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The political economy of Fiscal Policy: The Case of Algeria

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Abstract:

This research examines the links between fiscal policy, political institutions and oil revenues in Algeria with special emphasis on budgetary procedures , the budgetary process, the legislative framework and their links to fiscal balances, cyclicality and economic outcomes. It tests for the occurrence and extent of pro-cyclicality and then identifies and explains the reasons behind such pro-cyclicality using an Autoregressive Distributed Lag (ARDL) model for the period 1984-2013.Our analysis of Algeria's budget institutions and fiscal policy evolution shows that : i)there is a lack of transparency in the budget information in Algeria , ii)the quality of fiscal institutions in Algeria is in general highly inferior that in non-oil Arab exporting countries such as Morocco , Jordan and Lebanon , in terms of transparency and oversight .Moreover , our results related to the determinants of fiscal pro-cyclicality suggest that both deficient political and institutional factors , as well as financing constraints, play a major role in explaining why Algeria has not been more successful in reducing the pro-cyclical pattern in expenditures .We conclude that , in spite of the fiscal reforms initiated by the Algerian government since 2000s in order to insure public spending against fluctuations in oil revenues , more efforts needs to be done to make Algeria's fiscal policy more countercyclical.

Key words : Natural Resources , Oil , Fiscal policy ,Fiscal Institutions , Budget Process , Pro-cyclicality , Algeria .

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1. Introduction:

Fiscal policy has been of large interest in most developed and developing countries since inappropriate fiscal policy has been traced to some of the major macroeconomic instability and development problems that they have experienced. Hence, sound budget institutions are vital for a country's fiscal policy effectiveness. For resource- rich countries the challenges facing fiscal policy makers are even greater than in other countries because of their susceptibility to large price shock and often sudden spurts after new discoveries and sharp falls when resources are exhausted. .. Thus, unless strong constraints or policy rules are imposed governments often have an incentive to increase government expenditures when their revenues rise .It is for this reason that prices of oil, government revenues, government expenditures and aggregate demand are often so closely linked, reflecting "the pro-cyclicality of fiscal policy" (Kaminsky, Reinhart and Vegh 2004). Fiscal policy is the main channel through which international oil price fluctuations are transmitted in an oil exporting country. By the same token, however, a well-designed fiscal policy can become a major means with which oil-rich countries like Algeria can use to manage their windfalls and avoid the negative effects of oil price volatility and the "resource curse".

The budgets that are produced to implement fiscal policy arise out of an overlapping set of institutions that can either facilitate or hinder the adoption of appropriate fiscal policies. Therefore, the quality of these institutions can go a long way toward explaining why some resource rich economies perform better than others.

Algeria is one of the world's most important oil and gas producing countries; it has the 10th-largest reserves of natural gas in the world and is the sixth-largest gas exporter. Algeria had proved oil reserves of 12.199 billion barrels at the end of 2011, equivalent to 19.3 years of current production and 0.73 percent of the world's reserves, rankly 16th in oil reserves. Algerian fiscal policy is very dependent on the hydrocarbon sector and oil and gas prices. Thus, its revenues are heavily dependent on what is collected from the oil tax . Algeria has typically pursued expansionary fiscal policy after the increase of oil prices; and a contractionary policy after the decrease of these prices.

This research attempts to investigate the link between fiscal policy, budget institutions and the oil revenues regarding the budgetary procedures in Algeria as the case study. It tries to answer the following questions: ***What are the main factors affecting budget institutions in Algeria ? ; Is the Algerian fiscal policy pro-cyclical ? ;and if it is do political institutions play a role in such pro-cyclicality? Also. if so, what should be done about this? .***

The paper is divided into four sections. After this introduction, the second section presents a literature review tackling the link between three aspects of the research: budget institutions, fiscal pro-cyclicality and the oil curse. Section three offers an overview of the importance of hydrocarbons in the Algerian economy, we presents the evolution of the Algerian fiscal policy since the nationalization of the hydrocarbon sector and provides in details the evolution of Algeria's fiscal policy institutions**.** An econometric model to investigate the pro-cyclicality of the Algerian fiscal policy, and the empirical results are presented in section four. Finally the conclusions including policy recommendations.

2 . Literature Review:

A large theoretical and empirical literature showed the linkage between fiscal policy and the oil resources via the role of budget institutions. Most of the literature has put forward the strong relationship between fiscal policy and the dutch disease (see for instance , Ali Alichi & Rabah Arezki, 2012, and Arezki, Rabah & Ismail, Kareem, 2013). Other studies pointed on the relationship between fiscal policy and the role of political institutions (Kazim Kazimov & Kirk Hamilton & Rabah Arezki, 2011). This section, moreover, provides the literature tackling the impact of the budget institutions quality on the fiscal outcome and performance. Secondly, it

provides the main studies explaining the association between budget institutions quality and fiscal pro-cyclicality as one of the main factor explaining the so-called "oil curse".

Budget institutions and fiscal outcomes:

Alesina and Hausman (1996) defined budgetary institutions as all the rules and regulations to which budgets are drafted, approved and implemented. The literature distinguishes between two interrelated phenomena that have an impact on the nature of the budget process and the quality of budget outcomes. The first is the common pool phenomenon which arises when the various decision makers involved in the budgetary process (legislators, the finance minister, line ministers, etc.) compete for public resources and fail to internalize the current and future costs of their choices.(Velasco (1999)). The second pertains to information asymmetry and incentive incompatibilities—the agency phenomenon—between the government and voters and within the government hierarchy (e.g., between the ministry of finance and line ministries) which can influence the size, allocation, and use of budgeted resources.(Dixit 1998).

Empirical evidence on the relationship between budget institutions and fiscal outcomes, such as budget deficits and debt, has relied on the construction of various kinds of indices. These indices summarize key aspects of relevant institutional features with a view to gathering a wide range of information about the different phases and aspects of the budgetary process. Based on analysis of budgetary processes in EU countries, von Hagen (1992)—and subsequently von Hagen and Harden (1994, 1996)—find that fiscal discipline is enhanced if budgeting procedures give a strong role to the prime minister or finance minister, limit parliamentary amendments, and enforce strict execution of the budget law. Rabah Arezki and Kareem Ismail (2013) , investigate the behaviour of expenditure policy in a panel of 32 oil-exporting countries over the period 1992 to 2009 , they find that current government expenditures, which include consumption of goods and services and transfers increases in boom time and conversely for capital expenditures. These authors suggest current spending might be \sticky because it is more vulnerable to political pressures. However, Arezki and Ismail (2013) also find that fiscal rules have limited influence on government spending.

Moreover, Alesina et al. (1999) has formally measured the quality of budget institutions in developing countries by creating an index comprised of 10 different components related to different stages of the budgetary process in 20 Latin American and Caribbean countries.

Budget rules and regulations are divided into three types: procedural rules along a hierarchical/collegial scale, rules on transparency, and numerical targets such as balanced budget laws. Their results showed that hierarchical and transparent procedures have been associated with more fiscal discipline, and from there to better economic performance, including economic diversification away from natural resources, capital and human capital accumulation and technological change and the ability to sustain growth after the exhaustion of the natural resources.

Budget institutions and pro-cyclicality:

The relationship between budget institutions and pro-cyclical fiscal behavior has received growing attention in recent years. Both theoretical and empirical studies have tackled the pro-cyclicality issue; its consequences and causes.

Since the pioneering work of Gavin and Perotti (1997) , which were the first to find evidence of pro-cyclicality of fiscal policy in Latin America, a number of empirical studies have provided evidences on differentials in fiscal cyclicality between developing and advanced countries .

Kaminski, Reinhart, and Vegh (2004) and Talvi and Vegh (2000) noted that procyclicality is not a phenomenon confined especially to Latin American countries , but , pro-cyclical fiscal policy seemed to be the rule in all of the developing countries . Also , Talvi and vegh (2000) for a sample of 56 countries (20 industrial and 36 developing countries) , they find a positive correlation between government spending component and gross domestic product with an

average of 0.36 for each of the 36 developing countries in their sample , while , the average correlation for the G7 countries were zero . This shows that fiscal policy in developed countries is acyclical or even countercyclical , while , in developing countries fiscal policy is pro-cyclical (Alesina, Campante, and Tabellini, 2008; and Ilzetzki and Végh,2008).

Abdih, , Lopez-Murphy, Roitman and Sahay (2010) analyses the cyclical properties of fiscal policy in the countries of the Middle East and North Africa during the past four decades , they find that fiscal policy across sample has been more procyclical in good times than in bad times.

Villafuerte and Lopez-Murphy (2010) ,find evidence that fiscal policy in oil producing countries has been procyclical during the recent oil price cycle, and has exacerbated the fluctuations in economic activity . Sturm, Gurtner and Gonzalez Alegre (2009) provides empirical analysis on the pro-cyclicality of fiscal policy in a panel of 19 oil-exporting countries over the period 1965-2005 ,their results point to pro-cyclical behaviour of fiscal policy , and they confirm that pro-cyclical conduct of fiscal policy in oil exporting countries is indeed a feature over a long period of time with no signs of abating. De Cima (2003) showed that Mexico has for the most part followed a pro-cyclical fiscal policy. Baldini (2005) also present evidence for a higher fiscal pro-cyclicality in Venezuela during good times than bad times, and he shows that this could be related to the existence of voracity effects. Recently Erbil (2011) find, strong evidence of pro-cyclical fiscal policy in 28 developing oil producing countries during 1990–2009. Recently Rabah Arezki, Kirk Hamilton, and Kazim Kazimov(2011) examine the performance of commodity exporting countries in terms of macroeconomic stability and economic growth in a panel of 129 countries during the period 1970-2007, they find that the so-called "Point-Source" or concentrated resources such as oil and some particular minerals lead to pro-cyclical fiscal policies and poorer growth performance in commodity-exporting countries.

Theoretical literature and empirical studies have proposed two broad groups of arguments that explain the phenomenon of pro-cyclicality of fiscal policies in developing countries (including the oil exporting countries).

One is related to the financing constraints and limited access to international credit market (Gavin and Perotti 1997,Catao and Sutton 2001 and Kaminski, Reinhart, and Vegh 2004) . According to financing constraints arguments , in recessions many developing countries face tight credit constraints because limited access to international capital markets ,which prevent them from borrowing , and may force them to cut spending and hence to run a procyclical fiscal policy . In this sense , Gavin and Perroti (1997) suggest that pro-cyclical fiscal policies arise because binding borrowing constraints. Also they show that access to International Monetary Fund Emergency Credit was higher in recession periods , as lenders and investors lose confidence and restrict credit to developing countries when these countries face a sharp decline in revenues (fall in oil prices in the case of oil economies) , because they fear that high fiscal deficits may become unmanageable, and increase the possibility of government default , which hamper the ability of these countries to conduct a countercyclical fiscal policies . During crises constraints , governments in developing countries faces what has been called by Kaminsky et al. (2004) " sudden stops "of capital inflows from world capital markets , which impedes the implementation of countercyclical fiscal policy. However , wider access to domestic and foreign capital markets enables countries to avoid pro-cyclical fiscal policy (Calderón and Schmidt-Hebbel ,2008) .

Political and institutional factors are another arguments proposed to explain the pro-cyclical fiscal spending behavior in developing counties. According to institutional and political economy sets of factors such as : voracity effect , political distortions , weak institutions , rent seeking behaviour and corruption in government , have been proposed as explanations of the occurrence of pro-cyclical fiscal policies .

Lane and Tornell (1999) link pro-cyclical response of fiscal policy and low economic growth in resource-rich countries to weak institutions and fractionalization. They show that the common characteristics of resource-rich countries are the absence of strong legal and political institutions and the presence of powerful groups in the society . In such

circumstances , a windfall in revenue intensify competition for public resources between different powerful groups within the government via a fiscal process which leads to slow economic growth and a voracity effect by which a positive revenue shock generates a more-than-proportionate increase in government spending . Such patterns result in the strong pro-cyclicality in the economies of resource-rich developing countries due in part to weak fiscal policy institutions and greater corruption .

Alesina and Tabellini (2005) argue that pro-cyclical and myopic fiscal policy stems from what they call the political agency problem. They show that in an environment of corruption and imperfect information , the voters do not trust government officials, due to the lack of information about the revenues that are appropriated as rents by the state apparatus ;As result, fearing that officials attempt to grab a even greater shares of national wealth for themselves ,when voters see government revenues rising, they try to maximise their utility either by lowering tax payments or taking greater advantage of public goods. This social pressure forces the government to increase expenditures, and hence induces it conduct a pro-cyclical fiscal policy. With ups and downs in fiscal revenues, this eagerness to spend leads to a greater accumulation of government debt. Also , their econometric evidence confirms that there is a strongly statistically significant relationship between corruption and pro-cyclicality , means that more corrupt the government is the more pro-cyclical policy will be. Moreover, Alesina and Tabellini conclude that corruption plays a major role in explaining pro-cyclicality of fiscal policy more so than credit constraints.

Talvi and Végh (2005) demonstrate e that in developing countries the fluctuations in the tax base (the tax base variability)are between two and four times higher in developing countries than in G7 countries). When fluctuations in the tax base are large, this implies the generation of large potential budget surpluses during the upturns, but thereby putting extra political pressure on spending, and making it very difficult to save major surplus in good times. In the face of these pressure from different social groups and lobbies for increased government spending, when times are bad, large deficits emerge but eventually leading sharp corrections in the form of contractionary fiscal policy in bad times So , high tax-base variability generates more pro-cyclical fiscal expenditure policies . De Cima (2003) has argued that pro-cyclical fiscal policy followed by the Mexican government during the period 1970-1988 reflects the economic interests of groups who exert more pressure on policymaker (spending ministers). However, this finding support the argument advanced by Talvi and Vegh's model about the role of pressure from interests groups to increase the pro-cyclical behavior of fiscal policy in developing countries.

Woo (2009) shows that social polarization stemming mainly from income inequality and educational inequality is another important factor lying behind the fiscal problems and pro-cyclicality and volatility of fiscal policies in developing countries. Also , the author find that social polarization is harmful to growth .

Ilzetzki (2011) develops a political economy model to explain the phenomenon of pro-cyclicality of government expenditures in developing countries. The author demonstrates that political frictions between incumbent and successive governments on the use of redistributive policies may also give rise to pro-cyclical fiscal policies. Thus, the presence of political friction pushes incumbent governments to save less and spend more when more revenues are available, making fiscal behaviour more pro-cyclical.

Partello et al. (2010)was the first to present multi-dimensional indices of the quality of budget institutions in low-income countries. The indices allow for benchmarking against the performance of middle-income countries, across regions, and according to different institutional arrangements that deliver good fiscal performance. Their empirical results supported the hypotheses that strong budget institutions help improve fiscal balances and public external debt outcomes; and that countries with stronger fiscal institutions are more likely to conduct countercyclical policies.

Frankel (2011) shows that an important reason for pro-cyclical spending in developing countries is precisely that when receipts rise in booms, the governments cannot resist the political pressure to increase spending proportionately. Also, Frankel confirms that the

phenomenon of fiscal pro-cyclicality is more pronounced in natural resources riche countries , where income from these resources tend to dominant overall government revenues . Rabah Arezki and Markus Bruckner (2012) examine the effects of windfalls from international commodity price booms on external debt in a panel of 93 countries during the period 1970–2007.They find that external debt moved strongly countercyclically in democracies, while it moved acyclically in autocracies. According to authors autocracies spent the additional revenues from commodity price booms on government consumption expenditures, while democracies used a large part of the windfalls to reduce external debt. Also, their empirical results highlight the role of political institutions in shaping external debt policy. Overall, either credit constraints or political and institutional factors push the governments towards pro-cyclical fiscal policies in developing countries; moreover, these factors are likely to reinforce each other.

Compared with the large and rich literature on fiscal policy and pro-cyclicality and other characteristics in other developing countries, only a few studies have tackled the issue of pro-cyclicality and the political economy of fiscal policy in Algeria. In an analytical paper, Barka (not dated) described and analysed the budgetary process in Algeria and gave a short survey on the fiscal policy evolution. Barka finally displayed some challenges that still facing the Algerian government in well maintaining the fiscal policy. Chekouri, Benbouziane and Chibi (2014) estimated the effect of fiscal policy on Algerian economic activity, showing evidence of asymmetric effects of fiscal policy across regimes, defined by the state of the business cycle (two situations: recession and boom). Their results showed the government spending and revenue multipliers to be small and positive in the short term in both regimes.

Moreover , The Impulse Response Functions to a unit shock on GDP show that decision-makers of fiscal policy in Algeria react to the fluctuations of the business cycle with Anti – Keynesian view (pro-cyclical), since they raise their spending and revenue in the case of boom and vice versa in the case of a recession.

In other hand, Myriam Lowi, 2009 discussed in her book the political economy in Algeria. Lowi insists throughout the book on the significance of leadership choices and the reactions of leaders to economic shocks. Her main message can be summarized as follows: effective leaders can use the external rents for socioeconomic development, and oil wealth is nothing but a "cash cow" . Comparing Algeria to some Arab rentier states, she finds that Indonesia outperformed not only Algeria but also Saudi Arabia, Iran, and Iraq. This proves that resource endowment is not a curse; in fact, Suharto's regime was able to stabilize its macroeconomic framework despite price shocks, thanks to a variety of measures including money devaluation, deregulation, and the restraint imposed by foreign borrowing. Lowi demonstrates the omnipresence of the army in the political and economic arena since Algeria's independence and the adverse consequences, including the arrested development of political institutions, the accentuation of corruption problems, and the alienation of the ruling elite from the Algerian population. The oil rent has served not only to enrich the elite but also to relax state budget constraints and finance ambitious economic projects, without bringing in economic diversification. She also explains how an undiversified economy based on oil can be severely affected by the international environment, namely, the volatility of oil price. From a GDP rate of 5.2 percent in 1984, Algeria experienced an economic downturn in 1997 (−1.4 %) and 1988 (−2.7 %), right after the oil price decreased from $30 per barrel to $10 in the summer of 1986. Instead of introducing sound policies (as in Indonesia, for example), Algerian officials chose to increase their foreign borrowing. Such ill-advised policies created the preconditions to the civil war of the 1990s. These actions provoked disillusionment and excluded guerilla or opposition movements such as the Front Islamique du Salut (FIS).

3 .Algeria : Oil dependence and fiscal policy design:

3.1. The importance of hydrocarbons in the Algerian economy :

Algeria has been one of the most important oil and gas producers and exporters. The development of these two industries started in 1958 after the discovery of two giant oil and gas fields at Hassi Messaoud and Hassi R'mel in the northern Sahara region. Actually , Algeria is the 14th largest world exporter of oil , and is the sixth-largest gas producer .

Algeria's proven crude oil reserves are estimated at 12.2 billion barrels , as of January , 1, 2013 ,which is equivalent to about 20 years of current production . Algeria's proven natural gas reserves are estimated of about 159.1 trillion cubic feet (Tcf) , as of January 2013 , the ninth largest natural gas reserves in the world and the second largest in Africa. According to US Energy Information Administration Algeria also holds vast unexploited shale gas resources located in eastern Algeria in Ghadamas Basin . Algeria is estimated to hold the third-largest amount of shale gas resources in the world - 707 Tef of technically recoverable shale gas resources estimated by U.S. EIA - after China and Argentina.

Oil and Natural Gas sector management

Algeria has applied a controlled and socialist economic system from the independence to the late of 1980s. Consequently, the national and state-owned oil company SONATRACH created in 1963 was responsible only for the transportation and marketing of hydrocarbon products. In 1971, after the nationalization of this sector, SONATRACH became a quasi-monopoly in oil production.

The hydrocarbon law of 1986 allowed the foreign companies to participate in the oil exploration where the maximum limit of the partner's share is 49% under the economic reforms starting in the 1980s. The main principles of this law were:

- The property of hydrocarbon reserves belongs to the nation;
- The exploration and exploitation activities are state's monopoly while their performance may be associated with foreign oil companies;
- Obligation for any foreign investor to enter into exploration contracts with SONATRACH and the partnership on the already discovered fields is not authorized.

The amendments of the law introduced in 1991 also expanded the possibilities for foreign participation while the law of 2005 and its amendments provided more open possibilities:[5]

- Establishing competition in free market;
- Separating the operations of the state from SONATRACH;
- Establishing two independent regulatory agencies (ALNAFT[6] and ARH[7]) in order to ensure regulation of the liberalized hydrocarbon sector;
- Establishing transparency in contracts awards.

Although these legal reforms, SONATRACH still dominates the hydrocarbon sector with its double role as both a producing company and a regulatory of the hydrocarbon sector and is ranked the 11th among world oil companies.

Crude Oil and Natural Gas production

Regarding the production, the crude oil was at the center of the expansion of hydrocarbon sector after the independence of the Algerian state. At the beginning of 1980s, oil production and exports declined remarkably because of OPEC's constraints to stabilize the world oil price. Indeed, between 1980 and 1982, the export share of crude oil decreased from 80% to 30%.

The oil production has increased sharply in the first five years of the last decade from almost 1.2 million barrel per day in 2000 to 1.7 million barrel per day in 2006 responding to the increase in the global demand (Figure 1). But since 2005 crude oil and gas production has been in decline , mainly because new production projects have repeatedly

[5]Khelil Chakib, " Coping with challenges : an Algerian perspective", African oil and gas forum, Maryland, November 2006.

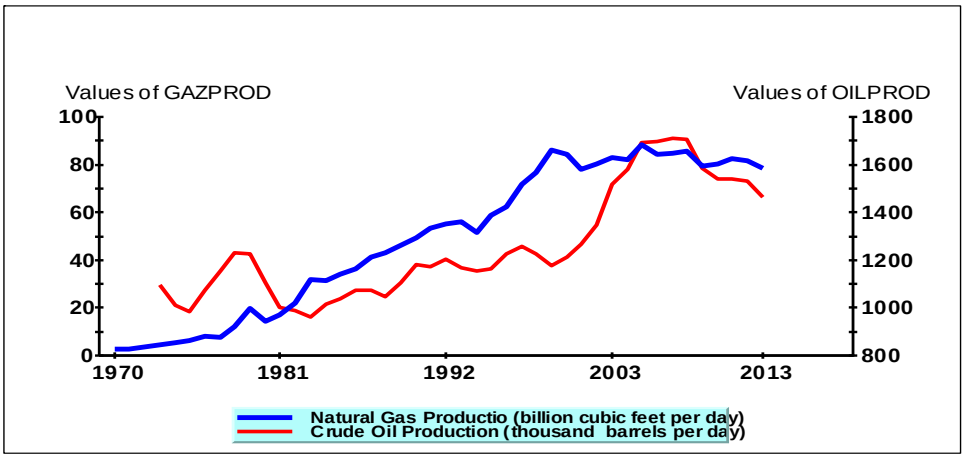
[6] The National Agency for the Development of Hydrocarbon Resources.

[7] The National Agency of Control and Regulation of Activities in the Field of Hydrocarbons.

been delayed , resulting from difficulties attracting investment partners (US Energy information administration , 2014).

This declining production of both oil and natural gas has led the Algerian government to enact new law regarding foreign investment in hydrocarbons in 2013 , in an attempt to attract more foreign investment to new projects , particularly toward unconventional resources, and to compensate the decline in older fields .

Figure 1: Natural Gas and Crude Oil Production in Algeria (1970-2013)



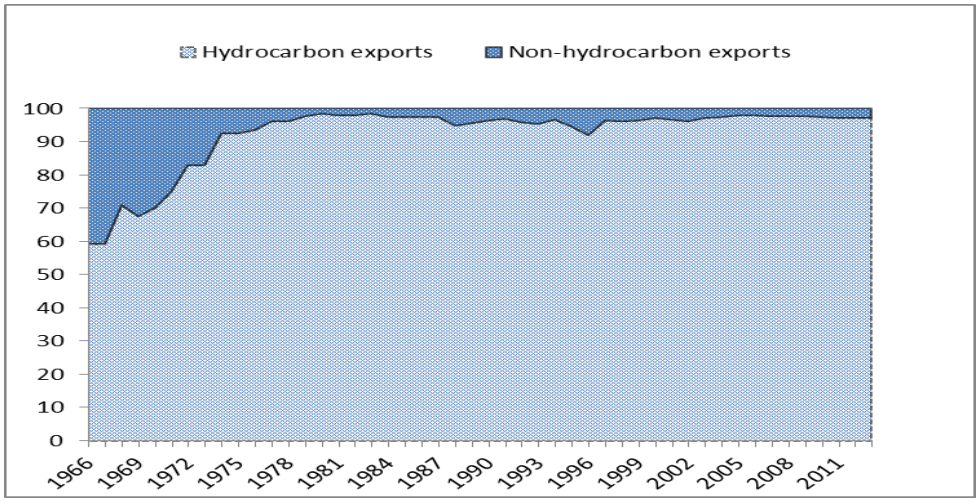
Source: U.S. Energy Information Administration, International Energy Statistics

Oil sector and the Algerian economy

The oil sector has an important role in the Algerian economy through the large revenues from it. In the late of 1960 and early 1970s Algeria's hydrocarbon exports represented 60 percent of total exports , in recent years , they exceeded the level of 98 percent (Figure 2). As a result , the Algerian economy is among the least diversified in the world.

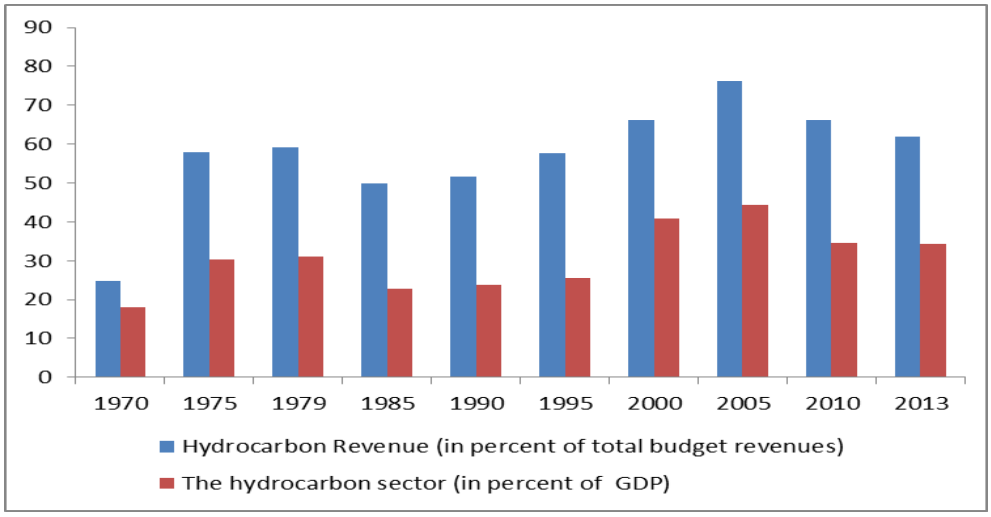
The contribution of oil sector in Gross domestic product has not ceased to rise, jumping from less than 15% in 1969 to more than 43.6 % in 2011 , the share of hydrocarbon fiscal revenues in total government revenues rose from 21 percent in 1970 to more than 68 percent in 2013 (Figure 3). Such large strategic windfalls need to be well managed by the implementation of specific economic policies.

Figure 2. Algerian Exports 1966-2013 (Percent of Total Exports)



Source : World Development Indicator database

Figure 3: The share of hydrocarbons in the Algerian economy



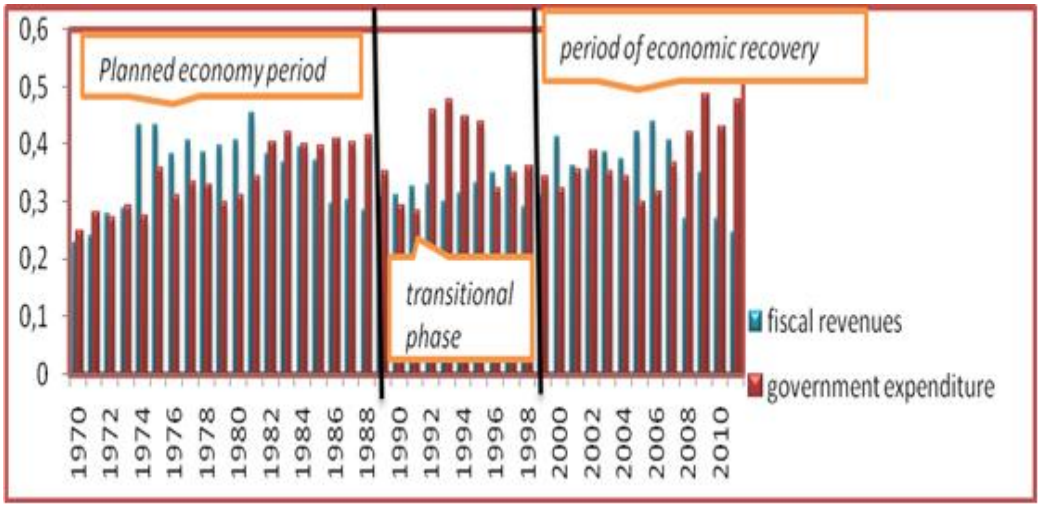
Source : world bank data

In Algeria , the structural dependence on hydrocarbons is the result of the failures of reform policies, notably in terms of post-independence agricultural reforms , the vast industrialization program launched by the government in the 1970s and early 1980s,and the privatization process for government-owned enterprises under the structural adjustment reforms in the 1990s . The failure of these attempts at integrated the Algerian economy into the world economy, can be attributed in large part to the political opposition to economic reforms , bad governance and rent seeking behaviour (Auty , 2003 , Hakim Darbouche , 2011).

3.2. Development of fiscal policy in Algeria :

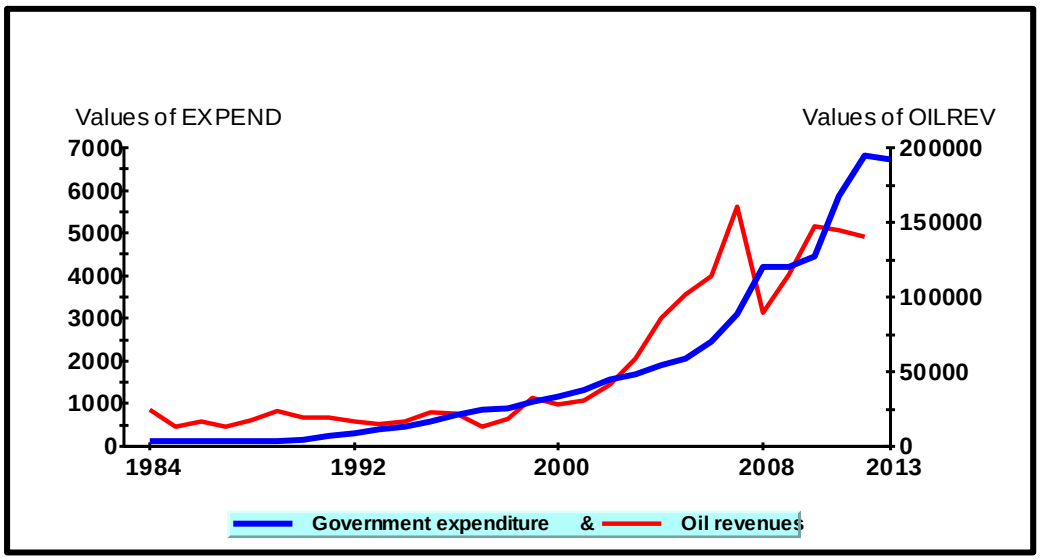
It is clear from the Algerian budget process that the fiscal policy is so dependent on the hydrocarbon sector. Thus, it focuses largely on the government expenditure due to the large revenues from the oil tax. This section provides the different changes in the Algerian fiscal policy since the year 1963.

Figure 4: Fiscal revenues and public spending in Algeria (as% of GDP)



Source: Authors' construction using data from the national office of statistics (ONS).

Figure 5. Co-movement of Algeria government expenditure and oil revenues



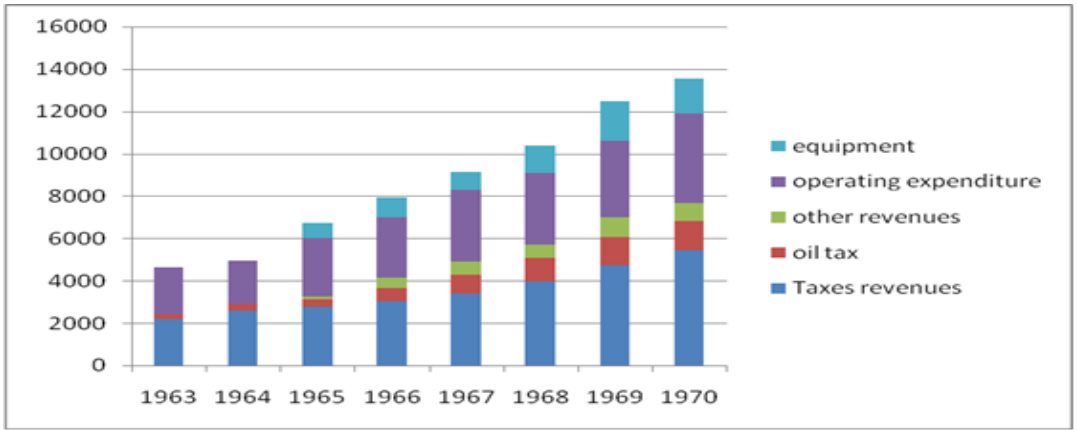
Source: Authors' construction using data from world bank.

A. Fiscal policy before the nationalization of hydrocarbons (1963-1970):

After the independence in July 1962, Algeria had been facing great challenges to build what the French colonization has destroyed; to reconstitute the economy and catch up the development path. Regarding the fiscal policy, the Algerian government started to fight against the fall of revenues by a quasi-general rise of the taxes; creation of new taxes to broaden the base of the tax; fighting against the fraud by sharing heavier penalties and awarded the good taxpayers; and finally improved collection by multiplying installment.[8]

In this period, the hydrocarbon sector has not been nationalized yet and the oil tax was deducted from the foreign oil companies. The figure below shows the evolution of the budget revenues and expenditures during 1963-1970. From the figure, we can see obviously that the oil tax has been very low comparing to the total tax revenues which is explained by the non-nationalization of the hydrocarbon sector and the focus of the government on the revenues from other direct and indirect taxes.

Figure 6: state budget of Algeria: 1963-1970



Source: authors' construction using data from National office of statistics (ONS)

[8]Kandil A.; "fiscal theory and development: the Algerian experience" (French version); National company for edition and diffusion (SNED), Algiers 1970; P117.

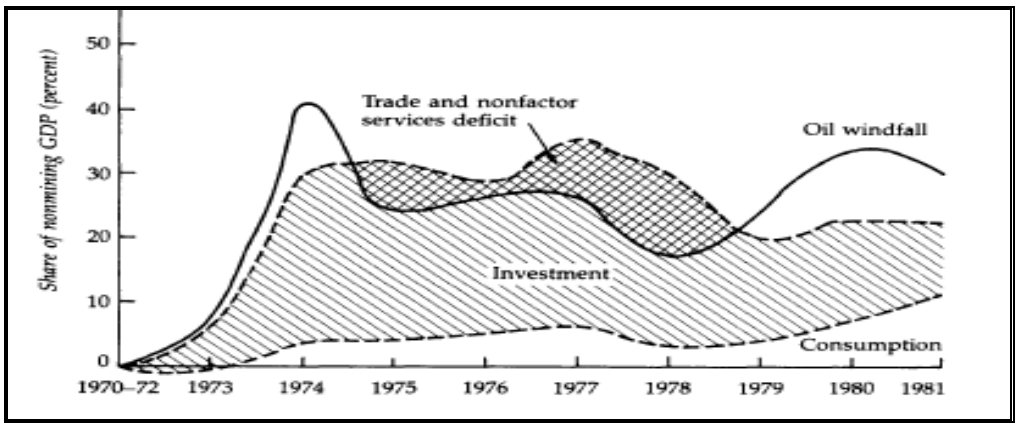
B. The planned economy era (1971-1989):

This period was characterized by the nationalization of the hydrocarbon sector in 1971 and the planned economic system. Algeria's development strategy during this period was to create heavy industry. The role of the hydrocarbon sector was considered particularly crucial in this development strategy based on industrialization of the country , it would provide a market for capital goods, supply raw materials for downstream processing activities, and generate resource rents to fund industrialization(Gelb , 1989) .

It can be easily witnessed from the Algerian budget that the public revenues were based on the oil tax with the ratio of 27.5% in 1971 against 24% in 1970 of the total fiscal revenues. This rate has registered an increase following the increase in the international oil prices. It (the ratio of the oil tax) surged to 38.9% in 1973 and 62.19% in 1975. After the sharp decrease of the oil price in 1980s, the oil tax revenue went down with about 25%. This had a strong effect on the total revenues which were 30% of GDP in 1986 against 45% in 1981.

Regarding the public spending, during the 1970s and early 1980s the Algerian expenditure was largely concentrated in the large scale public investment projects and was channeled towards heavy industry (Figure 7). Hence, the government expenditure has known a persistent increase over the period 1971 to the late of 1980s from 27.85% of GDP in 1971 to 40.6% in 1986 , leading to a significant increases in public investment. Between 1970 and 1973 average investment rate was equal to 28.3 percent , and even rose to 40.4 percent of GDP between 1973 and 1978 , reaching a peak of 47.8 percent in 1978 ,which was among highest rate of investment in the world (World Bank, 2003).

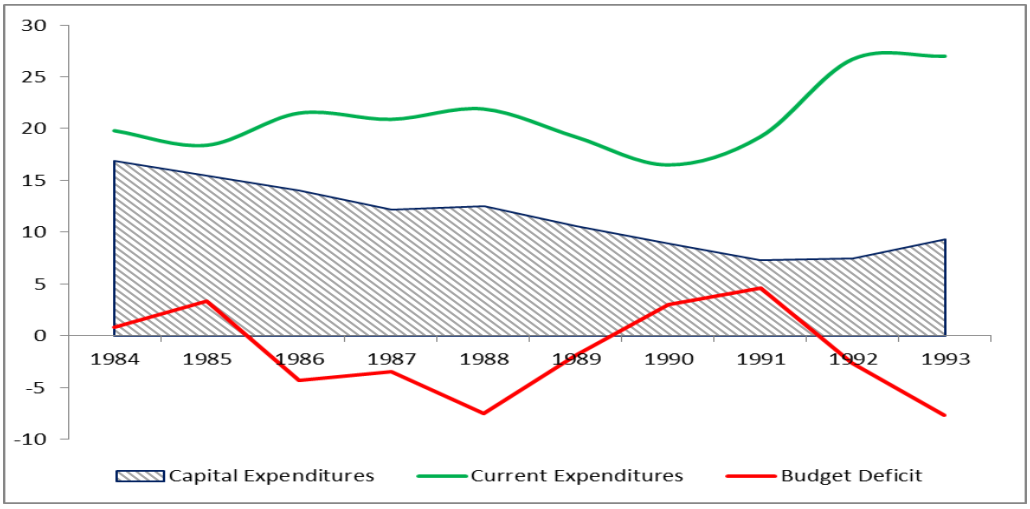
Figure 7: The oil windfall and its use , 1973-81



Source : Gelb, A. and Associates (1989) , "Oil Windfalls: Blessing or Curse? " , World Bank: Oxford University Press.

However , in the late 1980s, in the face of social instability , government expenditure was increasingly reoriented towards current expenditure , and government capital expenditure declined to about 6 percent of GDP by 1991 .The Algerian government borrowed heavily from abroad to maintain consumption levels , and to import raw materials , equipment and spare parts required by public manufacturing sector . As a result , large budget deficits started to accumulate , with about -7.5 percent of GDP due to the decrease in oil price in 1988 against a surplus of 3.3 percent of GDP in 1985 (Figure 8). Algeria's external debt rose from $1 billion in 1970 to $24.8 billion in 1988 , the equivalent of 100 percent of GDP .

Figure 8. Algeria: Current , Capital Expenditures , and the budget Deficit as Share of GDP



Source: Authors construction using data from : World Bank , Algeria : country economic and memorandum : the transition to a market economy , Volume II , statistical annex , 1994 .

C. The transitory period (1990-1999):

The collapse in the international oil market has shown the weakness of the Algerian economy and threatened social stability in the late 1980s. Indeed, the lack of public confidence in the Algeria's political leadership , the high rate of unemployment among youth and the measures of austerity announced by the government were the main reasons for the anti-government riots in October 1988. A social strife known as the black decade and economic disequilibrium were the main characteristics of this phase.

For this reason, Algeria has embarked in different structural programs and reforms under the aim of transition from the planned to a market economy.A macroeconomic stabilization programme from April 1994 to March 1995 and a structural adjustment programme from April 1995 to March 1998 aimed to correct fiscal and external deficits, promote economic growth and push Algeria's transition process from social to market oriented economy. To achieve macroeconomic stabilisation, these programmes relied on strong fiscal adjustment supported by tight fiscal policy and decreases in government investment expenditures. Thus, government expenditure was increasingly reoriented towards current expenditure and government capital expenditure declined to about 6 percent of GDP by 1991. The oil tax revenue increased during the years 1990; 1991 and 1992 from 51% to about 66% of GDP due to the increase of the oil price resulting of the Gulf War. Simultaneously, the ordinary tax registered remarkable changes due to the fiscal reforms; it changed from 48% of total revenues in 1990 to 33% in 1991 followed by an increase with about 5% to 40% in 1993.

Furthermore, during the period 1990-1998, Algeria's **external borrowing declined** markedly, because some official export credit agencies limited the amounts of new export guarantees available for Algeria. External borrowing, which had exceeded US$ 6 billion annually in the late 1980s dropped to an annual average of US$ 1.8 billion in 1996-1998 (IMF,2000) . In this context , a number of empirical studies such as Micheal , Hutchison , Ilan Noy and Lidan Wang(2010) , Chamon , Manasse and Prati (2006) Show that "**Sudden Stops** **"** of international capital inflows initiated in Algeria in 1990 and during 1995-2004 . As a result, all these factors included the sudden stop of capital inflows and the IMF policy recommendation called for fiscal and monetary tightening, forced the Algerian government to undertake a contractionary fiscal policy during that period after the expansionary fiscal policy of 1970s.

D. The period of economic recovery (since 2000):

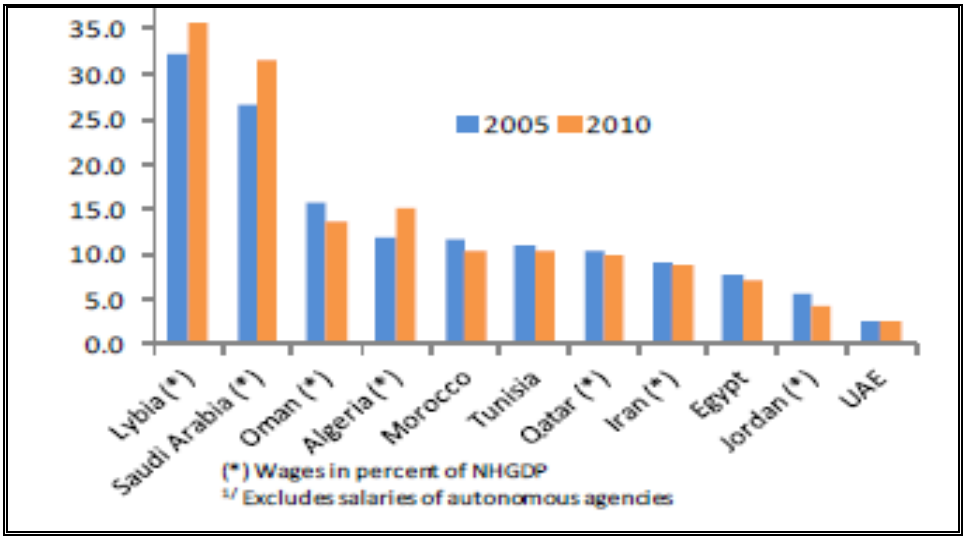
Algeria's public spending has increased sharply during recent years, this is due partly to the importance rise of oil revenues and the massive public investment programs initiated in the 2000s, and partly to an expansion of subsidies.

As a result of the oil windfall, the Algerian government has pursued a very expansionary fiscal policy, through the implementation of a series of substantial public investment programs (2001-2004, 2005-2009, and 2010-2014) . Between 2001 and 2004, the government implemented the first public investment program (Economic Recovery Program) , worth about DA 525 million (US$7 billion), followed by a second program known as Complementary Plan for Growth Support (Programme Complémentaire de Soutien à la Croissance) for 2005-2009 , with initial allocation of DA 4,203 billion (roughly US$55 billion) , which has increased to about DA 8,705 billion (approximately US$114 billion) in the late June 2006 (World Bank 2007) . On the mid 2010 the Algerian government has announced the third public investment program for 2010-2014 with an investment amounting to 21,214 billion Algerian dinars (around US$286 billion) .

Faced with urban riots in 2010 and early 2011 , the government responded by ramping up spending , through providing subsidies for basic food, such as grains and milk , and exceptional exemptions on import duties, value-added tax and corporate tax for everyday commodities (BTI report , 2012) ; and providing employment opportunities in order to calm down popular protest , and to avoid a potential spillover-effects of the recent Arab spring from their neighboring countries . The Algerian regime spends 3.8 $ billions each year on subsidies, which is equivalent to 6 % of the government budget, or 2% of GDP (Achy L.,2013) .

In addition to raising wages in a great many sectors and raising the minimum wage and pensions (Algeria increased the minimum wage in 2010 as well, by 30%, raising it from 12,000 to 15,000 dinars, before granting the current increase of 30,000 dinars), in 2010, the authorities increased salaries by 34 percent, making Algeria one of the MENA countries with the highest public salary burden (Figure 9).

Figure 9. Wages and salaries, Percent of GDP and NHGDP



Source :International Monetary Fund , Algeria: 2011 Article IV Consultation—Staff Report; Public Information Notice , Country Report No. 12/20 , January 2012 .

3.3. Evolution of Algeria's fiscal policy institutions:

A. Budgetary procedures in Algeria:

- ***Legal Framework :***

According to the article 3 of the organic law relative to the financial laws, the budget law provides in each year the total revenues and expenditures of the state and all the other financial instruments for the management of public services and spending on the public equipments and the development programs.

The existing law for budgets has been amended several times . The budget framework law No: 17-84 of July 7 , 1984 was elaborated during years of centralized planning establishes, in particular, the content and presentation of budget laws, voting rules, and the terms and limits governing modification of appropriations by the government in the course of the year .

However , in response to the economic and social crisis of the early 1980s , law No: 17-84 was amended by the budget laws No: 90-21 of August 1990 . That law defines the roles and

responsibilities of the various stakeholders involved in budget execution and the recording of revenue and expenditure transactions in the accounts. That law specifically provides for strict demarcation between officials responsible for commitment, verification, and payment authorization operations and those officials in charge of revenue collection, payment of expenses, and management of funds (IMF , 2005)[9] .

The general budget in Algeria is a common responsibility between the legislative (parliament) and the executive authorities. The laws governed the budget preparation provide that the proposed budget for each year is prepared by the ministry of finance and submitted to the council of ministers . After review by the council of ministers , the proposed budget must be adopted by both houses of parliament : the national people assembly and the national council .

The macroeconomic framework and policy basis for the budget project :

The macroeconomic framework for budget preparation is drawn up by the Ministry of Finance and updated during the budget preparation process. The government refers to some macroeconomic and financial factors when preparing the budget project , particularly the oil prices (table 1).

Table 1: references of the government budget project:

The global economic situation	**The macroeconomic and financial factors for the financial law of the year N relative to the year N-1**
• The global economic situation in the year N-1; • The situation of the global oil market.	• The referential oil price; • The exchange rate of the Algerian dinar against the U.S. Dollar; • Imports; • Exports of hydrocarbons; • Inflation rate; • The growth rate of GDP; • The estimated revenues comparing to the year N-1; • The estimated expenditures comparing to the year N-1; • The expected budget deficit and • The reserves of the oil fund (RRF).

[9] International Monetary fund , Algeria: Report on the Observance of Standards and Codes— Fiscal Transparency ModuleIMF Country Report No. 05/68 , February 2005 .

Budget time Frame:

Both the recurrent and capital budgets are prepared and executed according to a similar calendar, but in a disjunctive manner and according to different approaches. The time frame of the budget preparation for the year ***n*** is the following:

- March n-1--framing letters
- End of May n-l--organizers demand reception
- June-mid-July-arbitration meetings
- 20-30 July-bilateral discussions permitting arbitrations at the ministry/ministries level
- 30 July-government transmission
- Government council
- Ministries council
- Transmission to the Assembly at the end of September

- ***Budget Execution and Control:***

According to the World Bank report[10] about the public expenditure in Algeria, the execution of the national budget takes the following phases:

Public accounting principles for budget execution are defined by Law *90/2.* This law defines the roles and responsibilities of actors (organizers, financial inspectors, public accountants *assignees)* in charge of state budgeting and accounting. Decree 92/414 for prior expenses' control obliges keeping budget accounting records o f state engagements and of auditing by financial inspectors. The major definition and distribution's principles of roles are:

- The organizer is responsible for initiating the expenditure.
- The financial inspector controls all engagements.
- The accountant assignee has primary authority over empowerments (mandates).
- The organizer's and accountant's roles are separated.

Credit notification involves the following:

Recurrent expenses-Credits are voted by principal organizers. The decree divides each ministry's credits into the part given to central services and the part for decentralized services. In assigning credits to secondary organizers, each ministry produces detailed manuals for each secondary organizer that include the procedures for tapping designated credits.

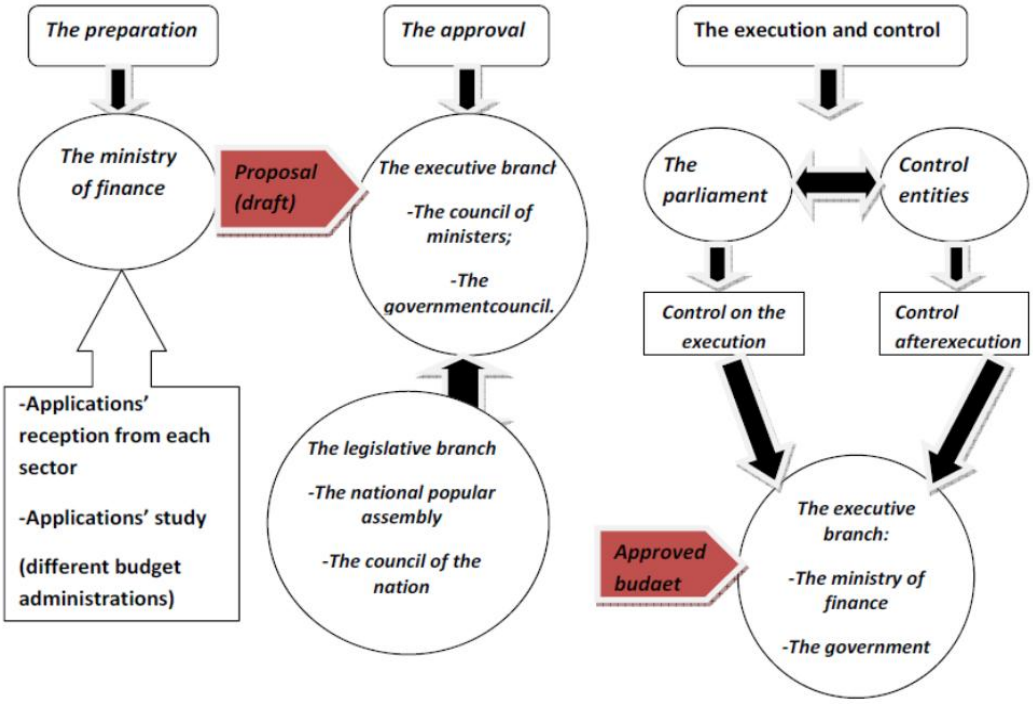
Investment expenses4redits are voted by sector. The Ministry of Finance notifies by subsector the approved programs and credit payments. At the central level, credits are divided into those for principal organizers, those for decentralized sectoral programs level and those for development communes programs.

Spending Procedures include the following:

- Standard procedure prevails when (a) the item is covered by an order form to the supplier and the financial inspector's visa or (b) for payment upon completion of a committed service. A simplified process would be possible.
- The procedure without prior ordering is used for payments executed by previously decided governance, and for payment of the principal and interest due on public loans. The accountants assignees are allowed to pay these expenses, which will be sorted out once an order or a mandate payment is presented by the competent organizer for the concerned budgeting credits.
- The procedure without an organizer's intervention includes expenses that are paid by the accountant assignee independent of the organizer's role in execution.

[10]World Bank report: « Assuring high quality public investment, Algeria », Public expenditure review,Volume II, Appendices and Statistics, 2007.

Figure10: The budget process in Algeria



Source: Authors' construction using the process of the financial law elaboration and the execution of the budget.

B. Algeria's fiscal institutions innovations in response to the recent oil boom :

In an attempt to improve the management of their revenues from oil and the quality of public spending , Algeria has applied a prudent budget formulation, while managing its exceptional oil resources well.[11]

Setting up budgets on the basis of conservative oil price assumptions:

A referential oil price has been used in budget formulation which was 19US$/barrel from 2003 to 2005 and 22 US$ in 2006 then 37US$ since 2007.

The oil tax has known an increase over the first seven years of the period from 66% of total tax revenues in 2002 to 77% in 2007. In 2008 with the global financial crisis and the sharp decrease in the oil prices, the Algerian oil tax decreased to 62% in 2009 and 53% in 2011 because of the decrease in oil revenues, while the non-oil tax registered an increase in the year 2013 with 8.7%[12]. For the year 2014, the budget law has been elaborated under the following financial and budget data:[13]

- A referential oil price for the budget calculation of 37$ and a price of about 90$ per barrel for the calculation of the total oil revenues and the value added of the hydrocarbon sector, as a prudential price.
- 4218.2 billion DA as budget revenues predicted for 2014 with about 37% as oil tax, 55% as ordinary tax and 6% as exceptional tax.

[11] World Bank report: « Assuring high quality public investment, Algeria », Public expenditure review,VolumeI,2007,P10.

[12] Presentation note of the budget law proposal for 2014 (French); P10.

[13] Ibid, P11.

- 7656.2 billion DA as government expenditure where 4514.7 billion DA as current expenditure and 2941.7 billion DA for equipment with the increase of 11.3% comparing to 2013.

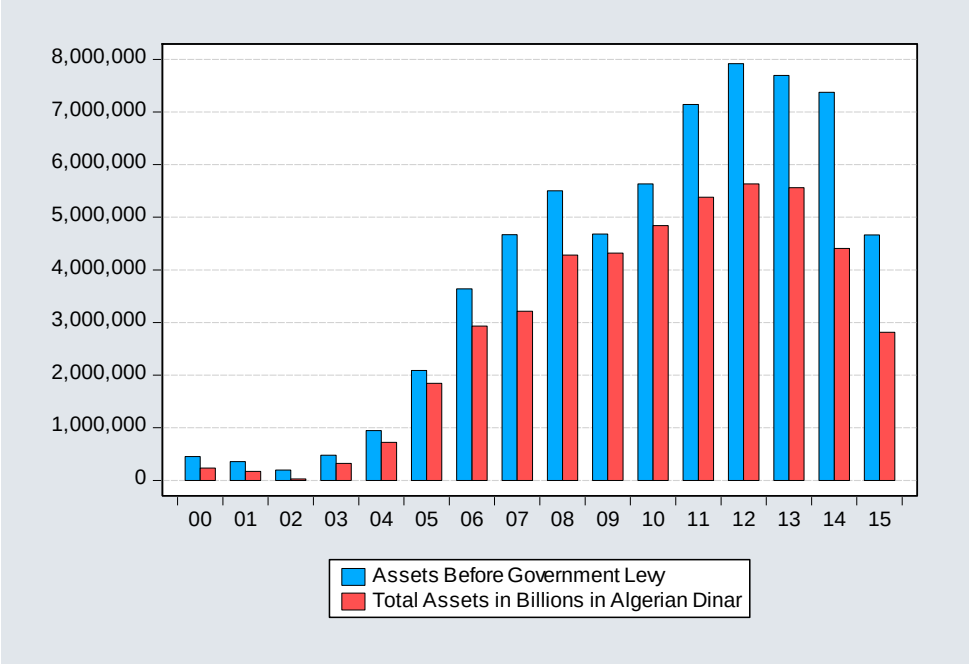
The last increase in the public spending is basically due to the current expenditure resulting from the remunerations and subsidies for the public service staff.

Establishing The oil stabilization fund (The Revenue Regulation fund):

The excess oil revenues (the difference between actual and the referential oil price) are deposited into the oil stabilization fund (Fond de Régulation des Recettes)[14] which was created in 2000. This fund records fast accumulation due to the considerable increase in oil price in international market from 5.6 % of GDP in 2000 (USD 3.057 billion) to 24.4 % in 2005 and to 35.6 % in 2012 (USD 70.554 billion). Of the 79 sovereign wealth funds listed by the SWF institute, FRR was ranked 25th with USD 50 billion (updated in June 2015), and the second largest fund after Libya (USD 66 billion) in Africa15. The growth in the assets of FRR, which were rising at a rapid rate before, they began to decline from 2013 and worsened in 2015 (FRR are declined about to 27 % of GDP in 2015 equivalent to USD 49.928 billion).

The oil fund has three main objectives: (i) reconstitute the cushion of external reserves that had been used in 1998-99 during a period of low hydrocarbon revenues; (ii) to service the stock of public debt in the context of strictly limited domestic bank and nonbank financing and (iii) to smooth the longer-term profile of expenditures. Henceforth, the oil fund of Algeria does not have intergenerational transfer purposes; it is stabilization rather than a saving fund.

Figure 11: Historical Assets under Management on Revenue Regulation Fund



Source: *authors' construction using Bank of Algeria, finance ministry and Sovereign Wealth Fund Institute.*

[14] By the 2004 budget law, the amounts accumulated in the FRR can be used to finance the budget deficit in case of lower than budgeted hydrocarbon revenues and reduce the outstanding national debt. For further details about FRR, refer to the World Bank report (2007),p19.

[15] http://www.swfinstitute.org/sovereign-wealth-fund-rankings/

Table 2: Historical Assets under Management on Revenue Regulation Fund (Billions in Algerian Dinar)

	Resources					Uses				
	previous year balance (1)	**oil taxes in FL (2)**	**recovered oil tax (3)**	**Oil taxes Surplus (4) =(3-2)**	**Assets Before Government Levy (5)= (1+4)**	**Repayment of public debt (6)**	**Repayment Bank of Algeria Advances (7)**	**Treasury deficit financing* (8)**	**Total Levies (9) = (6+7+8)**	**balance after Levies (10)= (5-9)**
2000	0	720000	1173237	453237	453 237	2 21 100	0	0	221 100	232 137
2001	232 137	840600	964464	123864	356 001	184 467	0	0	184 467	171 534
2002	171 534	916400	942904	26504	198 038	170 060	0	0	170 060	27 978
2003	27 978	836060	1284974	448914	476 892	156000	0	0	156000	320892
2004	320892	862200	1485966	623449	944 391	222 703	0	0	222 703	721 688
2005	721 688	899000	2267836	1368836	2090 524	247 838	0	0	247 838	1 842686
2006	1 842686	916000	2714000	1798000	3640686	618111	0	91 530	709 641	2 931 045
2007	2 931 045	973000	2711848	1738 848	4669 893	314 455	607 956	531952	1454363	3 215 531
2008	3 215 531	1715400	4003559	2288 159	5503 690	465 437	0	758 180	1223617	4 280 072
2009	4 280 072	1927000	2327 675	400 675	4680 747	0	0	364 282	364 282	4 316 465
2010	4 316 465	1501700	2820010	1318 310	5634 775	0	0	791 938	791 938	4 842 837
2011	4 842 837	1529400	3829 720	2300 320	7143 157	0	0	1 761455	1761455	5 381 702
2012	5381 702	1519040	4 054 349	2535 309	7917 011	0	0	2 283 260	2 283260	5 633 751
2013	5 633 751	1615900	3678131	2062231	7695982	0	0	2 132 471	2132471	5 563 511
2014	5 563 511	1577530	3388 355	1810 625	7374 136	0	0	2 965 672	2965672	4 408 464
2015	4 408 464	1722940	1978900	255950	4664414	0	0	1850000	1850000	2 814414

Source: The General Directorate of Forecasting and Policy, Ministry of Finance and Sovereign Wealth Fund Institute.

(*): Art 25, supplementary Budget law 2006.

C. Assessment of the Algerian budget institutions:

It is evident that the soundness of any state's budget institutions is vital for the good performance of its fiscal policy; its effectiveness (fiscal policy) and its role in resource allocation and economic growth development. The quality of such institutions helps ensure government accountability, transparency and prevent the leakage of public funds.

The Open Budget Index

In order to evaluate the budget institutions in Algeria, we use the data for the open budget index (OBI).**(Box1)**

Box 1 : The open budget index (OBI)

The Open Budget Survey measures the state of budget transparency, participation, and oversight in countries around the world. It consists of 125 questions and is completed by independent researchers in the countries assessed.

Ninety-five of the questions deal directly with the public availability and comprehensiveness of the eight key budget documents that governments should publish at various points of the budget cycle. The remaining 30 questions relate to opportunities for public participation in the budget process, and to the roles played by legislatures and supreme audit institutions in budget formulation and oversight. The Survey does not reflect opinion. It measures observable facts related to budget transparency, accountability, and participation.

The OBI assesses whether the central government in each country surveyed makes eight key budget documents available to the public, as well as whether the data contained in these documents is comprehensive, timely, and useful. The Survey uses internationally accepted criteria to assess each country's budget transparency developed by multilateral organizations, such as the International Monetary Fund (IMF), the Organization for Economic Co-operation and Development (OECD), and the International Organization of Supreme Audit Institutions (INTOSAI).16The Open Budget Survey assesses whether the central This index takes the score from 0% to 100% (0 to 20% => scant or none information; 20 to 50%=> minimal ; 50%=> some; 50 to 70%=> significant and 70 to 100%=> extensive)

The Open Budget Index evaluates the quantity and type of information that governments make available to their publics in the eight key budget documents (table 3) that should be issued during the budget year. The Algeria's scores for this index since 2008 (1% for 2008 and 2010) indicates scant to almost no budget information for the public. This makes it virtually impossible for citizens to hold the government accountable for its management of the public's money. The 2012 round of the open budget surveys showed an increase in the Algeria's OBI to 13% which is an encouraging step comparing to the very low score of the previous rounds. However, the 13% is still considered as scant information which means that Algeria should expand budget transparency by introducing a number of measures, some of which can be achieved very quickly and at almost no cost to the government.

On the other hand, Algeria has a low budget transparency score of19 out of 100 on the 2015 Open Budget Index 17(see figure 12), compared to an average score of 45 for the MENA. Algeria has a low public participation score of 0 out of 100 which indicates that the public is provided with no opportunities to engage in budget processes, compared to an average score of 25 for the region. The legislature provides limited oversight during the planning stage of the budget cycle and weak oversight during the implementation stage of the budget cycle. In addition, the supreme audit institution provides weak budget oversight.

[16] The open budget survey 2012, The international budget partnership.

[17] http://www.internationalbudget.org/

Table 3 provides the eight key budget documents and their publication status in Algeria over the three OBS's rounds as an indicator of transparency.

Table3: the key budget documents in Algeria.

Documents	Documents descriptions	Publication status		
		2008	2010	2012
PBS	**Pre-Budget Statement**: Provides information that links government policies and budgets and typically sets forth the broad parameters that will define the budget proposal that is presented to the legislature.	Not-published	Produced, Not Published	Produced for Internal Use
EBP	**Executive's Budget Proposal**: Presents the government plans to raise revenues through taxes and other sources and spend these moniesto support its priorities, thus transforming policy goals into action.	Not-published	Produced, Not Published	Published
EB	**Enacted Budget**: The legal instrument authorizing the executive to raise revenues, make expenditures, and incur debt.	published	Published	Published
CB	**Citizens Budget**: A nontechnical presentation to enable broad public understanding of a government's plans for raising revenues andspending public funds in order to achieve policy goals.	Not-published	Not Produced	Not Produced
IYR	**In-Year Reports**: Periodic (monthly or quarterly) measures of the trends in actual revenues, expenditures, and debt, which allow for comparisons with the budget figures and adjustments.	Not-published	Not Produced	Produced for Internal Use
MYR	**Mid-Year Review:** An overview of the budget's effects at the midpoint of a budget year and discusses any changes in economic assumptions that affect approved budget policies.	Not-published	Produced, Not Published	Produced for Internal Use
YER	**Year-End Report**: Information comparing the actual budget execution relative to the Enacted Budget.	Not-published	Produced, Not Published	Produced for Internal Use
AR	**Audit Report**: Independent evaluation of the government's accounts by the country's supreme audit institution. It typically assesses whether the executive has raised revenues and spent monies in line with the authorized budget, and whether the government's accounts of its revenues and expenses are accurate and provide a reliable picture of the fiscal situation.	Not-published	Produced, Not Published	Produced for Internal Use

Source: made by the authors using the open budget survey reports for Algeria.

As shown in the table above, Algeria makes available to the public only one budget document presented by the enacted budget, while all the others are produced for internal use only. The proposal is not made available to the public, meaning citizens do not have a comprehensive picture of the government's plans for taxing and spending for the upcoming year.

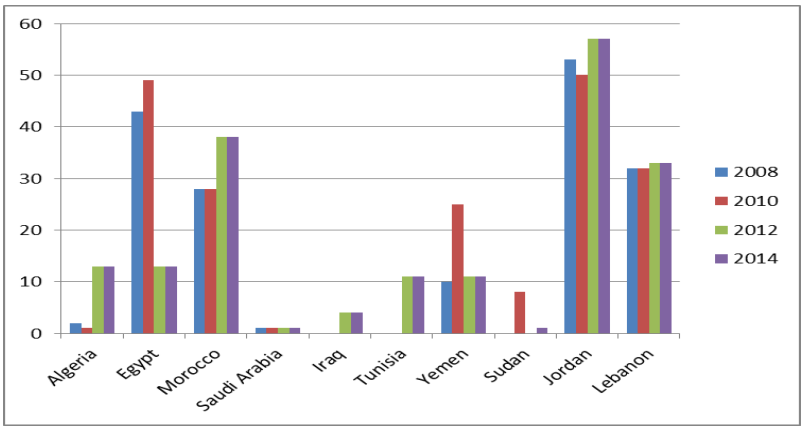
Moreover, it is difficult to track spending, revenue collection and borrowing during the year. Algeria does not publish its in-year reports or a mid-year review. Publishing these documents would greatly strengthen public accountability, since they provide updates on how the budget is being implemented during the year.

It is also difficult to assess budget performance in Algeria once the budget year is over. A year-end report is not made public, preventing comparisons between what was budgeted and what was actually spent and collected.

Also, Algeria does not make its audit report public and does not provide any information on whether the audit report's recommendations are successfully implemented. Furthermore, Algeria does not produce the so called citizen budget which confirms the weak scores of the budget. In 2012, Algeria started to open its budget and makes the executive's budget proposal available to the public. This step was the key to raise the overall index score to 13%.

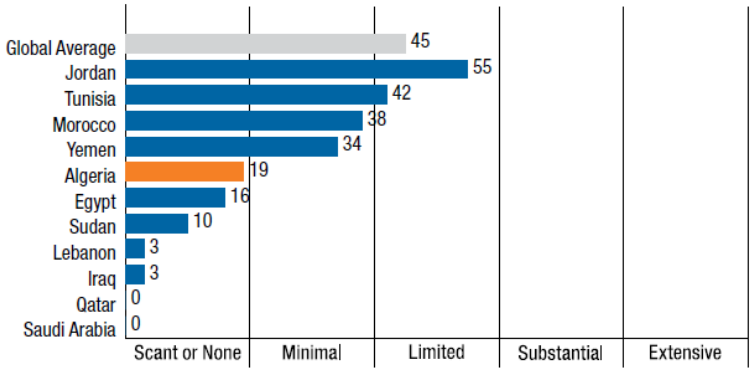
Comparing the Algerian OBI with the one in ten Arab countries (figure 12); Algeria records lowest index with the Saudi Arabia and Iraq. Thus, we can say that this index is linked with the oil revenues since most of non-oil Arab countries provides some budget information to the public (high OBI scores) while the largest oil rich countries (Algeria, Saudi Arabia; Sudan and Iraq) provides scant information.

Figure 12: The open budget index scores in ten oil and non-oil Arab countries



Source : made by the authors using the open budget index data ; www.openbudgetindex.org

Open budget index country Ranking (2015)

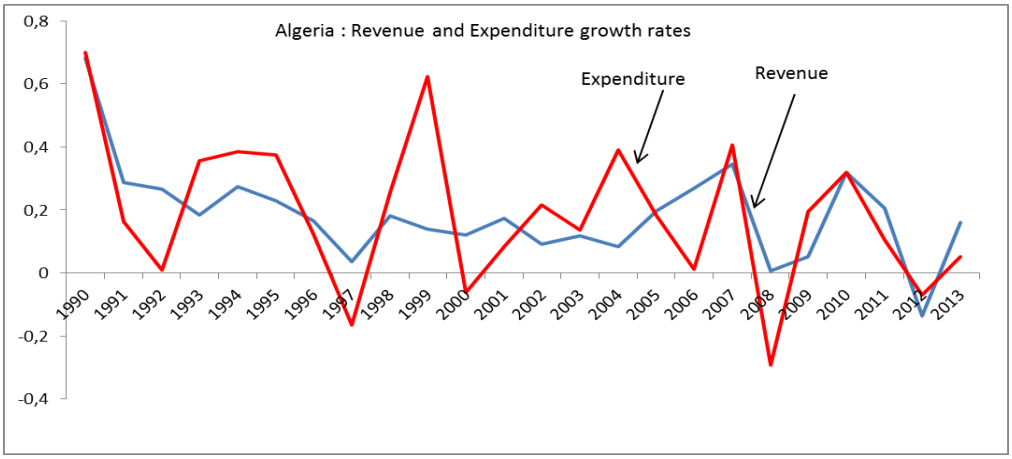


Source: The International Budget Partnership

As figure 13 illustrates , Algeria has failed to stabilize their government expenditures as a response to oil revenue volatility . Thus we can say that neither the modest improvement in the Open Budget Index nor the establishment of stabilization fund after 2000 have had a significant effect on fiscal performance , because in Algeria spending has been usually driven by revenue availability , public expenditure (financed

in large part with oil revenues) served not at strengthening the economy, but :***i)*** to secure loyalty among the population ; ***ii)*** to weaken and divide opposition political parties by creating or supporting political parties close to the regime ; ***iii)*** and to secure votes in pre-election times (Achy L.,2013; Miriam Lowi,2009;Werenfels I. , 2007).

Figure 13 :Budget stabilization in Algeria



Source : IMF World Economic Outlook

Subsidies and government expenditures :

As is the case of many oil exporting countries , an important share of public spending goes to subsidies . Total subsidies for food , water , electricity , natural gas , housing , education , and interest rates amounted to 18,3 percent of GDP in 2012 (Table 04) . According to the IMF (2014) these subsidies are inequitable , inefficient , and represent a major source of loss of revenues .

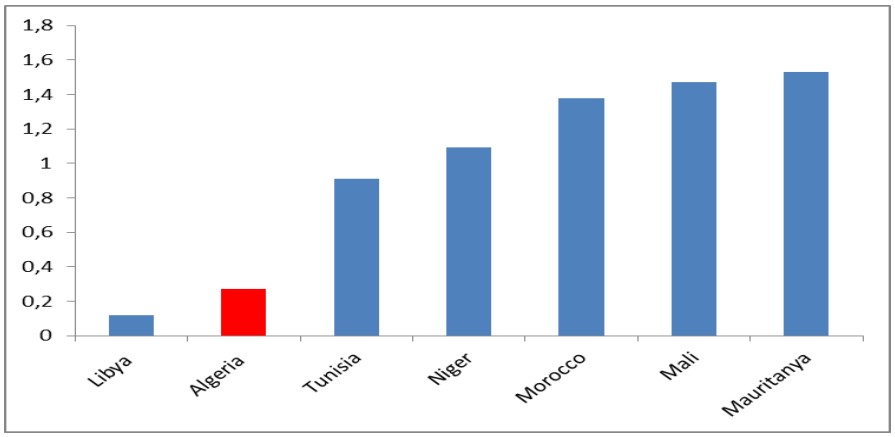
For instance, fuels subsidies have encouraged large scale smuggling to neighboring countries, where these fuels are three to five times more expensive (Figure 14). The price of a 1 liter of subsidized gasoline in Algeria is 23 dinars (0.23 euros), While the price in Morocco is 1.1 euros that is five times more expensive, and in Tunisia 0.72 euros, or more than three times. Each year, 1.5 billion liters of fuel (25% of the Algerian fuel) smuggled from Algeria towards neighboring countries (60% of smuggler fuel heading towards Morocco, while 30% heading toward Tunisia and the rest heading towards the southern border to Mali). Also, 600 thousand cars outside the borders of country is walking by Algerian fuel. This means that the treasury state losing about 100 billion dinars (The equivalent of 1 billion euros).

Table 04: Subsidies 2012 (Percent of GDP)

Non-oil	**13.6**
Food (milk , cereal , oil and sugar)	**1.1**
Water , natural gas , and electricity	**8.4**
Water	**1**
Natural gas	**3.4**
Electricity	**4**
Housing	**3.1**
Education	**0.7**
Interest rates (2013)	**0.3**
Petroleum products (diesel , gasoline , and LPG)	**4.7**
Total	**18.3**

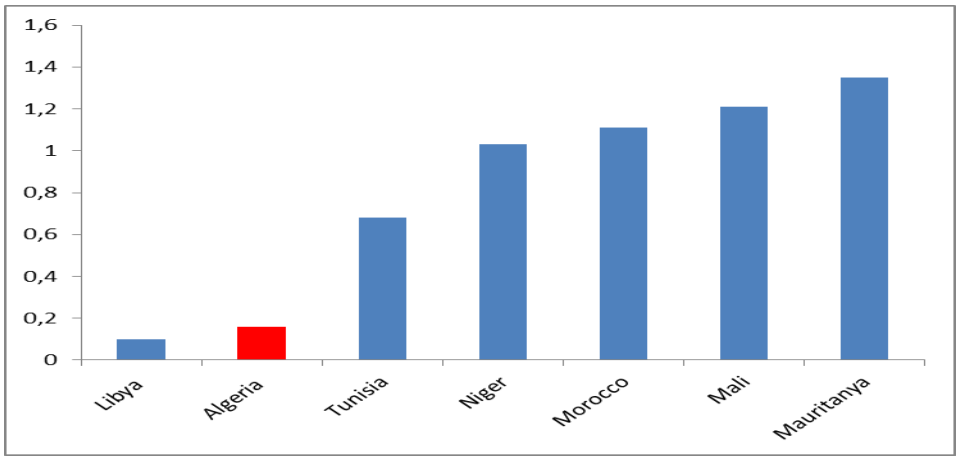
Source : Algeria selected issues , IMF country report n 14/342 , December 2014 .

Figure 14 : Gasoline prices (2014, US$ per liter)



Source: World Development Indicators

Figure 14 : Diesel Fuel prices (2014, US$ per liter)



Source: World Development Indicators

4. Empirical methodology, data and results:

In this section we evaluate the cyclicality of fiscal policy in Algeria, by analysing the correlation

4.1.Model and data:

between government spending and GDP. Therefore, a pro-cyclical fiscal policy is associated with a positive correlation between output (Real GDP) and the government expenditure.

To define the cyclicality of fiscal policy, We use the following policy regression equation (equation 1), which is used by a number of studies such as Gavin and Perotti (1997), Alesina and Tabellini (2005) , Thornton (2008) , Lledo, Yackovlev, and Gadenne (2009), Woo (2009) and others , to estimate the cyclicality coefficients.

$$EXPEND_t = \beta_0 + \beta_1(RGDP_t) + \beta_2(TOT_t) + \beta_3(GCGD_t) + \beta_4(M2_t) + \beta_5(ICRGPOL)_t + \beta_6(REER)_t + u_t \ldots\ldots(1)$$

Where: EXPEND represents real total general government expenditure, used as dependent variable. RGDP: is the real gross domestic product .TOT: index of the country's terms of trade. The terms of trade –

the relative price of exports to imports -is an important variable for oil exporting countries like Algeria, because in these countries, the main driver of the terms of trade is the oil price, thus, including *TOT* provides a control for oil prices shocks to the economy. In the other hand we include real effective exchange rate *REER* as another indicator of oil curse in Algeria (Arezki and Ismail 2013).

The cyclicality of fiscal policy is determined by looking at the sign and the size of β_1 coefficient, which measures the elasticity of government spending with respect to real output. If $\beta_1 <0$, fiscal policy is countercyclical; if $\beta_1 =0$, fiscal policy is acyclical; and if $\beta_1 >0$, fiscal policy is pro-cyclical. An estimated $\beta_1 \rangle 1$ implies a more-than-proportionate response of the fiscal variable to output fluctuations.

Our basic model includes additional variables, especially financing constraints variables and political and institutional factors in order to investigate the interaction of these variables with fiscal cyclicality in Algeria.

Institutional quality variable is measured by political risk index (ICRGPOL) taken from the dataset constructed by Political Risk Services (International Country Risk Guide governance indicators, 2013) .According to ICRG's definition" *the aim of political risk index is to provide a means of assessing the political stability of the countries*". The political risk rating comprises 12 variables covering both political and social attributes (Government stability , Socioeconomic conditions , Investment profile , Internal conflict , External conflict , Corruption , Military in politics , Religious tensions , Law and order , Ethnic tensions , Democratic accountability , Bureaucracy quality) .The ICRG political risk score ranges from 0.00% to 100% , with higher values indicating low risk , and lower score means higher risk .

For credit constraints, we use two variables: total (domestic and external) gross central government debt as a share of GDP (GCGD) as a measure for the domestic and external financing from Reinhart and Rogoff's (2010) data on external debts. The broad money (M2) to GDP ratio is the most commonly used measure of financial development. This ratio indicates the degree of financial intermediation and shows the real size of the financial sector of the country (see Calderon & Liu, 2003; King and Levine, 1993a, 1993b). A higher ratio of M2 to GDP indicates a larger financial sector and a bigger financial intermediation. We expect that more developed financial systems enable countries to run anti-cyclical fiscal policy.

The macroeconomic and fiscal variables consist of annual data during the period 1984–2013, the main data sources are the International Financial Statistics (IFS), from the IMF, and World Development Indicators (WDI), from the World Bank.

4.2.Methodology of the study:

The aim of the present paper is to investigate the long run and short run relationships among government expenditure and macroeconomic and institutional variables for Algerian economy over the period of 1984-2013, by using the ARDL bounds testing approach developed by Pesaran and al.(2001) .

Indeed, the ARDL bounds test approach has various advantages over the Johansen's co-integration method. First, the ARDL bounds test is carried out even with mixture of I(0) and I(1) variables. Second, this technique is more appropriate for small and finite sample size as compared to the Engle-Granger (1987) and Johansen and Jeselius (1990) co-integration tests (Pesaran and shin , 1999). An additional benefit is that this technique overcomes the problems of serial correlation and endogeneity (Pesaran and shin ,1999). For these reasons, this study employs the ARDL bounds test approach to estimate equation (1).

Our ARDL model can be specified as follows:

$$DEXPEND_t = \alpha_0 + \sum_{i=1}^{n} \beta_0\ DEXPEND_{t-i} + \sum_{i=1}^{n} \beta_1\ DRGDP_{t-i} + \sum_{i=1}^{n} \beta_2\ DTOT_{t-i} + \sum_{i=1}^{n} \beta_3\ DGCGD_{t-i}$$
$$+ \sum_{i=1}^{n} \beta_4 DM2_{t-i} + \sum_{i=1}^{n} \beta_5 DIRGPOL_{t-i} + \sum_{i=1}^{n} \beta_6 DREER_{t-i} + \delta_1\ DEXPEND_{t-1} + \delta_2\ DRGDP_{t-1} + \delta_3\ DTOT_{t-1}$$
$$+ \delta_4\ DGCGD_{t-1} + \delta_5 DM2_{t-1} + \delta_6 DICRGPOL_{t-1} + \delta_7\ DREER_{t-1} + u_t \text{.....(2)}$$

Where, D is the first difference operator, ε_t is residual term, α_0 is constant, $\beta_i\ (i = 1-7)$ and $\delta_i\ (i = 1-7)$ are coefficients.

The implementation of the ARDL approach estimation requires three steps. The first step is to determine the existence of a long run relationship between the concerned variables using the wald-coefficient test or F-statistics, for testing the null hypothesis of no co-integration ($H_0 : \delta_1 = \delta_2 = \delta_3 = \delta_4 = \delta_5 = \delta_6 = \delta_7 = 0$) against the alternative hypothesis of long run relationship ($H_1 : \delta_1 \neq 0, \delta_2 \neq 0, \delta_3 \neq 0, \delta_4 \neq 0, \delta_5 \neq 0, \delta_6 \neq 0, \delta_7 \neq 0$). Then, the calculated F-statistics is compared with the critical values proposed by Pesaran and al.(2001). If the calculated F-statistic is higher than the upper bound critical value, then, the null hypothesis of no co-integration is rejected, indicating that long run relationship exists. If the calculated F-statistic falls below the lower bound critical value, then, the null hypothesis of no co-integration can not be rejected. However, if the F-statistic lies within the lower and upper bounds, then the results are inclusive. The second step in the ARDL bounds analysis is to estimate the long run coefficients of the selected ARDL model. Finally, in the third step we estimate the short run coefficients by estimating an error correction model (ECM).

4.3. Empirical results:

Stationarity / Unit root:

According to Pesaran and al. (2001) the ARDL bounds test approach is valid for variables that are stationary either at level i.e. I(0) or at first difference i.e. I(1), or even fractionally integrated. Therefore, it is necessary to investigate the order of integration of the individual time series in order to ensure that none of the variables is integrated of order two i.e. I(2) or higher. We employ ADF test, and Phillips-Perron test statistics. We run the test both in level and first differences. The results of unit root tests are reported in Table 5. In this study, these tests give the same results, namely that each of these series is I(1), that is they are integrated of order 1. This result was confirmed by using unit root tests with structural breaks (Table 6) as we reject the alternative hypothesis for the stationarity at the 1% level of significance for all tests.

Table 5. Unit root tests

Augmented Dickey Fuller unit roots test									
Variable	*Level*				*First difference*				***Decision***
	Intercept		*Intercept and trend*		*Intercept*		*Intercept and trend*		
	ADF	CV	ADF	CV	ADF	CV	ADF	CV	
EXPEND	*0.068025*	*-2.9385*	*-1.7658*	*-3.5098*	*-4.8564*	*-3.0422*	*-6.8212*	*-3.5950*	*I(1)*
RGDP	*0.93357*	*-2.9385*	*-1.3493*	*-3.5098*	*-4.0452*	*-3.0422*	*-4.9186*	*-3.5950*	*I(1)*
TOT	*0.00202*	*-3.0422*	*-1.7942*	*-3.5950*	*-4.1299*	*-3.1472*	*-4.2744*	*-3.5692*	*I(1)*
GCGD	*-0.67056*	*-3.0449*	*-1.9697*	*-3.7128*	*-3.2561*	*-3.0261*	*-3.8330*	*-3.7280*	*I(1)*
M2	*-1.5132*	*-2.9677*	*-1.2432*	*-3.5742*	*-4.0519*	*-2.9718*	*-4.2338*	*-3.5806*	*I(1)*
ICRGPOL	*1.9559*	*-2.9385*	*-2.3560*	*-3.5098*	*-3.4415*	*-3.0422*	*-4.1182*	*-3.5609*	*I(1)*
REER	*-1.0795*	*-2.9762*	*-3.2943*	*-3.5875*	*-3.10.27*	*-2.9918*	*-3.9251*	*-3.5875*	*I(1)*
Phillips- Perron unit roots test									
Variable	*Level*				*First difference*				***Decision***
	Intercept		*Intercept and trend*		*Intercept*		*Intercept and trend*		

	ADF	CV	ADF	CV	ADF	CV	ADF	CV	
EXPEND	*0.5150*	*-2.944*	*-1.6979*	*-3.610*	*-3.6994*	*-2.845*	*-3.8579*	*-3.627*	*I(1)*
RGDP	*1.3414*	*-2.9447*	*-1.4957*	*-3.610*	*-5.3303*	*-2.845*	*-6.0527*	*-3.627*	*I(1)*
TOT	*-.53484*	*-2.845*	*-2.6634*	*-3.627*	*-5.7354*	*-2.944*	*-6.4554*	*-3.557*	*I(1)*
GCGD	*-.39790*	*-2.909*	*-1.9533*	*-3.689*	*-3.4945*	*-2.9979*	*-3.8358*	*-3.583*	*I(1)*
M2	*-1.6256*	*-2.6297*	*-1.3353*	*-3.5742*	*-4.0184*	*-2.9718*	*-5.2815*	*-3.5806*	*I(1)*
ICRGPOL	*-1.5763*	*-2.9447*	*-1.5390*	*-3.610*	*-4.7797*	*-2.8452*	*-4.7957*	*-3.627*	*I(1)*
REER	*-2.7692*	*-2.9677*	*-1.3484*	*-3.5742*	*-3.7082*	*-2.9718*	*-4.5349*	*-3.5806*	*I(1)*

Notes: The sample period runs from 1984 to 2013.CV gives the 95 percent simulated critical values.

Table 6: Unit root tests with structural break

	One structural break						**Two structural breaks**			
	Zivot and Andrews (1992)			**Saikkonen and Lütkepohl (2002)**			**Lumsdain and Papell (1997)**			
	lags	**Statistic**	**Break date**	**lags**	**Statistic**	**Break date**	**lags**	**Statistic**	**Break date I**	**Break date II**
EXPEND	2	-2.61	2002	2	2.67	2008	2	-6.24	1998	2004
GCGD	1	- 4.36	1998	2	-0.72	1998	3	-5.90	1994	2006
RGDP	1	-4.42	1998	2	1.63	2009	3	-5.72	1994	2005
M2	1	-4.36	1995	1	-3.04	2001	2	-4.41	1997	2002
ICRGPOL	1	-3.81	2004	2	-1.86	2005	2	-4.45	1998	2008
TOT	1	-4.44	1998	2	0.83	2009	2	-6.94	1994	2007
REER	1	-3.55	1990	2	-2.26	2001	2	-5.01	1996	2001

Zivot and Andrews (1992): Critical values are: -5.57, -5.08 and -4.82 at 1%, 5% and 10% respectively.
Saikkonen and Lütkepohl (2002) (shift dummy): Critical values (T=1000) are: -3.48, -2.88, and -2.58 at 1%, 5% and 10% respectively.
Lumsdain and Papell (1997): Critical values are: -7.34, -6.82 and -6.49 at 1%, 5% and 10% respectively.

Co-integration and long run analysis:

Since none of the variables is integrated of order two, co-integration can be investigated using the ARDL bounds test approach. Real total general government expenditure does hide important information such development projects. It is important to separate recurrent expenditure and investment expenditure to track fiscal policy path. Therefore we re-estimate the equation 1 by taking capital expenditure as the dependent variable (model 2).

The bounds test is conducted to determine the existence of a long run relationship between variables in all models. Since we use annual data, we choose two as the maximal lag length in the bounds test. The results of the test are shown in table 7 below.

Table 7. Bounds test for co-integration analysis

Critical Value	*Lower Bound Value*	*Upper Bound Value*
Dependent variable is EXPEND (1)		
5% *10%*	*2.5144* *2.0493*	*4.0135* *3.3578*
Computed F-statistic: 4.8462		
Dependent variable is capital expenditure (2)		
5% *10%*	*2.5124* *2.0590*	*4.0485* *3.3807*
Computed F-statistic: 5.0824		

Note : The computed F-statistic is ***4.8462*** (*5.0824*) . Critical values are cited from Pesaran et al.(2001) , Table B1 , Case II (intercept and no trend) .

As the calculated F-statistics *4.8462* (*5.0824 in model 2)* is greater than the upper bound at the 5 percent level *4.0135* (*4.0485*) and 10 percent level *3.3578* (*3.3807*), we conclude that there exist a long run relationship between government expenditure, real GDP and the other institutional and financial factors in the ARDL model.

Once co-integrating relationship between the variables has been established, the estimate of the long run coefficients of the ARDL model can be obtained. The optimal lag order of each variable in the ARDL system is selected on the basis of Schwarz Bayesian Criterion. The coefficients of the long run relationship between government expenditure and its determinant (both political and financial variables) are reported in the table 7.

Table 7. Estimated Long-run Coefficients using the ARDL Approach

Dependent variable is EXPEND: The optimal lag is determined by Schwarz : Schwarz based ARDL(1,2,2,2,2,2,2)			
Regressor	***Coefficients***	***Standard Error***	***T – Ratio [prob.]***
GDPDF	0.96040 ***	0.17281	5.5577[.001]
M2	0 .23867*	0.10864	2.1968[.059]
TOT	0.13292 *	0.066386	2.0023[.080]
GCGD	0.043818 *	0.019614	2.2340[.056]
ICRGPOL	-1.0032 **	0.21912	-4.5783[.002]
REER	0.094430**	0.022366	4.2220[.003]
Dependent variable is capital expenditure: The optimal lag is determined by Schwarz : Schwarz based ARDL(1,2,2,0,2,2,1)			
Regressor	***Coefficients***	***Standard Error***	***T – Ratio [prob.]***
GDPDF	0.53826*	0.1118	4.48415[.00368]
M2	0.79805***	0.2034	2.66317[.0521]
TOT	0.064607 ***	0.21566	2.29958[.0870]
GCGD	0.11272 **	0.14234	3.79194[.0405]
ICRGPOL	-0.18274***	0.6279	-2.69540[.0511]
REER	0.063372**	0.13115	3.48322[.0438]

As a matter of scientific integrity, we estimated the previous model but in this time we have introduce the Government consumption as the dependent variable ,but the results obtained did not have any statistically significant.

In both models, the results above show that there exists a long run positive association between government expenditure and real GDP in Algeria, indicating that Algeria's fiscal policy exhibit strong pro-cyclicality, with an estimated coefficient $\beta_1 = +0.96$ (and 0.53 in second mode) at 1% significant level. As expected, the finding of pro-cyclicality of fiscal policy seems to be pronounced for Algeria, confirming the results of other related studies (Sturm and al., 2009; Abdih and al., 2010; Villafuerte and Lopez-Murphy, 2010; Erbil, 2011) which analyses the cyclical properties of fiscal policy in oil producing countries.

Besides, the long run coefficient of terms of trade is positive and statistically significant as expected in both models. In particular Algeria is a net exporter of crude oil and gas, so increases in oil prices and hence terms of trade (in Algeria the main driver of terms of trade is the oil prices) tend to increase government expenditure.

The results also show that there is evidence of a positive relationship between government expenditure and financial constrains variables in both models, as the coefficients of both total government debt as a share of GDP (GCGD) and broad money (M2) are positive and statistically significant. The sign of government debt is opposite of what we had expected. However, the sign of depth for broad money implying pro-cyclical behaviour.

The results also show that the estimated coefficient on the variable political risk (ICRGPOL) is negative and statistically significant in both models, implying that fiscal behaviour is more pro-cyclical when the political and institutional variables (proxied by the political risk index) are low. These results are consistent with the theories that explain pro-cyclical behaviour on fiscal policy due to the weak quality of institutions and corruption in government.

Short-Run Dynamics:

The short run coefficients obtained from the error correction representation (ECM) version of the ARDL model was also estimated and the results are reported in table 8. The results show that both institutional and financial constraints factors affect government expenditure in the short run, and most of these variables maintained their long run sign in the first model. In the second model both institutional and financial constraints factors affect government expenditure but there is no significant effect of trade and exchange rate. Besides, from the results, it is clear that the error correction term $ecm(t-1)$ is negative and statistically significant at 1% level in both models. Specifically, the estimated coefficient of the error correction term $ecm(t-1)$ is: -0.2719 (-0.52489 in second model), indicating the low (medium) speed adjustment to equilibrium after a shock. Also, the significant of the error correction term indicates the existence of long run relationship.

The stability of the estimated models is examined using the cumulative sum (CUSUM) and cumulative sum of squares (CUSUMSQ) tests. As shown in figure 15, the graphs of the CUSUM and CUSUMSQ test lie within the 5% critical bounds which confirm that the estimated model is stable in both models.

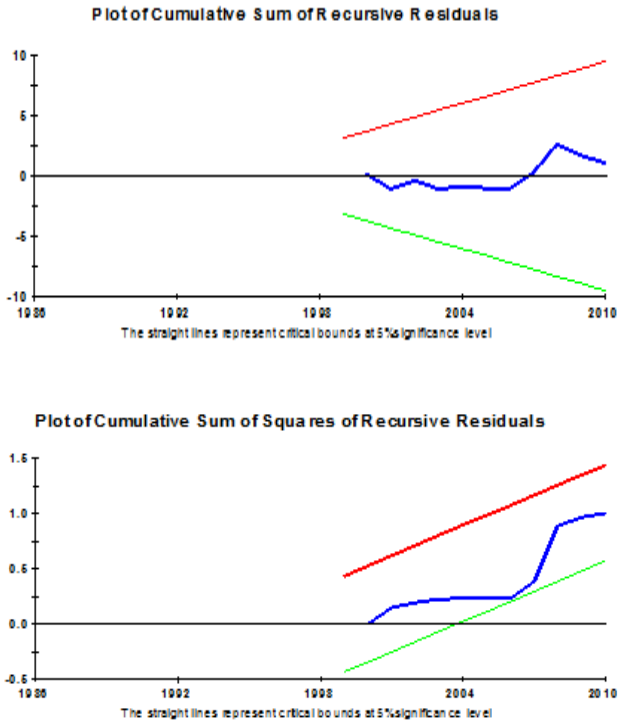
Table 8. Short-run Error Correction Model (ECM) for the selected ARDL

Dependent variable is EXPEND: The optimal lag is determined by Schwarz : Schwarz based ARDL(1,1,1,1,1,1,1)			
Regressor	***Coefficients***	***Standard Error***	***T – Ratio [prob.]***
dEXPDF1	0.67221***	0.33782	1.9898[.067]
dGDPDF	0.036697	0.19220	0.19094[.851]
dGDPDF1	0.3155*	0.38668	3.4021[.004]
dM2	0.036791	0.14397	0.25554[.802]
dM21	0.77734*	0.21056	3.6918[.002]
dTOT	0.14494**	0.062091	2.3344[.035]
dTOT1	0.076673	0.054278	1.4126[.180]
dGCGD	0.00688	0.033466	0.20584[.840]

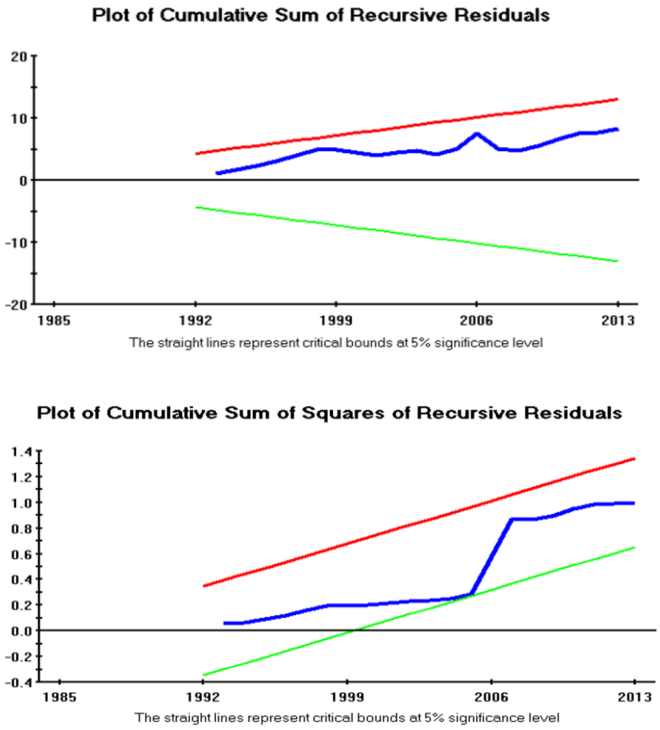
dGCGD 1	0.081944***	0.039668	2.0657[.058]
dICRGPOL	0.36526	0.26252	1.3914[.186]
dICRGPOL1	-0.77593***	0.19297	-4.0209[.001]
dREER	0.088863*	0.043538	2.0410[.061]
dREER1	0.083736**	0.038679	2.1649[.048]
ecm(-1)	-0.2719***	0.67760	-1.8771[.081]
Dependent variable is capital expenditure: The optimal lag is determined by Schwarz : Schwarz based ARDL(0,1,1,0,1,1,0)			
Regressor	***Coefficients***	***Standard Error***	***T – Ratio [prob.]***
dGDPDF	0.065399	0.066122	0.98907[.337]
dGDPDF1	0.22745*	0.074662	3.0464[.008]
dM2	0.029699	0.046650	0.63664[.533]
dM21	0.26803*	0.061169	4.3818[.000]
dTOT	0.010607	0.026733	0.39677[.697]
dGCGD	0.015474	0.014592	1.0604[.305]
dGCGD1	0.042058*	0.013985	3.0073[.008]
dICRGPOL	-0.21014*	0.058144	-3.6141[.002]
dICRGPOL1	-0.17819**	0.068494	-2.6015[.019]
dREER	0.0078639	0.012988	0.60548[.553]
ecm(-1)	-0.52489*	0.10937	-4.7992 [.000]

Figure 15: Plots of CUSUM and CUSUMQ statistics for coefficients Stability Tests

(1st model)



(2nd model)



These results indicate that fiscal policy of Algeria exhibits high pro-cyclicality, which is in line with most empirical literatures which analyses the cyclical properties of fiscal policy in developing and emerging countries as indicated by kaminsky and al (2004), and other studies. Furthermore, the results show that political and institutional factors, as well as financing constraints, play a major role on the cyclical pattern of fiscal policy in Algeria during the period 1984-2013.

5. Conclusion:

This paper investigated in the budgetary process in Algeria through the analysis of the legislative framework and the behaviour of the Algerian fiscal policy. It analysed empirically the cyclical behaviour of fiscal policy in Algeria, and linked this cyclicality of fiscal policy to institutional and political economy argument, as well as to the traditional explanation of financing constraints, using Autoregressive Distributed Lag (ARDL) model for the period 1984-2013.

It was obvious from the Algerian budget process that the fiscal policy is very dependent on the hydrocarbon sector. Thus, changes in government expenditures are largely traceable to changes in oil revenue. The assessment of the budget process showed the non-transparency of the Algerian budget institutions; thus, the government provides scant information to the public, according to the open budget index, regarding its fiscal policy and national budget which makes difficult to assess budget performance in Algeria. Moreover, this index is linked with the oil revenues since most of non-oil Arab countries provides some budget information to the public (high OBI scores) while the largest oil rich countries (Algeria, Saudi Arabia; Sudan and Iraq) provides scant information.

Our empirical analysis shows that government spending is highly pro-cyclical in Algeria. Moreover, our results related to the determinants of fiscal pro-cyclicality in Algeria suggest that political and institutional constraints seem to play a significant role in determining pro-cyclicality. Furthermore, we find that both domestic and external financing constraints and private credit are a source of pro-cyclicality in Algeria.

In fact, this result suggests the need for the authorities to implement countercyclical fiscal policy aimed at smoothing government spending and decouple it from oil revenue.

In attempts to adopt countercyclical fiscal policy, Algeria has applied a prudent budget formulation: a conservative referential oil price has been used in budget formulation, between 2000 and 2005 the budget reference oil price has been of US$19 per barrel and US$37 between 2008 and 2010, although average oil prices were in fact above US$45per barrel in 2005 and US$60in 2010. Whereby, any increase in oil tax revenue above the budget benchmark oil price goes to the hydrocarbon stabilization fund (The Revenue Regulation Fund) which was established by the government in 2000, to shield government expenditures from fluctuations in oil revenues and prices. Despite these procedures, government has failed to reduce dependence of the national budget on the oil revenue, and therefore, the pro-cyclical bias of government spending. Part of the reason behind this is the absence of a rule that limits the resources withdrawn annually from the revenue regulation fund to finance spending, the lack of limit on the fiscal balance, and weak performance of state institutions (IMF, 2013) .In Algeria institutions are not functioning well. Thus, it is required to modernise the institutional framework, because countercyclical and effective fiscal policies require strong institutions and more transparency and accountability.

However, Algeria is making more efforts to fight against corruption by establishing new laws regarding this issue, but it seems that there is no result since Algeria is still ranked at the least of the corruption index list (According to Transparency International's Corruption Perceptions Index CPI, which measures the perceived level of public sector corruption, Algeria ranked 100th out of 175 countries in transparency in 2014) and the fiscal policy is still dependent to the oil prices changes because of the corruption and many other institutional matters as the empirical results show (the ICRG index includes the corruption).

In the context of the revamped fiscal framework proposed, the FRR should be transformed into a full-fledged sovereign wealth fund with a clear investment strategy able to yield market-based return. The goals, the deposits, and the drawdown rules should be clearly defined, consistent with the proposed rule. Furthermore, the goals of the FRR could be broadened to include the saving motive and secure financial wealth for future generations. Moreover, the creation of a SWF could help ground the management of fiscal reserves on a market footing. In addition, adhering to international best practices may help the governance structure of SWFs. Recently, the Santiago Principles were established: these are a voluntary code of conduct governing investment policies, disclosure rules, and other parameters of SWF activity. Overall, the reserves management capacity should be strengthened. For the sake of smooth transition, the management of the SWF should be the responsibility of the central bank, which already has the capacity and experience in reserves management. Also, we call government to expand transparency, disclosure and accountability standards to state-owned companies and natural resource funds.

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