



Trade openness and its relationship to economic performance in Algeria - An analytical and evaluative study during the period 2013-2023

Hamza KHIRDJA

Ahmed Derayah University, Adrar (Algeria),
khirdja@univ-adrar.edu.dz

Ahmed HALALI

Ahmed Derayah University, Adrar (Algeria),
halaliah@univ-adrar.edu.dz

Lila AYAD

Ahmed Derayah University, Adrar (Algeria),
ayadlila01@univ-adrar.edu.dz

Abstract

The trade openness policy has been one of the cornerstones adopted by Algeria since the 1990s, as part of its economic reforms aimed at achieving integration into the global economy and diversifying sources of economic growth.

This research aims to introduce the role of trade openness in driving economic growth in Algeria and enhancing economic performance by analyzing the developments in the foreign trade sector, represented by the development of the gross domestic product (GDP), and the extent of the impact of trade openness on economic growth in Algeria.

The study's indicators showed that exports remained dominated by the hydrocarbon sector, which is significantly affected by fluctuating energy prices. Meanwhile, Algeria is moving towards gradually reducing its

reliance on imports, which has a positive impact on reducing the trade deficit. the study's indicators also showed a positive long-term equilibrium relationship between economic growth in Algeria and trade openness

Keywords: *trade openness, economic growth, Algeria, export, import*

Ouverture commerciale et son lien avec les performances économiques en Algérie - Étude analytique et évaluative pour la période 2013-2023

Résumé

La politique d'ouverture commerciale est l'un des piliers adoptés par l'Algérie depuis les années 1990 dans le cadre de ses réformes économiques visant à s'intégrer dans l'économie mondiale et à diversifier ses sources de croissance économique.

Cette étude vise à présenter le rôle de l'ouverture commerciale dans la stimulation de la croissance économique en Algérie et l'amélioration des performances économiques en analysant l'évolution du secteur du commerce extérieur, représentée par l'évolution du produit intérieur brut (PIB), et l'ampleur de l'impact de l'ouverture commerciale sur la croissance économique en Algérie.

Les indicateurs de l'étude ont montré que les exportations restaient dominées par le secteur des hydrocarbures, qui est fortement affecté par la fluctuation des prix de l'énergie. Parallèlement, l'Algérie s'oriente vers une réduction progressive de sa dépendance vis-à-vis des importations, ce qui a un impact positif sur la réduction du déficit commercial. Les indicateurs de l'étude ont également montré une relation d'équilibre positive à long terme entre la croissance économique en Algérie et l'ouverture commerciale.

Mots clés : *ouverture commerciale, croissance économique, Algérie, exportation, importation*



Introduction

Foreign trade is one of the main pillars on which the economy depends for growth and development. It represents a major means of exchanging goods and services between countries, which leads to improving productivity, expanding markets and benefiting from the comparative advantages of each country.

The world has witnessed a significant development in the movement of foreign trade thanks to globalization and international trade agreements, and technological progress in the fields of transport and communications, as the global economy has become more integrated and interconnected, making foreign trade an influential element in determining the path of economic growth of countries.

For years, Algeria has sought to integrate its national economy into the global economy by opening up to foreign markets and adopting trade reforms aimed at reducing customs and non-tariff restrictions and encouraging trade exchange with various international partners. Through this research paper, we will try to answer the following problem:

How much has trade openness contributed to improving Algeria's economic performance, by tracking Algeria's trade openness index during the period 2013-2023?

Objectives of the study

- Introduce the concept of trade openness, economic growth and economic performance,
- Identify the relationship between trade openness and economic growth,

- Knowing the contribution of trade openness to GDP in Algeria.

Methodology

In order to answer the problem, both descriptive and analytical approaches will be relied upon, and this is to study the general framework of trade openness and economic growth and their relationship to each other, by tracking and analyzing the development of the trade openness index using annual data, which covers the period between 2013-2023.

1- What is Trade Openness

1-1 Definition of trade openness

In the minds of many, the concept of trade liberalization is related to zero or low tariffs. This may be true to some extent, but the truth is that tariff reduction or elimination is only a small part of what is meant by trade liberalization. The reason for this is that the concept of trade liberalization is a broader concept that includes many things, ranging from tariff reduction to overcoming non-tariff barriers, which take many forms and have spread in recent times to internal reforms that are at the borders and related to customs and their procedures, such as inspection procedures and certificates of origin. Therefore, we find that trade liberalization is a broad concept that includes many aspects and aspects that are not necessarily related to customs reduction. (Ahmed Farouk, 2004, p. 2)

Trade liberalization between countries promotes free trade, allowing countries to trade in goods without regulatory barriers or associated costs, reduces costs for countries that trade with other countries, and may eventually lead to lower prices, because imports are subject



to lower fees and competition between countries is likely to increase.

(<https://www.investopedia.com/terms/t/trade-liberalization.asp>)

Freedom of trade is defined as the policy followed by states and governments when they do not interfere in trade between states through tariffs, quotas or other means. (Raad Hassan, 2000, p. 286)

On the other hand, trade openness is defined as the policy that leads to abandoning export-biased policies, pursuing neutral policies between export and import, reducing the value of high tariffs, in addition to converting quantitative restrictions into tariffs and moving towards a unified tariff system. (Zakaria, Al-Nasser, & Shahrazad , 2021, p. 94)

Trade openness also refers to the degree to which countries' economies participate in international trade, and is usually measured by the ratio of total exports and imports to GDP. It also means a freer flow of goods, services and capital between countries, leading to increased trade and deeper economic integration.

Accordingly, it can be said that the policy of economic openness is the policy that would reduce the degree of processing against exports. Economic analysts mostly focus on reductions in import duties and licenses as an essential step in reforming foreign trade. This definition is related to an important characteristic that trade liberalization does not necessarily require that the value of tariffs be zero or even a very low level. Therefore, according to this definition, an open and liberalized economy can exist at the same time as imposing tariffs. (Abdous, 2010 - 2011, p. 44)

The editorial policy depends on a set of tools, the most important of which are:(Abdelmadjid, 2005, p. 249)

Changing the price system, changing the pattern of state intervention in international trade and changing exchange rates.

1-2 Importance of Trade Openness

The importance of foreign trade is that it represents an economic and political strategy. It is also a weapon used by countries on international transactions to achieve their economic and political purposes, and to implement their internal objectives, such as protecting emerging industries from foreign competition. It also enables each country to benefit from the advantages of other countries. What a country enjoys, foreign trade puts at the disposal of all countries. The importance of trade lies in the relationship it brings with economic growth. Many economists confirm that trade liberalization positively affects the economic growth index and then the general level of economic and social well-being together. (Mustapha, 2023, p. 316)

Economic openness is an important factor in improving and distributing production elements among different sectors, which increases the quantity and efficiency of production and also contributes to the occurrence of economies of scale in production because the expansion of the market through trade must lead to lower production costs, and therefore will have a positive impact on growth and human well-being.(Ali Tawfiq & Walid , 2000, p. 17)

2- Defining economic growth and performance

One of the axioms circulating in the economic world is that it is not possible to achieve economic development



Soumission : 07/03/2025 Acceptation : 11/06/2025 Publication : 20/09/2025

without achieving a significant and appropriate rate of economic growth. Therefore, economic growth has become the main factor officially relied upon in measuring the progress and progress of countries. There are many definitions of economic growth, including:

- Economic growth is the continuous long-term increases in real per capita income over time, which achieves high rates in macro variables such as national income, employment, consumption, saving and capital formation, which achieves well-being for members of society.
(https://democraticac.de/?p=79192#_ftn6)
- Economic growth "means a continuous increase in average real per capita income over time, and at the rate of per capita income we mean total income divided by population.
- Samuelson A.P. considers that net real national product is the main indicator of economic growth, because its data are available and easily obtained according to his opinion, and therefore defines economic growth as the relative increase in net national product.(Ahmed, 2014-2015, p. 9)

Economic growth can also be defined as a continuous increase in average real per capita income over time. (Abdelkader, 2003, p. 11)

It can also be defined as an increase in productive capacities in the country as a result of an increase in the number or improvement in the use of economic resources or the development of technology used in production.

Economic growth can also be measured in "nominal" or "real" terms. Nominal economic growth refers to the increase

in the value of production in dollars over time, including changes in the volume of production and the prices of goods and services produced. As for economists, they usually talk about real economic growth, that is, the increase in the volume of production only, which removes the impact of price change, due to the fact that it better reflects the amount of state production at a given time, compared to other time periods. (<https://www.rba.gov.au/education/resources/explainers/economic-growth.html>)

Accordingly, it can be said that economic growth is a continuous increase in GDP and income per capita and society, which achieves high rates of total variables.

The term economic performance refers to how the state or company operates, i.e., how efficient it is in achieving its desired goals. Alternative approaches to measuring macroeconomic and microeconomic performance exist. GDP, among other indicators, is one of the most important indicators to know how well the economy is performing, and because there are international standards to calculate it, it is widely used globally for international comparison. Efficiency and productivity, as well as long-term growth, are traditional indicators of corporate performance. However, it should be noted that not all indicators are accurate, and it is important for economists and policymakers, in general, to go beyond key statistics to provide a better overall picture of economic well-being. (https://link.springer.com/rwe/10.1007/978-1-4614-7883-6_208-1)

3- Relationship of trade openness to economic growth

The relationship between trade liberalization and economic growth is an important topic that economists have



discussed for many centuries. Some argue that trade liberalization contributes significantly to boosting economic growth; while others argue that it has negative effects on some sectors and countries.

It is known that the impact of foreign trade liberalization on economic growth is a positive and positive one. The liberalization of imports leads to the expansion, development and modernization of the productive base by providing the necessary means of production, which leads to a reduction in prices. The liberalization of imports also leads to the stimulation of national production, by pushing local producers to accept the challenge posed by competing foreign products to their products, both in the domestic market and in foreign markets. To reach the required level of competition, local producers must rationalize their investments, reduce costs, raise the level of production and improve its quality. It is known that all these conditions are vital for the developed or developing economy, as raising the level of production and improving its quality has become a prerequisite for access to foreign markets. (Abdel Aziz, 2010, p. 152)

The impact of trade openness may end in the escalation of imports at large rates, at a time when the ability to export is reduced and many problems arise, including the problem of the deficit in the trade balance and thus increasing external indebtedness.

The issue of choosing appropriate trade policies to achieve economic development, that is, whether development is achieved outwardly through the adoption of an export substitution strategy, or inwardly through the

adoption of an import substitution strategy, has been highly debated. (Jamal & Aicha, 2018, p. 198)

The number of developing countries increased at that time by following the strategy of replacing imports, as many politicians and planners saw the ability to achieve many development goals such as creating investment and employment opportunities, facing the deficit in the balance of payments, benefiting from transferred technology and diversifying the structure of GDP. (Huda , 2018, p. 49)

4- Contribution of trade openness to Algeria's GDP

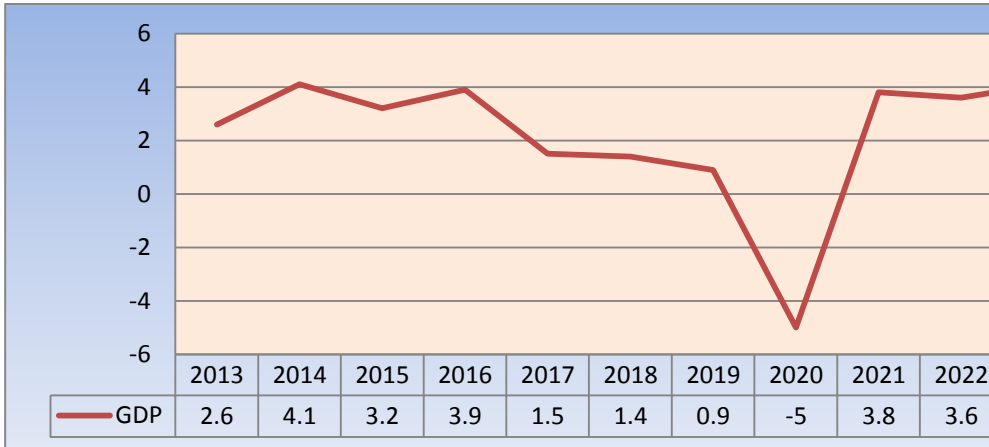
4-1 Evolution of Algeria's economic growth rates for the period 2013-2023

Economic growth is one of the most prominent indicators of the development and prosperity of societies, as it reflects the ability of the economy to increase the production of goods and services over time. It refers to the increase in the size of a country's economy over a period. The size of the economy is usually measured by the total production of goods and services in the economy, which is called GDP. The following figure shows the development of economic growth rates in Algeria as follows:

Figure (01): Evolution of economic growth rates in Algeria for the period 2013-2023



Soumission : 07/03/2025 Acceptation : 11/06/2025 Publication : 20/09/2025



Source:GDP growth (annual %) - Algeria. Observed on 05-08-2025 at the link:

<https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=DZ>

Throughout the curve, we note that there is a gradual improvement in the growth rate from 2.6% in 2013 to 3.8% in 2021 thanks to the rise in oil prices. Since then, the growth rate has witnessed a decline due to the decline in oil prices and the implementation of the new five-year program 2015-2019, which did not meet the hoped-for expectations.

According to the World Bank report, this recession is mainly due to the "slow" growth of the hydrocarbon sector in addition to the contraction of economic activity, which led to a decline in the development of growth in non-hydrocarbon sectors. This is due to the negative repercussions of the COVID-19 pandemic, which has affected the path of growth and financial balances.

The growth rate recorded a positive improvement in 2021 and 2022, thanks to the recovery of the carbohydrate

sector after the recession caused by the pandemic, in addition to the recovery of oil prices, and at the period (2021-2023) there was a strong recovery. In 2021, the level of growth returned to about 4%, and the gradual recovery continued in 2022 and 2023, maintaining that the growth rate was at a good level, exceeding 4%.

We conclude that the curve shows a pattern of relatively stable growth until 2016, followed by a gradual slowdown and then a sharp collapse in 2020, and a strong and rapid recovery after the pandemic. This pattern reflects the economy's sensitivity to crises, but it also shows good resilience.

The conclusion that can be reached from the analysis of the data in Figure (01) is that the real growth rates recorded in the Algerian economy are clearly volatile, which reflects the fact that the growth strategies followed by Algeria until today have not provided the economy with the necessary sectoral diversification that reduces the risk of exposure to external shocks, due to the excessive dependence of the national economy on the oil sector, which has not yet provided opportunities for stable growth in real output, which has remained in this direction for the past three decades.

4-2 Analysis of the indicators of Algerian trade openness to international economies:

The indicators of the openness of the Algerian economy to international economies are limited to the ratio of Algerian foreign trade to GDP, the ratio of exports to GDP and the ratio of imports to GDP.

The following table shows the development of indicators of trade openness in Algeria as follows:



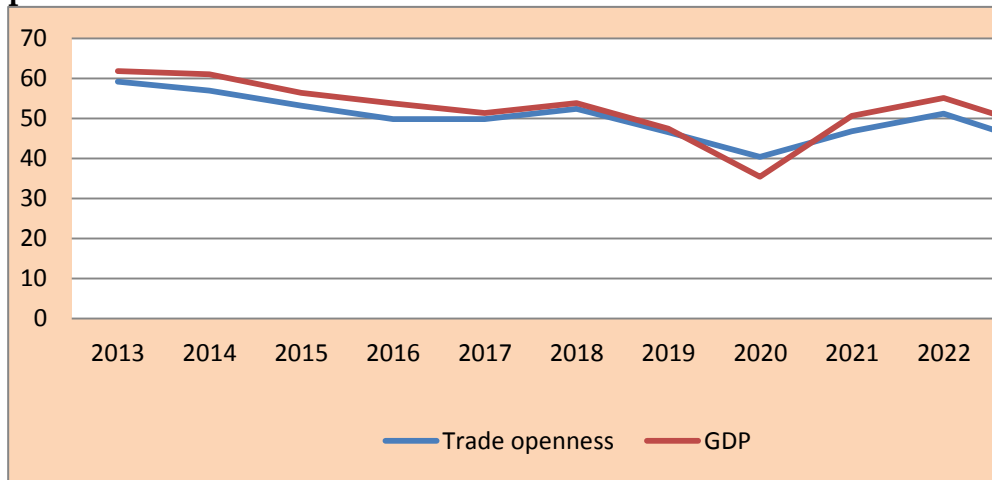
Table (01): Evolution of indicators of trade openness in Algeria during the period (2013-2023)

Year	Exports to Output Ratio	Ratio of Imports to Output	Trade Openness Index
2013	30,8	28,4	59.2
2014	27,6	29,3	56.9
2015	20,5	32/7.	53.2
2016	18.5	31,3	49.8
2017	20-3	29.5	49.8
2018	23 April	29	52.4
2019	20-4	26,1	46.5
2020	15.5	24/09	40.4
2021	23 April	23 April	46.8
2022	30,8	20-4	51.2
2023	23,6	20,1.	43.7

Source: Prepared by researchers based on different years' reports of the World Bank

The Trade Openness Index is a measure of how open a country's economy is to international trade, and is usually calculated by dividing total exports and imports by GDP. The rise in this indicator suggests that foreign trade plays a larger role in the country's economy. The following figure shows the development of the trade openness index in Algeria as follows:

Figure (02): Ratio of foreign trade to GDP during the period 2013-2023



Source: Prepared by researchers based on the data of Table (01) and Figure (01)

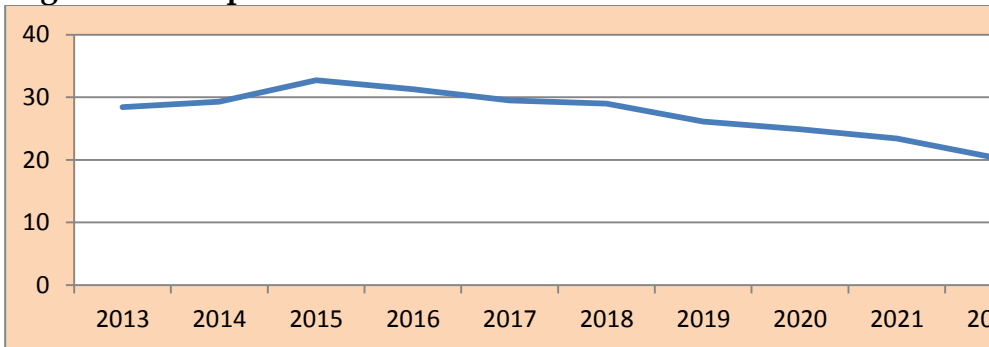
We note that the high degree of openness to foreign trade translates into the significant role played by foreign exchanges in national economic activity. Through Figure (02), we note that from 2013 to 2016 there has been a continuous decline in the level of reciprocal activity, which indicates a relative weakness in foreign trade or a slowdown in foreign economic performance. From 2016 to 2018, we note relative stability with a slight rise in 2018, and at 2018 to 2020, it witnessed a sharp decline, especially in 2020, and this is related to the effects of the Covid-19 pandemic on global trade. In the years from 2020 to 2021, a significant rise was observed indicating a partial recovery, and from 2021 to 2023, it was shown that the decline in the ratio of foreign trade to GDP has returned, which indicates a new decline in the ratio of foreign trade.



Soumission : 07/03/2025 Acceptation : 11/06/2025 Publication : 20/09/2025

By tracking economic growth rates and the rate of trade openness, we conclude that there is a positive long-term equilibrium relationship between economic growth in Algeria and trade openness during the study period. The following figure shows the development of the indicator of imports to GDP as follows:

Figure (03): Evolution of the Imports to GDP Index in Algeria for the period 2013-2023



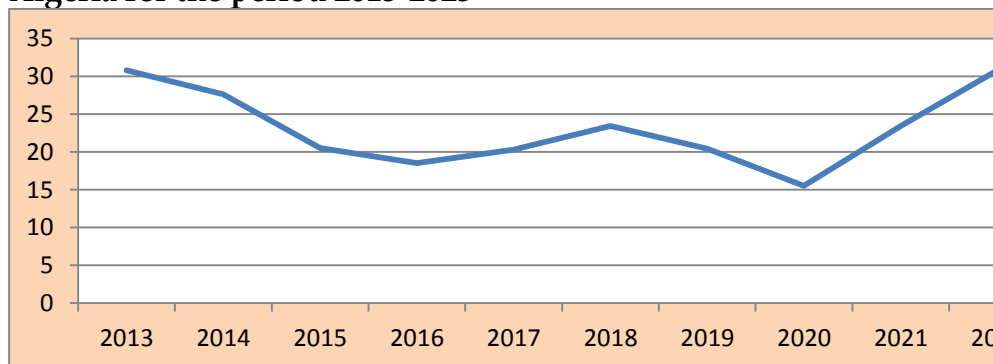
Source: Prepared by the researchers based on the data of Table (01)

This percentage reflects the extent to which imports contribute to meeting aggregate demand, meaning that this

indicator reflects the volume of international economic activity directed to the national market. (Dalila, 2018, p. 239)

Figure (03) represents the development of the import-to-GDP index in Algeria for the period 2013-2023. We note from the figure that in the period 2013-2015 there is a slight increase in the ratio, and it reached a peak in 2015, which may reflect an increase in import spending during that period, and from 2016 to 2023 we witnessed a continuous and clear decline, especially after 2018, which indicates the impact of low external purchasing power prices, and perhaps the beginning of activating import substitution policies and encouraging domestic production. From this, we conclude that Algeria is moving towards reducing reliance on gradual importation. This may be positive in terms of reducing the trade deficit. The following figure shows the development of the index of exports to GDP in Algeria as follows:

Figure (04): Evolution of the export index to GDP in Algeria for the period 2013-2023



Source: Prepared by the researchers based on the data of Table (01)



The ratio of exports to GDP expresses the contribution of exports of goods and services to the volume of national economic activity, that is the importance of the role of exported goods and services in driving domestic economic activity. The greater the ratio of exports to GDP, the greater the degree of dependence of national economic activity on foreign countries. Figure (04) represents the development of the index of exports to GDP in Algeria during 2013-2023, where we note that in the period 2013-2015 there is a gradual decline, as the percentage decreased from about 30% to about 20%, it is likely that the reason is the decline in oil prices globally since mid-2014, which affected the value of Algerian exports that depend heavily on hydrocarbons.

In the period 2016-2019, the index witnessed some stability with slight fluctuations around the rate of 18-22%. This reflects the continued weakness of export performance outside the energy sector and the decline in 2019 may also have been affected by political unrest. In 2020, it was found that the percentage decreased significantly, which is in line with the repercussions of the Covid-19 pandemic, which affected global demand and oil prices. In 2021-2022, it witnessed a significant increase in the ratio of exports to GDP, reaching about 30% in 2022. This reflects the rise in energy prices globally after the pandemic, and the return of export activity. In 2023, we witnessed a sudden decline in the index compared to 2,202, which may be explained by fluctuating energy prices or an increase in GDP without keeping pace with the volume of exports.

Conclusion

Trade openness plays an important role in economic growth, as it allows countries to benefit from global resources and markets, which enhances productivity and efficiency. However, some countries may face challenges such as intense competition and increased reliance on foreign markets.

Through this research paper, we tried to find out the impact of trade openness on economic performance in Algeria during the period 2013-2023. For this purpose, a set of concepts and fundamentals about foreign trade liberalization policies and their contribution to the economic growth process were identified. Three indicators were used to represent trade openness, namely the exports to GDP index, imports to GDP index, total exports and imports to GDP index, which represents the trade openness index. Through the research, we have reached a set of results, the most important of which are:

- For Algeria, the study period witnessed a fluctuation in the ratio of imports to GDP and a sharp decline in the ratio of exports to output at the end of the study period, due to the double shock of the Coronavirus (COVID-19) pandemic during 2020 and the sharp decline in hydrocarbon revenues.
- The general decline in the ratio of foreign trade to GDP may be the result of global crises (such as the pandemic), fuel prices, OPEC quotas and international relations.
- We note that there is a positive long-term equilibrium relationship between economic growth in Algeria and trade openness.
- The Algerian economy can remain strongly linked to oil and gas revenues, and this directly affects growth



Soumission : 07/03/2025 Acceptation : 11/06/2025 Publication : 20/09/2025

rates, trade openness indicators and the Algerian economy.

Sources and References

1. Ahmed, D. (2014-2015). The Impact of Fiscal Policy on Sustained Economic Growth in Algeria,1989-2012. *PhD Thesis*. University of Algiers 3.
2. Ali Tawfiq , S., & Walid , A.-K. (2000). The Development Role of Governments in Light of Economic Openness. (6).
3. Huda , A. (2018, 4). Development Economics from Theories to Development Strategies and Policies. 19(2).
4. Jamal, Z., & Aicha, B. (2018, 12). Trade Openness and Economic Growth in Algeria, Standard Analytical Study for the Period 1980-2014.
5. Mustapha, H. (2023, 01). Economic and Measurement Modeling of the Impact of the Contribution of Trade Openness in Improving Algerian Economic Performance, 2000-2020. 13(1).
6. Abdel Aziz, A. (2010). The Policy of Trade Openness between Combating Poverty and Protecting the Environment: The Other Side.
7. Abdelkader, M. (2003). Modern Trends in Development. Algeria: University House.
8. Abdelmadjid, K. (2005). Introduction to Macroeconomic Policies. Algeria: Diwan of University Publications.
9. Abdous, A. The Politics of Openness and its Role in Raising the Competitiveness of States, Algeria Case Study. PhD Thesis in Economic Sciences,

Specialization in Development Economics, University of Tlemcen.

10. Ahmed Farouk, G. (2004). Trade Liberalization. Egypt: Center for International Private Enterprise.
11. Dalila, T. (2018, 6). The Impact of Exports and Imports on Economic Growth in Algeria in Light of Current Global Developments. (3).
12. Raad Hassan, A.-S. (2000). Fundamental of Contemporary International Trade. Egypt : Dar Al-Rida Publishing House.
13. Zakaria, J., Al-Nasser, B., & Shahrazad , e. (2021, September). Measuring the Impact of Trade Openness on Economic Growth in Algeria during the Period 2000-2019 Using Self-Regression Models for Distributed and Slow Time Gaps ARDL. , Journal of Business Research and Studies, 5(2), p. 94
14. Ahmed Ezzat Mahmoud El Metwally, The Impact of Trade Openness on Egyptian Economic Growth 2000 – 2018. observed on 30-06-2025 at the link:
https://democraticac.de/?p=79192#_ftn6
15. Shorouk Ali Al-Shehri, Nashwa Mustafa Mohammed, The Impact of Trade Openness on External Indebtedness in the Arab Republic of Egypt, available at:
https://fac.ksu.edu.sa/sites/default/files/shorrok_elshaheri.docx
16. ICT and Economic growth. observed on 29-06-2025 at the link:
<https://www.rba.gov.au/education/resources/explainers/economic-growth.html>
17. Economic Performance .It was observed on 30-06-2025 at the link:



Soumission : 07/03/2025 Acceptation : 11/06/2025 Publication : 20/09/2025

https://link.springer.com/rwe/10.1007/978-1-4614-7883-6_208-1

18. caroline baton.) Trade Liberalization. observed on 29-06-2025 at the link:

<https://www.investopedia.com/terms/t/trade-liberalization.asp>

19. GDP growth (annual %) - Algeria. Observed on 05-08-2025 at the link:

<https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=DZ>