisions. Research is, therefore, needed in Africa focusing on best-information gathering and dissemination techniques. This involves looking at what information should be gathered for what target group of farmers, how should the information be packaged and how should it be disseminated in order to have the maximum effect. This should also involve analysis of institutions, the policy environment and governance structures that would ensure smooth flow of information.

6. Conclusion

The purpose of this paper was to discuss markets and institutions and their impact on agricultural performance in Africa. The paper has shown that poverty is a serious problem in Africa that is leading to food insecurity and poor nutrition. At the same time, smallholder farmers have limited access to markets for their various agricultural products due to transaction costs, poor infrastructure, agricultural risk, missing markets and institutional constraints. Some of the problems, such as missing markets have been aggravated by the withdrawal of marketing boards from remote areas, a move necessitated by market liberalization.

Since the structural adjustment programmes have not succeeded in Africa, the paper recommends that the direction taken by NEPAD to let Africans take the lead in designing their own programmes needs to be supported. The paper further recommends that regional initiatives such as SADC, COMEASA and ECOWAS should launch a campaign to persuade African governments to substitute African products for foreign products.

Finally, for market development, collective action among farmers, agro-processing to add value, development of grades and standards, infrastructural development, and market information should be top priority in every African country.

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