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TRADE AND AGRICULTURAL POLICY REFORM FOR FOOD SECURITY IN TOMORROW'S AFRICA AND ASIA

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ABSTRACT

In late 2007, the World Bank released its flagship annual World Development Report (WDR) that focused its attention on agriculture as a key instrument for development. The WDR report may be considered an indication of how agriculture went out of fashion in development circles, for which the world and indeed African and Asian continents are now paying the price in the form of food crisis that is continually shaping up. There are enormous sets of opportunities and challenges in Africa that call for more proactive agriculturally-based policies and more competitive trade terms. The Asian continent has been a key player in the world's agricultural sector, for example, China's agricultural sector is ranked the first in the world farm output and employs more than 300 million farmers. The Asian continent has also been offering diverse agricultural assistants to Africa through aids and exports of agricultural implements and food. This chapter's objectives are two; the first is that it assessed the impact of agricultural policies and trade across Africa and Asia, with special attention given to Africa where there are many trade barriers and agricultural policy distortions. Second, it proposed appropriate agricultural policies and trade synergy which may boost intra and inter agricultural trade in the two continents.

The chapter made an in-depth analysis of the agricultural policies, trade and programmes in Asia and concludes that they can be used as learning tools which may help in shaping the ones in Africa. It argued that the main role of international agricultural agencies and institutions on agricultural policy and trade is to promote sustainable growth of the agricultural business by encouraging trading blocks and

individual countries to adhere to the international agricultural policies and agreements. The chapter concludes that the current agricultural policy and trade terms in many African countries are major barriers that hampers development and hence need to be reformed. The Chapter put forward that the key elements of the agricultural policy reform in Africa and Asia should focus more on smallholder farmer and identified barriers to sustainable food security in the two continents which should be removed. It also put forward that trade reforms in both African and Asian governments should be very gradual because markets for staple crops are still poorly organized, remains uncoordinated, have excessive transaction costs and risks, and are subject to price volatility which negatively affects net buyers of food and hence negatively impacts on food security.

Keywords: Agricultural reform, trade barriers, African smallholder farmers, price volatility

1. INTRODUCTION

Reforms refer to a series of changes in the current system or systems with intentions to improve its operational effectiveness. Food security on the other hand refers to availability of food and one's ability to access food. Agricultural policies are a combination of laws put in place by various jurisdictions in order to regulate the agricultural activities both locally and internationally. Finally, agricultural trade refers to the engagement in purchase and sales of products obtained from farming. Therefore reforming agricultural policies and trade for food security in Africa and Asia can be explained as the change processes put in place to improve food availability, sales and purchases across the continents of Africa and Asia.

This chapter aims to look at agricultural policies put in place by various countries within the Asian and African continents. Agricultural trade policies for the two continents are also given an in-depth analysis. Management of the policies on operations is also analyzed in Asia and Africa by giving specific examples of its success or otherwise. Also, the impacts of these policies both locally and internationally are examined. The latest developments in agriculture in Asia and its possible applicability in Africa are considered. The chapter also looks at the viability of Asia continuing the positive trend of

agricultural productivity and some of the factors that may threaten this trend. The chapter proceeded to analyse the global food situation and possible threats to food security in both Africa and Asia.

The chapter observed that the recent occurrence regarding sustainability of food supply in Africa and some parts of Asia has seen many international agencies coming to give food aid to rescue lives hence the urgent need for reforms to improve food security. Agricultural policies and trade have been changing over time in the two continents. This has been facilitated mostly by the continuous improvement in technology. Secondly, the world today is seen as one market place due to globalization, economic integration and various trade agreements between countries. For these reasons the chapter looks at what in the current agricultural policy and trade in the two continents need to be reformed so as to counter threats to food security for the sustainability of tomorrow's population. It then ended up with a conclusion.

2. AGRICULTURAL POLICY AND WORLD TRADE

With the emergence of globalization, advancement of technology and liberalization of markets, significant developments have been realized in the global scene (Pardey, 2006). In this regard, the agricultural sector has not been exempted, whereby substantial attention and developments have been undertaken. As outlined by Liapis (2007), the 20th and 21st centuries have been the key historical times where substantial concerns in the agricultural sector have been undertaken. This has been evident through the numerous policies and structures established to enhance the sector. The need for enhancing efficiency and sustainability in the agricultural sector has been a vital element inducing policy making in the agricultural sector. As defined by Cooper (2006), agricultural policy refers to a set of laws concerning agriculture and the foreign importation of agricultural products. The imposition of agricultural policies has been influenced by the desire to attain specific objectives for the benefit of the people and facilitating efficiency in the agricultural market (Muhammad et al, 2011). Some of the vital agricultural policy outcomes include price stability, proper land use, steady supply, product selection as well as employment.

Unlike other commercial products, the trade in agricultural commodities is handled with great concern. This is evident through the various policies and trade structures that guide the trade of agricultural products. The issues of tariffs, subsidies, and trade barriers on agricultural trade have been adequately addressed at global level. This is aimed at ensuring fair competition and increased production in the sector both in developing and developed nations. The Agreement on Agriculture (AOA) and the exemption from GATT (General Agreement on Tariffs and Trade) are tangible developments that have been realized in agricultural trade policy. These agreements and negotiations concerning agricultural trade are aimed at reforming world trade in agriculture as well as enhancing efficiency in the sector. In the case of the AOA and the GATT agreements on agriculture, numerous changes have been undertaken. This was primarily aimed at increasing market access for agricultural products, and facilitates the reduction of domestic support on agriculture (Katungi et al, 2011). This was on the aspects of quotas, and subsidies which were perceived to trigger prices, thus leading to unfair competition (Diaz-Bonilla et al, 2006). However, United States (US) government for example, has consistently put forward that its agricultural trade policy is dictated by a culture of government support to agriculture but not to undue competition as perceived by many other countries. As reported by Dewbre and Brooks (2006), the US government pays over \$20billion annually as subsidies to agriculture which is aimed at facilitation of farm income stabilization as well as increase in agricultural output.

According to Dewbre and Brooks (2006), the formulation and implementation of agricultural policies and regulations have been influenced by the numerous challenges facing the agricultural sector. To begin with, severe marketing and consumer taste challenges have been in prevalence for years. Nenci and Pkktobelli (2008) indicated that the marketing of agricultural products has been faced by great controversy based on the advancement of globalization and liberalization of markets. In this case, agricultural producers in developing countries are faced with tremendous competition from those from developed nations. This is in relation to differences in technology, political issues as well as government support. With this in mind, there has been every need to formulate agricultural policies to ensure efficiency and fairness in marketing of agricultural products. On the other hand, consumer tastes and preferences have been varied across the

globe thus leading to increased trade activity across borders. In regard to this phenomenon, policy imposition has been inevitable so as to ensure fair trade.

The international trading environment has been a key factor inducing the formulation of agricultural policies. As indicated by Roetter et al (2008), the world market conditions are not impressive, whereby they are dominated by severe inequality and competition. Barriers to trade are also in existence in the global market. This phenomenon leads to serious challenges in the trade of agricultural products, thus the need for policy imposition (Josling, 2003). A point worth considering is that agricultural policies are not aimed at removing competition but at ensuring fair competition in the global market.

As outlined by Lutz (2001), the issue of biosecurity has also been a vital element contributing to the need of agricultural policy. This entails the issue of pests and diseases related to agriculture and agricultural products. For instance, diseases like avian influenza, citrus cancer, foot and mouth, and bovine spongiform encephalopathy are serious phenomenon of concern in the global agricultural market (Molony and Smith, 2010). In order to ensure sustainability in the agricultural sector, there has been every need to ensure biosecurity (Tepe et al, 2011). This is realized through the formulation of policies concerning the distribution of agricultural products as well as the use of agrochemicals.

From another perspective, agricultural policy has been influenced by the desire to enhance infrastructure. This includes transport, telecommunications, irrigation, ports, and energy. As postulated by Gardner et al (2007), all these forms of infrastructure are not only aimed at enhancing the agricultural sector but the human community as a whole. Improvement in infrastructure leads to efficiency in agricultural processes as well as enhancement of productivity and profitability (Beddow, 2009). The issue of technology has been given considerable attention so as to be efficient. This entails technologies on productivity, research, genetically modified (GM) crops, adoption and investments (Buah et al, 2011; Dewbre and Brooks, 2006). Through concentration on these phenomena, efficiency and sustainability in the agricultural sector is guaranteed.

Environmental awareness has been identified as a very crucial phenomenon guiding the development of agriculture. Josling (2003) argued that the status of the

environment is the key determinant of the sustainability and continuity of the agricultural sector. With this in mind, there have been joint government efforts to ensure adequate environmental protection and awareness so as to enhance sustainable development. The major elements of environment under concern include water, air, soil, vegetation, and the atmosphere (Liapis, 2007). In regard to these phenomenons, various policies have been established to ensure optimum protection and promotion of the environment. This is aimed at enhancing sustainable development and protection of biodiversity.

A point worth of consideration is that the concepts of poverty reduction and employment have not been exempted in the agricultural policy making process (Mandere et al, 2011). As indicated by Roetter et al (2008), agriculture is the key contributor to livelihoods. It has been outlined that agriculture offers livelihoods to more than 75% of the world's population (Nkala et al, 2011). In regard to this phenomenon, agricultural policy has been aimed at enhancing the developing world and more specifically through poverty reduction and employment (Pauw andand Thurlow, 2011). Most of the developing nations have over 80% dependency on agriculture, thus there the need to place more emphasis on it. Having reviewed the global situation of agricultural policy and trade, it is also important to analyse the role of global trade institutions on agricultural policy and trade. Therefore, the next section concentrates on reviewing the role of such institutions like World Trade Organisation (WTO), the World Bank and International Monetary Funds (IMF).

3. GLOBAL TRADE INSTITUTIONS AND AGRICULTURAL TRADE POLICY

The 21st century has been characterised by overwhelmingly high commercial activity. This has been reported in all sectors including the agricultural sector. The concepts of globalisation and liberalisation of markets have been the key aspects contributing to the high commercial activity in the global scene (Josling, 2003). The issue of unfair competition and irregularities in the global trade have been dominant over the years. As indicated by Roetter et al (2008), the developing countries have been at a great threat following the severe competition and pressure from the developed world. This is closely associated with the economic and political influence of the developed countries, which has adversely affected the developing countries. Based on this situation, there has

been a joint effort by the international community to set up structures that guide global trade and agriculture (Dorosh et al, 2009). This is well evident through the operations of global trade institutions and agricultural policies.

Global trade institutions like the World Trade Organisation, the World Bank and IMF are collectively aimed at ensuring fairness in global trade. Despite the speculations by the developing nations that these institutions favour the developed nations, it has been explicit that they are primarily aimed at ensuring a favourable playground for doing business (Stockbridge, 2007). The issue of trade barriers and technical barriers has been adequately focused by these trade institutions in that they seek to ensure fairness. For instance, equal opportunities to all nations for participation in the global market are ensured. This is achieved through the establishment of liberal markets, whereby each nation can freely participate. By so doing, fairness and efficiency in the global market is enhanced.

The WTO has been the most visible in agricultural trade markets and policy issues concerning agriculture. The WTO has been constantly engaged in practices and policy restructuring that is aimed at ensuring efficiency and fair competition in the sector (Swinbank, 2010). This has been witnessed through the various agreements and policies set up to guide agricultural trade. The WTO has led to establishment of structures and reforms in the agricultural sector that are market-oriented. Through these reforms, security and predictability for exporting and importing countries is enhanced, hence increasing fairness and competitiveness in agricultural trade (Diaz-Bonilla et al, 2006). The key agreements and provisions of WTO on agriculture are as follows.

Market access: This is a vital phenomenon in agricultural trade that includes tariffication. The concepts of access to opportunities and reduction of tariff is facilitated through this provision. The concept of tariffication entails the elements of quotas, state trading measures, minimum import prices, voluntary restraint agreements, variable levies and discriminatory licensing. These entire phenomena are aimed at creating barriers to fair and competitive trade (Swinbank, 2010). In regards to the agreements and policies set by the WTO, all these barriers ought to be abolished (Karapinar and Haberli, 2010).

Domestic support: In its endeavour to streamline the agricultural sector, the WTO requires member countries to reduce government support on agricultural production and trade. In this case, the reduction of domestic support is focused on total levels of support rather than support on individual commodities. Through reduction of domestic support, fairness and competitiveness in agricultural trade can be attained. This is so because conditions which would unfairly favour the local producers are eliminated. By so doing, market oriented conditions are established (Ingco and Nash, 2005).

Export Subsidies: From another perspective, WTO has also done extensive contributions in ensuring competitive foreign trade in the agricultural sector. This is achieved through the reduction of export subsidies. WTO urges both developed and developing nations to significantly reduce their export subsidy expenditure. Whereas developed countries are required to reduce their export subsidy expenditure by over 36% (Swinbank, 2010), developing nations on the other hand are required to cut their export subsidy expenditure by 24%. This is attained in annual instalments for a period of 10 years. Through these provisions, competitiveness in agricultural commodity markets is achieved (Ingco and Nash, 2005). FAO has on the other hand initiated key developments and policy structures in the agricultural sector. The aspect of food safety in agricultural commodity trade has been highly emphasised by FAO. In this case, FAO has urged member countries to abide by the Codex code of ethics in the need to enhance consumer safety (FAO, 2009). This is achieved through the trade of safe food products and the abolishment of food dumping in developing nations.

Rice research institutions have also contributed significantly in agricultural trade. In this case, the institutions have offered credible and important ideas on sustainable methods of improving the wellbeing of rice farmers, consumers and the environment. Efficiency in production of the commodity has also been boosted by enhancing stability in prices (Johnson, 1975). On the other hand, agricultural policy has been of great importance in facilitating efficiency and productivity in the agricultural sector (Teweldemedhin and Van Schalkwyk, 2010). In this case, all the agricultural policy is aimed at ensuring sustainable development, through fair competition, increased production and environmental awareness. Roetter et al (2008) noted that the agricultural policies help in ensuring global competitiveness in the agricultural sector. This is

achieved through the abolition of trade barriers and discriminatory tariffs. By so doing, equity and efficiency in conducting agricultural activities and trade is attained. Another perspective to consider is that of analysing the role of Agricultural Agencies and institutions in the development of sustainable agricultural policy and trade. This perspective is discussed in the next section.

4. ROLE OF AGRICULTURAL AGENCIES AND INSTITUTIONS ON TRADE

As postulated by Cooper (2006), the main role of agricultural agencies and institutions on agricultural policy and trade is to ensure sustainable development in the agricultural sector. This is achieved through the formulation of favourable agricultural policies that ensure sustainability in the agricultural sector. For instance, the policy on biosecurity ensures that all agricultural activities are environmental friendly and promote biodiversity (Tepe et al, 2011). The issue of using agrochemicals and exploitation of natural resources is adequately addressed by agricultural agencies thus ensuring sustainability. In addition, the issues of land use and diversification of agricultural activities is also considered by agricultural agencies (Roetter et al, 2008). A point worth of consideration is that agricultural agencies ensures that all nations adhere to the international agricultural policies. This is attained through keen focus on the operations and policies adopted in each nation.

It is the task of agricultural agencies to ensure smooth and fair trade in the agricultural sector. As indicated by Cooper (2006) agricultural agencies ensure that all nations engage in fair trade practices that protect and promote the interests of other nations. In this regard, regulation of tariffs and trade barriers on agricultural products is put into consideration. Roetter et al (2008) noted that it is the responsibility of the agricultural agencies to ensure that all nations engage in effective and sustainable trade practices (Swinbank, 2010). Nevertheless, the agencies have not been aimed at obstructing competition but rather ensuring competition in agricultural trade. Through ensuring that all nations adopt fair policies on agricultural trade, the agencies ensure that agricultural trade is promoted. The aspect of quality of agricultural products is also monitored. This helps in ensuring safety of all people as well as avoids exploitation of any population (Eicher and Staatz, 2003). In addition, the agricultural agencies take

considerable attention on the exploitation of natural resources. This is commonly in the aspects of fishing and harvesting of forest. By so doing, sustainability in the trade of natural resources is enhanced. Having briefly analysed the role of both global trade institutions and agricultural agencies in the development of agricultural policy and trade, it will be worthwhile to further discuss the developments of agricultural policy and trade in both Africa and Asia on continent by continent basis. This is the focus of the next two sections of the chapter.

5. DEVELOPMENT OF AGRICULTURAL POLICY AND TRADE IN AFRICA

The developments in Agricultural policies and trade in Africa revolve around the main objectives of increasing productivity and income growth with specific emphasis on small holder farmers hence improving food security (Beddow, 2009). There have been numerous developments in the agricultural industry in Africa. A specific example of these policies is the South African policy on marketing agricultural products, which is called ‘The Marketing of Agricultural Products Act 1996’. This policy involved the deregulation of some policies and enhancing market freedom for agricultural products (Horan et al, 1999). The act focus on better and competitive terms of trading for example doing away with agricultural marketing boards, withdrawing certain import and export tariffs and doing away with subsidies to protect the local farmers from unfair international competition. This has boosted the agricultural income in the country and agriculture contributes about 22% of the country’s total exports as at 2008 (Teweldemedhin and Van Schalkwyk, 2010).

Another development in South Africa agricultural sector is the access to agricultural financing by smallholder farmers. A specific example is the Standard Bank – South Africa that won the development initiative of the year award in the African investor agribusiness award. The bank came up with a funding scheme that involved availing finances for agriculture for smallholder farmers (Gumisai, 2003). Major agricultural products exported in this country include maize, grapes, sugar etc. The sophisticated banking structure together with other policies enhanced trade in this country making the agricultural products export to hit 24% in the year 2010. These policies attracted international trading partners for example China, Germany, United States of

America, and Japan among others. The policy makers have concentrated in key areas of this sector to improve its productivity. Being a major source of income both to governments and the respective citizens, different governmental organizations, non-governmental organizations and the individual citizens in Africa as a continent have played a major role in the development and implementation of the various agricultural policies on production and trade.

Another major driving force for policy development in most African countries is to guard against further deaths caused by lack of food and reduce the level of dependency on other international sources for food supply (Denning et al, 2009). Some of the major developments in this industry include integrated and sustainable rural development. Since most agricultural products come from the rural areas, there has been intensive infrastructural development in terms of road construction, investing in irrigation to avoid losses occasioned by inaccessible market and harsh weather conditions (You et al, 2011). This ensures continuous flow of the products. Improved governance in the African countries has led to increased allocation of fund during budgeting (Anderson and Nelgen, 2010). Good governance has also influenced the development of major policy documents that put agricultural activities in the forefront. An example of these documents would be the 'Kenyan Vision 2030 policy document' which has elaborate projections for the agricultural sector. Again, an increase in access and participation in the global market which is more competitive with good returns have led to growth in the agricultural industry (Dorosh, et al, 2009).

The use of technology has also taken a centre stage and is highly embraced in the agricultural industry in some Africa countries (Buah et al, 2011). A good example is the use of greenhouse farming for flowers and other agricultural products. This has led to increased income and food security in the countries that have adopted this technology. Despite the many positive developments in the agricultural sectors in Africa, there are key concern areas that need to be addressed to achieve efficiency. There has been a declining agricultural performance and the policy makers have worked round the clock to overcome the cause of this declining trend. Mostly, this decline can be attributed to the poor marketing facilities in the agricultural industry. Agricultural activities though the

backbone of most African countries are yet to be embraced by embarking on a proactive marketing activities.

Another challenge that hinders the policy implementation in Africa is the limited high potential agricultural land and overreliance on rain-fed agriculture (Sulieman, 2010). With serious fluctuations and change in weather patterns caused by global warming, this has posed a major challenge for African countries. Irrigation which could be a solution to this problem has not been exploited to the maximum (You et al, 2011). For agricultural trade in Africa, there has been limited exploitation of the regional market potential. This is a failure that can be attributed to the governments of African countries. If this were to be taken up by the respective governments then trade in agricultural products would experience increased income (Anderson and Nelgen, 2010). There has been lack of research in the agricultural field in most African countries. This as a result has led to slow growth. If the African countries could invest in research, then this could be a sure way out of underproduction. Research comes with it new technology, which is the key to agricultural problems in the continent at large (Buah et al, 2011). The government needs to take the initiative which may come in the form of subsidizing tax on technological oriented agriculture, sponsoring agricultural research activities, inviting or employing expertise from agriculturally successful countries to drive the agricultural agenda.

The agricultural policy adopted by the United States (US) has widely impacted on the global agricultural sector. African agricultural sector is the most hit by the agricultural policy adopted by the US. The policy of extensive subsidies on agriculture in the US has contributed to overproduction of agricultural commodities (Josling, 2003). This has led to agriculture prices going too low, thus making farmers to stay out of business. Agricultural exports from the US are very cheap thus creating unfair competition on highly priced local commodities in African nations. This phenomenon has led to diversion of demand of locally produced products to imported products from the use. For instance, rice, wheat, corn, tobacco, peanut and dairy products from the US are lowly priced. This has led to African consumers to abandon the consumption of local products in preference of those imported from the US. As a result of this scenario, agriculture in Africa is adversely affected. Moves by the African nations to enhance agriculture have been strongly influenced by the American agricultural policy. As outlined by Liapis

(2007), African nations have been experiencing tremendous pressure from the American agricultural sector thus the need for change. In response to the situation, most of the African nations have taken a positive move in enhancing agricultural sector in their nations (Pali et al, 2011). In this regard, some of the African nations are taking a considerable proportion of their national income to support agriculture. This is done through high budgetary allocation for the agricultural sector to support direct and indirect subsidy (Josling, 2003). Regular incentives are in the recent being provided to farmers in an effort to boost agriculture (Anderson, 2009). By so doing, the cost of agriculture in Africa is gradually being reduced thus enhancing agricultural activity.

African countries are also faced with the challenge of lack of comprehensive land use policy. The land use policy in most African countries does not ensure effective and efficient use of land. This has led to land underutilization and overutilization. Land ownership in most African countries has a much skewed distribution (Keck and Alessandro 2009). There are serious inequities in land ownership and the poor who are willing to engage in agricultural activities as the only source of income do not own land and cannot afford to buy. The rich who are a small percentage of the population own close to three quarters of the land. A specific example would be South Africa where the gap between the rich and the poor is very wide (Banerjee and Duflo, 2007) and land ownership in this country lies with the rich (Mbote et al, 2008).

Both domestic and international trade in Africa in agricultural products has had their fair share of challenges. The major challenge has been imposition of high tariff by different countries (Sturrock, 1964). This has continued to be an impediment to the greater intra-Africa trade. There have been slight developments facilitated by African Union through their initiation to establish an African Economic Community. This has led to a reduction of tariff imposed on agricultural products from member countries and as a result has led to an increase in intra-African agricultural products sale. Trading in agricultural products has also been affected by other barriers, for example social and political factors and infrastructural underdevelopment. Lack of geographic proximity has to a greater extent hindered the farmers from bringing their products to the market. This has led to wastage of the products. This has been further worsened by lack of industries

that can readily consume the agricultural products for further processing (Haggblade, 2011).

Import and export restrictions have also posed a challenge for agricultural products in Africa. Finally, technical regulations and standards required by different countries for example the size of the product, shape and packaging act as a hindrance to trade. The local and small scale farmers who cannot meet such standards usually resort to trading their products locally (Molony and Smith, 2010). Despite the many developments in agricultural policies and trade in Africa, much is yet to be done especially by the governments of the respective countries. There is so much potential that is yet to be tapped and for this to be successful all the governments in African countries need to give Agricultural activities a top priority.

6. DEVELOPMENT OF AGRICULTURAL POLICY AND TRADE IN ASIA

Asia as a continent has a very large population which stood at 4.14 billion as at end of 2011 and China alone had a population of approximately 1.34 billion (UN, 2011). China is a major exporter of agricultural products trading with Brazil, Russia, and United States of America, among others. The policies of the Chinese government have made the country to be a key player in the world's agricultural sector. Cooper (2006) outlined that agriculture is a vital economic sector in China, whereby it employs more than 300 million farmers (Mandere et al, 2011). This is a high figure showing the role of agriculture in providing employment to the Chinese people. China has also been ranked the first in world farm output. The country has embarked on the production of wheat, rice, maize, tea, pork, barley, fish, potatoes, cotton, and oilseed. In recent years, the country has demonstrated an increased presence in the international agricultural arena (Dewbre and Brooks, 2006). This has been evident through the overwhelming exports China is making now. Chinese agricultural products are finding ready markets in America, Europe, Africa and other parts of Asia.

Since the year 1978, numerous developments in the agricultural sector have been realized in China. This is associated with the government initiatives to support agriculture as well as the establishment of efficient policies on land. Most of the land is currently under public ownership thus boosting sustainable exploitation of the land resources. As

reported by Deal and Current (2009), China has not only concentrated in feeding its people, but it has been offering diverse agricultural products to the world population. This is despite the various challenges facing agriculture in the country. Such challenges include low percentage of arable land and series of disasters like floods. China has been identified to have a steady increase in annual surplus of agricultural commodities since 1978. The production of grain in China has recorded a steady annual increase of 2.6% and this increase is twice the population growth rate, thus demonstrating the level of food security in the country. Also, the production of fishery products, meat, cotton, and oil seeds have been observed to multiply at a high rate (Deal and Current, 2009). Based on this phenomenon, China is able to feed its population and have surplus to reach the global markets.

The increased presence of China in the international agricultural arena is a result of the various factors. To begin with government policies and support to farmers has been a vital factor leading to excellence in the agricultural sector (Stockbridge, 2007). In this case, the government offers sufficient support in form of subsidies and policy regulations to agriculture. Adoption of modern technology in farming has also been of great importance in facilitating agriculture in China (Buah et al, 2011). This has been adequately adopted in commercial agriculture, whereby intensive and extensive commercial agriculture is undertaken. The presence of cheap and adequate labour and market has also been of great importance in boosting agriculture in China. This is provided by the large population. Cheap and environmentally friendly farming methods have also been adopted in China.

The big population of the Asian continent together with trade competition calls for a very urgent need for massive investment in agricultural activities across the continent (Haggblade, 2007). The continent has put its agricultural activities in the list of its priorities and a top agenda in its major economic discussions. This has seen the continent self-sustaining in its food needs and is even involved in the provision of food aid, exportation of agricultural implements and food to some African countries (Del Ninno et al, 2007). The agricultural sector in China for example contributes to more than half of the country's Gross Domestic Product. Asia as a continent is very wide with vast

disparity existing in the various countries. Generally, the continent has vast and rich agricultural land.

The key agricultural development policies in Asia have seen the continent putting more emphasis on research and development. Asia is home to several agricultural research institutes for example International Rice Research Institute based in Philippines, International Crop Research Institute for Semi-Arid Tropics based in India and Centre for International Forest Research based in Indonesia, among others. These research centres have been properly used for the development of agriculture. A recent research conducted in China saw the successful introduction of a drought resistant food legume called 'pigeon pea' (Deal and Current, 2009). This development and other breakthroughs in researches have put Asian agriculture in the forefront and make the continent of interest especially in international research and trade organizations.

Asia has in the recent past embarked on industrialization of rural areas. This has been necessitated by the agricultural policies of the continent. Before the rural industrialization, there were instances where farmers' products would go bad and farmers would use their products to feed livestock. This turned out to be very wasteful and discouraged many people from engaging in agricultural activities. The industrialization of rural areas has been very beneficial to the small scale farmers who could not afford to pay for the costs associated with transportation of farm products industries located mostly in the urban areas. It has as well led to reduced cases of lack of market for farm products. This aspect of development in the agricultural industry has also led to a massive rural employment easing the high urban population experienced in most African countries (Muhammad et al, 2011).

Asia as a continent has concentrated on issues related to land tenure, agrarian structure and agrarian reforms in its pursuit of agricultural development. Land tenure refers to all the relations that are set normally by the law of various countries or the customs concerning the use of land (Bamire, 2010). Agrarian structure refers to a more wide coverage of land tenure and structural conditions facing the production in agriculture and livelihood of rural population (Nkala et al, 2011). It also deals with controversies relating to land ownership, inheritance of land etc. Agrarian reforms on the other hand refer to the corrective measures towards curbing the challenges of land tenure

and agrarian structures. Asian countries have formulated various policies that work towards addressing these challenges some of them being re-appraisal of issues in the policy relating to land tenure so that they can be in line with today's challenges. The Asian communities have come up with the 'green revolution' which involves reconsideration of these policies in line with new technology (Buah et al, 2011).

Asia as a continent with a specific example of China has created a very friendly trading environment for agricultural products. In China, the government has totally given a tax holiday on agriculture. There are no taxes or fees imposed on agricultural activities. This has seen this sector move up the ladder and hence food security, increased income and eradication of poverty among other benefits (Pauw and Thurlow, 2011; Naylor and Falcon 2010). The friendly environment has also attracted foreign investors who bring with them better technology. Asian continent being a major producer and exporter of agricultural products enjoys various low tariffs from the countries with which it trades. This has gone a long way in ensuring profitability of Asian agricultural products (Chu and Lee, 2000).

Asian countries have major exports across the world and they ensure that they protect their products by imposing tariff and other restrictions on imports. This discourages importation and more emphasis is placed on local production. Developments in trade have also involved investing in agricultural assets that are more robust, effective and efficient in production hence giving them a competitive advantage for the products. This normally has an impact on competitive prices of Asian products in the world market. The continent also has preferential market access and ensures that it chooses the most viable, sustainable and profitable markets for its products (Katungi et al, 2011).

Through the development in agricultural policy and trade, most Asian countries are on their way to achieving economic independence, food security and poverty eradication (Bahiigwa et al, 2005). However, there are certain negative effects associated with these developments. The highly industrialized countries are already feeling the negative impacts of global warming caused by pollution from the many manufacturing industries. China being one of the countries is being challenged to cut on the level of pollution. Asia as a continent also has a very wide gap between the rich and the poor. It has also suffered from terrorism activities making some countries like Afghanistan suffer

from acute food insecurity (Molony and Smith, 2010). The parting shot for agricultural policy and trade development in Asia would be that the continent is on the right track and it should aim to ensure increase in agricultural research but at the same time monitor the level of pollution for a balanced benefit from agricultural activities. Attention should also be paid on the other line industries to ensure that not all people concentrate in agriculture leaving an imbalance in other sectors. The overall objective of agricultural policy and trade in both Africa and Asia is to ensure food security for economic growth and quality life. But what is the picture of the global food situation?

7. GLOBAL FOOD SITUATION

The concept of global food situation has been in a dynamic movement in the past few decades. There has been a serious instability and uncertainty on the global food situation over the past few years. As outlined by Orke et al (2004), the world food situation is presently being defined by new forces. They are broadly, income growth, urbanization, globalization, and high energy prices. These phenomena have had a significant influence on the global food situation, whereby they have changed food consumption, food markets and production patterns (Pardey, 2006). Another vital factor in the global food situation is the aspect of private sector in food production. As noted by Feder et al (2011), the private sector has led to leverage of food retailers. Based on these situations, the concept of global food situation has been surrounded by immense uncertainty and jeopardy.

As postulated by Pinstруп-Andersen et al (2007), the past four decades have been characterized by severe decline in agricultural productivity. This is in contrast to the ever increasing demand on food products. This situation has brought the global food situation to a crossroad thus threatening human life. Orke et al (2004) observed that lack of swift action on the agricultural sector would worsen the situation in future. This can only be achieved through a wholesale re-investment in agriculture through massive research and development (Haggblade, 2007). Advancement in the use of modern and sustainable technology can also be used to address the situation. From another perspective, improvement in infrastructure and training programmes for farmers can also help in

curbing the crisis. Haggblade (2011) indicated that the global food basket is rapidly being worn out thus creating doubts and anxiety concerning human survival.

A research by FAO (2009) has shown a drastic decline in food availability over the last three decades. The prices of food commodities have also been in a rapid increase thus making it unaffordable for a big proportion of the population. It is worth mentioning that food producers have always been dynamic and they have also been overwhelmed by commercialization of agriculture (Pinstrup-Andersen et al, 2007). This leads to production of more income earning products at the expense of food products for feeding the poor and in return led to food insecurity for majority of the poor communities. It has been evident that most of the government and private sector agencies concerned with agriculture have been not been very proactive for sometime according Feder et al (2011). This has led to the deterioration of agricultural productivity. In response to this situation, there is a great need for comprehensive analysis and interpretation of the recent situation so as to provide policy makers with adequate information for addressing the situation.

Some key food cereals have been identified to be in decline in terms of their global production in many parts of the world (FAO, 2011). As outlined by Betru and Kawashima (2010), the global yield growth rate of rice has been dropping annually by an average of over 1% in recent years in many African countries. In contrast, the projected income, population and consumption of the same commodity are expected to rise by over 2.5% in the year 2020 (Muhammad et al, 2011). Also, the production of maize and wheat in some parts of the world has been identified to decline. This phenomenon has been witnessed in many of the sub-Saharan countries which can not sustain their annual grain demands (Chuku and Okoye, 2009). As a result global food basket is being drained each day.

A report by the Food and Agriculture Organization (FAO) has shown that the price of basic food commodities has sky rocketed in recent years. This has made it unaffordable to many of the poor populations. According to the report, the number of hungry people across the globe is increasing at 75 million annually. This has reached an alarming figure of 925 million people across the globe. As noted by Pinstrup-Andersen et al (2007) these high figures of hungry people is jeopardizing the UN Millennium

Development Goals of reducing poverty and hunger by 50% in the year 2015. It has been unfortunate to note that the world population is at a rapid increase despite the decline in agricultural production.

In regard to the above discussions, it is explicit that the global food situation is at jeopardy. The supply of food has been in a rapid decline in recent years thus jeopardizing the global food security (Naylor and Falcon 2010). A point worth of consideration is that efficient policies and structures to guide agricultural products and demographic trends has been missing (Betru and Kawashima, 2010). This is very evident in many developing nations, whereby an inverse relationship is witnessed between population growth and food production (Orke et al, 2004). This scenario leads to an overwhelming deficit which is hard to curb overnight, thus the need for efficient policy structures in order to run away from food insecurity. To achieve this, there is the need to fully understand what constitutes the main aspects of global food security and what are the major threats to food security in the two continents under study?

The Main Aspects of Global Food Security

As defined by Zabawa et al (2000), food security is the availability of food as well as an individual's access to it. Joshi et al (2010) indicated that a population is termed as food-secure if its occupants do not have hunger or live in the fear of starvation. Reports by the world resources institute have shown that the world per capita in food production has been in an increase. In the year 2006, the number of overweight individuals was identified to surpass the undernourished. This phenomenon shows a development in food production and security for some of the world population (McCalla and Revoredo, 2001). A study by Joshi et al (2010) has indicated that China, which is the world most populous country, is suffering from an obesity epidemic thus demonstrating the access to food by most of its citizens. However, Haggblade (2011) put forward that the total number of hungry people in the world is about 925 million and with possibility that the figure may go up if adequate measures are not put in place. Therefore, to understand the global food situation, it is necessary to identify the key aspects of global food security which are listed as follows.

Availability: The concept of food availability entails ease in production and supply of food commodities. This is determined by the level of production in relation with the demand. High availability of food is a positive factor in food security. This is so because high food availability means that all of the world's population will be secure (Gilbert, 2010). Low production of food on the other hand leads to unavailability of the commodities, which in turn jeopardizes the security of the people (Riemenschneider, 2005).

Stability: Stability in reference to food security entails the trends in production and supply of food. This is the certainty and regularity in provision of various food commodities. With a high sense of stability in food production, food security will ultimately be in the increase. Naylor and Falcon (2010) indicated that stability in the supply and storage of food products is a vital factor determining the state of food security. This aspect is however determined by a number of factors including climatic change, changes in price as well as changes in population (Timmer, 2011). In order to attain food security, the supply and demand of food should be in harmony. It is worth noting that constant supply of food commodities is inevitable in the endeavours of ensuring food stability (Zabawa et al, 2000). This will not only ensure smooth supply to the population but also ensure stable prices, thus making it affordable to the population.

Utilization: Utilization in reference to food security entails the degree or extent of utilizing the available food commodities. This is usually defined by the level of supply and demand of food commodities. A high demand of the products in relation to supply will lead to over utilization. This may lead to food insecurity since no surplus will be put for future use. McCalla and Revoredo (2001) indicated that the concept of utilization also entails the scope of exploiting the available resources in food production. The utilization of land in provision of food commodities is also a vital factor influencing food security (Riemenschneider, 2005). Based on this phenomenon it is evident that the degree of utilization of the available food commodities and resources determines the state of food security.

Access: Access of food commodities entails the degree of affordability. This is an element of price as well as the income levels of the population. Zabawa et al (2000) indicated that inaccessibility of food commodities by an individual or population

demonstrates how the person is food-insecure. This phenomenon is evident in recent years, whereby the prices of basic food commodities have sky rocketed. As a result of this situation, most of the low income earners are unable to afford the food commodities (Joshi et al, 2010). This situation leads them to be identified as food insecure. The decline in food production as well as increase in world population is leading to immense pressure and competition for the available food commodities. This leads to inaccessibility of the products to the less competitive persons and more specifically the poor. This in turn leads to food insecurity.

8. THREATS TO FOOD IN AFRICA

Africa is the continent faced by a serious crisis of food insecurity in relation to other continents. The issue of food insecurity in Africa has been in the headline for over a quarter of a century now. A series of stakeholder consultations, commitments, recommendations, and declarations have been made by African leaders concerning food security. This has however not yielded substantial results as the issue of food insecurity is still in persistent. McCalla and Revoredo (2001) noted that, Africa has remained in short of almost everything, thus calling for urgent diagnosis and prescription to curb the situation. Although various strategies have been put in place to address the food insecurity issue, no much result has been realized.

As outlined by Zabawa et al (2000) hunger and food insecurity are predominant in many parts of Africa and more specifically in the sub-Saharan Africa. This region is faced by an overwhelming unavailability of food commodities, food prices instability, over utilization of food resources, and inaccessibility of food products by many of the population. The supply of food commodities in Africa is not certain because it is characterised by significant fluctuations in the annual farm products output (Riemenschneider, 2005). This phenomenon causes unnecessary shortages thus affecting food stability. It is also worth noting that the prices of food commodities in Africa are never stable. This is usually caused by fluctuations in supply as well as the rapidly increasing population (McCalla and Revoredo, 2001).

The accessibility of food products in Africa has also been identified to be at a serious situation. This is because many of the population who are living in abject poverty

are not able to access basic food products (Bahiigwa et al, 2005). The issue of high prices has been one of the main causes of the food inaccessibility in Africa. As postulated by Riemenschneider (2005), declines in supply of the food products as well as the high demand of the products are the main cause of the high prices. As a result of this situation, the poor population are locked out of the food commodity market and they are therefore exposed to hunger and starvation (Banerjee and Duflo, 2007). The level of food utilization has also been at an alarming state in Africa because stocking of surplus has been a thing of the past in many areas. This situation is caused by decline in supply and a rapid increase in population.

As argued by McCalla and Revoredo (2001), the provision of safe and nutritious food commodities in Africa is lacking. Some of the African population has been dependent on unsafe and innutritious food commodities. Joshi et al (2010) observed that the main meal to most of the African population is mainly composed of starch. This may be due to inaccessibility of nutritious and healthy foods like meat, eggs, fish, milk and butter to most of the population due to price and supply factors. This has exposed a portion of the African population to a series of diseases as a result of malnutrition. With this in mind, there is no doubt to conclude that the food situation in Africa is highly unacceptable (Zabawa et al, 2000) because many countries in Africa are exposed to hunger and starvation, thus demonstrating the degree of food insecurity in the continent (Runge et al, 2004).

Atehnkeng (2007) indicated that the challenges in Africa affecting agriculture are diverse ranging from natural to human factors. The issues of environmental, political, economic, and climatic factors have been the main factors jeopardizing food and agriculture in Africa. Environmental factors have been the main threat to food and agriculture in Africa. Sage (2010) indicated that the environmental phenomenon in most parts of Africa is not favourable for agriculture. Most of the African nations lie in the tropics, whereby they experience dry and hot climate. This is usually unfavourable for productive and profitable agriculture. Climate in Africa has been identified to be predominantly tropical in nature. This is classified into humid temperate, humid equatorial and dry climate (Nelson, 2009). Nevertheless, localized variables and altitude usually leads to other distinct regional climates. Despite this diversity in climate, it has

been identified that the dry tropical climate is dominant in most of the regions of the continent. This is very unfavourable to agriculture following the inadequate rain as well as the high temperatures (Sulieman, 2010). Most of the African regions are facing long drought seasons and short rain seasons thus making it impossible for the cultivation of different crops. These phenomenons jointly threaten food production and agriculture in Africa. The level of soil fertility in most parts of Africa has also been devastating. As postulated by Callahan (2002), most of the regions of Africa are not favourable for agriculture due to poor soil. This is associated with the issues of soil erosion as well as poor farming methods which lead to deterioration of soil fertility. The economic and technological challenges also make it impossible for most of African farmers to adopt inorganic fertilizers and manure (Bosede, 2010). With this in mind, food production and agriculture is inhibited in Africa.

Food production in Africa has also been closely influenced by political factors. Like in many other sectors, the issues of politics and governance are very influential on the agricultural sector in the case of Africa. According to Nelson (2009), most of the African nations have unstable governments due to lack of political will and ethnicity conflict. This has led to a series of civil wars. For instance, Somalia, DRC Congo, Sudan, and Ivory Coast have been engaged in political instability. This has ended up jeopardising agriculture in the sense that farmers fear looting and destruction of products (Simms et al, 2004). The civil wars have also led to the fleeing of people from their land, thus leading to under utilisation of such land suitable for agricultural purposes. Through this process, the overall output from agriculture is reduced. The aspect of politics is also strongly related with policy making and structuring of the agricultural sector. Most of the African leaders have been identified as lacking political responsibility (Sage, 2010). This causes their reluctance in the formulation of policies and programmes that support and encourage agriculture. For instance, the issue of land policy has been deliberately politicised by the governments. This is closely influenced by corruption where many of the political leaders have been associated with grabbing of land and later leaving it under utilised (Tetty et al, 2003). Gaps in the governments' policies have also initiated careless use of land, whereby human settlement is creating strong pressure on agricultural land; this is more evident in West Africa particularly in Nigeria.

Economic barriers have also been at a high level in Africa. As depicted by Atehnkeng (2007), most of the African nations are economically poor, whereby poverty levels and unemployment are at an alarming rate (Pauw and Thurlow, 2011). The per capita incomes in most of the Africa countries are also low thus obstructing investment. The economic crisis in Africa does not only affect agriculture but all other sectors (Macaskill, 2009). In the case of agriculture, the economic backwardness of most of the nations has led to little investment in agriculture. Most of the farmers are incapacitated from acquiring the much needed capital for engaging in extensive commercial agriculture. For instance, the price of buying farm machinery among other farm inputs is very high (Simms et al, 2004). This phenomenon makes many people to engage in small scale farming which does not offer the much needed output.

The manufacture and supply of fertilizer is a great challenge too. Most of the fertilizer being used by African farmers is imported from outside the African continent, mostly from East Europe (Bosede, 2010). Kumar et al (2009) indicated that the industrial backwardness of Africa has led to the unavailability of industries to produce fertilizer. This is also associated with technological challenges as well as economic challenges. Based on this scenario, the supply and accessibility of fertilizer is a serious calamity. The prices of fertilizer are inflated, thus making it unaffordable to a large percentage of farmers. The high price of fertilizer in Africa has also been a main cause of the high cost of doing agricultural business in Africa. This makes agriculture unprofitable thus chasing out many potential investors (Liapis, 2007). The importation of fertilizer from the overseas has also led to the dumping of inorganic fertilizers from the developed nations. This has led to the deterioration of soil thus reducing farm output. Demographic elements have also been a serious threat to food and agriculture in Africa. Nevertheless, efficient analysis and planning on the current situation in African can help in countering the situation (Simms et al, 2004). This will however require a joint effort from all stakeholders as well as support from the global community.

9. THREATS TO FOOD IN ASIA

By definition, a threat is that which can cause or is regarded as a possible cause for danger (Garner, 2004). Used in this context, threat to food security in Asia refers to those

factors that pose challenges to food security and has the potential of stopping the current system from operating the way it has been. Asia like any other continent has its own challenges consisting of bottlenecks which lie beyond the boundaries of the continent. These challenges have the potential to affect the continent's current state of food security. The environment in which they have to operate is in a continual state of flux. Customers' taste change, governments change, new roles are introduced, market structure change, new technology revolutionizes production processes, etc. The continent's ability to respond and cope with these changes in the environment is one of the most important determinants of its success and ability to survive. The main external influences on the continent can be summarized as environmental forces, political and economic forces, social factors and technological factors (Molony and Smith, 2010).

The environmental factors refer to the relationship between human beings and other living things and the air, soil and water that support them (Calcott and Walls, 2000). Threats to our life supporting ecology caused principally by human activity in an industrial society are commonly referred to as pollution. Specific concerns include global warming, loss of habitat and biodiversity as well as air, water and land pollution. In Asia, the use of alternative source of energy for example the bio-fuel production has posed challenges on the environment. Bio-fuel refers to renewable or alternative source of energy that is produced from biological material. The resources required to produce this product are normally planted, this has a very negative impact on the land. The popularization of this source of energy in Asia has led to the need for more and more land to plant the resources for such production to be sustained. The biggest challenge is that these plants exhaust soil to the extent that it may not be fit for growing food crops in the long run. This is a major cause for panic, if an alternative or a corrective measure is not taken soonest, then Asia is likely to have a situation where there is no land for food production hence food insecurity in the years to come.

Another environmental disaster is climate change in Asia which has contributed a very significant portion of the world pollution. A December 2011 environmental seminar held in Durban, South Africa highlighted concerns on the environmental damage caused by this continent with specific example of China (Lybber and Stummer, 2012). The effect of this in the future is an environment with no rains and degraded land value that cannot

support agricultural products. The vegetation in most Asia countries are already suffering from the impact of global warming. This is likely to be worse since the measures taken to correct these consequences are not commensurate to the degree of damage that is increasingly being caused. The other effect of climatic conditions caused by pollution that give health experts sleepless nights is the health complications that are likely to be caused by poor quality air conditions. This will lead to a nation that is unproductive and increase dependence on the government.

Political and economic factors are also causing this continent sleepless nights. Asia has the highest level of terrorism activities being home to Al-Qaida. Such groups are usually a hindrance to development. They are a source of insecurity and discourage investors from investing in a politically volatile environment. Countries like Pakistan which is a major producer of rice could do much better if there was political stability. With rising insecurity in this continent farmers are likely to be discouraged and this will lower production and the continent may be faced by food insecurity. Secondly, the world is becoming more and more competitive, thus trade barriers and restrictions may keep potential customers off, hence making them to look for better alternatives and competitive prices elsewhere. This will lower the demand for Asian agricultural products hence lowering prices. The reduced returns in this sector will stop farmers from doing large scale farming for fear of huge loses. This finally will reduce the quantities of production and in the long run may lead to food insecurity. Economically, the China Yuan is relatively stable as compared to the US dollar; this puts the country's export at a more competitive position. The policies on agriculture has seen several reviews in Asia, this causes uncertainty on the part of farmers. Uncertainty can imply higher risk of incurring losses and this will stop large scale production (Nenci, and Pktobelli, 2008).

Continual use of fertilizer for agriculture has increased its demand and the prices have gone up making it unsustainable for the governments to continue the supply. Fertilizer is also a source of pollution, used fertilizer is swept away to rivers by rain water polluting the rivers, and this may in the long run lead to drying rivers. Some countries in Asia cannot do agriculture without using fertilizer for example China, this is because the level of soil fertility (Chalmin, 1999). Asian countries for example India have overwhelmingly high population. This high population together with the big gap between the rich and the

poor is a breeding ground for social crimes. This big gap leads to high dependency ratio on the few active members of the nation through heavy taxes that may have discouraging impact (Chu and Lee, 2000). The heavy taxes will reduce agricultural activities since the returns will be reduced. Investors will look for other alternative lucrative businesses and quit farming. This will lead to a reduction in food production and as a result increased chances of food insecurity.

Inequitable land ownership is another source of threat for food security. The rich who own big acres of land use it for commercial purposes and have a greater bargaining power. They may choose to use their land for other purposes (Chalmin, 1999). The level of farming technology should be upgraded in Asia before it becomes obsolete. The soil cannot produce naturally without the use of improved seeds and fertilizers; this if not taken care of will lead to food insecurity (Bosede, 2010). However, despite the short coming of the Asian agricultural policy and trade, it is safe from the above discussions to say that there are lot of developments in the Asian agricultural policy and trade that can be used as learning tools in Africa. The next section of the chapter focuses on these learning tools.

10. IMPLICATIONS OF ASIAN AGRICULTURAL POLICY AND TRADE FOR AFRICA

As has been highlighted earlier, the Asian policies on agriculture and trade are a true empowerment to the farmers in the continent. If adopted by African countries, there are chances of experiencing growth in this sector. Asian countries have embarked on aggressive marketing activities for their products both locally and internationally. If African countries would take this as their initiative, there would be increased demand for its products nationally and even internationally. This policy would mean bargaining or selling product to the customer with the highest bid. In African countries, there is very little effort on creating awareness especially of the farm products. The government would be in a better position to enhance this by regulation advertisement costs for agricultural activities. This can be done in several ways for example installing a media station specifically meant to promote agriculture as viable business.

Many Africa countries like Nigeria, Ghana, Kenya and Zambia are cooperating with India and China in the area of agricultural trade. They share crucial ideas such as gradually improving agricultural tools and international market support for agricultural products. Nigeria has a vested interest since its agricultural sector makes up 9 percent of GDP and the nation has vast agricultural resources (Bosede, 2010). Additionally, the agricultural sectors of Ghana, Kenya and many other African countries accounts for 20 percent or more of the labour force (Haggblade, 2007). The U.S. Department of State reported that “agribusiness... accounts for about one-third of Nigeria’s GDP” (Rezek, et al, 2011, p7). The agribusiness sector becomes even more important when it is considered that it makes up 50 percent of the many African countries’ exports (Carmody, 2009). The varying natural and human resources of Africa should be exploited as it is done in Asia in order to create the greatest possible benefit for all agricultural firms including small holder farmer participating in open trade.

Trade regulations are common in international markets. However, trade agreements have also seen an increase in frequency and depth. Agriculture has historically been an area greatly protected by both developed and developing nations. The increasing need for free trade is indicated by the increasing depth and breadth of free trade agreements. The trade agreement between the US and Europe are all representative of the possible benefits Africa and Asia could receive if trade were opened between Africa and other selected nations like China and India in the Asian continent. Although it can be argued that open markets increase a nation’s susceptibility to world-wide economic volatility, Africa’s relatively isolated past has not saved it from these troubles. In fact, Africa’s historical instability can partially be combated by economic integration with Asia and other stable international markets that will support its agricultural development. This could be achieved through inflow of foreign investments. Again, imposition of tariffs and restricting imports of agricultural products will ensure that farmers concentrate on the local production and sale. This will also ensure that the prices of local products are competitive which will in turn be very beneficial to farmers and the country at large. They will experience more returns. This is one of the policies that the Asian countries have adopted and is going a long way in ensuring that the farmers get good returns, remain motivated and prices are competitive in the international market.

This together with preferential market access if adopted should put African farmers at a better position (Katungi et al, 2011; Chalmin, 1999).

Another policy which African countries can take as a learning tool from Asia is rural development policy. This policy may result in more inter community trade. Most African countries have very poor rural infrastructural development. This has posed a major challenge to farmers in Africa. There is no ready market for their products and the cost of reaching the market is very high. Farming in Africa is also facing the challenge of unreliable weather patterns. The Asian continent has invested heavily in irrigation to cater for water needs of farmers (You et al, 2011). This should also be implemented in African countries to reduce the losses associated with lack of rains. Apart from irrigation, African countries should embrace other methods of farming that do not rely on rain water for example the greenhouse technology which is practiced widely in the Asian countries. The level of research and development in the agricultural industry is very low in most African countries. The number of citizens in the agricultural field as a career is also low. African countries cannot be compared with the Asian countries in terms of the number of agricultural research institutions. These institutions are very many in Asia and as a result agriculture is looked at as a very lucrative field worth venturing in (Hebei Rural Survey Team, 2006)

In most African countries, the rate of rural-urban migration is very high. Job opportunities are only available in the urban areas and this has resulted to overpopulation in urban centres leading to social problems for example, crimes. The lack of rural development by African countries has discouraged rural employment (Muhammad et al, 2011). The key to this problem lies with the government of African countries, if the rural areas could be developed, industries brought at the source of raw material, this could be advantageous both to the farmers and the citizens and will go a long way in reducing the urban population and creating employment opportunities for the youth. The current structure in the agricultural industry of most African countries is that, very few farmers sell their products in the international market. Most farmers' products do not even get to the major towns within the country. The small holder farmers cannot compete at the same level with the commercial farmers. The local market in most African countries is very poorly developed. The commercial farmers will produce and sell the top quality products

in the international market. There is a misconception that they will not be able to fetch the returns expected from such products locally (Fischer, 2010). African governments should learn from their Asian counterparts how to reduce the gap between the commercial farmers and small holder farmers who are mostly rural based. The key learn point to focus is on strategies to develop rural areas by setting many viable cottage industries and also how to massively develop basic infrastructure using scarce resources.

The impact of subsidy on small holder farmers in Asia is relatively positive as compared to African countries and even the United States of America. This is because the subsidy policy is highly concentrated in the rural areas where the small scale farmers are mostly found. Another reason for better benefits to the small scale farmers is because the subsidy is based on the area of land cultivated. In Asia there has been the issue concerning 'black land' which is land cultivated but is not disclosed to the authorities. This has questioned the accuracy of the Asian figures on the impact of subsidy, there are pieces of land that are cultivated but disclosure to the government is not done (FAO, 2009). Though there has been a world cry on the benefits of a subsidy on both the large commercial farmers and the small holder farmers. The African countries should continue to embrace the policy on subsidy, this will lower the production cost leading to competitive prices and higher returns to farmers. This is because in both continents subsidy has led to a modest increase in rural farmers' income. Compared to Africa, Asian rural farmers' income is much higher as put forward by FAO (2009) and this implies that the small scale farmers in Asia have benefited more. African policy makers should study and practice the Asian subsidy strategy even though the subsidy policy is faced with the challenge of withdrawal due to the insignificant role it plays in the overall output of agricultural products.

The policy on land tenure system is very poorly developed in Africa (Aruleba and Ajayi 2010; Mbote et al, 2008) and it discourages maximization of production which will increase volume of trade as well as competition. Most people concentrate on land ownership as opposed to land use. This has also negatively affected the agrarian structure in Africa. Land ownership in most African countries lies with the rich. The poor who cannot afford to buy land due to its high cost have remained to be very poor. Most African countries should adopt the policy on land tenure and agrarian structure used by

the Asian countries since this will lead to effective use of land. Another learning tool should be the domestic support to farmers by the government. Because farmers in Africa operate in a very volatile environment which is characterized by fluctuating prices, poor market access, harsh weather conditions among other challenges. They need to be supported in terms of access to affordable funds so that they remain in the business of farming and also move from subsistence farming to commercial farming which will increase volume of trade and hence the income of the farmers . This has been the practice in most Asian countries and should be a learning tool for African countries. Generally, the farmers in Asian countries operate in a much friendly environment. This is the reason for their prosperity. African countries should follow suit to encourage farmers and this will reduce poverty level in Africa and increase food security. Despite the developments in the Asian agricultural policy and trade which may be applied to Africa, there are many policy and trade reforms that need to be done in both continents in order to have food security for tomorrow's population in the two continents.

11. REFORMING AGRICULTURAL POLICY AND TRADE

In the examining some of the threats to food security in Asia, the findings reveal that that threats to food security in Asia is minimal compared to Africa. But since food security is a global concern and thus it still requires continuous research to be undertaken in various research and development institutions to come up with better farming methods and policies. There is an alarming need for countries to come up with better farming methods to guard against food insecurity. From the above mentioned threats, there is an urgent need to engage in corrective measures which should be very constructive and realistic by both Asia and Africa to avoid future consequences of such threats.

Beginning with the environmental threats in these two continents, environmental activists have been conducting tree plantation campaigns and warning different countries in the two continents to lower their levels of pollution (Calcott and Walls, 2000). If only these warns are taken positively, the result will drastically lower the consequences of global warming. There is need for these continents to come up with reforms that will lay more emphasis on land tenure and ownership. This should involve redistribution of land ownership so that the landless can also have access to land. Limiting the number of acres

that can be owned by an individual is another way of implementing land reforms in the two continents (Mbote et al, 2008). This will go a long way in encouraging all the willing and potential farmers to engage in agricultural activities. The land tenure and agrarian structure have been a bone of contention in most countries in Asia. There have been several protests by the citizens to have reforms. The current inadequate system of land tenure and ownership is blamed for the rising political wars in most Asian and Africa countries (Aruleba and Ajayi, 2010). The poor and vulnerable members of the society have been side-lined on issues of land ownership. There seems to be no one ready to come to their rescue. This calls for the need for reforms on the current land tenure and agrarian structure in these continents. There is need for such reforms for the following reasons; the unproductive land that is owned by the rich and economically empowered members will be put into more use and this will enhance food production leading to more food security, the income of small scale farmers will increase as a result of access to land, there will be poverty eradication, etc ((Bamire, 2010).

Reforms are also needed in the current trade policies. The barriers and restrictions for example high tariffs and preferential market access are a hindrance to growth, these continents have policies on trade that keep off better opportunities (Katungi et al, 2011). This in the long run will affect the demand for these products. Instead, the continents through respective governments should engage in aggressive marketing activities, join as many trade communities as possible to make it possible to have a variety of potential consumers for their products. This will make their products more marketable and competitive. It is also going to have the effect of high demand hence higher prices. This will attract more investors and the final result is more food production and security.

There is the need to reform the current focus on agricultural research and development. This is because most of the individual nations in the two continents lack adequate facilities and programmes concerning agricultural research. This has led to inefficiency in agriculture in the sense that poor selection of crops and animals for farming is used, thus leading to poor output. With this in mind, sufficient research and development facilities concerning agriculture should be established. In this process, the governments ought to be in the forefront in supporting this strategy. The main objective of these research and development programmes is to evaluate climatic change effects

alongside other environmental phenomenon affecting agriculture. With this information, the best crops and animals suitable for different regions will be identified. This will help in boosting agricultural output in the continent, thus curbing the food crisis.

The level of technology in agricultural production needs reforms. This is of more concern especially noting that the soil fertility has seriously been affected and climatic conditions are very harsh in most countries in Asia. Technology should be ahead of these negative effects so that the future consequences may be minimized. If technology could be enhanced, there would be efficiency which will result into lower costs of production. Efficiency comes with competitive prices which will be advantageous to farmers and encourage more production. The case for Africa as a continent needs more reforms than any other continent. This continent having recently suffered from serious cases of hunger in the horn of Africa should take up their reforms on agricultural policies and trade much more serious. There is a very unimpressive attitude about farming policies and activities. Instead of learning from the bitter past, it is sad to remark that most African countries can still afford to politicize such pertinent issues touching on human rights. The level of food insecurity in many African countries is just very high as can be seen in Ethiopia, Niger, Somalia, etc.

It is high time the governments in African countries realized that the only solution to food security is to heavily concentrate on coming up with workable policies. Most African leaders have the tendency of coming up with policies that are only good on paper. It takes ages for them to implement such reforms (Mbote et al, 2008). In Africa, with a specific example of Kenya, there are very big acres of land unutilized. There are internally displaced persons who have never been resettled since the post poll violence and many died at that time due to lack of food. Against all these problems, there is very little that has been done to save the situation. There is need for the government to lead the way. Places like Turkana in Kenya are very sparsely populated. There are large parcels of land lying idle. This calls for the government to take up the initiative and undertake irrigation in such areas so that the farmers can engage in farming. This will enable them get food and to stop deaths caused by hunger (Molony and Smith, 2010). Similar to Asia, African governments should undertake reforms on land tenure and ownership. To cite Kenya again as an example, there is existing land without owners along the coastal strip

and the government has put in place reforms to reclaim such land and redistribute it to the squatters. This would be a move in the right direction and it will to a great extent, will solve the problem of land ownership within this area.

African countries have very low levels of technological development in the agricultural field. This has seriously eaten into their agricultural productive potential. There is total reliance on rain water for good harvest and with the effects of pollution catching up with the world's climatic conditions; natural methods of farming have become out of date. The governments need to encourage the use of technology in farming by offering domestic support for acquiring farming equipment that are in line with modern technology. This can be done by financing the acquisition of such equipment at low interest rates with flexible repayment terms. Technology will instantly lead to increased production and hence more food security. It will also help to reduce the rate of social crime as it will offer job opportunities to most young people (Mandere et al, 2011). Rural development should be given a priority to enable farmers to access market for their products. The government can also be a major consumer of farmers' products in cases where there is no ready market in order to guard against losses. There is a great possibility that if the suggested reforms are implemented the tendency to have food security for the people of tomorrow is achievable. The next section of the chapter presents its conclusion.

12. CONCLUSION

Generally, agriculture forms the backbone of most countries within the Asian and African continents. It contributes a significant percentage to these continents Gross Domestic Product (GDP). In both Africa and Asia, domestic support measures are a part of agricultural history. However, the global face of agriculture is changing and current individual government's policies in the two continents must accept that international trade is a standard practice and an integral part of business. The need for the governments to accept the growing importance of the international market for agricultural goods (both raw and processed) is crucial to the wellbeing of agribusinesses and attraction of investments. The current agricultural and trade policies should be reviewed to be in line with major development goals. The policies on trade should be reformed, for

example, imposition of high tariffs and preferential markets accesses are hindrances to development and growth, and should be reformed. Also, some of the policies discourage investors who would wish to operate in a flexible trading environment with minimum trade barriers. This has led to low activity levels in the sector and even affected output. The trade policies have also kept off many international organizations that may have intentions of offering assistance in the form of loans or aids. If a review is made on the trade policies, there is likelihood to have more competitive trade and the smallholder farmers will be at a better position to negotiate trading terms. The ultimate requirement is to have provision of efficient and sustainable foreign trade policies concerning agricultural commodities. This will help in the protection of the local farmers from unfair competition. Good trade and food policies will also ensure that agricultural products are not exported in periods of shortages. Through establishment of these policies, the local producers will be protected thus enhancing their morale to produce more.

The policy on subsidies should also be reviewed based on its implementation challenges and possible impacts on inter countries trading. The aspect of overproduction caused by subsidy needs to be attended to so that markets are not oversaturated. Generally, overproduction has a negative impact on the price levels of agricultural products because it lowers the returns which may in the long run discourage farmers and cause distortions in the level of trade. Though, there have been proposals to withdraw policy on agricultural subsidy, the pros and cons of this action should be critically analyzed before such an action is taken. This is because it can bring food production or generally agricultural activities to a standstill, which may result into food insecurity. Secondly, the current market structure for some agricultural products is still facing challenges of continuous fluctuation in prices, high production costs, etc. and as a result, some farmers may not be able to continue operations should the subsidy be withdrawn.

The reforms on land tenure, land ownership and agrarian structure should take a centre stage and should not be politicized. This is a major concern as individuals die of hunger and some absentee landlords are sitting on large acres of land which does not result in the maximization of agricultural trading business. In implementing these reforms, caution should be taken to ensure that the reforms do not result into wars and conflicts that might disrupt trade and other economic activities. What is important is to

understand that the varying natural and human resources of the two continents should be exploited to create the greatest possible benefits for all farmers participating in agricultural trade. Environmental degradation should be avoided at all cost and the industries engaging in pollution should be made to bare the social costs associated with pollution, this can form part of trade terms. The Asian and African governments should be ready and willing to welcome more technological advancement in the agribusiness which will boost trade. They should encourage the use of technology by the local farmers which will improve output and hence increase volume of trade. If the stated reforms are successfully implemented, there is no doubt these two continents would record substantial volume of trade and also may not experience food insecurity in the future.

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