What explains the lack of export diversification in Algeria?

MERGHIT Abdelhamid 1

Associate Professor Faculty of Economics and Management, Laboratory of "organizations economics and sustainable development", University of Jijel, Algeria A.merghit@univ-jijel.dz

Received date: 17.02.2021 / Accepted date: 18.03.2021

Abstract:

This paper aims to understand why Algeria- as an oil exporter country- has suffered such lagging of export diversification, by investigating whether the traditional explanations for a lack of export diversification in Oil-exporting countries hold for Algeria? The findings show that: Dutch disease, real exchange rate volatility, and rent seeking do not seem to hold for Algeria, while the constraints on private sector development is a highly appropriate explanation. However; many critical binding's constraints to private sector development and export diversification still exist in the country. Consequently, policymakers should prioritize their intervention on the removing of such constraints in order to improve the country's business climate.

Keywords: Export diversification, Dutch disease, private sector; rent seeking; Algeria.

Jel Codes: 049, D31, I32, O11.

Introduction:

The lack of export diversification has been a dominant feature of Algeria's economy for decades. The productive structure is highly concentrated in the hydrocarbons sector, which accounted for more than 95 percent of total exports, three-quarters of fiscal revenues, and about half of GDP. This heavy dependence on the hydrocarbon sector is unsustainable, and making the economy more vulnerable to external shocks, and fiscal risks (Merghit, 2018) resulted essentially from the changes in world oil markets, such as the 1986 and 2014 oil shocks (Jose R. Lopez-Calix, Irum Tougeer, 2016).

Furthermore, Algeria's exports are among the least diversified in the world, even compared to other oil producers like: Iran, Oman, Saudi Arabia, or Venezuela. However, the "Herfindahl -Hirshman" index for the export basket classified Algeria among the 10 highest export concentration in the world (World Bank, 2019).

Corresponding Author. Abdelhamid Merghit. E-Mail: A.merghit@univ-jijel.dz.

This limited export diversification in oil exporting countries has pushed many researchers to study this issue. Consequently, four possible explanations can be considered in the existing literature. The list include: Dutch disease, real exchange rate volatility, rent seeking, and constraints on private sector development (Hausmann et al., 2010).

In order to understand why Algeria- as an oil exporter country- has suffered such lagging export diversification, the present paper attempt to investigate whether the traditional explanations mentioned above still to hold for Algeria? The answer to such question will allow us to identify the key obstacles (or the binding constraints) to export growth in Algeria.

To address these issues, the paper is structured as follows: in section I we review part of the relevant academic literature that focus on the potential explanations for the lack of diversification in oil exporting countries. Section II present some stylized facts for Algeria's lack of export diversification. Finally, section III provides a detailed analysis on the possible explanations for Algeria's lack of diversification.

1- Literature Review

In this section we reviews, firstly, the literature on the relation between export diversification and economic growth, and, secondly, the existing literature on possible explanations for oil countries lack of diversification.

1-1- Export diversification and economic growth

There is abundant literature with empirical evidence showing that export diversification has a strong, positive impact on growth. However, it is argued that it is not just the level of exports that lead to growth but also the level of diversified exports or products (Ben Hammouda et al., 2010). Indeed, the literature identifies many channels in which diversification may influence growth: First, (Romer ,1990) found that export diversification may enter as a production factor by increasing the productivity of the other factors of production. Second, (Feenstra and Kee, 2004; Hausmann et al., 2007) have argued that diversification may increases productivity through knowledge "the stock of useful ideas" spillovers, which help the economy as a whole to grow without limitsThird, (Acemoglu and Zilibotti, 1997) have support the view that export diversification cause an increase in income by expanding the possibilities to spread investment risks over a wider portfolio. Fourth, (Hausmann et al., 2010) argued that diversification stimulates new industries and expands existing industries elsewhere in the economy, simply by adding new production opportunities for industries. And finally, a more diversified export structure may reduce the volatility of export revenue, by reducing dependence on a limited number of products (such as oil) that are subject to major price and volume fluctuations (Levchenko and Giovanni 2006).

1-2- The lack of export diversification in Oil-exporting countries

The recent literature on the relatively lack of export diversification in a major oil-exporting countries suggests that there are many possible explanations for such issue. The most important ones identified by researchers are the following:

1-2- 1-Dutch disease

A first potential explanation of lack of export diversification in Oilexporting countries is the "Dutch disease" hypothesis. It refers to the harmful macroeconomic consequences, notably, the deindustrialization, when the oilexporting countries experience a sudden large strong inflow of foreign currency.

due to a sharp rise in oil prices. Indeed, economists argue that the resource boom would amount to an appreciation of the real exchange rate, which making the non-oil exports more expensive and, therefore, less competitive (Ebrahimzadeh, 2003). Furthermore, An increase in oil revenues raises the demand for all goods, but the supply of tradables can be increased through imports while the supply of nontradables must be produced domestically. Thus, oil windfalls often raise the price and the profitability of the nontradable sector and draw human capital and other resources away from any non-oil tradable activity, thereby harming export diversification (Hausmann et al., 2010).

1-2- 2- High volatility of the real exchange rate

A second potential explanation of lack of export diversification in Oil-exporting countries is the volatility of the real exchange rate. According to this theory, a specialized economy with volatile resource revenue will see a volatile real exchange rate, while a diversified economy will have a constant real exchange rate. However, the high volatility in the real exchange rate increases the riskiness of the non-oil tradable sector, through reduces investments in that sector, consequently, it keeping it small (Hausmann and Rigobon 2002).

1-2-3. Rent seeking

Other related explanation of lack of export diversification in Oil-exporting countries is the rent-seeking behavior. Indeed, the rapid growth in the petroleum sector and availability of rents from this wealth may rise concerns about a resource curse, and constitute a danger for private sector. However, the allocution of large part of this wealth by the government, may dulling the incentives for private sector to invest in new export activities (Baland and François2000). In addition, many studies have found a strong correlation between economic 'booms' or sudden increases in wealth and rent-seeking behavior (Mehlum et al., 2006, , Torvik, 2009).

1-2-4. Business constraints on the private sector

Another potential explanation for the lack of export diversification in Oil-exporting countries refers to business constraints on the private sector. In this context, the annual survey of the World Bank entitled "Doing Business" is the best reference for identifying the most important substantial administrative barriers to investment and business operation around the world. Broadly speaking, the Doing Business Indicators compare the business regulation in 190 economies. The main objective of these Surveys is to investigate the regulations that enhance business activity and those that constrain it. Hence, twelve (12) areas of the life of a business are covered in the survey: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency (World Bank, 2020).

2-Algeria's lack of export diversification: Stylized Facts

Since its independence in 1962, Algeria's development model relies heavily on the hydrocarbon sector, which has continued to play a key role in the Algerian economy, as the exploitation of these resources accounted for more than 95 percent of total exports, three-quarters of fiscal revenues, and about half of GDP. Subsequently, the nonhydrocarbon GDP is largely dependent on

hydrocarbon revenue—financed public spending: for example, the construction sector is largely financed by the public sector, and public consumption is a large share of GDP (Lahreche, 2014).

Given this pattern of specialization, it is not surprising that the vulnerability of the Algerian economy to external shocks has remained significant, as oil price volatility translates into macroeconomic and financial instability (Jose R. Lopez-Calix, Irum Touqeer, 2016).

Algeria's hydrocarbon dependency is particularly marked for exports. However, over the past 30 years, Algeria has increased the share of oil in exports, while other oil exporters, such as the Islamic Republic of Iran, Oman, Saudi Arabia, and Venezuela (until the late 1990s), have diversified away from hydrocarbons (Hausmann et al., 2010). In this context, the concentration ratio, as measured by the Hirschman Herfindahl (H H) index (see table 1), reveal the high export concentration in Algeria compared to the average world ratio.

Table 1. Hirschman Herfindahl (H H) index for export concentration in Algeria and the world.

	2014	2015	2016	2017	2018
Algeria	0.08	0.08	0.08	0.08	0.08
World	0.04	0.04	0.04	0.04	0.04

Source:https://wits.worldbank.org/CountryProfile/en/Country/DZA/StartYear/2014/EndYear/2017/Indicator/HH-MKT-CNCNTRTN-NDX.

It is worth noting that, the Hirschman Herfindahl index is a measure of the dispersion of trade value across an exporter's partners. A country with trade (export or import) that is concentrated in a very few markets will have an index value close to 1. Similarly, a country with a perfectly diversified trade portfolio will have an index close to zero (WITS, 2020).

On the international side, Algeria remains weakly integrated into the global economy. The country is not a member of the world trade organization, but, it signed in 2002, a partnership agreement with the European Union. Thus, Algeria's trade openness remained week, as measured by the ratio of exports plus imports to GDP. The latest value from 2018 is 57.96 percent compared to a world average of 94.19 percent based on 162 countries (World Bank, 2019).

In addition to that, the latest statistics about the country's trade balance show that its major trading partner countries for exports were: Italy (\$6.22B), Spain(\$5.21B), France(\$4.56B) United States(\$4.24B) and United Kingdom(\$2.66B). By contrast, its partners for imports were: China (\$7.37B), France (\$6.04B), Spain (\$3.96B), Italy (\$3.64B), and Germany (\$2.23B) (OEC World,2019). Algeria's main exports and imports can be summarized in the table below:

Table 2. Algeria's main exports and imports in 2019

Exports (\$B)		Imports (\$B)				
Crude Petroleum	15.9	Refined Petroleum	2.07			
Petroleum Gas 12.8		Wheat	1.85			
Refined Petroleum	7.05	Cars	1.43			
Nitrogenous Fertilizers	0.809	Concentrated Milk	1.11			
Ammonia	0.456	Packaged Medicaments	1.09			

Source: OEC World (2019), Algeria profile country, in:// oec. World /en /profile /country / dza.

Further, the non hydrocarbon exports are dominated mainly by chemical products, reflecting a lack of strong industries or products on which to build export diversification. The manufacturing exports suffer from the low level of high-tech products, and services exports also appear underdeveloped, notably compared to non-oil-exporting countries, and are largely related to hydrocarbon exports (Lahreche, 2014). In addition, the non oil exports are generally produced with low levels of skill and are unsophisticated. However, (Hausmann et al., 2010) have argued that Algeria's trade is characterized by a very limited number of export products per partner, and suffers from a lack of sophistication of the export basket. The analysis of the product space of exported goods suggests that the country is highly specialized in products that offer very little opportunity to expand the export basket.

3- Constraints to export diversification in Algeria

In this section we try to investigate whether the traditional explanations for a lack of export diversification in Oil-exporting countries hold for Algeria?

3-1- Dutch disease

The clear symptom of Dutch disease phenomenon-as we mentioned aboveis an appreciation of the real exchange rate. In the case of Algeria, Dutch disease is not a plausible explanation for the country heavy dependence on the hydrocarbon sector, because it's real exchange rate has continued to depreciate massively over the past two decades (figure 1), and there was no more diversified export structure.

500 400 300 200 100 0

Figure 1: Real effective exchange rate in Algeria (1980-2019) (2010 = 100)

Source: World Bank (https://data.worldbank.org/indicator/PX.REX.REER?locations=DZ).

3-2- Volatility of the real exchange rate

Real exchange rate fluctuations are harmful to the competitiveness of non-hydrocarbon exports. Judging from the previous graph (figure 1), it can be seen that Algeria has enjoyed relative stability in the real exchange rate since the mid - 1990s. Although, In 1994 the country has embarked on a IMF-supported adjustment program (1994–98) that was accompanied by a monetary and fiscal tightening, exchange rate and trade liberalization, opening up the financial system, and adopting market-based monetary policy instrument. One of the immediate objectives of the program was to correct the previous real appreciation of the Algerian dinar, in order to encourage the efforts of the Algerian government to expand economic activity beyond the hydrocarbon sector. Thereafter, the Algerian authorities has pursued flexible exchange rate management, where, the Bank of

Algeria has introduced a managed float for the Dinar on October 1, 1994 (IMF,2006). However, since 1995, Algeria's exchange rate policy aims at stabilizing the real effective exchange rate of the dinar close to its equilibrium rate. Through its intervention, the Bank of Algeria adjusts periodically the nominal exchange rate so as to achieve its real exchange rate target. Maintaining the stability of the real effective exchange rate is a key determinant to improve competitiveness of, and incentives to invest in, non-oil exports (Banque d'Algérie,2011). But, despite this REER relative stability there is no corresponding diversification out of the hydrocarbons sector.

1-2-3. Rent -seeking behavior

According to this theory, there is a link between the amount of rent-seeking activities in a country and its pattern of diversification, however, when rent-seeking is a widespread practice in a country, the number of its products being exported will be smaller, making it less diversified (Felipe Starosta, 2010).

In this direction, (Hausmann et al., 2010) argued that rent-seeking is not a convincing explanation of the lack of diversification in the Algerian economy. A great many countries (such as Kazakhstan and Russia) have much larger endowments of oil and therefore much higher rents to capture, in addition to feature significant state intervention in the economy, but nevertheless have much more diversified export baskets.

However, the structural reforms implemented by Algeria in the 1990s under the supervision of the IMF, has relatively liberalized the private sector from repression due to the strong state intervention in all sectors in the past. But, the incomplete reforms and limited openness of the economy have not resulted in the diversification of a country's productive structure. The export diversification can succeed only if a reinvigorated second wave of liberalization reforms, allow for an expanded business elite (Hausmann et al., 2010).

1-2-4. Business constraints on the private sector

A possible explanation for the lack of export diversification in Algeria refers to business constraints on the private sector. The table below summarizes the 2020 Doing Business indicators for Algeria and other MENA countries:

Table 3: Doing Business 2020 indicators for Algeria and other MENA countries (Rank among 190 countries)

	Ease of doing busines s	Startin g a busines	Deali ng with licenc es	Getting	rinσ	Getting	investo	ng	Trading across borders	ng contract	Resolvi ng insolve ncy
Algeria	157	152	121	102	165	181	179	158	172	113	81
Djibou ti	112	123	87	121	117	132	103	133	147	144	44
Egypt	114	90	74	77	130	67	57	156	171	166	104
Iran	127	178	73	113	70	104	128	144	123	90	133
Iraq	172	154	103	131	121	186	111	131	181	147	168
Jordan	75	120	138	69	78	4	105	62	75	110	112
Kuwait	83	82	68	66	45	119	51	6	162	74	115
Lebano	143	151	164	172	110	132	114	116	153	131	151

n											
Moroc co	53	43	16	34	81	119	37	24	58	60	73
Oman	68	32	47	35	52	144	88	11	64	69	97
Saoudi Arabia	62	38	28	18	19	80	3	57	86	51	168
Syria	176	143	186	160	162	176	97	91	178	160	158
Tunisia	78	19	32	63	94	104	61	108	90	88	69
Emirat e	16	17	3	1	10	48	13	30	92	9	80
West Bank	117	173	148	86	91	25	114	112	54	123	168
Yemen	187	156	186	187	86	186	162	89	188	143	159
Qatar	77	108	13	49	1	119	157	3	101	115	123
Bahrai n	43	67	17	72	17	94	51	1	77	59	60
Malta	88	86	57	73	152	144	51	78	48	41	121
Libya	186	164	186	142	187	186	183	130	129	145	168
Region al Averag e	107	105	87	86	89	118	93	82	117	102	118

Source: Doing Business Indicators database, World Bank, 2020.

From the table above, it seems clearly that Algeria ranks poorly in the World Bank's 2020 Doing Business overall index, where it ranked 157 in the world out of 190 countries. Compared to MENA countries Algeria's ranking is also bad, where it ranked 16 among 20 ranked countries. For example, Algeria's ease of doing business rank is higher than that of Morocco, Tunisia, Egypt, Iran, and other countries in the region. However, the main barriers to private investment and business operation in Algeria according to the table 3 can be summarized in the following arguments:

- The difficult process of starting a business: the criterion of starting a business means how the time and procedures that this operation still takes? However, Algeria ranking is 152 in the world out of 190 countries ranked in the 2020 doing business survey(c.f.tab.3). At the MENA level, Algeria still ranked poorly (15 among 20 ranked countries). On the basis of this ranking, it seems that starting a business in Algeria remains a lengthy and often difficult process, unlike other neighbors and middle-income economies.
- The difficulties of dealing with construction permits: the criterion of dealing with construction permits means how easy it is for entrepreneurs to legally build a warehouse? This criterion still problematic in Algeria; where the country ranking is 121 in the world out of 190 countries. At the MENA level, Algeria still ranked poorly (14 among 20 ranked countries).
- **-Electricity shortcoming**: the criterion of getting electricity show how easy it is for entrepreneurs to connect a warehouse to electricity? Consequently, Algeria is the 102 most electricity shortcoming country in the world out of 190 countries ranked in the 2020 doing business survey. At the MENA level, Algeria has ranked bellow the overall average (13 among 20 ranked countries).

-Poor property rights: Algeria is the 165 most poor registering property country in the world out of 190 countries ranked in the 2020 doing business survey. At the MENA level, Algeria has also ranked poorly (19 among 20 ranked countries).

-The lack of access to finance: According to the table 3, we can argue that the poor growth performance in Algeria can be explained by the high cost of finance. However, Algeria's getting credit ranking is 181 from 190 countries included in the doing business survey. Furthermore, at the MENA level, Algeria ranks very late (17 from 20 countries). These ranking shows that Algeria suffers from a poor financial intermediation and lack of "access to finance", which constitute another major binding constraint to growth.

-Weak protection of minority investors: the criterion of protecting minority investors show how strong are investor protections against self-dealing? Hence, this criterion still matters in Algeria, given that it ranking 179 in the world out of 190 countries ranked in the 2020 doing business survey. At the MENA level, Algeria has also ranked poorly (19 among 20 ranked countries).

-High taxation: the table 3 shows that Algeria is the 158 most taxation country in the world out of 190 countries ranked in the 2020 doing business survey. At the MENA level, Algeria has ranked poorly (20 among 20 ranked countries).

-The difficult process of trading across borders: the criterion of trading across borders means how easy it is for businesses to export and import goods? According to the 2020 doing business survey (*c.f.*tab.3) Algeria is the 172 country in the world out of 190 countries ranked. At the MENA level, Algeria has ranked poorly (17 among 20 ranked countries). These results, highlighted that the time and procedures needed to process both exports and imports is long in Algeria.

-Poor contract enforcement: the criterion of contract enforcement means how efficient is the process of resolving a commercial dispute through the courts? Thus, Algeria is the 113 most poor contract enforcement country in the world out of 190 countries ranked in the 2020 doing business survey. At the MENA level, Algeria ranking was generally average (11 among 20 ranked countries).

-Widespread Corruption: Algeria's rank on a corruption index published annually by Transparency International (TI) in 2019 was 106th out of 180 countries (Transparency International, 2020). This ranking show that corruption in Algeria is serious problem, and its continuity will lead to the deterioration of its business climate.

Conclusion:

The present paper aims to understand why Algeria- as an oil exporter country- has suffered such lagging of export diversification, by investigating whether the traditional explanations for a lack of export diversification in Oil-exporting countries hold for Algeria? The findings show that: Dutch disease, real exchange rate volatility, and rent seeking do not seem to hold for Algeria, while the constraints on private sector development is a highly appropriate explanation. According to this thesis, there are many critical binding's constraints to private sector development and export diversification in the country, which ranks it poorly in the World Bank Doing Business overall index. Subsequently, authorities should prioritize their intervention in addressing these export growth constraints. On that front, a number of measures can be taken, in order to improving the country's ranking on the ease of doing business. These measures include mainly:

-Lowering the cost of creating a business: given that government bureaucracy is a major impediment to the conduct of business in the country, authorities should improve its bureaucratic institutions efficiency through simplifying all the necessary administrative services;

- Facilitating access to finance: The Algerian economy clearly needs to further modernize and deepen its financial sector in order to achieve higher aggregate savings, lower interest rates, and subsequently facilitate access to credit for SMEs, by giving them the priority sector lending.
- Improving the legal framework in its standards and regulations applicable to business, notably those related to the enhancing property rights and fighting anticompetitive "informal" practices, contract enforcement and providing strong protection to minority investors;
- Revisiting the tax system in order to lowering taxes, improving tax administration, and enact the needed fiscal incentives to support private economic activity;
- -Facilitating trade across the borders, through faster customs procedures, such as: the opening of a logistical corridor for exports, or by the establishment of an export processing zone;
- -Fighting corruption: the authorities should take a concrete measures to strengthen its legal framework and efforts in order to fight the widespread corruption at all levels.

References:

- **-Acemoglu, D. and Zilibotti, F., (1997)**, "Was Prometheus unbound by chance? Risk diversification and growth", Journal of Political Economy 105, pp.709-751.
- **-Banque d'Algérie.(2011)**. Evolution économique et monétaire en Algérie en 2010. Retrieved from http://www.bank of algeria.dz.
- -Ben Hammouda; Hakim; Karingi; Stephen N.; Njuguna, Angelica E.; Jallab, Mustapha S. (2010). Growth, Productivity and Diversification in Africa, Journal of Productivity Analysis, 33: 125–146
- -Ebrahimzadeh Christine (2003), Dutch Disease: Wealth Managed Unwisely, Finance and Devlopment, vol 40, No. 1.
- **-Feenstra, Robert, and Hiau Looi Kee.**(**2004).** "On the Measurement of Product Variety in Trade." American Economic Review, 94 (2): 145-149.
- **-Felipe Starosta de Waldemar** (2010). How costly is rent-seeking to diversification: an empirical approach. Halshs-00461486.
- **-Hausmann R,Bailey Klinger, & José Lopez-Calix (2010)**, Export Diversification In Algeria, in: Trade Competitiveness of the Middle East and North Africa, World Bank, Washington , p.66.
- **-Hausmann, R., and R. Rigobon.** (2002). "An Alternative Interpretation of the 'Resource Curse': Theory and Policy Implications." NBER Working Paper9424, National Bureau of Economic Research, Cambridge, MA.
- **-Hausmann, R., J. Hwang, and D. Rodrik.** (2007). "What You Export Matters." Journal of Economic Growth 12 (1): 1–25.
- **-IMF.** (2006). Algeria: Selected Issues .IMF Country Report, No.05/52, Washington, D.C: International Monetary Fund.
- **-Jean-Marie Baland and Patrick Francois (2000)**; Rent-seeking and resource booms. ... Journal of Development Economics, vol. 61, issue 2, 527-542.
- Jose R. Lopez-Calix, Irum Touquer (2016), Algeria: Comparing the Last Two Oil Shocks and Policy Responses, Topics in Middle Eastern and African Economies Vol. 18, Issue No. 2.
- **-Lahreche Amina (2014),** Fostering Export Diversification in Algeria, Algeria: Selected Issues paper, International Monetary Fund, December.
- **-Levchenko, A. A., and J. di Giovanni.** (2006). "The Risk Content of Exports." International Monetary Fund, Washington, DC.

-Mehlum H.,Karl M.,Ragnar T. (2006), Institutions and the Resource Curse,The Economic Journal, Volume116, Issue508, pp.1-20.

- **Merghit A.** (2018), Rethinking the fiscal risk management framework in Algeria, Les Cahiers du Cread, vol. 34 n° 2, pp.59-62.
- OEC World, (2019), Algeria profile country, in :http s:// oec. World /en /profile /country /dza.
- -Romer, P., (1990), "Endogenous technological Change", Journal of Political Economy 98(5), S71-S102.
- **-Torvik Ragnar, (2009)**, Why do some resource-abundant countries succeed while others do not? Oxford Review of Economic Policy, Volume 25, Issue 2, pp.241–256.
- **-Transparency International (2020)**, corruption perceptions index 2019, in: https://www.transparency.org/files/content/pages/2019_CPI_Report_EN.pdf.
- **-WITS (2020)**, Merchandise Trade Indicator Metadata,in: http s:// wits .worldbank .org / Country Profile/Metadata/en/Indicator/Trade.
- -World Bank (2019), Algeria Overview,in: https://www.worldbank.org/en/country/algeria/overview
- **-World Bank (2019)**, HH Market concentration index By Country(1988-2018) ,in :https://wits.worldbank.org/CountryProfile/en/country/by-country / startyear /LTST/endyear/LTST/indicator/HH-MKT-CNCNTRTN-NDX
- -World Bank ,(2020), Doing Business Indicators database, Washington DC.