

Public Sector Performance in West African Countries: A Comparative Analysis

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Abstract: This paper evaluates and compares the performance of public sectors in West African countries for two periods- 2007 and 2012. The evaluation is conducted based on the assumption that the state is faced with the responsibility of redistributing its revenue to achieve certain social and economic objectives. In this study, we compute PSP indicators, covering seven sub-indicators and a composite, for 16 countries within West Africa. These indicators are administrative, the public infrastructure quality, health and education outcomes, which are known as “opportunity” indicators. Three remaining indicators are the conventional “Musgravian” roles of a government which are stabilisation, distribution, and allocation. The analysis shows significant distinctions among West Africa countries’ public sector performance and welfare enhancing public spending is desirable.

Keywords: Public expenditure, Efficiency, Performance

JEL Classification: H11, H21, H50

1. Introduction

After decades of holding importance to the role of the state in the development of West Africa countries, there is now a paradigm shift and a rekindling of the importance of the state in the process of socio-economic development, as the need for a more proficient public sector has been revived. Undeniably, there is a renewed motivation for the creation of an effective public sector in African countries at both the continental and national levels (UNECA, 2004).

African governments have embraced public sector reforms since independence, and with the assistance of foreign donor agencies, many African countries had aggressively tried varied reform strategies. These involved the qualitative and quantitative policy designs of the Washington Consensus (WC) era in the 1980s and 1990s, and service delivery policy designs of the post-WC (World Bank, 2003). Also, there were sets of public sector reform policies which were based on a model employed in the Organization for Economic Cooperation and Development (OECD)

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economies and tried to use principles of market to public sector administration. Despite these reforms, the public sector in many African countries still remains inefficient and incapable of performing basic functions (Mutahaba & Kiragu, 2002).

Macroeconomic performance in the ECOWAS Member States showed a negative GDP growth between 1981 and 1984. It increased to 6.4 percent in 1984 before changing to negative growth rates in 1986 and 1987. GDP growth for the region was then positive but declining since then till 1999. ECOWAS region experienced its highest GDP growth rate of 22.8 percent in 2004, before falling drastically to 3.8 percent in 2005. Regional GDP has been on the decline due to unfavourable structural and economic factors, which include deterioration in the terms of trade, the political instability and poor public sector performance in the region. However, West Africa remained a region of striking contrasts. In spite of the generally displeasing situations, some of them achieved remarkable economic growth, even when compared with the rest of the World (ECOWAS, 2012).

The increasing trend in public sector spending in many West African countries since the 1990s triggers the needs for evaluating the performance of such spending. In order to clamour for public sector efficiency and transparency, the availability of an indicator of public sector performance, which allows for international comparisons, would be useful. This will also facilitate ranking of countries based on the output of their public spending (Schuknecht & Tanzi, 2003).

In West Africa, the measurement of PSP and PSE is still at its nascent. In this paper, effort is made to measure and assess public sector performance in this sub-region. The rest of this study is organised as thus: Section 2 exposes the theoretical and conceptual framework and review of the related empirical literature; Section 3 elaborates the methodology while 4 shows and analyses the result of the study and section 5 concludes the paper.

2. Conceptual and Theoretical Framework

The effectiveness of the public sector of a country is crucial to the success of its social and economic development. The public sector remains the massive employer and spender in almost all developing countries and it determines the policy environ for the rest of the economy. Policies, such as fiscal and monetary, perform a vital role in determining the growth and competitiveness of an economy. Owing to the size of economic activity, efficiency and effectiveness of the sector remain, unarguably, one of the most important determinants of macroeconomic performance. The importance is also vested in the public benefit from the policies which tends to improve human life and the quality of life.

Public sector performance (PSP) is described as the outcome of public sector undertakings while Public sector efficiency (PSE) is defined as the ratio of public spending and performance indicator. It is the end result compared to the resources used. According to Marieta *et al.*, (2010), efficiency is provided by the relationship between the effect of output and effort of input. It is the ability of yielding the targeted result with a minimum of energy, money materials, time, or other costly resources. It is also the measure of the accuracy and speed of completing work. Abidian and Bigg (1998) define efficiency as the optimal allocation and employment of inputs over time. Mester (2003) sees efficiency as a measuring standard of the deviation between desired performance and actual performance.

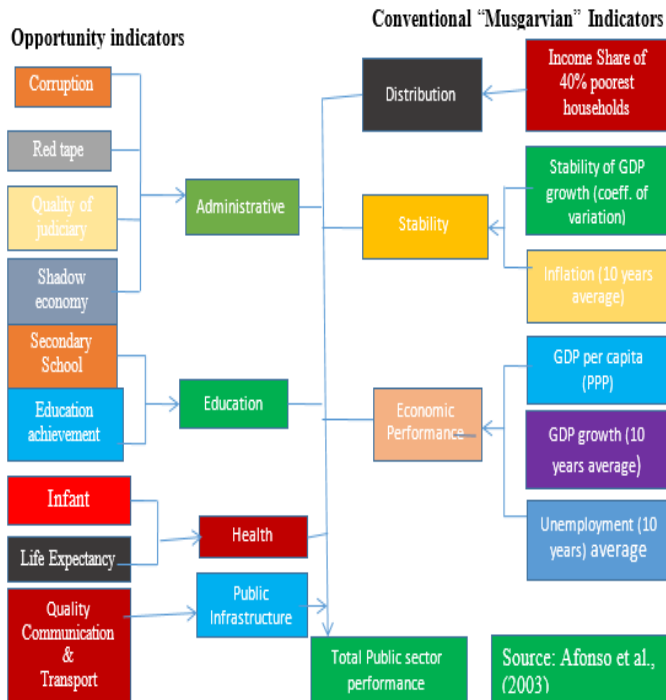
The theoretical links between government spending and performance of public sector show that PSP is captured by the quality of socioeconomic indicators such as health, education, economic growth, administration and public infrastructure (Afonso *et al.*, 2003). It is further stressed that positive effect of government expenditure on any of the indicators reveals an expected improvement in the public-sector performance indicators. Accordingly, changes that might occur in the social and economic indicators over some periods could be seen as changes in PSP.

The socioeconomic indicators used by Afonso *et al.*, (2003) were grouped into two; opportunity and Musgravian indicators. The opportunity indicators were sub-grouped into four; administrative which is composed

of 4 sub-indicators: corruption, quality of the judiciary, the shadow economy, and red tape. Education consists of 2 sub-indicators: education achievement and secondary school enrolment. The health indicator comprises 2 sub-indicators: life expectancy at birth and infant mortality. Public infrastructure contains transport infrastructure quality and quality communication. These four sub-indicators were termed opportunity indicators.

The Musgravian indicators are distribution measured by the income share of the poorest 40 percent of the households. Economic stability, proxied by average inflation (10-year average) and the stability of output growth (coefficient of variation), and economic performance consist of unemployment (10-year average), GDP growth rate (10-year average), and per-capita GDP.

Figure 1: Public Sector Performance (PSP)



3. Literature Review

One of the most crucial dimensions of the government sector that have attracted attentions is its impacts on the economic growth of both developed and developing countries. As a result, the discussion about the function of the public-sector performance has shifted, in recent years, towards empirical assessment of the usefulness and efficiency of public sector activities.

Afonso *et al.*, (2003) evaluated the efficiency and performance of public sector for 23 developed countries by computing seven sub-indicators and a composite of the performance indicator. The estimated performance indicators include health, administration, education, and infrastructure. Their study revealed differences in the PSP index across developed economies with small government sector countries reporting the best performance while big public sector countries display higher equitable distribution of income. The study further showed that smaller the public sector is, the higher the public-sector efficiency across the observed countries. The implication of this finding is that public spending is governed by diminishing marginal products.

Social and Cultural Planning Office (SCP/CERP (2004)) improved on the works of Afonso *et al.*, (2003) by assessing public-sector performance in European Union countries. The country clusters results for public sector efficiency and performance was very similar to Afonso *et al.*, (2003) findings. Southern European countries were discovered to have low educational and general performance; Eastern New EU member's states showed high educational but low general performance. Northern European and Anglo-Saxon countries had high scores in both general and educational performance.

The efficiency indicators in the aforementioned research are based on the quantitative measure of PSE. In contrast, Maroto *et al.*, (2007) focused on the evidence-based assessment of the usefulness and efficiency of public sector activities using both quantitative and qualitative measure of PSE. The result of their study supports the economic theory that research and development (R&D) and concretely innovation promote higher economic development at the macro level. They concluded that the more R&D in a

country, the better the public-sector performance. Private sector R&D and gross R&D were reported to have a profound impact on the PSP.

Mihau *et al.*, (2010) also tried to quantify and present the real situation of public sector performance for EU countries. Their study focused on the comparative analysis of the effectiveness, efficiency and performance of the private and public sector. The study concluded that a package of bold measure is needed for more efficient public sector activity and performance.

4. Methodology

The method of assessing the performance of public sector in this paper is adapted from the work of Afonso *et al.*, (2003). This method is descriptive analysis in which certain socioeconomic indicators are examined at a point in time and used to evaluate and compare the PSP across nations. The study compiled data on these social and economic indicators for 16 West African countries. The comparative studies were conducted for data of 2007 and 2012.

Afonso *et al.*, (2003) did not describe how the four “opportunity” indicators were measured. In this study, however, corruption is proxied by corruption perception index. Red tape is represented by the burden of government regulation; quality of judiciary is measured by a composite average of judicial independence and efficiency of the legal framework. Shadow economy is omitted due to lack of data. Also, Afonso *et al.*, (2003) measured public infrastructure as communication and transport infrastructure quality. However, in this study, wider measure of public infrastructure is used. This is represented by a composite of all infrastructures including communication, transport, energy, etc. All other indicators are used as measured by Afonso *et al.*, (2003).

Data for the study are retrieved mainly from three sources. Corruption perception index was sourced from Transparency International (2007 and 2012). GDP per capital, unemployment, inflation rate and output growth, life expectancy at birth, infant mortality, secondary school enrolment, literacy rate, and income share of the poorest 20 percent were sourced from World Bank database (2012). Judicial independence, efficiency of legal

framework, strength of investor protection, and quality of public infrastructure were all sourced from Global Competitive Index Report (2012).

4.1 Data Analysis

Public sector performance indicators were computed from the different indicators with the same weight given to each of them. For instance, corruption, efficiency of the judiciary and red tape, each contributes approximately 33 percent to the administrative performance indicator. For indicators where higher numbers are more unfavourable (e.g., inflation, infant mortality), the inverse of the original values were used. In order to enhance the computation, the values of all indices were normalised and their average was set to 1. Therefore, values for each economy were then recomputed relative to the average. As a result, the overall public-sector performance for each country constitutes an average of all the seven indicators.

Table 1 shows public-sector performance indicator results for the year 2007 of 16 West African Countries. The mean of PSP for the 16 West African countries is normalised to 1.0 and the maximum value is 1.311. The highest value of the score function was obtained by Cape Verde (1.311), followed by Liberia and Gambia with 1.083 and 1.069, respectively; these states are the top 3 in terms of overall public sector performance. Contrarily, the least score of 0.857 was obtained by Niger, followed by Guinea with a score of 0.893, and Cote d'Ivoire with a score of 0.904.

The public-sector performance indicators across 16 West African countries are presented in table 1. Economies with the largest values for sub-indicators include Mauritania (1.977), Guinea (1.105) followed by Guinea-Bissau (1.091) under the administration performance. In the education Performance, Cape Verde obtained the best rank with the score of 2.354 followed by Gambia and Ghana with 1.481 and 1.270 respectively. Cape Verde has the best rank in health with a score of 1.181 followed by Senegal (1.066) and Mauritania (1.048) in 2007. Gambia followed by Cote d'Ivoire and Ghana obtained the best rank for Public Infrastructure. However, there are missing data for some countries under this indicator.

The income distribution score shows that Togo is the best with 1.191 followed by Guinea-Bissau and Sierra Leone with the score of 1.177 and 1.125 respectively. Senegal followed by Cape Verde and Burkina Faso topped the economic stability indicator with the score of 1.032, 1.030, and 1.029 respectively. Under the economic performance indicator, Cape Verde obtained the best score followed by Liberia and Nigeria. The best overall performance belongs to Cape Verde but she did not do well in administration and income distribution.

Table 1: Public Sector Performance (PSP) indicators (2007)

YEAR 2007								
Country	Administration	Education	Health	Public Infrastructure	Income Distribution	Economic Stability	Economic Performance	General Performance
Benin	0.892	1.001	1.022	0.94	1.017	1.026	0.979	0.983
Burkina Faso	0.835	0.643	0.989	0.873	1.106	1.029	1.078	0.936
Cape Verde	0.696	2.354	1.181	n/a	0.855	1.03	1.751	1.311
Cote d'Ivoire	0.821	0.702	0.923	1.175	0.88	1.016	0.808	0.904
Gambia	0.878	1.481	1.021	1.377	0.791	1.004	0.997	1.079
Ghana	0.854	1.27	1.047	1.142	0.846	0.969	0.96	1.013
Guinea	1.105	0.49	0.981	n/a	1.025	0.983	0.772	0.893
Guinea Bissau	1.091	0.953	0.965	n/a	1.177	0.907	0.569	0.943
Liberia	1.078	1.065	1.011	n/a	1.039	0.985	1.653	1.138
Mali	0.86	0.866	0.956	0.873	1.085	1.028	0.882	0.936
Mauritania	1.977	0.679	1.048	0.705	0.988	1.004	0.999	1.057
Niger	1.009	0.308	0.991	n/a	1.109	1.028	0.695	0.857
Nigeria	0.904	1.023	0.938	0.806	0.768	0.975	1.176	0.941
Senegal	0.793	1.01	1.066	1.108	1.001	1.032	0.858	0.981
Sierra Leone	1.078	0.757	0.864	n/a	1.125	0.964	1.077	0.977
Togo	1.05	1.233	0.996	n/a	1.191	1.02	0.744	1.039

Table 2 shows the results for the public-sector performance indicators for the year 2012 of 16 West African Countries. The mean of PSP for the 16 West African countries is normalised to 1.0 and the maximum value is 1.22. The highest value of the score function was obtained by Cape Verde (1.220), followed by Gambia and Ghana with 1.083 and 1.069, respectively; these States are the top 3 in terms of public sector performance. On the opposite side was Guinea with a score of 0.88, Guinea (0.906) and Mauritania (0.920).

The indicators, as shown in Table 2, show difference level of public-sector performance across 16 West African countries. Economies with the largest values for sub-indicators include Guinea-Bissau followed by Gambia (administration), Cape Verde followed by Gambia(education), Cape Verde followed by Senegal (Health), Gambia followed by Liberia (Public Infrastructure) Niger and Mali (distribution), Gambia and Mali (economic stability) and Guinea Bissau and Mauritania (economic performance). Countries such as Cape Verde, Gambia, Ghana, Liberia, Mali and Benin report high total PSP indicators. The best overall performance belongs to Cape Verde but she did not do well in administration and income distribution.

Table 2: Public sector performance (PSP) indicators (2012)

YEAR 2012								
Country	Administration	Education	Health	Public Infrastructure	Income Distribution	Economic Stability	Economic Performance	General Performance
Benin	1.004	1.1	1.019	0.945	1.136	1.059	0.936	1.028
Burkina Faso	0.957	0.725	0.98	0.798	1.004	1.055	1.129	0.95
Cape Verde	0.925	1.647	1.171	1.093	0.956	1.044	1.707	1.22
Cote d'Ivoire	0.954	0.812	0.931	1.064	0.956	0.936	0.807	0.923
Gambia	1.096	1.355	1.015	1.329	0.861	0.978	0.946	1.083
Ghana	1.006	1.245	1.042	1.152	0.852	0.992	1.196	1.069
Guinea	0.961	0.859	0.989	0.62	1.016	0.997	0.737	0.883
Guinea Bissau	1.212	0.752	0.963	n/a	1.179	0.893	0.67	0.945
Liberia	1.022	1.126	1.029	1.241	1.027	0.921	0.93	1.042
Mali	1.012	1.027	0.964	1.123	1.227	1.043	0.809	1.029
Mauritania	0.97	0.66	1.033	0.827	0.903	1.003	1.047	0.92
Niger	0.988	0.368	0.999	n/a	1.26	1.035	0.788	0.906
Nigeria	1.069	1.084	0.947	0.945	0.659	0.975	1.362	1.006
Senegal	0.964	1.019	1.061	1.004	0.904	1.053	0.985	0.999
Sierra Leone	0.976	0.771	0.865	0.857	1.167	0.976	1.181	0.97
Togo	1.063	1.264	0.991	n/a	0.895	1.04	0.772	1.004

4.2 Comparison of Public Sector Performance: 2007 and 2012

To examine how PSP has changed over time, a comparison between PSP 2007 and 2012 was performed and the results are presented in figure 1. The figure shows that some countries such as Benin, Burkina Faso, Ghana, Niger, and Nigeria shows relative improvement in PSP, some other country such as Cape Verde, Liberia, Mauritania and Togo showed a decrease in their PSP, while some country such as Gambia, Guinea, Guinea-Bissau and Sierra Leone maintained their formal PSP. The figure also shows that for both years Cape Verde has the highest PSP score, while Niger and Guinea obtained the worst PSP score in 2007 and 2012, respectively.

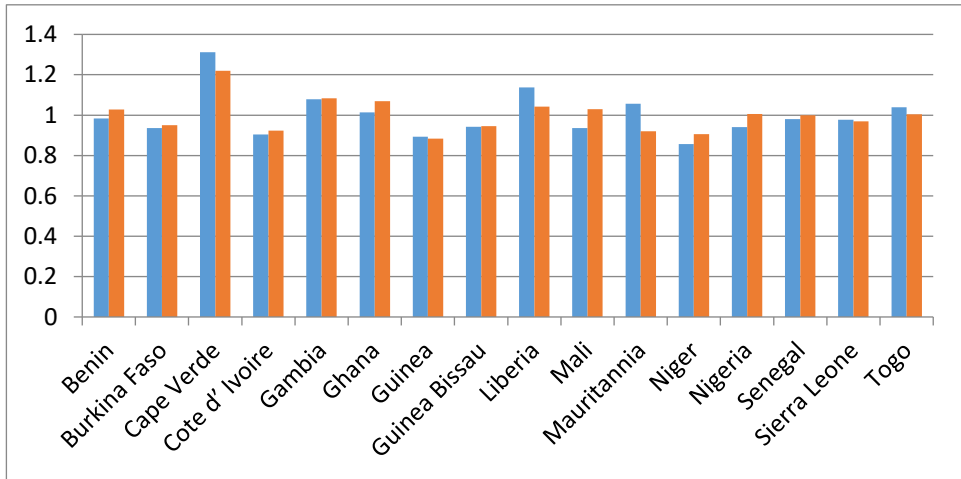
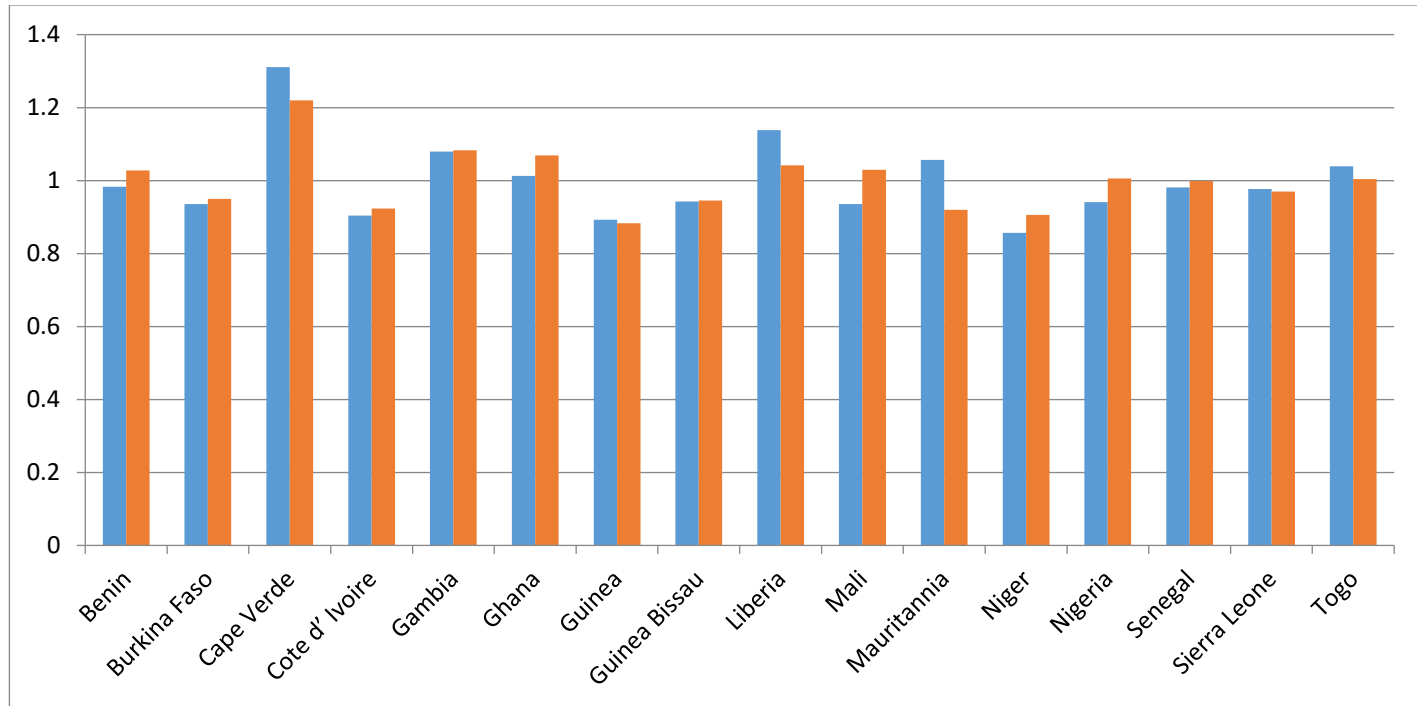


Figure 1: Public Sector Performance (2007 and 2012)

. Represents General Performance (2007);

. Represents General Performance (2012)

Source: Transparency International (2007 and 2012); World Bank Database (2012); Global Competitive Index Report (2012)

5. Summary and Conclusion

This paper appraised public sector performance for countries within West Africa through a number of socio-economic indicators. The study also assessed how PSP has changed over time between 2007 and 2012. Moderate differences in the PSP across West Africa economies were found. The results show that some countries such as Benin, Burkina Faso, Ghana, Niger, and Nigeria showed relative improvement in PSP, some other country such as Cape Verde, Liberia, Mauritania and Togo showed a decrease in their PSP, while some country such as Gambia, Guinea, Guinea-Bissau and Sierra Leone maintained their formal PSP. The evaluation also reveals that for both years Cape Verde has the highest PSP score, while Niger and Guinea obtained the worst PSP score in 2007 and 2012, respectively, although, the improvement in Nigeria's PSP does not justify the wealth of the nation. Finally, the optimal dimensioning of public sector's management is the starting point of obtaining real performances that have an impact on the entire economy.

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