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Moderating Role of Institutional Quality on Public Debt Sustainability in Kenya

Yabesh Ombwori Kongo

Department of Economics, Moi University, Kenya

ABSTRACT: The focus of institutional economics is on the crucial part that institutions play in a nation's economic performance. With a focus on transaction costs as a crucial element of economic activity, it offers a framework for understanding the interaction of governmental structures, corporate structure, and individual decisions. A mechanism for advancing transparency, accountability, and responsibility in policy decision-making is thought to be better institutional quality. Kenya is one of the Sub-Saharan African nations struggling to meet enormous debt repayment obligations that the World Bank and other bilateral financial institutions have said are unsustainable. Kenya has recently heavily relied on bilateral financial arrangements with the Chinese government to finance important infrastructural projects because it has not been producing enough output to effectively finance its development projects. Kenya's economic growth and debt management problems are partly related to budgetary components where there has been an unnecessary exaggeration of government consumption components, and government institutions are to blame for such disparities in the budgetary components, which have been empirically confirmed to be growth retarding. The analysis shows that Institutional Quality has a significant positive impact on public debt sustainability, while Current Account Balance does not appear to have a statistically significant effect on it. However, the interaction between Current Account Balance and Institutional Quality has a statistically significant negative effect on public debt sustainability. Based on the findings, policymakers should prioritize improving institutional quality as it plays a vital role in enhancing public debt sustainability. This may involve measures to strengthen governance, transparency, and the rule of law, which could lead to better fiscal management and debt control. Enhancing institutional quality promotes economic growth, reduces government overreliance on foreign debts and thereby acts a moderator in making public debt to be sustainable.

KEYWORDS: Institutional Quality, Public debt, Current Account Balance, Kenya

1.0 INTRODUCTION

The percentage of public debt in the world today is almost 40%, which is the highest level since the middle of the 1960s. The two significant economic crises that governments have experienced since 2007—the global financial crisis and the COVID-19 pandemic—are largely to blame for the increase in public debt. According to IMF (2021), debt dynamics differ significantly between nations. The advanced economies and China accounted for more than 90% of the $28 trillion increase in global debt in 2020. These nations were able to increase public and private debt during the pandemic due to low interest rates, central bank actions (including significant purchases of government debt), and well-developed financial markets. However, most developing economies are on the other side of the financing divide, with limited access to funds and frequently higher borrowing rates.

Kenya's total public debt stood at Kshs 6.3 trillion as of March 2020, and with the country raising the debt ceiling to the absolute figure of Kshs 9.0 trillion from the initial 50 percent of GDP in October 2019, the government has headroom to borrow an additional Kshs 2.7 trillion before the current debt ceiling is exceeded. The debt mix is 51:49 external to domestic debt, implying that foreign borrowing is currently at Kshs 3.2 trillion, while domestic borrowing is at Kshs 3.1 trillion. In FY2020/21, the government borrowed a total of Kshs 569.4 billion, of which Kshs 247.3 billion came from external lenders, a 30.0 percent decrease from the Kshs 353.5 billion seen in FY2019/20, and Kshs 318.9 billion as domestic debt, up from the projected 300.7 billion in FY2019/2020. As a result, the domestic to foreign debt ratio was 56:44 (Central bank of Kenya, 2021).

It is therefore clear that the country's high debt levels have become a source of concern, with both the debt-to-GDP ratio and the debt-service-to-revenue ratio exceeding the recommended threshold. It is further anticipated that the global pandemic posed fiscal challenges to the economy. This sentiment has been echoed by a number of authoritative bodies, implying that Kenya's

creditworthiness may be further eroded. Since from the previous studies the presence of sound institutions appears to be capable of offsetting the negative impact of high debt on long-term growth, this study therefore considers this key variable in this study.

Institutional development is the best indicator of a nation's structural development and long-term welfare creation. The study of the nature and causes of national wealth dates back to at least 1776, when Adam Smith published his similarly titled landmark book Smith, 1776. Smith eloquently describes how well-organized markets enable individuals to collectively maximize economic welfare while solely pursuing their personal interests. Douglass North (1990) did much of the early work in the field of institutional quality. North defines institutions as humanly devised constraints that shape human interaction. Essentially, in North's framework, institutional quality improves as executive power is limited. Such constraints can be formal rules or informal constraints, and their strength is determined by the characteristics of those who enforce them.

High-quality institutions will not prevent the next economic crisis in a market economy, but they will increase the chances that a society will be able to cope with, recover from, and continue on its long-term trajectory of progress (Mensah, Bokpin, & Boachie-Yiadom, 2018). Institutional quality can therefore be modeled to ensure that economies like Kenya can continue to use a variety of borrowing instruments that are consistent with the goals of the 2021 Medium Term Development Strategies there by ensuring debt sustainability. The quality of institutions (along with the level of public debt) contributes to the explanation of long-term growth performance in EU countries. A recent ECB staff study (Masuch, Moshammer, & Pierluigi, 2017) connects countries' long-term growth (average annual real GDP per capita growth over 15 years) to the initial level of institutional quality, government debt, and an interaction term between these two explanatory variables. It discovers that a combination of high debt and poor institutional quality is especially harmful to growth. These findings lend credence to the notion that the quality of institutions has been a significant growth determinant. The findings appear to be significant for countries where institutional delivery is below or near the EU average and initial public debt exceeds 60% of GDP.

Given the widespread belief that Sub-Saharan Africa's underdevelopment is the result of poor institutional quality (Bräutigam & Knack, 2004; Siba, 2007) and the region's mounting debt burden (Omotola & Saliu, 2009), this study seeks to ascertain the role of institutional quality on the relationship between current account balance and debt sustainability relationship in Kenya. This is especially important because Kenya's institutional quality is typically characterized by high levels of corruption, weak rule of law, escalating social unrest, recurring political instability, and the spillover effects of armed conflict. As a result of the rising cost of corruption and increased demand for public debt, Kenya's fiscal and external imbalances have widened (Onuoha & Qobo, 2012; Tarek & Ahmed, 2017).

2.0 EMPIRICAL LITERATURE REVIEW

Empirical evidence suggests that institutional quality plays a significant role in explaining growth disparities between countries (Acemoglu, Johnson, & Robinson, 2002; Butkiewicz & Yanikkaya, 2006; Siba, 2007). Furthermore, it has been determined that the impact of finance on economic growth is greater when the country is endowed with good institutional qualities (Law & Habibullah, 2006; Law, Tan, & Azman-Saini, 2014). This highlights the importance of investigating the role of institutional quality in the debt sustainability relationship, which has been largely overlooked in reviewed literature. It has been argued that good institutions efficiently manage public debt (Daud, 2020; Daud & Podivinsky, 2014; Presbitero, 2008), whereas bad institution destabilizes the borrowing decisions of the country, divert the borrowed funds to a potentially meaningless projects (Jalles, 2011) and have a more likelihood of debt defaulting and poor economic performance (Ciocchini, Durbin, & Ng, 2003).

Fournier and Bétin (2018) investigated the impact of structural characteristics on middle-income countries' debt limits. Two equations in their study linked the probability of default to the interest rate. First, the likelihood of default was estimated using a logit model. Second, the assumption of non-arbitrage opportunity on the sovereign bond market was linked to the interest rate, default probability, and recovery rate. Their model produced three outcomes: a single and stable solution at low debt, multiple equilibria with stable and unstable solutions at intermediate debt, and a single solution with a prohibitively high risk-premium above a debt threshold. This situation defined the debt limit for them. It mirrored empirical evidence on default determinants: it rises with perceived government effectiveness, the export-to-GDP ratio, and the expected recovery rate, and falls with commodity export-to-GDP ratio, the size of growth shocks, the share of defaults in neighboring countries, the risk-free rate, and investors' risk aversion. According to the study, debt limits are highly sensitive to the expected recovery rate, demonstrating the importance of credibility. The case of multiple equilibriums demonstrated the danger of self-fulfilling crises: interest rate shocks can cause a default below the debt limit.

Against this backdrop, this study is an improvement over the previous empirical studies, such as (Laskaridis, 2021) on the debt sustainability nexus in many important aspects. First, it looks at the direct impact of institutional quality on debt sustainability as well as the indirect impact of institutional quality on debt sustainability through the interaction term. Daud (2020) used a dynamic panel data analysis to investigate the role of institutional quality in the relationship between external debt and economic growth.

The study discovered that institutional quality can help to mitigate the effect of external debt on a country's economic growth. The study further revealed that the negative effect of external debt on a country's economic growth monotonically increases with the level of institutional indicator, implying that debt overhang can still occur in economies endowed with good institutions, but only for higher debt values.

Abera, Mulugeta, and Melaku (2019) used fixed effect and System GMM methods to examine the extent to which institutional quality affects economic performance in 14 East African countries from 2005 to 2016. This study's findings confirm previous empirical research that economic institutions matter for economic performance, with control of corruption and government effectiveness having a positive impact on economic performance and rule of law having a negative impact. According to the findings of this study, Eastern Africa with better institutions has a higher economic performance. According to the study's recommendations, Eastern African countries should improve those institutions that have a positive impact and promote and change those that have a negative impact in order to promote economic development.

While comparing a large sample of developed and developing countries, Altayligil and Çetrez (2020) discovered that economies with higher political stability tend to have more capital flows, resulting in a larger current-account deficit. When comparing the current account balances of the United States and developing Asian economies, Gruber and Kamin (2007) discovered that institutional quality has dimensions such as political-stability, voice, government-effectiveness, rule-of-law, regulatory burden, and corruption. The findings demonstrated that institutional quality has a significantly negative impact on current account balance.

3.0 RESEARCH METHODOLOGY

The study investigated the moderating effect of institutional quality on the relationship between current account balances, and public debt sustainability. A moderator is a variable that specifies the circumstances under which a specific predictor is related to an outcome. To test the conceptualized relationships, several models were formulated to facilitate the process in accordance with Andrew Hayes model 1 (Hayes, 2013). Moderation occurs when the relationship between two variables depends on a third variable. The effect of a moderating variable is characterized statistically as an interaction (Hayes, 2017).

When one chooses to run a moderator analysis using multiple regressions, part of the process involves checking to make sure the data can be analyzed using multiple regression. It was appropriate to use a moderator analysis using multiple regression if the data "passes" the assumptions that are required for multiple regression to give a valid result (Hayes, 2017). According to Hayes (2013), if the effect of independent variable (*X*) on dependent (*Y*) varies in relation to variation in moderating variable (*W*) then moderation is deemed to have occurred. Figure 1 conceptualizes this relationship in a statistical diagram according to Hayes (2013).

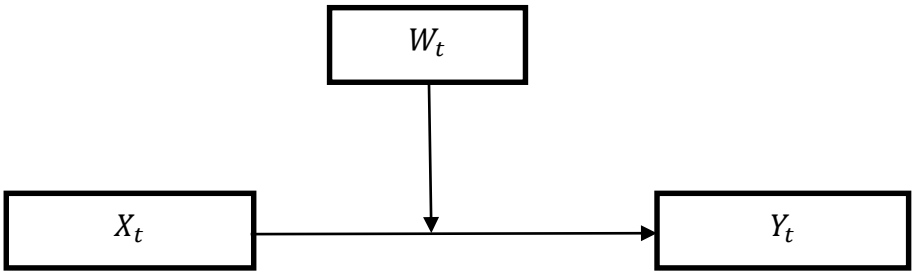

Figure 1: Moderation Analysis

Where, Y_t is the public debt sustainability (PDS), X_t stands for the independent variable (current account balance), W_t is the moderating variable (institutional quality) and t is the year. To assess the effects of a moderating variable, hierarchical multiple regression was used. To test moderation, the interaction effect between X and W, as well as whether or not such an effect is significant in predicting Y is established.

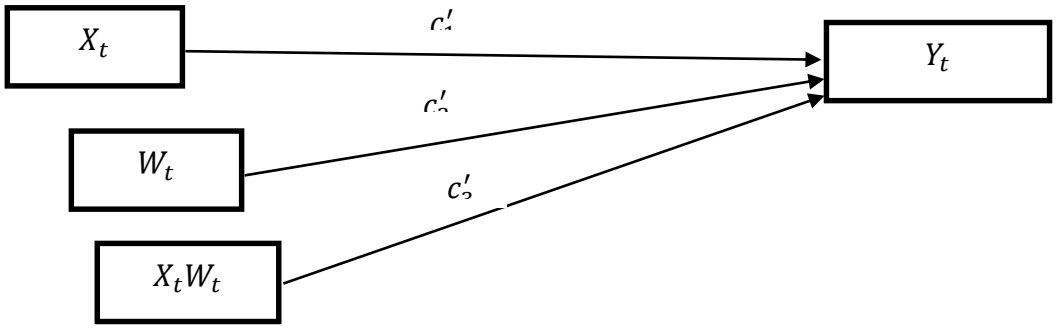

Figure 2: Statistical Analysis Diagram

$Y_t = c_0' + c_1'X_{it} + c_2'W_t + c_3'X_tW_t + e_t$.....1

Where, Y_t is the public debt sustainability (PDS), X_{it} is the current account balance, W_t is institutional quality and t is the year while c_0' is the intercept, c_1' , c_2' and c_3' are the coefficients. c_3' Measure the moderating effect of institutional quality.

4.0 RESULTS AND DISCUSSION

Table 1 present result for moderation evaluation. The coefficient for determination (R-square) was 0.8443 indicating that approximately 84.43% of the variation in public debt sustainability is explained by the independent variables in the model. The change in R^2 (ΔR^2) was 0.0334, showing the incremental improvement in the model's fit when adding the independent variables. F-statistic of 50.613 (p<.05) indicated that the overall model is statistically significant. Results further indicate that the interaction between current account balance and institutional quality was negative and significant. The relationship between current account balance and debt sustainability before interaction was positive and significant and introduction of institutional quality reversed the relationship. According to Memon et al. (2019), a moderating variable can enhance, buffer, or antagonize the relationship between the predictor variable and the outcome variable. If the moderator variable is significant, it can either strengthen or diminish the relationship between the dependent and independent variables (Memon et al., 2019). The effect of a moderator can be shown via the interaction of an independent and moderating variable. Results from Table 1 therefore specifies that at low levels of institutional quality, the negative coefficient (-92.175) indicates that the relationship between current account balance and debt sustainability is weaker or even reversed. In this case, as current account balance increases, debt sustainability may not improve as expected due to the negative moderating effect of weak institutional quality. On the other hand, at high levels of institutional quality, the negative coefficient (-92.175) suggests that the moderation effect is less pronounced. Here, as current account balance increases, debt sustainability is more likely to improve, with the positive impact of strong institutional quality outweighing the negative moderating effect.

Table 1: Moderation of Institutional Quality on the Relationship between Current Account Balance and Debt Sustainability

		Y(Public Debt Sustainability)	
Variables		**Coef. (SE)**	**p-value**
Intercept		.042(.057)	.468
Current Account Balance (X)		.676(1.245)	.591
Institutional Quality(W)		.413(0.02)	.000
Interaction (X*W)		-92.175(37.622)	.021
R^2	=.8443		
ΔR^2	=.0334		
F	=50.613		
P>F	=.000		

Note: Coef. = coefficient, SE = standard error for conditional direct and indirect effect using bootstrap.

Figure 3 presents the impact of institutional quality acting as a moderator on public debt sustainability which is found to be antagonistic. This means that the presence of the moderator (institutional quality) reverses the effect of the predictor (current account balance) on the outcome variable (debt sustainability). The results show that the effect of current account balance on

debt sustainability varies depending on different levels of institutional quality. When institutional quality is high, with strong governance and transparency, the effect of a current account balance above the mean value (medium), there is increased debt sustainability. This implies that good institutional quality can promote fiscal discipline, encouraging prudent fiscal policies, minimizing wasteful spending, and controlling budget deficits. As a result, a better current account balance is achieved, leading to enhanced debt sustainability. Conversely, at low levels of current account balance with high institutional quality, public debt sustainability is achieved. On the other hand, the results also indicate that weak institutional quality can hinder the relationship between current account balance and debt sustainability, potentially leading to unfavorable outcomes. Therefore, strengthening institutional quality is essential to achieve and maintain sustainable levels of public debt in Kenya.

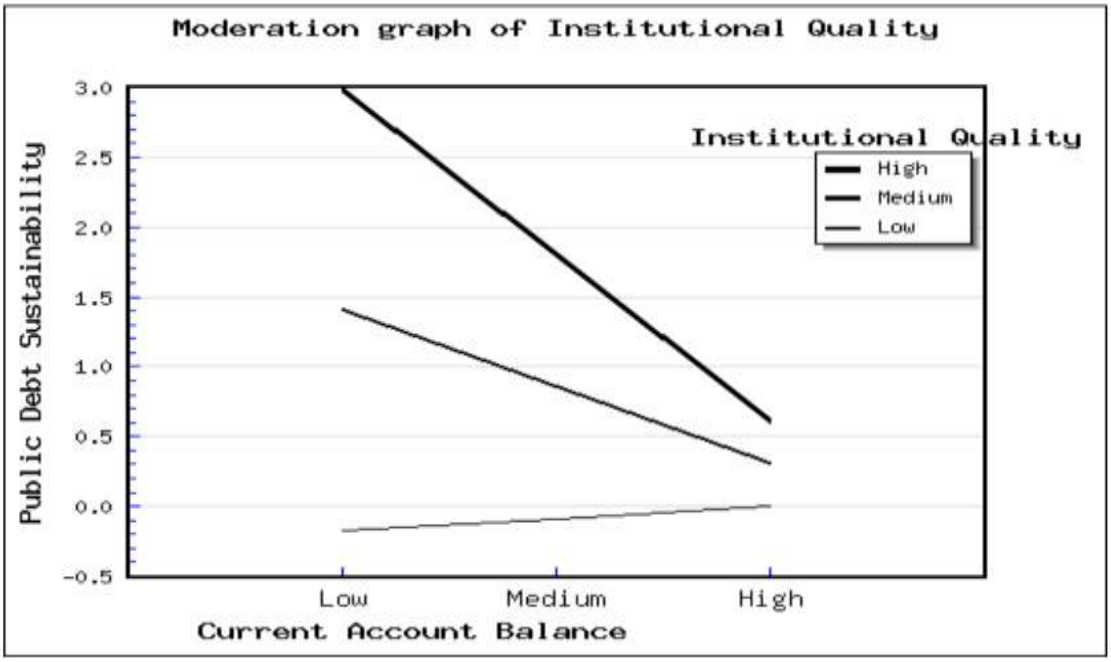

Figure 3: Moderation Graph of Institutional Quality on the Relationship between Current Account Balance and Debt Sustainability

Overall, the statistically significant p-value of 0.021 indicates that the interaction effect between current account balance and institutional quality is not likely to occur by chance. This supports the notion that institutional quality plays a significant role in influencing the relationship between current account balance and debt sustainability, underscoring the importance of robust institutional frameworks for fiscal management and debt sustainability in Kenya.

5.0 CONCLUSION AND RECOMMENDATIONS

Based on the regression analysis output, it can be concluded that Institutional Quality (W) is a crucial factor positively influencing public debt sustainability (Y). The interaction between Current Account Balance (X) and Institutional Quality (W) also has a significant impact on public debt sustainability. However, the individual effect of Current Account Balance is not statistically significant in this model. The overall model shows a good fit, explaining approximately 84.43% of the variation in public debt sustainability. To achieve public debt sustainability in Kenya, policymakers should focus on enhancing institutional quality, including governance, transparency, and efficiency in public financial management. Effective institutions can lead to better fiscal discipline, sound debt management practices, and improved debt sustainability. Policymakers should closely monitor the interaction between Current Account Balance and Institutional Quality, as it significantly impacts public debt sustainability. Regular assessments of this interaction will inform appropriate policy responses to influence debt sustainability positively. Addressing current account imbalances is vital for macroeconomic stability, even though the individual effect may not be significant in this model. Policymakers should implement measures to promote sustainable trade balances and avoid adverse effects on public debt sustainability. Prudent debt management remains crucial, optimizing debt composition, maturity structure, and interest rates to ensure manageable debt service commitments. To further enhance debt sustainability, policymakers should prioritize fiscal reforms, including comprehensive tax reforms, efficient tax administration, anti-tax evasion measures, and exploring new revenue streams to diversify the revenue base and create fiscal space.

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