

# American Journal of Agriculture (AJA)




**Angola's Agricultural Productivity and the  
Agricultural Sector Development Strategy**

**Dr. Beatriz Bernardo**



## Angola's Agricultural Productivity and the Agricultural Sector Development Strategy

 <sup>1\*</sup>Dr. Beatriz Bernardo  
The University of Agostinho Neto  
\*Corresponding Author's Email:  
[Beatty@gmail.com](mailto:Beatty@gmail.com)

---

### Article History

*Received 28<sup>th</sup> February 2023*

*Received in Revised Form 18<sup>th</sup> March 2023*

*Accepted 26<sup>th</sup> March 2023*



### Abstract

**Purpose:** The purpose of this study is to investigate the agricultural sector development strategy has affected agricultural productivity in Angola.

**Methodology:** The paper used a desk study review methodology where relevant empirical literature was reviewed to identify main themes and to extract knowledge gaps.

**Findings:** The study concluded that climate change response, agribusiness, agricultural extension services and access to agricultural credit positively and significantly influence agricultural productivity.

**Unique Contribution to Theory and Practice:** Angola as a country should implement agricultural extension services by ensuring there is enough staff in the country who are regularly capacity built so as to improve the agricultural productivity of the country.

**Keywords:** *Angola, Climate Change, Agricultural Productivity, Agricultural Sector.*

©2023 by the Authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>)

## INTRODUCTION

Wiley (2020) defines a strategy as the pattern of purposes, policies, programs, actions, decisions or resource allocations that define what an organization is, what it does and why it does it. The term "strategy" can also be used to refer to the overall body of knowledge (including but not limited to ideas, insights, experiences, aims, skills, knowledge, memories, perceptions, and expectations) that serves as a foundation for determining how to best go about accomplishing a set of goals. Comparable to a road rally navigator's use of a map, a company's strategic plan is essential to its success. It is a device that maps out the steps that, when taken, have the best chance of bringing a company from its current state to the one that its owners or other stakeholders envision for it (Dix & Matthews, 2022).

When it comes to adapting to the dramatic changes that have recently occurred in their environments, public sector organizations can benefit from strategic planning techniques that were originally developed for the private sector. For instance, "strategic planning" is "a disciplined effort to produce fundamental decisions shaping the nature and direction of governmental activities within constitutional bounds." For governments, this means increased efficiency (Hughes, 2022).

The modern agricultural landscape presents numerous challenges for policymakers and development practitioners tasked with creating investment strategies to spur economic expansion. Although agriculture has long been recognized for its productive role in supplying food, clothing, fuel, and shelter to a rapidly expanding global population, it also plays other roles, the significance of which is only now being appreciated. Agricultural development is now recognized as a critical and effective means of reducing poverty, in addition to its critical role in ensuring food security. Environmental issues such as global warming, water scarcity and pollution, and land degradation are also attributed to it (World Bank, FAO & UN, 2020).

By 2050, the world will need to be able to feed 9 billion people, end extreme poverty, and increase shared prosperity. When compared to other industries, growth in agriculture is roughly two to four times more effective in increasing incomes among the poorest. Seventy-eight percent of the world's poor reside in rural areas and rely primarily on farming for subsistence. One-third of Sub-Saharan Africa's GDP and three-quarters of the region's workforce are directly or indirectly reliant on the agricultural sector. However, agriculture-driven growth and poverty reduction, as well as global food security, are in jeopardy. When it comes to the effects of global warming, agriculture is among the most vulnerable industries. As the temperature rises, it may be necessary to plant less food. Between 19 and 29 percent of global greenhouse gas emissions can be attributed to agriculture and land use change (World Bank, 2015).

### Statement of the Problem

Creating a plan of action helps you concentrate your efforts and establish a path to success. Doing so will allow you to make the most of available tools and opportunities, overcome obstacles with agility, and maximize the productive use of your time, effort, and materials (Nagy & Fawcett, 2015). The ASDS hopes to create a country where everyone has access to healthy food, and its mission is to promote commercially viable and technologically advanced farming. Improvements in coordination and institutional change are necessary if the agricultural sector is to realize its potential.

Agro-pastoralism is vital to the people of Angola, as it provides them with a means of subsistence. Agriculture improves national food security by making more people's favorite foods readily available and by making them more affordable thanks to income earned from employment as an alternative source of livelihood, thereby raising the nutritional status of the population. Low agricultural production leading to food shortage; crop destruction by wildlife; livestock attacks by wild animals; and encroachment of forests by humans leading to environmental destruction are the main problems facing the agricultural sector (ASDSP, 2015).

### **Objectives of the Study**

The general objective of the study was to establish the effect of the agricultural sector development strategy on agricultural productivity in Angola.

### **Significance of the Study**

The study set out to assess whether or not the Agricultural Sector Development Strategy was successful in boosting agricultural output. Management and policymakers in the agricultural sector, and perhaps in other sectors as well, may benefit from the study's potential insights into the outcomes of the government's Agricultural Sector Development Strategy and broader strategic planning. It may also help the industry in Angola figure out if the implementation of the Agricultural Sector Development Strategy has had any unexpected side effects. The study's identification of sector gaps could help farmers in Angola and possibly beyond either fill those gaps themselves or pressure the government into doing so. This study can also serve as a resource for other researchers who are interested in exploring similar topics; it can inspire them to think of novel approaches to old problems and provide background information on areas that haven't been thoroughly explored here.

## **LITERATURE REVIEW**

### **Agricultural Extension Services and Agricultural Productivity**

Farmers' information needs, the public good nature of extension services, and the organizational and political factors influencing the effectiveness of extension systems were the focus of Anderson & Feder's (2015) research. With this theoretical framework, the authors of "Agricultural Extension: Good Intentions and Hard Realities" evaluated the efficacy of various extension strategies. More than 90 percent of the world's nearly 1 million extension personnel work in developing economies, so it was argued that investing in extension services could boost agricultural productivity and farmer incomes. They also mentioned that extension operations are one of the largest institutional development efforts in history, spanning 40 years. Hundreds of millions of farmers have interacted with extension services, and tens of thousands of technicians have been trained. In a time of shrinking public budgets, the question of how productive these extension investments have been becoming especially important.

### **Access to Agricultural Credit and Agricultural Productivity**

Bhatta (2015) found that farmers in the study area did not gain much from the use of credit for the cultivation of food crops and vegetables. The low rate of return from agriculture combined with the high interest rate on such credit led to this situation. However, the financial sector was

skeptical that the agricultural sector would be able to repay the loans it had extended. As a result, they set high expectations for farmers' annual income and mortgage payments. As a result, rural micro-enterprises have a hard time securing adequate agricultural financing. But he came to the conclusion that the farmers' agricultural productivity in the study area had increased thanks to the availability of agricultural credit. Improved seeds, fertilizer, pesticides, and irrigation facilities were more readily available to farmers thanks to this credit system. In the area under study, the average level of technical efficiency among farmers who had accessed the credit facility was 82%, while that of farmers who had not accessed the credit facility was 66%.

### **Empirical Review**

Ozdemir, (2021) conducted a study on the impact of climate change on agricultural productivity in Asian countries. While climate change is having serious impacts on agriculture and may require ongoing adaptation, short-run threats to global food security are also crucial for developing countries. The study adopted a dynamic and asymmetric panel autoregressive distributed lag estimators to investigate how the effects of climate change on agricultural productivity vary depending upon the short run and long run in Asia over the period of 1980–2016. The results confirmed that there is a long-run relationship between agricultural productivity and climate change variables; however, only CO<sub>2</sub> emissions could be linked to agricultural productivity in the short run. Moreover, while the direction of this effect is positive for the short run, it turns into negative in the long run confirming that carbon fertilization in the atmosphere can to some extents have a positive effect on agricultural productivity.

Fei and Lin, (2017) conducted research on the estimation of energy demand and energy saving potential in China's agricultural sector. This paper analyzed the energy saving potentials of China's agricultural sector by using an econometric approach and a scenario analysis. First a co-integration analysis and an error correction model were employed to analyze the long-term equilibrium relationship between agricultural energy consumption and its influencing factors such as agricultural output, mechanical power, agricultural industrial structure, fiscal expenditure and energy prices during the period 1980–2012. Then stability test, fitting effect test and Monte Carlo simulation method are applied to confirm the rationality of the prediction model. Further, the scenario analysis method is used to predict the energy-saving potentials in 2020 and 2025 under different scenarios. It is found that agricultural output and mechanical power have positive impacts on energy consumption, while agricultural industrial structure, fiscal expenditure and energy prices have negative influences. The results demonstrate that under BAU condition, the energy demand of China's agricultural sector will reach 128, 94 and 161,61million tons of standard coal by 2020 and 2025 respectively. Moreover, the energy savings potential will be 7, 967 million tons and 15,701 million tons under moderate and advanced scenarios by the year 2020, and 17, 225 million tons and 31,094 million tons by the year 2025. This study provides a reference for establishing energy saving policies for China's agricultural sector.

Lawry, Samii, Hall, Leopold, Hornby and Mtero, (2017), conducted a study on the impact of land property rights interventions on investment and agricultural productivity in developing countries. They conducted a systematic review on the effects of land tenure recognition

interventions on agricultural productivity, income, investment and other relevant outcomes. The findings were synthesized from 20 quantitative studies and nine qualitative studies that passed a methodological screening. The results indicated a substantial productivity and income gains from land tenure recognition, although gains differ markedly by region. The study found that the effects may operate through gains in perceived tenure security and investment; no evidence for a credit mechanism. The qualitative synthesis highlights potential adverse effects. A conclusion emphasizes the need for further research on inter-regional differences and on the role of customary tenure arrangements.

Pittelkow, Liang, Linquist, Van Groenigen, Lee, Lundy and Van Kessel, (2015), conducted a study on the productivity limits and potentials of the principles of conservation agriculture. One of the primary challenges of this time is to feed a growing and more demanding world population with reduced external inputs and minimal environmental impacts, all under more variable and extreme climate conditions in the future. Conservation agriculture represents a set of three crop management principles that has received strong international support to help address this challenge with recent conservation agriculture efforts focusing on smallholder farming systems in sub-Saharan Africa and South Asia. However, conservation agriculture is highly debated, with respect to both its effects on crop yields and its applicability in different farming contexts. The study was conducted using a global meta-analysis using 5,463 paired yield observations from 610 studies to compare no-till, the original and central concept of conservation agriculture, with conventional tillage practices across 48 crops and 63 countries. Overall, the results showed that no-till reduces yields, yet this response is variable and under certain conditions no-till can produce equivalent or greater yields than conventional tillage. Importantly, when no-till is combined with the other two conservation agriculture principles of residue retention and crop rotation, its negative impacts are minimized. Moreover, no-till in combination with the other two principles significantly increases rainfed crop productivity in dry climates, suggesting that it may become an important climate-change adaptation strategy for ever-drier regions of the world. However, any expansion of conservation agriculture should be done with caution in these areas, as implementation of the other two principles is often challenging in resource-poor and vulnerable smallholder farming systems, thereby increasing the likelihood of yield losses rather than gains. Although farming systems are multifunctional, and environmental and socio-economic factors need to be considered, the analysis indicates that the potential contribution of no-till to the sustainable intensification of agriculture is more limited than often assumed.

Aguilar, Carranza, Goldstein, Kilic, and Oseni, (2015), investigated the decomposition of gender differentials in agricultural productivity in Ethiopia. A number of studies document gender differentials in agricultural productivity. However, they are limited to region and crop-specific estimates of the mean gender gap. This study improves on previous work in three ways. First, data representative at the national level and for a wide variety of crops is exploited. Second, decomposition methods traditionally used in the analysis of wage gender gaps are employed. Third, heterogeneous effects by women's marital status and along the productivity distribution are analyzed. Drawing on data from the 2011–2012 Ethiopian Rural Socioeconomic Survey, we find an overall 23.4 percentage point productivity differential in favor of men, of which 13.5 percentage points (57%) remain unexplained after accounting for

gender differences in land manager characteristics, land attributes, and access to resources. The magnitude of the unexplained fraction is large relative to prior estimates in the literature. Moreover, the productivity gap is mostly driven by non-married female managers particularly divorced women; married female managers do not display a disadvantage. Finally, overall and unexplained gender differentials are more pronounced at mid-levels of productivity.

## **METHODOLOGY**

The study adopted a desktop methodology. Desk research refers to secondary data or that which can be collected without fieldwork. Desk research is basically involved in collecting data from existing resources hence it is often considered a low-cost technique as compared to field research, as the main cost is involved in executive's time, telephone charges and directories. Thus, the study relied on already published studies, reports and statistics. This secondary data was easily accessed through the online journals and library.

## **FINDINGS**

The results were grouped into various research gap categories namely as conceptual and methodological.

A conceptual gap occurs when desired research findings provide a different perspective on the issue discussed. For instance, Ozdemir, (2021) who conducted a study on the impact of climate change on agricultural productivity in Asian countries. Focused his study on climate change while our current study focuses on agricultural sector development strategy. His study therefore did not fully explain the objective of the study, leaving some study gaps that need to be filled. In his study a geographical gap was identified, his study was based in Asia and not Angola, hence his results will not perfectly relate with the area of study focused in the current study. His study adopted a dynamic and asymmetric panel autoregressive distributed lag estimators, contrary to the current study that will use a study desk method of data collection.

In addition, methodological gap can be identified from the research, for example Fei, & Lin, (2017), who conducted the research on the estimation of energy demand and energy saving potential in China's agricultural sector. A co-integration analysis and an error correction model were employed to analyze the long-term equilibrium relationship between agricultural energy consumption and its influencing factors such as agricultural output, mechanical power, agricultural industrial structure, fiscal expenditure and energy prices during the period 1980–2012.

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

In light of the study's findings, the authors draw the conclusion that adapting to climate change increases agricultural output. If global warming actually occurs, it will have a profound impact on farming. A majority of the mechanisms and two-way interactions between agriculture and climate are known, albeit not always fully understood.

The agricultural sector benefits greatly from access to agricultural extension services, which have a direct and substantial impact on agricultural output. Researchers found that private

extension services tend to focus on high-value areas and produce. It's difficult to reach rural areas and provide for poor farmers, who often grow low-value crops with little surplus to sell. They are a focus for non-profit providers, but their reach is limited by the lack of government funding for expansion. This suggests that agricultural extension may be improving unobserved productive attributes of farmers, such as managerial abilities, as gains in agricultural productivity are greatest at the top end of the distribution of yield residuals.

### **Recommendations**

The study concludes that quick action is needed to lessen the effects of climate change on agricultural output, and it suggests a number of options for doing so. These actions consist of things like informing farmers about climate change and its potential effects, investing in irrigation infrastructure, and researching and developing new agricultural technologies. Other researchers have found that agriculture is directly impacted by climate change and that reducing the effects of climate change could increase agricultural output.

In order to increase agricultural output in Angola, the government should substantially expand both national expanded and small irrigation programs. With the help of irrigation, even small-scale farmers can significantly increase their harvest. Therefore, the government should provide assistance to farmers by disseminating information on effective farming techniques, such as the safe use of pesticides and the availability of a reliable water supply.

Animal and agricultural products in Angola could benefit greatly from the introduction of micro processing plants. Because of this, agricultural output in the country will rise. Even though most researchers in this area failed to draw a connection between agribusiness and agricultural productivity, their emphasis on agriculture's viability as a business model provides compelling evidence that the latter greatly improves the former.

Furthermore, the study suggested that the government of Angola collaborate with various actors, including the private sector, to improve agribusiness and market access, leading to increased productivity. This cooperation could take the form of sharing cutting-edge equipment, conducting educational programs, or enhancing existing facilities. Colleges that provide training for farmers are another area of urgent need in the agricultural market, and they should be supported.



## REFERENCES

- Aguilar, A., Carranza, E., Goldstein, M., Kilic, T., & Oseni, G. (2015). Decomposition of gender differentials in agricultural productivity in Ethiopia. *Agricultural Economics*, 46(3), 311-334.
- Anderson, J. R., & Feder, G. (2015). Agricultural Extension: Good Intentions and Hard Realities. *The World Bank Research Observer*, 19(1), 41- 57
- Bhatta, G. (2015) *Agricultural Credit and Its Impact On Farm Productivity: A Case Study Of Kailali District*. Nepal Rastra Bank Banking Development and Research Unit Dhangadhi Office
- Dix, J., F., & Matthews, H., L., (2022). *The Process of Strategic Planning*. Article #1 of 10. Retrieved from [http://fisher.osu.edu/supplements/10/1470/All\\_Articles.pdf](http://fisher.osu.edu/supplements/10/1470/All_Articles.pdf)
- Fei, R., & Lin, B. (2017). Estimates of energy demand and energy saving potential in China's agricultural sector. *Energy*, 135, 865-875.
- Hughes, O. E. (2022). *Public Management and Administration* (4<sup>th</sup> Ed.) Palgrave Macmillan, United Kingdom, pp.11. Retrieved from <https://books.google.co.ke>
- Lawry, S., Samii, C., Hall, R., Leopold, A., Hornby, D., & Mtero, F. (2017). The impact of land property rights interventions on investment and agricultural productivity in developing countries: a systematic review. *Journal of Development Effectiveness*, 9(1), 61-81.
- Nagy, J., & Fawcett, S. B. (2015). *Why Develop Strategies?* Retrieved from, <http://ctb.ku.edu/en/table-of-contents/structure/strategic-planning/developstrategies/main>
- Ozdemir, D. (2021). The impact of climate change on agricultural productivity in Asian countries: a heterogeneous panel data approach. *Environmental Science and Pollution Research*, 1-13.
- Pittelkow, C. M., Liang, X., Linquist, B. A., Van Groenigen, K. J., Lee, J., Lundy, M. E., ... & Van Kessel, C. (2015). Productivity limits and potentials of the principles of conservation agriculture. *Nature*, 517(7534), 365-368.
- Wiley, J. (2020). *The Jossey-Bass handbook of Non-profit Leadership* (3<sup>rd</sup> Ed), 186
- World Bank, (2015). *Agriculture Overview*. Retrieved from <http://www.worldbank.org/en/topic/agriculture/overview#1>
- World Bank, FAO & UN, (2020). *Global Strategy to improve Agricultural and Rural Statistics*. Report# 56719-GLB