

National debt management and business sustainability in Africa's largest economy: A focus on the private sector

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Abstract

In many developing economies, high and increasing public debt profile constitutes an essential means of financial risk. An appropriate debt management is germane for survival of business and good international reputation though its effect on private sector credit mobilization had been seldomly investigated. This study seeks to know whether strategic debt management approach exacts a significant effect on the Nigerian private sector and Africa at large resulting to higher credit availability for sustainable enterprise establishment. The study used a time-series observation spanning from 1981–2021. The method of data analysis employed the unit root test for stationarity. Johansen cointegration and vector error correction approach. The result of the unit root test indicates the series were all stationary after first difference and thus were integrated of order 1. The Johansen cointegration test support the existence of a cointegrating series between the private credit and its determinants. More empirical evidence from the study shows that proper

debt management and increase revenue generation through net taxes on products accounted for 0.93 and 1.32% increase in private sector credit mobilization, while total external debt stock was responsible for a significant negative influence of 0.60% on private sector credit mobilization. The study recommends that the government should always be proactive in their strategic and innovative approach to debt management, revenue generation and sources of funds. This will help not only to avoid crowding out of the private sector but will enhance adequate credit mobilization for effective operations of the private sector.

Figures

Error Correction	DLDPMS	DLDPDM	DLDNTP	DLDTEDM
Coefficient	-0.43047	0.17618	0.32733	-0.53061
	(0.14412)	(0.14722)	(0.12191)	(0.22743)
	[-2.9893]	[1.19194]	[2.68420]	[-2.33197]

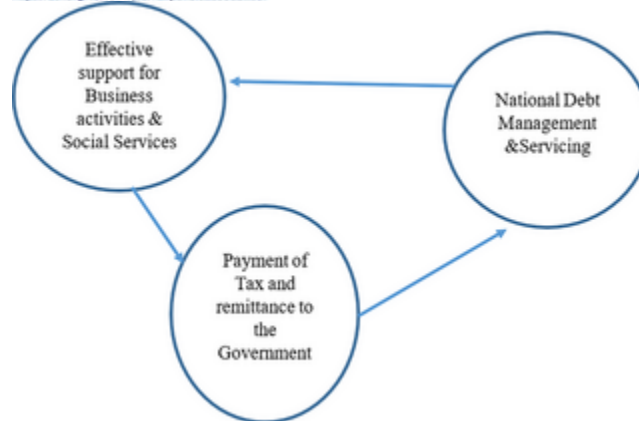
Source: Authors computation.

<https://doi.org/10.1371/journal.pone.0293582.t006>

		P-value
R-squared	0.596039	
Adj. R-squared	0.532920	
Serial Correlation LM Tests	1.087317	0.3809
Heteroskedasticity Tests	112.7549	0.1807

Source: Authors computation.

<https://doi.org/10.1371/journal.pone.0293582.t007>



Variable	ADF Test @ Levels (5% significance level)	ADF Test @ First Difference	Remark
EPSC	-0.910671 (-2.430642)	-4.321612 (-2.930967)***	Integrated to order 1
LPDM	-1.507746 (-1.430860)*	-4.096329 (-2.930967)***	Integrated to order 1
DNTP	0.411089 (-1.243692)	-7.298274 (-2.930967)***	Integrated to order 1
TEEM	-2.743429 (-2.430642)	-8.866602 (-2.930967)***	Integrated to order 1

Source: Authors computation.

Note: the critical T values are in brackets and computed ADF test statistics are outside the bracket
***, ** and * indicates stationarity at 1%, 5% and 10% respectively.

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Hypothesized No. of Cointegrating Equations	Eigen Value	Trace Statistics	CR1 Critical Value	Prob.**	Max Eigen Statistic	CR1 Critical Value	Prob.**
None*	0.334032	52.24203	47.47612	0.0141	21.50437	27.58434	0.0149
At most 1	0.289991	26.79049	24.79702	0.0704	13.33644	21.13162	0.4199
At most 2	0.153609	7.413815	15.49471	0.5279	6.504200	14.26440	0.5404
At most 3	0.021033	0.829635	3.841466	0.3710	0.929635	3.841466	0.3358

Source: Authors computation.

<https://doi.org/10.1371/journal.pone.0293582.t009>

Endogenous variables: DLDPMS DLDPDM DLDPDM DNTP DLDTEDM	Eq.	Eq.	Eq.	Eq.	Eq.	Eq.
0	76.53467	NA*	3.67e-007*	-2.611291*	-3.242097*	1.352071*
1	83.56369	21.47804	4.94e-007*	-2.290779	-2.486671	-2.931661

Source: Authors computation.

<https://doi.org/10.1371/journal.pone.0293582.t010>

EPSC	LPDM	DNTP	TEEM
1.000000	-0.428743	-1.314377	0.465040
	(0.01736)	(0.20594)	(0.11044)
T-Statistics	[16.11131]	[6.43080]	[5.14434]

Source: Authors computation.

<https://doi.org/10.1371/journal.pone.0293582.t011>

DLDPMS (1)	DLDPDM (1)	DNTP (1)	DLDTEDM (1)
1.000000	-0.446291	-0.930006	0.729499
Std. Error	(0.17670)	(0.12270)	(0.11073)
T-Statistics	[-2.52910]	[-2.41470]	[3.37504]

Source: Authors computation.

<https://doi.org/10.1371/journal.pone.0293582.t012>

Error Correction	DDPMS	DDLPMS	DDLNTP	DDLTDMS
Const(1)	-0.420547	0.170108	0.337311	-0.330017
	(0.18412)	(0.16723)	(0.12190)	(0.22743)
	[1.84951]	[1.01934]	[2.04420]	[1.33197]

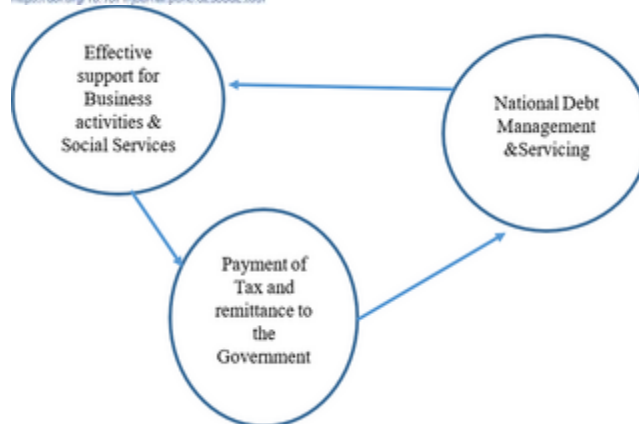
Source: Authors computation.

<https://doi.org/10.1371/journal.pone.0293582.t006>

		P-value
R-squared	0.596039	
Adj. R-squared	0.532920	
Serial Correlation LM Tests	1.087317	0.3809
Heteroskedasticity Tests	112.7549	0.1807

Source: Authors computation.

<https://doi.org/10.1371/journal.pone.0293582.t007>



Variable	ADF Test at levels (5% significance level)	ADF Test at First Difference	Remark
EPMS	-0.910671 (-2.930942)	-4.522612 (-2.930967)***	Integrated to order 1
LPMS	-1.507740 (-2.930967)	-4.099629 (-2.930967)***	Integrated to order 1
LNTP	-0.410089 (-2.930942)	-7.206279 (-2.930967)***	Integrated to order 1
TTMS	-2.743439 (-2.930942)	-4.800602 (-2.930967)***	Integrated to order 1

Source: Authors computation.

Note: the critical T values are in brackets and computed ADF test statistics are outside the bracket
***, indicates stationarity at 1%.

<https://doi.org/10.1371/journal.pone.0293582.t008>

Hypothesized No. of Coint	Eigen Value	Trace Statistics	0.05 Critical Value	Prob.**	Max Eigen Statistic	0.05 Critical Value	Prob.**
None*	0.934032	53.29205	47.85613	0.0101	31.38137	27.58438	0.0101
At most 1	0.209991	20.79049	29.79707	0.5706	13.35664	21.13162	0.4199
At most 2	0.153609	7.413835	15.49471	0.5279	6.504200	14.26460	0.5404
At most 3	0.023335	0.829633	3.841466	0.3700	0.929633	3.841466	0.3330

Source: Authors computation.

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Data Availability: All relevant data are within the manuscript and its [Supporting Information](#) files.

Competing interests: The authors have declared that no competing interests exist.

1. Introduction

The management of national debt has become a common practice among economies around the world. Many national economies borrow to either supplement the funding for their budget or execute special projects in their economies [1,2]. The use of debt funding has helped the debtor economies to support the provision of basic amenities required to sustain the lives of the citizens and business activities within the economy.

National debts are also adopted as an option to address macroeconomic crises in economies and an available option to avoid an increase in the tax burdens on the citizenry [3,4]. While many economies have gone into borrowing on a higher scale especially when the interest and payback are attractive, coupled with their needs to meet national economic needs, the burden of debt repayment requires the continuous obligatory actions of the debtor nation to affect the payback as negotiated [5].

Business organizations in an economy depend on the fluent interactions and movement of basic macro support such as the availability of credit facilities, and infrastructural provisions to function in an economy. This means that these businesses that are largely resident in the private sector are expected to participate in the payback of acquired national debt through their remittance of taxes and levies to the government treasury [6-10]. The management of national debt and its influence on business sustainability has become a trendy practice in Nigeria, which leaves the government with the responsibility to determine the amount and rate at which the national debt is acquired and the direction of such funding to support economic activities, with the aim to sustain businesses in Nigeria [11-13].

The current study is focused on exploring the impact of the Nigerian national debt profile on business sustainability in the private sector of the economy. It aims to provide learning about the level of support accessible to operating businesses in the private sector due to the acquisition of debt by the Nigerian national government. It is focused on developing learning on the intrinsic implications of national debt burdens on the operations of businesses in the private sector (see [2,14]). A critical question raised in this study is *how can the use of national debt funding provide further support to business activities in the various sectors?* and *how in turn, can the extant productivities of the private sector be harnessed to support national debt management obligations in Nigeria?* This study aims to address these critical questions and suggest an improved approach to maximize the positive impacts of national debt burdens on the sustenance of businesses in the Nigerian economy.

While this study explores the potency of the national debt in supporting business activities, culminating in investment drives in the private sector, its emphasis is on the need for prudent management and allocation of national to achieve this set purpose, in order to maximize the useful of national debt to the broad economic development such as positive transformation of the private sector. The study therefore emphasizes the viability of national debt management, in terms of its sustainability in critical areas such as the development of a robust repayment structure that offers effective support to the sustenance of business activities in the economy. This aligns with the observation of [15], who based their study on the natural resource management approaches of selected developing economies, towards attaining economic growth and the optimization of financial productivity for optimum impact on the economies.

This study assumes the following structure: The next session provides a detailed literature review on the key concepts of national debt management and business sustainability and the underpinning theory adopted in this study. This is followed by the methodology and a discussion of the main findings. The final section covers the conclusion and recommendations for further research.

(XLSX)

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