

Diagnostic of the Algerian emergence economic constraints

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Abstract: With the current economic situation, the flaws of the development strategy put in place by Algeria have resurfaced on the surface. The economic emergence process requires endogenous economic factors and institutional changes also. In this context, the purpose of this study is to highlight the blocking factor of the Algerian economy.

For that we proceeded by ARDL estimation over the period of 1990-2017 and we used the factors which allowed China to emerge economically to see if Algeria can follow the same Chinese model of industrialization.

Keywords: economic growth, economic emergence, industrialization strategy, ARDL model.

Jel Classification Codes: C13, O20, O40.

ملخص: أظهرت استراتيجية التنمية التي وضعتها الجزائر عدة نواقص مع الوضع الاقتصادي الراهن. حيث تتطلب عملية الظهور الاقتصادي عوامل اقتصادية داخلية وتغييرات مؤسسية أيضاً. في هذا السياق، الغرض من هذه الدراسة هو تسليط الضوء على قيود الاقتصاد الجزائري. لهذا الغرض انتهجنا تقدير ARDL خلال الفترة 1990-2017 واستخدمنا العوامل التي سمحت للصين بالظهور اقتصادياً لمعرفة إمكانية تتبع الجزائر لنفس النموذج الصيني للتصنيع

كلمات مفتاحية: النمو الاقتصادي، وانشوء الاقتصادي، واستراتيجية التصنيع، نموذج ARDL.

تصنيف JEL: C13, O20, O40

1- Introduction

Algeria is one of the countries that exports hydrocarbons which their economic growth is due to the oil rises, despite the state tries to promote the industry out of hydrocarbons, it is also a country that invested in agriculture. The reforms initiated since the 1990s with the assistance of the institutions still seem unfinished. The public authorities have, according to the circumstances, adopted gradual transition, at some point the state tried the shock therapies but they were followed by downtime due to system stakeholders. Doubts about the liberalization project resurface today in a difficult environment and can be sustainable if the economy doesn't develop a process of economic emergence which allows it to restart its economic growth with a high rate of growth and manage to maintain it.

Emerging economies are middle-income economies that have started on a process of institutional and economic transformation that has resulted in strong and sustained economic growth over the last decade (Julien Vercueil , 2012).

Algeria completed the first part of this definition except for the results it has not yet arrived the stage of take-off towards economic development, Indeed the takeoff stage is a phase characterized by the appearance of technical progress, the increase in the investment rate, in other words it is a kind of revival of economic growth (Philippe Deubel, 2008).

From that, our problem is as the following:

What are the eminent constraints of the economic takeoff in Algeria?

We will retain the following hypotheses:

- The contribution of the industrial sector to the Algerian economy remains weak because it relies heavily on the petroleum industry and not on the manufacturing industry.
- The dysfunctional Algerian economy is mainly due to the institutional quality of the country.

For this study we divided this paper into two parts: in the literature review; we talked about the path taken by Algeria during its economic transition, then we did an econometric study to see if the country can undertake an industrialization strategy inspired by the Chinese model in order to revive its economic growth.

2- Literature review

Economic reforms and structural changes are established to mainly improve efficiency by allowing the ease of reallocation of resources which leads to increased productivity, they also aim to facilitate the transfer of technologies and knowledge (Era Dabla-Norris, Giang Ho, and Annette Kyobe, 2016), India to successfully take off its economic growth rate and maintain high when it decided to accelerate the pace of liberalization, opening its financial system, reduce corruption and pursue privatization and structural reform more vigorously (Dani Rodrik, 2011).

For Turkey we see the role of economic institutions with all the structural changes that triggered the economic reforms that in turn boosted economic growth, these changes were aimed at isolating the public sector banks since up to By 2001 the Turkish financial system was very vulnerable, with these institutional changes economic indicators recovered, real GDP increased by about 35% in the four years that followed these reforms. At the end of 2005, the rate of inflation fell to less than 8%, a level not seen since the 1960s and real interest rates also fell sharply (Pamuk, Sevket. 2007).

these experiences and much else show that with a good development strategy an economy can recover in a short time, Algeria seems to have chosen a well-defined trajectory, because with the arrival of President Abdelaziz Boutaflika in 1999 the Algerian economy has seen a major turning point with new economic and structural reforms starting with unemployment, the result is that the rate of Unemployment declined from 10% in 1999 to 10%, except that it was at the expense of government spending because it is the engine of job creation in Algeria. Other important points in this new economic era are the new policies. Aimed at improving infrastructure, such as education, health, housing and the distribution of

water and electricity. The institutional and structural changes were also aimed at the development of the private sector because the decline of this sector led to the development of the informal sector, which was estimated at 40% of GNI at the end of 2000 (Pamuk, Sevket. 2007) , which is why Algeria has been confronted with the need to diversify its economy and to remedy this situation, the Algerian state has developed several schemes for the promotion of SMEs (Farida Merzouk2010), as they represent the rapid way to diversify and reduce dependence on hydrocarbons, except that they have not dealt with the behavior of the Algerian entrepreneur, as well as the fact that these companies created could not face the international competition because of the quality / price ratio so they are far from considering the internationalization and the construction of a promising nonhydrocarbon sector.

Given that Algeria is a country endowed with natural resources the problem which found in setting up a good development strategy are structural problems, these structural problems can be mentioned on the following points: (Ivan Martin, 2003)

- Unemployment
- The decline in purchasing power
- Dependence on hydrocarbons, foods products imports and external indebtedness whenever oil prices decline.

in fact agrifood takes a large part in Algerian imports while these countrie is characterized by its fertile farmland, it is true during the period of terrorism a large percentage of rural population have quit their land but since civil reconciliation much of the budget is intended to support the rural areas but despite that we continue to suffer from food insufficiency with 45% of food consumed are imported, which has a negative impact on economic growth.

Since 2003 the Ministry of Agriculture and Rural Development had put established a strategy composed of two parts: (Ministère de l'agriculture et du développement rural, 2012)

- The first pat was for agricultural development, the aim was to revive agriculture, ensure food security and consider exports of agricultural products.
- The second was to develop rural areas and improve the living conditions of the rural population; the aim was to fight against desertification, an efficient management of the forest heritage and to allow its extension, and the conservation of natural ecosystems.

The first signs of this strategy proved reassuring, agricultural production recorded a steady growth; its value has gone from 359 billion AD in 2000 to 668 billion AD in 2006(Ministère de l'agriculture et du développement rural, 2006).

For the industry in Algeria, the sector includes non-hydrocarbon sectors such as the pharmaceutical industry, which only covers 60% of the needs of the local market.

Algeria is trying to reduce its dependence on the hydrocarbon sector by promoting a climate of investment incentives and encouraging competition, these are the axes on which the Ministry of Industry and Mines has built its strategy to improve the productivity of the sector. (Ministère de l'industrie et des mines, 2015).

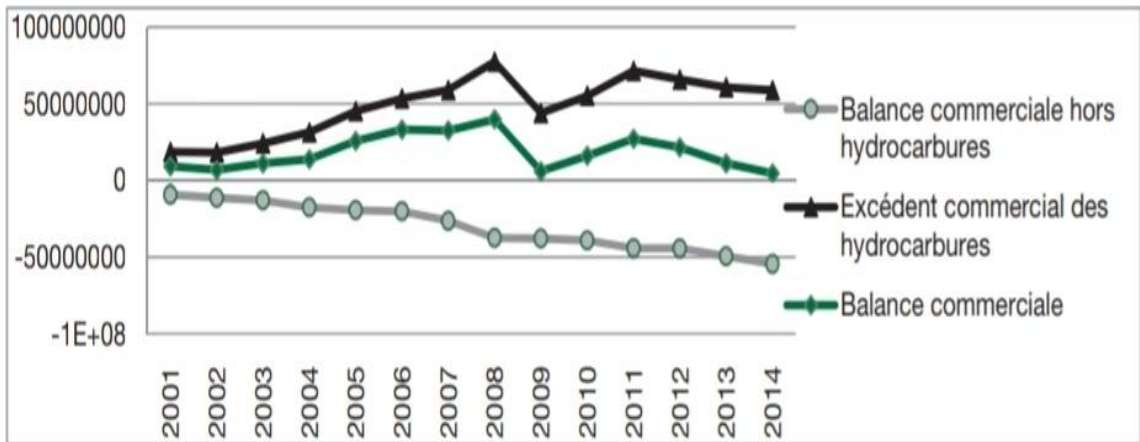
Algeria had also started in the automobile industry with the opening of a parts assembly plant, an investment estimated at \$ 250 million in 2016, it has again invested more in the mining industry with allocation of 18 mining titles for more than 263 million DA(Direction Générale de la Veille Stratégique des Etudes et Systèmes d'Information, Division de veille stratégique et des Systèmes d'Information, 2017), hoping that these investments will bear results on economic growth as it has decreased or decreased from 3.8 in 2014 to 2.4 in 2016(Banque mondiale, 2017).

foreign trade accounts for 58% of Algerian GDP, exports are composed of a very large majority of hydrocarbons, since the recession of 2015 the state limits imports but it is still in front of the challenge to fight against the iformel given that the informal sector in Algeria it is found in all areas, it's

found in speculation in the parallel foreign exchange market, speculation in real estate as well as in black-labor, because business leaders take the opportunity to reduce their costs because these employees working at a minimum wage and he doesn't benefit of social insurance, these entrepreneurs don't charge all their sales to reduce their taxes which is estimated by the experts 40% of GDP.

The trade balance has been in a deficit since the drop in oil prices in 2015, which has led to a decrease in economic growth and an increase in inflation which was estimated at 6.4%, which is due to the depreciation of the Algerian dinar compared to US dollars(Ambassade suisse en Algérie, 2017).

Graph N° 01
Trade balance evolution



Source: (UNCTAD,2017)

This graph confirms Algeria's dependence on hydrocarbons and shows perfectly that exports must be diversified, as the gap between the trade surplus of hydrocarbons and the trade balance grows, the non-hydrocarbon trade balance falls, which is explained by the decline in non-hydrocarbon exports. Trade openness is only part of an economic policy it does not represent the key to economic development, but economic development can't be achieved without openness(UNCTAD, 2017).

For this liberalization to occur with a positive impact on economic growth there must be an effective institutional system and it must create a good business climate that encourages foreign investors to invade to invest in the country.

Limiting the participation of foreign investors means that these funds are invested somewhere else, among the new 2009 provisions on foreign direct investment are: (UNCTAD, 2017)

- The financing of investments initiated by foreign investors must be made exclusively by recourse to local financing; except for the constitution of the share capital.
- Foreign investment must present a surplus currency balance in favour of Algeria throughout their lifetime in the country.

These first two provisions are intended directly to save the country's currencies. It is difficult to estimate the effects. The first condition is simply unrealistic because it concerns the entire life of the project and therefore ignores the fact that projects must mature before they become exporters.

3- Empirical study:

Many have been interested in identifying the issue of the economic emergence of Algeria, most have studied the impact of a variable and these determinants on economic growth, for our case we will try to identify among the factors economic factors and institutional factors that hinder the economic emergence of Algeria.

From the factors that led to the economic emergence of certain countries we will try to see where the Algerian economy is blocking, our model is that of a study carried out on the identification of the factors of the emergence of China (Hasan, Hanaa & Noureden Jomaa Shili, Nedra. 2017), the natural resource earnings variable has been added since Algeria is known as a hydrocarbon-rich country and is counted among the world's oil exporters.

The model equation is as follows:

$$y = a + agr + ind + expo + ind + fde + Unp + res$$

Y : GDP growth (annual %)

AGR: approximated Algeria's Agricultural value added (%GDP)

IND: approximated by Algeria's Industry value added (%GDP)

Exports : Exportation (%GDP)

Imports : Importation (%GDP)

FDI : Foreign direct investment (%GDP)

RES : Total natural resources rents (% of GDP)

The data has been taken from the World Bank database(Banque mondiale, 2017) and we will proceed with data processing using EVIEWS version 9. The estimate covers the period 1990-2017.

Stationarity test :

Tableau N° 01
Stationarity test result

variable	prob	level
y	0.02	0
agr	0.001	1 st
ind	0.00	0
imp	0.0007	1 st
expo	0,0003	1 st
fdi	0.00	1 st
res	0.008	1 st

Source : Obtained from EVIEWS 9 data processing

As we see in the table all the variables are stationary at the first level as their probabilities are below 5%, the most appropriate model for our study is the ARDL model is model that is used when the variables are integrated into the same order on I (0) or I (1) or both at the same time. The ARDL model is a more statistically significant approach to determining the cointegration relationship in small samples, in contrast to the Johanson technique which requires a larger sample for the results to be validated(Charles Harvi, Mosayeb Palhavani, 2006).

4- Results and discussions:

The results of ARDL model are shown in these tables:

Table N02
Result of ARDL model

Variable	Coefficie			
	nt	Std. Error	t-Statistic	Prob.*
Y(-1)	-0.145495	0.248111	-0.586411	0.5653
AGR	-0.787486	0.277149	-2.841376	0.0113
IND	0.050704	0.040773	1.243580	0.2305
IMP	-0.105718	0.150097	-0.704331	0.4908
EXPO	0.805922	0.254076	3.171967	0.0056
FDI	0.124244	0.726198	0.171089	0.8662
RES	-0.356462	0.173056	-2.059811	0.0551
C	22.33734	10.75865	2.076222	0.0534

Source : Obtained from EVIEWS 9 data processing

R squared= 0.54

Prob F statistic = 0.03

Table N° 03
ARDL Bounds test

Test Statistic	Value	k
F-statistic	4.257574	6
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.12	3.23
5%	2.45	3.61
2.5%	2.75	3.99
1%	3.15	4.43

Source : Obtained from EVIEWS 9 data processing

The Bounds test shows that the value of the Fisher statistic ($F = 4.257574$), it's lower than the upper tabulated value for the different significance thresholds that corresponds to 4.43, we accept the hypothesis H_0 is the absence of a long-term relationship between the different variables.

So we will not be able to estimate the model with long-term error correction and we will be refraining with the estimates obtained.

The R square is equal to 0.54, so we can say that 54% of variable explain the model.

The results show that the variables (IND), (IMP), and (FDI) are not significant var their probabilities are of (prob REGU = 0.23), (prob REGL = 0.49) and (prob effgouv = 0.86) respectively.

when the value added of agriculture increases by 1% the Algerian economic growth decreases by 0.78, this can be explained by the fact that the farmers benefit from aids and subsidy and the acquisition of new agricultural machines which allow them to develop their sector, often these machines are imported and thus its reflects the negative impact, but the development of this sector will make it possible to have good results in the long term.

When exports increase by 1% economic growth increases by 0.8, it is logical except that Algeria must work to increase this value since these exports are mostly composed of hydrocarbons.

When natural resource profits increase by 1%, the Algerian economic growth decreases by 0.35, which is explained by the fact that as long as these benefits increase, they are redirected towards the import of consumer goods and not towards investment. This negative effect of resources may be due to poor management, which is due to poor public decisions and choices.

5- Conclusion

This study aims to determine if the factors of economic emergence of china can contribute to the economic emergence of Algeria, for this we proceeded by an ARDL estimation on the period of 1990-2017 to see if these factors can contribute to long-term economic growth.

the results show that the Algerian economy is essentially based on hydrocarbons, it has not yet to carry out a good strategy of industrialization on which its economy can rest, in terms of foreign investment it should put in place policies of foreign investment attraction and for that reason it should reform its banking system and review the conditions imposed for the foreign investors. Finally the exports have a positive impact, but if we look at this export, it's should be diversified because if it remains composed mainly of hydrocarbons it is threatened to be victim of the resource curse.

to conclude we can say that Algeria is far from taking as an example the Chinese emergence model in the first place because of its lack of industrial platform.

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