WHAT CONSTRAINS GROWTH IN ALGERIA? A DIAGNOSTIC APPROACH

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ABSTRACT

The growth diagnostic approach crafted by Hausmann, Rodrik and Velasco (2005) provides a framework for formulating hypotheses on what may be constraining a country's growth. In this context, this paper aims at highlighting the methodology of such an approach with an application to Algeria. Our findings show that low private returns to economic activities due to micro risks (high taxes, weak contract enforcement & property rights, electricity shortcomings, corruption…), and insufficient access to finance, are a critical binding's constraint to growth in the country. However, unlocking Algeria's growth potential requires that economic policymakers should prioritize their intervention on the removing of such constraints.

KEY WORDS

Growth- Constraints- Diagnostic –Private investment-Finance-Algeria.

JEL CLASSIFICATION: F 43 , O4.

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QU'EST-CE QUI FREINE LA CROISSANCE EN ALGÉRIE ? UNE APPROCHE DIAGNOSTIQUE

RÉSUMÉ

L'approche diagnostic de croissance élaborée par Hausmann, Rodrik et Velasco (2005), propose une méthode pour formuler des hypothèses sur ce qui peut freiner la croissance d'un pays. Dans ce contexte, cet article vise à mettre en évidence la méthodologie d'une telle approche avec une application au cas Algérien. Nos résultats montrent que les principaux obstacles à la croissance en Algérie sont: un faible rendement privé de l'activité économique dû aux risques micro (impôts élevés, manque de rigueur dans l'exécution des contrats et de respect des droits de propriété, lent raccordement à l'électricité, corruption…), ainsi qu'un accès insuffisant au financement. Toutefois, l'étude conclut que la libération du potentiel de croissance en Algérie, nécessite que les décideurs économiques accordent une priorité particulière dans leur intervention à la levée de ces contraintes.

MOTS-CLÉS

Croissance, Contraintes-Diagnostic, Investissement privé, Financement, Algérie.

CLASSIFICATION JEL : F 43, O4.

ما الذي يعيق النمو الاقتصادي في الجزائر؟ مقاربة تشخيصية

ملخص

تعتبر مقاربة "تشخيص النمو " التي طورها كل من الاقتصاديين "هاوسمان-رودريك-فيلاسكو" (2005) أحد الطرق المعتمدة لصياغة الافتراضات الخاصة بأهم القيود التي تعيق النمو الاقتصادي في بلد ما. وفي هذا السياق، تحاول هذه الورقة التعريف بمنهجية هذه الطريقة مع تطبيقها على الحالة الجزائرية. وعموما فقد توصلت الدراسة إلى أن أهم معوقات النمو في الجزائر تشمل كل من: ضعف العائد على الاستثمار الخاص

بسبب المخاطر على المستوى الجزئي (كالضرائب المرتفعة، ضعف الحماية لحقوق الملكية وإنفاذ العقود، صعوبة الربط بالكهرباء، الفساد...)، إضافة إلى صعوبة الحصول على التمويل. وعليه فان تفعيل فرص النمو الكامنة تقتضي من صناع السياسة الاقتصادية في البلد إعطاء الأولوية في تدخلاتهم الحكومية على رفع المعوقات السابقة الذكر.

كلمات مفتاحية

النمو الاقتصادي–المعوقات– التشخيص– الاستثمار الخاص– التمويل –الجزائر.

تصنيف جال: F 43 , O4.

INTRODUCTION

For policymakers, in both developed and developing countries, finding ways to promote faster and sustained growth is a top priority. However, the necessary strategies and reforms needed to achieve such a goal differ from one country to another, in the light, of the differences between its levels of economic development, and the socio-economic challenges faced by them.

A large literature has attempted to solve the puzzle of economic growth, through many theoretical models with different approaches, the famous ones are : Harrod & Domar model (1946) - Solow s' Growth Model (1956) -Romer Model (1986) -Lucas (1988). Furthermore, in the early 1990s a new vision to the growth issue was reflected by the "Washington Consensus », which has come to represent a general orientation toward market-based solutions for growth. However, many developing countries have adopted such list of "global reforms", but, the results on growth have been extraordinarily varied from a country to another.

Bythe mid 2000's,a new framework to economic reform was introduced by Hausmann, Rodrik and Velasco (2005)called "Growth Diagnostics approach ".The primary objective of such framework isto help low income countries decide which reforms to pursue for growth. In other words, these countriesshould figure out a small number of binding constraints on growth and focus on overcoming those, rather than tackle a « long checklist list of reforms »as argued by the "Washington Consensus ».Hence, the "Growth Diagnostics" framework has been used widely by both the World Bank and the International Monetary Fund, as a complement to devising growth strategies for many countries such as : El Salvador(2005)- Bolivia (2006)-Nepal (2014)-Tunisia (2016)…But, our country (Algeria) has not been subjected to such an approach ,which motivated us to apply it to the Algerian economy.

Algeria's economy is highly dependent on hydrocarbons. The sector accounts for about half of total output, three-quarters of fiscal revenues, and 98 percent of exports. Meanwhile, Algeria's non-oil export basket is very unsophisticated and unlikely to fuel future growth. Despite progress made over the 2000's , thanks to the solid country's macroeconomic performance combined with relatively high oil prices, Algeria has faced daunting challenges since June 2014, due to the drastic drop in oil prices and its negative effects on macroeconomic performance, notably the slowdown in economic activity, and the widening of fiscal and current account deficits.

Furthermore, the current environment of durable low oil prices has exacerbated the macroeconomic volatility in most oil-exporting countries, which face similar challenges of jobs creation and foster economic growth. However, greater economic diversification through promoting the non-oil private sector and entrepreneurship can be expected to be the best way for these countries to tackle its mounting socio-economic challenges, especially unemployment. In this regard, the unemployment rate in Algeria has reached 11.7 percent in October 2018 and is higher among the youth (29 percent in April 2018), women (19.4 percent) and university graduates (18.5 percent) (World Bank,2019).But, tackling long–term unemployment in Algeria is still a difficult task , in the light of the poor growth performance recorded in recent years, where GDP growth reached only 0.8 percent in 2019, compared to 1.5 percent in 2018, and 1.4 percent in 2017 (World Bank,2019).It is worthnoting that ,the World Bank Commission on Growth and Development , emphasized in its report published in 2008, that achieving growth in an effort to reduce poverty and boost living standards, require from economies to generate an economic growth at an average rate of 7 percent (World Bank ,2008).

In this paper ,we try to applying the growth diagnostics approach developed by Hausmann, Rodrik and Velasco (2005) on Algeria's economy , in order to identify the key obstacles to growth (or the binding constraints).To address these issues, the paper is structured as follows :in section I , we review the main previous studies on the determinants of growth. Section II summarizes the main features of the growth diagnostics approach. In section III, we present a brief overview of Algeria's growth performance in the last decades.Finally, in section IV we provide detailed analysis from investigations into potential constraints to growth in Algeria using the diagnostic framework.

I - DETERMINANTS OF GROWTH: A LITERATURE REVIEW

The existing literature relating to the main determinants of growth has been extensive. In this section we review the most important ones.

1.1- The Harrod–Domar model 1947

This model of growth is based on seminal papers prepared by "Roy Harrod" in 1939 and "Evsey Domar"in1946. The two economists postulated that economic growth depends on three variables: the saving rate, the capital-output ratio, and labor force growth. These variables were fixed and exogenous, and the steady long-run growth can prevail if the economy's saving rate had to match exactly the product of the capital output ratio and the rate of growth of the labor force (Ghosh, 2011).

1.2- Solow s' Growth Model 1956

Robert Solow, the Nobel Prize winner in 1987 for his seminal contributions to growth since 1956, was considered as the father of the modern growth theory. In Solow's model, the economic growth was exogenous. Its main idea was to show how growth in the capital stock, growth in the labor force, and advances in technology interact in an economy as well as how they affect a nation's total output of goods and services. Furthermore, Solow showed that technological change, rather than capital accumulation, was the main driver of long-run growth (Mankiw, 2003).

1.3- Romer Model (1986)

Paul Romer is the Nobel Prize laureate in 2018, for his contributions to endogenous growth theory. In a paper published in 1986, Romer investigated the relationship between growth and innovation, and he showed how knowledge can function as a driver of long-term economic growth .In other words, a stable positive equilibrium growth rate can result from endogenous accumulation of knowledge (Romer, 1986).

1.4- Lucas Model (1988)

In 1988, Robert Lucas (Nobel1995) had published a paper on the mechanics of economic development. He had shown that the long –run economic growth is consequence of human capital accumulation (Lucas, 1988).

1.5- Barro Model (1991)

In 1991, "Robert Barro"published a seminal paper on the determinants of economic growth. He examined the statistical associations between income growth and a list of variables for nearly one hundred countries since 1960. The list of variables included: school enrollment rates (as proxy of "human capital"), private investment, the size and nature of government activities, measures of the economic system in place, government-induced distortions of markets, and political instability. He found that "poor countries can catch up with the rich ones if they have essentially high human capital. In addition, he argues that investments by governments did little to trigger growth, and the political instability and market distortions tended to lower growth (Barro, 1991).

1.6- The "Washington Consensus"

The Washington Consensus (or "neoliberal Agenda) is 10 market-based solutions for growth originally stated by economist "John Williamson" in 1989, and then supported by other prominent economists and international organizations, such as: IMF, World Bank, EU and the US, in order to help economies in crisis to trigger growth. These prescriptions include: Low government borrowing - Redirection of public spending - Tax reform - Interest rates that are market determined - Competitive exchange rates- Trade liberalization- Liberalization of inward foreign direct investment - Privatization of state enterprises - Deregulation –and Legal security for property rights (Pettinger, 2017).

Many countries have adopted these policies, notably in Latin America, South East Asia and other countries .But; the results of such policies have been extraordinarily varied. In fact, what the experience has shown is that policies that work wonders in one place may have weak, unintended, or negative effects in other places (Hausmann et al., 2006).

In 2005, a new approach to economic reform was developed by three Harvard economists(Ricardo Hausmann, Dani Rodrik, and Andrés Velasco).This new framework called "growth diagnostics " suggests that growth was often triggered by one or a few changes and did not require a laundry list of reforms as the Washington Consensus assumes (Hausmann et al., 2005).This new approach has been widely used by World Bank and the International Monetary Fund to help countries decide which reforms to pursue for growth (Leipziger and Zagha, 2006).In the next section, we try to describe the main features of such an approach.

2- THE GROWTH DIAGNOSTIC APPROACH: AN OVERVIEW

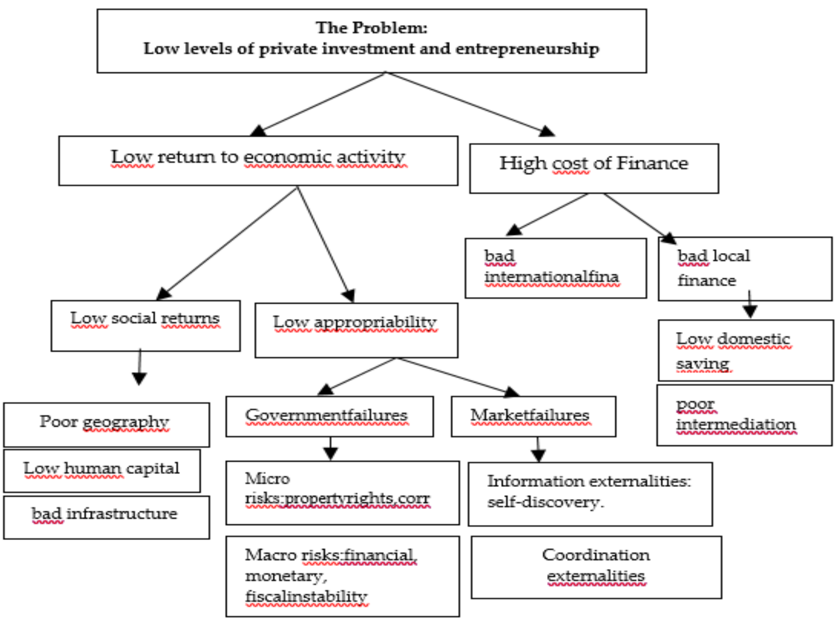
This section presents an overview of the growth diagnostic approach, and summarizes the pros and cons of such methodology.

2.1- What is the growth diagnostic approach?

The growth diagnostics framework proposed by Harvard's Ricardo Hausmann, Dani Rodrik, and Andrés Velasco (2005) is decision tree methodology (see.Fig.1) dedicated to policymakers in low-income countries ,in order to help them identify the relevant growth binding constraints. According to this framework, countries are not obliged to implement wholesale reform following international best practice to achieving growth, but it just need to figure out the one or two most binding constraints on their economies. And by focusing on the removal of those constraints, the countries would result into faster growth. In other words, the transitions to higher growth did not require a long list of reforms. Countries could achieve higher levels of economic growth by identifying "the binding constraints" to growth and removing them through "well-designed but relatively minor government interventions (Hausmann et al., 2005).

Furthermore, the growth diagnostic approach assumes that the problem in countries with lowest GDP growth is its low levels of private investment and entrepreneurship. However, the possible causes of such problem can be summarized in the figure below:

Figure 1. The Growth Diagnostic Tree



Source: Hausmann R., Rodrik D., & Velasco A., (2005), "Growth Diagnostics," John F. Kennedy School of Government, Harvard University, p.27.

From the figure above, we can observe that the level of private investment and entrepreneurship is constrained generally by a small number of specific obstacles called "binding constraints", which represents the biggest hurdle to growth. In this context, the diagnostic analysis of the economic activity in a low-income country, must figure out that its economic growth could be constrained by at least one of the following two factors:

(i) The low return to economic activity;
(ii) The high cost of finance.

If the problem is with low return to economic activity, it must be due either to low social returns (poor geography -shortage of human capital-inadequate infrastructure), or to low appropriability of those returns, which could be low for two groups of reasons:

- Market failures: due to (1) large externalities & coordination failures; or (2) information externalities:"self-discovery".
- Government failures: due to (1) micro risks: high taxes, insecure property rights, corruption; or (2) macroeconomic instability.

If the problem is with the availability of finance (i.e. the cost of finance is too high), it could be constrained either by: (1) low domestic savings, (2) poor financial intermediation, or (3) insufficient access to the international finance.

After the identification process of the main binding constraints that are more accurately characterizes the economy in question, the policymakers can prioritize their intervention by setting the reform priorities in order to addressing growth constraints, and achieving high sustained growth.

2.2- The Pros-and-Cons of theGrowth Diagnostic Approach

To explore the potential of the growth diagnostics framework and clarify its strengths and limitations, Hausmann, Rodrik, and Velasco agreed to work with World Bank .However, during 2005, many countries have been selected by the World Bank to apply the growth diagnostics approach. The list include: Armenia, the Baltic countries, Bangladesh, Brazil, Cambodia, Egypt, India, Madagascar, Morocco, Tanzania, and Thailand (Leipziger and Zagha, 2006).In addition ,the international monetary fund (IMF) had also applying this approach to other low income countries such as Tunisia(2016).

The table below summarizes the mainfindings of selectedcases studies:

Tab.1. Selected Case studies on the application of the growth diagnostic approach.

The study	The country	Binding constraints to growth	Recommandationsto accelerate growth
Hausmann et al.,(2005)	Brazil	Limited availability of savings.	Mobilizing enough domestic and foreign savings to finance investment.
Hausmann et al., (2005)	El Salvador	A "dearth of ideas": no new ideas had sprung up for other potential investment sectors.	Encouraging more entrepreneurship and new business opportunities.
Hausmann et al., (2005)	Dominican Republic	Weak institutions.	Institutional development.
World Bank (2006)	Bolivia	-Fiscal and financial sector fragility ; -Poor enforcement of Contracts&poor bankruptcy law; -High concentration of export.	-Ensure fiscal balances; -Enforcement of contracts and honoring property rights; -Dynamic productive sector.
IMF (2016)	Tunisia	-Lack of access to finance; -Public institutions ineffectiveness; -Macroeconomic risks.	-Appropriate financial and banking policies to increase access to finance; -Sound business environment; -Reduction in macroeconomic risks.

Source: Author.

The case studies mentioned above, showed clearly that there were many ways to grow, which differ from country to another country, in the light of its main growth's binding constraints.

On the other hand, the growth diagnostics approach was subject to criticism. Indeed, a number of limitations were identified by many economists. The main limitations can be summarized as follows:

- According to **Sartor (2007)** the growth diagnostics approach gives only a framework to build some hypotheses on critical constraints, and does not contain any scientific formula in its application to test these binding constraints;
- **Leipziger and Zagha (2006)**, argued that the results of application of the growth diagnostics approach are mostly depending on the analysts point of view and creativity. In addition to that, this framework is based on short-run considerations where the current binding constraints are easy to identify, but these constraints may change in the future, andit is difficult to predict it;
- **Felipe and Usui (2008)** considered that a low private investment and entrepreneurship is not the major problem for all countries. However, there are a number of counties that could grow without a high level of private investment. They argued that the growth diagnostics approach deals with identifying "the binding constraints" to growth and removing them, but it does not deal with further policy reforms. It is also said that analysts may accept one constraint as a binding one, for which data are available, and reject others due to lack of data.

Finally, **Habermann and Padrutt (2011)** consider that the growth diagnostics approach was simply not enough focused on context-specific priorities, and the decision-makers need a more targeted and scientific approach that allows critical obstacles to economic growth, as well as priorities for reforms, to be defined.

3- GROWTH PERFORMANCE IN ALGERIA IN RECENT YEARS: SOME STYLIZED FACTS.

This section describes briefly the structure of the Algerian Economy, and reviews the growth performance and its main drivers in recent years.

3.1- The Key Features of the Algerian Economy

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 situation has 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 Touqeer, 2016).

In addition, Algeria's exports are among the least diversified in the world, even compared to other oil producers like Iran, Oman, Saudi Arabia, or Venezuela(Merghit, 2021).As indicated by the analysis of Herfindahl –Hirshman index for the export basket, Algeria is among the 10 highest export concentration in the world (Hausmann et al., 2010).Indeed, the concentration ratio, as measured by theHirschman Herfindahl (H H) index (see table 2), reveal the high export concentration in Algeria compared to the average world ratio.

Table 2. 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).

Another key feature of the Algerian economy is the predominant role of the state compared to the share of the private sector. However, the country's largest banks are state owned, and government spending represents two-thirds of non-hydrocarbon GDP(IMF,2011), while, the agriculture and manufacturing sectors still represents a relatively small percentage of total output, with a contribution of 12.2 percent and 5.8 percent to GDP respectively, in 2019 (Banque d'Algerie,2019).

Further, 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 3. 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

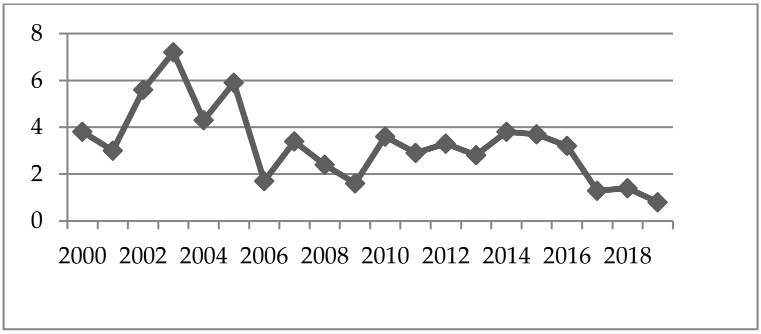
Source: OEC World (2019), Algeria profile country, in http:// oec. World /en /profile /country / dza.

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 (the World Bank, 2019). In addition to that, Algeria's financial integration is also weak, as measured by the Chinn-Ito financial openness index (-1.21 in 2017).

3.2- Algeria's Growth Performance (2000-2019)

Given the Algerian economy's reliance on the oil and gas sector, it is not surprising that the aggregate growth in the country is driven in large part by hydrocarbon prices. The figure below show the GDP growth evolution over the period (2000-2019):

Figure 2: Algeria's GDP Growth: 2000-2019 (%)



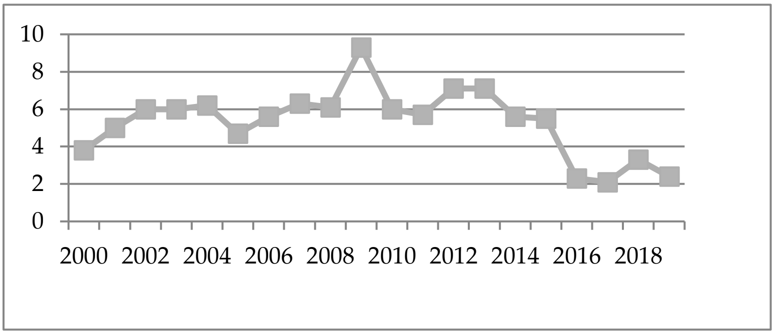
Source: Bank of Algeria.

It seems clearly that the growth performance in Algeria has been quite volatile, with the highest performance registered in 2003 (7.2 percent), compared to its lowest level marked in 2019 (0.8 percent).Meanwhile,the annual growth rate registered an average of 3.2 percent during the period 2000-2019.This average remains below to that of emerging countries, which registered an average of more than 6 percent in year.

Since the mid 2014, and due to the drastic drop in oil prices, Algeria has faces a slowdown in its economic activity. Thus, the real GDP growth has slowed sharply, mainly driven by a contraction in hydrocarbon production (IMF,2018).The overall GDP growth has significantly decreased in 2017 reaching 1.4 percent, and then sustained at 0.8 percent in 2019 compared to 1.5 percent in 2018 (World Bank,2019).

On the other side, the non-hydrocarbon sector has enjoyed solid growth rates, notably in the period 2000-2013 (i.e. before the 2014 oil shock) as we can see from the figure below:

Figure 3. Algeria's Non-hydrocarbon Growth: 2000-2019 (%)



Source: Bank of Algeria.

The Growth in the non-hydrocarbon sector has shown slight increase since 2000, which reaching a peak at 9.3 percent in 2009.But,since 2014 ,as oil prices declined dramatically, a plunge in the non-hydrocarbon sector growth rates has been registered. Despite a slight increase in 2018 (3.4 percent), the growth rate had dropped to 2.4 percent by 2019.

The non-hydrocarbon sector is driving essentially by construction and public works, commercial services, and industrial. Its growth performance remains highly dependent on oil and gas exports and on public expenditure. However, the record growth rates achieved in the non-hydrocarbon sector before the 2014 oil shock, was supported by large public spending, especially, the large public investment programs launched by the government to improve infrastructure, and expand access to services such as housing, water, energy, health (IMF,2012).In return, the government response to the 2014 oil shock, by pursuing a large fiscal consolidation in order to bring the budget deficit close to zero in the medium term, has continued to weigh on non hydrocarbon growth (IMF,2018),which dropped to 2.4 percent by 2019.

Our main results from the preceding analysis, suggests that Algeria's existing growth model depends strongly on the hydrocarbon sector and government expenditure. This situation makes the country more exposed to increasing macroeconomic vulnerabilities. However, the weekend growth performance remained a structural problem of the Algerian economy, in the light of low levels of private investment and entrepreneurship. Thus, the major question now is: why the private investment and entrepreneurship are not the main drivers of growth in Algeria? The answer will be reported in the next section.

4- IDENTIFYING ALGERIA’S BINDING CONSTRAINTS TO GROWTH

This section attempts to apply the growth diagnostic approach to the Algerian economy in order to identify the main obstacles to growth.

4.1- Algeria’s main binding Constraints to Growth

The application of the growth diagnostic approach to the Algerian economy, in order to explore the main causes for its low levels of private investment and entrepreneurship, require careful examination of Algeria’s performance in the latest World Bank “Doing Business” Survey, which 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 accross borders, enforcing contracts, and resolving insolvency.

The table below summarizes the 2020 Doing Business indicators for Algeria and other MENA countries:

Table 4. Doing Business 2020 indicators for Algeria and other MENA countries. (Rank among 190 countries)

	Easebof doing business	Starting a business	Dealing with licences	Getting electriciy	Registering property	Getting credit	Protecting investors	Paying taxes	Trading across borders	Enforcing contracts	Resolving insolvency
Algeria	157	152	121	102	165	181	179	158	172	113	81
Djibouti	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
Lebanon	143	151	164	172	110	132	114	116	153	131	151
Morocco	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
Emirate	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
Bahrain	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
Regional Average	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.

By returning to the growth diagnostic tree presented infigure1, and comparing it with the data provided in the table 4, we can explore the main barriers to private investment and business operation in Algeria, which area combination of the two factors suggested by the growth diagnostic approach: the low return to economic activity and the high cost of finance.

4.1.1. The low return to economic activity

A careful examination to the table 4show that Algeria is a low-return country, due essentially to low private appropriability, and not to low social returns.

4.1.1.1. The adequate social returns on investment

This adequacy can be observed from the following arguments:

- **The geography (natural capital)**: with an area of 2381741 square kilometers, Algeria's geography is an asset for its growth, reflecting its, direct access to the Mediterranean Sea and its proximity to the European market, in addition to its large openness on the African market.
- **Infrastructure**: the country's oil boom since 2001,has enabled the authorities to invest in large infrastructure projects. However, the government has launched through the economic recovery programs (2001-2009)a massive effort to improve infrastructure, and expand access to services (such as housing, water, energy, health).These massive infrastructure and social investments which appears to be adequate (compared to its neighbors), are a positive step for the country's growth strategy.
- **Human capital**: in order improve the country's human development indicators, the Algerian authorities have spend a substantial

amount on education—about 6 percent of GDP over the past years(IMF,2011).Meanwhile, the World Bank has noted that the country has made good progress in this context, with significant improvement in its human capital development. Hence, its position on the World Bank human capital index (HCI) that measures five key indicators in health and education is 93rd out of 157 countries. In addition, Algeria is considered to have achieved universal primary education with a 97% primary net enrollment rate in 2015 (with gender parity) and equally elevated higher education enrollment rates (World Bank, 2019). All these achievements show that the labor force availability was also found to be appropriate, and constitute a valuable asset for the country potential growth.

Overall, it can be said that Algeria's social returns on investment (geography, infrastructure and human capital) area dequate, which means that these factors of production are not binding constraints to growth.

4.1.1.2. The low private appropriability

The examination of the data provided by the table 4, shows clearly that Algeria suffers from poor private appropriability, which is due essentially to government failures resulted from microeconomic inefficiencies that it generates. These micro risks could be summarized as follows:

- **The difficult process of starting a business:**the criterion of starting a business means howthe 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.4). 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 meanshow 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 short coming**: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).
- **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 2 show 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.4) 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.

Finally, we can argue that all these micro risks are bad for growth, because they depress private returns to capital. In other words, all theses micro-level risks to appropriability are a critical binding constraint to growth in Algeria.

4.1.2. The lack of "access to finance"

According to table 4, we can argue that the poor growth performance in Algeria can be explained by the high cost of finance as stipulated by the growth diagnostic approach. 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.

It is worth noting that Algeria's financial sector is still dominated by six large public banks, which account for over 90 percent of banking sector assets. Financial intermediation in Algeria is provided almost exclusively by banks, with bank credit standing at about 46 percent of GDP in 2018.The entry of foreign banks remains limited in Algeria, and the shallow financial markets have left the stock exchange embryonic, given that, only three stocks are listed and their trading is almost nonexistent. Furthermore, Algeria's financial integration is weak, as measured by the Chinn-Ito financial openness index (-1.21 in 2017). In this context, the IMF annual report on exchange arrangements and exchange restrictions suggests that Algeria still impose restrictions on foreign currency purchases by residents, including surrender requirements on foreign exchange receipts that are high. In addition, capital transactions are also limited, given that the financial transactions in the money, securities, and derivative markets face restrictions (IMF, 2017).

Another key feature of the Algerian financial system is the inability of the banks to mobilize the financial resources circulating outside banks, estimated by the Bank of Algeria at 1500-2000 billion dinars (Banque d'Algérie, 2019).

From all what preceded, it seems very clear that the Algerian economy suffers from bad local and international finance, which means that private investment is constrained by the country's inability to mobilize enough domestic and foreign savings to finance investment at reasonable rates, which left self-financing still the main financing option for local firms, despite its incompatibility with firm's sustainable growth.

4.2- Unlocking Algeria's Growth Potential

The question now is to know what particular reforms should Algeria focus on in order to boost its potential economic growth? The answer will be based on the results of our diagnosis carried out in the previous section, which emphasize that the main barriers faced by private investment in the country are combination of poor private appropriability and the high cost of finance. Subsequently, authorities should prioritize their intervention in addressing these two major growth constraints.

4.2.1. Improving private appropriability of the returns

Algeria should take concerted action to improve its low private appropriability, through eliminating all micro risks identified above, which constitute an impediment to private-sector development. 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;

- 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.

4.2. 2. 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.

According to the (IMF, 2014) strategies to enhance access to finance need to address shortcomings in the banking system especially: the weakness of financial infrastructure ,and low banking competition. Thus, strengthening the financial infrastructure should include improving credit information systems, enhancing collateral regimes, and reforming insolvency regimes. On the other hand strengthening competition among banks will also be important, to create better incentives for them to expand their lending. However, the strengthening strategy may require the review of licensing requirements to ease bank entry (notably for reputable foreign financial institutions),the development of nonbanking finance institutions and capital markets, integrating Islamic finance instruments into the existing financial system.

CONCLUSION

In this paper, we proceed to an identification of the key constraints to growth in Algeria from the diagnostic perspective proposed by Hausmann, Rodrik, and Velasco (2005). According to this approach the problem in countries with lowest GDP growth is the low levels of private investment and entrepreneurship. Hence, the possible causes of such problem are either the private return to investment is too low or the cost of finance is too high. The application of the diagnostic approach to the Algerian economy shown that the main constraints on growth are a combination of two factors:low private returns to economic activities, and the inefficiency of financial intermediation. Consequently, achieving strong GDP growth require that authorities should prioritize their intervention on the removing of such constraints through improving its weak business climate (lowering the cost of creating a business, lowering taxes, protecting property rights, fighting corruption…), and enhancing the ability of the financial system to allocate more savings and other financial services to the SME companies and entrepreneurs who are most able to undertake productive investment.

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