

**AN EVALUATION OF THE ABUJA COMMODITY EXCHANGE
MODEL FOR AGRICULTURAL MARKETING AND MARKET
DEVELOPMENT IN NIGERIA**

BY

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**BEING A DISSERTATION SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF
MASTER OF SCIENCE (M.Sc) DEGREE IN MARKETING**

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JULY, 2010

APPROVAL

We certify that this dissertation on “**AN EVALUATION OF THE ABUJA COMMODITY EXCHANGE MODEL FOR AGRICULTURAL MARKETING AND MARKET DEVELOPMENT IN NIGERIA**” is the original work written by RAJI AKEEM OLORUNWA with Registration No: PG/M.Sc./06/46332. We equally examined and found it acceptable for the award of the Degree of Master of Science in Marketing.

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DEDICATION

This research work is dedicated to my grand parents, Mr. & Mrs. Raheem Olalekan and ultimately to the God Almighty (Allah) for His infinite mercy on me.

ACKNOWLEDGEMENTS

I would like to extend my sincerest thanks to Prof. (Mrs) Nnolim D.A., my dissertation supervisor for her reassuring encouragement, heart-warming assistance, and inspiring suggestions throughout all stages of this work. My sincerest thanks also would be extended to Mr Ogundokun S. A., who took care of grammatical errors. Besides, I equally the appreciate professors and other members of the department and faculty at large for their enthusiastic support, ardent help, insightful suggestions, and zealous encouragement in completing my dissertation without their efforts, it would have been impossible for me to complete this work.

Also, my immeasurable gratitude and appreciation is extended to people like Mr Adeosun Ōhola, Alh. Akeem, Mr. Adefolakan, Mr Abajue Victor, Mr Osia Innocent, Orsu Jessica (Miss), Mr Oluyombo, Mr John Eze, Hon. Denis, and Host of others for their untimely advice, support and criticism in each stage of this research work. Finally, I am grateful for the support, encouragement and patience of my close friends, family and my wife (Kehinde Raji).

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ABSTRACT

This study aims at evaluating the current model of Abuja Commodity Exchange for agricultural marketing and market development in Nigeria. This is done to be able to determine whether the operational functions and structural systems of the Exchange are environmentally favourable and yielding to solve the problems of agricultural marketing in Nigeria. More so, to increase the production and productivity of raw materials needed by the local industries from the agricultural sector and possibly advance to regional and international trade. Besides, the study aims to identify the following:

- i. Whether a centralized Commodity Exchange will enhance the performance of the Exchange.
- ii. Whether there are effective communication systems for the dissemination of market information to those who need them.
- iii. Whether there is relationship between adequate infrastructural facilities and other facilitating institutions for effective operation of the Exchange.

To this end, data were sourced from both primary and secondary sources. The primary sources were through the use of research instruments such as structured questionnaire and interview. On the other hand, the secondary sources were through the use of textbooks, journals, articles and publications from the Abuja Commodity Exchange. The population used for the study was 105 respondents out of which 87 respondents were found useful for the study and this cut across the staff, buyers and sellers of the exchange. However, the findings reveal that the Exchange is still in the infancy having existed for only seven years. Therefore it is yet to spread its tentacles to some environmentally compelling areas deeply such as the areas of dissemination of market information to the producers of agricultural produce, extension of warehouse facility to the grass root level where the producers of agricultural produce can have close proximity to them and as well lack of weather forecast service to the farmers to enhance production and productivity. Above all, Abuja Commodity Exchange is not specific to agricultural commodities alone and this creates a problem for specialization to enhance efficiency. This is a major setback because the nation lacks the necessary infrastructures and human resources to make centralization work at this moment.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Formerly, agriculture was a major source of food production, raw materials, employment generation and medium through which government was generating substantial income prior to oil boom in 1950s. As a result of the discovery of oil in the Niger Delta region of the country in the late 1950s, this gradually pushed the contribution of non-oil export commodities to the background (www.NigeriaBusinessinfo.com).

This is shown by the available statistics, which highlight a drastic fall in the year 2000, from 3.41% in 1998 to 1.19% in 1999 and to an all time low 0.52% in 2000. Nigeria's transformation into mainly a mono-product exporting nation is now a common knowledge, a development that has severally been attributed to the discovery of crude oil in 1950s (Nkamnebe, 2004:95). He added that as a result, economic development has continued to elude us.

Also, available evidence is showing that apart from crude petroleum, Nigeria effort at establishing vibrant diversified exporting has continued to amount to mere political rhetoric (Ibeh, 2003:281-286; 2002: 286-303; Anyanwu and Nkamnebe, 2003). This equally has led to a situation where non-oil export marketing research is to say the least narrow and minuscule (Nkamnebe, 2004:95). This is most worrisome, given the fact that export market research is a known correlate of export development (Czinkota and Johnston, 1983:147-53).

However, the study of economic history provides us with ample evidence that an agricultural revolution is a fundamental pre-condition for economic development (Eicher and Witt, 1964:239; Oluwasanmi, 1966:7-15; Jones and Woolf, 1969:123). The agricultural sector has the potential to be the industrial and economic springboard from which a country's development can take off (Ogen, 2007:184). Indeed, more often than not, agricultural activities are usually concentrated in the less-developed rural areas where there

is a critical need for rural transformation, redistribution, poverty alleviation and socio-economic development (Stewart, 2000:1).

More so, a strong and an efficient agricultural sector would enable a country to feed its growing population, generate employment, earn foreign exchange and provide raw materials for industries (Ogen, 2007:184). She further echoed that the agricultural sector has a multiplier effect on any nation's socio-economic and industrial fabric because of the multifunctional nature of agriculture. Furthermore, supply theory in economics holds that the higher price of a commodity, the greater its supply (www.fissecurities.com). However, agricultural products suffer from supply price inelasticity, where an increase in price does not translate to increase in supply as production is subject to seasonal fluctuations and vagaries of weather.

Consequently, farm-gate prices are relatively unstable and carry a price risk which the farmers are ill-equipped to manage. To address the problem of price instability, successive governments had intervened through state trading agencies-the Commodity Marketing Boards- which were marketing monopolies that fixed prices for produce which they purchased from farmers and sold to processors in developed economies (www.fissecurities.com). They were established as early as 1947, when the colonial administration established the Cocoa Marketing Board and subsequently the Palm Produce. In addition, Groundnut and Cotton Marketing Boards were established in 1949. The primary objectives of these boards were to manage and co-ordinate agricultural exports.

The magnitude of structural distortions in the economy led to the deregulation of commodity trade and made the 1986 Structural Adjustment Program (SAP) inevitable (www.fissecurities.com). SAP, patently addressed the "Marketing Boards" inadequacies through Trade Liberalization with particular emphasis on promotion and the adoption of measures to strengthen the productive base of the economy.

The productive sectors initially responded positively to the SAP policies available evidence showed that the Naira value of most agricultural exports increased appreciably, while the world market price for the same products were almost stagnant. Also, with the abolition of the Marketing Boards, many local merchants in collaboration with their foreign partners

were engaged directly in the export of primary products. These merchants reaped gains from the price increase than the real producers.

More so, Commodity Market was however characterized by sharp practices as a large number of inexperienced merchants entered produce trading, thereby bastardizing laid down quality procedures and engaging in the export of poor quality products ([www.fissecurities ltd.com](http://www.fissecuritiesltd.com)).

Most importantly, farmers became completely exposed to the trends in world commodity prices with their attendant volatilities. To manage the price risks associated with market fluctuation, the Federal Government acting under the advice of the Central Bank of Nigeria (CBN), directed the Ministry of Commerce to set up an Inter-Ministerial Technical Committee in 1989, to work out modalities for setting up a Commodity Exchange in Nigeria. The report of this committee was not implemented until 2001, when yet another committee charged with ensuring the conversion of the Abuja Stock Exchange (ASE) to a Commodity Exchange was set up.

However, government as part of Millennium Development Goals (MDGs) formulated a policy strategy (NEEDS) that gives recognition to the potentials of agriculture in solving some economic problems. Thus, according to the development policy of the former president Obasanjo's Administration (2003-2007) NEEDS ñ National Economic Empowerment and Development Strategy (2004): agriculture is a key element in the development process. In a similar vein, according to a NEEDS document, 'the priority to agriculture (especially to improve productivity of peasant farmers) is a key element of the poverty eradication strategy'.

More so, with reference to the same document, in spite of the dominant role of the petroleum sector as the major foreign exchange earner, 'agriculture remains the largest employer of labour and a key contributor to wealth creation and poverty alleviation' (2004:76).

Recently, almost half a decade after the Nigerian government perceived that demand increase in agricultural production and productivity for economic development can only occur and be sustained when there is effective and efficient marketing of agricultural commodities. This is because agriculture supplies the needed raw materials for local

manufacturing and food processing firms, for the development of the industrial market in agriculture. As a result of this, government came up with the incorporated Commodity Exchange in Nigerian agricultural market in 2003 (www.fissecuritiesltd.com). In essence, Commodity Exchange is an exchange for buying and selling commodities for spot and future deliveries (www.thefreedictionary.com).

In this regard, the Commodity Exchange is set up to market agricultural produce such as cocoa, sugar, cereals, cotton rubber and even non ferrous metals. A Commodity Exchange itself depends on a number of linked institutions, which are critical to its functioning (Gabre-Madhin and Goggin, 2005:22). These core institutions are: a market information system; a system of product grading; and certificate; a regulatory framework and appropriate legislation; an arbitration mechanism; and producers 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 such as banking, insurance, transport, IT service, and even inspection services. These institutions appear tailor-made to address the stumbling block to an effective marketing of agricultural commodities in a way that promotes raw materials availability for local industries and possible supplies for export. Therefore, Commodity Exchange is the center of focus for this study based on its functionalities and operations in Nigeria for agricultural marketing and industrial market development nationally, regionally and internationally.

Nigeria stands to gain from the Exchange if properly regulated and incorporated with a suitable model just like other countries around the world like United State of America (Chicago Board of Trade) 1848, United Kingdom (London Metal Exchange) 1877, Brazil (The Bolsa de Mercadonias de sao Paulo) 1917, Kenya (Kenya Agricultural Commodity Exchange Ltd) 1997, South Africa (South African Futures Exchange) 1995, Zimbabwe (Zimbabwe Agricultural Commodity Exchange) 1994, Malawi (Malawi Agricultural Commodity Exchange) 1990s, among others) who have adopted Commodity Exchange model for rural/urban integration of the economy on one hand and national/international economic integration on the other hand. And as it is to be expected in all human

institutions, environmental and situational imperatives determine the national brands of the Commodity Exchange.

1.1.1 Historical Background of Abuja Commodities Exchange in Nigeria

According to **www. Nigeria Business Info.Com**, historically early attempts to formalize product marketing in Nigeria can be traced to the 1930s when the European companies such as United African Company (UAC), John Holt, Societe Commercial Occidental Agency (SCOA) and Peterson Zochonis (PZ) were involved in direct purchases and export of Nigeria's major Agricultural Commodities considered as essential raw materials for overseas industries.

However, government involvement in organized commodity marketing dates back to the Second World War, when the West African produce control Board was established to stabilize commodity prices. Thus, produce marketing in Nigeria falls into two broad categories, domestic trade in food items that has always been handled mainly by private operators, and the marketing of cash crops, which until 1986 was handled by Commodity Boards which were monopoly public institutions.

While the prices of food items were freely determined in the market by the forces of supply and demand, government fixed those of cash crops under the Commodity Boards. The Commodity Boards were noted for paying farmers prices that were lower than the world prices and sometimes even lower than their production costs. This difference represented implicit taxation of farm incomes and served as a disincentive to domestic production.

However, the recent conversion of the short-lived and controversial Abuja Stock Exchange (ASE) to a Commodity Exchange is a much ñ expected filling in the promotion of non-oil exports. Originally, Abuja Stock Exchange was set-up sequel to the report of the Denis Odife led panel that reviewed the Nigeria capital market and suggested the idea of multiple exchange. Though, a Federal commission headed by Dr.Pius Okigbo had in 1976 recommended a single National Stock Exchange (NSE), which led to the conversion of the Lagos Stock Exchange (LSE) by Act of 1977 to the Nigerian Stock Exchange.

Conversely, it is pertinent to note the merit of the Odife recommendation, which led to the creation of Abuja Stock Exchange. It was meant to deal with the seemingly monopolist tendencies in the market. The controversy was thus ignited when the Security and Exchange Commission (SEC) relying on clause 69 of the Odife paper subsequently directed the NSE to revert to its old name, LSE. This move was strongly, opposed by key players in the Nigerian economic terrain, argument against the establishment of the ASE was hinged on the fact that the existing NSE is not yet deep enough to fully serve its purposes within the economy, so why establish a rival exchange. With intense pressure from interested groups and persons both within the NSE and outside, the Federal Government converted the ASE to a Commodity Exchange in 2003, which is primarily involved in trading of Agricultural Commodities such as maize, sorghum and millet, a decision that was widely lauded by industry experts. However, the idea was first mooted in 1989 but was not implemented until 2001 when a committee was set up to ensure the conversion of Abuja Stock Exchange to a Commodity Exchange.

Furthermore, the new Commodity Exchange is expected to assist the Federal Government in its drive to expand the horizon and contribution of Nigeria's non-oil exports to the national purse. This, it will do through the internationalization and standardization of Nigeria's tradable commodities such as cocoa, sugar, cereals, cotton, rubber and even non ferrous metals. The direct implication of this is the further integration of Nigeria into the Global Commodities Market and more freedom within the local market. The country in the late 1950s gradually pushed the contribution of non-oil export commodities to the background. This is shown by a recent statistics, which highlights a drastic fall, from 3.41% in 1988 to 1.19% in 1999 and to an all time low 0.52% in 2000 of non-oil export. The spirited moves by the promoters of first African Commodity Exchange limited (FACOMEX) to take-over facilities of the ASE from inception was influenced by the need to incorporate the operation of the global market in line with the private sector requirements and government sponsored Commodity Exchange.

Thus, the government is challenged to undertake massive enlightenment and educational campaign on the objectives and role of the Abuja Stock Exchange, considering the unwholesome experience of the defunct Commodity Boards. It must be transparent in its

dealings and carrying along individual producers of tradable commodities, prospective investors and other participants in the emergent market. Abuja Stock Exchange must endeavour to learn from the mistakes of the more established Commodity Exchange in other countries a case in point is the Bourse Du Calao ET DU Café ñ BCC otherwise known as the Ivorien Cocoa and Coffee Exchange.

1.2 Statement of Problem

There are several reports, cases and comments on the shortage, poor quality and non-availability of some raw materials that can be produced locally through agriculture in Nigeria for the industrial and manufacturing sectors despite the availability of both the human and natural resources in the country.

Basically, the chemicals and pharmaceuticals sector depend heavily on petrochemicals and, to a limited extent, solid minerals and agricultural products (www.rmrhc.gov.ng). The Nigerian government needs to actively promote the establishment of the kind of agro-based industries that are capable of processing Nigeria's agricultural raw materials in a most efficient manner (Ogen, 2007:190). Over 90% of raw materials for the sub-sectors are imported (www.rmrhc.gov.ng).

It was further communicated that, where raw materials are sourced locally like Kaolin, resin, carbon black, etc, they are of very poor quality and do not meet the specifications of the industries. The industries are therefore largely import-dependent for reliability and consistency in their processes and products. Cost of importation is enormous: cost of importation of caustic soda for example, was estimated at \$300,000.00 annually (www.rmrhc.gov.ng).

There is therefore need to focus on local processing of raw materials in this case. And this can only be brought to light, unless there is an effective and efficient marketing in agriculture as is made possible by the workings of a Commodity Exchange as is experienced in other countries. Otherwise, the contributions of agriculture to the achievement of the developmental goals of the nation cannot be practically made. The critical issue here is the ability of the Abuja Commodity Exchange (ACE) to increase agricultural production and productivity, by reducing to the barest minimum the effect of those uncontrollable factors that contribute to the instability in demand and supply of agricultural products through effective marketing.

1.3 Objectives of the Study

The objective of the study is to assess the possible impact of the existing Commodity Exchange on agricultural production and productivity, as an effective model for the development of the industrial market in agriculture, with the ability of the Exchange to

integrate urban and rural economies, rural transformation and possibly national/international economic integration. Therefore, the specific objectives are as follows:

- 1 To determine whether a centralized Commodity Exchange will enhance the performance of the Exchange.
2. To examine the legal and oversight arrangement at the Exchange.
3. To understand whether there is effective communication systems for the dissemination of market information to those who need them.
4. To determine whether there is significant relationship between adequate infrastructural facilities (warehouse receipts system, silo, bin, etc.) and other facilitating institutions (banking, insurance, transport, IT service, weather forecast service, etc) for effective operation of the Exchange.
5. To understand how commodity/Futures Exchange is operating in some countries around the world especially in African countries.
6. To evaluate whether there is an appropriate and environmentally sensitive model for proper functioning of the Commodity Exchange in order to achieve the desire objective of agricultural marketing and market development for the study.

1.4 Research Questions

- 1 Can a centralized exchange system enhance the performance of Abuja Commodity Exchange?
- 2 What legal and oversight arrangement do we have at the Exchange?
- 3 Which communication systems can be adopted for relaying market information to those who need them?
- 4 Is there any significant relationship between adequate infrastructural facilities and effective operation of the Exchange?
- 5 How does commodity exchange operate in some countries around the world especially in Africa countries?
- 6 Do we have an appropriate and environmentally sensitive model for proper functioning of the Commodity Exchange in order to achieve the desired objective of agricultural marketing and market development in Nigeria?

1.5 Significance of the Study

This research work would no doubt be greatly useful and be of immense significance in the agricultural marketing and market development in Nigeria. Therefore, the findings of this study will provide us with the basis for developing an appropriate model for the operation of the Commodity Exchange. With the development of viable and comprehensive model for the Exchange, any inefficiency and ineffectiveness of the Commodity Exchange, especially in the area of making available locally agricultural raw materials to the manufacturing industries shall be reduced to the bearest minimum and as well be able to extend the productivity to regional and international market.

Thus, the study will benefit the following: the government in the area of economic development. Buyers (industrialists) in the area of reduction in production cost, access to raw materials locally and strong bargaining power for raw materials sellers (peasant and commercialized farmers) gain access to perfect knowledge of ruling and current market prices to make better income. Businessmen are enlightened to the available investment opportunities on the floor of the Exchange. Students of Business Administration and academia will see the study as new area of added knowledge to academics, and will also serve as secondary data source to those intending to carry out similar a study in this area.

Finally, it is expected that the achievement of the objectives of this research work will provide the basis for empowering marketing of the agricultural products in Nigeria in order to discharge the onerous role of lubricating the economy, creating employment, generating revenue and contributing in one way or the other to the economic growth and development.

1.6 Scope of the Study

The scope of the study will only cover the Abuja Commodity Exchange in Nigeria alone with the exception of investigation on the Defunct Commodity Boards and traditional markets which are as well transaction places for agricultural produce.

1.7 Limitation of the Study

For obvious reason of financial and time constraints the study is restricted to the Commodity Exchange (Abuja Commodity Exchange). Nevertheless, the researcher also went through some difficulties in the process of charting relevant information from the respondents due to the negative attitude of people towards research study.

1.8 Definition of Terms

Percy Bridgman, a Harvard physicist has been widely credited with the relevance of operational definitions in any scientific study (Nkamnebe, 2004:105). Accordingly, operational definition hinges on the premise that 'the terminology of science must be totally objective and precise and that all concepts should be defined in term of a set of operations to be performed' (Goodman, 1995:64). Thus, the following are the operational definitions of some key words in the context of the work. This would assist in eliminating ambiguity (Nkamnebe, 2004:105). On the basis of the foregoing, the operational terms used in this study include:

Agribusiness: Agribusiness is concerned with the production, processing and distribution of agricultural products or with farm machinery services (Soola, 1995:2).

Agricultural produce: Agricultural products are called agricultural produce (Olakunori and Ejionueme, 1998:196).

Commodity: Commodity is anything of economic value which may be processed, or unprocessed (Collin, 1981:88). However, for the purpose of this study commodity is meant to be agricultural products which are meant to satisfy industrial need such as maize, millet, cocoa etc.

Exchange: According to Collin (1981:149) exchange is giving of something for another. This could be money for goods or goods for goods (Barter). However, in this study an Exchange is meant to be a place where transactions take place.

Price risk: Price risk is uncertainty or probability occurrence that may lead to rise or fall in price of commodities at the commodities market.

Liquidity: This is financial solvency or out of illiquidity of institution which supports its going concern. However, the term liquidity is used to signify the ease with which an asset can be converted at its full value into money (Tawaih, 2000:370).

Brokers: According to Perreault and Mc Carthy (2005:53) they are agents/middlemen who specialize in bringing buyers and sellers together. However, they are financial speculators who foresee the trend of business for the buyers and sellers in the area of price on the floor of Exchange. They are intermediaries or clients to the buyers and sellers.

Franchising: This is the incorporation of some services or business into the operation of a particular business which are not initially in the scope of the business.

Demurrage: It is a mechanism that facilitates the flow of commerce through the prompt loading and unloading of goods, so as to prevent unnecessary detention of goods of loaded or to be unloaded from vessels, trailers, and so on. However, in shipping term demurrage is the detention of a vessel by the freighter beyond the time allowed in her charter party for loading, unloading or sailing (www.thinexist.com). In general, the person liable for demurrage is the one who assumed the duty to unload or load cargo but fail to fulfill it (www.answerbag.com).

Model: According to Loudon and Della (1984:29), a model is a simplified representation of reality.

Market development: It means trying to increase sales by selling present products in new markets (Perreault and Mc Carthy, 2005:53). This may involve searching for a new use for a product.

1.9 Acronyms and Abbreviations

These are the full meanings of acronyms and abbreviation in the body of the work.

UAC	United Africa Company
SCOA	Societe Commerciale Occidentale Agency
PZ	Peterson Zochonis
ASE	Abuja Stock Exchange
ITs	Information Technologies
NSE	Nigerian Stock Exchange
LSE	Lagos Stock Exchange
SEC	Securities and Exchange Commission
FACOMEX	First African Commodity Exchange Limited
USD	United States Dollars
ACE	Abuja Commodity Exchange
BMSP	The Bolsa de Mercadonias de sao Paulo
LME	London Metal Exchange
UK	United Kingdom
WRS	Warehouse Receipt System
ZACA	Zambia Agricultural Commodities Association
CECAMS	Caisses döepargne et de Credit Mutuels

MFI	Micro-finance Institution
ACE	Agricultural Commodity Exchange
NASFAM	National Smallholder Farmersö Association of Malawi
SAFEX	South African Futures Exchange
ZIMACE	Zimbabwe Agricultural Commodity Exchange
SADC	Southern African Development Community
KACE	Kenya Agricultural Commodity Exchange Limited
MIP	Market Information Point
SMS	Short Message Service
IVR	Interactive Voice Response
MIS	Market Information System
ICTs	Information and Communication Technologies
KBC	Kenya Broadcasting Corporation
E-mail	Electronic Mail
NACB	Nigerian Agricultural and Cooperative Bank
GDP	Gross Domestic Product
EPZ	Export Processing Zone
ACGS	Agricultural Credit Guarantee Scheme
NEEDS	National Economic Empowerment and Development Strategy
CBOT	Chicago Board of Trade
SAP	Structural Adjustment Program
MDGs	Millennium Development Goals
RMRDC	Raw Materials Research and Development Council
MAN	Manufacturers Association of Nigeria
SAP	Structural Adjustment Program
ASCE	Abuja Securities & Commodity Exchange
MICs	Market Information Centres
IITA	International Institute for Tropical Agriculture
MISTOWA	Market Information System for Trade Organizations in West Africa
NAMIS	Nigerian Agricultural Market Information System
NAFDAC	National Agency for Foods and Drugs Administration and Control

SON Standards Organization of Nigeria

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1.0 Introduction

In this chapter we will review studies that are significantly related to our research area of study. In particular, the related review literature considers the following: the Introduction; Current State of Nigerian Agriculture and Policy Recommendation; Definition of a Commodity Exchange; How Does Commodity Exchange Work?; the Market Information and Communication Systems in an Exchange; Regulating a Commodity Exchange; Warehouse Receipts System in Africa; Money, its "Universal Equivalent" Its Origin in Commodity Exchange; Agricultural Commodity Exchange in Africa; Nigeria Commodity Exchange (Abuja Securities & Commodity Exchange); BMSP Historical Development and the Historical Development of Chicago Board of Trade.

2.2.0 Current State of Nigerian Agriculture and Policy Recommendation

As noted earlier, the neglect of the agricultural sector and the dependence of Nigeria on a mono-culture crude oil based economy, have not augured well for the well-being of the Nigerian economy (Ogen, 2007:189). In a bid to address this drift, the Nigeria government as from 1975 became directly involved in the commercial production of food crops. Several large scale agricultural projects specializing in the production of grains, livestock, diaries and arrival feeds, to mention but a few were established (Fasipe, 1990:129-130). Sugar factories were also established at Unman, Lafiagi and Sunti (Lawal, 1997:196). The Nigerian Agricultural and co-operative Bank (NACB) was established in 1973 as part of government's effort to inject oil wealth into the agricultural sector through the provision of credit facilities to support agriculture and agro-allied business (Olagunju, 2000:98).

In spite of these efforts, it is heartrending to note that as from the mid 70s, Nigeria became a net importer of various agricultural products. In 1982 alone, Nigeria imported 153,000mt tons of palm oil at the cost of 92 million USD and 55,000mt tons of cotton valued at 92 million USD (Alkali, 1997:10). Between 1973 and 1980, a total of 7.07 million tons of wheat, 1.62 million tons of rice and 431,000 tons of maize were imported. Thus, from N47.8 million in the 60s, the cost of food imports in Nigeria rose to N88.2 million in 1970 and N1,027.0 million in 1988 (Alkali, 1997:19-21).

Since the 1990s and until the recent ban on rice importation, Nigeria has been spending an average of 60 million USD on the importation of rice annually. Indeed, in 1994, the agricultural sector performed below the projected 7.2 percent of budgetary output (Lawal, 1997:197 ñ 198). Between 1995 and 1998 the government further embarked on the reformation of the lending policies of the Agricultural Credit Guarantee Scheme (ACGS) for easier access to agricultural credit schemes. It also established the Calabar Export Processing Zone (EPZ) and initiated the Enugu, Kaduna, Jos, and Lagos EPZs with each specializing in specific food and export crops. In fact, the National Rolling plan for 1996-1998 assumed that by year 2000, Nigeria would have been able to feed its population, develop the capacity to process agricultural raw materials both for local industries and for export and significantly, increase the contributions of the agricultural sector to the GDP (Lawal, 1997:198).

These lofty objectives have turned out to be a mirage mainly because of official corruption and lack of commitment on the part of those saddled with the responsibility of implementing the government's agricultural policies. In order to get out of this doldrums, Nigerian policy makers need to be wary of development economists who assign a relatively minor role to agriculture in economic development and fervently believe that industrialization is synonymous with economic development (Ogen, 2000:27) and Ogundipe, 1998:135 -138).

However, based on the development of Commodity Exchange in Nigeria as a way of marketing agricultural products the reports of a conference held 1999 at University of Agriculture Umudike recommends the following:

- Agricultural Commodity Exchange Market should established 6 zonal head quarters with national headquarters at Abuja to serve as data collection, collation and analysis centre to be regarded as commodity data reporting NODES for a nationwide area network.
- Market should be backed-up with a National Agricultural Commodity Exchange Information System (NACEIS) to accommodate all major agricultural crops, livestock and livestock products and fruit products in the country.
- To operate the information system a commodity base and data flow systems should be developed.

The data base and flow system require that an ecological good system should be developed for the country which details Nigerian Agricultural Commodities endowment.

- The agricultural commodities type should be defined by quality, quantities available, where available, prices and time-profile of the commodities.

- End-users information base with respect to area, type and location should be developed-agricultural commodities reporting formats for the country.

- Electronic trading system with on-line and real-time to bridge financial and agricultural commodity markets in different ecological zones of the country.

- Computer software to enable users under an interactive mail system, access information on areas with quantities and quality of type of commodities needed and their prices and places order and transfer money using electronic means and monitor shipment.

2.3.0 Definition of a Commodity Exchange

According to Gabre-Madhin and Goggin (2005:5), 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 London Metal Exchange, among others. To many, a Commodity Exchange is an advanced market mechanism for use in industrialized countries, out of 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 (Gabre-Madhin and Goggin, 2005:6). As well in my own opinion, Commodity Exchange may be seen as a transaction place with mechanism that facilitates exchange of physical or non-physical commodities and financial services in an organized manner according to some specified rules and regulations.

In its wider sense, a Commodity Exchange is any organized market where trade, with or without the physical commodities, is funneled through a single mechanism, allowing for maximum effective competition among buyers and among sellers (Gabre-Madhin and Goggin, 2005:6). 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, 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 Commodity Exchange in its advancement connotes and anchors the following terminologies.

Commodities Market, Commodity Exchange – a workplace for buying and selling, open only to members (www.thefreedictionary.com).

Forward Market, Futures Exchange, Future Market – a Commodity Exchange where future contracts are traded (www.thefreedictionary.com).

Pit – (Commodity Exchange) the part of the floor of a Commodity Exchange where trading in a particular commodity is carried on (www.thefreedictionary.com).

Derivative Markets (Forward, Future, Option and Swaps) are markets which spring up under a Commodity Exchange-dealing with a whole set of financial instruments- that is, going beyond the spot and physical markets and becoming apt for trading derivatives-may be regarded as an organization based in manage models and norms of conduct and performance, which offers services for trading, hedging and price discovery (Carvalho De mello 2006:1). Thus, commodity Exchange is a market strictly adherent to specified quality and rules for the purpose of ensuring trust and integrity as the conditions of the contract between parties involve specified.

In the most rudimentary form, a Commodity Exchange can be defined as a place where physical commodities are traded, whereby sellers and buyers 'auction' consignments of commodities (www.fissecurities.com). Alternatively, it can also be described as an organized market where buyers and sellers channel trade as well as various permutations of a given transaction on physical and non physical commodities in order to ensure the sanctity as well as the transparency of the trading transaction process (www.fissecurities.com).

In another way, 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 (Gabre-Madhin and Goggin, 2005:6). However, Commodity Exchange is a trade mechanism through which market information on spot and future markets is disseminated to the buyers, sellers and

any other participants in the market for the purpose of facilitating and ensuring free, fair and organized transactions among the traders according to some specified rules and regulations.

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 (Gabre-Madhin and Goggin, 2005:6). Thus, 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 risk.

In a nutshell, a Commodity Exchange is mechanism (not necessarily a place) that fosters the transparent and efficient trade in physical and non-physical commodities as well as their permutations or derivatives in order to ensure price discovery and the performance of the commodity trade contract ([www.fissecurities](http://www.fissecurities.com) ltd.com).

2.3.1 Participants in the Commodity Exchange and Futures Market

Participants in the Commodity Exchange and Futures Market include; Financial Institutions, Farmers, Grain merchants, Brokers, Multinational corporations, Food processor, and speculators ([www.fissecurities](http://www.fissecurities.com) ltd.com). They are collectively classified into investors, brokers, hedgers, speculators and arbitrageurs.

- (I) Broker:** The broker executes orders on the trading floor or the trading system of the Exchange. He buys and sells futures contracts on his own account as well as the accounts of his clients on the trading floor.
- (II) Hedger:** Hedgers are individuals and firms that make purchases and sales in the futures market solely for the purpose of establishing a known price level-weeks or months in advance- for something they later intend to buy or sell in the cash market. In this way they attempt to protect themselves against the risk of an unfavourable price change in the interim.
- (III) Speculator:** A speculator is one who attempts to anticipate price changes and through buying and selling futures contracts, aims to make profit. He does not use

the Futures Market in connection with the production, processing, marketing or handling of a commodity. The speculators in the Futures Market accept the price risk the hedgers seek to avoid. The speculator has no interest in taking delivery.

- (IV) **Arbitrageur:** Arbitrageur is the simultaneous purchase of cash commodities or futures in one market against the sale of cash commodities or futures in the same or different market, to profit from a temporary discrepancy in price. The transactions are risk less because an arbitrageur will only move from one market to another if the prices in both markets are known or if the profit outweighs the cost of transaction.
- (V) **Basis:** difference in prices that are pertinent to hedger in a certain location, and the price set by the market. This difference can be mainly by transportation costs and differences in the quality of cotton create the basis risk (Carvalho De mello, 2006:12).

2.4.0 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 (Gabre- Madhin and Goggin, 2005:8). 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 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.

This is possible because the grade product needs no description with 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. Obviously, the key to a successful Exchange is to bring about the needed highest possible concentration of buyers and sellers into a single mechanism in an efficient, low-cost manner. To do so requires that 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 Commodity Exchange from a typical central wholesale or terminal market.

2.4.1 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 need integrity and trust in the system. To begin, goods traded on an exchange must be standardized according to known standard of quality and quantity. The grading and certification of grade must be done by licensed inspectors that are qualified and regulated.

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. Third, in order to ensure that 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. How then can large number 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. 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 the precedence to the interest and goodwill of the Exchange;
- (4) Comply with laws, regulations and commonly agreed issue pertaining to the trade;
- (5) Make use of practices that promote the public image of the Exchange and the mutual trust among all that concerned; and encourage research and the introduction of new methods and practices that promote the efficiency of the market.

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. 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 contract 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.

However, 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 quantity, as per standards, approved by appropriate laws or regulations, or by a 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 cost,
- The name of the broker, if there is one
- Provision on notice,
- Consequences of non-performance, and

- Force majeure, if agreed to include ground other than those stated in the law.

2.4.2 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. An Exchange becomes the market information system as it undertakes its function of price discovery based on the public posting of buying and selling 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 provide a great service to the market, and the wider economy. This fact alone is a compelling reason to justify an Exchange.

2.4.3 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 stability encouraging storage just after harvest, but this is not guaranteed. However, while the receipt is an important mechanism for farmers to their cash constraint, it must be considered that it also entails speculative activity by farmers, with high risk implications, because farmers who are holders are thus taking a position in the market judgement about the future direction of prices.

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. The chances of success for a warehouse receipts system are considerably higher if it is linked to a function Exchange on which receipts can be traded. 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 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 is vital for both the warehouse receipts system and the functioning of the Exchange.

2.4.4 A System That Increase 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 turn generates incentives for increased participation in the market.

Further, particularly when linked to 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 1

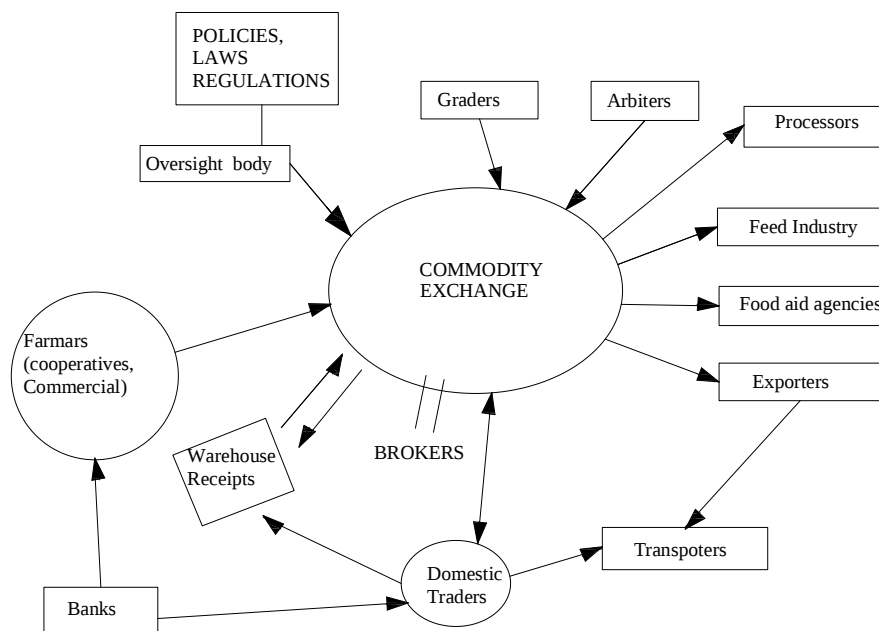


Figure 2.1: Actors in the Commodity Exchange System

Source: Ethiopian- Development Research Institute-Ethiopia Strategy Support Program: Policy Working Paper No.4, November 2005.

2.5.0 The Market Communication Systems in an Exchange

According to Mukhebi (2005:194) market information Communication systems in KACE is instrumental to the following:

(a) Collecting and Processing Market Information

KACE MIP staff visit commodity markets in their areas early in the morning each market day. Using standard KACE data collection sheets, they interview three to six wholesalers to obtain wholesale buying prices for each listed commodity traded in the market. They compute mean prices for the market for that trading day, and send by e-mail, SMS or telephone the information to the KACE Headquarters information technology department each trading day.

(b) Disseminating Market Information through MIPs Users Visit the Market Information Points (MIPs) to Receive Market Information.

They read the information placed on the MIP wall or on boards. Users who can not read get assistance from the MIP staff. MIPs are information kiosks located in rural market, serving as sources of market information. An MIP consists of a simple office, with two staff (a manager and an assistant). Those in areas with electrical and fixed land line telephone service are equipped with a computer, internet connection and a fax machine. As well all are supplied with mobile phones. There are boards used to display market information, or used trading floors for matching offers and bids. KACE Headquarters in Nairobi compiles market information and sends it to MIPs, where it is printed and placed on the boards for users to visit and view freely with the help of KACE staff.

(c) Disseminating Market Information through SMS and IVR

Wholesale buying prices, as well as commodity offer and bids collected and disseminated as SMS to safaricom mobile phone subscribers on daily basis. This same information for some commodities is also available on the IVR service provider, where it is recorded on voice mail and updated through the kilimo hotline member.

(d) Disseminating Market Information through the Internet

Wholesale buying prices, as well as commodity offers and bids, are daily entered and updated into the Regional Commodity Trade and Information System database and sent to recipients via e-mail by KACE IT staff.

(e) Disseminating Market Information through the Radio

Wholesale buying prices are sent to the Kenya Broadcasting Corporation (KBC) daily by the IT staff for radio broadcasts Monday ñ Friday after news broadcast market linkage service: The Commodity Exchange.

In addition to the provision of market information, market linkage is the second service offered by KACE. In KACE's view, the value of market information lies in facilitating trade links. This is accomplished through direct as well as indirect trade linkages.

2.6.0 Regulating a Commodity Exchange

Specifically, for effective and efficient operations of Commodity Exchange in any country as a system of marketing agricultural products in both local and international markets, it requires some rules and regulations which the Commodity Exchange must put into consideration and abide with before we could have what is known as a successful Commodity Exchange. Thus, according to Hegarty (2007:1-7), he exposed 23 rules that must be strictly adherent to in a Commodity Exchange market in his report of "UNCTAD EXPERT MEETING ON THE TRADE AND DEVELOPMENT IMPLICATIONS OF COMMODITY EXCHANGES" with a special reference to London Metal Exchange as being adjusted to and incorporated in its operations in the global market on products such as copper, tin, lead, zinc, nickel, primary aluminium and aluminium alloy. However, the following are the rules and regulations as purported by Hegarty in his presentation.

- (1) He explained how effective regulation is a prerequisite for the success of a Commodity Exchange. A detailed understanding of how any particular Commodity Exchange works requires an understanding of the commodities that it trades. The specific details about how the London Metal Exchange works are built on the specific qualities of the world markets in non-ferrous based metals. The London Metal Exchange is the world centre for trading price risk to copper, tin, lead, zinc, nickel, primary aluminium and aluminium alloy. We produce the world reference

- price for those metals because it is possible to do so. Some commodities are not capable of producing a world reference price.
- (2) The physical trade in the primary metal, copper, tin, lead, zinc, nickel and primary aluminum, is a global trade because those metals can be stored and shipped around the world at a cost that is a small percentage of their total value. That cost limits the regional variations in the price of those metals. Take zinc as an example. The LME three-month price is roughly US \$300 per tonne. The freight cost of shipping zinc to the other side of the world is probably around US\$100 per tonne. A relatively small price difference between two regions of say \$200, or just under 7%, means it easily becomes economically viable to ship the metal from one region to the other. However, in this circumstance a single reference price would not be sufficient for these with price risk in the different regions.
 - (3) An exchange is not a free-for-all market where buyers and sellers take their chances; it is a market place where rules and regulations are formulated both to facilitate trading and to encourage trading. However, an Exchange is regulated market bound by rules.
 - (4) The first job regulation is to standardize the contract terms under which buying and selling on the Exchange will take place. Besides, this will create certainty about minimum quality and settlement terms for those trading on the Exchange. This is the sort of regulation designed to facilitate trading so that buyers and sellers do not need to renegotiate the contract terms each time they trade; all they need to negotiate is the price and the volume.
 - (5) The purpose of regulation of an Exchange is to create a level playing field so that buyers and sellers have the confidence to enter into contracts. This gives rise to the anti-manipulation rules that are a necessary part of any exchange. On stock markets the main form of abuse is trading with inside information. However, on physically settled Commodity Exchanges the main potential for abuse attempts to squeeze the deliverable commodity.
 - (6) Commodity Exchanges have two stages of growth. The first stage is where the exchange becomes a market for willing buyers and willing sellers who want to make or take delivery. This could be producers, consumers or physical traders. The

second phase starts when the prices discovered by trading on the Exchange become a reference price against which those willing to trade price risk are prepared to settle their contracts. The test of whether this stage has been reached is whether or not producers, consumers and physical traders use the price for their physical contracts that do not go through the Exchange.

- (7) In this second phase the volume of trading on the Exchange is not solely driven by those wishing to make or take delivery of the underlying commodity through the Exchange but is driven by those willing to trade price risk to the underlying commodity. For example a physical trader will buy and sell direct to and from his customers on the basis of the Exchange price. He will hedge his price risk on the Exchange by trading on the Exchange but will close out his Exchange contracts before the settlement date. Thus the majority of Exchange contracts will be closed out to create a net cash payment.
- (8) An Exchange will never make the transition from the first phase to the second phase unless the prices discovered from trading on the Exchange become accepted as the best indication of the underlying value of the commodity. The aim of all Commodities Exchange is to develop to the stage where the traded prices on its exchange become the reference prices for the underlying commodities. However, it follows that no exchange will develop from the first phase to the second phase unless it is properly regulated and seen to be properly regulated by those who use it.
- (9) Another way to describe the purpose of regulation on an Exchange is that it must ensure "orderly trading". There are three elements to orderly trading: (a) Clearly defined contractual terms that give no room for disputes on settlement. (b) Financial stability of the market participants to ensure that settlement takes place on time and without default by any party. (c) Freedom from manipulation so that the prices traded on the exchanges are driven by commercial decisions based on supply and demand and on the willingness to buy or sell price risk. A market is said to be manipulated when one party or a small group dominates the price formation. For example, if one person were to control the supply or demand of the delivery commodity, that person would be able to push the price up or down.

- 10 The real purpose of a Commodity Exchange is to discover the price at which willing buyers and sellers are prepared to trade. That price is based on uncertainty on the part of those buyers and sellers. The buyer can not be sure what price he would have to pay but will discover that price by bidding for the commodity; as well the seller will discover that price by offering to sell the commodity. This means law of demand and supply is also applicable here, that is when more people want to buy than to sell, the price is bid up; and when more people want to sell than to buy, the price is offered down.
- 11 Where a market is dominated by one party, whether a buyer or a seller, that reduces the uncertainty on his part and therefore throws out of balance this process of discovery through trading. The reason why a Commodity Futures Market develops is because it is the best way of discovering the traded value of the commodity. If the market believes that there is a better way of establishing that value the exchange will not grow. For example, in some commodities the dominance of a small number of producers is so great that there is no uncertainty about the traded price of the commodity. In those circumstances, the traded price is the price set by the producers. The same would be the case if a market were dominated by consumers.
- 12 The essential ingredients for a Commodity Exchange to succeed are (a) that there exist a large and varied number of buyers and sellers who either have exposure to price risk to that or are prepared to trade in the price risk to that commodity and (b) that there is no better method available of knowing the value of that commodity except by trading it on the Exchange.
- 13 From the aforementioned, there are three elements of orderly trading on an exchange; (a) clearly defined contractual terms, (b) Financial stability and (c) freedom from manipulation. Freedom from manipulation is the one area of regulation that attracts most attention and for good reason. However, if an Exchange wants to succeed the other two elements are just as important. The reason why they attract less attention is because if an Exchange gets those parts of its regulation correct they become invisible, that is everyone takes them for granted.
- 14 The contractual terms explain clearly what is expected of the buyer and seller in carrying out transaction at the Exchange. Most commodity markets have monthly or less frequent settlement dates. However, in the case of London Metal Exchange

- which its contractual terms have been developed over 130 years have reached a stage where there is absolute certainty on a settlement date and as well make settlement possible on the daily basis but on the banks business days in London and New York. This frequency of settlement would not be possible unless settlements were certain.
- 15 The reason for this certainty is that the LME sets out the basic contractual terms that apply to LME contracts. Only brands of metal that have been admitted to listing by the LME can be delivered against an LME contracts. Producers of those brands undertake to the LME that they will maintain production of those brands in conformity with the LME specifications. Delivery is *on warehouse* which means that before metal can be delivered against an LME contract the metal must be placed in an LME-listed warehouse in one of the LME approved locations. The LME has set up a warranting system whereby ownership of specific metal in an LME-listed warehouse is evidenced by a warehouse receipt called an LME warrant. Confidence in the integrity of the LME warranting system is such that a buyer will pay on the settlement date against delivery of an LME warrant and will treat that LME warrant as proof that the metal is exactly what he has agreed to pay for.
- 16 Financial stability is also an essential ingredient to support orderly trading. Those who enter into contracts for future delivery need to be confident that on the day that delivery is due to take place the other party will be in a financial position to honour his contract. There are many ways of achieving this sort of financial stability. In the UK there are two strands to do it.
- 17 The first strands is that UK Futures Exchanges like the London Metal Exchange are required to use a central clearing house for all trades between brokers. This means that the system is insulated from the collapse of anyone because the credit risk to that broker has been centrally managed by the clearing house. After the brokers trade with each other the clearing house steps in and becomes the buyer to every broker who is selling and the seller to every broker who is selling and the seller to every broker who is buying.
- 18 The second strand of financial stability is the capital rules that apply to brokers. The UK financial Service Authority has capital rules apply to LME brokers which are designed to ensure that the trading risks and credit risk that the brokers run are

- matched by sufficient capital. The purpose of these rules is to ensure that the collapse of any one customer does not bring down the broker. There have been two recent cases where LME brokers were companies in a larger group and that larger group collapsed into insolvency. In each case the subsidiary that was a member of the LME continued to trade throughout the insolvency of its parent company and was sold off by the liquidators as a going concern to new owners. In this case none of the customers of those LME brokers suffered any loss on their LME business. This is what the system is designed to achieve.
- 19 The combination of clearly defined contractual terms and financial stability means that in a well ordered market settlement failure does not occur. Once an Exchange is subject to the likelihood that settlement failure might occur, the prices at which those trading on the Exchange are prepared to trade are undermined. Ultimately, if the risk of settlement failure becomes too likely trading will dry up.
- 20 Market abuse, that is; lack of freedom of manipulation on an Exchange, it is a fraud on the other users of that Exchange. It is well accepted that there need to be effective regimes to punish and therefore discourage fraudulent behaviour. Government Legislation has been used to reinforce the criminal nature of market abuse. However, even if there were no government legislation dealing with market abuse, an Exchange that wanted to be successful would have to do all that it could to prevent its markets from being abused. This is not just a moral issue; people will not use an Exchange if they do not use an exchange if they do not think that trading on it is fair.
- 21 An exchange should design its contracts so that they are as little susceptible to market abuse as possible. For example, in the case of the LME's plastics contracts delivery is by means of bagged plastic stored in warehouses. We rejected the possibility of delivery in silos because available space in plastic silos is restricted and could too easily be manipulated to make delivery difficult for sellers.
- 22 An exchange will also need to develop procedures designed to reduce the scope for market abuse. The daily settlement on the LME means that a particular attention should be paid to procedures for preventing settlement squeezes because nearby dominant positions can build up quickly. A set of rules called Lending Guidance,

- should be developed and designed to neutralize the effect of nearby dominant positions by obliging the dominant nearby position holders to provide liquidity to the market.
- 23 A mature Commodity Exchange will become the price discovery mechanism for its underlying commodities. However, a mature commodity exchange is a mechanism for discovering the price but is not a mechanism for controlling the price. In a situation where the users of an Exchange believe that a commodity is over-supplied the price will drop or over-priced they will sell. On the other hand, where the users of an exchange believe that a commodity is under-supplied the price will rise or under-priced they will buy. On the LME we have seen phases in the commodity cycle where the traded prices for metals were lower than the producer thought was fair and phases where the traded price for metals were higher than the consumers thought was fair.

2.7.0 Warehouse receipt systems in Africa:

The rationale- why bother?

First of all, rural Africa is collateral ñ starved (Coulter, 2007: 183). In many countries, banks have considerable excess liquidity because they find it difficult enough to low-risk lending opportunities. Rural land is usually in eligible on account of customary forms of tenancy. This put a great premium on systems that allow banks to attach debts to stock-in-trade. Such systems are particularly advantageous if they can mitigate in various ways: by using market intelligence, by hair-cutting (only leading a percentage of the stock value) and in some cases, by hedging so as to lock in a forward or minimum price.

There are series of other reasons for WRS in Africa. Smallholder agriculture is fragmented, lacks bargaining power and reliable sources of input supply, and, except when working in conjunction with strong out grower schemes, is of little in interest to the banks. Markets lack transparency, in term of both quality and price, and it is often difficult for farmers to negotiate effectively with buyers. It is very difficulty to set up enforceable contracts, for which reason grain must bought and sold on a spot basis (Coulter, 2005:183). African countries have much to gain by establishing systems that assist in the bulking and standardization of agricultural products so that they can be traded more transparently and in

line with market requirements and provide smallholder farmers and small traders with a ladder that they can use to gain the interest of banks and other service suppliers.

2.7.1 Regulated and Unregulated Approaches

With the liberation of agricultural marketing systems, collateral management agreements (CMAs) have become a common form of warehouse receipt system in Africa (Coulter, 2005:184). They are typically used in the pre-export or post-import financing of commodity inventories, often as part of structured financing inventories of commodities, such as maize and sugar, which do not pass across borders. The provider of the collateral management service is normally the subsidiary of a Geneva or Paris-based inspection company, and the agreement is tripartite in nature, involving the borrower (typically an exporter, trader or miller), a bank, and the collateral manager.

Precedents in various countries, notably the USA, much of South Africa and the Philippines, show that it is possible to solve this problem by organizing regulated warehousing systems that enable a larger group of providers to enter into the warehousing business, including trading companies that offer storage services as sideline (Coulter and Shepherd, 1995; Lacroix and Varangis, 1996) as quoted in Coulter (2005:184).

The organization of regulated systems can strengthen the agricultural markets of Africa in a variety of other ways, notably by increasing marketing transparency, the regulatory regime can be instrumental in introducing standard grades, weights and farmers to organize, bulk up produce, sell to remote buyers and gain a credit history. Indeed, production credit is potentially more attractive to both bank and borrower when the borrower is not obliged to sell his product after the harvest, but can deposit it with a collateral manager who holds it until prices are favourable. It makes it easier to establish commodity trading systems, and provides a tool by which public and food aid buyers can efficiently manage their stocks (Lacroix and Varangis, 1996; Martin and Bryde, 1998) as quoted in Coulter (2005:184).

The WRS can also become a focus for the organization of stakeholders, and a healthy policy dialogue between these stakeholders and government (Coulter and Onumah, 2002; Coulter, 2005) as cited in Coulter (2005:184). In short, the organization of an effective

regulated WRS can contribute to breaking the log-jam of low productivity, which affects most of African agriculture.

2.7.2 Key Considerations

Experience to date calls attention to a few key considerations that need to be taken into account in designing a regulated system in Africa—trust, scale, the policy environment and the legal framework of the country concerned (Coulter, 2005:184). The arrangement of trust is the most important factor, and explains why subsidiaries of multinational operational have come to dominate the collateral management business. While not immune from failure, these companies enjoy the backing of their first-world parents and have internationally underwritten professional liability insurance. Further stress that the cover typically has various exclusion, and the collateral managers do not offer depositors a “full out-turn guarantee” but the companies concerned clearly provide African Banks with a significant level of comfort, such that they usually not use home-grown collateral managers.

2.7.3 How Can One Engender Trust in a WRS?

In most developing countries, it is preferable to have some sort of regulatory framework to license warehouses to receive deposits of agricultural products, and issue warehouse receipts against them (Coulter, 2005:185). This is further stresses that the objective is that buyers of grain, banks and other participants will treat all warehouse receipts the same, regardless of which warehouse issued them. The more effectively regulated the system, the more trust depositors and banks will have in those warehouses in outlying locations, which bankers rarely visit.

The criteria for licensing a warehouse operator will take account of its financial strength, physical facilities, competence of staff, ability to store according to quality standards, and administrative capabilities. The company, moreover, have to put up a financial guarantee to protect depositors in the event of negligence and fraud. Apart from this, it will be subject to unannounced inspections to ensure that its obligations are covered by commodities in store.

In countries where public administration is characteristically weak and/or highly politicized, the only alternative may be to place the regulatory regime in the hands of a body representing stakeholders who have a vested interest in the success of the system. At its simplest, such a body can operate on a purely contractual basis with warehousing companies whose suitability to handle third-party stocks it can certify. However, it is likely to have greater reach if it works under national warehousing laws and with regulatory powers delegated by the state.

Conversely Stakeholder controlled regulatory bodies do not politicized in their own right. However, in some countries the approach appears to be yielding results. In the Republic of South Africa, the SAFEX division of the Johannesburg Stock Exchange oversees a large number of silo facilities that are registered as SAFEX delivery locations. Grains are receipts issued by silo operators in their own name. Probably of greater relevance to the rest of Africa is the Zambian WRS, the only significant regulated WRS for gains in Africa north of the Limpopo. The regulatory function is handled by the Zambian Agricultural Commodities Association (ZACA) Ltd, a stakeholder ñ controlled organization whose board includes representatives of farmers, traders, banks, insurers, development projects and government.

Another case worthy of mention is the Coffee WRS in Tanzania, which in 2004-05 resulted in the lending of US 7.6 against stocks stored by co-operatively owned coffee curing companies, licensed by the Tanzania Coffee Board. A key feature which gives them credibility vis-à-vis banks and depositors is their autonomous member-controlled character and independence of political process.

In the case of Brazil, the world's fourth agricultural producer, politicization was at the root of long-running failure of the warehousing sector. Some warehousing companies belonged to senators, and the public regulator was unable to establish rigorous regulatory discipline such that would disqualify underperforming operators (Coulter et al, 1999). With the passage in 2000 of law 11,076, the country is seeking to address this problem and generally modernize the warehousing system. Compared with the previous law (Decree 1, 102 of 1903), the new legislative framework allows private entities a more important role in managing, the system. For example, the Central Bank of Brazil has authorized the clearing

house the leading Commodity Exchange (Bolsa de Mercadorias futuros, of Sao Paulo) to institute a system of electronic registration and custody of warehouse receipts.

2.7.4 A Supportive Policy and Institutional Environment

Governments often welcome the establishment of WR, but in practice the policy environment does not always prove favourable (Coulter, 2005:188). For example, governments sometimes

- * Intervene suddenly in a way that alters market fundamentals causing price to drop and people storing in licensed warehouses to lose money, the introduction of food aid grain on to the market can have a similar effect;
- * Maintain a high overall level of government intervention in the market, such that seasonal price movements do not reflect carrying costs ñ this has been an issue in former socialist countries of East Europe (e.g Poland in the late (1990s) rather than in Africa, where governments have generally lacked the resources to engage in sustained large-scale intervention;
- * Unexpectedly reduce import tariffs, with similar effect this happened in Ghana in 1997, causing difficulties for two inventory credit schemes (Coulter and Onumah, 2002) as cited in Coulter (2005:188),
- * Decline to make under-utilised public storage facilities available for WRS, even when they are unutilized.

Given the history and politics of grain marketing, promoter should not expect the policy environment to be perfect for the establishment of WRS. However, it is best to organize such systems where the environment is relatively favourable, and build bridges with politicians and officials, consulting and familiarizing them with their rationale and operation. It is important to evaluate the information available to stakeholders, e.g over the internet, through radio bulletins or mobile phones and if the information is not suitable, seek it out through other sources.

2.7.5 Establishing a Supportive Legal Framework

Some earlier papers have suggested that the most important element in establishing a WRS is a favourable legal environment (Lacroix and Varangis, 1996; Martin and Bryde, 1998) as

cited in Coulter (2005:189). Banks and buyers require good title to the underlying goods represented by the warehouse receipts, and protection against seizure or litigation by other claimants to these goods.

The latter requirement is encapsulated in the terms 'negotiability' are functionally equivalent to the goods themselves. Under such circumstance, business people can buy and sell, and lend against them. Such legal protection is of the greatest importance in developing a strong WRS, particularly when it involves grain stored by a large number of farmers or traders. Holders of warehouse receipts also need legal protection to provide cover for the possibility of events, such as the death or bankruptcy of the borrower or the warehouse operator.

However, experience to date indicates that, at least in those possible to start regulated WRS without legal system which provides for negotiability. In South Africa, which has a Roman-Dutch legal system, the silo receipts system is treated as if negotiable, even though legally speaking they are not negotiable instruments; certain test cases have upheld the position of receipt holders against other claimants. These and other experiences in Africa to date confirm the following statement from Coulter and Shepherd (1995:26) as quoted in Coulter (2005: 189):

It is stress that the 'practical effects of a particular legal viability of inventory credit will usually not be evident from the examination of legal doctrine alone. Where the economics of the scheme are strong enough, and lenders are comfortable that the practical risks are small, they may be able to live with a certain amount of legal ambiguity. Where, however, the economics are unclear and the political and business culture is unaccustomed to what is being proposed, legal uncertainties may present another reason for skeptical participants, particularly banks, to turn away from an uncertain venture'.

Where it is not possible to make the warehouse receipts de facto tradable and pledge able, there is a strong case for new legislation: Zambian bankers made this point very poignantly

during the second highly successful year of the regulated WRS, in that country by stating they were “only scratching the surface”? They could achieve for more, particularly with smallholder grain, once the draft warehouse receipt law was passed and warehouse receipts became negotiable documents of title (Geogina Smith, Natural Resources International, UK, personal communication).

2.7.6 Alternative to the Regulated Warehouse Receipt Model

The regulated model has two potential drawbacks: its requirements, for scale; and honest and strict regulatory governance (Coulter, 2005:189). It is worth asking whether there are alternative systems, apart from the above-mentioned CMAs, that can prosper in the absence of these prerequisites. There have been some well organized smallholder-oriented inventory credit or warehouse projects, including those organized by technoServe in Ghana and the Ministry of Agriculture and FAO in Niger (Bass and Henderson, 2000, Kwadzo, 2000) as cited in Coulter (2005:189).

However, with such projects it is difficult for the promoter to find an exit strategy in a way that makes the regulatory, oversight function self-financing. One case where promoters appear to have overcome this problem is that of the *Caisses d’Épargne et de Credit Mutuels* (CECAMs) in Madagascar. Village credit unions belonging to a large regional micro-finance institution (MFI) are financing members who store paddy in small local warehouses. The stock is jointly held by the credit union and the borrower under a “dual key” arrangement. Since the inception of this initiative in 1992, the volume of paddy stored had risen to around 80,000 tonnes and the project is reported to be having a very positive impact on local food security (Fraslin, 2002, 2005) as cited in Coulter (2005:189).

The big advantage of the CECAM system is that a single institution fulfills both the regulatory and lending function; the lender is directly concerned with looking after its own assets and thereby absorbs the relevant overheads (Coulter, 2007:189). However, two factors are likely to slow the replication of the CECAM experience. First, there are few rural MFIs of comparable strength in Africa. Second, MFIs tend to charge high interest rates and this may render them uncompetitive with banks; the CECAMs enjoyed access to a special government line of credit which has helped them lend at competitive rates.

The combination of lending and regulatory functions may also work with commercial banks. During the 1990s, the government owned Banco do Brasil directly supervised a group of tied warehouses which were acting as depositaries for grain financed by the bank (Coulter et al., 1998).

Here again, however, it is difficult to replicate the model, as bankers generally wish to confine themselves to banking and are reluctant to get involved with the warehousing business. Few are willing, like Banco do Brasil, to set up their own structure for supervising warehouses. Moreover tied warehouses of this kind are generally closed to lending by outside parties, and this may restrict their ability to attract deposits.

2.7.7 Promoting the WRS: Making things happen

Entirely home-grown national WRS have emerged in countries with strong commercial farming, such as the Republic of South Africa and Zimbabwe prior to 2001 (Coulter, 2005: 190). Elsewhere in Africa, donor ñ funded projects have been predominant in promoting WRS. This is unsurprising, because smallholder farmers are too dispersed to take the initiative in establishing national systems. Moreover, in the absence of public or donor support, other stakeholders, such as banks and traders, generally restrict themselves to CMAs, which are less institutionally challenging.

It should therefore be recognized that WRS are to a significant extent a ñpublic goodö and that the skills of the promoting entities are crucial to their uptake (Coulter, 2005:190). At the same time, support services that are highly dependent on donor support run the risk of becoming artificial and not developing local roots. Based on the experience of recent years, we can offer some guidelines for success (Coulter, 2005:190).

First and foremost, the entity will need to work closely with, and stimulate initiative by, the private stakeholders who stand to gain through creation of the new system. The more successful examples described here have all depended on strong private initiative. These players willing turn need at least tacit support of their governments, and preferably explicit backing in the policy and legal spheres.

2.8.0 Money, Its ‘Universal Equivalent’ and its origin in Commodity Exchange

Since, it is obvious fact that there is no way one would talk about exchange without referring to money and commodity in an economy. This forms the premise of a paper discussion between Zelizer (2000) and Fine and Lapavistas (2000) in the pages of *economy and society* refers to the conceptualization of money (Lapavistas, 2003:2). Zelizer rejects some sociology), and claims that the concept of "money in general is invalid. Fine and Lapavistas also criticize the neoclassical treatment of money in general – remains essential for social science. Intervening, Ingham (2001) finds both sides confused and in need of untangling – it is worth stressing that, despite appearing to be equally critical of both sides. Ingham (2001:305) strongly agrees with Fine and Lapavistas on the main issue in contention and defends the importance of a theory of "money in general.

However, he sharply criticizes Fine and Lapavistas for drawing on Marx's work, which he considers incapable of supporting a theory of "money – in general – complicating things further, Ingham (2001:305) also declares himself "at odds with Fine and Lapavistas's interpretation of Marx's conception of money; For Ingham, in short, Fine and Lapavistas are right to stress the importance of "money in general – but wrong to rely on Marx, whom they misinterpret to boot. His true aim is to present an "alternative" theory of "money in general – associated with the German Historical school and post-keynesianism. According to Ingham, neglect of this "alternative" theory led Fine and Lapavistas, as well as Zelizer, to focus excessively on commodity money, while ignoring credit money and disregarding the social relations inherent to money as "promise to pay". Responding to the charge of neglect is also awkward, since one of the disputants has extensively discussed the "alternative" theory, in places even mentioned in the original exchange (Lapavistas and Saad ñ Filho 2000, Itoh and Lapavistas 1999, Ch.2, 10).

2.8.1 Marxist Monetary Theory and Credit Money.

For Ingham, Marx has little to say on credit money (Lapavistas, 2003:3). Marx "seems to understand the peculiar character of credit money and its relative independence from commodity exchange but only in relation to pre-capitalist formation (Ingham 2001:315). Apparently, Marx's view of capitalist credit instruments was "quite conventional" for his era: he saw them as "substitutes" for hard cash (Ingham 2001:315). Thus, Ingham places

Marx in the same camp as orthodox monetary theory, in sharp contrast to contemporary post-Keynesian treatments of credit money.

Contrary to Ingham's claims, there is no 'convention' of treating them as substitutes for hard cash. Participants in the controversies were generally agreed that it was desirable for credit money to be convertible into commodity money (gold). But to advocate free convertibility into gold is not automatically to treat money as a substitute for gold. It is entirely plausible to treat credit money as qualitatively different from commodity money, while favouring its free convertibility into gold for reasons of monetary stability.

The infirmity between Marxism and post-keynesianism on credit money (without wishing to denigrate their differences) is acknowledged even by leading post-keynesian monetary theorist (Lavorie and Secareccia, 2001). Nevertheless, there are also profound differences between Marx and post-keynesianism regarding the relationship between Marxism and post-keynesianism regarding the relationship between money and commodity exchange, which have implications for the theoretical treatment of 'money in general'. These are made clear below, after briefly considering the broader theoretical tradition on the issue of money and markets.

Market trading, money, and Ingham's 'alternative theory'

There are two fundamental theoretical approaches to money's relation to market trading (Lapavistas, 2003:5). The first, typical of classical and neoclassical economics, stresses the function of means of exchange and postulates that market money are intrinsically related. The second, it roots dating classical political economy denies that market spontaneously give rise to money and focuses on the function of value measurement (money as a unit of account). These have been referred to as, respectively, the catallactic and the acatallactic theory of money's origin (Mises, 1934). Ingham strongly advocates the latter, but underestimates its theoretical and empirical weaknesses. The two approaches are briefly contrasted below.

2.8.2 Money as Means of Exchange

For classical political economy, commerce is a natural, timeless and universal human activity (Lapavistas, 2003:5). The locus classicus of this view is Smith (1776:17) who suggested that to track, barter, and exchange one thing for another is a fundamental

disposition of human beings. Moreover, for Smith, commerce gradually progresses from primitive barter, undertaken by "savages" in the primeval jungle, to capitalist monetary exchange raises the productivity of labour and increases "the wealth of nations". But Smith does not offer an account of the process through which barter leads to the emergence of a means of exchange, thus transforming itself into monetary exchange. He is content to identify the problems that arise in barter because commodities are perishable, heterogeneous, imperfectly divisible, and so on (Smith, 1776, Vol.1, Ch V). Consequently, Menger aimed at showing that money emerges as means of exchange through spontaneous market processes instigated by rational economic decisions.

For Menger, Commodity Exchange among "economizing individuals is timeless and universal" – the fundamental component of all economic activity. Barter occurs spontaneously among "individuals and gives rise to the problems that Jevons (1875) called the "double coincidence of want". Menger's (1871:248, 1892:243) analysis of money's emergence rests on the theoretical innovation of commodity "Saleableness" or "Marketability," i.e. the facility afforded by commodities to their owners in obtaining their required economic price. Menger assumes that some commodities simply are more "marketable" than others, and postulates a mechanism through which the importance of "marketability" is recognized by market participants. He also assumes that there are gifted individuals who grasp the advantages conferred by highly "marketable" commodities, even when not desired for direct consumption.

Specifically, highly "marketable" commodities make it easier eventually to acquire the desired commodities through further exchange (Menger, 1892:248-249, and 1871:210-261). Perception of this advantage spreads among market participants partly because of non-economic factors. In the course of exchange, the benefits accruing to the gifted few become evident to many, who begin to emulate them. Repeated exchanges create habits, and give rise to generalized customary acceptance of highly "marketability" becomes stronger the more a commodity is demanded in exchange (White, 1984:703). Eventually the most "marketable" commodity becomes universally accepted as means of exchange, thus solving the problems of barter and emerging as money.

2.8.3 Money as Measure of Value (unit of account).

The theoretical tradition that associates money with measure of value (or unit of account) predates the high point of classical political economy (Lapavistas, 2003:7). Steuart (1767, vol. 11, bk.III, Ch. 1, 2), the late mercantilist, systematically differentiated between “money of account” (an arbitrary scale of value measurement) and “material money” (money in actual use). For Steuart, “money of account” establishes an abstract accounting system of prices (it is an abstract “numeraire”) while “material money” generates practical approximations of abstract prices. The distinction drawn by Ingham (2001:310) between a “monetary” (abstract) duck and a “commodity” (concrete) duck, in any “duck standard of value, strongly echoes Steuart, though probably not deliberately.

For Steuart, since “material money” is an approximation of the “money of account” the former need not have the same nomenclature as the latter. Moreover, the actual price established by “material money” need not coincide with the ideal prices established by the “money of account”?

Seeking the origin of money outside the process of commodity exchange create significant problems, four of which are particularly poignant. The first is the empirical substantiation of money having existed as pure, abstract unit of account. It is important to be clear about what has to be shown. Units of account can often be different from means of exchange as, for instance, when prices are dominated in pesos but commodities are paid for in dollars (or luncheon vouchers). The second problem is to identify a social process, other than commodity exchange, through which disparate things become commensurate (money functioning as unit of account). The third problem is that this approach to money from the value of commodities: money is considered as a quantitative claim on wealth determined arbitrarily by the state, or by other non-economic bodies. Finally, the fourth problem lies with the link the Ingham (2001:312) draws between, on the one hand, money as unit account and, on the other, credit relations among market participants. To establish this result, it is necessary to analyse money as a phenomenon of commodity exchange, precisely the approach that Ingham advises against.

2.9.0 Agricultural Commodity Exchange for Africa (ACE)

A Brief History of the Formation of ACE

ACE was first mooted by the National Small holder farmersö Association of Malawi (NASFAM), who identified a need to bring more order to the market place (Goggin, 2005:207). Although not everyone shared this view at first, recent developments in the local market have resulted in a distinct change in attitude. The development of agricultural industries, not previously in place, has played a considerable part in this change of attitude and has resulted in a much broader interest in this new marketing initiative. Ultimately a board of directors will be appointed and tasked with running the Exchange on behalf of its members, made up of companies from the region, initially from Malawi, Zimbabwe and South Africa ACE will provide a forum at which deals can take place.

2.9.1 Aims and Objectives of ACE

According to Goggin (2005:208), the primary requirement of a successful ACE in a producing country is; ãan orderly internal market, which encourages production, allows free movement of the goods and rewards qualityö To this end, it is essential that we establish a Commodity Exchange of the highest integrity, available to all the people and acceptable international traders, based on an open, free market system for the benefit of producers and consumers. The Exchange will facilitate the trade of any agricultural commodity provided or desired by any consenting parties. It will also provide price discovery and dissemination ñ prices are based on the economics of supply and demand and then supplied to the public via the media.

How Would an Individual or Company Trade Through ACE? Members of the Exchange would appoint brokers to conduct business for them and it is they who will conduct trade on behalf of their clients, whether they are individuals (Goggin, 2005:208). The members would get a return through the brokers, who will charge an agreed broking fee to their clients. This will not be set by the Exchange, but will be negotiated between the client and the broker, and is usually in the region of 1 or 2% of the value of the contract.

2.9.2 Benefits of Trading through a Commodity Exchange

According to Goggin (2005:209), there are many benefits to be gained from trading through an Exchange such as ACE, some of which are detailed below:

- Reducing risks to calculated ventures
- All deals are transparent, which is certainly not the case in other market. Prices are published through the news media, both producers and consumers that they are getting the best price available at the time.
- The rules and regulations of ACE govern the manner in which deals are transacted within the Exchange. Through this mechanism, the integrity of member companies, and conduct of their brokers, is monitored.
- In the event of a dispute arising, and where the disputing parties are unable to resolve the issue among themselves, the ACE rules of arbitration govern, and an arbitration board will review the controversy.
- The Exchange ensures the maintenance of standard quality, not only of the commodities themselves, but also of trading practices through its rules and regulations.
- There will be a great deal of expertise on the exchange and the members located outside will make access into both regional and international markets considerably easier.
- An Exchange such as ACE also provides a very cost-effective marketing system, with the transaction costs involved being as transparent to both buyers and sellers as any other details such as price of the commodity, for example.
- The ACE contracts, which must be signed by both parties and which are legally binding and are required to be lodged at ACE in respect of each deal conducted, give much-needed securing to the parties involved in the transaction. These contracts cover the following assurances:
 - quantity
 - quality
 - passing of ownership and risk
 - price
 - payment terms
 - inspection transport
 - delivery and weights
 - packaging and packaging definitions
 - force majeure

- analysis
- demurrage
- interest
- arbitration

However, for the purpose of better understanding of how ACE works in Africa, we are going to discuss the introduction, experiences and achievements or benefits of ACE in some African countries such as South Africa, Zimbabwe, Malawi and Kenya.

2.9.3 The Establishment of an Agricultural Commodity Exchange in South Africa

The agricultural derivatives market in South Africa was first established January, 1995 and the Agricultural Market Division of the South African Futures Exchange (SAFEX) as a result of the deregulation of the agricultural marketing sector in South African, (Gravelet ñ Blondin, 2005:212). This was further explained the fact that the government moved out of the price determination function and allowed agricultural prices to be based on the economic factors of demand and supply meant the introduction of price risk into the agricultural marketing equation.

The agricultural derivatives market was established to provide all participants in the market with an efficient price risk management facility and an effective price ñ discovery mechanism. The market was established on private sector initiative by way of the compilation of a business plan (Prospectus) and the subsequent selling of trading rights to the private sector to raise the requirement start-up; capital.

More so, the role of the government in this was solely the provision of the enabling environment to allow the establishment of the market, and the fact that the market was left to operate without any interference. The regulation of the market introduced and is operated by the financial services board that administers the relevant acts under which Exchange are granted and Exchange rules are regulated.

In August 2001, SAFEX was acquired by the then Johannesburg Stock Exchange (JSE), and the agriculture derivatives market in South Africa is now operated as the agricultural products division of the JSE. The membership structure of the market changed in July

2005, when the JSE demutualised and ownership of the Exchange was effectively separated from the trading rights of the exchange. This is in line with many Exchanges worldwide. However, it is important to note that the exchange in South Africa was established as a derivative market trading futures and options contracts, and not spot or physical commodities.

2.9.4. Success Factors

The following are the factors that led to the success of SAFEX according to Gravelet & Blondin (2005:212):

(i) **Clear objective – price volatility**

The market was established with a clear objective: to provide all participants in the market with an efficient price risk management facility and an effective price discovery mechanism.

(ii) **Consistent policy – Agriculture**

In order for a derivatives market to work in agriculture, there should be consistency in government policy regarding price determination and trade policy should be consistent. The objective or reason for the establishment of the market must continue to exist so that value can continue to be added to the agricultural marketing process.

(iii) **Credible environment – Financial, legal**

There must be a high level of integrity and trust in the financial and legal framework in which the market is to be established. Participants entering contracts according to rules need to know that the contracts will be honoured, and that if not, that there is competent legal recourse to ensure adherence.

(iv) **Compatible infrastructure – storage, transport**

In any agricultural commodity market, product needs to be stored and moved (unless it is a highly localized spot market). Storage and transport infrastructure that can be trusted as secure, safe and efficient should be in place.

(v) **Clear and consistent standards**

Although vital to the operation of a derivatives market, the compilation and consistent application of clear standards is also important to the operation of any

agricultural market. The buyer needs to know what he or she is buying, particularly if they do not have sight of the product.

(vi) **Concrete Regulations Rules**

All participants in a market need to understand and abide by the rules of the market, which need to be clear and consistently applied. Obviously, rules governing a derivative market will be more detailed and comprehensive than these of a spot market, but the important issue is that rules exist, and are applied consistently. It is important that some dispute resolution mechanism exists, as well as some form of agreed legal contract, to complement and enforce the rules where necessary.

(vi) **Consultative Development – participants/members**

In order to add value to the marketing process, the market must meet a need. Thus, in order to establish if the need is real or perceived, it is necessary that a consultative process take place with participants in the market.

(vii) **Creating the Opportunity**

The establishment of the derivatives market in South Africa enables members, initially, and brokers, subsequently to act as agents on the market. This created opportunity to do business, and one cannot underestimate the promotive in the establishment and success of an exchange.

(viii) **Creative Marketing /Training**

The more complicated the market structure, the more extensive and detailed the marketing and training programme, but it is vital that participants are fully aware of the benefits of the market and the potential pitfalls. Marketing and training are never complete, but must be ongoing. It is important to include politicians, the administrators (government) and the media in marketing and education.

(ix) **Committed Staff**

This could be classed as a “soft” issue, but dedicated hard-working staff, who believe in what they are doing, can make or break the establishment of a market. Incentives can be looked at and can be helpful as motivation, but belief in a project cannot be bought.

2.9.5 The Future Challenge

A particular challenge facing the derivatives market in South Africa is to make a market that is primarily devised for large commercial farmers relevant and applicable to the smaller subsistence farmers in the country (Gravelet - Blondin, 2005:214). Obviously, the fact that the derivatives market establishes an efficient price signal is of enormous benefit to all farmers, as it clearly signals the true economic value of the product, but directly accessing the market to benefit from the price risk ñ management facilities is difficult for smaller farmers.

However, if the government policy in South Africa changes to re-introduce centralized price determination, the *raison d'être* for the derivatives market will disappear. It is important that policy-makers ensure the mechanism of a market and are not intimidated by price fluctuations.

2.9.6 Prospects for a Regional Agricultural Derivatives Market

The Southern African region, whether defined as the five countries of the Southern African custom union or the larger 15 ñ country Southern African Development Community (SADC) is an agricultural resource ñ based regional economy (Gravelet ñ Blondin, 2005:214). This prompted the view that economic development in the region should be agricultural resource-based in order to be sustainable.

However, the nature of agriculture is such that it is subject to volatile pricing patterns and provides, according to many analysts an unstable and unsuitable basis on which to develop the economy. It is now widely accepted that the preferred route to stabilize the impact of volatile commodity prices on an economy is to facilitate access to a derivatives market. Not only can participants in the agricultural economy benefit from the advantages of the price risk ñ management facilities offered by a futures market, but the economy itself can benefit from the price-discovery function that is generated by an efficient market.

2.9.7 Fundamentals for a Successful Derivatives Markets

According to Gravelet ñ Blondin (2005:215), it is widely accepted that, for a viable Commodity Derivatives Exchange to be established, the following conditions should exist.

- * Supply and demand for the commodity concerned has to be large, there need to be many potential participants, and the commodity must be a fairly important

- component of these people's operation. However, some literature states that there has to be a well functioning spot market and that before futures contracts can be introduced, forward contracts have to be actively traded.
- * The commodity traded must be well standardized, with grades widely accepted by commercial parties, and independent entities able to evaluate grades. Exchange trade is easier if a commodity is storable.
 - * Pricing must be left to market forces. This means that there should be little likelihood of manipulation by:
 - private interests (note, in particular, the need to avoid control of a small number of people over transport and storage facilities)
 - government entities – either deliberate, for the commercial interest of government officials, or because of a sudden change in government policy. The latter implies that there has to be a commitment from the government to a rule – based rather than arbitrary, policy on the pricing trade of the commodities to be traded on an exchange
 - * The Exchange should be supported by major commercial interests. This does not just mean that many companies should use the market for hedging (or if they wish, speculation), but also that:
 - They are willing to use the Exchange price as reference for their physical trading,
 - Even if they do not trade on the Exchange, they should not feel left out – e.g. farmers should feel the exchange is good for them. This requires an educational effort by the exchange, and good public relations.
 - * Well functioning and accessible services and infrastructure facilities are necessary, for example good access roads, availability of transport companies, weight bridges, housing, telecommunications, etc.
 - * Judicious government support is required – including a willingness to adopt suitable new regulation/legislation and appropriate oversight over trade on the Exchange.
 - * Free market prices must be volatile enough to create large price risks
 - * There should be enough potential interest from the speculative community.
 - * Well functioning and fully trusted clearing operations are needed, whereby trades are guaranteed and margin money/deposits are held with integrity.

2.9.8 Agricultural Commodity Exchange in Malawi ACE:

Its formation and potential Role in A Liberalized Market Place

Malawi, like many other countries in Africa, has an economy that is based on, and relies primarily on, agricultural production, (Goggin, 2005:205). In the past, Malawi established a name for the quality of the commodities produced ñ tea, coffee, groundnuts, rice and chillies, to mention but a few. However, the introduction of marketing boards, their inability to pay a premium for quality product, and a general lack of reliable market information led to a reduction in both the volumes produced and qualities achieved, as there was little or no incentive for farmers to produce or grade what was produced.

However, a feasibility study conducted in 2004 revealed that the introduction of an ACE in Malawi would improve the marketing of agricultural produce and products in the country, with resultant economic benefits.

2.9.9 Economic and Market Challenges

The country faces many economic and market challenges (Goggin, 2005:205). First and foremost, there is a total lack of reliable and accurate market information. While steps have been taken to address this, much still needs to be done, and ACE will supply a great deal of necessary market information needed in this respect.

By declaring sale prices in various parts of Malawi, as well as those other countries with members, and by registering bid and offer prices for commodities, market trends will be established. Add to this the function of the broker, whose duty it is to advise his client, whether buying or selling, as to the best marketing opportunities and when and where these are likely to occur, market participants will be much more empowered than they are at present.

The transparency of the market will also provide an opportunity for those unable to conduct their business over the exchange floor to negotiate from a position of strength, having been informed of what markets is doing and what future trends are likely to be. Through the establishment of quality standards for each commodity traded, it will be much easier to do

business, as the market will be able to identify the grade being offered for sale, attach the known characteristics to that parcel and bid against the offer price on this basis.

Many small-scale farmers have no option but to sell their produce, whether they want to or not, because they have nowhere to store it. The ACE warehouse/silo certificate system will provide an opportunity for them to do so, and will also allow for those farmers who do not have access to registered storage to sell their commodities at a fair market price, as there is likely to be less of any specific commodity available in the market at harvest. These documents will afford an opportunity to producers, as well as traders and end ñ users, to store their goods in an ACE registered storage facility and to be issued a warehouse/silo receipt. This document can then be used to secure a loan using the commodity in store as the collateral.

2.9.10 Factors Necessitated the Introduction of an ACE in Malawi

The factor necessitated the introduction of an ACE in Malawi are the following according to Goggin (2005:206):

- Poor market information
- Lack of available market
- Lack of competition
- No quality standards
- Lack of transparency.

2.9.11 The potential Benefits of ACE in Malawi

The following are the potential benefits of ACE in Malawi according to Goggin (2005:206):

- Reliable market information, both pre- and post handed
- Much-improved market access
- Much more competition
- Introduction of quality standards
- Much ñ improved communication
- Full transparency

- Enforceable contracts
- Arbitration facility
- More efficient and cost-effective markets.

2.9.12 Ways ACE Assisted the Farming Community as a Whole and the Small-Scale Farming Sector in Particular

The following are ways ACE assisted the farming community as a whole and the small-scale farming sector in particular according to Goggin (2005:206):

- Market information not previously available
- Market access ñ local, regional and international
- More market participants
- Higher prices for good quality produce
- Written contracts that are enforceable
- Improved communication
- More efficient and cost-effective markets.

2.9.13 Potentialities of ACE to other sectors within the Agricultural Industry

The following are the things ACE do for other sectors within the agricultural industry according to Goggin (2005:207):

- Ability for all sectors to participate
- Opportunity for parastatals to participate
- Opportunity for transport to be traded
- Opportunity for storage to be traded
- Opportunity for the seed industry to participate.

2.9.14 Benefits of ACE to Malawi

The following are the benefits of ACE to Malawi according to Goggin (2005:207):

- Much improved agricultural markets
- Renewed faith in agriculture
- Higher production
- Fewer imports
- Focus on Malawi and exchange

- More efficient and cost-effective markets.

2.9.15 Agricultural commodity Exchange in Zimbabwe Background:

The idea for the formation of the Zimbabwe Agricultural Commodity Exchange (ZIMACE) was first mooted in the early 1990s when the government of Zimbabwe embarked on its economic Structural Program (Goggin, 2005:202). With the introduction of this program, the liberalization of agricultural marketing commenced, and it soon became apparent that an organization was needed through which the free marketing of agricultural commodities could occur, out of this, the concept of ZIMACE evolved. ZIMACE started by interested parties in the private sector, namely the commercial farmers' union and Edwards and company, a local firm of stockbrokers, who became shareholders and the financial backers.

Subsequently, a board of directors was appointed and tasked with establishing a Commodity Exchange. Initially, while the administration was being set up, ZIMACE employed brokers who traded for ZIMACE, but from 1 March 1994 blocks of shares were sold, entitling the purchasers to appoint a broker to trade on their behalf. ZIMACE stopped utilizing brokers and ceased being actively involved in any trading and from that date, provided a forum for deals to take place.

However, the commercial farmers' Union and Edwards And company were initially the major shareholders in ZIMACE, this position changed over time. The commercial farmers' union reduced its seat holding from eight to three, while Edwards and company were no longer seat holders, having held seven seats originally. The balance of current membership of 28 seats is made up of other organizations, including the Grain Marketing Boards, Millers, traders, banks, other buyers and broking firms. The membership has changed dramatically since the early days of ZIMACE.

2.9.16 Aims and Objectives of ZIMACE

The following are the aims and objectives of ZIMACE according to Goggin (2005:202):

- * To create an orderly internal market this encourages production
- * To allow free movement of goods.
- * Enforcement of integrity in the agricultural commodities Exchange market.

- * To facilitate the trade of any agricultural commodity provided or desired by consenting parties (willing buyer- willing seller).

2.9.17 Problems of ZIMACE

The following are the problems of ZIMACE according to Goggin (2005:202-203):

- (a) Lack of relevant market information, both within Zimbabwe and in the SADC region as a whole
- (b) Figures quoted as to crop size, quality and volume in store, and anticipated imports and exports, were inaccurate at best, and at times extremely distorting the market itself .
- (c) The lack of support of some of the larger and more firmly established market- based and ñ oriented institutions tended to undermine the operations of ZIMACE.
- (d) The imposition of price controls on basic foodstuffs, which did little or nothing to halt increase in the cost of inputs either to the producer or the end-user.
- (e) Lack of specified rules and regulations to differentiate the basic rights or responsibilities of members who choose to be ñnon-brokingö members from the broking members, who make both utilizing the services of a broking member wherever they wished to conduct business across the exchange floor.

2.9.18 Kenya Agricultural commodity Exchange – Linking smallholder farmers in Kenya to better markets through market information.

The Kenya Agricultural Commodity Exchange Limited (KACE) has developed and piloted a simple, low-cost MIS to provide relevant and timely market information targeted at smallholder farmers (Makhebi, 2005:192). The MIS uses modern ICTs to collect, process, update and disseminates market information, so that farmers can negotiate for a better price in the market place. The KACE MIS is designed to disseminated market information and link the farmer to people in the market chains including other farmers, traders, commodity dealers, processors, exporters and importers.

The components of the KACE MIS include: (i) Rural market ñ based market information points (MIPs); (ii) Mobile phone short message service (SMS); (iv) Interactive voice response (IVR) service; (iv) Internet, and (v) Radio. To provide long ñterm sustainability of the MIS, plans are under way to involve beneficiaries as franchisees for the operation of

MIPs as commercial entities. In addition, revenue ñsharing agreement have been established between KACE and service providers who charge for information such as SMS.

2.9.19 KACE Services

KACE (www.kacekenya.com) is a private ñ sector firm launched in Nairobi, Kenya in 1997, to provide two services targeted at small farmers: to link farmers to markets through matching commodity offers to sell and bids to buy; and to provide relevant and timely market information (Makhebi, 2005:192). Market information includes commodity prices in different markets in Kenyan, regional and international markets, commodity offers and bids (in quality, packaging, timing), transport services and costs.

However, lack of relevant and timely market information greatly disadvantages smallholder farmers in the market place, and reduces their access to better market and better prices. As a result, farmers are often exploited by middlemen in local markets who offer relatively low prices, sometimes below production costs. In addition, farmers either remain ignorant of better market opportunities, or face high transaction costs in trying to access new markets. For any one crop, the marketing chain often consists of multiple middlemen, each taking a margin. The combination of low prices, lack of access to better markets or high transaction costs result in low farm incomes, keeping farmer in a vicious cycle of poverty (Makhebi, 2005:192).

Market information is also needed to help farmers decide and choose what commodities to produce, what technologies to apply for production, when to produce, for whom to produce, and when and at what price to sell (Makhebi, 2005:192). Without market information, farmers can not be efficient in their production or marketing activities.

2.9.20 Direct Trade Links: Offers and Bids

Farmers as well as traders come to place bids (to buy) or offers (to sell) at the MIPs. Specially designed forms are provided for that purpose by the manager. The offers and bids are placed on a bulletin board and also circulated by SMS or e-mail to all other MIPs, MICs and other recipients. Through this, two possibilities exist:

- The transaction takes place at the MIP trading floor by matching the bid and offer, and no other charges are paid.

- The transaction takes place outside the MIP by MIP staff acting as a broker between sellers and buyers.

2.9.21 Indirect Trade Links

Indirect trade links are those where farmers or traders use KACE market information to trade without passing through KACE. Transactions are concluded outside the MIPs directly between buyers and sellers, often without the knowledge of the MIP, KACE get no commission on such transactions.

2.9.22 Measure taken to ensure Sustainability of the Services.

According to Mukhebi (2005:200) two approaches were adopted by KACE to ensure availability of market information.

(i) Involvement by Beneficiaries and Local Entrepreneurs

Farmers are being trained and shown how to access and use market information. Once they benefit from it, through better market access and better prices, as pilot results have demonstrated, they will acquire the capacity to seek and access the information without further training from KACE. They will visit and access the information at the MIPs. They will also use mobile phones, which an increasing number of farmers are acquiring, especially on a group basis to share the costs of mobile phone handsets, to access SMS and IVR services.

For further sustainability of the MIS provision KACE plans to franchising MIPs to local entrepreneur to operate them on a commercial basis. This will create private ñ sector operators, who will further develop a wide range of related agricultural marketing and extension services and ensure long-term financial sustainability. It will also free KACE from intensive management of these centres and hasten the scaling up of their services.

2.9.23 Financial Sustainability through Service Revenue-Sharing

KACE has entered into revenue sharing agreements with the SMS and IVR service providers. For every SMS message, or IVR call, the user pays for airtime to the mobile phone service provider, who in turn pays KACE an agreed percentage share. KACE will share the revenue so generated with the MIPs to contribute to their financial sustainability.

2.9.24 Main Challenges of KACE

The challenges of KACE are polarised into two and extensively looked into as explained by Mukhebi in (Coulter, 2007:200).

Market information service

- * Lack of standard units of measurement: various local units are used in market places for trading. They often do not have uniform volumes or weights, posing a challenge in quoting a price per weight or volume.
- * Lack of grades and standards: commodities traded in the market place do not have specified grades and standards against which to provide price quotations
- * Maintaining, the cooperation of respondents to provide price data: some farmers or traders in a given market object to being asked to provide price information over a period of time.

Trade Linkage Services

- * Small quantities of highly varied quality commodity may be offered: this makes it difficult to attract large volume buyers prepared to pay a premium price for better quality. This increases transaction costs.
- * The lack of standard units of measure and grades and standards makes market links difficult. For instance, there is no premium price for superior quality, which is often required for trade links to better (price) markets.
- * Lack of a warehouse receipt system to enable farmers to access some cash or credit from stocks while they await selling at better post harvest prices.
- * Unpredictable government policy: in Kenya the produce board, continues to intervene in grain markets, and this distorts prices and discourages increased private sector participation in Commodity Markets.

2.9.25 Way forward for KACE

There are two major developments that KACE plans to undertake in order to scale up its services: franchising of MIPs to make them financially sustainable; and the development of a physical (and electronic) trading floor in Nairobi, in conjunction with the Kenya Grain council, which currently under establishment for the promotion of structured grain trade not only in Kenya but also in the East Africa and COMESA regional markets Mukhebi in (Coulter, 2007:201).

2.10 Nigeria Commodity Exchange (Abuja Securities & Commodity Exchange)

The Abuja Stock Exchange which was re-incorporated as the Abuja Securities and Commodity Exchange (ASCE) in 2003. It is configured to help develop the largely unorganized but potentially lucrative Nigerian commodity-trading sector through the establishment of a platform that would engender effective and efficient price discovery and transparency for operators (www.fissecuritiesltd.com). To function, effectively the ASCE will need the following infrastructures:

- (i) A technical partner for knowledge transfer and capacity building.
- (ii) A commodity trading software that will drive commodity trading activities at the Exchange.
- (iii) Set of rules and regulations to guide its day to day operations and a forward market commission to regulate the activities of Commodities Exchange & futures markets.
- (iv) Registered Independent Bonded warehouses that could store Commodities and issue negotiable warehouse receipts that could be traded on the Commodity Exchange.
- (v) A Collateral Management Company to intermediate between the collateral taker (usually a Bank) and the farmer who will pledge his stock of Commodity stored in a bonded warehouse as collateral to secure credit finance.
- (vi) An Organized Spot Market (OSM), that would provide bench-mark spot prices of commodities whose futures contract are quoted for daily trading, on the Futures Market.

The above infrastructural requirements informed our implementation strategy. However, the Commodity Exchange is functioning currently with this model.

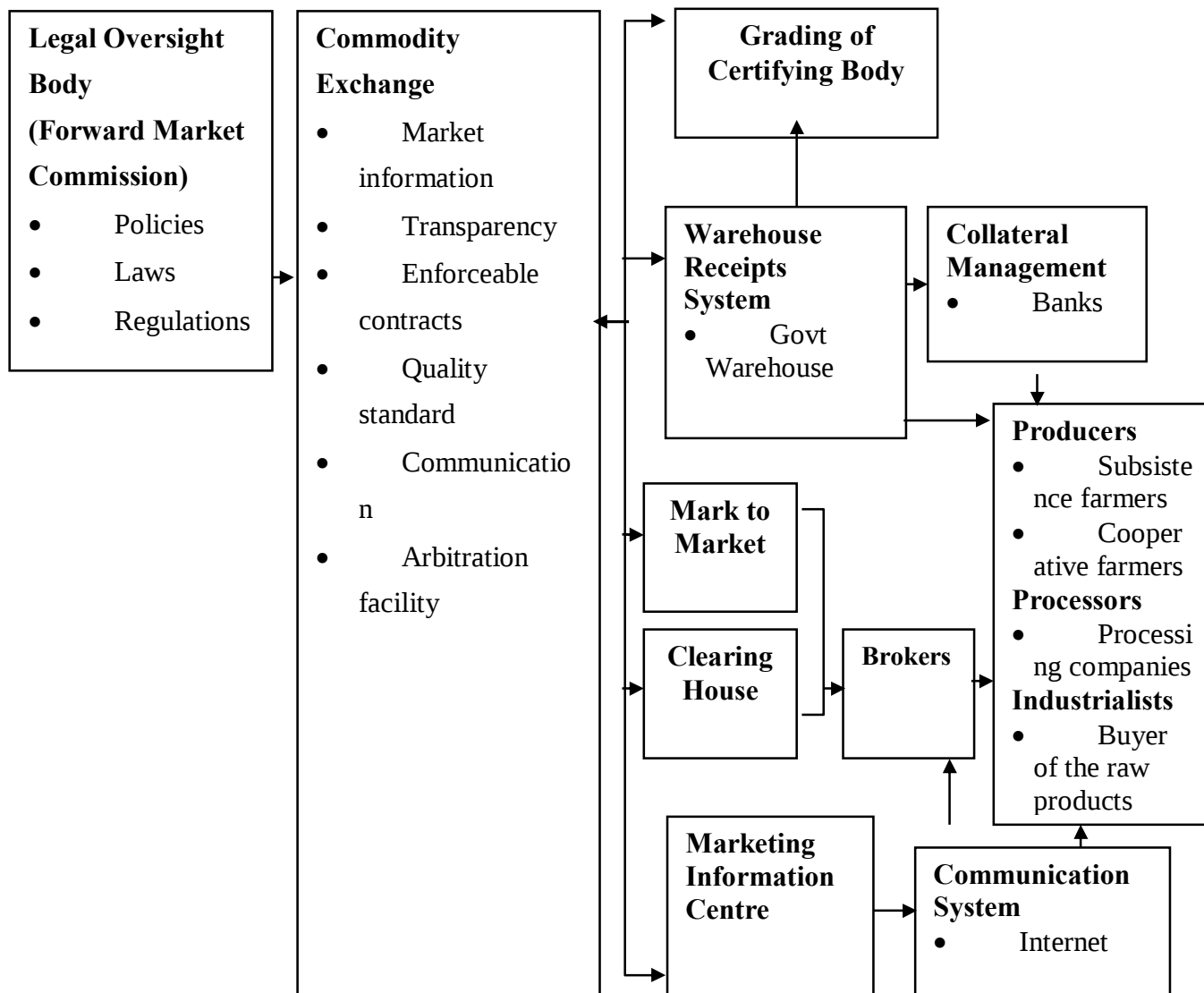


FIG. 2.2: The Model of the Commodity Exchange (Abuja Securities & Commodity Exchange)

Source: Abuja Securities and Commodity Exchange 2003

2.10.1 Project Implement Strategy

The Exchange will start open ‘out-cry’ manual trading in the first quarter of 2006, on the basis of physical samples of some selected commodities (www.fissecuritiesltd.com). When sufficient trust in the system is developed, an Exchange grading certificate which will describe the qualities of the commodities will be attached to the physical samples which will guarantee the quality of the goods, rather than the need for the buyer to see and physically check each sample of the commodities traded at the Exchange.

Gradually, the Exchange will develop good grading standards and by the third quarter of 2006, physical samples will be withdrawn and replaced with trade on the basis of a grading certificate and an Exchange contract certificate which will indicate how much is being sold or bought (www.fissecurities.ltd.com). The Exchange will certify and accredit warehouses to issues grading certificates and warehouse receipts which together, could be traded on the Exchange and this could replace physical delivery of commodities to a large extent. Trading in warehouse receipts will then follow and this will dovetail into the development of a forward market and subsequently, the Futures Market will evolve during the early part of 2007.

2.10.2 Collateral Management

A collateral management company grades and certifies the stock of Commodity put-up as collateral under its care to secure a credit facility (www.fissecurities.ltd.com). These quality parameters are reviewed on a regular basis to ensure the sufficiency and quality of the collateral throughout the loan period. This enables the collateral managers to provide lenders with early warning signals reducing risks to the collateral taker.

Agricultural credit through collateral financing reduces the pressure for immediate sales of the commodity as it creates an alternative source of finance (www.fissecurities.ltd.com). It improves the efficiency of commodity markets and reduces price volatility; producers are not obliged to sell their commodities after harvest for immediate case; they can store them and sell at a later date while pledging the commodity as collateral in a certified warehouse to secure credit finance.

Another benefit of collateral financing is that it guarantees quality because the quality of commodities in a warehouse needs to be specified and maintained as to grade, weight, quantity etc. A bill on warehousing and collateral management is in progress. The bill when enacted into law, would legislate on the issuance of warehouse receipts, collateralization, negotiability and their uses as instruments of trade on the ASCE.

2.10.3 Warehouse Receipt Finance and Trading

A warehouse receipt (WR) is document of title or promissory security issued by a warehouse detailing a specific quantity and grade of commodity stored in the warehouse

(www.fissecuritiesltd.com). An ideal warehouse receipt should bear all the features of a security document. It should carry all the important information on the commodity as they relate to grade, quantity and weight, mode of packaging and the name and address of the legitimate owner. They are instruments that can make standardization easier because a uniform and well-regulated system of storage of commodities can serve to guarantee the quality and quantity of goods stored in a warehouse.

Warehouse receipts are also title documents that can be used as collateral for short-term loans known as warehouse receipts financing (www.fissecuritiesltd.com). Warehouse receipt finance system involves three participants; the warehouse, producers (farmer/merchant) and banks. Under this system, farmers can use warehouse receipts to obtain loans from banks without having to sell their grains at harvest period when prices are usually low.

2.10.4 Market Information Service

The present produce marketing system does not guarantee timely and free flow of price and trade information dissemination (www.fissecuritiesltd.com). Farmers have no information on produce prices in different markets within the same geographical zone and therefore, do not know whether it will benefit them to sell in a market close to them, or travel some distance to see the same produce at better prices than they would otherwise have received. There have been instances when agricultural commodities such as dry maize, citrus, yams, tomatoes, onions and pepper are found to be cheaper in Lagos, Ibadan and other major markets than in markets situated in the areas where they are produced. Heaps of these commodities are usually seen rotting away in these markets due to a glut created by lack of market information.

Therefore, timely price and trade information dissemination will assist farmers in accessing better markets for their produce and prevent gluts (as it will ensure that produce moves from surplus to deficit markets) and create a perfect market that could guarantee realistic pricing of agricultural produce. This in effect will guarantee farmers' income, improve their standard of living and eliminate rural poverty.

The ASCE will establish Market Information Centres (MICS) in major agricultural produce markets in all the geo-political zones of the country (www.fissecuritiesltd.com). MICs will provide a reliable source of market information on Commodity volumes and prices that will enable an efficient determination of the daily spot prices of major commodities throughout the federation.

The MICs shall collect market data within their areas of coverage on a daily basis (depending on market days) and transmit such data by price or e-mail to a Polling Centre where the data will be processed and the price information disseminated back to the various MICs through the same medium, so that the scope of information available to each MIC is up-to-date and timely (www.fissecuritiesltd.com). The information will be available daily on the exchange website and on information boards at all the MICs. The information will also be relayed on local radios and television as well as on NTA network for wider outreach.

Eventually, the spot prices will be fed into the Futures Exchange as reference prices for all bids and offers on commodity futures contracts (www.fissecuritiesltd.com). The MICs will provide producers, processors, industrialists and traders with objective up-to-date market information analysis, market outlook, and other references to assist in marketing decisions. This information will play a key role in effective pricing and will eliminate artificial trade barriers that may be created by middlemen in the value chain. The market information centres will;

- (i) Engender perfect knowledge of the markets among various players in the agricultural produce markets.
- (ii) Reduce or eliminate price differentials in adjacent markets
- (iii) Effectively mobilize agricultural produce from surplus to deficit areas.
- (iv) Minimize waste in agricultural produce marketing.
- (v) Improve output and post harvest handling of agricultural crops for better pricing.
- (vi) Improve farmers' income and their standard of living.
- (vii) Standardize weights and measures for commodity volumes for uniform pricing.

The Management of ASCE under the guidance of the Consultant conducted a nationwide survey of major commodity markets to determine suitable locations for the establishment of Market Information Centres (www.fissecuritiesltd.com). The ASCE is networking with the International Institute for Tropical Agriculture, (IITA), the Market Information Systems for Trader Organizations in West Africa (MISTOWA) and the Nigerian Agricultural Market Information System (NAMIS), to establish a central Database Management System for uniform price dissemination and cost sharing on logistics, for effective resource deployment and management. The outcome of this collaborative is the evolution of a national network that could sustain the MIS as a vital Price Risk Management service to Commodity Exchange operations and the agricultural sector of the national economy.

2.10.5 MARK TO MARKET

According to www.fissecuritiesltd.com, at the end of each trading day the margin account is adjusted to reflect the investor's gain or loss. This process is known as marking to market the account. A trade is first marked to market at the close of the day on which it takes place. It is then marked at the close of the day on which it takes place. It is then marked at the close of trading on each subsequent day until the contract is closed out. Marking to market is not merely an arrangement between broker and client. When there is an increase in price the broker to the investor with a short position (sell) has to pay over a variation margin to the Exchange and the Exchange will in turn pass on the money to the broker of the investor with a long (buy) position. Similarly, when there is a fall in the futures prices, the broker of the party with long position pays money to the Exchange which shall be passed on to the broker of the investor with short position.

2.10.6 The Clearing House

According to www.fissecuritiesltd.com, the Exchange Clearing House is the counter party to buyers and sellers in a futures contract. It guarantees the performance of the parties to each contract. All trades are cleared through the Clearing house, by clearing house members. Brokers who are not Clearing house members themselves must channel their businesses through the Clearing house members. The main task of the Clearing house is to keep track of all the transactions that take place during the day, so that it can calculate the net position of each of its members.

Just as an investor is required to maintain a margin account with its broker, a Clearing house member is required to maintain a margin account Clearing house. This is known as a clearing margin. The margin accounts for the Clearing house members are adjusted for gains and losses at the end of each trading day in the same way as the margin accounts of investors. The purpose of the margining system is to reduce the possibility of market participants sustaining losses due to defaults.

2.11.0 The BOLSA DE MERCADORIAS DE SAO PAULO (BMSP) And Cotton Trading: BMSP History.

According to (Carvalho De mello (2006:7) BMSP was the first modern commodity exchange in Brazil. The BMSP was founded in October 26, 1917 and the by-laws approved in November 8 of the same year. The effective functioning began in March of 1918, and the trade pits started to operate in August of 1919. However, according to BM&F (1996:7) it was closed in 1991, when it was acquired and merged with the BM&F (commodities and futures exchange). BM&F today is the fifth largest commodity and future exchange in the world (notional value of all trading of BM&F in 2005 was US \$7 trillion). In opposition to the image usually associated with exchanges- that they are strongly linked and inspired by financial markets and speculative activities the BMSP had its origins and history strongly linked with the process of industrialization and development of a commercial agriculture in Sao Paulo. Among its 259 founders were very important owners and executives of industrial, agriculture, commerce and banking companies.

However, in its original by-laws, BMSP established that it would be formed by commercial firms with the following objectives:

- (a) To promote commerce and the development of food production in the country as well as other agricultural products;
- (b) To organize the classification of products, and promote the service in the entire state, using associations and collaborative firms, and mails;
- (c) To maintain a specialized building for the exchange, with suitable space and equipment, to foster trade;

- (d) To regulate the conditions and instruments for buying and selling commodities in the exchange;
- (e) To act as an arbitration court to settle trade disputes;
- (f) To represent the commodities sector when dealing with the government authorities;
- (g) To organize and publish statistics about the commodities traded in the exchange;
- (h) To organize and regulate the commodity brokerage houses;
- (i) To create a laboratory for chemistry and exams to attest the quality of the commodities trade in the exchange;
- (j) To establish a special registration for all contracts to buy and sell commodities, regarding type quality and samples.

In addition, BMSP was very active in the promotion and marketing of cotton trade, and innovative in developing communication with the public, and even organized a special radio program using commercial radio network. The "Exchange Hour" was aired by Excelsior Radio Station on a daily basis, and the program was produced by a specific department of BMSP, the "Radio Department."

2.11.1 Futures Contracts

A futures contract is an agreement between two parties that oblige one party to sell and the other to buy a certain quality of commodity at a given price, at or before a certain date in the future (Carvalho De mello, 2006:14). This definition was given by Carvalho De mello based on the angle he viewed cotton trade in BMSP. The Key word is Standardization. All the conditions under which the cotton will be transferred from seller to buyer are established by the exchanges before the transaction begins. The only thing left for the parties to trade and fix is the future price. Exchanges, in general, follow basic rules about margins of guarantee and daily adjustments of payment settlements for the contracts, due to daily changes in prices from the starting day of negotiation to the expiration date of the contract. Everything else is organized and set by the Exchanger under certain standards; it is very understood and agreed by the parties evolved in the negotiation of the contract. Contracts, in general, have several pages and details.

More so, a standard contract of cotton presents the following specification;

- (a) Object of the contract (cotton);
- (b) Type of market (future);

- (c) Size of contract (quantity volume standard set by the exchange in general related to the typical cargo, like the capacity of a truck or train wagon);
- (d) Type of pricing (example: Brazilian currency /unit of weight);
- (e) Settlement, expiration or maturity date;
- (f) Number of maturities dates {example: cotton futures contracts for May, June, July, august, etc);
- (g) Last day of trading (in general, from 3 to 5 days before expiration);
- (h) Quality of cotton in accordance with benchmark standards;
- (i) Date of delivery of the cotton sold;
- (j) Local of delivery;
- (k) Settlement mechanism.

In addition, there are detailed procedures established in the contract for the delivery of cotton when the contract expires. Most contracts are settled without delivery by the seller selling another contract, or by the seller buying another contract for the same maturity date. The heart of any Exchange is the registration, clearing and settlement system. Futures markets are very leveraged in general. For instance the cotton contract traded in BMSP, in some years, traded at a multiple of the cotton crop of that year. Today, in Brazil, the notional value of contracts traded in BM&F was in 2005 around US \$ 7 trillion, against a GDP of US \$700 billion, that is a multiple of 10 times.

2.11.2 Requirements for a Contract to Be Successful

According to Carvalho De mello (2006:17), the world experience shows that several commodities and financial instruments, in principle can be negotiated in the futures market; here are no precise formulas to indicate ex ante which commodities or financial instruments will succeed. The exchanges, after undergoing the huge investments for the building, trading pits, advertisement, organization, clearing houses, and other areas, have considerable economies of scope for launching new contracts. The big problem however, is not how to design a new contract. The real problem is to acquire liquidity, how to have a substantial number of hedger and speculators engaged in daily negotiations.

The accumulated experience of Exchanges located in different countries point to the following list of factors to be taking into account:

- (a) There must exist a large and active market for the physical commodity. The larger the market, the higher the likelihood of success of the derivatives contracts
- (b) The participants in the physical market need to have a link with the futures market, and vice versa in order to exist a logical and constant connection between spot and futures prices;
- (c) The market needs to be competitive in all links of the production chain. Ideally, there must exist large number of producers and consumers in both the agricultural and industrial sectors of the cotton agribusiness, to guarantee a free formation of prices. If in one of the chains there is a *price maker*, this will violate the free formation of market prices;
- (d) The product must be homogenous and undifferentiated, to allow interchange during delivery or trading;
- (e) The market should be free or have minimum government intervention price formation and commerce of commodities. Price control, minimum prices, intervention in the supply, restrictions on the demand and other government policies, if conducted without moderation, can destroy a market for derivatives;
- (f) The product can not be too perishable, since it would be difficult to establish rules and norms about maturity dates and delivery;
- (g) The market rules and the *rules of the game* shall be stable. If they change often, it becomes very difficult to design contracts, since there will a strong element of risk, or even uncertainty;
- (h) The price of the commodity need to show a volatile nature, in order to attract market players willing to avoid the frequent changes in the prices, and making them willing to manage these risk;
- (i) There must be transparency, abundant and timely information for the market participants.

In addition to this extensive list, it can be added the following items:

- (a) The commodity can be stored at reasonable costs, allowing decisions about selling immediately or holding them, in accordance with rational market strategies;
- (b) The commodity needs to be fit for general uses. If too much specific, it will narrow down the user base of the commodity, and fragment it into sub-commodities, each

with its own special market. This will impede minimum market side, or a feasible market threshold;

- (c) Uncertainties or major changes in the institutional macro-environment which happens in developing countries like Brazil, can affect the market. It happened in BMSP 1986, when the government decreed a freeze in all prices as a desperate attempt to eliminate hyper inflation;
- (d) There are also micro economic factors repealing new entrants, like the financial mechanics of future contracts, reflected in need for cash flows and close follow-up by market participants; or intricacies of the written contracts, that are sometimes considered too complex cotton producers.

However, BMSP as a result of been a pioneer exchange in a developing country, in addition for the concern with all items listed above, had to intervene into other areas, an effort not common in Exchanges belonging to developed countries:

- (i) The activities supported financially and with team collaboration of BMSP to Instituto Tecnológico de Campinas, a leading research center in cotton agriculture in Sao Paulo and in Brazil, for obtaining new varieties of cotton and to increase technical expertise in cotton agriculture;
- (ii) Educational campaign to spread the cultivation of cotton in the state of Sao Paulo;
- (iii) The development of a classification system for cotton, in accordance with business standards;
- (iv) Training of human capital and provision of professional education for developing and managing the classification system;
- (v) Creation of a Trade Justice Court to arbitrate disputes involving the trading of cotton, including disputes about the classification of cotton;
- (vi) Development of an industrial sector widespread in the state in order to transform raw cotton into useful for manufacturing and exports;
- (vii) Fostering of trade links and commercial connections between cotton processors and derivative brokers of the Exchange;
- (viii) Development of cultural activities sponsored by BMSP to attract good will for the Exchange;

- (ix) Creation of links and common objectives between government and BMSP, including the special permit to act as an *ad hoc* government agency for educational and classificatory activities in the cotton business.

2.12.0 Historical Development of the Chicago Board of Trade

According to Gabre-Madhin and Goggin (2005:6), 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 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 cost 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.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter is an exposition of the procedures and methods employed in the collection, analysis and interpretation of data to address the research problems. It discusses the conduct of the survey and systematic approaches adopted for information gathering from the staff and buyers and sellers on the trading floor of Abuja Commodity Exchange. This is for the purpose of ascertaining the level of agricultural marketing and market development in Nigeria. To this effect the chapter covers: The Area of Study, Population of the Study, Research Design, Questionnaire Design, Sources of Data and Instruments for Data Collection, Reliability and Validity of Research Instruments, Data Presentation and Analysis.

3.2 The Area of study

The study area encompassed Abuja commodity Exchange in Abuja, Dawanu in Kano State and Funtua in Kastina State where the exchange has warehouse system located in Nigeria.

3.3 Research Design

In this study, both exploratory and descriptive research methods were considered useful to enable the researcher gain fresh ideas and deeper understanding which helped to explain what was and how the identified variables interrelated. Census approach was adopted due to the small population of the study area. This made it impossible for the researcher to use any sampling procedure or determine any sample size that can make the researcher formulate any hypothesis in chapter one. The descriptive statistical technique is desired and considered the most appropriate for this study was simple percentage. To facilitate the collection of relevant data for the study both primary and secondary sources were employed. Besides, in the primary data collection both qualitative and quantitative approaches were used for the survey research carried out in the study.

3.4 Population of the Study

The population of the study is 105, comprising of 100 respondents of the staff of the Commodity Exchange, 3 buyers and 2 sellers based on the information given by the Exchange. In line with the above, the researcher adopted census whereby every member of the population was covered.

3.5 Sources of Data and Instruments for Data Collection

The sources of data collection for the study were both primary and secondary sources. The instruments for primary data collection were; questionnaire and personal interview. And secondary data sources were through text books, journals, articles, and publications from the Abuja Commodity Exchange.

3.6 Questionnaire Design

The questionnaire for the study was designed in such a way that the staff of Abuja Commodity Exchange will easily understand and digest the questions so as to chart the real and accurate answers from the questions prepared in close ended and multiple choice styles, 100 copies of the questionnaire were allocated to the staff. However, in this study, the buyers and the sellers were interviewed orally with the aid of open ended questions and structured interview, because of its ability to create discussions and different views.

3.7 Reliability and Validity of Research Instruments

3.7.1 Pilot Survey

The pilot survey was carried out through the administration of 17 copies of the questionnaire on the staff of the Abuja Commodity Exchange randomly selected. From the first pilot survey, only 15 copies of the questionnaire were returned and properly completed by the respondents while, the remaining 2 copies of the questionnaire were not returned. For the second pilot survey, again using 17 copies of the questionnaire, 16 copies were returned and found useful while one copy of the questionnaire was not returned. The purpose of the pilot survey was to establish the reliability of the research instrument.

3.7.2 Reliability of Research Instrument

To establish the reliability of the research instrument the Spearman-Brown split-half method (2003:85) was used. Therefore,

$$r_{t=1} = \frac{2}{1 + r}$$

Where r_t = reliability of the whole test and

r = correlation coefficient of the split test.

In this method the instrument which we want to determine its split half reliability coefficient is first split into two reasonably equal halves. The test items were divided into odd numbered items and even numbered items. Thus, for this study we have 28 items (questions). Then, the odd numbered items and even numbered items were administered separately to the staff of the Abuja Commodity Exchange as follows:

Odd number (1,3,5,7,9,11,13,15,17,19,21,23,25,27) rep. x

Even number (2,4,6,8,10,12,14,16,18,20,22,24,26,28) rep. y

From these two variables $\bar{x}$ and $\bar{y}$ and the application of Pearson's coefficient of correlation formula as follows:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n(\sum x^2) - (\sum x)^2][n(\sum y^2) - (\sum y)^2]}}$$

x	y	xy	x^2	y^2
1	2	2	1	4
3	4	12	9	16
5	6	30	25	36
7	8	56	49	64
9	10	90	81	100
11	12	132	121	144
13	14	182	169	196
15	16	240	225	256
17	18	306	289	324
19	20	380	361	400
21	22	462	441	484
23	24	552	529	576
25	26	650	625	676
27	28	756	729	784
196	210	3850	3654	4060

$\therefore$ We have the following values.

$n = 28, \Sigma x = 196, \Sigma y = 210, \Sigma x^2 = 3654, \Sigma y^2 = 4060, \Sigma xy = 3850.$

$$\begin{aligned}
 r &= \frac{28(3850) - (196)(210)}{\sqrt{[28(3654) - (196)^2][28(4060) - (210)^2]}} \\
 &= \frac{107800 - 41160}{\sqrt{[102312 - 38416][113680 - 44100]}} \\
 &= \frac{66640}{\sqrt{[63896][69580]}} \\
 &= \frac{66640}{\sqrt{4445883680}} \\
 &= \frac{66640}{66677.5} \\
 &= 0.9994
 \end{aligned}$$

Thus, $r = 0.9994$ (strong positive correlation).

Then with the introduction of Spearman-Brown's prophecy formula stated above with $r = 0.9994$

$$\begin{aligned}
 \therefore r_{t=1} &= \frac{2(0.9994)}{1 + (0.9994)} \\
 &= \frac{1.9988}{1.9994} \\
 &= 0.9997
 \end{aligned}$$

Therefore, the reliability of the research instrument is very high.

3.7.3 Validity of Research Instrument

In essence, the questionnaire that is designed for the study was pre-tested in the Abuja Commodity Exchange for validity purpose with special reference to the pilot survey. The respondents were interviewed after the pre-testing to explain why the questions were answered the way they were. This was quite necessary to ensure that they understood the questions asked accordingly and that there were no ambiguities. After the validity test some necessary corrections were made on the original draft for use for the field work.

3.8 Data Presentation and Analysis

In this study, the descriptive statistics techniques we employed were tables for the presentation of the data collected. Meanwhile, simple percentage was as well used to determine the degree of responses. The fact that every member of the population was used (census), the analysis of the data was done through the integration of the data gathered from questionnaire, interview and secondary sources to validate the findings.

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CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

The objective of this chapter is to present, analyze and interpret the results from this study taking into consideration, the research questions formulated in chapter one.

4.2 Data Presentation

Out of 100 copies of questionnaire sent out to the staff of the Abuja Commodity Exchange 82 copies were returned and found useful for the study. Thus, the data collected here is presented in tabular form and interpreted.

Table 4.2.1: Gender

Variable	Frequency	Percentage
Male	62	75.6
Female	20	24.4
Total	82	100.0

Source: Field Survey 2008

From the above table, 75.6% of the respondents indicated that they are male staff while 24.4% identified themselves as female staff. This indicates that the staff of the Exchange is mostly male.

Table 4.2.2: Educational Qualifications

Variable	Frequency	Percentage
Advanced Level/OND	6	7.3
HND/First degree	47	57.3
Above first degree/professional	29	35.4
Total	82	100.0

Source: Field Survey 2008

As shown from the above table, nobody has below level Aö Level/OND but 7.3% of the respondents have Aö Level/OND; 57.3% of the respondents have HND/First degree and finally 35.4% of the respondents have above first degree/professional qualification.

This indicates that majority of the staff have higher qualifications.

Table 4.2.3: Age

Variable	Frequency	Percentage
25-35	46	56.1
35 ñ 45	36	43.9
Total	82	100.0

Source: Field Survey 2008

From the above table, it is shown that 56% of the respondents fell between the age range of (25 ñ 35) and 44% of the respondents fell in the range of (35 ñ 45). This indicates that the staff ages fell within the range of 25-45 years.

Table 4.2.4: What Kind of Market is the Commodity Exchange?

Variable	Frequency	Percentage
A market for buying and selling agricultural produce and mineral resources.	82	100
Total	82	100

Source: Field Survey 2008

From the above table, it is shown that 100% of the respondents knew that the Exchange is a market for buying and selling agricultural produce and mineral resources. The respondents agreed that the Commodity Exchange is nothing but market for buying and selling agricultural produce and mineral resources.

Table 4.2.5: Operational Model That Best Describe the Commodity Exchange

Variable	Frequency	Percentage
Regulatory system, warehouse receipts system, grading and certifying system, market information system, and other ancillary services such as banking, insurance, transport, weather forecast, IT and inspection	76	93

Warehouse receipts system, grading and certifying system, communication system, and other ancillary services such as insurance, transport and IT.	2	2
Communication system, market information system and other ancillary services such as banking, IT and inspection.	4	5
Total	82	100

Source: Field Survey 2008

From the above table, 93% of respondents agreed that operational model that best describe the Exchange should contains: Regulatory system, warehouse receipts system, grading and certifying system, market information system, and other ancillary services such as banking, insurance, transport, weather forecast, IT and inspection. While, 2% and 5% of the respondents respectively were of different views. The table above indicates that the majority of the respondents have a fuller understanding of the operational model of the Commodity Exchange.

Table 4.2.6: The Existing Model of the Commodity Exchange Would Encourage Effective Agricultural Marketing and Market Development Objectives in Nigeria Economy.

Variable	Frequency		Percentage
	Yes	No	
It encompasses all the necessary facilities	64(78.0)	18 (22.0)	82(100.0)
It still needed to be adjusted	47(57.3)	35(43.7)	82(100.0)
It is already up to the standard	49(59.8)	33 (40.2)	82(100.0)
It is the best for rural and urban economic integration for Nigeria	45(54.9)	37 (45.1)	82(100.0)

Source: Field Survey 2008.

From the above table, 78%, 57.3%, 59.8% & 54.9% of the respondents agreed that the existing model will bring about improvement in agricultural marketing as well as develop industrial markets for agriculture. While 22%, 43.7%, 40.2% and 45.1% of the respondents

disagreed with the opinion. The above table shows that the majority of the respondents are positive on the ability of an Exchange to bring about improvement in agricultural marketing as well as develop industrial markets for agriculture.

Table 4.2.7: There is Enlightenment on the Purpose of the Commodity Exchange in the Country.

Variable	Frequency	Percentage
Yes	37	45.1
No	45	54.9
Total	82	100.0

Source: Field Survey 2008

From the above table, 45.1% of respondents indicated that there is adequate enlightenment on the purposes of the commodity exchange while 54.9% opined that it is not true. The above table shows that over an average of the respondents disagreed with the fact that there is adequate enlightenment of the purpose of the Exchange in the country.

Table 4.2.8: Rate of the Enlightenment.

Variable	Frequency	Percentage
High	9	24
Low	20	54
Poor	8	22
Total	37	100

Source: Field Survey 2008

From the above table, 24% of the respondents said that rate of enlightenment is high while 54% and 22% of the respondents were of the opinion that the rate of the enlightenment is low and poor. This table confirms the responses above.

Table 4.2.9: Demand and Supply Determine the Price of Commodities on the Floor of the Exchange.

Variable	Frequency	Percentage
Yes	73	89
Do not know	9	11

Total	82	100.0
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Source: Field Survey 2008

From the above table, 89% of the respondents have the knowledge of how price is being determined on the floor of the Exchange while 11% of the respondents did not know. The above table shows that virtually all the respondents have better knowledge of how prices are being determined on the floor of the Exchange except few that are ignorant.

Table 4.2.10: Exchange Specifies Standard Quality to Producers /Sellers of the Tradable Commodities on the Floor of the Commodity Exchange.

Variable	Frequency	Percentage
Yes	73	89
No opinion	9	11
Total	82	100.0

Source: Field Survey 2008

From the above table, 89% of the respondents admitted that the quality standard is followed on the floor of the Exchange while 11% of the respondents said they lack the knowledge. The above table shows that the largest percentages of the respondents admitted that quality standard is followed on the floor of the Exchange.

Table 4.2.11: Quality Standard Enforcement Mechanism.

Variable	Frequency	Percentage
Through designated assayers and laboratory scientists	73	100
Total	73	100

Source: Field Survey 2008

From the above table, 100% of the respondents accepted that the quality standard is being controlled by the designated Assayers and laboratory Scientists. This confirms the responses above.

Table 4.2.12 Respondents' Opinion on Whether Warehouse Receipts System Should be Established Geographically for both Agricultural and Non-agricultural Products on State Basis across the Nation.

Variable	Frequency	Percentage
Should be	73	89
No opinion	9	11
Total	82	100

Source: Field Survey 2008

From the above table, 89% of the respondents proclaimed that warehouse receipts system should be established geographical for agricultural and non-agricultural products separately across the nation while 11% of the respondents were neutral. The above table shows that nearly all the respondents were of the view that warehouse receipts system should be decentralized.

Table 4.2.13: Benefits of Decentralization of the Exchange on State Basis.

Variable	Frequency	Percentage
It will enhance efficiency, promotes accessibility and facilitates fast trading.	73	100
Total	73	100

Source: Field Survey 2008

From the above table, 100% of the respondents supported the view that the decentralization of the warehouse receipts system will-enhance efficiently, promotes accessibility and facilitates fast trading. This also confirms the responses above.

Table 4.2.14: These Necessary Facilities are Available through the Exchange to the Producers of Agricultural Products.

Variable	Frequency		Percentage
	Yes	No	
Warehouses	73(89.0)	9 (11)	82(100.0)
Silos	69(84.1)	13(15.9)	82(100.0)
Weather forecast	4(4.9)	78(95.1)	82(100.0)
Bins	65 (79.3)	17(20.7)	82(100.0)

Source: Field Survey 2008

From the above table, 89%, 84.1% 4.9% and 79.3% of the respondents respectively admitted the provisions of warehouse silos, Bins and weather forecast service which may

be probably due to their ignorance. While 11%, 15.9%, 20.7% and 95.15 of the respondents respectively disagreed the provision but very glaring non-provision of weather forecast service at the Exchange. The above responses show that the Exchange is moving in the right direction in the provision of necessary facilities for the proper functioning of the Exchange. However, it needs to do better in weather forecast information to farmers for this is vital to the overall success for the farming activity.

Table 4.2.15: How the Exchange Ensure ‘Free and Fair’ Trading on its Trading Floor ?

Variable	Frequency	Percentage
Through strict enforcement of laws binding the operations and contracts on the floor of the Exchange.	82	100
Total	82	100

Source: Field Survey 2008

From the above table, 100% the respondents supported the view that the Exchange ensures ‘free and fair’ trading through strict enforcement of laws binding the operations and contracts on the floor of the Exchange. It is important that there is a hundred percent agreement on this.

Table 4.2.16: Media Used to Disseminate Market Information to the Participants of the Commodity Exchange.

Variable	Frequency		Percentage
	Yes	No	
Radio	0	82	100.0
Television	0	82	100.0
Internet	82	0	100.0
Mobile phone	0	82	100.0
Interactive voice response	0	82	100.0
Short message service	0	82	100.0
Newspaper	0	82	100.0

Source: Field Survey 2008

From the above table, 100% of the respondents indicated that the Exchange lack the existence of radio, television mobile phone, interactive voice response, short message service and news paper as means of disseminating market information to those who need them instead the exchange adopted the use of internet alone. This shows that the only media use to disseminate information is internet whereas other suitable media such as radio, television, mobile phone, etc. should be used.

Table 4.2.17: The Necessity for Weather Forecast Service to Farmers.

Variable	Frequency	Percentage
Necessary	55	67
Not necessary	18	22
No opinion	9	11
Total	82	100.0

Source: Field Survey 2008

From the above table, 67% of the respondents said it is necessary to provide weather forecast service to the farmers while 22% and 11% of the respondents respectively were of negative opinion. The above table shows that larger percentage of the respondents deems it necessary that the Exchange should have weather forecast service to enhance its efficiency.

Table 4.2.18: Why Weather Forecast is Necessary

Variable	Frequency	Percentage
Because it will increase production, prevent bad harvest and may increase producers/sellers income	41	75
Because it may increase the producers/sellers income and prevent bad harvest.	5	9
Because it will increase production and prevent bad harvest.	9	16

Total	55	100
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Source: Field Survey 2008

From the above table, 75% of the respondents agreed that availability of weather forecast service will increase production, prevent bad harvest and may increase the producers/sellers income based on the fact that they have better knowledge of the potential contributions of the service; 9% of the respondents agreed that it may increase the producers/sellers income and prevent bad harvest because they lack deep knowledge about the importance of weather forecast to the farmers; 16% of the respondents admitted that it will increase production and prevent bad harvest due. The above table shows that three-quarter of the respondents agreed that availability of weather forecast service will increase production, prevent bad harvest and may increase the producers/sellers income based on the fact that they have better knowledge of the potential contributions of the services.

Table 4.2.19: It is Ideal to Run a Separate Exchange for the Marketing of Non-agricultural and Agricultural Commodities under the Abuja Commodity Exchange.

Variable	Frequency	Percentage
Yes	75	91.5
No	7	8.5
Total	82	100.0

Source: Field Survey

The above table shows that 91.5% of the respondents agreed, it is ideal to run a separate Exchange for the marketing of non-agricultural and agricultural commodities under Abuja Commodity Exchange, and 8.5% of the respondents disagreed. The above table shows that virtually all of the respondents agreed, it is ideal to run a separate Exchange for the marketing of non-agricultural and agricultural commodities under Abuja Commodity Exchange.

Table 4.2.20: Reason for the Desirability of a Separate Exchange for Agricultural Commodities

Variable	Frequency		Percentage
	Yes	No	
Because it will create efficiency.	75(100)	0(0)	75(100.0)
Because it the will the development of the			

Exchange.	75(100)	0(0)	75 (100.0)
Because agricultural and non agricultural products have different characteristics.	75(100)	0(0)	75 (100.0)
To be in keeping with practices elsewhere.	75(100)	0(0)	75(100.0)

Source: Field Survey 2008

From the above table, 100% of the respondents agreed with all the suggestions. The above table shows that the entire respondents agreed that all the options may be responsible for the reasons why agricultural and non-agricultural commodities should be separated under the Exchange.

Table 4.2.21: Responses on Whether Warehouse Receipts System is Practiced in the Rural Areas.

Variable	Frequency	Percentage
No	82	100
Total	82	100.0

Source: Field Survey 2008

From the above table, 100% of the respondents opined that it is not practiced. The above table shows that the entire respondents agreed that the warehouse receipts system is not yet practiced in the rural areas where the subsistence farmers can have access to it.

Table 4.2.22: The Current Geographical Coverage of the Commodity Exchange Operations.

Variable	Frequency	Percentage
Locally	82	100
Total	82	100

Source: Field Survey 2008

From the above table, all the respondents agreed that the trading is currently done only locally by the Commodity Exchange. This shows that the Exchange is yet to extend its trading coverage to the regional and international levels.

Table 4.2.23: Responses on Whether Market Information to the Participants of the Commodity Exchange is Disseminated Daily and Timely.

Variable	Frequency	Percentage
Yes	82	100
Total	82	100.0

Source: Field Survey 2008

As the above table shows, 100% of the respondents agreed, that the dissemination of market information to the participants of the Commodity Exchange is on timely and daily basis. This shows that market information is done timely and daily.

Table 4.2.24: When Market Information is Normally Disseminated?

Variable	Frequency	Percentage
Before and after the trading hour	82	100

Total	82	100.0
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Source: Field Survey 2008

From the above table, 100% of the respondents admitted market information dissemination is done both before and after everyday. The above table indicates that the entire respondents agreed that the market information dissemination is both before and after the trading hour on daily basis.

Table 4.2.25: Availability of Resolution Processes in Settling Disputes between the Participants on the Floor of the Exchange.

Variable	Frequency	Percentage
Available	82	100
Total	82	100.0

Source: Field Survey 2008

From the above table, 100% of the respondents proved the available of resolution processes of setting disputes on the floor of the Exchange. The above table shows that the whole respondents agreed, there is resolution process adopted in settling disputes between the participants on the floor of the Exchange in case there is in the process of transacting businesses.

Table 4.2.26: The Set-up for Settling Disputes.

Variable	Frequency	Percentage
Through arbitration panel, council of the exchange and investment and securities tribunal.	82	100
Total	82	100.0

Source: Field Survey 2008

From the above table, 100% of the respondents revealed that methods of settling disputes on the floor of the Exchange are through arbitration panel, council of the Exchange and investments and securities tribunal. Hence this confirms the above responses.

Table 4.2.27: The Exchange is Functioning with Adequate number of Intermediate Firms (Raw Materials Processing Companies) to Produce the Required Raw Materials for the Manufacturing Industries Locally in Nigeria.

Variable	Frequency	Percentage
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No	82	100
Total	82	100.0

Source: Field Survey 2008

From the above table, 100% of the respondents were of the view that the Exchange currently does not have adequate intermediate firms (raw materials processing companies) to operate successfully. This shows that all the respondents have better knowledge of the operations of Exchange.

Table 4.2.28: Benefits of the Exchange

Variable	Frequency	Percentage
It will benefit the country in the area of economic development and growth.	82	100
Total	82	100.0

Source: Field Survey 2008

From the above table, 100% of the respondents believed that the Exchange will benefit the country in the areas of economic development and growth. This indicates that the entire respondents understand the potentials of the Exchange.

4.3.0 Buyers and Sellers Interview Reports

This report is the responses of the 3 buyers namely; Grand Cereals Plc, Nigerian Breweries Plc and Guinness Nigeria Plc and the 2 sellers namely; Derivative Industries Ltd and Olam Nig. Ltd through their representatives based on the interview conducted with them.

Questions: Do you perceive any sort of transparency in the deals on the floor of the Exchange? If yes how does it work?

Responses: Buyers

All the buyers' responses to whether there is transparency in the operation of the Exchange claimed to be the same because they all agreed that the operations are free and fair without any manipulation either the buyers or the sellers.

Sellers

All the sellers interviewed provided similar responses as the buyers..

Questions: Do you receive market information timely and on daily basis?

If yes, through which medium(s) do you normally receive the information?

Responses: Buyers

The buyers agreed that the market information dissemination is timely and daily but via internet alone which may be considered okay by the buyers in the absence of alternative but not enough to them. However, there are still other possible means through which the information can be relayed to them such as mobile phone, newspaper, interactive voice response, etc.

Sellers

All the sellers interviewed provided similar responses as the buyers.

Questions: Does the Exchange specify quality standard for the tradable commodities on the floor of the Exchange? If yes, how does this measure?

Responses: Buyers

The buyers explained that the Exchange specifies standard quality for the tradable commodities on the floor of the Exchange so as to avoid conflict of low quality against order and specification between the buyers and sellers. This is enforced through the designated Assayers and the Exchange Laboratory Scientists.

Sellers

All the sellers interviewed provided similar responses as the buyers.

Questions: Is there any law binding the operations between the buyers and sellers on the floor of Exchange? If so, how does this work?

Responses: Buyers

The respondents explained that there are laws binding the operations between the buyers and sellers especially in the case of delivery of orders. Under such situation, the Exchange ensures the delivery of order according to the specification, if otherwise, the defaulter must suffer from it and it is being termed as breach of contract

Sellers

All the sellers interviewed provided similar responses as the buyers.

Questions: Is there any mediatory body that decides cases, in case there is any dispute between buyer and seller under the Commodity Exchange? If yes, how is it carried out?

Responses: Buyers

All the respondents also agreed that adequate measures are in place as regard the regulation of the Exchange, as they even confirmed the set-up for settling disputes under the Exchange as listed in the hierarchy below

Investment and Securities Tribunal

Ž

Council of the Exchange

Ž

Arbitration Panel.

Sellers

All the sellers interviewed provided similar responses as the buyers..

Questions: Does Nigeria need to develop the Commodity Exchange to the level of futures Exchange? If yes, why do you think so?

Responses: Buyers

The buyers agreed its a good thing if the Exchange can still improve on its effort to also accommodate future contracts because it will be to the benefit of both the buyers and sellers and as well give the Exchange more recognition since prices of the commodities are determined by the interaction of demand and supply on the floor of the Exchange already.

Sellers

All the sellers interviewed provided similar responses as the buyers.

Questions: Do you think the inauguration of Commodity Exchange can promote much improved market access to the buyers and sellers of agricultural produce in Nigeria? If yes, in what ways do you think so?

Responses: Buyers

They all agreed that this will bring about growth and development to the Exchange and the economy.

Sellers

The sellers interviewed provided similar responses as the buyers.

4.3.1 Functional Areas of a Commodity Exchange: Interview Reports

The data were gathered via interview with Mr Bodunde Rufus (senior officer of operations) Abuja Commodity Exchange based on some theories in line with the functional areas of the Exchange. This served as check and balance against the interview conducted with the 3 buyers and 2 sellers.

4.3.1.1 Quality Standard

According to Goggin (2005:206) through the establishment of quality standards for each commodity traded, it will be much easier to do business, as the market will be able to identify the grade being offered for sale, attach the known characteristics to that parcel and bid against the offer price on the basis. On this issue Mr Bodunde emphasized that it is highly imperative to set a quality standard for each tradable commodity on the floor of the exchange truly in order to avoid unusual disputes between the buyers and sellers which also

conform to the information gathered from the buyers and sellers. This is because when the delivery is not matched with the specification in order there is bound to be rancour between the seller and buyer. However, the exchange has quality control department for the inspections and assessments of the quality of the tradable products on the floor of the Exchange to ascertain whether it matches the specification with the help of qualified assayers (lab scientists) in the department and as well the assayers in some states of the federation.

4.3.1.2 Communication System

According to Mukhebi (2005:192) lack of relevant and timely market information greatly disadvantages smallholder farmers in the market place, and reduces their access to better markets and better prices. Mr Bodunde vehemently substantiate this theory by saying that lack of relevant and timely market information is a serious injury to the smallholder farmers particularly in the country where our predominant occupation is subsistence farming. The farmers are being denied access to relevant and timely market information. As a result of this, their access to a commensurate income, better markets and better prices is reduced. Equally, this is hindering the increase in production capacity of the farmers and their tendency to apply modern technologies on the farms. However, the dissemination of market information under the exchange presently is via the internet services, therefore, reasonable efforts has not been made to relay market information to the people at the grass root level who are majorly the producers of the agricultural produce whose efforts should be improved on.

Market information is needed to help farmers decide and choose what commodities to produce, what technologies to apply for production, when to produce, for whom to produce, and when and at what price to sell (Mukhebi, 2005:192). Mr Bodunde also emphasized further, that availability of market information to farmers will aid decision making on what commodities to produce, what technologies to apply for production, when to produce, for whom to produce, what quality to produce, and when and at what price to sell.

4.3.1.3 Warehouse Receipts System (WRS)/Legal System

The existence of WRS makes it easier to establish commodity trading systems, and provides a tool by which public and food aid buyers can efficiently manage their stocks

(Lacroix & Varangis, 1996; Martin & Bryde, 1998) as cited in Coulter (2005:184). Mr Bodunde said warehouse receipts system is a good system that facilitate storage of farm produce after the harvest and provision of collateral security for financial purposes to the farmers or any other participants who partakes in transactions on the floor of the Exchange because it is transferable. For this reason, warehouse receipts system is an essential tool in the operation of the Abuja Securities and Commodity Exchange.

However, based on the present observations, the warehouse receipts system is not yet spread all over the federation as it is supposed; currently we only have it in Kano and Kastina States in the northern region of the country. The most important element in establishing a WRS is a favourable legal environment (Lacroix & Varangis 1996, Martin & Bryde, 1998) as cited in Coulter (2005:188). Bodunde explained that it is highly essential to have enabling legal environment for the establishment of warehouse receipts system if at all we want to have a vibrant Commodity Exchange. This means the activity of Commodity Exchange must be strongly fortified with adequate and required laws. Therefore, suitable and appropriate regulations, laws and policies are implemented for the generation of the exchange. For instance, settlement of disputes on the floor of the Exchange passes through three phases: arbitration panel, Exchange council and finally securities and investment tribunal, if the settlement could not be met at first two phases.

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CHAPTER FIVE

5.0 Summary of Findings, Conclusion and Recommendations

5.1 Introduction

In the previous chapter empirical data was compared with theories from previous studies and equally a quantitative analysis was carried out. Thus, this chapter will present the findings, recommendations and conclusion based on the analysed data in order to fulfill the objectives of the study.

5.2 Summary of findings

Generally, the findings revealed that there is low production and productivity of agricultural produce as a result of very low mechanized farming in Nigeria. Besides, lack of basic amenities in the rural areas this is also currently contributing to the rural-urban migration. However, this is part of the problems faced by the Commodity Exchange to function effectively for the economic growth and development. Specifically, the following are the findings of the study:

- (1) The dissemination of market information to the producers/sellers of agricultural produce is not yet completed or channeled to reach the target audience (farmers).
- (2) The concentration of the warehouse receipts system facility at present in the Northern region, Funtua in Kastina and Dawanu in Kano is insufficient to bring about effective functioning of the Commodity Exchange in Nigeria.
- (3) The operation of the Commodity Exchange is currently on grains such as maize, cereals, guinea corn, millet, beans, etc, and the major buyers of these produce on the floor of Exchange are: Grand Cereals Plc, Nigeria Breweries Plc and Guinness Nigeria Plc.
- (4) There is a standard set-up for settling disputes on the floor of the Exchange. There is a standard legal system of settling dispute on the floor of the Exchange namely: arbitration panel, if the dispute could not be settled, then it is channeled to the council of the Exchange, if still settlement could not be reached then the matter is finally passed on to the investment and securities tribunal.
- (5) There are just two agro-processor companies; Derivative Industries Ltd and Olam Nig. Ltd serving as intermediate firms (raw materials processing companies) which is not enough for a successful operation of the Exchange.

- (6) The enlightenment and awareness on the purpose of the Commodity Exchange is low and poor.
- (7) It is found that there is no separation and decentralization of agricultural and non-agricultural produce to the states or geopolitical zones.
- (8) The communication system adopted by the Exchange to relay market information to the farmers is not yet the best in the Nigerian environment compared to what is obtainable in Kenya.
- (9) The quality standard enforcement is promoted under the exchange through the assayers at the exchange and designated assayers (laboratory scientists) in 22 states of the federation including the Federal Capital Territory.
- (10) It is found that the Abuja Commodity Exchange operation model is yet in best shape as a result of the deficiency in some key areas such as warehouse receipts system, market information dissemination system, other ancillary services and as well as the centralization of the Exchange.

In addition, it was discovered that:

- (i) In Kano State presently, effort is in place to bring together subsistence farmers to sell their product in bulk as well as encourage the practice of co-operative farming among them.
- (ii) On the floor of the Exchange there is also what is called negotiated trading. This is trading that is not executed on the trading floor of the exchange. It is just a call for interested seller to come and fill up an order being placed when no seller is available directly on the floor of the exchange. As it is done on the floor of exchange, the same percentage of commission is charged (1.5% on commodity exchange and 0.5% on the securities exchange commission).
- (iii) The organization structure is not yet fully encompassing the agricultural department for easy dissemination of information on improved seedlings and availability of modern agricultural implements and equipment to the producers of agricultural produce.
- (iv) The trading on the floor of the exchange is on outcry that is the exchange is not yet on electronic trading.

5.3 Conclusion

Generally, the findings showed that the exchange is still in its infancy having existed for only seven years. Therefore, it is observed that the Exchange is not currently working fully with the suitable and environmentally sensitive model through which it can function effectively in the country as a result of the fact that it is not yet completely being environmentally sensitive to the agents that can facilitate smooth running of the Exchange to compete favourably with other countries of the world Exchange such as Chicago Board of Trade, London Metal Exchange, Kenya Commodity Exchange, Zimbabwe Commodity Exchange and a host of others.

More so, the findings revealed that majorly there is deficiency in three core areas namely: warehouse receipts system, market information system and other ancillary services. Also, the Exchange should be decentralized and separated non-agricultural from agricultural products. Therefore, the operational model of Abuja Commodity Exchange is yet to be best in line with other countries of the world with similar environment such as Kenya. However, the Exchange regulatory system and grading and certifying system is measured up to standard

In addition, it is observed generally that lack of technological development and technical know-how by the producers of agricultural produce is seriously affecting the production of virtually all the raw materials produced from the agricultural sector. Basically, in the area of agricultural produce lack of and inefficient of infrastructural facilities such as irrigation/water supply, electricity, good roads, weather forecast services, hiring and credit facilities etc, which are seriously militating against the production and productivity of the agricultural produce in large quantities for industrial raw materials and food for human consumptions.

5.4 Recommendations

For a Commodity Exchange to function effectively and efficiently the Exchange should operate with a fortified model which contains the entire necessary elements that can make it have a successful operations. Specifically, this study recommends:

In general, there should be massive enlightenment and public awareness to make people understand the importance, purpose and potentials of, Commodity Exchange to Nigeria relative to economic growth and development.

- (1) That the Exchange should establish market information points (MIPs) in the rural areas. Better still, they should relay market information to the traditional rulers or village heads to pass to their kinsmen. Besides, the current use of internet for the dissemination of market information should be in conjunction with the use of television, radio, mobile phone, newspapers, interactive voice response and short message services, as suggested in the reports of a conference held 1999 at University of Agriculture Umudike.
- (2) That the Exchange should enforce and ensure that weather forecast service is relayed through agricultural development project (extension officers) to the farmers.
- (3) That the warehouse receipts system should be instituted by the Exchange for both agricultural and non-agricultural products on state basis as it is applicable.
- (4) That the Exchange should be decentralized to each state or region of the federation based on the commodities that can be produced there such as crops, fruit products, etc, as suggested in the reports of a conference held 1999 at University of Agriculture Umudike.
- (5) That the Exchange should intensify efforts in the area of financial institutions such as banking, insurance and other facilitating services such as transport, IT, inspection, etc for effective operations.
- (6) That the grading and certifying system should as well encompasses NAFDAC and SON as the case may be for regional and international trading of the Exchange which will eventually aid the development of Futures Exchange.
- (7) That the Exchange in collaboration with government should intensify effort to encourage the interested private investors to participate in the processing of raw materials due to the lack of enough intermediate firms to process the raw materials for the local manufacturing industries.
- (8) That deep efforts should gear towards improvement in the warehouse receipts system, market information system, certifying and grading system for both home and foreign market, and other related service provider institutions that can aid the Exchange to have a suitable environmental and ecological sensitive model for its operations.
- (9) That there should be massive enlightenment and public awareness to make people understand the importance, purposes and potentials of Commodity Exchange to Nigeria relative to economic growth and development.

In addition, based on the observations, the following are further recommended as supportive measures;

- (i) That the Exchange should institute and encourage co-operative and mechanized farming in order to boost the production capacity in the agricultural sector and as well engage in purchasing of the produce from the local farmers through their recognized agents.
- (ii) That the Exchange should transform transactions on the floor of the Exchange electronic trading and create agricultural department for direct dealings with the users of agricultural information instead of solely depending on information from agencies or institutes such as National Seed Council, IITA, and so on, as suggested in the reports of a conference held 1999 at University of Agriculture Umudike.
- (iii) That Exchange should liaise with government to be more proactive in the provision of hiring and credit facilities of farm inputs such as harvesters, ploughs, ridgers, planters, tractors, millers, fertilizers, etc.

Below is a graphic illustration of the Exchange model suggested by the researcher to achieve the main objective of effective disposal of agricultural produce to encourage effective and organized industrial market in agricultural produce. An important feature is the restriction of trading in the Exchange to only agricultural produce. However, the Exchange model as shown below shall be sub-divided into three categories, namely: category 1,2 and 3. in the category 1, this comprise of services such as national seed, legal, Climatology/meteorology and soil science which are highly essential for the Exchange to have a rudimentary foundation for effective operation which will encourage the producer of agricultural products to enhancing production and productivity.

While in the category 2 (Commodity Exchange), it's the central processing unit for every activity on the floor of the exchange which promotes the smoothness running of the operations. This is because, it is the engine room through which all the ancillaries are networking and navigating to from both left and right.

The last category which is the category 3, this navigates to some major actors which are linked to some facilities. In this category, it encompasses the export council, grading and certifying body and allied institutions which are in one way or the other have business to do with the warehouse receipts system. At this juncture, the allied institutions and warehouse receipts system further linked to the sellers and buyers of the agricultural produce at the

Exchange. Furthermore, the buyers and sellers will liaise with the intermediary (broker) who shall work on their behalf in connection with the market information available.

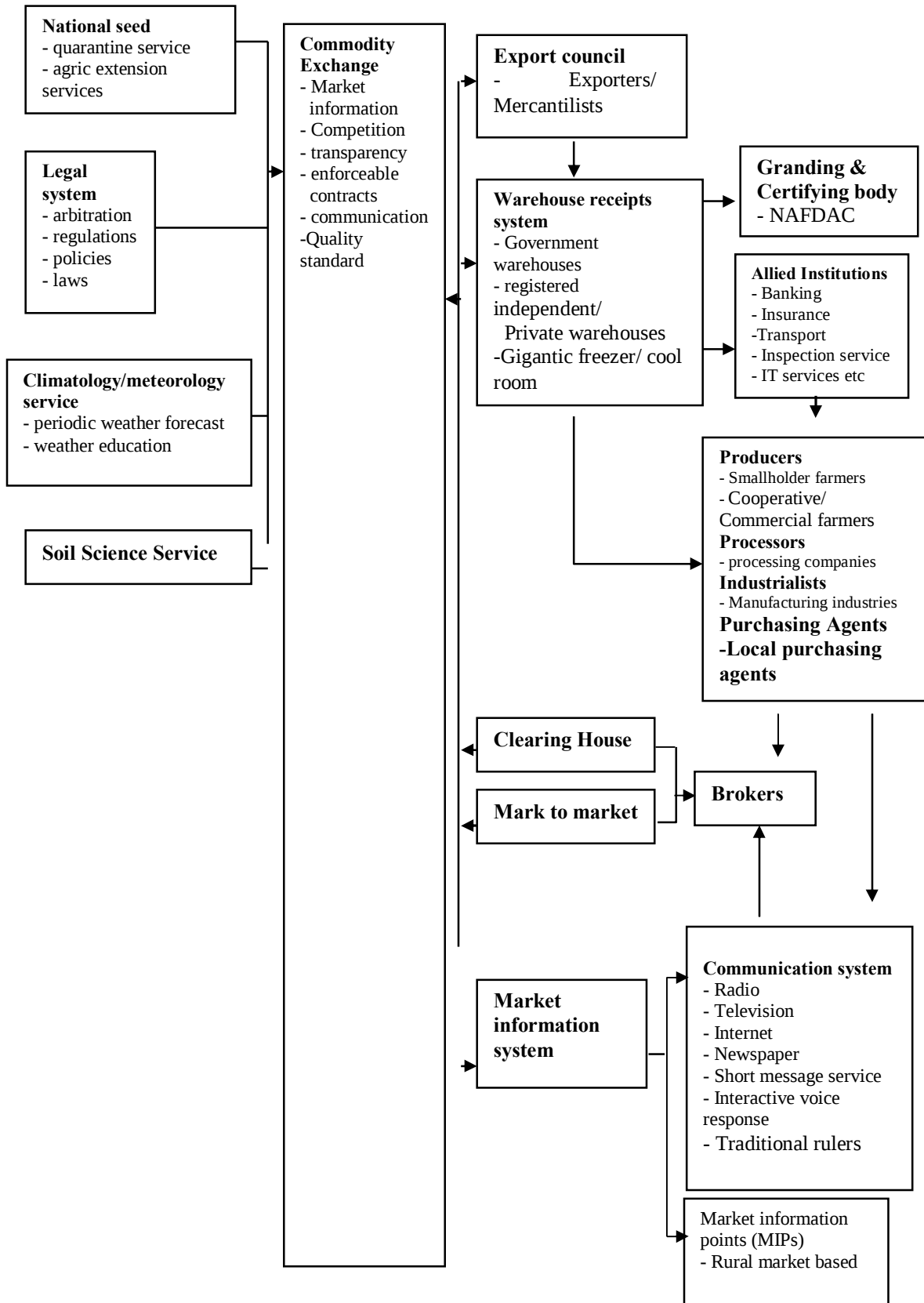


Fig. 5.1: A Commodity Exchange Model for Agricultural Marketing and Industrial Market Development for Agricultural Produce: Contribution to Knowledge.

Source: Field Survey 2008.

Finally below are the explanations of the key words as they appear in the model.

National Seed Services: These are services that will give information about which, when and what combination of agricultural inputs should the producers of agricultural produce apply to encourage and promote more production. This information will be related to the farmers through the agricultural development project (ADP)

(i) **Quarantine services:** It is a service by agricultural experts in form of inspection of new varieties of crop discovered or imported into the country to give approval of it for production, provided it is suitable for our own production.

(ii) **Agric Extension Service:** it is a service rendering by agricultural officers to orientate the farmers (producers) on how to plant, harvest, protect and apply different kinds of agricultural inputs on their plantation

Legal Systems: These are the regulatory and binding systems that must be complied with by the participants on the floor of Exchange in the process of discharging their duties as the need arises.

(i) **Arbitration:** it is a mechanism that facilitates the settling of disputes between the participants on the floor of Exchange.

(ii) **Regulations:** These are rules governing the conduct of operations on the floor of the Exchange.

(iii) **Policies:** These are formulated principles governing the management of the transactions and operations on the floor of Exchange.

(iv) **Laws:** These are the rules for regulating the operations of the Exchange for effective and efficient delivery or performance.

Climatology/Meteorology Services: It is the study of climate and weather by experts for the purpose of disseminating forecasted weather information to farmers on the varieties of crops that are suitable for planting at a particular season of the year.

(i) **Periodic Weather Forecast:** It is a seasonal projection of what the climatic condition may likely be for safety purpose of production to the farmers and in order to prevent bad harvest that can lead to decrease in supply which may as well force prices up. Thus, there should be as well the disclosure of the time yearly, when

there will be adequate, shortage, and extension of rainfall, winter and hot weather geographically to the farmers periodically.

- (ii) **Weather Education:** There should be an education of self prediction of weather by the climatologists to the farmers to know when and where to plant some varieties of crop geographically through the agricultural extension service officers.

Export Council: This is a body in-charge of export of commodities which may be informed of raw materials or finished goods from the producing countries to other countries of the world in compliance with the Exchange and world standard quality and prices.

Exporters/Merchantilists: These are merchants that take charge of exporting agricultural produce from one country to another through an Exchange.

Warehouse Receipts System: For a Commodity Exchange to be effective and efficient, the warehouse facilities should be strategically positioned. Both government warehouses and registered independent/private warehouses should function in collaboration with the use of silos and bins for bulk storage. If the need arises, the use of cold rooms and gigantic freezers may be applicable. In this case, the receipts issued here can be used as a negotiable instrument and is transferable.

Allied Institutions: These are ancillary institutions that aid the smooth running of the Commodity Exchange namely; banking, insurance, transport, inspection service, and information technology services.

Grading and Certify body: This is an agency which is saddled with the responsibility of assessing the quality standard of the commodities to be traded on the floor of the Exchange to determine whether it meets the international standard requirements for approval by participants of an Exchange: The participants of an Exchange comprise producers, processors, industrialists and brokers. It is the interaction of the following participants, in conjunction with the ancillary institutions that makes an Exchange to be effective and efficient.

- (i) **Producers:** This encompasses the small holder farmers and co-operative/commercialized farmers who are patronizing the Exchange with their produce in order to have a desired income.
- (ii) **Processors:** These are intermediate industries that process the produce produced by farmers into semi-finished goods or raw materials as specified by the international quality standard requirements.

- (iii) **Industrialists:** These are the organizations using the agricultural produce as their basic raw materials to produce some finished goods rather than the synthetic process. They indulge in both on-the-spot and future contracts to get the needed produce from the producers through the Commodity Exchange.
- (iv) **Purchasing Agents:** These are the Exchange representatives designated to do the purchase from the local farmers at a determined price.

Mark to Market: It is a process that facilitates the preparation of profit or loss account to reflect when there is rise or fall in price at the end of market on daily basis.

Clearing House: It is a trade management unit that guarantees the performance of contracts to the benefit of both sellers and buyers, be it on-the-spot or future contracts. The unit tries to prevent losses to the parties on contract.

Brokers: These are agents who act or transact on behalf of their clients. They act as intermediary between the sellers and buyers and charge commission for the services rendered.

Market Communication Systems: These are the channels through which market information about price and volume of commodities on the exchange floor are disseminated to the participants and interested parties of the Commodity Exchange. In Nigerian context, market information should pass through the following media: radio, television, newspapers, internet, interactive response voice, short message service, traditional rulers and rural market information points.

Commodity Exchange: It is a trade mechanism which facilitates market availability, competition, transparency, quality standard, enforceable contracts and communication of market information to the existing, potential and interested parties and participants in the market on the spot and future contracts.

Areas of Further Research

This study focuses on the sourcing of raw materials locally from the agricultural sector in Nigeria for the industrial sector of the economy and possibly for regional and international purpose with intensive evaluation of the present agricultural marketing model adopted by the Abuja Commodity Exchange. However, further studies may be carried out from the Exchange based on the following areas:

- (i) Food production
- (ii) Employment generation

- (iii) Income generation.

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APPENDIX A
QUESTIONNAIRE

Department of Marketing,
Faculty of Business Administration,
University of Nigeria,
Enugu Campus.

Dear Sir/Ma,

I am a student of Master of Science (M. Sc.) in marketing Degree from the University of Nigeria, Enugu campus. I am undertaking a research work on "An Evaluation of the Abuja Commodity Exchange Model for Agricultural Marketing and Market Development in Nigeria". This questionnaire is therefore meant to chart relevant information from you regarding the study. Please be assured that any information provided shall be used for this study only and shall be treated with optimum confidentiality. Thanks.

Yours faithfully,

Raji, Akeem Olorunwa.

APPENDIX B

Questionnaire

Introduction

You are to choose from the alternatives provided against each question, one or more answer that best describes your knowledge on the area from which the question was asked.

Section A (Staff)

(1) Gender.

(a) Male ☐ (b) female ☐

(2) What is your highest educational qualification?

(a) GCE or WASCE O/level ☐ (b) Advanced level / OND ☐

(c) HND/first Degree ☐

(d) Above first degree/professional ☐

(3) Age

(a) 15-25 ☐ (b) 25-35 ☐ (c) 35-45 ☐

(d) 45 and above ☐

SECTION B

4. What kind of market is this Commodity Exchange?

(a) A market for buying and selling agricultural produce and mineral resources. ☐

(b) A market for buying and selling financial securities.

(c) A market for buying and selling capital goods. ☐

(d) A market for buying and selling all goods. ☐

5. Which of these best describe the operational model of the Commodity Exchange?

(a) It embrace regulatory system, warehouse receipts system, market information system, grading and certifying system, communication system, and other ancillary services such as banking, insurance, transport, weather forecast, IT, and inspection. ☐

- (b) Warehouse receipts systems, grading and certifying system, communication system, and ancillary services such as insurance ☐ transport, and IT.
- (c) Communication system, market information system and other ancillary services such as banking, IT and ins ☐ tion.
- (d) Others no ☐ ecified
6. Do you think the existing model of Commodity Exchange can justify agricultural marketing and market development in Nigeria economy?
- | | Yes | No |
|--|--------------------------|--------------------------|
| i) It encompasses all the necessary facilities | ☐ | ☐ |
| ii) It is still needed to be adjusted | ☐ | ☐ |
| iii) It is already up to the standard | ☐ | ☐ |
| iv) It is the best for rural and urban economic integration for Nigeria. | ☐ | ☐ |
7. Is there any massive enlightenment on the purpose of Commodity Exchange in the country?
- (a) Yes ☐ (b) No ☐ (c) No opinion ☐
8. How do you rate the level of the massive enlightenment?
- (a) High ☐ (b) Low ☐ (c) Poor ☐
9. Does the force of demand and supply determine the prices of commodities on the floor of the Commodity Exchange?
- (a) Yes ☐ (b) No ☐ (c) Don't know ☐
10. Do you agree that the exchange should specify quality standard to producers/sellers of the tradable commodities in the commodity exchange?
- (a) Yes ☐ (b) No ☐ (c) No opinion ☐
11. If yes, how do you confirm or enforce that?
- (a) Through the designated assayers and laboratory scientist if the Exchange ☐
- (b) Through the buyers and seller ☐
- (c) Through the brokers ☐
- (d) Others not specified ☐
12. Are you of the opinion that the warehouse receipts system should be establish for both agricultural and non-agricultural products on the state basis across the federation? (a) Should be ☐ (b) Should not be ☐

- (c) Don't know ☐
13. If yes, what do you think will be the impact of the decentralization to other states in the country?
- (a) It will enhance efficiency, promote accessibility and facilitate fast trading ☐
- (b) It will facilitate fast trading and promote accessibility ☐
- (c) It will enhance efficiency and promote accessibility ☐
- (d) Others not specified ☐
14. Which of these necessary facilities are available through the Exchange to the producer of agricultural products?
- | | Yes | No |
|------------------------|--------------------------|--------------------------|
| (i) Warehouses | ☐ | ☐ |
| (ii) Silos | ☐ | ☐ |
| (iii) Weather forecast | ☐ | ☐ |
| (iv) Bins | ☐ | ☐ |
15. Do you ensure 'free and fair' process in your operations on the floor of the Exchange?
- (a) Through strict enforcement of laws binding the operations and contracts on the floor of the Exchange ☐
- (b) Through facilitation of trading alone ☐
- (c) Through settlement of disputes ☐
- (d) Others not specified ☐
16. Which of the following media and methods do you use to disseminate market information to the participants of the Commodity Exchange?
- | | Yes | No |
|--------------------------------|--------------------------|--------------------------|
| (i) Radio | ☐ | ☐ |
| (ii) Television | ☐ | ☐ |
| (iii) Internet | ☐ | ☐ |
| (iv) Mobile phone | ☐ | ☐ |
| (v) Interactive response voice | ☐ | ☐ |
| (vi) Short text messages | ☐ | ☐ |
17. Does the Exchange involve in periodic weather forecast to the producers of agricultural products?
- (a) Necessary ☐ (b) Not necessary ☐ (c) Don't know ☐
18. If yes, why do you think so?

- (a) Because it will increase production, prevent bad harvest and may increase the producers/sellers income ☐
- (b) Because it may increase the producers/sellers income and prevent bad harvest ☐
- (c) Because it will increase production and prevent bad harvest ☐
- (d) Others not specified ☐
19. Do you think it is ideal to run a separate Exchange for the marketing of agricultural and non- agricultural produce?
- (a) Yes ☐ (b) No ☐ (c) No opinion ☐
20. If yes, why do you think so?
- | | Yes | No |
|---|--------------------------|--------------------------|
| (i) Because it will create room for efficiency. | ☐ | ☐ |
| (ii) Because is delaying the development of the Exchange. | ☐ | ☐ |
| (iii) Because agricultural and non- agricultural products have different characteristics. | ☐ | ☐ |
| (iv) To be in keeping with practices elsewhere . | ☐ | ☐ |
21. Is the warehouse receipts system practiced in the rural areas where the subsistence farmers can have access to it for their storage?
- (a) Yes ☐ (b) No ☐ (c) No opinion ☐
22. In what capacity is the Commodity Exchange working in marketing the agricultural products presently in respect to the following?
- (i) Locally ☐ (ii) Regionally ☐ (iii) Internationally ☐
- (a) i ☐ (b) i, ii ☐ (c) i, ii, iii ☐ (d) not at all ☐
23. Do you disseminate market information to the participants of the Commodity Exchange on timely and daily basis?
- (a) Yes ☐ (b) No ☐ (c) Don't know ☐
24. If yes, when do you normally disseminate the information?
- (a) Before and after the trading hour ☐
- (b) After the trading hour ☐
- (c) Before the trading hour ☐
25. Is there any resolution method adopted in settling disputes among the participants on the floor of the Exchange in the process of transacting businesses?
- ☐ ☐ ☐

- (a) Available (b) Not available (c) Don't know
26. If yes, how is it carried out?
- (a) Through arbitration panel, council of the Exchange and investments and securities tribunal ☐
- (b) Through arbitration and securities tribunal and council of the Exchange ☐
- (c) Through arbitration panel and council of the Exchange ☐
- (d) Other not specify ☐
27. Does the exchange function with adequate existence of intermediate industries (raw materials processing companies) to produce the required raw materials for the manufacturing industries locally in Nigeria?
- (a) Yes ☐ (b) No ☐ (c) No opinion ☐
- 28 How can this Exchange benefit the country as whole?
- (a) It will benefit the country in the area of economic development and growth ☐
- (b) It will create employment opportunities ☐
- (c) It will boost the national income ☐

SECTION C

Structured Interview (Buyers and Sellers)

1. Do you perceive any sort of transparency in the deals on the floor of the Exchange?.....
2. If yes, how does this work?.....
3. Do you receive market information timely and on daily basis?.....
4. If yes, through which medium(s) do you normally receive the information?.....
5. Does the Exchange specify quality standard for the tradable commodities on the floor of the Exchange?.....
6. If yes, how does this measure?.....
7. Is there any law binding the operations between the buyers and sellers on the floor of Exchange?.....
8. If so, how does this work?.....

9. Is there any mediatory body that decide cases, in case there is any dispute between buyer and seller under the Commodity Exchange?.....
10. If yes, how is it carried out?
11. Does Nigeria need to develop the Commodity Exchange to the level of futures Exchange?.....
12. If yes, why do you think so?
13. Do you think the inauguration of Commodity Exchange can promote much improved market access to the buyers and sellers of agricultural produce in Nigeria?.....
14. If yes, in what ways do you think so?.....