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THE INFLUENCE OF PUBLIC FINANCE ON ECONOMIC GROWTH IN THE DEMOCRATIC REPUBLIC OF THE CONGO DURING THE YEARS 1980-2007

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Abstract

The objective of this study is to evaluate and describe the influence of public spending on economic growth in the Democratic Republic of Congo in the years 1980-2007. In particular, the purpose is to explain here the role or the impact of the composition of public spending on economic growth in this country. Several studies have examined the relationship between public spending and economic growth, but the relationship between the composition of public spending and induced economic growth is a blueprint for economic analysis that deserves further attention. We have highlighted a non-linear relationship between public spending and economic growth across public expenditure components, thanks to a smooth transition model, the Vector Auto Regresie (VAR) method. Our results also specify the margins in which the different components of public spending can have a positive and significant impact on economic growth in this country.

JEL Codes: *H6, E5, E6, C23, O40*

Keywords **— Economic Growth, External Debt, Government Expenditures, Government Revenue**

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INTRODUCTION

1. Problematic

The state is considered as a public institution or a certain public power which needs the means especially financial to achieve its several objectives of political, security, economic and social order. To this end, the Congolese State has set up mechanisms of all kinds, based on public finances and several other financial systems that provide public revenue. The changes we are witnessing today in the economic and financial field, both nationally and internationally, challenge the public authorities about the particular importance of restoring their public

finances from reliable information. From the beginning of the 80s of the 20th century, the socio-economic situation of the Democratic Republic of Congo was characterized by the continuous deterioration of the macroeconomic and social indicators, thus dissipating the results realized in the different domains during the previous decades. From the 90s of the 20th century, the country entered a long phase of political transition marked by the weakening of the State in its attributions notably the security of the citizens and their goods, the provision of the public services and the management of all the national space. During this long period, governance in the Democratic Republic of Congo has been marked by mismanagement of public finances and the dysfunction of public institutions and their local or regional subsidiaries. Public finances are the science of covering public expenditures by fiscal, non-fiscal, leasing and borrowing resources. Generally, we are of the opinion that the functioning of the public finance management system in the Democratic Republic of Congo has for several years been seriously weakened, which does not allow it to assert itself as a modern state in the context of nations. Thus, it has often been noted that there is an imbalance between the means available to the administration and the need for the viability of the state. Indeed, in an environment where the culture of standards and respect for skills are lacking because marginalized to the detriment of the collective interest, public finances are less efficient. Hence, the need for all regions or national communities to absorb their role in improving the living conditions of the state and its citizens. In the Democratic Republic of Congo, public finances have always been at the center of the State's concerns, precisely because they play a predominant or even unavoidable role in the existence of States and in economic growth. Macroeconomic aggregation on which is based essentially the public power or also the economic dynamics, the public finances constitute an important lever of economic growth, and thus of the economic and social development. They condition the stability and viability of the state. Policies and strategies, institutions and structures are designed, created and implemented by States at the national, regional and international levels always taking into account their current or future impact on public finances [UMBA-Di-NDANGI, 2004, pp.6-7].

In light of all the above, we propose to answer the following questions:

- Can public finances be an economic stimulus tool in the Democratic Republic of Congo?
- What is the impact of Congolese public finances on the country's economic growth?

2. Hypothesis

Given the questions of our research, we hypothesize that the Democratic Republic of Congo, with its potential, must use public finances because they contribute, predominantly or unavoidable to the existence of States and growth economic. Indeed, our hypothesis is that during the period of under-study,

Congolese public finances had a negative impact on the country's economic growth; bad governance, war, looting, were at the base of this counter performance.

3. Interest of the subject

The interest of this study is to make available to any natural or legal person, public or private, involved in the financial life of the State, information on the importance of public finances in economic growth. This will make the use and management of public finances efficient, rational and responsible in the Democratic Republic of Congo.

4. Methodology of the work

According to the Greek etymology, the word "method" signifies path, pursuit, reasoned sequence, means for an end, generally intellectual, and also with a view to obtaining technical results4. The technique as for it, is the set of the processes of an art, a science, a trade.

For a good presentation of our work, and in order to carry out our study, we used the inductive method, and the vector model auto regresive (VAR) to make a good analysis of our data. The inductive method consists of describing the components and elements of the phenomenon and deriving the typical characteristics. As for the autoregressive vector model (VAR), it consists in linking the variables based on the evolution of the data themselves. With regard to the techniques, we used the documentary technique which facilitated the collection of the information through the books, the notes of the courses, the magazines and other documents related to the subject. We also used the interview technique to properly understand the reality of the public finance problem.

5. Delimitation of the subject

In this study, we will discuss the role of public finances in the economic growth of the Democratic Republic of Congo over the period from 1980 to 2007.

6. Subdivision of work

Apart from the introduction and the conclusion, our research has three parts. The first deals with generalities, the second presents developments in macroeconomic aggregates and the third analyzes Congolese public finances.

Part 1. General information on public finances

To better clarify the theoretical and conceptual framework of this study, it is important to explain the key concepts. This is how this first chapter confides the task of explaining the main recurring tools of our analysis.

1.1. The notions of public finances

Public finances are the study of rules and operations relating to public money. According to the organic criterion, public finances can also be presented as the set of rules governing the finances of the State, local authorities, social security organizations, public institutions and all other legal entities of public law. It is a field at the crossroads of tax law, constitutional law, as well as public

accounting. Public finances are part of the social sciences and their purpose is the study of the public financial phenomenon in its entirety: resources, charges, treasury, budgetary and accounting procedure, budgetary policy ... and whose main protagonists are the states, local authorities, businesses and public institutions as well as social and international organizations.Within the general finance sector, public finance concerns financing, budgeting and accounting:

- intergovernmental bodies at the regional (eg European) or global level, in particular the ECB, the EIB, the IMF and the World Bank. This is the field of international public finance;
- States and other local authorities (regions, departments, municipalities). In most countries, the central institution for public finance is the Ministry of Finance;
- central banks;
- Parastatal bodies (eg social security, public services not granted to the private sector, etc.).

The general expression "public finances" refers to all the elements that relate to the budgets of the various public administrations (the State at large) [J.Yves CAPUL and Olivier Garnier, 2008, pp. 25-27]. Public Finance is the science of covering public spending by fiscal, non-fiscal, leasing and borrowing resources. They are a subject regulated by all the successive institutions of the Democratic Republic of Congo. Finances are not only a reflection of the economy, they also reflect the state of the economy and the political structure of the state. Financial transactions are linked to political events that affect the lives of states. The correlation between the good politics of the state is reflected in the situation of its finances; it affects its revenues and expenses. Maurice Duverger in his book "Public Finance" defines public finances as the science of the means by which the State procures and uses the resources necessary to cover public expenditures, by the distribution among individuals of the resulting burdens. [Maurice DUVERGER, quoted by Nathalis MBUMBA NZUZI, 2008, pp. 26-27]. Public Finances, especially with regard to revenues, react to economic developments (economic situation): a recession is reflected in a fall in income and in deficits, while a period of boom leads to an increase in revenues and surpluses. The cyclical balance corresponds to the share of deficit or surplus attributable to an under-exploitation or an overexploitation of the capacity of the economy (cyclical deficit). The structural balance, whether a surplus or a deficit, measures the fiscal imbalance in the event of normal exploitation of the economy's capacity. A structural deficit does not come down on its own. It indicates the extent of the necessary remediation that must be achieved through a reduction in spending or tax increases.

1.2. Importance and role of the State - Components of Public Finances

Public Finance deals with the financial aspect of the State's action. In fact, "they are a necessary gateway to almost any economic and social policy" [LOWENTHAL, 1996, p.3]. Since Public Finance plays an irreplaceable role in the implementation of projects, we understand that the government attaches considerable importance to the area of Public Finance. In the decades prior to the Second World War, the focus was on the merits of the market and public failures of market balance. The state played only a trivial role in the economy: it remained in the fields of intervention (regulatory framework of the functioning of the markets, defense, health, education, infrastructures, protection of the poorest, ...) which must justify a large budget [MUBAKE MUMEME, 2007, pp. 28-29]. Proponents of this trend believe that the market is able to self-regulate and achieve equilibrium. It should be pointed out that the fundamental theorem of market equilibrium is based on equilibrium assumptions concerning goods and services produced and traded on the market. This equilibrium states that in the market, consumers and producers get a high level of utility satisfaction and a high level of profit maximization. This is the reason why, the said theorem supposes a pure and perfect competition framework. But in reality, there are producers and consumers in the market who are harmed because of the presence of its imperfections, all of which result from non-competition situations. Of all these imperfections, the balance of the market is seen in the need to be improved or redeveloped. From this there must be another agent outside the market who is able to deal with it. This is why the presence of the State through Public Finance to come regulate these inequalities.

The intervention of the state in an economy can be summarized in three points, namely:

- the allocation of resources;
- The distribution of income and wealth and;
- The satisfactory development function of the economy (regulation).

By allocating resources, the State facilitates the market (competition), modifies the rules of the game when market rules do not apply; it replaces the company when the market can not exist, that is to say for the satisfaction of collective needs. State intervention in the distribution of income and wealth responds to the reasons of equity and social justice. Finally, through the function of satisfactory development of the economy, the State intervenes to ensure full employment, price stability through the promotion and expansion of demand and the maintenance of external equilibrium. balanced and continuous growth of wellbeing (Keynesian revolution). It should be added that the modern state also produces goods and services similar to those of the enterprises and sells at a certain tariff (intermediate enterprises of the national companies with a status more or less close to that of the private companies, ... gives subsidies private and national enterprises). In the end, the state defines the rules that must be respected by individuals and businesses in the economic field [MUBAKE MUMEME M.,

2001, pp.25-26]. The preceding literature gives the quintessence of the role of public finances in the economic development of a nation. The components of public finances appear as the financial relations that are formed between individuals, businesses and public authorities, placing them at the heart of the macroeconomic financial circuit. They (public finances) are composed of:

- The government's disposable income which is the sum of gross primary income and net current transfer. In this case, expenditure is required to obtain the capacity or the financing needs of public authorities;
- Gross primary income, which is the total income earned as part of the production process;
- Net current transfers are the difference between transfers received and transfers paid;
- From public consumption covers the general government operating expenses (personnel, goods and current services, ...), fixed capital transfers (GFCF) correspond to public sector investments [Michel MUBAKE MUMEME., 2001, pp.25-26].

1.3. State budget

The state budget is a legal document that is often passed by the legislature and approved by the chief executive or the president of the republic. This is the annual budget that the state holds, that is, all accounts describing government revenues and expenditures for a calendar year. The state balances it by means of indebtedness (if necessary), or by placing surpluses.This budget falls within the broader framework of the general government budget.

We can also say that the state budget is a document established by the government and voted by the Parliament which provides for and defines the expenditures and revenues that the state is entitled to incur and collect for the year to come. The budget (or budget law) which determines the State's expenditure and revenue, is proposed each year in October by the Government to Parliament.

Once voted in plenary, it is sent to the Senate which must adopt it in the same terms. In case of disagreement, the bill of finance returns to the Assembly. Parliament actually has a power limited by the 2006 Constitution: it can not fundamentally change the text submitted to it by the government. It can only make changes called amendments; the government must have accepted them. The Government has, in the Constitution of the 3rd Republic, the power to vote the draft budget, which it has developed, using a major weapon, Article 49, paragraph 3, which commits his responsibility on the vote of his text. The government runs the risk of being censored by MPs, that is, having to resign; but this risk is limited: the members of the majority will hesitate to overthrow a government of their tendency, and the whole text is then adopted without discussion.

State expenditure:

- reimbursement of the public debt, ie the debt burden (repayment of principal and interest;
- the administrative expenses of the administrations;
- investment expenses (purchase of new equipment);
- economic intervention expenditures (eg subsidies to the SNCC);
- social intervention expenditure (eg RMI);
- military expenditures.

Public spending includes not only state but also local government expenditure. Since the decentralization law of 2006, municipalities, departments and regions have seen their area of expertise expand. Half of their expenditure is financed by the State; the other half comes from local taxes.The State also contributes to the financing of the budget of the European Community.

State revenue

We distinguish :

- direct taxes paid directly to the public treasury by taxpayers (eg personal income tax, corporation tax);
- indirect taxes that are collected on the occasion of an expense: VAT.

The revenues of the State are distributed as follows:

- VAT: 49%
- The personal income tax (IRPP): 21%;
- corporate tax (IS): 8%;
- other taxes: 22%.

VAT: indirect tax (we pay it every time we consume). It is better accepted by taxpayers because, being incorporated into the price, they do not notice it. But it is socially less fair than the income tax. Indeed, a household with a low income, devotes almost entirely to consumption, and will be taxed on the totality of its income, which is not the case of a well-off household.

The personal income tax (IRPP). In the French tax system, the tax is calculated according to a declaration of income that each taxpayer draws from his income from the previous year.

All the other countries have a system of withholding tax: it is the employer who calculates the tax and levies it directly on the payroll of his employees to return it to the State.

The personal income tax (IRPP) accounts for only about one-fifth of the state's tax revenue; it is relatively low compared to most developed countries. This situation is open to criticism: the progressivity of the income tax makes it a fairer tax than VAT. Its base (all the income it hits) is reduced: only 50% of the French pay the IRPP, of which almost a quarter pay personal income tax (IRPP) only 5 % of their declared income.

Corporation tax (IS).

Corporate tax (IS) affects corporate profits. The tax rate is 36.6% for EG (large companies) and 20.9% for small and medium enterprises (SMEs). This rate is comparable to that of other major industrialized countries. Other tax revenues: Solidarity Tax on Wealth (ISF), Registration and Stamp Fees, Domestic Tax on Petroleum Products (TIPP), Customs duties, etc. Revenue from local authorities: the main resource of local authorities is the business tax. This tax, whose base consists essentially of wages paid by companies, is accused of aggravating the cost of labor and curbing the hiring.

The balance of the budget and its regulations

The state budget may have a surplus, balanced, or deficit balance. A deficit balance raises the problem of its financing. The causes of a budget deficit: in a recession (slowdown in GDP growth), the slowdown in activity has the effect of reducing tax revenues:

- the personal income tax (IRPP), because unemployment is rising and the number of taxpayers is decreasing;
- corporate tax (IS), because companies make less profit;
- VAT, because consumption is declining.

The settlement of the budget deficit: the state borrows the sums that it lacks. The more the State borrows, the more the public debt increases, leading to an increase in the debt burden, ie the amount of interest to be paid to the creditors of the State.

The state budget is the act by which the revenues and expenses of the state are planned and authorized for a calendar year. It consists of a set of accounts that describe all the resources and all the expenses of the State and the ministries. The state budget is set by the finance laws that are the subject of a vote by Parliament:

- the initial finance law (BIA), which provides for and authorizes all state resources and expenses.
- Amending finance laws (LFR) or "collective budget" amend the provisions of the BIA during the year;
- the settlement law that sets the final amount of the budget's income and expenditure, as well as the budget result (deficit or surplus).

The revenues consist mainly of direct taxes (income tax, corporate tax, etc.) and indirect taxes (VAT, fuel tax).

The expenses consist of:

- operating expenses of public services,
- capital or investment expenditures,
- intervention expenditure in the social, economic and international fields,
- the payment of interest on the public debt.

The balance of the State budget is ensured by means of the debt if it is in deficit or investments in case of surpluses. The budget consists of all the accounts that describe, for a calendar year, all the resources and all the permanent expenses of the State [Alain BEITONE & Cie, 2001, pp.35-36]. Jean Marie ABOLA defines it from an economic point of view as an act that establishes a projected income and expenditure plan in the context of the great macroeconomic balance pursued by the government [ABOLA J.M., Op. Cit, p.18]. On the legal level, it is a legal act, by which the representatives of the people decide on state resources, evaluate their amounts, agree the expenses that the executive can make and set the limits. On the economic and social level, the budget is also an act but a forecast of the actions to be taken in revenue and expenditure, by the State, so as to obtain a given behavior of the economic agents favorable to the achievement of the economic and social objectives [BIBOMBE MUAMBA, 1993, pp.36-37]. Seen in this light, the budget is very important in that it aims at a macroeconomic framework in the sense of KALDOR's magic square. Thus, in a general way, the budget is a document containing the forecasts of expenditure and revenue of the State.

1.3.1. Public revenue

They are the resources of the State constituted of taxes and non-fiscal products (receipts from privatizations, receipts from state merchant production such as armaments). In the Democratic Republic of Congo, income and expenditure are divided mainly into current receipts and expenditures, which actually increase or decrease the assets of the State, and income and capital expenditures that modify the form of the collective patrimony without increasing or decreasing it. value, in principle at least [Magain A., Brussels, 1946, pp.90-91]. Public revenues are sensitive to the political events that mark the activity of the state. Thus, they lead to borrowing and raising taxes. The scale of political operations reflects the importance of financial operations. Capital receipts consist of proceeds from domestic loans, external loans and grants, donations and legacies granted and accepted in the legal form, sales of real estate, participations and movable property.

1.3.2. Public expenses

Public expenditure is defined as the total expenditure of public administrations (state, local authorities and social security organizations). One could say that it is not easy to give a single definition of public expenditure, because of the progressive interpenetration of the "public" and the "private". In an attempt to simplify, it may be said that a socio-economic definition tends to replace the legal definition [Buabua wa Kayembe Mubadiate, 2009, pp. 3-4].

Public expenditure refers to all general government expenditure (state, local authorities and social security). Until the beginning of the twentieth century, the concept of public finances was primarily concerned with the state budget. The approach is now more economical and the national accounting leads to interest

in the finances of all public administrations. It improves the understanding of the major trends at work in the evolution of the structure of public expenditure.

1.3.3.Evolution and determinants of expenditure.

According to the American economist Richard Musgrave, public spending can fulfill three functions:

o resource allocation: to finance public goods and services;

o redistribution: to correct inequalities;

o Macroeconomic stabilization: to smooth cyclical variations in activity.

These three functions are found as variables that affect the dynamics of evolution of public expenditure.

In 2007, consolidated government expenditure (that is, after elimination of cross-flows between public administrations) amounted to CDF 1 068 billion, or 56% of GDP. They account for 45% of social benefits, for 6% of investments, for 10% of various subsidies and for 4% of public debt interest. Operating expenses (public payroll and intermediate consumption) represent 35% of the total. Over the period from 2002 to 2007, the share of public expenditure in GDP increased significantly. It accounted for about 35% of GDP in the early 1980s, almost half in the mid-1990s and has now exceeded that threshold since 2001. This general tendency confirms Wagner's law. According to economist Adolph Wagner, "the more civilized society becomes, the more expensive the state". In other words, the more an economy develops, the more the state tends to intervene. As the population's income grows, it increases its consumption of higher goods (culture, education, health), but it does so more quickly than its income allows. The state invests to meet this new demand and increases its spending in a dimension more than proportional to the growth of the population's income.

In the long term, this change in public spending in France is attributable to the sharp rise in social benefits (mainly sickness and old age). Then comes the debt burden, the increase of which is a direct consequence of the rise in the public debt (note that in the recent period the fall in interest rates has reduced the weight of this burden in GDP). Operating expenditure increased slightly as a share of GDP, but its share of total public expenditure fell (due to the increase in the share of social benefits in expenditure). The weight of public investment fell back in the 1980s, although the trend was interrupted between 1998 and 2009 (+0.2 point of GDP) due to the dynamism of local investment. With regard to the relative weight of the sub-sectors, there has been a sharp increase in the size of local budgets (due in part only to decentralization) and the rapid increase in social spending by communities. At the same time, the relative weight of the state in public spending has narrowed.

However, the average rate of increase in volume of public expenditure has generally slowed down. Since the end of the 1990s, its rate of growth has stabilized at around 2% per year (some "peaks" are easily identifiable, especially

at the time of the major fiscal stimuli in 1975 and 1981 - in 2009, the increase in volume is also close to 4% due to the implementation of the recovery plan).

1.3.4. Role of public capital expenditure

Public capital expenditures are those made up of investments made by the State (development and major maintenance expenditure, land and real estate assets, construction, building, industrial and commercial installations and their repair, purchase of machinery, other equipment , Accompanying investment expenses of equity investment (capital contribution) and public and para-public bodies as well as equity investments in private enterprises, finally para-public investment grants, private companies, organizations and Not-for-Profit Societies The age-old debate between economists about the nature and role of public power in a modern economy is fueling economic science, and David Ricardo, for example, sees public spending as such a waste that he did not even think it necessary to talk about it. the market can do anything and consequently the state must withdraw from the general Keynesian theory of a voluntarist policy of the public authorities. In the 1920s, Pigon and Dallon established a general budget principle: "Public expenditure must be pushed to the point where the marginal social benefit it generates compensates exactly the marginal social cost entailed by the withdrawal of financial resources". As a reminder, and in spite of the approaches, public expenditures denominated in terms of investment expenditure, public consumption and transfer have an impact on economic activity through their spillover effects or "multiplication" effect. Public expenditure has a multiplier effect on production comparable to that of investments. This is what is meant by "fiscal stimulus", that is to say that the public authorities decide on a series of expenditures which, through their effects on public orders to businesses, employment (and, therefore, on consumption), revive an economic machine handicapped by the recession.

Hence the equation:

$$\frac{d_y}{dG_0} = \frac{d_y}{dG_0} = = \frac{1}{1 - G} \rightarrow \blacktriangleright k$$

1.3.5. Evolution of public expenditure by nature of 1990 to 2007 (in millions of US $)

Years	Public Debt Remuneration	Public debt	Grants and transfers	Operating costs	Capital expenditure	Other (*)	Total
1990	301,50	257,60	111,90	473,00	129,50	127,80	1410,30
1991	359,70	173,20	28,70	571,70	124,80	6,20	1264,50
1992	210,70	221,80	81,90	879,00	159,60	40,50	1593,50
1993	182,80	171,60	34,30	746,20	155,50	89,60	1380,00

1994	73,40	49,30	15,40	127,30	31,40	2,50	299,30
1995	94,30	26,40	18,30	103,50	17,60	2,10	262,20
1996	41,00	46,50	15,50	138,30	26,60	0,20	268,10
1997	85,69	24,58	14,97	178,07	28,86	9,67	311,84
1998	335,41	15,67	23,94	175,66	5,86	0,00	556,54
1999	517,40	274,88	20,40	279,90	137,80	134,80	1365,18
2000	319,20	3,21	32,80	327,50	33,50	341,40	1057,61
2001	116,30	2,64	24,80	102,70	8,20	71,80	326,44
2002	109,00	72,92	18,80	89,30	13,10	72,70	375,82
2003	138,60	159,52	44,20	136,40	34,80	60,60	574,12
2004	241,40	168,50	33,00	275,10	52,00	71,60	841,60
2005	300,20	231,90	55,80	383,40	57,70	83,21	1112,21
2006	403,70	156,40	97,10	451,20	67,90	130,10	1306,40
2007	589,10	135,40	144,10	455,40	28,40	167,50	1519,90

Source: Prepared by author based on data from Central Bank of Congo

(*) Unallocated expenditure, expenditure to be regularized, HIPC payments, extorn Source: Central Bank of Congo, from OBSAM Report 2007

Total Democratic Republic of Congo government expenditures fluctuated during the periods covered by the study compared to the base year (1990). The following year saw a decrease, and a change in 1992 to fall in 1993, and a sharp decline in the years 1994, 1995 and 1996. From 1997, public expenditures begin a new stage positive to 1999 and are downgraded in the years 2000 to 2004. The years 2005 and 2006 mark a small positive evolution compared to the previous five years, while the year 2007 high compared to the base year.

Looking at all the years in Table 3, we notice that the DRC's public spending is changing somewhat negatively during the period under study.

Table n ° 4: Evolution of expenditure in% of GDP

Years	Remuneration	Debt public	Grants and transfers	Operating costs	Capital expenditure	Other (*)	Total	GDP (in millions of USD)
1990	3,32	2,76	1,20	5,06	1,39	1,37	15,08	9,3497
1991	3,96	1,91	0,32	6,29	1,37	0,07	13,91	9087,96
1992	2,57	2,70	1,00	10,71	1,94	0,49	19,42	8206,24
1993	1,71	1,60	0,32	6,97	1,45	0,84	12,89	10707,78
1994	1,26	0,85	0,26	2,19	0,54	0,04	5,14	5820,38
1995	1,85	0,52	0,36	2,03	0,34	0,04	5,13	5109,48
1996	0,78	0,88	0,29	2,62	0,50	0,00	5,07	5286,59
1997	1,45	0,42	0,25	3,01	0,49	0,16	5,79	5908,26
1998	8,18	0,38	0,58	4,28	0,14	0,00	13,58	4099,62
1999	10,48	5,57	0,41	5,67	2,79	2,73	27,66	4935,62
2000	7,42	0,07	0,76	7,61	0,78	7,93	24,58	4302,70
2001	1,71	0,04	0,36	1,51	0,12	1,05	4,49	6812,24
2002	1,96	1,31	0,34	1,61	0,24	1,31	6,77	5547,79
2003	2,44	2,81	0,78	2,40	0,61	1,07	10,12	5675,69
2004	3,70	2,58	0,51	4,21	0,80	1,16	15,52	6530,25
2005	4,19	3,24	0,78	5,35	0,80	1,16	15,52	7168,37
2006	4,65	1,80	1,12	5,19	0,78	1,50	15,04	8688,39

2007	5,81	1,34	1,42	4,50	0,28	1,65	15,00	10130,76

Source: Prepared by author based on data from Central Bank of Congo

(*) Unallocated expenditures, accruals, HIPC payments, reversals

This table shows that since 1990, government spending on both final goods and services and investments has been small. It can be deduced that the size of the state in the creation of wealth in the Congolese economy is low. This is all the more true since State expenditure is low, the importance of the state in the overall demand, and hence in the domestic production, is also. During the 1990s, total expenditures rose from 15.08% of GDP in 1990 to 27.66% in 1999 after hovering around 5% and 6%, without exceeding the 6% threshold between 1994 and 1997. After the peak reached in 1999, public spending will fall to 24.58% in 2000. And since then, they fall sharply, to 4.79% of GDP in 2001, to rise slightly to 6.77% of GDP in 2002 and a little more in 2003 (10.12%) and 15% in 2007. We find that the size of the state has been steadily dwindling over the last 18 years, yet there is a relationship between government spending (G) and the volume of economic activity. We understand then why production. The interior of wealth has steadily diminished and, moreover, it is evolving at a highly disturbed rate, characterized by an untimely succession of crises to short cycles of growth that do not absorb unemployment. The following table n ° 5 shows the evolution of the expenditure as a percentage of their total amount, as a result, the small part of the capital expenditure.

Table 5: Evolution of expenditure (in% of Total) from 1990 to 2007

Years	Remuneration	Debt public	Grants and transfers	Operating costs	Capital expenditure	Other (*)	Total
1990	22,02	18,27	9,93	33,54	9,18	9,06	100,00
1991	28,45	13,70	2,27	45,22	9,87	0,49	100,00
1992	13,22	13,92	5,14	55,16	10,02	2,54	100,00
1993	13,25	12,43	2,49	54,07	11,27	6,49	100,00
1994	24,52	16,47	5,15	42,53	10,49	0,84	100,00
1995	35,96	10,07	6,98	39,47	6,71	0,80	100,00
1996	15,29	17,34	5,78	51,59	9,92	0,07	100,00
1997	25,07	7,19	4,38	52,09	8,44	2,83	100,00
1998	60,27	2,82	4,30	31,56	1,05	0,00	100,00
1999	37,90	20,14	1,49	20,50	10,09	9,87	100,00
2000	30,18	0,30	3,10	30,97	3,17	32,28	100,00
2001	35,63	0,81	7,60	31,46	2,51	21,99	100,00
2002	29,00	19,40	5,00	23,76	6,06	10,56	100,00
2003	24,14	27,79	7,70	23,76	6,06	10,56	100,00
2004	28,68	20,02	3,92	32,69	6,18	8,51	100,00
2005	26,99	20,85	5,02	34,47	5,19	7,48	100,00
2006	30,90	11,97	7,43	34,54	5,20	9,96	100,00
2007	38,76	8,91	9,48	29,96	1,87	11,02	100,00

Source: Prepared by author based on data from Central Bank of Congo

(*) Unallocated Expenditures, Expenditure to Be Settled, HIPC Payments, Excludes Source: ADB, Op. Cit.

Considering that it is capital expenditure, mainly, factories, infrastructures such as roads, ports, airports or gross human capital formation (education, health

expenditure), which act on the wealth creation, it is easy to understand why there is a slowdown in growth for as many decades. On the other hand, or understand why, in the case of visibly providential growth, unemployment that has become structural has not been eliminated, nor can hyperinflation be defused. We went from a growth rate of 9.7% in 1970 to 6.3% in 2007 while capital expenditures compared to current expenditures (remunerations, payment of public debt, subsidies and transfers, operating expenses) fell from 23.18% of total expenditures in 1970 to 1.87% in 2007. Can the future of future generations be guaranteed without basic infrastructure, without adequately maintaining the productive forces, without appropriating the advanced technologies, or in a word without any useful expenses? The following tables 6 and 7 respectively show the forecasts as well as the achievements of the State's expenditures during the period 2000 to 2007.

Table n ° 6: Evolution of the State expenditure forecasts from 2000 to 2007 (in millions of current FDCs)

Topics	2000		2001	2002		2003		2004		2005		2006		2007	
Current expenditure	14	855	49 372	92	551	157	985	243	910	354	176	360	876	623	580
Capital expenditure	6	035	3 227	49	463	72	433	143	727	225	328	240	641	294	347
Budgets Appendices		696	3 261	1	500		510	1	556	1	680		0	1	743
Expenditure for order		302	2896		200		1959		0		0		0	9	539
Public debt and financial expenses	2	778	3 393	48	191	92	166	94	809	171	507	225	048	376	381
HIPC expenditures		-	-	–	-	9	667	44	331	53	478	38	150	7	146
Exceptional expenses		-	-	–	-	–	-	–	-	–	-	178	846	57	574

Source: Ministry of Budget, Directorate of Budget Preparation and Monitoring.

We note that the expenses for order and related budgets have not gone upwards because they remain in the first year almost lying on the abscissa axis. In the

same way, current expenditure has increased remarkably in the first year; its curve is always increasing; they are followed by capital and public debt and financial expenses which also have an increasing curve.

Table 7: Evolution of the achievements of State expenditure from 2001 to 2007 (in thousands of current CDFs)

Topics	2001		2002			2003		2004			2005			2006			2007		Total		
Remuneration	24 03	171	37 752	699	56	123	118	24149	118	142	2420	050	188	953	469	197	204	069	670	454	858
Public debt	544	777	25 264	324	64	607	132	378779	327	109	8811	538	73	189	939	52	911	044	364	278	081
Grants and transfers	5 125	331	6 518	496	17	911	417	34133	521	26	4300	117	45	453	966	49	663	366	154	516	214
Operation	21 216	123	30 945	982	55	257	231	269755	941	180	6677	736	211	197	354	181	109	385	707	369	752
Capital expenditure	1 693	582	4546	989	14	084	737	58233	986	27	3227	851	31	798	040	12	023	201	97	298	386
HIPC expenditures	–	-	–	-			-		-	12	7006	1911	19	389	007	8	559	979	40	655	177
Expenditure to be regularized	14 384	001	25 126	127	24	536	192	22005	876	23	0341	8112	41	037	548	41	523	273	171	847	829
Reversal	–	-	–	-			-		-	2	679	404		474	142			-	3	153	546
Other non-ventilated	447	098	–	-			-		-			-			-			-		447	098
Total	67 441	083	130	225 546	232	519	991	1004477	769	524	9699	699	611	493	465	542	994	317	210	091	870

Source: BCC, Different digests of statistical information.

We find that the state expenditures made during this period change in a positive way because no year has reached a level lower than or equal to the reference year (2001) which records 3.05% of the expenditure. realized during the seven years.

1.3.6. Budget and public deficit

For any budget, the equality of revenue and expenditure corresponds to a balanced budget. The budget balance is therefore the difference between all the receipts and all the expenses of the state budget. This balance may be positive or negative. It is described as deficit when the State expenditure exceeds the revenue, on the other hand, it is qualified surplus when the revenues are higher than the State expenditure. A large budget deficit may indicate some imprudent government, but too large a surplus is not necessarily recommended, as it can draw too much money from the economy, with deflationary effects on economic activity. IMF, 1999, pp. 46-47]. Fiscal policy is an important topic of controversy. Some, supporters of the liberal system of public finances, are attached to a certain financial orthodoxy, that is to say the respect of two main principles: the neutrality of the budget and the absence of budget deficit. Neoclassical theorists are in this current. In their view, the budget deficit would create perverse effects on the entire economy whatever its mode of financing. Others, in favor of a voluntarist policy, criticize the dogma of balanced budgets as a guarantee of sound management of the economy [BIALES, M., LEURION, R. and RIVAUD, J.L, 2004, pp. 372-374].

It is understood as the negative balance of state budgets of local authorities and social security. It is the public deficit of the central government of a country, reported annually to GDP. The public deficit results from the difference between, on the one hand, current receipts, capital receipts, and public donations received, and on the other hand total expenditures and loans, less repayments [IMF Report, 1999, pp. 47-48]. GDP is an economic aggregate that indicates the relative level of wealth production of a country. It results from the sum of the wealth produced by the different sectors of the economy (agriculture, industry, etc.). The public deficit, by contributing to the indebtedness of a country, is a sign of unsustainability. In relation to GDP, the indicator measures the annual contribution to the total public debt, and in what proportion it weighs on the national economy. However, the indebtedness of a government is sometimes necessary, in order to develop the structures and the conditions of a sustainable development.

1.3.6. External public debt

By definition, public debt should not be confused with the public deficit. This represents all the loans contracted by the State, in particular to finance the public deficit, local authorities by the social security bodies. We can still say that the public debt is, in the field of public finances, all the financial commitments made in the form of loans by a State, its public authorities and its organizations which depend directly on it (certain public companies, the organizations social security, etc.). The public deficit appears when the products (mainly tax revenues) are lower than the general government expenditures (mainly budgetary expenditures). This difference between expenses and revenues is assessed over a

legal period, usually the calendar year. The public debt increases each time a public deficit is financed by the loan. The public debt thus represents the accumulation of the financing needs of the successive periods of these administrations. Debt is most often in the form of government bonds. The repayment capacity of public debt issued by governments and public authorities is assessed by rating agencies. The least reliable countries, in terms of financial markets and rating agencies, may use commercial banks or international institutions (World Bank, International Monetary Fund, Regional Development Banks). Within the public debt, we distinguish the domestic public debt, held by the resident economic agents of the issuing State and the external public debt, held by foreign lenders. Short-term (one year or less), medium-term (up to ten years) and long-term (over ten years) debt are also distinguished. In macroeconomics, therefore, public debt is distinguished from household debt or corporate debt.

In economics, external debt refers to all debts that are owed by a country, state, business and individual to foreign lenders. It is important to distinguish between gross external debt (what a country borrows externally) and net external debt (the difference between what a country borrows from abroad and what it lends to the outside world). 'outside). What is most significant is the net external debt. Too high a level of external debt is a significant country risk factor: in the event of fluctuations in the national currency, the amounts of interest and principal of the external debt, if denominated in foreign currency, can quickly reverse lever lead to the economic crisis or even the lack of repayment. This was the case during the Asian crisis in the 1990s for example, in the absence of any negative rating of risk in the World Bank reports. The level of the external debt is part of the financial risks assessed at the same time by the rating agencies, as we saw during the Greek crisis of 2010. This category includes all the loans of economic agents of a country (State, but also companies) vis-à-vis foreign lenders, refundable in foreign currency or goods and services.

1.3.7. Public debt and its usefulness - theoretical analysis of the public debt

Roland Dumont thinks that external borrowing can be used to finance the current account deficit of the balance of payments, the amortization of debts previously contracted, or the replenishment of foreign exchange reserves [Roland DAUMONT & Cie, 2010, pp.158- 159]. In addition, borrowing is a way to finance additional consumption or investment, a complement to domestic savings. The public debt is analyzed in the context of the temporal management of public finances, inter-generational transfers, management of shocks (war, destruction of infrastructures, ...), demography, growth rate of the economy, the level of interest rates and inflation ... The main currents of contemporary economic theory, neoclassical synthesis and neo-Keynesianism, advocate the practice of counter-cyclical fiscal policy to partially smooth the variations in output related to economic cyclicality. OECD countries practice this policy more

or less rigorously. However, electoral practices of politicians can lead to the practice of bad fiscal policies: governments in place typically increase public spending in the run-up to elections. The Keynesian school of thought advocated the implementation of stimulus policies that would have made it possible to sustainably increase production. But the repeated failures of the stimulus policies of the 1970s and 1980s in developed countries led them to stop these practices, which had brought their debts to very high levels. To these practical failures noted, Robert Barro gave a theoretical explanation in a famous article, in 1974: the increase in public spending favors the savings of economic agents (in anticipation of future taxes) and that this effect makes ineffective the recovery policies (principle of Ricardian equivalence). Nevertheless, this theoretical conclusion is not unanimous among economists, in particular because Barro refers to the theory of rational expectations, whereas economic agents are not very familiar with the laws of the economy or certain fundamental data, which is why makes them (apparently) not rational. As a result, some suggest that Ricardian equivalence must be handled with care and can not be systematically invoked as a reason for not resorting to public debt.

1.3.8. The economic dynamics of public debt

The public debt of the year is equal to the debt of the previous year to which the budget balance has been subtracted. In fact, from one year to the next, the debt decreases if the budget balance is in surplus: the surplus makes it possible to reduce the debt. On the contrary, if the budget balance is in deficit, the debt increases: the budget deficit of the current year is added to the public debt of the past. Debt is thus the result of the accumulation of past budget deficits. However, the budgetary balance is broken down into two elements:

1. the primary balance, which is the difference between the income of the year and the expenditure of the year, excluding payment of interest on the debt. If this balance is negative, we are talking about a primary deficit, if it is in surplus, of primary surplus.
2. the payment of interest due on past public debt and that the State must repay the current year.

Finally we have:

budget balance = primary balance – interest on debt and
debt of the year = past debt - budgetary balance

from which we deduce: budget balance $< 0 \Rightarrow$ debt of the year $>$ debt passed.

In noting the primary balance of the year, the interest rate and and the debts respectively of the year and the year:

and

This equation allows us to see that the debt depends on:

- the size of the past debt;

- interest rates;
- primary balance.

The higher the interest rates, the higher the debt, the more the government will have to generate a large surplus from its primary balance if it wants to reduce the public debt. This means that it is not enough for a State to have a balanced primary balance to stabilize its debt: it must also pay the interest on its past debt, which will be all the higher when the past debt is important. and that interest rates are strong. So that the debt is stable, it is necessary that the primary balance covers at least the repayment of debt service (capital + interest). If the past debt is very large, or if the interest rates are very high, the state, which has to pay very large interests, may not succeed: the debt will then grow from year to year in the way a "snowball": the part of the debt that the state can not repay for lack of sufficient own resources will be by subscribing a new loan, increasing by the same amount the past debt, or even the average interest rate .

1.3.9. Changes in the debt ratio in relation to GDP

However, the taxable matter growing with GDP, one of the indicators of the sustainability of the public debt is the debt ratio, that is to say the ratio between the public debt and the GDP. The evolution of this ratio will depend, in addition to the other variables already identified, also on the growth rate of the economy.

Debt ratio and growth rate

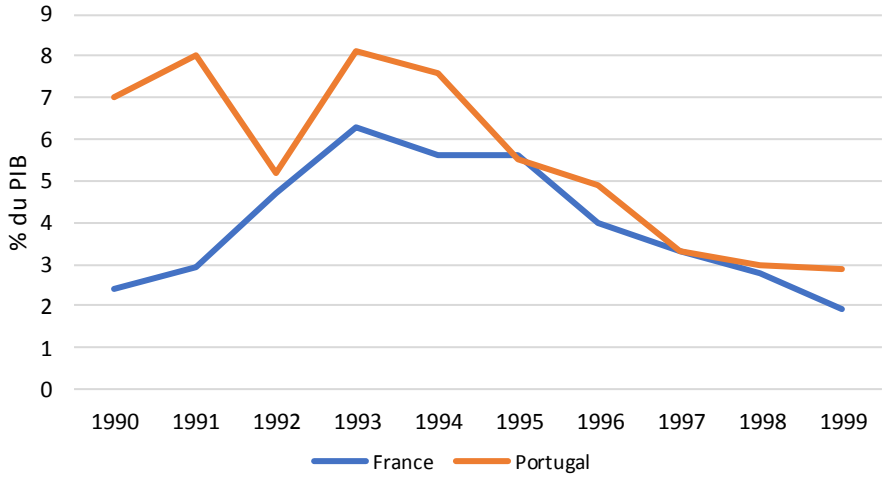

Chart 1: Budget deficit in France and Portugal in the 1990s

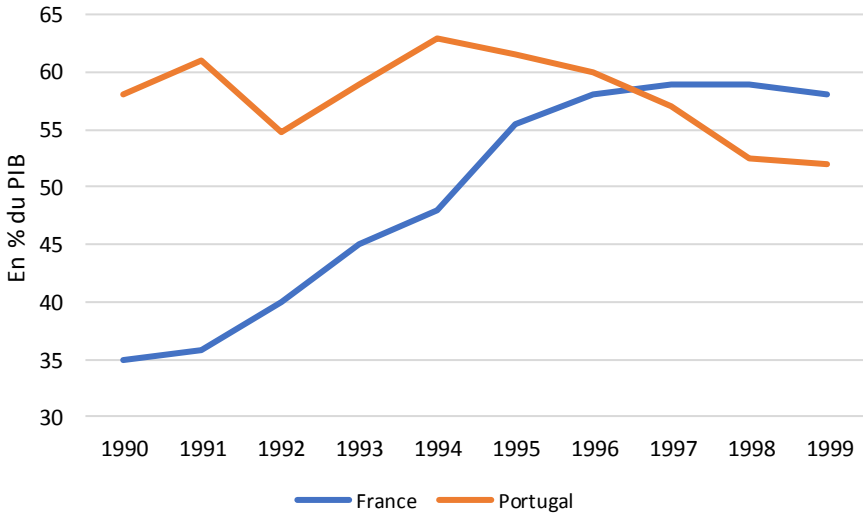

Chart 2: Public debt in France and Portugal in the 1990s

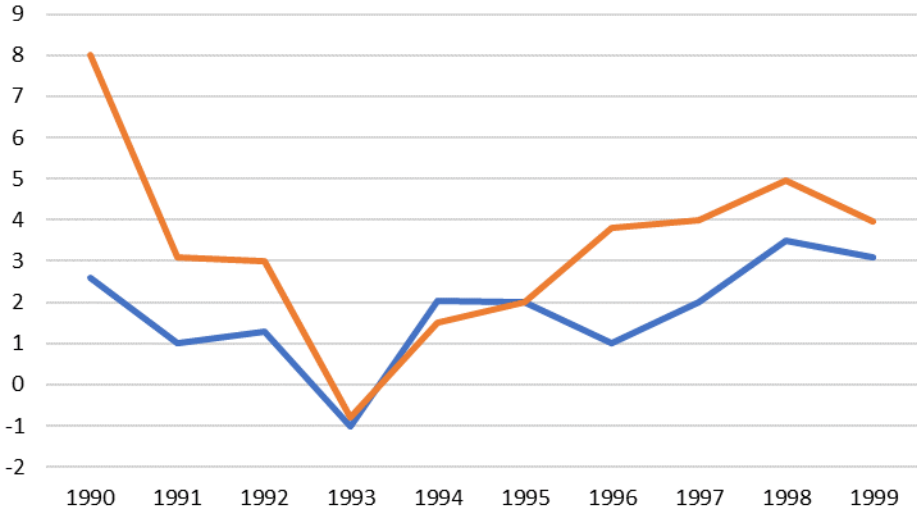

Chart 3: Growth rates in France and Portugal in the 1990s

A country's debt ratio as a ratio of GDP may fall as nominal debt stock increases: it is sufficient for debt to grow at a slower rate than GDP. Therefore, the link between deficit and the dynamics of indebtedness is not obvious. An example can illustrate this aspect. During the 1990s, France and Portugal

experienced very similar developments in their fiscal balances, with Portugal's balance generally showing a larger deficit than France's (Chart 1).

However, while the Portuguese public debt, measured in relation to GDP, fell by nearly 10 points of GDP, the French public debt experienced a very significant increase (Chart 2). These divergent developments in the debt ratio, even though the deficits were higher in Portugal, are due to the differential growth and inflation rates of the two economies (Chart 3). A key element of the dynamics of the debt ratio: the difference between interest rate and growth rate. As discussed in the previous section, the budget balance is a function of (a) the primary balance, which is a direct result of government decisions in the current year and (b) the payment of interest on the debt, which from past financial commitments. For a government, it is therefore relevant to know what type of primary balance it must release to maintain or reduce its debt ratio. This primary balance depends on the difference between the interest rate and the nominal growth rate (or the rate of growth of GDP in value, ie the sum of the real growth rate and the rate of inflation). Indeed, from the equation that had been reached in the previous section (see box), we can show that a State wishing to stabilize its

The dynamics of the debt

We have: $D_t = (1+r) * (D_{t-1} - SP_t$ (1)

To obtain these magnitudes in proportion to the GDP, it suffices to divide them by the GDP (Y_t):

$D_t/Y_t = (1+r)*D_{t-1}/Y_t - SP_t/Y_t$ (2)

Since $Y_t = (1+g)Y_{t-1}$, *(2)* can be written:

$D_t/Y_t = (1+r)/(1+g)*D_{t-1}/Y_{t-1} - SP_t/Y_t$ (3)

$d_t = (1+r)/(1+g)*d_{t-1} - sp_t$ (4)

$sp_t = (1+r)/(1+g)*d_{t-1} - d_t$ (4')

For public debt to be stable, one must know $d_t = d_{t-1}$.

Therefore :

$sp_t = (1+r)/(1+g)*d_{t-1} - d_{t-1}$ (5)

$sp_t = (r-g)/(1+g)*d_{t-1}$ (6)

Since g is small compared to 1, we can simplify (6) in:

$Sp_t = d_{t-1} (r-g)$

The **public budget balance stabilizing** the debt must then be greater than:

$- d_{t-1} . g_t$

debt ratio must have a primary balance relative to GDP equal to:

with the primary balance in relation to GDP (equal to SPt / GDP, dt-1, the debt ratio in year t-1 (equal to Dt-1 / GDP), r the nominal interest rate and g the nominal growth rate (ie, inflation included, since inflation has the weight of the public debt, the same effect as real growth) This relationship means that the primary balance that stabilizes debt depends on the difference between the interest rate and the growth rate.For more precisely, three situations can be distinguished:

1. If interest rates are equal to the nominal growth rate (r = g), a balanced primary balance (spt = 0) keeps the public debt stable.
2. If the interest rates are above the nominal growth rate (r> g), the primary balance must be in surplus (spt> 0) to keep the debt stable. If the primary balance is simply at equilibrium, then the debt increases. This is called the "snowball effect" of indebtedness: from year to year, debt will increase more and more. In the situation where interest rates are higher than the sum of real growth rates and inflation, a State wishing to stabilize its debt ratio is therefore forced to have a surplus of its primary balance all the more important that the difference between interest rate and nominal growth rate is strong.
3. If the interest rates are lower than the nominal growth rate (r <g), the primary balance may be in deficit (spt <0), without the debt increasing. If the primary balance is simply in equilibrium, the debt ratio decreases even from year to year.

Finally, two relationships are important in the dynamics of indebtedness [Kamba-Kibatshi M., 2015, pp.201-202]:

- Debt can be kept stable with budget deficits all the higher as GDP growth in value is high;
- Debt can be kept stable even if governments maintain permanent primary deficits, provided that the rate of growth is higher than the interest rate.

As a result, changes in indebtedness depend very much on the spread between interest rates and the growth rate. High interest rates therefore have a negative impact on indebtedness: if they are higher than nominal growth, they automatically increase the public debt, even with a balanced primary balance. If the gap between the two is very large, it can go up to a "snowball" effect, where the debt is no longer controllable, except to release very large budget surpluses. On the contrary, real economic growth and inflation have a positive impact on the debt ratio: if their sum is higher than the interest rate, this makes it possible to reduce the debt ratio, even with a deficit primary balance.

1.4. Economic growth and measures

Economic growth refers to the positive change in the production of goods and services in an economy over a given period, usually a long period. In practice, the most used indicator to measure it is gross domestic product (GDP). It is

measured "in volume" or "at constant prices" to correct the effects of inflation. The growth rate is the rate of change in GDP. Per capita GDP growth is often used as an indication of the improvement in individual wealth, assimilated to standard of living. Growth is a fundamental process of contemporary economies, based on the development of factors of production, linked in particular to the industrial revolution, access to new mineral resources (deep mines) and energy (coal, oil, gas, nuclear energy). ...) and technical progress1. It transforms people's lives to the extent that it creates more goods and services. In the long run, growth has a significant impact on the demographics and standard of living (to be distinguished from the quality of life) of the societies that are the setting. Similarly, the enrichment that results from economic growth can help to reduce poverty2 [ref. necessary] of this same society. Some consequences of economic growth such as pollution and damage to the environment, increased social inequalities or the depletion of natural resources (oil, metals in particular) are often considered as perverse effects that make it necessary to distinguish between growth and progress.

According to François Perroux, economic growth is "the sustained increase during one or more long periods of a dimension indicator: for a nation, the gross or net total product, in real terms". Economic growth is therefore the increase in the quantity of goods and services produced in a country during a given period. It is measured by the increase in real GDP. The term growth is therefore conventionally used by economists to describe an increase in production over the long term. In the short term, it is customary to use the term expansion that opposes recession or depression. Strictly speaking, growth describes a process of increasing economic output alone. It does not refer directly to all the economic and social changes in a growing economy. These broadly defined transformations are conventionally referred to as economic development. Growth is a fundamental process of contemporary economies. It transforms the lives of individuals by providing them with more goods and services. The term growth is used when we talk about the economy of a country, while development is a social change that can for example change the level and way of life of individuals. In the long run, the standard of living (which should not be confused with the quality of life) of individuals depends fundamentally on this growth. In the short term, demand can be the product of an increase in the population (increase in the labor force and therefore potentially production) or capital. However, over the long term, the increase of these two factors being necessarily limited, the growth comes from an increase of the productivity that is to say of an increase of the quantity of production obtained with the determined volume of work and capital. Economists use the term growth conventionally to describe an increase in production over the long term. According to François Perroux's definition, economic growth corresponds to "the sustained increase during one or more long periods of an indicator of dimension, for a nation, the

total net product in real terms. "Simon Kuznets' definition goes further and states that growth occurs when GDP growth is greater than population growth.

In the short term, economists use the term "expansion" rather than "recession", which indicates a phase of growth in an economic cycle. Potential growth estimates the difference between measured growth and that achieved with full utilization of all factors of production; this gap is minimal at the height of an expansion. Strictly speaking, growth describes a process of increasing economic output alone. It does not refer directly to all economic and social changes in a developing economy. These transformations in the broad sense are, conventionally, designated by the term of economic development. According to François Perroux, "development is the combination of the mental and social changes of a population that makes it able to grow, cumulatively and sustainably, its overall real product. The term "growth" then applies more particularly to already developed economies. The UK Government's Commission for Sustainable Development points out that it is important to distinguish between three notions that "are not absolutely the same things":

- the growth of biophysical flows (energy and materials);
- the growth of the monetary value of production (GDP);
- the growth of the economic well-being of the population.

Economic crescentism is considered to be the ideology of growth as opposed to decreasing philosophy. The most used indicator for measuring the growth of the national economy is GDP. This aggregate is defined as "the sum of the values added by the resident units". The evolution of the operations is carried out in gross terms (depreciation included). Growth is measured from annual growth rates of real GDP (ie constant prices). But the measurement of this GDP poses the following problems:

- The measure of production in volume supposes a deflator, that is to say a price index by which one will divide the index of the production in value (at the current prices) to obtain an index of the growth in volume . This raises the whole problem of the construction of price indices;
- Even when the measure is done at constant prices, the output is evaluated in monetary terms, that is to say that the aggregate of the heterogeneous goods is done thanks to the prices.

Strictly speaking, this is only legitimate if the prices reflect the marginal utility and the marginal cost of the goods to know, if one is in the presence of a pure and perfect competition market. We can also say that economic growth is generally measured by the use of economic indicators, the most common of which is gross domestic product (GDP). It offers some quantitative measure of the volume of production. In order to make international comparisons, purchasing power parity is used to express purchasing power in a reference currency. To compare the situation of a country at different times we can also

reason at constant currency. The GDP indicator, however, remains imperfect as a measure of economic growth. For this reason, it is the object of several criticisms:

- It only partially measures the informal economy. A large part of the transactions, not declared, was lost for statistics such as the tax authorities. But in 2014, several countries (Italy, the United Kingdom, Spain and Belgium) decided in 2014 to include in their GDP estimates of the underground economy (drugs, prostitution, various types of trafficking) in application the new European accounting standards published by Eurostat; the United States had already done so in 2013; French national accounts, which were already making adjustments to take into account concealed activities (moonlighting, smuggling), decided to include estimates of drug trafficking, but not of clandestine prostitution.
- It measures only imperfectly the productions which are not marketed: thus, the production of the administrations is supposed equal to the wages of the civil servants; an assessment of self-consumed agricultural production is integrated. Even if it takes into account the production of non-market activities, it does not measure domestic production activity (household, cooking, DIY, child rearing, etc.). According to the joke of Alfred Sauvy, it is enough to marry with his cook to bring down the GDP.
- It only measures added value in the immediate term (over a year). Long-term effects, especially in services such as Education or Health, are not or poorly accounted for through their impact on production.
- GDP measures only the value added produced by resident economic agents. It does not take into account transfers of international resources, which often represent a significant part of their national wealth. It is possible to use a more relevant tool such as Gross National Income.
- Finally, it takes into account only the added values, and not the wealth possessed by a country, without distinguishing the positive or negative effects on the collective well-being. A natural disaster (Katrina destroying New Orleans, for example), which destroys wealth, will contribute to GDP through the reconstruction activity it will generate. This contribution does not reflect the previous destruction nor the cost of financing the reconstruction. This contradiction was denounced as early as 1850 by the French economist Frédéric Bastiat, who in his Fragmented Glass Sophism wrote that "society loses the value of objects unnecessarily destroyed," which he summed up by: "destruction is not profit".

This apparent contradiction is probably due to the fact that GDP does not really measure development, progress in itself; nor does it measure economic activity

as a job-earner, as the activity may well grow without any increase in value added, if one replaces capital or raw materials with labor. Growth in fact measures only the increase in the consumption of factors of production: labor, capital and natural resources (raw materials, productive potential of agricultural lands, etc.). Society can grow without growth by changing the distribution of factors. In its classic sense, economic development is more than just economic growth, and indicators have been proposed to measure it more precisely, such as the Human Development Index.

Part 2. Evolution of macroeconomic aggregates

Aggregates are synthetic quantities that measure the result of the activity of the whole economy [BERNIER B. and YVES S., 2001, pp.22-24]. However, as public finances are a vast field, we can not explain them using all the aggregates. Thus, we have chosen three aggregates that we consider relevant and even inclusive. This is GDP, our variable explained, and public revenues and expenditures as explanatory variables.

2.1. Evolution of Congolese public finances from 1980 to 1990

The public finance situation deteriorated steadily during the 1970s and during the first three years of the 1980s. Indeed, the economic and financial stabilization measures applied in the framework of the various confirmation agreements concluded with the F.M.I. From 1976 to 1980, the treasure deficits of the years 1977 to 1982 were reduced to almost those of the years prior to 1974, with a clear recovery from 1979 to 1980. From 1973 to 1981, the state had to resort both to the resources of the entire domestic banking system and to external borrowing. The evolution of public finances thus described resulted from the steady decline in revenue accompanied by the increase in expenditure. Thus from 1970 to 1982, public revenues recorded only small increases in these expenditures. The fiscal position improved significantly from 1983 to 1985, when deficits, in constant 1970 values, remained the lowest since 1972, with the exception of 1980. The financing of the deficits of this period was ensured by the advances of the domestic banking system as well as by the resources borrowed in the short term from the public by the treasure channel. The slowdown of the international economic situation from 1983 to the first half of 1985, combined with a better implementation of the economic and financial stabilization programs concluded with the F.M.I. in September 1983 and in March 1985, achieved satisfactory results. During this period, the public revenue mobilization effort has been intensified, particularly through the strengthening and rationalization of taxation and the improvement of the country's tax administration. The public finance situation deteriorated considerably in 1986, despite the continuation of the same public finance management policy during that year as in 1985; revenues have increased less rapidly than expenditures. Revenue mobilization efforts have been hampered by the weakening or declining prices of the country's main exports. The domestic banking system has

contributed to the financing of most of the financing needs of the state. A residual portion was covered by the public loan either as short-term or long-term treasury bills, as part of the public lot loan launched in November of the same year. From all the above, it appears that the evolution of the international economic situation has played a determining role in the country's public finances. Short-term economic measures will be insufficient if they do not meet favorable international economic conditions. This shows the vulnerability and instability of the country's financial situation as long as the economy remains dependent on the international situation as for most developing countries.

2.1.1. The situation of public finances is again

deteriorated by a reduction in income over expenditure at the end of 1987 following a large balance of payments deficit, this led to a depreciation of the national currency until it was demonetized. The pressure exerted in 1989 by politicians for reasons of suppression of a single party because of the establishment of a multiparty system has reduced to ashes public finances from the first three periods of the 1990s by looting.

Part 3. Econometric analysis of Congolese public finances

This part of the work makes it possible to determine the various factors of the public finances which explain the economic growth in the Democratic Republic of Congo by using the vector representation auto regresive (VAR). It is divided into three sections: the first deals with data analysis, the second with the residue test, and the second with the results and interpretations of the data.

3.1. Results analysis

Before moving on to econometric tests and analyzes, it is interesting to study the statistical properties of our series because the robustness of the results depends on them.

3.1.1. Presentation of the Granger causality model

The methodological approach will be that of the analysis of the causal relationship between public finances (public revenues and public expenditures) and economic growth. Beyond this, the analysis of the VAR model estimate will be conducted with a view to better understanding and deepening the interrelationships between the variables studied. We will use the Eview 5, software as an analysis tool on the secondary data base of Central Bank of Congo and ADB. We consider the following variables in logarithm from 1980 to 2007: Public Revenue (GER), Public Expenditure (GER), and Economic Growth as measured by Gross Domestic Product (GDP).

In theory, the identification of causal relationships between variables provides elements of economic reflection. Knowing the meaning of causality is as important as highlighting a relationship between economic variables. For our study, the analysis of the sense of causality between public finances (receipts and public expenditures) and economic growth will appeal to the two concepts: first, the concept of Granger causality which states that a variable causes another

if and only if the present and past values of the latter allow to better predict the values of the first. Then we have the concept of cointegration, which reflects the idea that two variables move together at the same rate. Thus, for example, we will say that two variables are cointegrated if a linear combination of these two variables (non-stationary) is stationary[Mubake Mumeme M., 2001, pp. 47-49]**.** Economically, this means that there is a stable long-term equilibrium relationship between them. When two variables are cointegrated, there is causality in the Granger in at least one direction. On the other hand, the non-cointegration of two variables is not an indication of the absence of Granger causality.

3.1.2. Specification of causality models and stationarity of variables

The models study the influences of indicators of the development of public finances on those of economic growth. Before the analysis of cointegration and causality, we will check if our series present the desired statistical properties in order to have unbiased results. The causality tests will be carried out on models that have a significant impact of the development of public finances (revenues and public expenditures) on economic growth. In fact, to measure which variable actually causes the other, we will use the Granger causality test. The objective is to examine the stationary or non-stationary nature of the variables, since most of the statistical properties of the estimation methods apply only to stationary series. A chronological series is said to be stationary if it is the realization of a stationary process that is to say, having neither trend nor seasonality, it is characterized by an average and a constant ariance and generally no characteristic evolving with time. This stationarity study is essentially carried out using the study of autocorrelation functions and unit root tests which allow, for the first time, to detect whether the stochastic process is affected by a trend or a seasonality, and for the second to provide some answers on the type of non-stationarity of the series. To do this, two types of processes are distinguished:

- The TS (Trend Stationary) process which has deterministic nonstationnarity;
- DS (Differency Stationnary) process for random non-stationary processes.

The stationarity test involves several tests: increased Dicky-Fuller or Dicky-Fuller test, Phillips Perron test, KPSS test ...

In our study, however, we will only use Dicky-Fuller augmented test (ADF). This test tries to verify the presence of unit root in the variables of the model (non-stationary series) or not.

3.1.3. Evolution of Public Expenditure of 1980-2007

Preliminary analysis of the data using a graphical visualization suggests that the variables are non-stationary. And in order to ensure or not the stationarity of different variables, we proceed to the study of the stationarity of the variables. For this, we apply the Dickey-Fuller augmented unit root test on each of the

variables. The determination of the presence of the unit root is done iteratively. Consider the model below with constant:

$$Y_t = flo + 23Y_{t-1} + E_t \quad (1)$$

Where $\mathbf{E_t}$ is a white noise, **-1 = 23 = 1** and $\mathbf{Y_t}$ is a random variable at time **t**. If regressing equation (1) above, we find that ä is statistically equal to 1, we say that the random variable Y_t has a unit root; it is then non-stationary. Thus, a variable with a unit root is nonstationary. By subtracting the quantity Y_{t-1} from the two members of equation (1) while maintaining the hypothesis of non-stationarity (23 = 1), we obtain:

$$Y_t - Y_{t-1} = â0 + (23 - 1)\, Y_{t-1} + E_t \quad (2)$$

$$\text{Let } \mathbf{ÄY_t = Y_t} - Y_{t-1} \text{ and } p = 23 - 1 \quad (3)$$

Substituting (3) in (2), we finally have the equation (4) which follows:

$$ÄYt = â0 + pY_{t-1} + E_t \quad (4)$$

We test the following hypotheses on equation (4):

- H0: p = 0 Presence of a unit root, the series is nonstationary;
- H1: p = 1 Absence of a unit root, the series is stationary.

The unit root tests are applied to:

Autoregressive model with trend and constant: $ÄY_t = â0 + â1t + pY_{t-1} + E_t$;

Autoregressive model of order 1 with drift: $ÄY_t = â0 + pY_{t-1} + E_t$;

Autoregressive model without drift: $ÄY_t = pY_{t-1} + E_t$.

(General autoregressive model with trend and constant: ÄYt = â0 + â1t + ñYt-1 + ái Ó ÄYt-1 + Ct

The hypotheses of the test are:

- H0 : r = 1 : the series is non-stationary or the series contains a unit root;
- H1 : r < 1 : the series is stationary does not contain a unit root

The null hypothesis (H0) is rejected when the statistic of the ADF test is, in absolute value, higher than the critical values of Mackinnon in absolute value at the thresholds of significance of 1%, 5% and 10%. So we say that the series under analysis is stationary.

Table 3.1. ADF test on all series

	ADF statistics	**Mackinnon's Critical Values**
PIB	- 3,801331	1% - 3,737853
		5% - 2,991878
		10% - 2,635542
REC	- 3,348285	1% - 3,724070
		5% - 2,986225
		10% - 2,632604

DEP	- 4,055122	1% - 3,724070
		5% - 2,986225
		10% - 2,632604

Source: Author's calculations on Eviews 5

We note in the table above that the ADF test statistics expressed in absolute value are higher than the Mackinnon values also taken in absolute value at the significance levels of 1%, 5% and 10%. So all our series are stationary at level.

3.1.4. Estimation by the Autoregressive Vector and determination of the optimal delay number

One of the practical uses of the Autoregresive Vector representation is that it later allows for an analysis of Granger causality. We estimate here Autoregresive Vector with a lag that will capture the impact of a lagged variable on itself and other variables. The reading of the estimation tables is done, by comparing the critical value of t given by the Student's table which is 1.70 at the threshold of 5% by admitting that the series follows a normal distribution. Here, if the value between hooks is greater than 1.70, the coefficient is significant.

The choice of the optimal delay is based on the information criteria to be minimized, notably the information criteria of Akaike and Schwarz. The determination of the delays as well as the estimates will be done for each model.

Table 2. Determination of optimal lags

Lag	AIC	SC
1	- 2,08822	**- 1,503162**
2	- 1,472893	- 0,442096
3	- 1,968062	- 0,486982
4	- 2,087212	- 0,153091
5	**- 3,567174**	- 1,179694

Source: Calculations of the other from Eviews 5

We note that the AIC criterion is minimized at the fifth offset, however, the SC criterion is minimized at the first offset, in principle PARCIMONIE, it is required that we retain a model that contains fewer offsets. We therefore opt for the autoregresive vector model of odre1 (VAR (1)).

3.1.5. Estimation of the Granger causality relationship

The analysis of causal relationships between economic variables allows a better appreciation of economic phenomena. It provides additional elements on the history of events between them and helps in the development of economic policies.

Table 3.3: Result of Granger causality tests

Pairwise Granger Causality Tests

Date: 04/11/2018 Time: 18:09 Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Probability
DLREC does not Granger Cause DDLPIB	25	0.27434	0.60567
DDLPIB does not Granger Cause DLREC	-	9.59830	0.00525
DLDEP does not Granger Cause DDLPIB	25	5.98044	0.02293
DDLPIB does not Granger Cause DLDEP	-	5.33041	0.03073
DLDEP does not Granger Cause DLREC	26	0.35289	0.55828
DLREC does not Granger Cause DLDEP	-	2.7E-05	0.99591

Source: Author's calculations on Eviews 5

The null hypothesis of non-causality is accepted if the associated probability is greater than or equal to 0.05.

The causality test on the first differences of the variables indicates that at the 5% threshold, there is a unidirectional causality relationship of public revenues to economic growth; this means that knowing the past and present values of financial variables makes it possible to better predict the future values of economic growth. However, at a 90% confidence level, we can say that this relationship is bidirectional. In this case, past values of financial and macroeconomic variables can be used to make economic forecasts.

After estimating the causal relationships and concluding that causality is present between the variables, we will summarize the results and their interpretations.

3.1.6. Residue Test

It involves testing the normality, heteroscedasticity and autocorrelation of the residues.

Residual normality test

The hypothesis of normality of the residuals plays an essential role because it will specify the statistical distribution of the estimators. It is therefore thanks to this hypothesis that the statistical inference can be realized. This test is carried out using the Jacque-Bera test which follows a Khideux law with two degrees of freedom at the 5% threshold of 5.99. It allows to know if the variables of the model follow or not a normal law. The results of our tests generally prove that the residues are normally distributed because the Jarque-Bera statistics are all less than 5.99.

3.1.7. Heteroscedasticity test of residues

Performed using the White test as part of our study, this test allows to know if the errors are homoscedastic or not. Heteroscedasticity qualifies data that do not have constant variance. However, the series must be homoscedastic to present the best estimators. To test for heteroscedasticity, the general idea is to check if

the square of the residues can be explained by the variables of the model. In our study, the residues are homoscedastic because the probabilities are greater than 5%.

Table 3.5: Result of the test of heteroscedasticity of residues

Chi-sq	df	Prob.			
40.86297	36	0.2653			
Individual components:					
Dependent	R-squared	F(6,18)	Prob.	Chi-sq(6)	Prob.
res1*res1	0.376877	1.814456	0.1527	9.421917	0.1512
res2*res2	0.357096	1.666329	0.1867	8.927408	0.1777
res3*res3	0.323599	1.435238	0.2556	8.089973	0.2316
res2*res1	0.197686	0.739184	0.6251	4.942146	0.5513
res3*res1	0.282719	1.182464	0.3589	7.067986	0.3146
res3*res2	0.388402	1.905182	0.1351	9.710048	0.1374

Source: Author's calculations on Eviews 5

3.1.8. Autocorrelation error test

This test also called error correlation test, checks if they are not correlated. The presence of the autocorrelation invalidates the comments concerning the validity of the model and the statistical tests. Autocorrelation should be detected by the Durbin-Watson test. But in the case of the autoregressive model, the Durbin Watson test is replaced by the Durbin h test because the endogenous variables are shifted. In the case of this study, there is no autocorrelation because the associated probabilities are greater than 5% in our models.

Table 3.6: Result of the autocorrelation error test

VAR Residual Serial Correlation LM Tests
H0: no serial correlation at lag order h Date: 01/21/11 Time: 17:33
Sample: 1980 2007
Included observations: 25
Lags LM-Stat Prob

1	5.165195	0.8197
2	10.36357	0.3219
3	9.886919	0.3597
4	22.34421	0.0078
5	10.60729	0.3036
6	7.382041	0.5974
7	12.64691	0.1792
8	4.426318	0.8812
9	15.76347	0.0720
10	3.890515	0.9185
11	9.518782	0.3908
12	3.390616	0.9468

Probs from chi-square with 9 df.

Source : Calculs de l'auteur sur l'Eviews 5

Results and interpretations

The analysis of the evolution of the interactions between the public finances (receipts and public expenditures) and the economic growth led us to do a certain number of works: the estimation of a VAR, the test of causality of Granger. At the end of the econometric tests applied to the Congolese case, the following results were obtained:

- In terms of VAR estimation, the measurement of real GDP growth suggests a positive and significant impact of its own prior values as well as those of financial variables. In addition, by measuring economic growth through government revenue, we observe that past levels of government revenue positively and significantly explain current levels of capitalization, although this influence remains weak.
- The causality test performed on the first differences of the explanatory variables indicates that, at the 5% threshold, there is a unidirectional causal relationship of government revenues to economic growth (real gross domestic product). However, at a 90% confidence level, this relationship is bidirectional. Then, the knowledge of past values of one can better predict those of others.

CONCLUSION

We are at the end of our work on the role of public finances in economic growth in the Democratic Republic of Congo, from 1980 to 2007. In this study, we have discussed the impact of public finances (revenues and public expenditures) on economic growth. Our study developed in three chapters. In the first we mentioned the generalities in which we had to explain the concepts of public finance with its components and economic growth; the second chapter presented the evolution of macroeconomic aggregates and; the third makes an econometric analysis of Congolese public finances during this period.

With all these facts, we are entitled to say that:

- Congolese public finances suffered during this period a strong destabilization which prevents them from reaching the economic growth because of a very long period of the financial difficulties, a brief period of financial recovery and the recovery of financial difficulty observed under the period 1980-1989. Dysfunctioning institutions, looting, mismanagement excepted.
- During this period we have found that public revenues, despite the fact that they represent 1.15% of real GDP, contribute in some positive way to economic growth even if it is invisible. On the other hand, public spending, which accounts for 24.93% of real GDP, contributes negatively to this growth. Because they are not well oriented.

In light of the above, we make suggestions

following:

- The Democratic Republic of Congo must direct its resources with the aim of improving the welfare of its population;
- The Congolese State must control its expenditures through sound, rigorous and effective management; but he must also mobilize all the recepis provided in the tax and customs legislation so as not to endanger the nation, the options of the state, the welfare of citizens. This effort to control public spending can not in any way hinder the functioning of state institutions and bodies or retard growth;
- It must ensure good security for its population, especially at the borders.

Public finances must be placed at the heart of the Congolese state's concerns, as they play a predominant or even unavoidable role in the existence of states and in economic growth. The development of the financial system is undoubtedly a driving force of economic growth, but at the same time it can be analyzed as the result of economic development. The growth of the real sector allows the economy to develop an efficient financial system. Being a human work, this work is law to be perfect. So let us bend to all the constructive remarks and suggestions of our readers.

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L'INFLUENCE DES FINANCES PUBLIQUES SUR LA CROISSANCE ECONOMIQUE EN REPUBLIQUE DEMOCRATIQUE DU CONGO DANS LES ANNEES 1980-2007

Résumé

L'objectif de la présente étude est d'évaluer et de décrire l'influence des dépenses publiques sur la croissance économique en Republique Democratique du Congo dans les annees 1980-2007 . En particulier, il s'agit d'expliquer ici le rôle ou l'impact de la composition des dépenses publiques sur la croissance économique dans ce pays. Plusieurs travaux ont étudié la relation entre dépenses publiques et la croissance économique mais la mise en relation de la composition de ces dépenses publiques et la croissance économique induite est un plan de l'analyse économique qui mérite qu'on s'y intéresse davantage. Nous avons mis en évidence une relation non-linéaire les dépenses publiques entre et la croissance économique à travers les composantes des dépenses publiques, grâce à un modèle de transition lisse, la méthode VAR (Vector Auto Regresie). Nos résultats précisent également, les marges dans lesquelles les différentes composantes des dépenses publiques peuvent avoir un impact positif et significatif sur la croissance économique dans ce pays.

JEL Codes: *H6, E5, E6, C23, O40*

Mots clés : *Croissance économique, dette extérieure, dépenses publiques, recettes publiques*

