

## Economic diversification in Algeria: the solution to restrain the economic effects of COVID-19

التنوع الاقتصادي في الجزائر: الحل للحد من الآثار الاقتصادية لـ COVID-19

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### Abstract:

COVID-19 has disrupted several economies around the world. So, the global economy has been destabilized by this pandemic due to the cumulative effect. Then, developing countries were severely affected by the pandemic because of their economies' fragility. Therefore, this article aims to discuss possible solutions that allow Algeria to restrain the economic effects of COVID-19. For this purpose, we opt for a descriptive analysis method of the Algerian economic situation. This article emphasizes the importance of economic diversification, especially in this crisis context. As a result, several proposals have been made as part of a long-term strategic diversification plan for the Algerian economy.

**Key- words:** economic effects of COVID-19; economic diversification; Algerian economy.

الملخص:

عطل "COVID-19" العديد من الاقتصادات حول العالم. حيث تزعزع استقرار الاقتصاد العالمي بسبب هذا الوباء بفعل الأثر التراكمي. وهو ما أثر على البلدان النامية تأثيرا شديدا بسبب هشاشة اقتصاداتها. لذلك تهدف هذه المقالة إلى مناقشة الحلول الممكنة التي تسمح للجزائر بالحد من الآثار الاقتصادية لـ "COVID-19". ولهذا الغرض، نختار طريقة تحليل وصفية للوضع الاقتصادي الجزائري. كما تؤكد هذه المقالة على أهمية التنوع الاقتصادي، خاصة في سياق هذه الأزمة. ونتيجة لذلك، قدمت عدة مقترحات كجزء من خطة تنوع استراتيجية طويلة الأجل للاقتصاد الجزائري. الكلمات المفتاحية: الآثار الاقتصادية لـ COVID-19، التنوع الاقتصادي، الاقتصاد الجزائري.

### Introduction:

The COVID-19 pandemic has affected several economies around the world. But developing economies have been the most affected by this health crisis, especially

those based on hydrocarbon rents. COVID-19 was first identified in December 2019 in Wuhan, China. And it was declared as a pandemic, by the World Health Organization, in March 2020 (W.H.O, 2020). This virus, which belongs to the coronavirus family, has so far caused 744 941 deaths out of 20 439 274 confirmed cases worldwide (Dong E, 2020).

The objective of this article is to discuss possible solutions to curb the economic effects of COVID-19 on the Algerian economy. To do this, we will begin by exposing its economic effects around the world. Then, we will analyze Algeria's economic situation before this pandemic. After that, we will try to identify the COVID-19 impact on the Algerian economy. Finally, we will suggest a set of solutions related to economic diversification to better control this critical situation.

This article aims to address the following question: "what are the suggested solutions to curb the economic impact of COVID-19 on Algeria?". To answer this question, we considered it appropriate to follow an analytic method. Based on the documentary resources relating to our subject as well as Algeria's budgetary data, published by national and international institutions, we will analyze the situation to identify possible solutions.

This question is divided into a set of sub-questions:

- what are the economic effects of COVID-19 around the world?
- How did COVID-19 influence the Algerian economic situation?
- How can Algeria curb the economic effects of COVID-19?

To answer these sub-questions, we consider the following hypotheses:

- COVID-19 caused a slowdown in production, disruptions in distribution and supply chains and instability and uncertainty in financial markets.

- COVID-19 has aggravated Algeria's economic situation because of its dependence on hydrocarbons.
- Economic diversification in Algeria is crucial to restrain the economic effects of COVID-19.

### **1- The economic effects of COVID-19 around the world:**

covid-19 caused a global health crisis. At present, all efforts are directed towards the control of this crisis to ensure the continuous perineum of humanity. In this context, several preventive measures have been taken to control the spread of the virus. So, people must cooperate with the authorities in implementing these measures. COVID-19 will inevitably have economic effects around the world. But we believe that people's reactions to this virus will determine the extent of this impact.

On the one hand, according to (Bachman, 2020) non-severe public reaction *"could allow the disease to spread more quickly and widely"* which leads to an increase in the costs of health care. For example, when people do not comply with necessary measures such as wearing a surgical mask, the occasional use of the hydroalcoholic gel, the social distancing...etc. In that case, people can cause the increase in contaminated cases and the hospitals will no longer be in the ability to take care of these patients. Knowing that WHO has imposed compliance with prevention measures for all countries.

However, a severe public reaction could create significant economic costs, particularly for industries that specialize in production that can't be done virtually, like manufacturing (Bachman, 2020). Also, guidelines for preventing the covid-19 pandemic (such as home quarantine, partial or total confinement, school closure, commercial activities shutdown, social distancing and environmental measures...etc) may reduce the available labour force, create unnecessary costs, increase unemployment especially for day labourers ...etc.

Similarly, the psychological effects of confinement on people working online can negatively affect their productivity. In other words, people no longer have an organized daily routine, they can't get some fresh air outside, do an outdoor sports activity or sleep/wake up in time...etc. All these factors will harm the productivity of individuals. The global effect will be generated by a cumulative singular effect.

Mainly, COVID-19 could affect the global economy in three main ways (Bachman, 2020):

#### **1-1- Effects on production:**

As we have explained earlier, several preventive measures have been taken around the world. Among these measures, we have already cited the activities shutdown and the confinement. Furthermore, these two measures have caused an economic slowdown, especially in countries heavily affected by the pandemic such as China, Italy, France, USA...etc. Even developing countries have suffered from the consequences of this containment, for example: Algeria and Tunisia.

The economy of a developing country depends mainly on two factors. On the one hand, the shutdown in developed countries will inevitably have negative effects on international transactions (imports and exports). In other words, the slowdown in developed countries can cause slower growth due to globalization.

On the other hand, confinement in these countries will slow down the production machine. So, in addition to exceptional expenses (hospitalization costs, implementation of preventive measures, compensation for professionals whose affected by the shutdown...etc) the incomes of these countries will fall considerably.

#### **1-2- Disruption (supply/sales):**

As we have just explained, international transactions have been negatively affected by the slowdown in economic activity and the closure of borders. Therefore, several firms that import raw materials and intermediary goods from countries

affected by the virus will suffer from serious financial consequences if they can't find an alternative. Also, firms that usually sell to these countries will be forced to lower their financial targets. Deloitte also noted that “*Business tied to travel and tourism are facing losses that are likely not recoverable*” (Bachman, 2020).

### **1-3- Financial markets disruption:**

Traders face difficulties in anticipating market movements due to instability and uncertainty (Bachman, 2020). Then, the position they take maybe unprofitable. In that case, investors will fly to quality by holding government securities.

Finally, we conclude that a non-controlling health crisis can lead to a very serious international economic crisis. In this regard, countries at risk must find solutions to reduce the negative effects of this health crisis on the economy.

## **2- Algeria's economic situation:**

### **2-1- The pre-pandemic phase:**

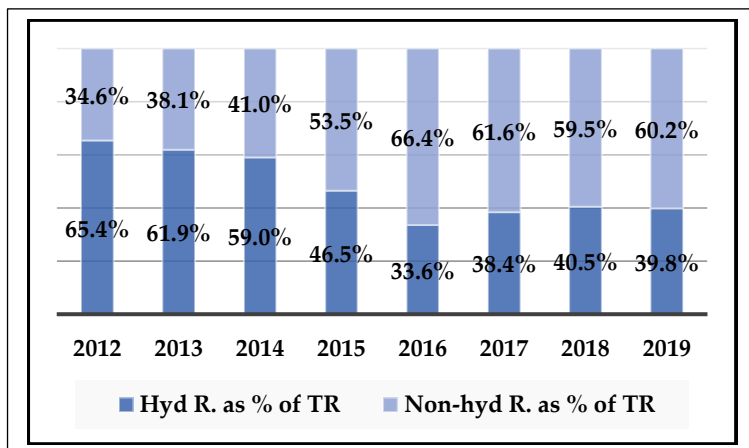
The Algerian economic context has its unique characteristics since the Algerian economy is a rent economy. In other words, hydrocarbon revenues are the country's main source of income. Despite the efforts of the state, the Algerian economy remains very undiversified.

The vulnerability of Algeria's economic model (highly dependent on hydrocarbons) was highlighted in 2014 by the fall in the world oil price of more than 55% of its value. At that time, the budget deficit reached - 1 258 mDA (IMF, 2018); an increase of more than 700% compared to 2013.

As a result of this crisis, the Algerian economy has experienced disruptions. So, several steps were taken to overcome this delicate period. Therefore, the diversification of government revenues was no longer an option; it has become a requirement to ensure the nation's sustainability and economic stability.

To have a comprehensive view of Algeria's economic situation, we will analyse the evolution of public revenues and public expenditure in the period [2012-2019]. First, we start with the distribution of public revenues from 2012 until 2019 as the following histogram shows:

**Figure 01 Distribution of Algeria's public revenues [2012-2019]**



Reference of figure: IMF, 2018, p. 30 & IMF, 2014, p. 29

Until 2014, hydrocarbon revenues accounted for the largest portion of total revenues. From 2015 to 2019, because of the disruption in the oil market, the Algerian government was obliged to increase its non-hydrocarbon revenues.

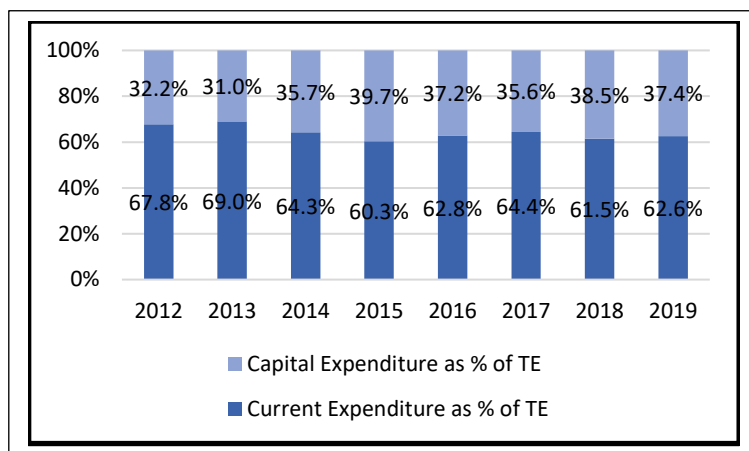
To understand this restructuring, we analyzed, in detail, non-hydrocarbon revenues. Because of this analysis, we found, on the one hand, an increase in tax revenues off 12.5% '2354 in 2015 compared to 2092 in 2014' (IMF, 2018).

The last quarter of 2019, tax revenues amounted to 3169 mDA (an increase of about 50%). Among the measures that have been taken to increase tax revenues, we cite the increase in VAT from 17% to 19% in 2017, the improvement of tax collection not only by competing tax evasion but also by encouraging voluntary payments...etc.

On the other hand, even non-tax revenues (such as fees) improved with 45% (375 mDA in 2015 compared to 259 mDA in 2014) to reach 703 mDA in 2019 (an increase of 172% compared to 2014).

Next, we present Algeria's public expenditure (see the following histogram):

**Figure 02 Distribution of Algeria's total expenditure [2012-2019]**

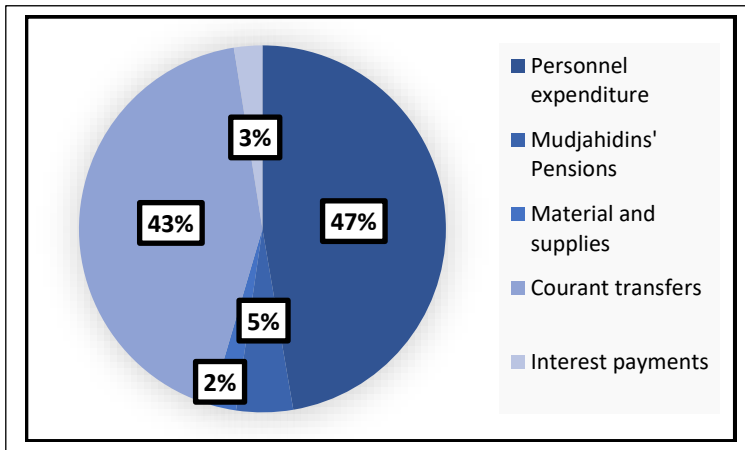


Reference of figure: IMF, 2018, p. 30 & IMF, 2014, p. 29

The first thing to note is that the current expenditure accounts for the largest part of total expenditure. Therefore, the government's choices -in terms of controlling expenditure- are limited because of this large part proportion of incompressible expenditure, such as: personnel expenditure, Mudjahidins' pensions, current transfers...etc.

Taking the year 2019, we find that personnel expenditure as well as current transfers absorb the largest part of current expenditure (see the pie chart). Almost a 1/4 of current transfers are spent on pension funds; the rest is allocated to family allowances, housing financial assistance, health insurance, unemployment benefits...etc.

**Figure 03 Distribution of current expenditure [2019]**



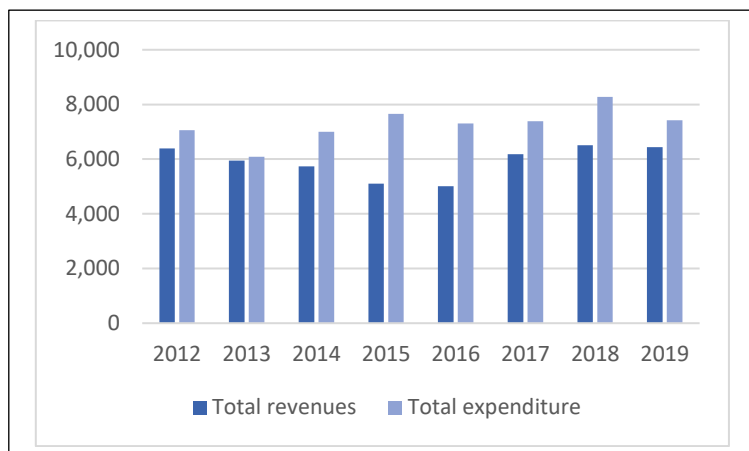
Reference of figure: IMF, 2013, p. 30 & IMF, 2014, p. 29

Finally, it should be noted that from 2014 (crisis period), the Algerian government has taken measures to gradually readjust non-targeted social transfer policies as part of the public expenditure's rationalization. Also, to boost the economy, the government has increased capital expenditure, which will be spread across several sectors.

We end this part with an analysis of the evolution of Algeria's total revenues and total expenditure. The following chart (see next page) summarizes this evolution over the period [2012-2019]:



**Figure 04** evolution of Algeria's total revenues and total expenditure



Reference of figure: IMF, 2018, p. 30 & IMF, 2014, p. 29

First, the total expenditure exceeds total revenues over the entire period studied. Secondly, we note that total revenues have shown a downward trend throughout the crisis period (until 2016). Then, over the next two years, they increased as a result of the increase in tax revenues, as we have explained earlier. Besides, total public revenues fell by about 1.1% in 2019 (until the last quarter). As for public expenditure, the differences between up and down are justified by the Algerian government's choices in budgetary policy (expansionist/restrictive).

## 2-2- The current phase:

While Algeria has set its current year budget around a forecast price per barrel of \$50 (MF, the draft budget bill for 2020, 2020), the oil price has fallen by about 2/3 (Prix-du-baril, 2020) of its forecast price in April because of this health crisis. So, the national economy is under threat once again.

Algeria is currently focusing much more on the safety of its citizens. By careful measure, all decisions are oriented towards this objective. Parallel to this major concern, the authorities have been forced to revise their budget forecasts for 2020,

as hydrocarbon revenues account for about 40% of total government revenues in 2019 (IMF, 2018).

Total public revenues were projected around 6 200 mDA, of which 2 200 mDA came from hydrocarbons. While total public expenditure has been projected at around 7 773 mDA, of which 4 893 mDA represents current expenditures (MF, the draft budget bill for 2020, 2020). So, the budget deficit will be about 1 573 mDA. Among the measures foreseen in this draft budget bill, we cite: the increase of VAT from 19% to 20%, the VAT submission of the delivery of the dematerialized goods electronically, revision of the annual threshold of the single forfaitaire tax ...etc (MF, the draft budget bill for 2020, 2020).

On the other hand, foreign exchange reserves fell to \$51 billion from \$62 billion in 2019 as set out in the 2020 Finance Act. So, the situation is really worrying. According to the government's forecasts, these foreign exchange reserves will continue to fall until they reach a level of \$44 billion (Nourredine, 2020). The situation becomes more critical especially with the high dependence of the Algerian economy on the hydrocarbon revenues 'about 93% of total exports' (BA, 2019).

Given the volatile situation, the government was obliged to revise its forecasts for the current year. In this context, the 2020 supplementary Finance Act provides for several measures, namely (Sahbani, 2020):

- **Investment measures:** Amendment of the local partnership rule 51/49, suppression of the state's right of pre-emption, authorization to use foreign financing...etc.
- **Start-ups measures:** start-ups are exempt from "TAP" and "IRG" or "IBS" as appropriate, for a period of 03 years, from the start date of the activity. Also, they are exempt, under the same conditions, from "IFU" (start-ups that are subject of this tax regime). Furthermore, equipment acquired by start-ups for

their investment is exempt from VAT...etc (MF, the supplementary finance act for 2020, Official newspaper of the Algerian republic n° 33, 2020).

- **Personal taxation:** amendments relating to the IFU regime, suppression of the controlled declaration regime, Global Income Tax (GVI) relief for low incomes, amendments relating to the wealth tax...etc.
- **Corporate taxation:** increase tax rate on income earned by foreign companies involved in service delivery contracts, elimination of double taxation of profits made by companies that distribute dividends under the “mother-daughter” scheme, repeal of the measure to the imposition of taxes unaffected profits, renunciation of the 0% VAT rate (Sahbani, 2020).
- **Other measures:** among the most important measures are updated tax rate on new vehicles imported or acquired locally, increase tariffs on tax on petroleum or related product imported or obtained in Algeria, review of the Guaranteed National Minimum Wage 20 000 DA...etc (Sahbani, 2020).

**Mainly, COVID-19's effects on the Algerian economy can be summarized as follows:**

- Both decline in global demand, due to containment, and non-adjustment of global supply have caused a drop in oil-prices. This has caused financial disruption for Algeria (KACI, 2020, p. 115).
- Preventive measures including containment have caused an economic slowdown in the Country. This has negative effects on demand, supply and public revenues (KACI, 2020, p. 110).
- Uncertainty has led to behavior patterns among consumers (survival behavior) and producers (period to adjust). These disruptions have destabilized the distribution chains (KACI, 2020, p. 110).

- The aforementioned disruptions also caused a lack of liquidity in the post offices (KACI, 2020, p. 110).
- Informal sector workers, who also suffered losses as a result of confinement, did not benefit from public social transfers. Given the size of the informal economy in Algeria, the individual situation of these workers will inevitably influence the overall situation of the country (BENNIHI & BOURICHE, 2020, pp. 366-367).
- On the one hand, the preventive measures taken have affected several sectors (economy, agriculture, transport...etc), which has affected demand, supply, distribution chains ...etc. As a result, all these factors have threatened food security (MOULOUDJ, BOUARAR, & FECHIT, 2020, p. 177). On the other hand, the food balance in Algeria is ensured through public intervention by subsidizing prices and using imports to meet part of the national demand for food (DAOUDI & BOUZID, 2020, p. 205).

### **3- Economic diversification in Algeria: the solution to restrain the economic effects of COVID-19:**

In the face of this critical situation, the diversification of the national economy has become urgent. As many experts confirm, this health crisis is an opportunity that pushes Algeria towards structural reforms in several sectors including the economic sector (BOUDEDJA & others, 2020, p. 24).

As we just explained, the government has already taken some measures to control the situation. Also, the hydrocarbon market has seen an upward trend since May. Currently, the price per barrel is \$45 (Prix-du-baril, 2020).

This upward trend provides some relief to oil-exporting countries. But it remains an exogenous variable -out of control of these countries- to which an

economy should not be highly dependent. In this context, several solutions arise; then the government must make a well-studied strategic choice.

Algeria's position is weak compared to other producers/consumers of hydrocarbons (low market share, undiversified exports of hydrocarbons, increase of national energy needs...etc). According to some scenarios, within ten years, Algeria will no longer be able to export hydrocarbons (BENAMIROUCHE & DJEDAA, 2020, pp. 49-52).

According to the same research, "*Algeria has an interest in maintaining the existence of OPEC*" to strengthen its position in the energy market. The two researchers also recommended the diversification of hydrocarbon exports by strengthening the national company SONATRACH through the expansion of investments. They added that the focus on renewable energy and the diversification of non-hydrocarbon exports are strategic choices for Algeria (BENAMIROUCHE & DJEDAA, 2020, pp. 52-53).

Many researchers and practitioners have studied the problem of the Algerian economy's heavy dependence on oil rents. They have also tried to propose solutions for the diversification of the national economy. Similarly, in this section, we will discuss several possible solutions that may be a start to thinking about the above-mentioned topic.

In mid-April, the World Bank published a study on the impact of this health crisis on MENA countries. This study suggested some steps to take to address this situation. Among these suggestions, (Arezki & Nguyen, 2020 ) mentioned that MENA countries should concentrate "...on responding to the health emergency and the associated risk of economic depression...". They added that fiscal consolidation is necessary, but it will be better to wait until the health crisis is brought to control.

The same article emphasized the transparency and the data disclosure that are needed to reduce the spread of the virus. They also recommended reducing interest rates and injecting liquidity in the banking system to ensure financial stability. (Arezki & Nguyen, 2020 ) noted that *“where inflation is low, liquidity injection and target cash transfers can be financed by “helicopter money”, that is, essentially from money printed by central banks”*.

The article also stressed the importance of having significant budgetary resources to be able to fight this virus. Furthermore, they pointed out that countries with fixed exchange rate regime cannot use helicopter money. As a result, (Arezki & Nguyen, 2020 ) concluded that *“the region will need much international support to help it navigate an extremely rough patch”*.

In summary, this article proposes that countries in the MENA region focus primarily on the health crisis and its economic consequences. Then, they should take steps related to fiscal consolidation. After that, it recommends lowering interest rates and injecting liquidity into the banking system to insure its stability. Finally, it suggests helicopter money or money printing to strengthen the state budget.

All these recommendations seem logical and very effective in the short-term and the medium-term. Moreover, the measures taken by many MENA countries, including Algeria, are very consistent with these suggestions. But in our opinion, Algeria needs long-term solutions. In this context, we propose the adoption of a long-term diversification strategy. We support our opinion with the famous proverb that says, *“don't put all your eggs in one basket”*.

Before moving on to possible alternatives, we stress that Algeria needs to find funding resources to implement this strategy diversification plan. First, we will discuss the solutions that allow Algeria to increase its budgetary resources. Then we will move on to the various possibilities of diversifying the national economy.

Hydrocarbon prices are highly volatile as they depend on the global supply-demand confrontation. For this, we believe that Algeria as an exporting country for hydrocarbons should resort to derivatives, such as options, to protect against fluctuations in the hydrocarbons price (hedging).

This strategy requires a developed financial market, which is not the case with the Algerian financial market. Moreover, (Bekada & Derbal, 2016) noted that *“the construction of a reliable economy can only be done through a stable and solid financial market”*. Besides, (Bekada & Derbal, 2016) considered that the banking sector is very important -in that context- because *“the strength of a developed and structured banking market can be an accelerator for the development of the financial market in Algeria”*.

On the other hand, strengthening the tax system can contribute to increased tax revenues. To do this, we propose “the digitization” of the entire system. This proposal gives several advantages such as transparency, traceability, reduction of current expenses due to the use of paper, reduced processing times for tax files, more effective control...etc.

At the same time, tax authorities should monitor the tax pressure ratio. It is also advisable to strengthen “tax consent” among citizens by introducing “tax citizenship” through awareness-raising. Then, public auditing is very important in rationalizing the use of public budgetary resources.

Besides, efforts must be consolidated to integrate the informal sector into the country’s formal economy. This can be achieved in several ways, mainly, we mention “the MONETICS” or “the use of e-payment” to reduce the cash use.

Also, Islamic banks or Islamic windows within conventional banks can attract dormant savings because of religious beliefs. Similarly, sukuks are an effective means

of collecting financial resources. Next, we believe that the integration of neo-banks is essential to further improve financial inclusion.

Also, reducing current expenditure in favour of capital expenditure is essential; all sectors must be involved in this measure. To better illustrate this proposal, we take the example of a very important sector which is the education sector. We propose to introduce a short-term higher education system that allows for the direct professional integration of graduates and contributes to the savings of current expenses. It is also advisable to encourage the establishment of private schools, institutes, and universities. In parallel, vocational training centres contribute to professional integration. Only, labour market demand must be studied to adapt academic and professional graduate studies with the requirement of this market to reduce unemployment.

As we explained earlier, the diversification of the national economy is now a necessity. Several research projects are interested in this issue. (Bessouh, 2018) has proposed to promote the industrial sector in view of the failure of the current economic model based on oil rents. So (Bessouh, 2018) think that “*ending Algeria’s dependency on oil could be achieved by investing in non-oil industrial sectors*”.

Economic diversification is the process of change with which an economy, initially based on primary sectors, promotes the secondary and tertiary sectors (Mesbahi & Benbouziene, 2017). To ensure the success of this diversification, it is necessary to begin with the development of a strategic plan that frames the entire process. As declared by (Lazreg & Godih, 2019), “*diversification is a long and laborious process*”.

To do that, we suggest focusing on two strategic sectors: agriculture and tourism. Certainly, the agriculture sector is a primary sector; but it is also very strategic and indispensable sector for all countries. On the one hand, it ensures the



country's food security (GANA, 2020, p. 223). On the other hand, agricultural products can be a raw material for the agri-food sector. So (Bentarzi, 2016) mentioned that *“food security remains a major target for all economies around the world, particularly developing countries”*.

To achieve self-sufficiency, Algeria has implemented many strategic plans. In recent years, many Algerian South regions has been marked by the abundance of their agricultural products. (Ouendeno, 2019) testified that *“in recent decades these arid areas (including the Souf) have undergone agricultural intensification processes marked by the development of irrigated corps through the exploitation of groundwater through drilling”*.

Second, the tourism industry belongs to the tertiary sector. Some believe that it can boost our economy growth, given the strategic geographical position (GANA, 2020, p. 223) and the natural wealth contained in Algeria. For example, the varied geographical areas, the various traditions, the very rich traditional cuisine, the diverse archaeological sites...etc. Unfortunately, there are several obstacles in this sector. Mainly, we mention the pricing, which is considered very high compared to neighboring countries, the insufficiency of transport means, and the absence of advertising campaigns to promote tourism.

Therefore, pricing should be revised using a targeting method (luxury hotels, mid-range hotels and entry-level hotels). Also, renting homes for short stays can give a very interesting alternative (AIRBNB platform). In other words, a market study is needed to capture the potential tourists needs. Similarly, to promote the welcoming tourist's culture, it is necessary to lunch awareness-raising companions among citizens. It is also possible to involve citizens in clean-up and decoration campaigns in cities. Furthermore, social networks are a free and effective way for tourism advertising campaigns.

Some researchers have conducted comparative studies to identify solutions to promote tourism. Mainly, these comparative studies are carried out between three countries, which are: Algeria, Tunisia, and Morocco. Then, (Chebili & Cahbou, 2019) insisted that “*national tourism can be significant contribution to economic development*”. According to the same study, it helps to mitigate the seasonality effects of international tourism. In the same context, tourism requires heavy investment. In most cases, the local investor will not be able to provide the necessary capital (Fodil & Hafsi, 2016). This requires encouraging foreign investment with tax advantages (Mjahed & Bouchnaka, 2016).

In addition to these two sectors, entrepreneurship can contribute to economic development and unemployment absorption. The public service is unable to meet all job applications on its own, hence the need for entrepreneurial initiatives. Many individuals are unemployed due to labour market saturation. Therefore, it is better to encourage them to start their own projects, individually or in groups. Second, the project will contribute to the creation of added value, and it will also provide some jobs.

The Algerian state has already taken several initiatives in this context by establishing support institutions for these small and medium sized enterprises. Among these institutions, we have ANSEJ (Gharbi & Gharbi, 2018). In its initial conception, it was a good solution to consolidate the economic tissue through profitable projects. But in practice, this institution has recorded some failures. According to our analysis, we believe that there is a very important element that has been ignored in this process. It is the continuous support, follow-up, and individual advice of each project apart on all levels: financial level, legal level, and management level.

Finally, there is an essential element to ensure the success of all the solutions suggested above, it is human capital. Hence the need to preserve competent national human resources and to cooperate with developed countries to promote them.

### **Conclusion:**

In summary, COVID-19 has caused disruptions in the global economy. Several countries have suffered from its economic consequences including Algeria. The Algerian economy had many problems, even before the pandemic, given its dependence on the hydrocarbon sector. So, the weakness of the Algerian economy has been highlighted by this health crisis.

Another disruption that is pushing towards economic diversification, which has become indispensable. On the one hand, derivatives must be used to hedge against hydrocarbon market fluctuations. On the other hand, there is a need to develop a whole long-term strategic diversification plan.

To conclude, the proposed solutions are mainly based on three points: the development of the agriculture sector to ensure food self-sufficiency, to promote tourism as a means of economic recovery and, finally, to encourage entrepreneurial initiatives to reduce unemployment and consolidate the industrial sector.

In closing, we suggest studying Algeria's economic situation in the post-pandemic phase based on the scenario analysis.

### **Bibliography:**

1. Arezki, R., & Nguyen, H. (2020 , April 14). coping with a dual shock: COVID-19 and oil prices. Consulté le June 18, 2020, sur The world bank :  
<https://www.worldbank.org/en/region/mena/brief/coping-with-a-dual-shock-coronavirus-covid-19-and-oil-prices>
2. BA. (2019). the quarterly statistical bulletin, n° 46. Algiers: Bank of Algeria.

3. Bachman, D. (2020, March 3). Deloitte Insights. Récupéré sur Deloitte:  
<https://www2.deloitte.com/us/en/insights/economy/covid-19/economic-impact-covid-19.html>
4. Bekada, M., & Derbal, A. (2016). le marché financier en Algérie, état des lieux et perspectives de son développement. *Algeria economics & management journal*, 10(3). Consulté le 2020
5. BENAMIROUCHE, H., & DJEDAA, N. E. (2020). ALLIANCES ET CONFLITS SUR LE MARCHÉ MONDIAL DE PÉTROLE POST-COVID 19 : QUEL POSITIONNEMENT POUR L'ALGÉRIE ? *les cahiers du Cread*, 36(3), 27-58.
6. BENNIHI, A. S., & BOURICHE, L. (2020). ASSESSMENT OF THE IMPACT OF COVID-19 PANDEMIC ON THE ALGERIAN ECONOMY: THE IMPORTANCE OF THE INFORMAL ECONOMY. *Les Cahiers du Cread*, 36(3), 349-371.
7. Bentarzi, K. (2016). الأمن الغذائي و أوضاعه في الجزائر. *EL-BAHITH review*, 8(1).
8. Bessouh, N. (2018). Diversification of non-oil economy — emergency plan for the acceleration of economic growth in Algeria. *economic policy review*, 6(1).
9. BOUDEDJA, K., & others. (2020). L'APRES COVID-19 : UNE ECONOMIE OUVERTE ET DURABLE SEULE POSSIBILITE POUR JUGULER L'IMPACT DE LA PANDEMIE. *les cahiers du Cread*, 36(3), 07-26.
10. Chebili, A., & Cahbou, M. (2019). domestic tourism, saving support for sustainable tourism development. *Academic journal of social and human studies*, 11(1).
11. DAUDI, A., & BOUZID, A. (2020). LA SECURITE ALIMENTAIRE DE L'ALGERIE A L'EPREUVE DE LA PANDEMIE DE LA COVID-19. *les cahiers du Cread*, 36(3), 185-207.
12. Dong E, D. H. (2020, March 30). JHU Communications. Récupéré sur Center for Systems Science and Engineering (CSSE):  
<https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>
13. Fodil, R., & Hafsi, Y. (2016). تشخيص واقع و أهمية القطاع السياحي و محاولة معالجة نقائصه في الجزائر. *Innovation Creativity journal*, 6(6).
14. GANA, B. (2020). COVID-19 ET ÉVOLUTION DES IMPORTATIONS DES PRODUITS ALIMENTAIRES EN ALGÉRIE : IMPACTS ET PERSPECTIVES. *les cahiers du Cread*, 36(3), 209-225.
15. Gharbi, S., & Gharbi, N. (2018). PME en Algérie : vers une solution pour un développement économique durable : opportunités et défis . *EL-ACIL review*, 2(2).

16. IMF. (2018). IMF country report n° 18/168. Washington: International Monetary Fund.
17. KACI, S. (2020). l'effet de la pandémie de COVID-19 sur l'activité économique en Algérie. les cahiers du Cread, 36(3), 107-130 .
18. Lazreg, M., & Godih, D. (2019). la diversification économique et le développement durable : des enjeux majeurs pour une émergence économique en Algérie . ABAAD IQTISSADIA review, 9(1).
19. Mesbahi, F., & Benbouziene, M. (2017). stratégie de diversification de l'économie algérienne. economics & management review, 16(1).
20. MF. (2020). the draft budget bill for 2020. Algiers: Ministry of finance.
21. MF. (2020). the supplementary finance act for 2020, Official newspaper of the Algerian republic n° 33. Algiers: Ministry of finance.
22. Mjahed, S., & Bouchnaka, A. (2016). واقع الإمتيازات الجبائية الممنوحة للإستثمارات -دراسة تحليلية- الأجنبيّة المباشرة في الجزائر . ATAKAMUL EL-IKTISSADI review, 4(2).
23. MOULOUDJ, K., BOUARAR, A. C., & FECHIT, H. (2020). THE IMPACT OF COVID-19 PANDEMIC ON FOOD SECURITY. les cahiers du Cread, 36(3), 159-184.
24. Nourredine, B. (2020, May 3). Actualités, Algérie 1. Récupéré sur Algérie 1: <https://algeriel.com/actualite/reserves-de-change-belhimer-pointe-une-declinaison-a-44-2-mds-a-fin-2020>
25. Ouendeno, M. (2019). l'agriculture irriguée au Souf-el Oued : acteur et facteur de développement. the Algerian Journal of Arid Regions, 13(2).
26. Prix-du-baril. (2020, April). price per barrel. Consulté le June 18, 2020, sur price per barrel: <https://prixdubaril.com/>
27. Sahbani, L. (2020). principales mesures de la loi de finances complémentaire pour 2020. Algiers: PwC-Algeria.
28. W.H.O. (2020, April 17). Global World Health Organization. Récupéré sur World Health Organization: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-coronaviruses>