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Agriculture and Development in Angola: An Assessment of Agricultural Policy Since the End of The Civil War

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Masters in Economics

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To Miriam, my inspiration

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Abstract

This dissertation has the goal to answer the following research question: “What were the outcomes of the Angolan agricultural policies since the end of the civil war?”. This theme has a significant importance because it will help to understand how Angolan agricultural activity developed after the war, in an oil dependency context. Data for this dissertation was collected by government plans that include policies and goals for agriculture and reports concerning agricultural performance as well as some information related to agricultural credit and GDP structure published by the Angolan National Bank. It will be possible to notice that the theoretical path to design agricultural policies in Angola was made in a correct way. Nonetheless, results give the sensation that theory was not enough. Agricultural activity in Angola showed difficulty to develop and the main causes include lack of trained human resources, technology, research and credit stimulus to farmers. In a country with significant agriculture potential, it seems to be essential to analyse a better way to put policies in practice.

Keywords: Angola, agriculture, Agricultural Policy, Sustainable Development

Resumo

Esta dissertação tem o objetivo de responder à seguinte questão de investigação: “Quais foram os resultados das políticas agrícolas angolanas desde o fim da guerra civil?”. Este tema tem uma importância significativa na medida em que ajudará a perceber como é que a atividade agrícola angolana se desenvolveu depois da guerra, num contexto de dependência petrolífera. Os dados para esta dissertação foram obtidos através de planos governamentais que incluem políticas e objetivos para a agricultura e relatórios sobre a performance agrícola bem como alguma informação relativa ao crédito agrícola e estrutura do PIB publicada pelo Banco Nacional de Angola. Será possível perceber que o caminho teórico usado para desenhar as políticas agrícolas em Angola foi feito corretamente. Contudo, os resultados dão a sensação de que a teoria não foi suficiente. A atividade agrícola em Angola demonstrou dificuldade em desenvolver e as principais causas incluem falta de recursos humanos especializados, tecnologia, investigação e estímulos de crédito aos agricultores. Num país com significante potencial agrícola, parece ser essencial analisar uma melhor forma to colocar as políticas em prática.

Palavras-chave: Angola, Agricultura, Políticas Agrícolas, Desenvolvimento Sustentável

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1. Introduction

The following research explores the evolution of the agricultural activities in Angola after the end of the civil war in 2002. This same war put the country in a very sensible situation. From massive migrations from the country interior to the cities that were safer or to neighbour countries to the destruction of vital infrastructures for the population. Before this war, that was preceded by an Independence war that lead to the country's liberation from the Portuguese domination, agriculture played an essential role in the economy of the colony. The land has the potential to produce large quantities of food that can help to solve deep starvation problems that existed just after the end of the war. As the country had to be rebuilt almost from zero, people's primary needs should be the priority and food supply to returned migrants or people which have seen their villages destroyed should have been a clear priority to assure a sustainable development. As it is going to be discussed ahead, agriculture is defended by several authors as an engine of development for developing countries. It should be easy to imagine that in a country that is freshly coming from a war, food products supply tends to be low and not enough to fulfil population basic needs and the prices tend to be high which jeopardizes most of the people's possibilities to acquire food.

Agriculture also plays an important role when it comes to economic diversification. This an activity that can generate substantial employment directly and indirectly, for example the creation of fertilizer manufactures, transportation firms, warehouses, among others. It is an activity that contributes to assure food security but it can also serve exports, when production starts to create surpluses. This fact is another contribution to develop the economy as agricultural products can be exported as they are collected or can be transformed before being exported, creating opportunities for the manufacture activity.

Having this context in mind, it seems to be significantly important to access how Angolan agriculture preformed, by analysing the policies put in practice and the results that came from these same policies in order to discuss their effectiveness. Another fact that can enhance the relevance of this study, is that the economic performance of Angola was mainly driven by the oil production since the end of the civil war. Therefore, in a country sustained by high rents originated by the oil production, it is important to analyse how this economic prosperity really influenced other economic activities in the country, particularly agriculture.

My motivation to study this theme comes from, firstly, growing up in Angola before coming to Portugal to the university, which made me want to explore a theme related to this country and, secondly, having significant curiosity on agriculture and how this activity influences countries societies and economies, since food supply is a question that is indispensable for any country. Trying to understand how economy evolved in Angola during these years of significant oil rents and trying to access if the population could actually benefit from this positive context, is something that in my opinion is worth exploring and may help next Angolan generations to understand the path followed by their country.

The research question to which this study tries to answer is: "What were the outcomes of the Angolan agricultural policies since the end of the civil war?". The goals seek in this research are a detailed analysis of agricultural policies in this country and how they changed along the years until nowadays and also the evaluation and discussion of the results of these policies, taking into account several values, such as production, investment, seeded area and harvested areas, between others. The methodology of this paper is influenced by the previously mentioned goals. In that part it will be analysed agricultural plans that contain agricultural policies and goals for periods of five years and also a more general plan designed by the Planning Ministry with a large period scope that includes several activities from where agriculture is one of them. The five-year plans published by the Agriculture Ministry will be analysed in detail and will also be compared with the goals set in the large period plan. For each midterm plan there will be a discussion taking into account the results verified in the end of each period of analysis.

This research will be structured with a first part that includes two literature review chapters. The first literature review chapter concerns the theme of agriculture and development in Africa and will discuss the importance of agriculture for development, agricultural policies and then it will analyse these aspects with the African reality and the importance of food security. The second literature review chapter will explain the effects of the civil war that took place in Angola for the society, economy and agriculture and analyse what was already written about the theme that will be analysed with this research. The second part includes the research itself, which consists in a documental analysis of the documents mentioned before with a comparison made between the goals set by the plans made by policy makers and the actual results. Then a third part will present a chapter dedicated to policy suggestions that result from the main problems detected in the research.

2. Agriculture and Development in Africa

2.1. The role of agriculture for development

A country's development may depend on several factors and several economic sectors. For some developing countries feeding the population in a proper way is still a structural issue for their development. This is where the agricultural sector appears as one of the fundamental areas to invest in order to guarantee a better nutrition for the population. It is clear that not every developing country has soil or weather conditions to satisfy most of its people feeding needs, but for the ones with those conditions agriculture investment may be a major solution for some major development problems.

Arínquez and Stamoulis (2007) set up an analysis of development due to agriculture by the perspective of production linkages. Production linkages consist in connections between one sector on the economy and other sectors which allow the economic dynamic to grow. These authors divide this concept in backward and forward linkages. Some examples for backward linkages in agriculture are the animal food industries or the fertilizers industries, and for forward linkages there are the food processing industries or also hotels and restaurants. There are some interesting results obtained by the authors. Firstly, as GDP per capita raises, the share of agriculture gets lower as it was expected by the authors. However, the real surprising results are related to the linkages evolution. The study found that backward linkages are much higher at lower levels of development and forward ones are higher at medium levels. As the authors refer, "as countries are in their earlier stages of development, agriculture has a higher effect in national non-agricultural income" (p. 21). This conclusion is very important for this research because it strengthens the perspective that developing countries investment in agriculture is a robust strategy to initiate a path to development, even if in the future agriculture will replaced by other sectors that may contribute more for output growth. This sector does not only create richness for itself, but it also creates economic growth for other sectors that employ more workers which together creates an ascending economic dynamic for the country that needs to develop. Of course, growth may not mean development as sometimes these two concepts are understood as the same. If growth does not cause improvement in distribution income it is not a pro-poor growth, and this question is of the most importance in the case of developing countries. The authors highlight four factors that justify that agriculture growth is a pro-poor growth:

- Direct increase of small farmers income as the agricultural expansion leads to benefits for this kind of farmers but only when land distribution is fair.
- Food price reduction as the agricultural products supply increase. This context promotes the raise of the real income of the poor once food is the major good in the consumption basket.
- Increase in non-farming rural activities income because in rural regions with reduced connections with urbanizations agriculture is the main activity, hence other activities depend on this sector's growth.
- Raise of employment and wages of the unskilled once agriculture is mostly an activity that demands unskilled intensive labour. If agriculture grows, the demand for unskilled labour will also grow, therefore the unskilled wages will grow in rural areas which will pressure urban unskilled labour wages to increase.

From the facts presented above there is a question that remains: What happens to agriculture when a certain level of development is reached? This sector importance is replaced by other sectors such as manufactures. However, Diao et. al. (2007) highlighted a problem with this way of thinking. If productivity in agriculture gets stagnated and there is a rise in the share of non-agricultural employment, then the future will be characterised by a food shortage. Adding to this situation a context of population growth, the solution happens to be an increase in imports in order to satisfy food needs in a country. Taking this into account, food prices would go up, poverty would increase, and the trade of balance would deteriorate from this need to import food. Diao et. al. (2007) recalled the phenomenon of the green revolution that happened in Asia in the late 1960s and early 1970s, where there were made efforts to apply technological evolution to the agricultural sector in order to tackle constraints relative to land a labour by adapting country's ecological conditions to these technologies. This effort promoted a continued growth in a sector that seemed to be destinated to stagnation and replacement by industry. This perspective allows to understand that agriculture can in fact grow even if a country reaches a certain level of development and this growth is fundamental to sustain a proper development path. However, Diao et. al. (2007) and Arínquez and Stamoulis (2007) converge into the opinion that agriculture growth is as important as the linkages that are created between this sector and non-agricultural sectors and hence, agricultural development cannot be analysed and promoted independently of other associated sectors because together they allow the economic growth to be broader and more robust. This interdependence between sectors adds some complexity to the theme but in the other hand allows to enhance that agriculture plays a

serious role when it comes to development. But another question raises: If technology is applied to agriculture to face land and labour constraints, should not labour reduce as productivity raises? Diao et. al. (2007) explains that even with labour productivity raise with the introduction of new technology, this leads to a necessity of labour to use this technology and promotes the requirement of intermediate inputs that have to exist to support the modern farming processes. Furthermore, these authors highlighted that this growth in agriculture promoted by technology will raise farmers' incomes and they may use these incomes to manage their risk and as a consequence they invest in non-agricultural activities, creating more employment, and to consume more in local markets making them grow, the so-called consumption linkages.

2.2. Agricultural Policies

As in any economic activity, there should exist guidance. The guidance normally comes in form of policy. Agriculture is no exception because it is important to know the path to follow in order to develop the activity taking into account the reality of a country and its resources and limitations.

In this section of the research the goal is to analyse how agricultural activities can evolve by applying policies to help this evolution. In sub-Saharan African countries, the policy orientation towards agriculture development have been weak and let this region fall behind every other region where agriculture was set as a priority. According to Ellis (1992), agriculture policies have several objectives, form which he highlights "political and social stability, integration of the national economy, increased food security, increased export earnings, prevention of malnutrition, economic growth, employment generation and so on" (p. 18). Some aspects such as better food security, prevention of malnutrition and employment generation will be discussed ahead as important factors to achieve human development, therefore this seems to be an important path to follow. This author also refers that these policies can be divided in three categories according to its spatial scope, one they can be local, provincial, or nationwide, which means that policies can be defined in a general way for a country but there is a need to understand that regulations should be analysed and elaborated locally. Ellis (1992) also refers to the problem of specific constraints when policies are defined. In case of agriculture there may exist several constraints for example a reduced number of roads to connect rural and urban areas to allow a more efficient food trade. In this case policy makers should act on the most

restrictive constraints for its country's reality. As the author recalls, welfare economists defend that main constraints can be generalized in two factors: resource availability and current technology. The conclusion is that policies should focus on technology acceleration once this allows higher productivity with the same resources. In the case of agriculture, higher production with the same land area, and the capacity to use resources that so far have not been considered suitable to use, agriculturally speaking for example land that was not considered fertile for some products can be used to produce other products. This kind of policies may accelerate technology in a direct way, by focusing on research activities, or in a indirect way by focusing in education and formation. Focusing on education and formation seems to be the best approach for sub-Saharan African countries since research implies strong research institutions that currently do not exist in this region. Education can lead farmers to enhance their knowledge, allowing them to produce more from their land by using new techniques and by having higher capacities to solve problems related to this activity. Having the importance of agricultural policies in mind and the other themes discussed previously, the next step concerns into analysing what are actually these policies and if there is a way to compile them into categories. According to Ellis (1992) there 8 categories of important agricultural policies:

Price Policy – with the aim to influence price levels and stability of farmers outputs.

- Marketing Policy – related to the path between farmers and final consumers or exports.
- Input Policy – related to influence prices and also systems of delivery of inputs needed for the agricultural activity, for example fertilizers.
- Credit Policy – mainly related to grant access to credit to allow farmers to buy inputs needed for their activity as well as to support investment.
- Mechanisation Policy – related to the influence of the pace and the direction of the adoption of new types of mechanic technology by the farmers.
- Land Reform Policy – related to alteration of land ownership distribution or condition of access to it.
- Research Policy – related to influence the creation and distribution of new technology to increase productivity in the sector.
- Irrigation Policy – related to the creation of conditions to provide water supply to farmers, mainly by building infrastructures.

Having this categorization in mind, the aim now is to find some examples to include inside these categories. Townsend (1999) may help to fulfil this task as he enumerates several types

of agricultural policies and their effectiveness with a special focus on the sub-Saharan African reality. Price stabilization policies may be the clearest policies to include in price policy category. By setting a fixed price, policy makers aim to counter the effects of market fluctuations in order to give farmers a more stable environment to trade their goods. However, according to Townsend (1999) this policy seems to be weakly efficient once "more stable prices do not appear to have outweighed the costs of the lower prices offered under the stabilization programmes" (p. 21). Transportation problem is also highlighted by this author, who refers that the problem resides not only in the lack of roads but also in their quality, and this transportation condition directly affect farmer capacity to earn properly from their products. Policies that improve transportation seem to be fundamental for this sector evolution and can be included in the category of marketing policy once it facilitates the connection between farmers and final consumers. Input policies include several examples, but one of the most important has to be, has the author refers, the lack of electricity supply in rural areas. Even if the production does not depend on artificial irrigation this input still is of the most importance for every economic activity nowadays. Without proper electricity supply, for example, producers cannot guarantee the storage of more sensitive products. This reality implies that producers have to buy power generators to keep producing which increases their costs. Facilitating capital access through policies has also its importance as Townsend (1999) defends because the entry in some market supply chains may require high costs. Mechanisation and research policies can be included in the previous discussed theme of technological accelerating policies stated by Ellis (1992) which allow agriculture to be more productive through, in this case, new machinery and new techniques. Recalling input policies, Townsend (1999) analyses with more detail the question of fertilizers, important inputs to improve farmers production. Fertilizers act like complementary inputs to agriculture and directly affect its productivity and prices. Fertilizers price changes are a crucial factor for agriculture activity, therefore if its prices raise the author defends that if policy makers do not act properly agriculture will suffer and the solution may be to subsidize it. Another issue is the volume traded and transportation since African countries import small amounts of fertilizers because local demand is not consistent and storage investment is low, reducing negotiation power leading to high transportations costs that get even higher because of weak roads quality. Tariffs and trade control of fertilizers are also factors that make prices rise constituting another barrier for farmers, hence abolishing these measures should be a great incentive. The liberalization of the market allowed private fertilizer traders to enter the countries, but Townsend (1999) refers that the existence of parastatal institutions that still dominate fertilizers trade is a main constraint for a proper competition market. With low

conditions to distribute fertilizers, sub-Saharan Africa receives significant amounts of fertilizers aid that has its value, but this aid should be temporary until the region achieves capacity to develop an efficient fertilizers market by adopting the right policies, and this kind of aid inhibits the formation of the aimed efficient markets.

There are also policies that should be considered that are not directly related to the agricultural sector. Townsend (1999) refers that there is room to improve agricultural incentives by focusing on the macroeconomic environment and trade and market access. Considering the macroeconomic environment, the author defends that policies that enhance macroeconomic stability will have a positive effect on investors' confidence. Another aspect of this topic is the need to improve credibility on the institutional framework so that rules become also credible allowing the private sector to feel safer about their investment projects in the country. Trade and market access policies are related to some important topics. First, the author reveals the importance to play a more important role in foreign markets in order to achieve a stronger negotiation power. This power should be achieved by, for example, enhancing regional integration, the SADC in the case of Angola, or by setting international sanitary and phytosanitary standards to export products. Second, there is a need to reduce import tariffs, mainly for intermediate inputs that are decisive to develop agricultural activities, such as machinery. Third, it is important to delineate a plan to handle with food prices fluctuations in the international markets by, for example, creating a prudent monetary and fiscal policy or diversify the exportations so one good price fluctuation can be balanced by other products stability. Finally, in this trade and market access policies there is the question of strengthening regional integration. This process will allow countries to trade higher volumes of products which implies better prices to import intermediate products, for example fertilizers that were discussed above, allowing the private sector to grow.

It seems to be quite simple to apply some policies and expect to have positive outcomes from them. However, there is a complex environment in which policies are applied. Policies should be applied taking into account the social and economic context in which a country is included. Binswanger and Deininger (1997) help to understand this complex environment. The authors created a map that allows an understanding of the dynamics that occur in a country and how policies affect it (Figure 1). In the centre there is the country. Exogenous influences are taken into account like shocks, technology, ideas and opportunities with other countries. These external influences can change abruptly the economic dynamic in a certain country, region or even the world. In this map, the variables that need to be explained are the outcomes which include policy outcomes, economic outcomes and material conditions. These outcomes result

from the use of models, that are static economic models, accumulation models, behavioural theories and political decision models which include policy making. These models take into account the external influences and try to analyse what are the better decisions to make in order to maximise positive outcomes. These outcomes are in reality what is important to analyse after putting policies in practice, once they are directly related to the levels of growth and development of a country. The map created by the authors shows the complex connection between external influences, models and the outcomes. Issues as the political environment, that in Angola is characterized by an oligarchy based on oil rents, the importance of regional integration to get higher power to negotiate and the role that technology has in development have already been discussed and it is clear that every factor is determinant to create effective policies, in this case agricultural policies, to develop a country. Therefore, policies should be considered as part of a bigger environment. Each country may develop better with certain types of policies. The identity of a country is fundamental to create a proper strategy of policy making.

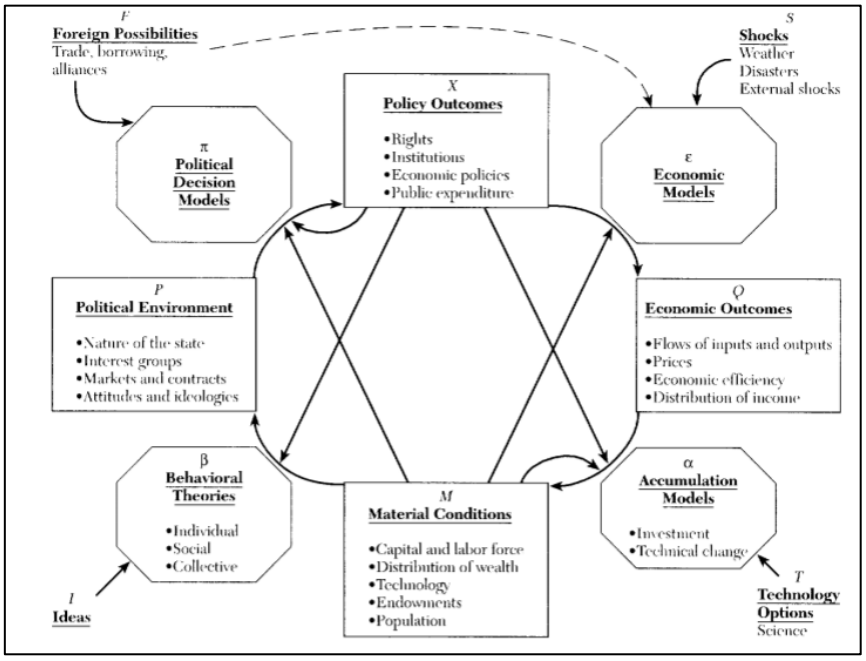

Figure 2.1. - Policy Map. Source: Biswanger and Deininger

2.3. The African perspective of Agriculture and Development

Now that the importance of agriculture has been elaborated above, it is important in this research to focus on the African agricultural reality in order to understand a more specific context where Angola is located. Africa has several countries that are significant rich in natural resources such as oil and mineral resources. Angola is a case of an oil rich country and the analysis of the dynamic of agriculture may be strongly influenced by this condition. Diao et. al. (2007) refer that the neoclassical trade theory defends that "it is plausible for resource-rich countries in Africa to export abundant non-agricultural natural resources, such as oil and minerals, and import agricultural goods to meet their domestic demand" (p.13). However, these authors enumerate some problems in this way of thinking. Firstly, it is important to highlight a short-term issue that comes from this theory, that is the high transportation costs of food inside the African continent. This fact implies that even if food can be imported at low prices, its price to the final consumer will substantially increase. This is a constraint for poor people, and that is why producing locally remains the most sustainable option. Another important constraint to refer is the unbalanced income distribution in this resource rich countries. Angola is no exception in this case as it created an oligarchy based on oil rents built by individuals close to the leading party, which accumulated the majority of the oil revenues leaving the most part of the population apart from this income distribution (Oliveira, 2015). A final issue that shows the limits of oil dependence, is the fact that the extraction and exporting of oil happens to be a low labour demand activity and also has a low capacity to create links with the rest of the economy in order to promote more dynamism and a sustainable growth. Nowadays the world economy lives in a context of trade liberalization and globalization which means that markets demand for high-value and high-quality goods. This fact may be a problem for small farmers as their capacity to become high-value producers is limited according to its size. As African agricultural sector is constituted mainly by small farmers (NEPAD, 2013) it is possible that a new problem is showing up for this continent. However, Diao et. al. (2007) defend that this reality is more problematic for more developed countries where there is a trend to a transition to bigger farms and a stronger urbanization pressure. As this transition takes some generations to happen, African agriculture reality may be safe from this issue, but the authors refer that some actions should be made in order to fight this new trade context. Both public and private institutions should help small farm owners by investing in technologic education, in infrastructures (mainly transportation) and in connections between this farmers and new market chains.

2.4. The Importance of Food Security

The United Nations Development Programme (UNDP) published the African Human Development Report with the title "Towards a Food Secure Future" in 2012. The following part of this research will proceed to an analysis of this report and link the food security issue with the role of agriculture to solve it. First, the report defines food security as the ability to consistently acquire enough calories and nutrients for a healthy and productive life. One of the main ideas of this UNDP report is that "sustainable increases in agricultural productivity and better nutrition are the drivers of food-secure growth and human development" (p. 1), reinforcing the important role of agriculture in a country development as it was discussed above. Another positive point of this report is the focus given to the sub-Saharan Africa reality in which Angola is located. Some arguments used in this report coincide with ideas that have been showed before, defending that agriculture investment leads to more food availability, reduction of food prices and the income raise of small farmers. As the arguments do not contrast with the previous authors, the following analysis will keep a specific focus on the question of food security and its importance to development. Food insecurity causes malnutrition which is a constraint for human development. People with malnutrition loose work and learn capacities, by becoming less productive and this problem starts even before a child is born in the gestation time. Directly, the economy of country suffers by food insecurity once it faces high health costs related to hunger and malnutrition diseases, low productivity from workers, absenteeism, and low returns from education. This report highlights that not only food security causes human development as the opposite also happens. More developed countries have higher educated and healthier population. Well educated farmers can be more productive once they have a better knowledge of their activity and if healthy their productivity raises even more. These facts allow agriculture to be also more productive, ensuring more food availability hence reducing risk of food insecurity.

Population growth in this continent remains a considerable challenge. Africa's agriculture production has been raising in the last years but food consumption has been raising at an even higher pace as consequence of population growth. Population in sub-Saharan Africa went from 186 million to 856 million people between 1950 and 2010 (2,5% average annual rate) and will be the region with highest growth rate for some decades in the world. If population keeps growing at high rates, the food security issue will be more difficult to deal with if countries do not consider food availability as a main priority. According to the UNDP report in analysis,

Africa's suitable rainfed land for agriculture is of 400 million hectares, but only one half of it is in use, and this is only a part of land that does not need to be artificially irrigated. It is clear that the continent has potential but what is failing? The UNDP report considers that one of the main problems in Africa consists in weak policies to turn the food insecurity page. First, it goes back to the independence years in Africa where countries became free from colonizers domain. The trend in the following years was the abandon of agriculture, that was seen as low productive sector that didn't connect with the ideas of modernization. Therefore, resources shifted from agriculture to manufactures. Then there is the question of gender inequality that is a serious constraint for food production because women have limited access to land, and it is proven that their farming productivity is at least the same as men's productivity. This limited access by the female gender puts in danger a significant part of children's nutrition. Another problem is the marginalization of rural areas, which leads to low infrastructure investments, mainly in the transportation sector that is fundamental for food trade in these areas. However, there are also external threats to sub-Saharan African agriculture development. The report refers three main threats and those are the agriculture subsidies in developed countries, the increasing production of biofuels and, with no surprise, the climate change. Agriculture subsidies in developed countries constitute a threat because this kind of incentives let these states dominate world food trade augmenting even more the difficulty of sub-Saharan African countries to develop their agriculture sector as the price competition is quite impossible to reach. The problem with biofuel production comes mainly from the corn biofuel once its carbon dioxide emission is significantly low. This fact causes a higher demand for this cereal (that is one of the most consumed cereal in the world, being an important feeding basis for a significant part of the world's population) which may easily drive its price up. In addition, as corn turns to be a suitable energy source, biofuel production can start to receive subsidies which could transfer the majority of this cereal production to biofuel production, neglecting its importance as a food product. Finally, climate change and its extreme weather conditions that negatively affect agriculture is clearly another important threat to take into account as a main issue for this sector in this region.

To sum up, development has to be separated from growth as different concepts. However, growth can be a cause of development if the right decisions are made. Agriculture in sub-Saharan Africa is clearly a main solution to achieve development taking into account evidence shown above and its high potential to develop this economic sector. Although there are some difficult threats to overpass, this sector can push Africa forward and give its people better

conditions and better future perspectives. Policy decisions must become more assertive and focused on this sector and the design of proper policy decisions in Sub-Saharan Africa can lead this region to achieve a successful path to develop agriculture.

3. The Civil War Effects in Angola and its Agriculture

3.1. Angolan Agricultural Context After the Civil War

According to NEPAD and FAO (2005) Angola is located in the north–western part of Southern Africa being the fifth largest country in terms of size in that region with an area of 1 246 700 km^2. It has an Atlantic coastline measuring about 1,659 km and a land border of 4,837 km in length. From its 124 million of hectares, 35 million consist in arable land which roughly represents 28% of its total surface. In 2005, close to the end of the civil war (2002), from this arable surface 30 million of hectares were still virgin. NEPAD and FAO report (2005) highlights that there are three main agro-ecological zones in the country, being cassava the most predominant in the north, maize in the central highlands and millet and sorghum in dry southern zones. It is estimated that by 2005 80% of the total food crop production was in the hands of traditional families that practiced the agricultural activity to fulfil their own food needs, using small surpluses to trade locally. Medium farmers accounted for 18% of the production and the rest 2% was in the hand of large farmers. With a large area of fertile soils, it is not difficult to access that agricultural activity has a high potential in the country. This potential may not only be seen as an economic opportunity but mainly as the main path to improve people life quality as the literature analysis have shown above. In 2002 FAOSTAT indicates an estimation that almost 48% of the Angolan population lived in rural areas and from the total population the prevalence of undernourishment in the 2002 to 2004 period reached 58.7%. Taking into account that half of the population lived in rural areas and that the majority of them, around 90%, worked in agriculture (Angolan Planning Ministry, 2007) it is clear that an efficient way to tackle the undernourishment situation should be to invest in agriculture, by creating conditions for the rural population to improve their productivity.

Although there is a clear potential for Angolan agriculture, the long civil war left significant obstacles in the way achieve success with this activity. In May 2002, 3 months after the end of the war, there were 4.01 million notified Angolan refugees, corresponding to one third of the

total population (Angolan Planning Ministry, 2007). This important fact influences the dynamics to revive the agricultural sector once these people should first be replaced in their communities with proper living conditions and only after that it would be possible to think about using their labour in agriculture. Another major issue to highlight is the transportation conditions in the country as consequence of the war. NEPAD and FAO (2005) estimated that in 2005 around 80% of the Angolan roads were in bad conditions or had no conditions at all to be used. Due to the war, the railway system is also mostly destroyed and unable to be used properly and only some short distances can be covered by train. As the literature above has shown this is a main obstacle for the agriculture activity once transportation assures the efficiency of surpluses trade between the rural areas and the main villages and cities in the country, and the better the transportation conditions the cheaper the goods to be sold in the markets which allow national producers to become competitive. The Angolan Planning Ministry (2007) mention some other problems more directed to the agricultural activity such as the high rain dependence of the crops and its instability and irregular distribution, lack of technical assistance and credit access, lack of production factors and tools making agriculture a very rudimentary activity, lack of first need goods. All of these factors added up turn into a major problem that is low productivity.

Another major problem that deserves a proper analysis is the high oil dependence of the economy. The oil sector was the only one that has not suffered massive consequences from the war. As Oliveira (2015) explained, this was the only sector that experienced a continuous progressive path since the independence in 1975. This was a sector where technical labour has never left the country, as it happened for instance with agriculture. With most of the oil extraction being made at the ocean with high military protection and high rents that were generated by this activity, the oil sector was set as a priority to the Angolan government to keep stability. Internal stability was guaranteed with income distribution to the closer power circles and external stability was secured by financing the war efforts with the oil rents. Therefore, by the end of the war, Angola was a country that was too used to have oil extraction as the main and even the only significant sector of the economy. This fact can be corroborated by the GDP structure in 2002 where oil and gas were responsible for 49.5% of total Angolan GDP, being followed by services with 26.6% and appearing in third place there was agriculture with 9.2% weight on GDP (Angolan Planning Ministry, 2007). This dependence trend with high rents for the top social classes is a clear obstacle when it comes to rebuild a country by trying to diversify the economy.

3.2. The end of a long civil war as a starting point to revive agriculture

Bowen and Steinberg (2003) highlight the main challenges that Angola would face to revive its agricultural sector after the peace achievement in 2002. There were almost three decades of a violent civil war between the ruling party in the government, the MPLA, and the opposition party, the UNITA, that had its own army. The end of the conflict was only the beginning of a new country that was not used to be at peace for a long time and as an independent country. As the authors refer, this conflict led to several problems in the country such as a huge amount of poverty along the population, the mass migration of the people, mainly from the interior where agriculture had its best production levels and the destruction of infrastructures. Thus, this situation led to the abandon of the agricultural sector in the country. Bowen and Steinberg (2003) earlier then Kyle (2010) and closer to the conflict memories set a group of urgent measures to help develop the agricultural sector. The authors first defend the need to use new seeds varieties in order to achieve better productivity levels, mainly in the Central Planalto where soil fertility as only medium levels. The authors also alert to an issue also defended by Kyle (2010) that is the need to create efficient markets that benefit small farmers helping them selling their surpluses, but in addition they highlight that this supply chains were at the time dominated by a small commercial elite that had the objective of eliminating potential competition. Therefore, the liberalization of food markets should be a priority policy. The authors alert that there were several constraints for rural population caused by the war such as the lack of livestock to help as traction assets which enhances the lack of labour needed to balance it once labour becomes more intensive when traction assets do not exist. On the other hand, the end of the conflict brought obvious benefits from which the authors highlight the free circulation of goods and people, the ability to exploit fertile areas that are now safe and the no longer need to migrate to run from conflict zones.

3.3. Angolan agricultural policies and results: the current state of literature

The analysis and assessment of Angolan agricultural policies is an under-researched topic. The most significant work that I was able to identify was a paper by Kyle (2010). This is an

interesting work as he analyses the state of the Angolan economy, with a focus on the agricultural sector, and sets some possible policies to put in practice given the country's reality.

Firstly, the author emphasizes that agricultural underdevelopment in Angola is mainly a consequence from its oil dependence. The main problem caused by this dependence is characterized by the Dutch Disease phenomenon, which implies that real exchange rates follow a path of constant appreciation, due to oil rents, and this fact leads to an increase in imports resulting in a loss of capacity to compete by domestic sectors. This could be assumed as a minor problem because if there is capacity to import cheaper than it should be the best option. The issue here is that it is indeed cheaper to import, but this is only an advantage for people living mainly in the capital, Luanda. For the people living in the rural areas, from which a significant part works in agriculture, this context is a problem once their production is not stimulated to increase and hence their incomes stay stagnated or may even disappear and direct the small agriculture sector of Angola to a destiny of lack of capacity to compete in its own country. With agriculture as an important sector to solve poverty problems, this oil dependence reality, even if very attractive in terms of easy rents, is not sustainable for Angolan development. Adding to this, Kyle (2010) highlights an important issue, that is the fact that oil availability will decrease in the next decades in Angola, putting in danger this fragile economy if there is no significant effort to diversify the economy when this resource production starts to fall. Another problem of maintaining the Dutch Disease as a reality in Angola is exactly what is happening now with the oil prices that started to fall since 2014. With this decrease of oil price, Angolan main income generator became inefficient to keep the economy healthy and the problems that have been hidden by this resource started to emerge in a country marked by high income differences and several social fragilities.

Kyle (2010) suggests a set of policies to be adopted and relates them with the Angolan reality. He divides the policies in three categories: (1) policies that limit oil revenue caused distortions, (2) policies that limit the effect of distortion in agriculture and (3) policies to stimulate demand in rural economy.

In the first category, the author mentions three policies, being the first the limitation of the quantity of oil pumped out from the sources. This measure would act to limit the inflows of foreign incomes directly affecting the real exchange rate leading to a higher capacity of the domestic market to compete with imports. Another policy inside this category is called the Norwegian option which consists in saving money out of the domestic economy, through a

sovereign fund, resulting again in less pressure to the real exchange rate. These two first mentioned options seem interesting and effective to fight the Dutch Disease once they prevent the real exchange rate appreciation, acting has incentives to domestic production once its capacity to compete gets stronger. Still in this category, the author includes the need to improve governance and transparency, once oil rents can lead to a dangerous trend to capital accumulation for a small elite rather than to invest in productive activities. This measure includes the importance of publishing every revenue obtained by the oil industry as well as the destiny of these revenues.

The second category of policies referred by Kyle (2010), aiming to limit distortions in agriculture, includes two measures. The first measure is to protect agriculture by changing tariffs. The first thing that comes to mind is to tariff imports at high levels to stimulate domestic production, but this decision would lead to some serious problems because food prices would go up for the final consumers and the author alerts for the current high living costs in the urban areas. So, what is suggested here as a more plausible policy is to eliminate tariffs on agriculture input products, such as fertilizers or machinery, which would lower the costs of domestic farmers, allowing them to practice lower prices to the final consumers. The second suggested policy is related to improve productivity may it be by improved seeds, technological changes and the use of fertilizers. Mainly this last one consists in a great advantage for Angola because a great part of the farmers has the knowledge how to use fertilizers, even if they have limited access to them, and also because Angola is reach in rock phosphates which are the main components of fertilizers. Therefore, the investment in fertilizer production could not only help domestic agriculture to grow but also be an important export product.

The last category includes four types of policies. The first is related to the need to create markets for domestic food products, so that producers can be stimulated to produce surpluses and sell them for cash. Because of the problematic management of the Angolan state companies, the author advises that these markets should be operated by the private sector. Secondly, it is important to set measures to promote competition between rural traders rather than imposing profit margins to them in order to create an environment of free market for food goods. Another policy should focus on creating a program to rehabilitate secondary and tertiary roads once this could dynamize the economy around these areas in the short term because employment would be created and promote better transportation conditions that will allow farmer to reach villages and cities with more population to sell their products. Finally, the author highlights the importance of creating micro credit schemes to stimulate farmers production but alerts that

these schemes cannot be achieved by only depending on farmers saves, which incomes are mainly to subsist. Therefore, outside investment has to enter in these micro credit mechanisms in order to allow them to have a proper positive effect on agriculture growth.

4. An Assessment of Angolan Agricultural Policy in the Post-Civil War Period

4.1. Methodology of Research

The aim of this research is to analyse the agricultural policy evolution in Angola since the end of the civil war. With that in mind, it was decided to gather as much information as possible concerning agricultural programs near the incumbent institutions in the country. The peace agreements were signed on April 2002, and as the country was starting its reconstruction with a recent war past, there was a difficulty to collect and systematize information. However, few years after the peace agreements some reports and strategy plans for the country were starting to be elaborated and published. The oldest document that will be used on this research is called "Estratégia de Desenvolvimento a Longo Prazo para Angola (2025)" which is the Long Term Strategy Plan for Angola until 2025 and was published by the Angolan Planning Ministry in February 2007. This document refers to a global strategy for the country, but the interest here is to analyse the agricultural long-term strategies. Besides this document the Angolan Agriculture Ministry published since 2007 "Planos de Desenvolvimento de Médio Prazo do Sector Agrário" that are Mid Term Development Plans for the Agricultural Sector. These plans were written with a five-year horizon but unfortunately it was only possible to access the two most recent ones, which means that the 2008-2012 period document cannot be analysed. However, the 2013-2017 period document has some references to its precedent which will allow to gather some important information on agricultural policies for that period. These documents are analysed in order to establish a chronological frame for the different policies. After that, the goal is to identify these policies and analyse them according to the literature and the Angolan social and economic context. Finally, the objective is to assess some of the goals set by policy makers by comparing them with real data concerning the agricultural sector in the country, which are obtained using the statistics service from FAO (FAOSTAT) and the Angolan Agriculture Ministry statistics.

4.2. Long Term Strategy Plan for Angola until 2025 Analysis

In this section the objective is to analyse the Long-Term Strategy Plan for Angola until 2025, in order to understand what were the main directions that policy makers wanted to follow for the Angolan economy in general, in particular for agriculture. It is important to understand if the long-term strategy is coherent with midterm agricultural plans. In the beginning of the document some global goals are set by policy makers and it is important to highlight that one of them is to assure an high rhythm of economic development with structural diversity and directly related to this the goal that was set was to elevate non-oil production until it reaches 75% of total GDP. As it was mentioned in previous chapters of this research, the need to diversify the economy in oil rich countries is of the most importance, in order to avoid a one resource dependence, and in cases of development countries it is important to set agriculture as one of the areas to diversify in order to assure food safety for the population. As it is shown in the graph below (Figure 2) there is a trend that appears to fulfil the goal set by policy makers, although in the last 4 periods there was an increase in the oil industry weight on GDP.

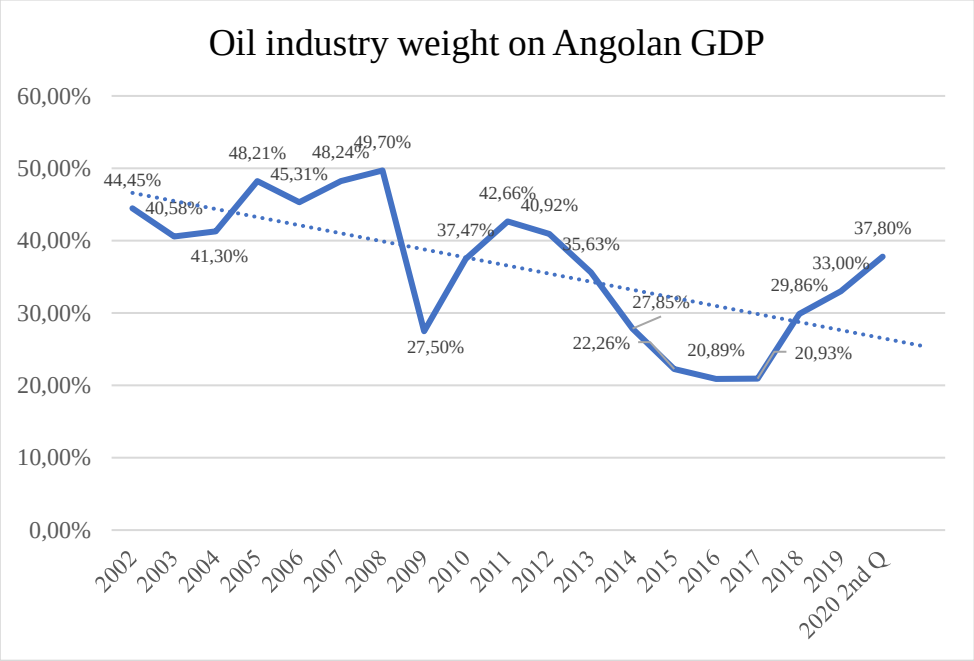

Figure 4.1. - Oil Industry Weight on Angolan GDP (Source: Angolan National Bank)

As mentioned above, this long-term plan includes a chapter on the strategy for agriculture. Among all the information contained in this chapter it is important to highlight four policy measures: the implementation of two major reforms (Rural Development Model Reform and Capacity Reinforcement Model Reform) and the creation and implementation of two programmes (National Integrated Rural Development Program and a National Rural Capacitation Program).

The first reform consists mainly in redirecting resources and priorities to family agriculture activities which seems to be an appropriate measure taking the demography of this country which was mentioned at the contextualization chapter and the literature also mentioned before. The second reform concerns the need complement the first one by assuring that small farmers have the means and the knowledge to develop their activities as well as technical assistance.

Allied to these reforms the Ministry of Planning decided that two programmes should be created. The National Integrated Rural Development Program has the main goal of recovering small farmers familiar agriculture, by evolving institutional capacity, rehabilitate infrastructures, evolving health, education and water and food supply, realising diagnosis to identify the best use of each region natural resources and stimulating commercial activity. This plan was set to be implemented until 2010. On the other hand, the National Rural Capacitation Program is concerned in developing an extension model for agriculture, which, according with the document in analysis refers to a model where the small familiar farmers are in the centre of the development and thus, they have to be given conditions to promote change, innovation and organization capacities. There are five main components contained in this program which are called Rural Extension, Technical Assistance, Agricultural Professional Training, Agriculture Research and Institutional Capacity Reinforcement of Agriculture Ministry. The first one has the main goal of integrating rural communities in social and economic development and contains eight major action categories:

1. To structure an extension structure at central, provincial and municipal levels.
2. To train institutional technical staff and help rural associations managers and leaders in questions of cooperativism, management, operations and finance control.
3. To create an information system to promote regular evaluations to the extension model and ask for annual external evaluations to the program.

4. To legalize rural associations, to support them in order to promote the creation of simple control systems, evaluation, accounting and statistics and to help them to create commerce systems of their products and also to obtain agriculture inputs.
5. To define and apply a national seeds policy and their supply to farmers, to assure access to agriculture tools through local commerce or associations and to assure access to fertilizers.
6. To promote access to micro-credit for small investors together with financial institutions and the international community.
7. To develop research activities to study production problems, product varieties, new harvest methods and new technologies.
8. Cooperate with social action sectors, like education and healthcare, in order to improve their services.

The second component is concerned with the development of agricultural production by increasing its productivity, the creation of an agricultural class and the possibility of accessible technology and innovation. This component contains six major action categories concerning agriculture:

1. To create a national system of agriculture investment opportunities identification.
2. To directly support divulgation of knowledge, technologies and innovations.
3. To intervein in a preventive way or in a direct way against more economic relevant plagues.
4. To directly support small and medium agricultural firms.
5. To support diversification of activities, namely through rural tourism.
6. To promote outsourcing services for technical assistance in a public-private logic.

The third component has the main objective of increasing technical a professional capacity of the rural development agents and contains two major actions categories. The first concerns training of trainers, rural and communitarian development specialists and agents and communitarian leaders. The second concerns the building of fixed and mobile training centres.

The fourth component concerns the recovery of the research capacity in the agricultural area and contains three major action categories:

1. To rehabilitate research structures, experimental stations in several provinces and to reinforce the Agriculture Ministry Central Analysis Laboratory in Luanda.
2. To reinforce and train the technical and scientific staff.

3. To promote experimentations of production technologies.

The fifth component is related to the necessity of improving the scientific, technical and institutional efficiency of the Agriculture Ministry and contains seven major action categories:

1. To elaborate and review the legislation concerning the sector and to support the sector in order to reduce agriculture activities vulnerability and risk by promoting new productions and activities, water management practices, price fixation and harvest subsidies, micro-credit, agriculture insurance and incentives to cost sharing through associative solutions.
2. To reduce land distributions inequalities.
3. Decentralize services by allocating them closer to the farmers.
4. To create a rural credit system and to support the creation of micro-credit agencies until the municipal level.
5. To harmonize the relation with the Environment Ministry in matters of environment and natural resources management.
6. To rehabilitate and create Agriculture Development Stations in each municipe.
7. To create and develop seventy-five strategic rural markets in the country.

4.3. Mid Term Agricultural Development Plan, Period 2008-2012

In the following sections the goal is to specifically analyse midterm agricultural development plans in order to identify major policies and assess its results. The policies are analysed having in mind the literature, the context of the country and the long-term plan just analysed before. The policy goals set in these plans are compared with data regarding the evolution of agriculture activity in Angola. For the period 208-2012 the information is not so detailed when comparing it with the two plans that followed it, but it allows nevertheless to reach some important conclusions. For this first period eight programmes were implemented:

1. Credit stimulus program for the agricultural sector, which according to Ellis (1992) is one of the main categories of agricultural policies, since it allows farmers to buy the inputs needed for their activity and it also fits in the economic context of Angola, which was a country devastated by the war and where most of the farmers where limited to invest if they would depend only on their savings. As the results concerning credit

structure from the Angolan National Bank are only available from 2010 it makes more sense to analyse it in the next period's analysis for a greater range of time.

2. Commercial agriculture promotion programme by the implementation of large-scale farms with a public-private partnership model. This programme deviates from the guidelines set by the long-term plan analysed above where the priority should be to support in a first instance the small family farmers. There is an example where the failure of some of these projects where clearly shown, specifically the ones financed by the Development Bank of China (Parker and Fourie, 2018), where by the time of this publication only five out of the seven farms were able to produce, and the ones capable to do it shown performances that were far away from the production potential as the best year ever of production in each farm combined showed a result of 33880 tonnes of grains when the projection was of 193985 tonnes annually by the owner company of the farms. By investigating mainly by media sources, it is possible to access that a great part of this projects has significantly failed. Financed by the Banco Nacional de Desenvolvimento Social e Econômico, a Brazilian Bank, the Pungo Andongo large scale farm was privatized in April 2021 to improve its production, according to the Angolan Finance Ministry. Financed by Luminar Finance from Israel, there were set six projects. According to Ferry and Honório (2019), one of them, the Cacanda Farm was far from producing what it used to in the colonial period. The Aldeia Nova Project was also one of the big farms supported by the Israelites that is now producing efficiently, but was a disillusion between its creation in 2005, as a mean to reintegrate former military elements, and 2011 when it showed low production levels and degraded infrastructures (Andrade, 2018). Another project, with Israelite technical support, and financed by the ING Bank is the Quiminha's Integrated Development Project that was created in 2012. In this case, by 2018 it was producing at levels near its full potential, around sixty thousand tons of fruits and vegetables, and employing two thousand people directly plus three hundred families that were reintegrated in those fields according to "Maior projeto agrícola em Angola" (2018). Finally, there were two remaining projects financed by the Spanish Deutsche Bank. One of them, the Agriculture and Industry Pole of Quizenga stopped its production in 2015, and only in 2020 efforts to requalify this project were made to restart production according to "Obras de requalificação" (2020). The second project is the Cubal's Agriculture and Industrial Pole, that according to the Angolan Agriculture Minister in 2021 in an interview for TV Zimbo, an Angolan television station, was a mistake by the time it was built once that area is characterized

by a lack of hydric resources. According to the minister, the solution is to adapt the project to produce sisal instead of the initial purpose that was corn production, since the first requires less water.

3. Rehabilitation of irrigated perimeters to assure higher productivity, which is aligned with the long-term document analysed before where one of the priorities was to increase productivity in agriculture. By the end of the period in analysis, in 2012, there were four out of seven irrigated perimeters in operation.
4. Promotion of a storage network for cereals to assure their conservation with the goal of industrial processing, trade circuits creation and the establishment of a strategic reserve. This is an obvious needed measure, because when harvested, products are not used immediately and cannot be transported simultaneously, therefore this happens to be a crucial support activity. By the end of the period in analysis only one storage unit was completed and had a twelve thousand tons capacity and six units were under construction where two of them would have an eight thousand tons capacity and the remaining four would have a four thousand tons capacity.
5. Institutional reinforcement of agrarian research institutions. According to Ellis (1992), technology development, in this case supported by research, is a key factor when agriculture policies are designed, therefore this seems to be a correct path to be followed as it is also aligned with the long-term plan analysed before that highlighted the necessity to increase research capacity in this sector. During this period and considering the document in analysis the efforts were made in a way to access the current research capacity and to create a proposal to create two national research centres, one for corn and beans and another for cassava, sweet potato and peanut. This project had the support of a Brazilian research company called EMBRAPA and was coordinated by FAO.
6. Rural extension and development programme which consists in the introduction of technologic innovations, farmers motivation and sharing agricultural good practices. This project is aligned with the long-term document that emphasizes the importance of the rural extension as the model to use in the Angolan agriculture. This programme is coordinated by a government agency named IDA (Agrarian Development Institute), which is passing now from a logic of input and equipment distribution to one of capacitation of rural families. By the end of the period in analysis there existed 131 agrarian development stations spread by 128 municipes that supported 11306 villages. The highlighted problem by this document is the lack of technical human resources once

this function is not attractive due to lack of housing conditions and isolation of this development stations.

7. Seeds production program with the goal to assure better seeds to increase productivity which is coherent with what Kyle (2010) defended as one of the strategies to evolve the Angolan agriculture. Unfortunately, for this period the information about seed production was not found, however for most recent periods it will be possible to access the state of this question.
8. Rural Development Program with the goal to improve farmer families social conditions which appears to be another obvious priority to build a productive, healthy and educated agricultural class in the country.

Related to these programs, the Agriculture Ministry set four goals for the sector for the period in analysis: (1) increasing in about four million hectares the cereal production area to reach a production of more than fifteen tons, (2) achieving self-sufficiency in the production of legumes, which includes beans, peanuts and soy by reaching a total production of 1.8 million tonnes, (3) reaching self-sufficiency in terms of roots and tubers, such as cassava, potato and sweet potato in order to produce 4.5 million of tons a year, (4) covering sixty percent of the domestic needs of sugar.

According to the Agriculture Campaign Results from 2007/2008 published in the Angolan Ministry of Agriculture statistics service, the sown area of cereals was of 1.162.963 hectares and the results for the campaign of 2011/2012 were of 2.408.421 hectares which means that the first goal was far from being reached. Concerning cereal production, the results are even worse going from 737.955 tons of cereals produced in 2007/2008 to 505.706 in 2011/2012 which reveals some struggle to develop the cereal sector. Nonetheless it is important to highlight that the cereal production in 2010/2011 was 1.408.826 tons, revealing some possible problem in the harvesting of the year after. In any case, the results were far from the goal.

According to the same reports used to access the first goal it is possible to notice that in 2007/2008 the production of legumes was of around 250.000 tons and for the period of 2011/2012 the production was of 171.533 tons. As with cereal production, the 201-2011 campaign has higher production level (472.380 tons), revealing again some problems in the harvest of 2011-2012.

The third goal is difficult to understand because in the 2007/2008 campaign the production of this category of products was already of 11.278.354 tons and of 11.935.414 tons in

2011/2012, being of 16.219.865 in the previous campaign revealing once more problems with the harvest in the final year of the period. In all the referred years these results are highly influenced by the cassava production that represents about ninety percent of this category production.

Finally, regarding the fourth goal the analysis is limited by is the lack of information related to the yearly sugar consumption in the country which makes the assessment of this goal not possible to make. The only information that was obtained was the produced quantity of sugar in this period of analysis that was of 50.000 tons in 2007 and of 52.000 tons in 2012 according to FAOSTAT data.

4.4. Mid Term Agricultural Development Plan, Period 2013 – 2017

The Mid Term Agricultural Development Plan for 2013-2017 designed agricultural policies by defining priority actions and programmes. As most of the priorities seem to be related to the programmes set by the policy makers the chosen method to describe and analyse the agricultural policies in this period was to analyse each priority action together with the programme or programmes related to it.

Priority number one consists in the promotion of public and national private investments in two sub-sectors: family agriculture and agrobusiness. The first consists in investing in general rural development and is allied to the Rural Communities Social and Economic Development Programme which is concerned not only with agricultural questions but also with aspects directly related to the communities' basic needs. Unfortunately, according to the next period development plan (2018-2022), there are disappointing indicators such as low levels of human development and health conditions in the rural areas and the capacity to read and write in these areas was only possible for around 41% of the people. Facts like these reveal that life conditions improvements remained difficult to achieve and this programme was not able to reach the goals it was set for. This sub-sector investment is also related to the Family Agriculture Development Programme that consists in loaning production factors as an incentive as well as technical support, but again, analysing the next period plan where some results were shown, there were registered deficits related to seeds and fertilizers, agricultural support equipment, difficulties in equipment acquisition due to lack of foreign currency and also difficulties concerning the

distribution of material to the small farmers, compromising the levels of production and productivity in this sector. The agrobusiness sub-sector investment is directly related with the promotion of agricultural and industrial poles and large-scale farms promotion which was discussed in the previous period analysis where very recent results were shown, therefore there is nothing to add to this question. Still in this priority analysis, policy makers found necessary to create two types of agricultural production for this investment priority. The first consists in food products that contribute to improve food security in the country such as corn, cassava, beans, sorghum, peanuts, potato and rice. For that, it was created a National Nutritional and Food Safety Programme with the goal to improve relations between civil society, companies and government in order to reach satisfactory food safety levels in the country. The results are not satisfactory when analysing this period. According to FAOSTAT the prevalence of undernourishment, calculated by a three-year average, was of 17.2% in the 2010/2012 period and has only slightly decreased to 15.4% in the period of 2015/2017, and the prevalence of moderate and severe food insecurity in the country has been rising since the period of 2014/2016 until 2018/2020 going from 66.5% to 73.5%. The second type of agriculture production is characterized as commercial products, where the goal is to achieve higher rentability per area, such as cotton, coffee, fruits and vegetables. Allied to this type of production it was created the Coffee Sector Development and Recover Programme to increase internal production, strengthen the business class and improve life conditions of rural communities. The fact is that between 2012 and 2017 coffee production, green beans, raised from 11.740 tonnes to 15.330 tonnes meaning a growth of 30,6% (FAOSTAT), which is a significant growth, but no further conclusion can be drawn since the official goal is not available. It was also created the Cotton Culture Recovery Programme to use this product potential to satisfy internal demand and generate employment. Despite this programme results published by the FAOSTAT indicate that the cotton production in Angola was stagnated from 2012 to 2017, producing around 5.500 tonnes per year. The case of the fruit production reveals some growth, raising from 3.512.348 tonnes in 2012 to 5.101.024 tonnes in 2017 according to FAOSTAT. The same was not noticed in the vegetables sector where there was a decrease from 4.945.897 tonnes in the agriculture campaign of 2011/2012 to 1.889.482 tonnes in the 2017/2018 campaign according to the agriculture campaign results reports from the periods in question.

The second priority was to attend the internal market mainly to satisfy rural and urban population demand which goes in the same direction as Diao et. al. (2007) that defended the

development of local food production in a country with the profile of Angola, where the transportation costs are high, precisely because it would provide food at lower prices. This priority results are linked with life conditions results presented for the first priority because if the internal demand was satisfied at low prices, there should exist improvements in some indicators such as the prevalence of undernourishment or food insecurity, therefore, taking into account results presented above, the internal market still suffers to be suitably supplied.

Priority number three consists in the development of the agroindustry by creating agro industrial poles. Some of these projects were analysed in the previous period discussion and the conclusion was that most of them were not able to produce as they should. Adding to this, according to the next period development plan, the industrial capacity for agriculture products transformation was residual by the end of the period in analysis. This problem affects the farmers as they cannot produce more even if they can because their products cannot be preserved or transformed, leading to more costs of storage and waste.

Priority number four consists in improve access to agricultural credit and insurance, for that there is a created programme called Agricultural Insurance and Credit Promotion Programme. As promised in the previous period analysis, now with more accessible data concerning credit to agriculture in Angola, it will be analysed the evolution of the credit access in the agricultural sector. According to the Angolan National Bank, the oldest registry of conceded credit by economic sector is from 2010 when only 1,9% of the credit conceded in the country was for the agriculture sector. In 2017 this value reached 5,7% and slightly decreased to 5,4% in 2020 that is the most recent information until now. In general, the credit to agriculture have been raising, but it is still not enough to fulfil farmers needs, according to the development plan for 2018-2022. The bank system is still weak when it concerns agricultural credit products as there are no specialized bank agents in the agricultural sector. Therefore, the lack of access to credit in the agriculture does not allow this activity to grow in terms of production and productivity. In the case of the agricultural insurance, it is still not very attractive for insurance companies, again due to lack of specialization in the sector. The lack of insurance puts the farmers more exposed and less protected to risks such as drought, plagues, excessive rain and others.

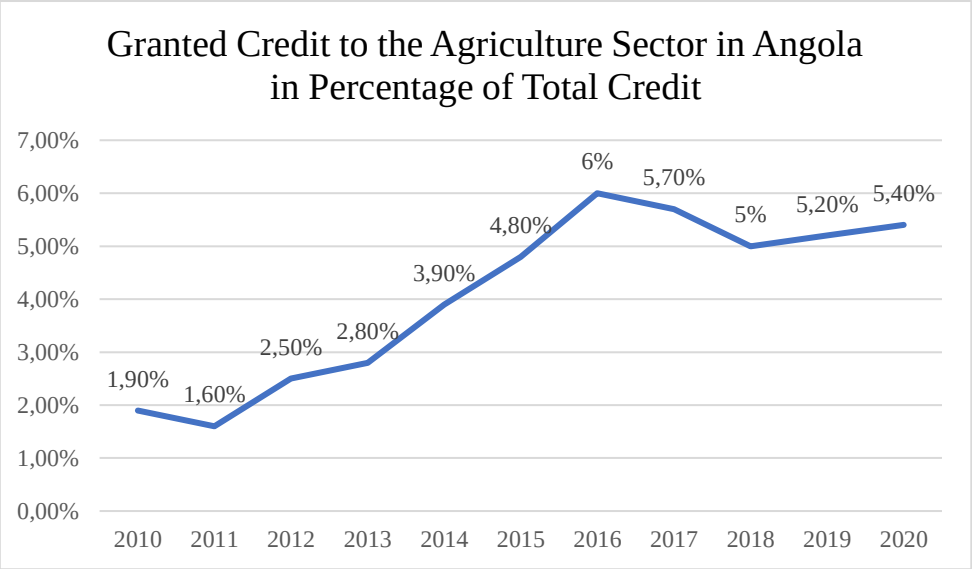

Figure 4.2. - Granted Credit to the Agriculture Sector in Angola in Percentage of Total Credit (Source: Angolan National Bank)

The fifth priority consists in agricultural research and technology and is directly influenced by the Agriculture Research System Restructuration Programme. This programme recalls the already mentioned cooperation between the Agriculture Ministry, the FAO and EMBRAPA that prepared a proposal for the creation of a new research organization in Angola in 2007. This project started in November 2011 with a predicted investment of 1,27 million dollars from the Angola Agriculture Ministry, according to the EMBRAPA website. Further information about this project could not be found, but according to the development plan for the next period it is possible to denote some lack of capacity to evolve agricultural research once it mentions an outdated agricultural research model, mainly caused by lack of coordination between the research object and the rural communities needs as well as poor conditions presented by the research labs. Taking these facts into account it becomes difficult to improve production and productivity once innovation is not happening.

Priority number six concerns commercial development, which englobes the goals of developing commerce of inputs and products in the rural area by reactivating commercial circuits between the rural areas and the cities, with more economic efficiency, lower commerce margins and improved distribution. This priority is directly allied to the Rural Commerce Support Programme which main goal is to create an institution responsible for creating public stocks by acquiring products at low prices in order to keep regularity of the internal supply food security among the population. This institution should also be responsible for obtaining statistical data about production, imports and exports of agricultural products. Another task of this institution should be to support small farmers in questions like transportation of their

products. This kind of policy goes along what Ellis (1992) called marketing policies that are responsible for the path between producers and consumers. However, this marketing policies depend a lot on transportation conditions as Townsend (1999) referred, and according to the 2018-2022 period development plan, by the end of 2017 the road network in the country was short and its conservation conditions are not the best and the railway network is also very limited. Thus, the goal of creating an efficient market for agricultural products has no conditions to exist because there are no infrastructures to promote it. Producers cannot sell their products near their regions of production, when they can sell them far from where they produce the transportation costs make them more expensive. Adding to this, when small farmers have the opportunity to introduce their products in big markets in the country, the products do not show quality presentation when comparing with international products.

The seventh priority consists in developing an Agricultural Information System that should include information about markets, prices, demand and supply conditions, imports and exports, main products and inputs in a database that allows analysis, storage and share of information. This practice is almost mandatory to understand the state of the sector and to allow the analysis of different variables that influence agriculture and helps other programmes to fulfil their goals.

The eighth goal is related to the legal basis of the agricultural sector as it defends to promotion of the current legal framework but also states the need to create laws in questions like health and quarantine of animals and plants, quality control applied to seeds, fertilizers and pesticides, support to norms related to the quality and industrial use of agricultural products, ownership of land and use of genetically modified organisms. The question of health of plants has a related is allied to the Vegetal Sanity Programme that establishes several measures to control the entry of other origin diseases. There is no information on quality control of seeds, fertilizers or pesticides nor on the use of agricultural products. Concerning ownership laws, the next period development plan highlights that most farmer face insecurity related to their land ownership due to not having ownership titles caused by lack of organization of the land registers and because government institution occupy the land with no previous warning. Another problem is that even if the law sets that the use of land rights can be returned to the state if they do not show useful utilization, there are individuals and firms owning extensive areas with no agriculture use. These facts lead small farmers to overuse their small lands to produce which puts in risk the quality of soils and consequently the productivity levels. Concerning the genetically modified organisms' laws, according to the next period development plan, there was a law that prohibited the entry of genetically modified seeds in the country, that will remain

until the creation of a Biosecurity National System capable of suitably control the entry and use of genetically modified organisms in the country. However, this same law that prohibits the entry of seeds and grains with genetical modifications is not being fully respected because of control problems, putting in disadvantage national producers as these products have higher levels of productivity.

Priority number nine consists in the rural development by expanding the cooperativism and associativism to assure rural economic growth, sector self-management and organized and participative rural communities. According to the next period development plan there were several problems, concerning the weak organization capacity of the farmers in order to work in a model of cooperation or association. This lack of organization results in low sharing of production factors, difficulty to get credit in a collective model and also to get access to insurance, incapacity to build local interest infrastructures, no sharing of management practices, difficulty in promotion of products in a collective way, lack of sharing of technical support and the difficulty to elaborate a collective commerce of products by celebrating collective contracts with big markets, by sharing storage infrastructures and transport means and also by creating collective export plans.

Priority ten consists in public private companies that should act as sharing agents for knowledge as well as technology and management systems. Another task of this companies should be the creation and rehabilitation of rural infrastructures, mainly the irrigation ones. Concerning irrigation there were created two programmes. First, there is the Irrigation Support Infrastructures Building and Rehabilitation Programme that should be responsible by the indispensable complementary infrastructures to the irrigation perimeters. The second consists in the Irrigated Perimeters Management Support Programme that should be responsible for maintaining the irrigation systems, installation and rehabilitation of meteorologic stations, installation of water treatment stations for the populations from the areas of the irrigation perimeters, land preparation for the creation of new irrigation systems, support to the farmers from those areas and support to young farmers. Unfortunately, these programmes seem to be very inefficient, since according to the next period development plan only 0,2% of all the sown area in Angola was irrigated by the end of the period in analysis. So, most of the Angolan agricultural land and production depends on the rain, which represents problems for the stability of production.

Priority eleven concerns International Cooperation, by promoting technical and economic cooperation projects with finance agencies and cooperation agencies in order to import some experience and knowledge about the agricultural activity. Regarding this priority it was not possible within the limits of this research to find evidence to assess the effectiveness of this cooperation projects.

Finally, there is priority number twelve that is related with institutional strengthening, that goes in the same direction as one of the long-term development plan priorities when it mentioned the need to develop institutional capacities. Just like the previous priority, the reinforcement of institutions related to agriculture in Angola can be reflected in the production since even if in paper there are changes in institutions, their efficiency can only be assessed by analysing the agricultural results. Institutions are responsible for the improvement of the activity because they should know the limitations that exist as well as the opportunities. So, if institutions get stronger there should exist positive results for the activity they are responsible for.

Having discussed the priorities set by policy makers and linked them with the programmes there are still some programmes which cannot be linked to a specific priority, but their discussion is important to be made. The remaining programmes can be included in two categories, which are human resources training and mechanization.

Concerning human resources training there are two programmes created by the government in the beginning of this period. One of them is the Global Training Programme which have as specific goals to act continuously by adjusting training to specific groups, decentralize training activities in geographic terms, promote information access, potentialize the existing knowledge, assess the performance of the training actions and promote cooperation to share information. It was also created the Training Centres Implantation Programme which as the name suggests should consist in a network of training centres that should complement each other and adapt their methodology according to their trainees needs. The human resources situation did not evolve quite well considering the created programmes. According to the 2018-2022 period development plan, there is a deficit of qualified technical employees due to lack of new entries for the rural extension model mentioned before, thus the technical support to small farmers was compromised and in the case of agriculture companies there is some dependency on foreign labour which increases production costs. The development plan also highlights a deficit in trained employees due to lack of capacity of the training model. One reason appointed by the

development plan is the low level of wages and lack of subsidies or health assistance in the rural areas as well as the absence of a career plan for these employees. Training was seen in literature as one of the fundamental bases to develop agriculture, and the programmes were created for that reason, but there is a lack of organizational capacity by the institutions to create robust programmes that can lead to suitable results. To put correctly in practice this kind of programmes seems to be the main problem to solve in order to achieve better levels of productivity.

Considering mechanization in agriculture it was created the Agricultural Mechanization Programme with the main goal of increasing the sown and harvested areas of the country and of increasing productivity. This programme consists in acquiring tractors, assure technical assistance and pieces provision and increase production by augmenting the mechanical harvested areas. Analysing the harvested area, according to the agricultural campaign results in the 2011/2012 campaign it was of 3.659.630 hectares and in 2017/2018 was of 5.141.260 hectares representing a growth of 40,5%, but still far from the arable potential of the country that is of 35 million hectares. In terms of use of mechanical tractors in the sown areas it was very reduced once it was responsible to prepare only 3% of the land used in the 2018/2019 campaign, being 25% prepared by animal traction and the remaining 72% manually.

Just like the previous period, policy makers set some goals to be achieved in the 2013-2017 period in analysis, which will be analysed now and faced with available data on results. First goal was to increase in 2 million hectares the cereals sown areas in order to achieve a production of more than 5 million tons of this product. According to the 2011/2012 agricultural campaign results the sown area for cereal was of 2.408.421 hectares and in 2017/2018 was of 5.664.315 hectares which shows the achievement of the purposed goal. Concerning production, the results for the 2017/2018 campaign were of 2.878.006 tons of cereals which denotes some problems in the question of productivity that has been highlighted along this part of the research. Second goal was to reach self-sufficiency in terms of legumes, such as beans, peanuts and soy by producing 1 million tons per year. Taking into account the results of the 2017/2018 campaign it is possible to assess that the production of these products was of 571.005 tons a little more than half of the goal initially set. The third goal consisted in improving production levels of tuber and roots and specifically reach self-sufficiency in the potato production by reaching 2,5 million tons a year. Attending the general part of this goal it is important to analyse the growth of the tubers and roots production in this period and it is possible to assess that in the 2011/2012 campaign the production was of 11.935.414 tons and the 2017/2018 campaign showed results

of 10.876.857 which is a surprising value because it reflects a decrease of more than 1 million tons and thus it did not meet the general part of this goal. Concerning the part of this goal related to the potato production, the 2017/2018 campaign showed that production was of 458.217 tons, being too far from the goal set by policy makers. The fourth goal was already set in the previous period plan and concerns the coverage of 60% of the domestic needs of sugar. Again, there are no information on the domestic sugar consumption in Angola, therefore it is difficult to perceive if the goal was reached or not as the only information obtained is related to the sugar production in the country that was of 52.000 tons in 2012, raising to 68.000 tons in 2017 according to the FAOSTAT.

4.5. Mid Term Agricultural Development Plan, Period 2018-2022

Although this period is still occurring the goal of this analysis will be quite similar to the previous periods' analysis. Some programmes mentioned in this plan have been created in the former plan but are still active. The first programme to be analysed is the Family Production Development Programme that has the main goal of increasing agricultural families income, by supplying production factors, technical support and commercial support. Although this programme was set to start in 2017, there was a similar programme in the previous period with similar goals. The way to assess the efficiency of this programme is by analysing the performance in productivity and production in agriculture, which will be realised ahead in this part.

The second programme is called Commercial Production Development Programme with the goal to stimulate agricultural companies in order to increase production levels so that food products needs can be covered, generate production surpluses to export and progressively reduce imports of products that can be produce internally. In this programme not only large-scale public and private cooperation projects are considered, it also takes in consideration private projects that are not as large as those large-scale farms but are also not as small as traditional family farms. It is important to highlight some interesting policies that policy maker considered fundamental to make this programme work, namely the creation of a legal plan on private propriety of land and on improved seeds, public investment acceleration in basic infra-structures, credit access and fiscal incentives. Questions of production will be analysed ahead but import and export results can be analysed right now. According to the External Commerce

Report for the year of 2017 published by the Angolan Statistics Institute the value of exports of agricultural and food products was of 24.391 million of AKZ, representing only 0,42% of the total amount of exports in that year, where fuel represented 94,82%. In the other hand, agricultural and food imports reached a value of 460.373 million of AKZ, representing 18,05% of the total amount of imports. The most recent information on this matter is from the first quarter of 2021, also a report from the Angolan Statistics Institute, where it shows that agricultural and food products exports had a value of 16.672 million of AKZ, representing 0,4% of the total exports, where again most of the exports where responsibility of fuel that accounted for 94,6% of exports in that period. Concerning imports, agricultural and food products showed a value of 276.242 million of AKZ, representing 17,6% of total imports. Even though, the period in analysis is not in the end, the trend shown by international commerce represents no signs of hope when the goal is to increase food exports and reduce imports as a result of production growth in agriculture. Exports of food are residual, and the imports are clearly needed to satisfy the demand of food products in the country.

The third programme is the Agricultural Activity Development Programme, which main goal is to increase coffee and palmar production, initiate cocoa production and increase cotton production. According to FAOSTAT coffee production was of 15.330 tons in 2017 and reached a value of 16.961 tons in 2019, the most recent register on this product. The plan in analysis set a goal for coffee and palmar production together, but since palmar production numbers are not available it is difficult to assess the performance of the overall goal. Concerning cocoa production, FAOSTAT shows that in 2017 it was of 462 tons and in 2019 was of 492 tons, revealing a slight growth which is difficult to interpret once there is not a set goal by policy makers. In the case of cotton, production was of 5.500 tons in 2017 an of 5.414 tons in 2019 according to FAOSTAT, representing a slight decrease in production, although it is not possible to assess if the values are close or not from the goal once this one was not set in this plan.

Programme number four is the Nutritional and Food Security National Programme, which name already represents its own goal that is to assure higher levels of food security in the population. According to this plan, the main measures to be implemented in order to achieve this goal are public investment in basic infrastructures, national programme to build access roads, national commerce and market development policies and food transport national policy. This programme goes in the direction of what Ellis (1992) called marketing policies for agriculture, where the goal is to build a path between producers and consumers so that the costs of internally produced products can decrease, helping the population to satisfy their nutritional

needs at lower prices. The results of this kind of policies will be reflected when the analysis of production will be discussed.

The fifth programme is the Agricultural Land Ownership Management Programme that has as main goal to assure ownership safety, by guaranteeing the right to use the land and to own it by the transmission of property from the state to the family farmers. This programme seeks to address the problem seen in the previous plan where there were spotted some problems in questions related to land ownership, therefore it seems to be a significant step by the government to admit that there should be created a law to give the farmers its right to own the lands, promoting a more sustainable use of land and thus higher levels of production and productivity. According to this plan it is needed to implement the Land Law that was created in 2004, which defends respect for the rural communities use of land and in case of expropriation by the state there should exist a compensation for the rural communities. It is difficult to understand why an old regulation like this one is still facing problems to be followed as this is a fundamental question to improve small farmers live conditions.

Programme number six is the Agricultural Conservation and Productive Infrastructures Rehabilitation and Building Programme, which has as main goals to increase cereal storage capacity and refrigerated storage capacity so that an increase in production can be followed by an increase in storage capacity. It is important to analyse the question of refrigerated storage because of the context of the country once according to Lusa (2018) in the end of 2018 the electrification coverage in Angola was around 42%, in an interview with the Ministry of Energy and Water of Angola. Taking into account the context of the country and the lack of investment in rural areas it is possible to predict that in those areas the electricity coverage may be even lower. Therefore, this goal set by policy makers is dependent on another fundamental question that is electricity supply.

The seventh programme is the Vegetal Sanity Programme that was already created in the previous period plan, which goal is protect agricultural productions from plagues and diseases that can negatively affect the production. The main measure of the programme is to control the entry in the country of agents that can cause this kind of problems, as well as the establishment of quarantine stations.

Programme number eight was created in the previous period plan and is the Technologic Development and Agricultural Research Programme. In this period plan there is no mention to the cooperation between the Angolan government, EMBRAPA and FAO, that as it was

discussed previously started a project to restructure agricultural research in Angola, which is a curious fact having in mind that this project was already being prepared in the first analysed midterm plan. According to the EMBRAPA website, in March 2015 there was a meeting between veterinary research institute from Angola, a FAO representant and EMBRAPA to set a cooperation agreement to evolve research in the country. This fact is somehow confusing once years before there was project of cooperation in agricultural research already started between this same intervenients. Adding to these facts, another difficult to understand question is the reason why this programme still has a goal of implementing an agricultural research model, which should have been the first objective to achieve in order to develop agricultural research in the country. If the model is not yet implemented, then any actions put in practice may be just not well organized once there is no main guidance to follow. As discussed in the literature, technology and training are a key to develop agriculture, mainly because this activity depends significantly on country's specificities such as land composition, weather and water availability. Improving research with a robust model would create a more productive agriculture in Angola.

Programme number nine is the Agriculture Ministry Operational and Strategic Reinforcement Programme, with the main goal of improving the ministry's governance, decision and communication models, in order to develop its efficiency. This programme goes in the same direction as one of the priorities set in the previously analysed long-term plan, which defended institutional improvement. The results on several variables related to agriculture in Angola, suggest that the ministry is facing some troubles in the task of promoting agriculture in the country. That could be explained not only by the lack of capacity of the ministry in the past years, but it should not be forgotten the role that oil exploration plays in the country, being the main source of income. Therefore, it can also happen to be a question of not seeing agriculture as a priority for the economic development of the country. Oil prices dropped since 2014 and perspectives show that a significant price raise may not occur soon. In an overwhelmed country by the high oil rents, it is understandable the low preoccupation with other economic activities. However, there are past examples of problems that resulted from one resource economies and the literature corroborates it. Therefore, the institution that rules agriculture in Angola, as well as other institutions that rule other activities, should be a robust one with the capacity to show the advantages of investing in agriculture as a solution to the problems caused by the oil dependency in the country.

Finally, programme number ten is the Agricultural Statistics National Programme. This one contains two domains. The first domain consists in creating information systems so that there

can be created a database at the Agricultural Ministry level to facilitate information access and treatment. This database already exists and can be accessed online and has information on agricultural production, harvested and sown areas, food availability, rural population and other variables. It has also documents related to the agricultural activity in Angola, such as agricultural campaign results reports, although there are some missing reports for some years. In this domain it was also predicted to realize an agricultural census, that has started on July 31 of 2020, which results have not been published yet, according to the Import Substitutions, Exports, Diversification and Production Support Program website. The other domain of the programme in analysis concerns information technologies and wants to extend and harmonize the informatic network of the Agriculture Ministry, as well as modernize technologic infrastructure of the ministry.

The 2018-2022 plan, like the others already analysed, have several goals set by policy makers. However, in this one there is a goal for each year of the plan, instead of a goal for the end of the plan only. This fact helps this analysis since the period end has not been reached yet and because of difficulties in availability of data for more recent years. The goals in this plan also differ from the previous ones in questions of detail, as there is a more significant number of goals. The analysis will focus on goals where it is possible to gather information. The goals were also divided into categories.

The first category concerns production expansion and defines goals for different types of agricultural products production. As the agricultural campaign of 2020/2021 is still occurring, the most recent data available is from the 2018/2019 campaign. Concerning cereal production, the goal for production in 2019 was of 3.570.727 million tons and the real result was of 2.902.643 tons, showing that the goal was not reached. For legumes production the goal for 2019 was of 692.960 tons and the observed was 574.954 tons, not enough to achieve the goal. The roots and tuber production goal for 2019 was of 12.082.722 tons and the result was 11.135.827 tons, also not achieving the goal. The vegetables production goal for 2019 was of 2.001.269 tons and the observed value was 1.938.791 tons, really close to the goal. Fruit production goal for 2019 was of 6.393.314 tons and the real result was 5.314.860 tons, revealing incapacity to reach the goal. A conclusion than can be made by analysing this numbers is that for every group the goal could not be reached, although the distance from the goals reveals to

be not that significant. For this reason, the goals design seems to have been done in a realistic way.

The second category concerns the satisfaction of population needs, namely by setting a goal related to food safety index. This index[1] should be at 75% in 2020 according to the plan, but the Global Food Security Index shows that Angola has an index of 45,5%, revealing that Angola has still a poor food favourable environment. Next category is related to the contribute improvement of agriculture in the Angolan economy, where one of the indicators is the weight of agriculture in Angolan GDP. According to the plan, in 2019 the agriculture weight on GDP should be of 15% but the National Bank of Angola data shows that in the first quarter of 2019 it was only on a value of 5% as shown in the following figure.

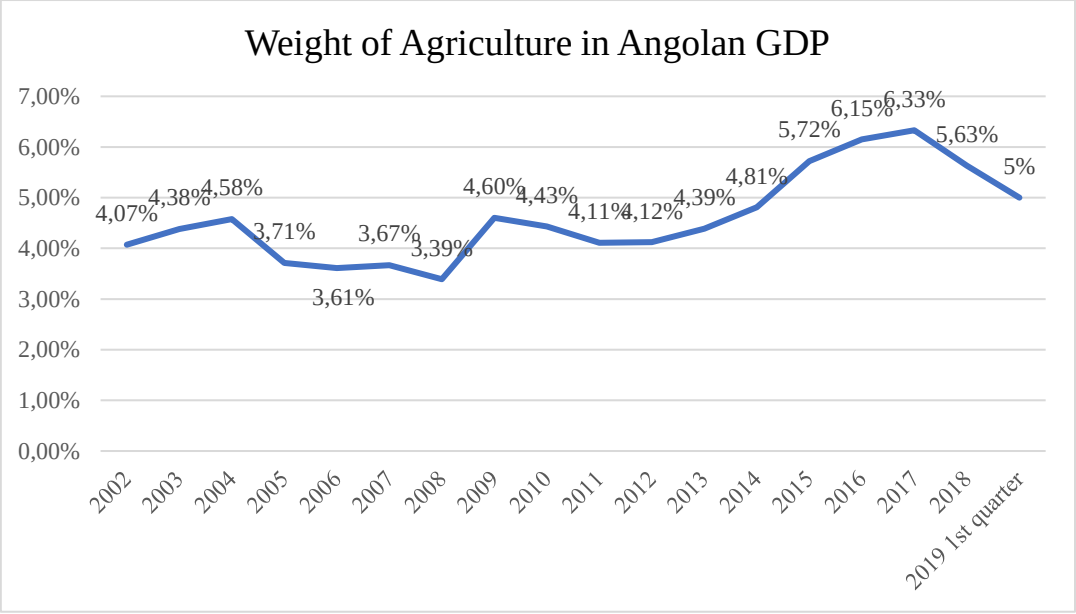

Figure 1.3. - Weight of Agriculture in Angolan GDP (Source: Angolan National Bank)

Another indicator from this category is the Hunger Global Index[2] which goal was set at 22% in 2020, but the real value is 26,8% in Angola according to Grebmer et al. (2020), revealing

[1] Food Security Index is an index calculated by Global Food Security Index using a weighted average of three indicators: food safety mechanisms, access to drinking water and ability to store food safely. The Global Food Security Index was designed and constructed by Economist Impact and is sponsored by Corteva Agriscience™. The Economist Impact team exercises full and final editorial control over all content, including data gathering, analysis and forecasting. The 2021 GFSI is the tenth edition of the index. Economist Impact updates the model annually to capture year-on-year changes in structural factors impacting food security.

[2] GHI scores are calculated using a three-step process that draws on available data from various sources to capture the multidimensional nature of hunger. The Global Hunger Index (GHI) is a tool designed to comprehensively measure and track hunger at global, regional, and national levels. GHI scores are calculated each year to assess progress and setbacks in combating hunger.

that food availability remains a problem in the country. The third category of goals concerns improved productive capacity and infrastructures to producers and the goal which is possible to assess is the mechanically prepared land proportion, that should be, according to the plan, of 75% in 2019, and as seen previously it was only of 3%, disappointingly far from the goal, meaning that the mechanization process is not happening as it was supposed.

Finally, the fourth category is related to assure finance resources to develop agriculture. One goal of this category was already analysed above that is the granted credit to agriculture comparing with total granted credit. According to this plan the percentage of agriculture credit should be of more than 30% in 2020, but as analysed previously it was of 5,4% only, emphasizing problems related to credit access for farmers that was also highlight before. Another goal is the percentage of the national budget directed to agriculture, that was expected to be of more than 25% in 2021 and according to the Angolan Finance Ministry it was only of 1,84%, which reflects the importance that agriculture has for the Angolan government.

4.6. Policy Suggestions

After the analysis of the evolution and the consequent results of the agricultural policies in Angola, this section will be used to draw some policy suggestions. The suggestions will take into account literature analysed previously, policy evolution in the previous years and its results, in order to try to solve some of the spotted fragilities. There are some policies and actions that are not regulated by the Agriculture Ministry but represent a fundamental support for this activity development. Questions related to health conditions, education, water supply, transportation, electricity supply among others need to be assured, otherwise the economy diversification will not be possible. Rural areas must have life conditions for their population so that other economic projects can start in those areas and be productive. This kind of policies will not be discussed or suggested here since this research is focused on agriculture and its policies.

Training should be a major concern for policy makers, since a big problem in this area is the lack of human resources with knowledge and experience to work in rural communities in order to give the best support to farmers. For that the suggestion consists in some steps that might help to create an efficient network of trained human resources. First step should be the

celebration of contract with a specialized agency in the agriculture field. This same agency would be responsible in a first phase for analysing the agricultural profile of the country, by identifying rural communities, main products per region, soil characteristics and other important variables for agriculture. After this analysis, this agency would be responsible to build training centres where they think it is more needed to start training locals. At the same time, as local human resources would still be in training, the responsible agency would support the communities with technical support by using mobile support vehicles, so that the support could start, and farmers could learn how to use their land in a more productive way. As the first human resources started to have their training complete, they should be distributed by the several rural communities, with proper conditions, such as home, water and electricity supply, communications and an attractive wage. They would be the supporters and teachers of the rural communities and the point of contact when these communities needed more specific help, such as fertilizers or mechanic equipment. With time, the communities would have created rural associations and would have to choose a leader and a team capable to realize the tasks done by the technical supporters, that of course would keep monitoring the communities but in more distant way. With the associations created, these technical supporters would progressively return to the training centres to embrace another project related with agriculture research. In some way these technical supporters have shared knowledge with the farmers but have also gained local experience to develop research by understanding the real problems faced by the farmers. Training programmes would still exist in order to keep rural associations updated to new techniques, but they should start to get autonomous with time. Research programmes would be responsible to update rural communities in order to increase productivity.

Creation of markets should be another priority to assure that farmer could sell their products. This idea will only be assured if roads are built to connect rural communities to villages and cities. Assuming a better road network in the country this suggestion would imply the creation of small markets in the villages and bigger markets in the cities. A complex part of this idea would be the transportation network, that could be assured by a contract celebration with a private transport company, which would probably create employment around the agriculture activity due to the dimension of transports necessity. This company would be in contact with technical supporters of each community or rural associations and organize ways to pick up the products to move them to the markets. For products with high surpluses there should be assured the construction of storage infrastructures near the markets. Sellers in the markets would negotiate a price to be able to sell in the market which should be low in the

beginning to assure that products could be sold and would negotiate prices with producers by contacting the associations or the technical supporters that should be present in the markets sometimes to facilitate the contact. Market place facilities should be built with public investment to assure their existence in villages and cities, and after that their management should be delivered to private companies with experience in that field in a renting regime, assuring the correct use of the markets for the purpose of being the major way to help producers to sell products.

Mechanisation of agriculture should also be a priority mainly to what concerns land preparation. As mentioned above, only 3% of the land was prepared using mechanic equipment which does not help to increase farmers productivity. The idea here is to make available to rural communities the needed equipment, so that farmers can start producing more. This equipment would be under responsibility of technical supporters already mentioned and of rural associations. At first, equipment maintenance should be guaranteed by public investment with contract with possible contracts with private companies with experience in fixing this kind of equipment. With time, when the associations could be capable to produce significant income this should be their responsibility. The logic behind this suggestion is based on the idea of a supporting state to initiate the activity and progressively rural communities are expected to organize themselves and act autonomously. This idea would attract agriculture equipment companies to the rural areas which would diversify even more the economy in these areas.

Agriculture credit is a question that shows some limitations according to this research, that is why it would be important to develop this activity. For that one idea could be training bank administrators by teaching them how to develop credit products for farmers. That would include banks needing to get specialized in this area so that farmers needs could be understood. This is an activity where credit collateral is difficult to grant and that is a major reason why banks grant so little credit to farmers. This kind of aspects should be studied and solved, even if the state has to be part of the solution by subsidising banks in order to stimulate them to grant credit to producers. The creation of rural associations that was mentioned would be a positive step to facilitate credit grant to agriculture since, united in the form of an associative group, farmers could be capable of presenting more robust collateral and could also get higher loans. By having access to loans, farmers would be able to invest in more equipment or expand cultivated areas, increasing their incomes as result.

5. Conclusion

The Angolan conflict history has a significant influence on the current state of this country's society and economy. Resulting in one third of the population in a refugee condition, mainly from the interior of the country where agriculture has its most potential, this conflict marked the way society developed to assure the capability of assuring basic needs, that were in clear jeopardy as a consequence of the conflict. After the achievement of peace in 2002, there was a long path to follow to overcome the destruction caused by the war. Infrastructures were destroyed and had to be rebuilt, refugees had to be resettled, basic services as education, health, water and energy supply had to be regenerated, employment needed to be created, as well as other priorities. To deal with the war, the leading party developed oil extraction as its main activity as this was the rent generator capable to finance war efforts. No other economic activity was stimulated during the war. There were no technical staff for agriculture, manufacture or other activity. People ran from the rural areas, where conflict was more intense - once for a long time only the region of Luanda was fully controlled by the leading party. Agriculture remained the main source of food for rural families but only in a subsistence logic, with no technical support in terms of mechanization, fertilizers or improved seeds and rain dependent.

One can argue that if agriculture was significantly developing in the colonial past, this was a signal that it should also be developed after the war. Moreover, literature shows more robust arguments that defend investment in agriculture in developing countries. At first, this activity is a main factor to assure food security for the population. Then, it is a low technical activity, which means that although the labour has to be intensive, it does not imply too much training, so the population can be capable to work in the fields and be productive in a quick way. With the correct technical and finance support, small farmers could start producing surpluses and their activity would level up from a subsistence activity to a commercial one, implying more income. Obviously, more income for farmers would result in higher investments, more relations with suppliers and clients and also non-agricultural businesses. Rural areas would become developed and life conditions would progressively raise. For that, it is clear that the first stimulus had to be originated by the state as rural population had no capacity, technical or financial, to develop their activity. Unfortunately, the state was too dependent on oil extraction by the end of the war. Rents were relatively easy to obtain, oil extraction were reaching high values and imports seem the easiest way, as they were affordable due to the economic context,

to obtain products, specifically food. However, imports were not that affordable for the poorer population, that had no access to the oil rents, and the rural areas had mostly poor population.

At the level of discourse, the government clearly defended that agriculture had to be a priority in order to diversify the country's economy. The documents that were analysed in this dissertation have shown that policy makers designed interesting and coherent programmes when they were compared to the literature. There was a clear priority in the creation of an extension model for agriculture, where small farmers should be in the centre of the activity and they should be supported technically. The main issue in this model was indeed the lack of technical staff to support the farmers. The function is not attractive as these technicians were offered low wages and had to live far from cities with low conditions. Mechanic support was also a significant failure in this model, once small famers have reduced access to this kind of equipment, resulting in low levels of productivity and production. Another priority for this activity that was mentioned in the analysed plans was the creation of markets to allow producers to sell their products in other regions than where they were produced. Although the road network of the country was improved, it is still insufficient to assure efficient transportation, thus this kind of costs are still high and products prices get also higher, which difficult competition of small farmers. Adding to this situation, there is a lack of storage capacity for the surpluses, compromising products conservation. This priority depends largely on infrastructure quantity and quality, which was another mentioned priority by policy makers, but as it was noticed the government did not perform in a suitable way. Agricultural research was another priority highlighted in these documents, but in this field the lack of transparency and organization was spotted once since 2007 there was an agreement between the Angolan government, a Brazilian research institution and the FAO to design a research model for the country and until the most recent plans there was no explanation of this model as it was still needed to implement a research model. Among other priorities that were analysed with detail in this research it is important to highlight the need to reinforce the institutional capacity of the Ministry of Agriculture, which has been showing interesting ideas during the last years but seem to be generally incapable of creating a strong agriculture activity in the country. Production levels, when compared with the goals set by the Ministry, were in general disappointing, but this fact is the reflection of the inefficient efforts that were made for agriculture in this country, which is still marked by the high oil dependence with its illusions for policy makers. Since 2014, oil prices dropped significantly, and Angola was clearly not prepared to face this new reality. Oil rents started to get lower and the capability to import was

also getting reduced. Prices started to raise and government funds were getting lower and there were no perspective of increasing unless oil prices started to raise again. Unfortunately, oil prices did not reach the high values registered in the past and Angola started to face a reality where economic diversification had to happen rapidly. However, diversification takes time and investment capabilities, two factors that were disappearing in the country. Agriculture activity is now probably seen as a real priority, but unfortunately the conditions are not the ideal to invest. Public investment may not be enough to stimulate it properly, so this activity development will not be as rapid as it could be if the high oil rents of the past were used for this purpose. Nowadays the reality in Angola shows a poorer population that still face food security problems and this fact negatively affects productivity in a country that urges to develop.

Although in some aspects there were not possible to find documents or data to be analysed and to enrich this research, in a general assessment it is quite reasonable to say that the research question had a suitable answer, that consisted in a detailed analysis of agricultural policies in Angola since the end of the civil war and its goals comparison with the real results for the agriculture activity. Production values were the easiest data to find since, fortunately, the Agriculture Ministry publishes reports related to agricultural campaigns, and therefore this aspect was clearly covered and evaluated. Some other indicators or goals set by policy makers were not so easy to find when it comes for example to know what big farm projects were really built or are really producing with satisfactory levels, which lead to a research on newspapers and other social media. The agricultural research projects that were mentioned in the several analysed plans are very confusing to be understood, or to be accessed if they are working properly or even if they really exist and how they work. Even with the research partnerships that were set by the government, there is a limitation for this research in order to clearly understand this theme. As a dissertation that mainly consists in documental research and facts comparison, it can be possible to admit that the present research can help people to understand the agricultural path followed by Angola in the years that followed the civil war. An advantage of joining a significant quantity of information with a chronological order allows to picture the decisions and the performance of agriculture in this country. The problems may now be easier to be spotted, and the potentialities may be easier to discover. Policy suggestions that follow the methodology are just indicative and the goal is to promote policy makers to draw even more suggestions from the analysis of this paper taking into account the reality of Angola and the available resources.

Future research can try to explore data so that more information can be published on this theme and it would be of the most interest that somehow there could exist a research where interviews could be made with local farmers around Angola, in order to understand their activity and what problems may exist that cannot be shown in plans or reports. Knowing the people that work in agriculture, sometimes very far away from villages, would be a significant enrichment of this kind of research. As well as an economic theme, this research concerns also social questions and it is important to use the numbers that exist to describe the activity, but also to know the opinions and needs of the population that actually works in the fields, because their reality has to be known in order to draw suitable policies.

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