Abstract

The aim of this study is to use macroeconomic and institutional variables to critically analyze the impact of public expenditure on the economic growth of the West African Economic and Monetary Union (WAEMU) countries. The study tries to convince the Government and the National Ministry of Economics and Finance to well address policies on the necessity to identify the strategic sectors in needs of investments to improve sustainable economic growth. The specific objectives are (i) to estimate the impact of public expenditure on economic growth, (ii) to analyze the effects of institutional variables on public expenditure and economic growth and (iii) to check the stability of the model in relation to structural breaks.
Introduction

There are numerous and varied studies that have analyzed the effects of public expenditure on the level of economic growth. Some of them are: Barro (1990), Devarajan (1996), Barro and Sala-i-Martin (1992), and Ventelou (2002). More recently, studies by Rajaranan (2005) and Gupta et al. (2005) have highlighted the impact which public expenditure could have on the trends in a country’s Gross Domestic Product (GDP). Case studies focusing on certain African countries were carried out by Ashipala and Haimbodi (2003) on data from Namibia. For the specific case of West Africa in general, and of the WAEMU area in particular, to the best of my knowledge, not much research has been done on the relationship between public expenditure and economic growth. The main studies are those of Nubukpo (2007) and Dumont and Mesplé-Somps (2000), which analyzed the impact of infrastructure expenditure on the competitiveness of the Senegalese economy. There are also some sector-based studies on the impact of public expenditure in the health and education sectors (see e.g. Chimobi, 2009).

The present study is different from those mentioned above in three respects: first, it focuses on just the WAEMU area; second, it analyses public expenditure through their specificities; third, in addition to public expenditure, it considers institutional variables while accounting for economic growth.

The present study’s focus on the WAEMU area can be justified by several reasons. The member States of the Union are using a common currency the CFA franc pegged to an external convertible currency, the Euro. This monetary connection made possible by financial cooperation agreements between the Central Bank of West African States (BCEAO) and the French Public Treasure, impose an unusual budgetary discipline on the countries of the Union. This implies that the allocations of public expenditure should be more rational and efficient. It is therefore necessary to identify the best sectors for public investments in order to improve economic growth. WAEMU have to face international pressures related to the accumulation of budgetary deficits, to the risk of the non-sustainability of the public debt, and to the crowding-out effects that are detrimental to the private sector.

Unlike previous studies, the present one examined the specificities of public expenditure and measures their different effects on economic growth. Specifically, it sought answers to the following questions: Is the productive nature of public expenditure essentially related to the individual specificities of the member States? Why does the public expenditure described as non-productive differ from one country to another in the same geographical area? What explains the differences in economic performance that result from the effect of public expenditure?
A further point that makes the present study relevant is the taking into account institutional variables as explanatory factors for economic growth. The WAEMU area has, for more than a decade, been marked by recurrent socio-political crises, armed conflicts and unconstitutional changes. This worrying situation engenders political instability and weakens the productive potential of the region. This is because the public expenditure that should have boosted economic growth is allocated to reconstruction, the rehabilitation of ex-combatants or that of basic socioeconomic facilities. A study of the interrelationship between public expenditure and economic growth would thus benefit from including in it, explanatory variables such as the governance index, the political risk index, etc. To sum up, the present study was aimed at analyzing the impact of public expenditure on economic growth in the WAEMU countries by considering the effects of institutional variables in order to better understand the reality.

Method of analysis

The study used a two-step methodology: the first step consisted of estimating a dynamic model of economic growth derived from a production function and the second step consisted of verifying the stability of the model, which was the concern of the study’s second objective. To this end, the study used Chow’s (1960) stability test to account for the possible structural breaks over the period studied for each country.

We consider the following production function where the dependent variable is the level of production per capita and the independent variables are the public expenditure variables matrix, private investment expenses in GDP with positive sign expected, institutional variables supposed to take into account political and social instability and the time variable. We suppose that this variable refers to debt service and terms of trade in GDP. With regard to the impact of the debt service on economic growth, we expect a negative sign for each country of the Union because of unsustainable external debt. The impact of the terms of trade should have a positive sign because the WAEMU countries are involved in a region integration process and they should benefit from the common agreements on tariffs and trade.

Public expenditure variables matrix regroups variables corresponding to the main heading as specified in the Directive nº08/2009 of WAEMU related to the budgetary nomenclature. Thus, we have included the variables such as the expenses of public administration services with a negative expected sign because there is any financial returns flux, the defense and security expenditure with a negative expected sign for the countries which have faced military conflict at least one time and the expenditure for health and education. We are expecting a negative sign because of the bad rank of most of WAEMU country in terms of economic governance and
corruption (Transparency International, 2009) and public company management. Several studies highlight a negative impact of these variables on economic growth in the short term.

Institutional variables are composed by political risk index, economic risk index, financial risk index and composite risk index. The remainder of this analysis will focus only on the political risk index because other data on the period under study are not available. Different signs are expected in terms of impact on economic growth. Most countries of the WAEMU area are facing lots of difficulties to keep peace and to promote good governance.

This analysis will focus on this dynamic model. Variables are observed from 1985 to 2011. The period is justified because institutional data from International Country Risk Guide (ICRG) are not available before 1984. The model includes a lagged dependent variable among independent variables. This autoregressive process looking like a Koyck model with lag suggests use of the “h” test of Durbin to test for serial correlation. The AutoRegressive Conditional Heteroskedasticity Lagrange Multiplier test is used to test for heteroscedasticity. The Augmented Dickey-Fuller test is used to test for unit roots. Feasible Generalized Least Squares (FGLS) estimator is used to estimate parameters of the model for each of the eight countries of the WAEMU zone. In order to achieve the third objective, set for the present study, the Chow’s (1960) stability test is used.

**Key findings**

For this first group of four (4) countries (Benin, Burkina Faso, Cote d’Ivoire and Guinea Bissau), it can be observed that, in general, expenditure of administration services had a positive and weak effect on economic growth. Structural policies should be implemented in WAEMU area for a better efficiency of administration services. Public expenditure for the administration services had very little positive impact on the GDP growth. Thus it is wrong to assume that public expenditure focused on relevant administration services are unproductive.

Good administrative and institutional governance can consolidate economic growth. The elasticity of political risk index and debt service was found to be negative. This suggests there might be an inverse relationship between the ineffectiveness of public expenditure and the accumulation of the budgetary deficit and the lack of credibility on the part of the country’s institutions.

It transpires from the present study that public spending on health, education, defense and security and consumption, all of which is often labeled as non-productive expenditure, did not turn out to have the same signs expected in all the countries.
Health facilities are exceptionally well-developed in Côte d’Ivoire than the three other countries. That can explain the obtained results. Besides, the reforms undertaken to increase access to health care and essential medicines have been implemented in line with the country’s National Plan for Health Development (PNDS), to which a substantial budget has been allocated. As for Benin, it has a smaller population than that of Burkina Faso and also benefits from positive externalities arising from its geographical proximity with Nigeria.

However, the elasticity sign of public spending on education was found to be negative for all the four countries. In the short term, this public spending did not have a positive and significant impact on economic growth, as mentioned in lots of empirical studies. It seems to be difficult to get the real impact of education expenditure on economic growth. Education sector remains a big issue for policy makers in developing countries. Budgets and supports are low with regard to the urgent needs of population and the targeted objectives in terms of ratio of performance cannot be reached.

The consumption expenditure increases as the need to spread general administration services throughout the country becomes increasingly pressing. Countries allocate a bigger share of the budget to armament in order to consolidate their grip on power and fight insecurity from both within and across the borders. Benin, Burkina Faso, Côte d’Ivoire and Guinea Bissau have all, at least once, experienced a military takeover. The empirical results obtained from the WAEMU countries have confirmed that the private sector remains the engine of economic growth.

For the second group of the countries (Mali, Niger, Senegal and Togo), the different elasticity values of public expenditure for administration services had the expected positive and weak sign on economic growth for Mali, Niger, Togo and Senegal. These coefficients were all statistically significant at the 5% level, although they are relatively low in the cases of Mali and Niger with respectively 0.31 and 0.24. The coefficients for the debt service and the political risk index for the latter two countries were found to be high and negative. This confirms the intuition expressed earlier that WAEMU Members States are facing difficulties to bring budgetary deficits and political instability under control.

The elasticity of public expenditure on health and education have a positive and weak sign for all the countries studied. Public spending on defense and security did not have a positive significant effect on economic growth in the short term. As in the cases of Benin and Cote d’Ivoire, public spending on health was found to have had a positive effect on economic growth in Senegal. This finding can be attributed to the fact that Senegal is ranked as the second largest economy in the WAEMU area. It has indeed embarked on huge infrastructural projects in the areas of road and air transport, the construction of health centers, etc.
The WAEMU countries are highly indebted, which slows down their economic growth. They have contracted debts to finance the economy and boost the sectors deemed to be productive. Unfortunately, the expected results were not achieved because of structural obstacles specific to the respective economies, of strategic choices made by political and economic players, of opportunistic behaviors, etc. All this raises the issue of debt sustainability and of the guarantee of the common currency that is the CFA franc. This currency is pegged to the euro, which imposes a certain amount of budgetary discipline, which is usually lacking in the WAEMU countries.

In order to complete the results of the present study and to establish whether the third objective of the study had been achieved, the Chow test for parameter stability was carried out. On the basis of the results of the Chow test, the CFA franc devaluation had a significant impact of public expenditure on economic growth in Burkina Faso, Mali, Niger and Senegal. The devaluation boosted the export of primary products like cotton, maize, uranium, ground nuts, etc., which are the main sources of export receipts for these countries. The additional revenues that were generated served to increase public investment.

The sociopolitical instability of the 2000s also affected economic performance indicators and the impact of public expenditure on economic growth: it deepened the budgetary deficit, made the debt burden heavier, and increased the political risk. The instability virtually lasted for a decade and certainly affected the economies of the WAEMU countries. The stability test also revealed that the massive investment recorded in Benin from 1998 had a positive effect on the country’s economic growth.

**Policy implications**

The present study addressed the issue of the re-examination of public expenditure in economic growth in the WAEMU area. It analyzed macroeconomic and institutional variables in order to gain a better understanding of the possible interrelationships between public expenditure and economic growth.

From the results of the study, it is important to highlight the main lessons learnt and the resultant economic policy implications. The study has confirmed the relevant contribution of the private sector to the consolidation of economic growth. This should encourage the economic policy makers to maintain their effort in promoting the private sector. This sector therefore needs to be better supported and regulated to enable it to successfully complement the public sector and improve economic growth.

The study also found that the public expenditure that is usually considered as productive was not uniform in the WAEMU area: in countries that have a strong economic potential, such as Côte d’Ivoire, Senegal and Benin, public spending on health, for example, was
found to have a positive and weak effect on economic growth. The impact of social expenditure on economic growth remains weak for the Sahelian countries like Burkina Faso, Mali and Niger. However, the study found that for all the WAEMU countries, the physical capital expenditure led to growth. In view of this, the study recommends that this type of expenditure should be increased through massive investment in new economic and social infrastructures, and in rehabilitating existing ones.

In this respect, greater emphasis should be put on health expenditure so as to enable the populations to get an easy access to health care and medicines, and the countries to intensify their fight against the diseases that are likely to negatively affect the total labor productivity. The study found that in the short-term, the non-productive expenditure was that spent on education, defense and security.

The attention of decision-makers should therefore be drawn to the high-spending sectors versus those that are likely to lead to economic growth. For instance, significant efforts must be made to reduce public expenditures, in particular those related to the way of life of the country's leadership and its administrative machinery. The States must continue catering for its sovereignty-related responsibilities in matters of defense and security, health and education. And the government must reconsider its investment in research and development and ensure that the training it offers is geared towards meeting the needs of the labor market so as to render the public expenditure on education more productive in the short term.

Further, the results of the present study speak in favor of good governance and conflict prevention. After all, good governance is increasingly becoming a condition for a given country to receive official development assistance and have access to certain sources of funding. That is why its institutions must be strong and credible.

References


Mission

To strengthen local capacity for conducting independent, rigorous inquiry into the problems facing the management of economies in sub-Saharan Africa.

The mission rests on two basic premises: that development is more likely to occur where there is sustained sound management of the economy, and that such management is more likely to happen where there is an active, well-informed group of locally based professional economists to conduct policy-relevant research.

www.aercafrica.org