



The Contribution of The Agricultural Sector to The Diversification of The Algerian Economy: Reality and Prospects

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Abstract

The agricultural sector plays a strategic role in improving the availability of food and achieving food security. Agriculture represents a strategic importance in the economy of Algeria, in the processes of agricultural and industrial production and consumption and an important source of export and obtaining foreign currency to achieve the self-sufficiency.

Despite recent reforms to boost production and investment, the agricultural sector faces several challenges, including limited water resources, fluctuating production, and weak infrastructure. The development of the agricultural sector requires to Algeria to make more reform by using the recent knowledge and skills based on research findings and long-term experience in achieving sustainable agricultural production. encourage private investment, improve agricultural value chains, and adapt agricultural policies to the current climatic and economic challenges. Using Technological progress in farming tools, genetic modification, and data analysis continues to open avenues for more efficiency and productivity.

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1. Introduction

The agricultural sector plays a strategic role in improving the availability of food and achieving food security. However, while there is general agreement on the increased global demand for food to be expected in the coming decades, there is uncertainty surrounding global agriculture's capacity to service this demand through an expansion in the food supply. Better food provision ensured by increasing the productivity of agriculture and expanding the range of agricultural land use seems to be a possible method to eradicate hunger (Pawlak. K & Kolodziejczak. M, 2020), agriculture can help people to raise incomes, reduce poverty and improve food security.

There is lack of harmonized approach in addressing agricultural sustainability issues as different policies are targeting different sustainability issues in agriculture (Streimikis. J. & Baležentis. T, 2020).

the agricultural sector requires a plethora of policy measures. These may seek to improve the production technologies, managerial procedures, viability of rural communities, and increase resilience of the farms. On the other side, the changes in demand have been noticed due to changes in diets and lifestyle. Thus, the dynamic situation in agricultural sector requires proper modelling frameworks (Peng. B & al, 2024).

The agricultural sector plays a fundamental role in achieving comprehensive development in any country, as the main role played by this sector depends primarily on the available resources (Gilan, 2007, p.34). The agricultural sector in Algeria is one of the most important economic sectors in the country due to its vast green spaces, which are considered one of the finest types of land in the world, and a relative abundance of the necessary resources necessary to achieve comprehensive development at the level of the economy as a whole we seek in this study to highlight the role of the Algerian agricultural sector in supporting growth and increasing the well-being of members of society.

To address the topic, the following problematic study is presented:

What is the reality of the agricultural sector in Algeria ? and what are the ways to develop it and strengthen its role in the national economy ?

To address these questions, the study is based on two primary hypotheses:

1. Improving infrastructure, modernizing production technologies and supporting gricultural research can contribute to the effective development of the agricultural sector.
2. The current peasant policies are important, but they are insufficient to achieve real development without deeper structural reforms.

2. The concept of agricultural development

- The agricultural sector occupies an important place in the economy of any country and is very resource-intensive, in this regard, it should be paid attention to first of all (Nezamova.O & al, 2023).

A fundamental premise for delivering sustainable food and agriculture is the creation of an enabling policy environment and the need for sectoral ministries to change the way they work and coordinate policies across government (FAO, 2018).

In addition to the role of Agriculture in reducing poverty and malnutrition in many countries, where most of the extreme poor depend on agriculture and related activities as their primary source of livelihood, inclusive agricultural growth for smallholders, especially women, has maximum effectiveness in reducing extreme poverty and hunger when it leads to increased return on Labor and increased employment opportunities for the poor (FAO, 2012, p.30).

Growth in agriculture remains 2-3 times more effective at reducing poverty than an equivalent amount of growth generated in other sectors, and the effects are largest for the poorest in society. Feeding people depends on protecting the natural resources and human capital that underpin their food systems (World Bank Group, 2025).

agriculture can help people to raise incomes, reduce poverty and improve food security for 80% of the world's poor (World Bank Group, 2025).

- Well-functioning food and agricultural markets can foster food security under the appropriate policy settings. Regions that are already affected by increasing land or water scarcity are likely to increase their reliance upon trade for food security, and allowing them to meet their food requirements in terms of quantity and diversity at levels above what domestic production could sustain (OECD/FAO, 2023, P.11).

The recent knowledge and skills based on research findings and long-term experience in achieving sustainable agricultural production practices need to be communicated efficiently and effectively. Sustainable agricultural production practices have the potential to reduce farmers' reliance on agricultural inputs maintaining higher production, Farmer's knowledge of sustainable production practices is vital which needs informal and formal ways of knowledge sharing (Abdullah. R. & al, 2024, P.468).

and innovative export strategies allowed to meet the evolving demands of international markets over the years. Advancements include superior crop varieties, enhanced farming techniques, along with efficient packaging and shipping methods, playing a significant role in expanding agricultural exports, the advanced agriculture fosters sustainability with economic growth potential. By implementing sustainable practices, agriculture significantly aids in preserving resources while ensuring economic stability, the agriculture innovation promises even more substantial contributions to economic growth. Technological progress in farming tools, genetic modification,

and data analysis continues to open avenues for more efficiency and productivity. Such innovations stimulate growth, provide job opportunities, and increase wealth (Bloom Ranch, 2025).

sustainable agriculture has significant social benefits. By prioritizing fair labour conditions for farm workers and investing in rural communities' development, it helps alleviate poverty and promotes social equity (Korneeva. E. & al, 2023, P.3).

The science of agricultural economics is divided into the following:

- Agricultural management: it deals with the rules, procedures, knowledge and laws related to farm affairs as an investment project using the economic resources available on the farm and outside, and it is considered one of the branches of agricultural economics.
- Agricultural marketing: it specializes in the stages of marketing agricultural crops, determining the prices at each stage, markets, raising marketing efficiency, the impact of marketing services costs in the price report....Etc. This is so that the good or service reaches the consumer and gets his satisfaction, both in terms of quality and price.
- Agricultural prices: he is interested in studying the agricultural price structure and its relationship to the purchasing power of crops and the subject of cash income of farms to fluctuations in their levels as a result of fluctuating economic and monetary activity, analyzing the foundations of agricultural price policies and their relationship to production efficiency, income distribution equity and meeting the needs of the state.
- Agricultural credit: this is because agriculture needs financing, after the growth of commodity and market production, the volume, timing and costs of agricultural financing, and the role of the state in providing the elements of efficient use of agricultural resources.
- Agricultural cooperation: it is concerned with policies and programs that will develop the national agricultural income in a balanced manner with economic plans at the sectoral and national levels. In order to achieve a set of political and social goals for the individual and society as a whole (Gado, 2013, pp. 7-8).

3. The role of the agricultural sector in the national output of Algeria

Agriculture represents a strategic importance in the economy of any country in the processes of agricultural and industrial production and consumption and an important source of export and obtaining foreign currency to achieve the self-sufficiency that any country aims for. The agricultural industry is an important source of employment, reducing unemployment, especially in rural areas, and a large labor market. Agriculture is a source of raw materials for many industries, there are many agricultural industries based on agricultural raw materials such as vegetable oil, textile and other industries, the diversity of agricultural raw materials leads to many areas for workers, increase national income and raise the standard of living of community members. Agriculture has long been a source of industrialization and development in many countries, as well as the utilization of the agricultural surplus for industrial exploitation outside the rural sector, which

largely depends on the extent to which agriculture has reached technological progress, the prevailing agricultural tenure systems, the prevailing trend in income distribution and the propensity to save. The availability of investment opportunities outside the agricultural sector is based on the fact that the level of income from agriculture and productive merit are the main factors for the availability of surplus income for saving, and the more diverse the sources and sectors of the economy in the state, the less it depends on agriculture as a source of capital. The number of rural workers is also related to the amount or level of technical progress. at the initial stage of economic development, a large amount of labor available to capital is used, which means a decrease in the productivity of the agricultural worker. at the advanced stage of development, the use of agricultural technical means increases, which means an increase in the proportion of capital used for Labor, an increase in labor results, and a decrease in the agricultural labor force.

The more agriculture develops, the more capital goods it needs, such as machinery, fertilizers and chemical pesticides, this helps to increase the production volume of these goods and the economic activities produced by them, as well as industrial (household) consumer goods. the contribution of Agriculture in this area depends on the increase in production progress and income, and the importance of the agricultural sector as a consumer of consumer goods.

An increase in the level of agricultural production leads to the formation of a production surplus, whether at the food or industrial level, after meeting the need for domestic consumption, so that this surplus production can be exported abroad, increase foreign exchange and raise the country's reserves of hard currency, which helps in the establishment of various fields of industry (Gado, 2013, pp. 9-14).

In addition to the role of Agriculture in reducing poverty and malnutrition in many countries, where most of the extreme poor depend on agriculture and related activities as their primary source of livelihood, inclusive agricultural growth for smallholders, especially women, has maximum effectiveness in reducing extreme poverty and hunger when it leads to increased return on Labor and increased employment opportunities for the poor (FAO, 2012, p.30).

Cereal products occupy a strategic place in the diet and in the Algerian economy. During the periods 2000-2009 and 2010-2017, the grain area occupied an annual average of 40% of the useful agricultural area .The area planted with cereals was estimated at 3,385,560 hectares during the period (2010-2017), an increase of 6% compared to the previous period (2000-2009). During the period (2000-2009), it amounted to about 3,200,930 hectares, with durum wheat and barley occupying most of this area, about 74% of the total grain area. The grain production rate during the period 2010-2017 is estimated at 41.2 million quintals, an increase of 26% compared to the decade 2000-2009, where the production rate is estimated at 32.6 million quintals. The production consists mainly of durum wheat and barley, which, respectively, accounted for 51% and 29% of the total grain production rate 2010-2017. Gain production in the 2022-2023 season amounted to 7 million tons, with Algeria taking the second place in Africa.

However, the emergence of oil in Algeria, the rise in its prices on world markets and the spread of corruption in various spheres of the state led to a weakening of the role of the agricultural sector in the structure of the country's GDP and the failure to achieve food self-sufficiency.

The Algerian economy experienced real growth of 4.1% in 2023, thus marking a slight acceleration compared to the 3.6% increase recorded in 2022. These results testify to a positive economic dynamic for the year 2023. The nominal Gross Domestic Product (GDP) for the year 2023 is estimated at 33,638.3 billion D.A, up from 32,039.5 billion D.A in 2022. This increase of 5.0% reflects an annual change of 0.9% in the implicit GDP price index. The moderate increase in the GDP deflator in 2023 is mainly explained by the decrease in the prices of petroleum products. The average price of Brent crude oil reached about \$83 per barrel in 2023, a decrease of 20% compared to its level of 103.8\$ in 2022.

The following table shows the extent to which the agricultural sector contributes to the GDP structure.

Table 1. The contribution of the agricultural sector and other sectors to the structure of Algeria's GDP during the period (2000-2023).

	Construction and Public Works(%)	Industry(%)	Agriculture (%)	Hydrocarbons (%)	Services (%)
2000	8,7	7,5	9	41,9	32,9
2001	9,1	8	10,5	36,7	35,5
2002	9,9	8,1	10,1	35,7	36,2
2003	9,2	7,3	10,6	38,6	34,3
2004	8,9	6,8	10,2	40,7	33,5
2005	8	5,9	8,2	47,4	30,4
2006	8,4	5,6	8	48,5	29,5
2007	9,4	5,4	8	46,4	30,9
2008	9,2	5	7	48,1	30,6
2009	11,8	6,2	10,1	33,6	38,3
2010	11,2	5,5	9	37,2	37,1
2011	9,8	4,9	8,7	38,3	38,4
2012	9,2	4,5	8,8	34,2	36,7
2013	9,8	4,6	9,9	29,8	38,4
2014	10,4	4,9	10,3	27	40,2
2015	11,5	5,4	11,6	18,8	44,6
2016	11,9	5,6	12,3	17,4	45,1
2017	11,7	5,5	12,3	19,2	43,9
2018	11,9	5,6	12,3	23,1	47
2019	12,7	5,9	12,8	20,3	48,3
2020	13,6	6,5	14,7	14,6	50,7
2021	15,1	7,2	15,7	28,8	33,2

2022	13	6,1	14,4	38,8	27,6
2023	13,6	4,8	13,8	20,2	46,3

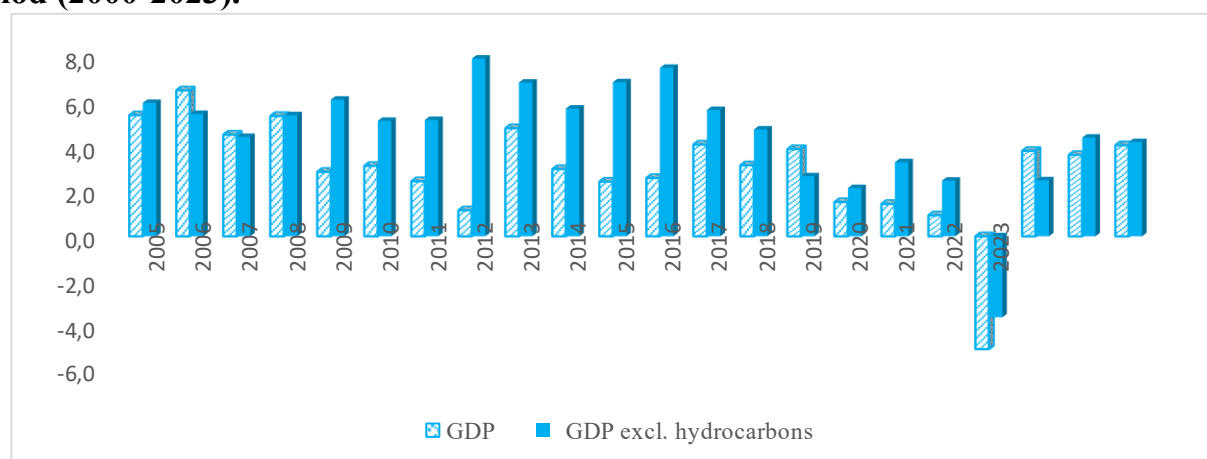
Source: prepared by the researcher based on the data of the National Bureau of Statistics in Algeria (ONS).

- Through table 1. We note the varying contribution of a group of sectors to the formation of GDP, as it turns out that the services sector (services of government departments and services outside government departments) contributes the largest percentage of GDP during the period (2000-2023) to come in first place in terms of its contribution to the formation of GDP, where its percentage ranged between 30.6% 50.7%, where the highest percentage was recorded in 2020 at 50.7% of the total GDP formation. As for Hydrocarbons sector, it ranked second in its contribution to the formation of GDP, as the contribution of this sector to GDP ranged from 14.6% in 2020 to 48.5% in 2006. The contribution of this sector to GDP has been declining in recent years due to the decline in oil prices and the reduction of exported quantities in accordance with agreements with OPEC member countries. While Services sector contributes to the GDP by the largest percentage in recent years, reaching 50.7% in 2020 and 46.3% in 2023. The agriculture sector recorded a weak contribution to the GDP, reaching 13.8% in 2023, despite the efforts exerted by the state to promote this sector, while the industry sector also recorded a weak contribution to the GDP, which reached stable rates at very low levels, reaching 4.8% during 2023. It can be said that growth outside the hydrocarbon sector remains fragile and at weak rates despite the developments that took place in this sector during the period (2000-2023), which is due to the role of Public Investment programs in achieving these results, and despite the focus of these programs on the development of the industrial sector, the main engine of sustainable growth, but the results achieved in it remain relatively weak and not at the desired rates, as it did not exceed 7.2% in the composition of GDP and achieved in 2021.

The problem of the decline of industrialization in Algeria is due to the problem of rent, which paralyzes the rest of the productive sectors, and the Algerian economy suffers from two main phenomena that are closely related to each other: the phenome of rent seeking and the phenome of corruption that results from the attempt to benefit and acquire this rent (Zairi.B, 2013, p.16).

Through this study, we will assess the relationship between the Agricultural Sector and the Economic Growth in Algeria. The Algerian economy experienced real growth of 4.1% in 2023, thus marking a slight acceleration compared to the 3.6% increase recorded in 2022. These results testify to a positive economic dynamic for the year 2023.

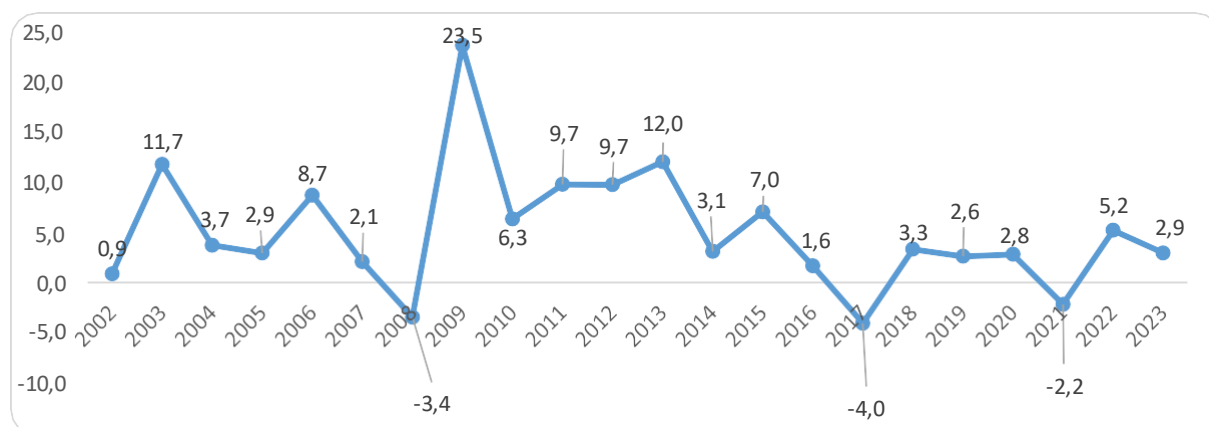
Fig 1. Evolution of the growth rate of GDP and GDP excluding hydrocarbons during the period (2000-2023).



Source: Based on the data of the National Bureau of Statistics in Algeria (ONS).

The agricultural sector grew by 2.9% in 2023, although this is lower than the 5.2% increase recorded in 2022. This development is mainly explained by an increase in agricultural activities, especially in the field of crop production.

Fig 2. Evolution of the growth rate of the value of agriculture and fisheries during the period (2000-2023).

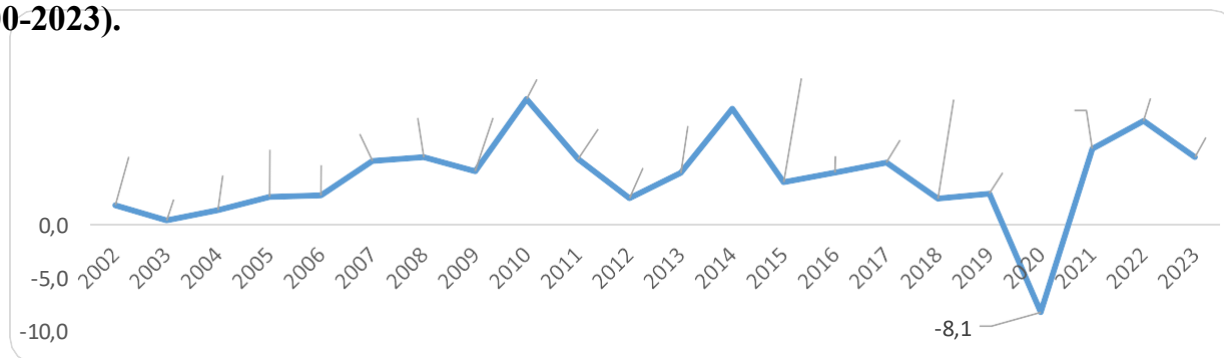


(2000-2023).

Source: Based on the data of the National Bureau of Statistics in Algeria.

- The industrial added value reached DA 1,522.9 billion D.A in 2023, marking an increase compared to 1,333.2 billion D.A in 2022, a nominal increase of 14.2%. In terms of volume growth, the industry grew by 6.3% in 2023, compared to 9.6% in 2022.

Fig 3. Evolution of the growth rate of the added value of the industry during the period (2000-2023).



Source: Based on the data of the National Bureau of Statistics in Algeria (ONS).

4. Ways to develop the agricultural sector in Algeria in light of current economic challenges

A policy was envisaged for the development of the agricultural and rural sector, through a structured and integrative endeavor based on a structure consistent with other sectoral policies. This approach will allow the development of agriculture, making it a tributary of economic diversity and growth. As for the economic growth model adopted in the field of Agriculture, which responds to several challenges, it is based, as a matter of priority, on the promotion of agricultural investment and agro-food industries based on greater mobilization of capital and the necessary private initiative to revive the agricultural and rural sector. In this regard, the priority actions that the government aspires to achieve, mainly, are (aapi, 2025):

- Covering basic food needs by increasing production and agricultural productivity,
- Development of a new agricultural and rural model driven by private investment and the emergence of a new generation of producers,
- Improving the competitiveness of agricultural and forest food products and integrating international value chains,
- Sustainable and balanced development of rural areas, especially in mountainous and desert areas,
- Modernization of agriculture through the integration of knowledge-related products and digitization.

Developing and strengthening the productive base through:

- Valorization of peasant lands, especially in the Great South,
- Development of strategic divisions (corn, sunflower, oily Herring, soy, cereals, food legumes, etc.),
- Developing integrated farms, encouraging public-private partnership within the framework of model farms, and developing agricultural mechanization,
- Development of irrigation systems and water-saving equipment, development of fertilization techniques to improve the use of inputs in different agricultural divisions,

- Creation and development of modern nursery Farms, development of greenhouse cultivation (multi-domed houses), development of feed cultivation (alfalfa, hydroponic),
- Valuation of agricultural production in the sheep, cows and goats, white meat, fruits and vegetables, as well as the milk division,
- Valorization of local peasant products (dates, oils, grapes.....),
- The development of cold storage and storage capacities, the development of wool packaging and conversion workshops, as well as the logistics base for the export of agricultural products,
- Marketing of meat products (red meat) (slaughter, conversion and packaging),
- Development of breeding and fattening of cattle (sheep and cows), development of leather conversion units,
- The forest economy and the valuation of forest products, as well as agricultural tourism and wet tourism in lakes and wetlands,

As for the food industry sector, it is necessary to work on:

- Creation of units for converting fruits and vegetables,
- Creation of units for the conversion of oils (sunflower, celandine...),
- establishment of units for the conversion of milk and its derivatives, and the establishment of units for the production of fertilizers,
- Manufacture of veterinary products and crop protection products,
- Development of factories for the manufacture of packaging for sorting and packaging units for agricultural and food products, and the development of storage and refrigeration capabilities.

5. Conclusion

Agriculture represents a strategic importance in the economy of Algeria, in the processes of agricultural and industrial production and consumption and an important source of export and obtaining foreign currency to achieve the self-sufficiency. sustainable agriculture has significant social benefits. By prioritizing fair labour conditions for farm workers and investing in rural communities' development, it helps alleviate poverty and promotes social equity.

- The services sector (services of government departments and services outside government departments) contributes the largest percentage of GDP during the period (2000-2023) to come in first place in terms of its contribution to the formation of GDP. While The agriculture sector recorded a weak contribution to the GDP, reaching 13.8% in 2023.
- The problem of the decline of industrialization in Algeria is due to the problem of rent, which paralyzes the rest of the productive sectors, and the Algerian economy suffers from two main phenomena that are closely related to each other: the phenome of rent seeking and the phenome of corruption that results from the attempt to benefit and acquire this rent.

By implementing sustainable practices, agriculture significantly aids in preserving resources while ensuring economic stability, the agriculture innovation promises even more substantial contributions to economic growth. Technological progress in farming tools, genetic modification, and data analysis continues to open avenues for more efficiency and productivity. Such innovations stimulate growth, provide job opportunities, and increase wealth. The recent knowledge and skills based on research findings and long-term experience in achieving sustainable agricultural production practices need to be communicated efficiently and effectively.

The development of the agricultural sector requires a clear vision in which efforts are integrated between the public sector, the private sector and local actors, focusing on innovation and modern technologies, raising the performance of the agricultural sector and improving its productivity. Which requires the state to modernize the agricultural sector with various modern technologies by encouraging the use of modern technologies such as smart irrigation, precision farming, and agricultural mechanization; improving rural infrastructure; strengthening governance and control; encouraging private investment in the agricultural sector and supporting cold chains to maintain the quality of agricultural products.

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