



## IMPACT OF GOOD GOVERNANCE ON HEALTH OUTCOME, EDUCATION OUTPUT AND ECONOMIC GROWTH AMONG SELECTED AFRICAN COUNTRIES

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**ABSTRACT:** *Good governance is an essential component that drives better health outcomes and education output required as a catalyst that will stimulate economic growth, and this constitutes a vital social objective due to a good level of human capital development. The study evaluated the impact of good governance on health outcomes, education output and economic growth among selected African countries using panel data from 2000 to 2020. The Panel unit root tests indicated that real gross domestic product, health outcome, and indicators of good governance are stationary at a level. In contrast, education output, education expenditure, health expenditure and foreign aid are stationary at first difference. The Generalized Method of Moment (GMM) results show that good governance indicators have positive and statistically significant effects on real gross domestic product in the selected African countries. Education expenditure has a positive and statistically significant effect on real gross domestic product in the selected African Countries. Primary school enrolment has a positive and statistically significant effect on real gross domestic product in the selected African Countries. Life expectancy has a positive and statistically significant effect on real gross domestic product in the selected African Countries. Health expenditure has a negative but statistically significant effect on real gross domestic product in the selected African Countries. Foreign aid has a positive and statistically significant effect on real gross domestic product in the selected African Countries. The study recommends that African countries should ensure an adequate supply of medical facilities at the level, minimise the incidence of insecurity challenges, and have a good standard of living to increase the life expectancy of African people. All things being equal, the economic growth will increase.*

**KEYWORDS:** Good governance, Education output, Health outcome, Economic growth, African Countries



## INTRODUCTION

Good governance is an essential component that drives better health outcomes and education output required as a catalyst that will stimulate economic growth, and this constitutes a vital social objective as a result of a good level of human capital development due to an increase in workers' skills, productivity, and quality of life that is required to bring about desired change (Hamid, 2017). Furthermore, efficient governance opens the door to high productivity and human capital accumulation, both of which are key determinants of economic growth. As a result, the relationship between good governance, economic progress, and human capital accumulation via education output and health outcomes may be established (Amadi, 2019). Similarly, the topic under consideration has been a source of contention for many decades. The notion of 'governance' was first proposed and actively debated in the disciplines of public administration, political science, and economics in the 1980s (Grindle, 2010).

Good governance is an issue of concern in African countries, which this research aims to address. It is impossible to overstate the importance of excellent governance, health outcomes, and education output in a country's economic advancement. In the past few years, a number of studies have looked at the impact of health expenditure on economic growth (Hilairth & Gilles, 2015), the relationship between education, health outcome, and economic growth (Barnard et al., 2018), the impact of health outcomes on economic growth in Sub-Saharan Africa (Sikiru et al., 2020), and the impact of governance on the health status in Sub-Saharan Africa (Innocent and Bernadette, 2015). (Mohammed, 2020). However, earlier investigations found the following holes:

It is clear that comprehensive studies have yet to be conducted on the influence of good governance on health outcomes, education output, and economic progress in Africa and other nations throughout the globe. It will be a valuable addition to the body of knowledge if this study looks at how democracy in the domain of good governance correlates with health outcomes, education outcomes, and economic progress in chosen African nations. According to the World Governance Indicators Index (WGI, 2021), chosen African nations will be examined for good governance indicators such as government effectiveness, political stability and rule of law, voice and accountability, and control of corruption. For example, in Sub-Saharan Africa, Makuta & O'Hare (2015) used just the corruption perception index as an indication of governance; in Europe and Malawi, Doucouliagos, Hennessy & Mallick (2019) utilised only the corruption perception index as an indicator of governance.

The main objective of this paper is to investigate the impact of good governance, health outcomes, and education output on economic growth among selected African countries. The rest of the paper is organised as follows: literature review, which is the second part of the paper; methodology in which the objectives of the paper could be achieved and the third part of the paper. Part four of the paper presents and analyses the empirical findings, and the final section concludes the paper.



## Concept of Governance

The term "governance" has been defined several times by various academics. Despite the many meanings, it appears that the term "governance" refers to the political sphere and political action as the essential role of every national government, regardless of which definition one uses. There is a difference between good governance and government, which we want to underline from the beginning. Government and good governance are different despite their shared purposes. Conversely, good governance refers to the conception, execution, and implementation of activities supported by shared aims of people and organisations, regardless of whether such organisations or individuals have official authority or policing capacity (Rosenau 1992 and Bingham et al. 2005).

Furthermore, when it comes to government, it is all about bureaucracy, law and financial regulation, and coercion. On the other hand, non-regulatory policy instruments are increasingly being used to promote good governance. By employing this policy tool, non-state actors collaborating with governments can be encouraged to propose, create, and implement cooperative projects (Jordan et al., 2003). Overall, excellent governance is becoming more commonplace in our society. A substantial and ever-expanding body of research exists on the topic of government (Aminuzzaman, 2010). When used historically, such as in the fourteenth century, the term "good governance" denoted a technique, activity, or function of government (Halfani et al., 1994). According to this definition, a nation's system of politics, as well as its administration and regulation of state activities, constitutes good governance for Landell et al. (1991).

According to Graham et al. (2003), effective governance is defined as the interaction of structures, procedures, and traditions that determines how authority and responsibility are exercised, choices are made, and people and other stakeholders have their voices heard. Consequently, successful governance is about power, relationship, and accountability: it tackles concerns like who has the authority, who makes the choices, and how decision-makers are held responsible. To ensure an open and legitimate relationship between civil society and the state, Halfani and his colleagues (1994) define good governance as a system of government that focuses on effective and accountable institutions, democratic principles and electoral processes, representation and responsible government structures. They focused on the vital connection between civil society and the state. Since this distinguishes the study of good governance from government, it is essential.

Moreover, when it comes to defining civil society, it is crucial to understand how it interacts with government. According to this group, decentralisation and sharing, citizen engagement, accountability, openness, and responsiveness are effective and efficient ways to establish government credibility and legitimacy. Similar to the OECD (1995) definition of good governance, which includes public administration as well as the institutions and methods used to govern the country, the relationship between government and its citizens (including businesses and other citizen groups) and the state's function are all part of good governance. Understanding the interaction between state and non-state entities is critical for today's twenty-first-century concerns. This is due to economic globalisation, widespread corruption of state agencies, the collapse of centrally planned economies, elitist bureaucracy, and the spectacular breakthrough of information technology in emerging countries (e.g., Hossain 2001; Salomon & Anheier, 1996; Anheier & Seibel, 1990). Public management and public policy studies have two distinct methods of interpretation and redefinition.



Analysing the existing literature, we discovered that these two methods have roots in international assistance organisations and European academics. From their vantage points, it appears that each method has contributed to the conceptual foundation for effective governance. The World Bank (1994) exemplifies the first conceptual dimension. The World Bank defines good governance as how a country's economic and social resources are managed for development (World Bank, 2020). As a matter of fact, the World Bank defines good governance in terms of administrative dimensions, which include civil service reform, government downsizing, service delivery, contracting out public interventions, and the development of institutions' ability. Researchers linked with the World Bank also examine good governance from three angles (e.g., Kaufmann et al. 2000). A government's ability to effectively manage resources, formulate and implement sound policies and regulations, and allow citizens access to the administration are all factors to consider. So, methods used to hold governments accountable, monitor their performance, and the tendency to remove them from office.

Good governance was still widely accepted in academic circles in the early 1980s, including public administration, political science, and economic and financial studies (Grindle, 2010). Governance may be defined as how public authorities and established institutions utilise power and authority to guarantee that necessary public policies are put in place for public goods and services to ensure they are available (WGI, 2020). Conversely, good governance is defined as "the ability of the government to set and enforce laws and to assure appropriate delivery of services, regardless of whether that government is democratic or not" Rothberg (2014).

## **Indicators of Good Governance**

### **Political Stability and Economic Growth**

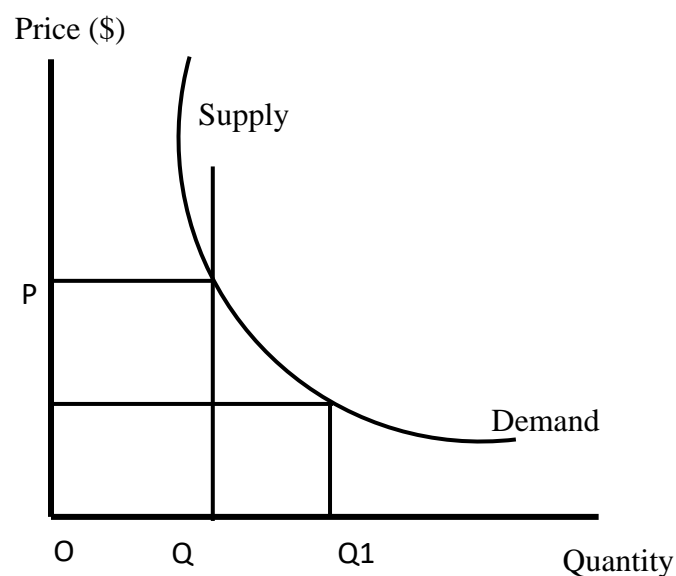
The anti-terrorist and anti-violence institutions enhanced regulatory processes, improved regulatory mechanisms, and improved rule-of-law enforcement; improved regulatory mechanisms; better rule-of-law enforcement; better rule-of-law enforcement (Kaufmann, 2010). Because of the high quality of the institutions, the well-positioned good governance institutions will drive the want rise in economic growth by using the human capital theory, Solow and endogenous model vividly x-ray growth. Consequently, a well-structured political system and a stable administration will instil trust in investors and encourage greater private sector activity, resulting in a more dynamic economy.

Similarly, political economists have a number of arguments for why political stability is good for the economy. Leaders who are nearing the end of their tenure are more likely to turn their backs on the public and commit crimes such as embezzlement, defaulting on contracts with the state, or even repudiating debt (Przeworski et al., 2000). This might lead to decreased economic interactions with the public sector due to a lack of confidence in the state's capacity to meet its promises. Researchers from a variety of disciplines are studying the topic of sustainable development. Sustainable development's economic, environmental, and social components are all intertwined. Maintaining a tolerable amount of government and foreign debt and avoiding significant sectoral imbalances that harm agricultural or industrial production are all requirements for a system to be considered economically viable (Goodwin, 2001).

## Corruption and Economic Growth

Corruption means high-ranking government officials selling company assets and sensitive information to non-governmental organisations (Andvig & Meone, 1990). As a result, the economy as a whole has suffered a setback. The economic decrease caused by corruption has led to a variety of alternatives being proposed by researchers. Corruption is a big problem, and policymakers should take steps to address it. A cancer worm that may cost up to 37 per cent of Nigeria's GDP by 2030 if it isn't dealt with fast is corruption (Akpata, 2020). By 2030, the cost is expected to rise to almost \$2,000 per person.. There has been a steady rise in the number of people signing up. There is a demand and supply side to corruption in any society. The government or a non-government party can be a source of both (Andvig & Meone, 1990).

Aid (2009), various people's views on the connection between good governance and economic growth vary. Due to the rise in transaction and production costs caused by corruption, it is clear that corruption has a detrimental influence on economic growth. In the same way, corruption erodes the trust of consumers and investors. A complete strategy that eliminates the red-tapism syndrome would naturally promote growth and development, even though this reduces the system's quality framework. Investing in the future of a country's growth relies heavily on the bureaucracy that predominates in the corridors of government decision-making. As a result, government officials are often required to bribe or otherwise reward vendors in order to accomplish this goal. It is also common for the government to give products and services to the public at a reduced cost, known as subsidies. As shown in Figure 2.3, the government is engaging in rent-seeking by inventing a subsidy scheme that allows it to evade any and all rules of due process (Samarasingl & Tharanga, 2018).



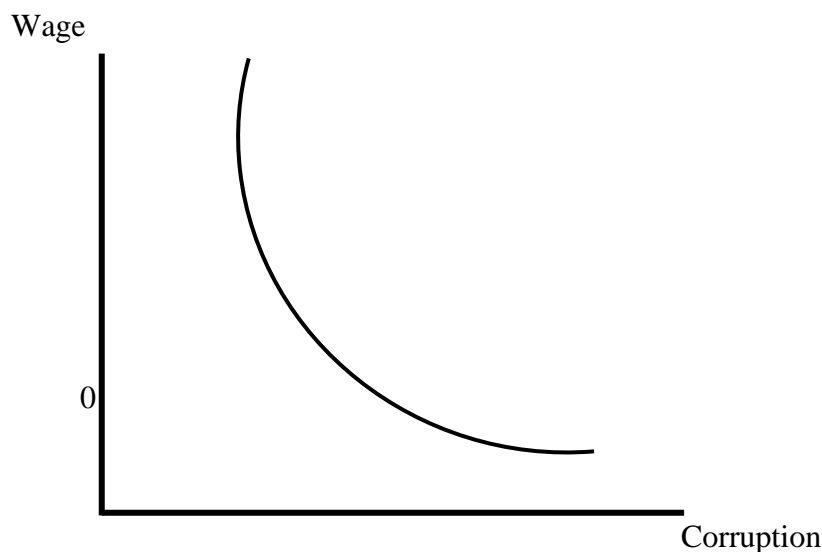
**Figure 2.3 Supply and demand of subsidies**

*Source: Samarasingl and Tharanga, (2018)*



The diagram from Figure 2.3 shows that the government provides some availabilities of goods and services but in limited supply at (OQ), creating an opportunity for gratification. The equilibrium price is at P, given the invisible hand market deduction of demand and supply. The government fixed the price below the equilibrium, at P1, and the quantity demanded is at OQ1. Hence, with this leverage of price reduction at (OQ-OQ1) with more consumer demand, government officers will be able to request bribes or gratification (Samarasingle & Tharangy, 2018).

Samarasingle and Tharangy (2018) pointed out different reasons that will subdue corruption in an organised institutional framework, including institutional corruption control mechanisms, transparency of rules and regulations, quality of bureaucracy, penalties for corruption and public sector wages. This will tremendously reduce corruption cases, accompanied by good wages, and will enhance the country's economic growth. The diagram below in Figure 2.4 shows the explicit relationship between corruption and government sector wages. That is when government sector wages tend to be low, which will equally raise the level of corruption in the country. But in a situation where government sector wages are considerably high, the corruption tendency will drastically reduce as shown from the graph, reflecting a downward sloping curve for wages and corruption below.



**Figure 2.4 The relationship between the government wage level and corruption.**

*Source: Samarasingle and Tharangy, (2018).*

### **Voice and Accountability on Economic Growth**

It is evident that, at any given time, citizens in a legal political system feel compelled to participate. Those elected or nominated by the public are held accountable because they have the complete support of their constituents. It is up to the constitution to determine whether or not the country will have a democratic or authoritarian government. The most crucial aspect of any democratic system is that it ensures enough public participation in the process of selecting



the political leader who will guide the country's progress. As a result, public engagement in effective government is solely based on the voice and accountability of the citizenry. Democracy's impact on economic growth has been the subject of three distinct schools of thought (Sirowy, 1990). There are three perspectives here: the sceptical, the conflicting, and the compatible. An authoritarian political system that ensures policy execution and changes are carried out with force is the only way to achieve faster economic development, according to the conflict perspective hypothesis (Sirowy, 1990). A trade-off between democracy and economic growth might accomplish this goal.

The compatibility viewpoint is viewed as the antithesis of the conflict perspective, which emphasises democracy and freedom of people via a vigorous investment drive as a consequence of faith in the system, and this will lead to economic progress. There must be a well-structured system in order for the rule of law, contract enforcement, and market expansion to be properly protected to accomplish strong economic growth (Sirowy, 1990). Critical thinking focused on how the industrial sectors, with their wealth of resources and political culture, influence economic growth more directly than any other aspect of democratic philosophy (Feng, 1997).

### **Rule of Law on Economic growth**

There are clear ties between the rule of law and protecting property rights, impartial contract enforcement, personal protection and controlling corruption in the system. The rule of law is vital to economic prosperity" (Haggard & Tiede, 2011). In order to stimulate economic growth, the government needs to keep corruption under control, keep law and order, and ensure that the judiciary is independent of the executive and legislative branches. Economic growth benefits from a well-functioning rule-of-law system because it increases investor confidence and, as a result, crowds out the private sector as a source of growth. Economic growth depends on a wide range of factors, as is evident. There are a number of important aspects that must be adhered to in order to ensure that markets run successfully and efficiently.

The most important of these is the country's government protecting property rights and contractual rights. According to the evidence, individuals or businesses must own property to engage in contractual agreements that encourage commercial transactions and assure openness, which in turn leads to economic revitalisation (Hoggard & Tiede, 2011). Individuals and groups have a stronger voice when establishing and enforcing the rule of law. Creating a level playing field for companies to thrive in while simultaneously combating corruption holistically will help to foster economic growth. Investing confidence may be bolstered by a country's legal system's ability to protect property and contractual rights.

Moreover, for nations with effective property rights protection and rule-based good governance, the World Bank has established a mechanised ranking system based on a scale of 1 to 6, where 1 is the lowest rating and 6 is the highest. According to the World Rating in 2012, the average ranking was 2.9. The Central African Republic, Benin, and Zimbabwe had GDP per capita of \$1,000, \$800, and \$600, respectively, among the 1.5-ranking nations. Furthermore, the data suggests that the Central African Republic, a landlocked country, suffers from economic and political insecurity, making it an increasingly dangerous destination for trafficked children. Since 1998, Zimbabwe's economic development has been sluggish. Like land redistribution and price restrictions, corruption and violence in the political process have prevailed in recent years. Countries that lack a clear framework of property rights and an



impartial judiciary free from corruption have fallen far behind the global economic progress (World Bank, 2020).

## EMPIRICAL LITERATURE

The impact of good governance on health outcomes and educational output on economic growth among selected African countries has been reviewed and investigated extensively in the literature. In furtherance of objective three of the study, the panel data of the percentage of real gross domestic product (real GDP) is used as a proxy of economic growth as a measure of national income per capita in a year, Life expectancy (LE), is used as a proxy for health outcome (HOC), , index of good governance (IGG), Foreign aid (Faid), Health expenditure (HExp), measures as a percentage of national income per capita as its contribution to Gross national product and foreign direct investment (FDI), Primary school enrolment (PSE) and education expenditure (Eduexp) (Ceri Sedgley, (2013). Since the end of the 1980s, the importance of good governance has dominated the international discussion about development and international assistance to Africa (Wohlmuth, 1998). This has led to various empirical investigations into the relevance of government amidst other factors to growth and development; Habtumu (2008) conducted an empirical study on the roles of good governance on economic performance in Sub-sahara Africa (SSA) between 1996 and 2005, using system and differenced GMM. He found that rule of law, government effectiveness, regulatory quality, political instability and voice, and accountability influence SSA growth.

However, control of corruption has no influence on economic performance in the region. Similarly, Cooray (2009) investigated the influence of governance on economic growth and development in 71 countries (including developed, developing and transitioning countries) adopting the same methodology and found that both size and quality of good governance are important for economic growth and in fact, investing in the capacity for enhanced government is a priority for the improved growth performance of the countries investigated. Their findings are corroborated by the works of Knack and Keefer (1997), Campos and Nugent (1999), Acemoglu et al. (2000).

Emara and Chiu (2016) investigated the impact of good governance on economic growth in 21 Middle Eastern and North African (MENA) countries between 2009 and 2013, using Principal component analysis (PCA) method of investigation reported that constant per capita income would rise by about 2% if composite government indicator increase by one unit. Contrarily, Yerrabati and Hawkes (2015), who investigated the governance and economic growth in South and East Asia and the Pacific region, using meta-synthesized techniques based on 29 studies with 554 estimators, found out that most governance indicators, other than government effectiveness and regulation have no important effect on growth. They concluded that empirical research on governance and growth still needs to provide evidence of the true effect of governance on growth.

Alomaisi et al. (2016) analysed the impact of governance on growth in Yemen, using multiple regression models, and found the rule of law and political instability to be the most important indicators of economic growth in Yemen, while other variables were declared insignificant. Kaufmann and Kraay (2012), in their paper titled Growth without Governance, using correlation analysis for 173 countries for the periods of 2000-2001, found that per capita





income and the quality of governance are strongly positively correlated across countries. Furthermore, they adopted an empirical strategy that allows the separation of this correlation into two components; the first result confirms the existing evidence on the importance of good governance for economic development.

Moreover, the second result is rather unpopular and suggests that there is a virtuous circle in which higher incomes lead to further improvement in governance. This result is similar to the recent report from Habyarimana and Dushimayezu (2018), who studied good governance, economic growth, and development in Rwanda, adopting a similar method of investigation found the existence of a pro-cyclical relationship between governance and economic development. The paper did emphasise that the level of economic growth and development depends not only on fixed capital formation and labour force but also on good governance.

Bayar (2016) empirically investigated public governance and economic growth in the transnational economies of the European Union between 2002 and 2103, using static panel analysis, revealed that all good governance indicators except regulatory quality had a statistically positive impact on growth and control of corruption and the rule of law had the largest impact, while political stability had the lowest impact. Tarek and Ahmed (2013) used a similar approach to study the relationship between good governance and economic performance in developing countries. Their findings were similar to those of previous research, suggesting that institutional failure is one of the main reasons for the destabilisation of long-term economic growth in developing countries. The authors concluded that an improvement in governance would greatly contribute to the economic growth of these countries. Authors with similar methods and results to Bayar (2016) and Tarek and Ahmed (2013) are Fayissa and Nsiah (2010) on 28 sub-African countries between 1990 and 2004, and Adam and Mengistu (2008) on privatisation, governance and economic development in developing countries between 1991 and 2002.

## METHODOLOGY

The model of the paper is specified as

$$RealGDP_{ij,t} = \lambda RealGDP_{ij,t-1} + \beta_0 + \beta_1 IGG_{jt} + \beta_2 Eduexp_{ij,t} + \beta_3 PSE_{jt} + \beta_4 LE_{ijt} + \beta_5 HExp_{ijt} + \beta_6 FAID_{ijt} + \phi_i + \alpha_t + \mu_{it} \quad \dots \dots \dots (3.4)$$

where primary school enrolment (PSE) is used as a proxy of education output (EDUOP), IGG is Index of good governance that influences the growth of the economy, taking into cognisance all its indicators, real gross domestic product per capita real GDP variables is used as a proxy of economic growth, health expenditure (Hexp), Life expectancy (LE) variables is used as a proxy of health outcome (HOC), Foreign direct investment (FDI).

It is evident that all foreign assistance to either private or public is used as a proxy for foreign aid (FAID) variables (variable and  $\phi_i$  represents a vector of conditioning information that controls for other factors associated with economic growth and  $\alpha_t$  is an unobserved country-specific effect and  $\mu_{it}$  is the error term. Arellano and Bond (1991) propose two estimators: one and two-step estimators. Our model is estimated using Arellano and Bond's two-step estimator, which is the most efficient method for doing so. Lagged differences of the explanatory variables as instruments for equations in levels are used by the GMM system estimator in



addition to lagged levels of the explanatory variables as instruments for first differences for more accurate findings (see Arellano and Bover, 1995; Blundell & Bond, 1998).

The validity of the instruments determines the consistency of the GMM estimator. Two-step GMM can be employed, according to Blundell and Bond (1998), when the number of cross-sectional units (countries, enterprises, etc.) is more than the time period  $t$ . There are 45 nations and 21 years of data to support our two-step GMM approach in this example.

A similar approach is taken by Blundell and Bond and Arellano and Bond (1991), Arellano and Bover (1995), as well as Arellano and Bond (1991). (1998). For example, Sargan/Hansen tests of over-identifying limitations are used to check the overall validity of instruments by assessing their sample analogues. No correlation between the error term and other variables is tested in this second test. We examine whether the differenced error term is second-order serially correlated in the system difference-level regression (by construction, the differenced error term is probably first-order serially correlated even if the original error term is not). Good governance and health expenditure ratios are also included to adjust for possible non-linearity so that we can see how health spending affects economic growth.

## EMPIRICAL RESULTS AND DISCUSSION

### Descriptive statistics

**Table 4.1 Descriptive statistics**

Statistics	RGDP	HOC	EDUOUTP	IGG	HEXP	EDUEXP	FAID
Mean	0.972364	60.19457	99.43645	0.537901	5.731624	5.437539	764.2447
Median	0.984077	59.58000	103.2829	0.610000	5.290000	4.078200	558.8300
Std. Dev.	0.748888	8.040202	25.87495	0.566090	2.155551	10.89044	7605624
Skewness	0.655883	0.180299	-0.951048	0.518138	1.869604	8.666589	1.828824
Kurtosis	4.100514	2.475983	5.093957	2.974604	9.937048	78.25408	7.875153
Jarque-Bera	61.69120	8.513985	168.3885	22.60951	1306.778	125484.4	781.6038
Probability	0.247813	0.074165	0.000000	0.931512	0.000000	0.563618	0.000000
Observations	714	714	714	714	714	714	714

Source: Researcher computation using E-views 10.

Table 4.1 indicates the result of the descriptive statistics of the study. It indicates that the standard deviations of the variables employed are far away from their means except for health outcome and education output (8.040202 and 25.87495). The Skewness of the distribution in the table shows positive values and less than one of real gross domestic product, health outcome, and indicators of good governance while negative value of education output. This implies that these variables are normally distributed. The Skewness also indicated values higher than those of health expenditure, education expenditure and foreign aid, which means that these variables are not normally distributed. The Kurtosis from Table 4.1 shows that health outcome, indicators of good governance, and foreign direct investment are normally distributed because their Kurtosis values are less than or equal to 3, while real gross domestic product, education output, health expenditure, education expenditure and foreign aid are not normally distributed



because their Kurtosis values are greater than 3. The Jarque-Bera test for normality shows that real gross domestic product, health outcome, indicators of good governance, and health expenditure are normally distributed because their p-values are greater than 5% while education output, health expenditure and foreign aid are not normally distributed because their p-values are less than 5%.

### Panel Unit Root Test

#### Levin Lin and Chu and Im Pesaran and Shin unit root test

**Table 4.2 Levin Lin and Chu and Im Pesaran and Shin unit root test**

Variables	Test at level		Test at first difference	
	LLC P-value	IPS P-value	LLC P-value	IPS P-value
RGDP	0.0003*	0.0007	-	-
HOC	0.0000	0.0000	-	-
IGG	0.0000	0.0000	-	-
EDUOUTP	0.1493	0.4178	0.0000	0.0000
EDUEXP	0.2434	0.0624	0.0000	0.0000
HEXP	0.0747	0.8570	0.0000	0.0000
FAID	0.0913	0.3099	0.0000	0.0000

Source: Researcher computation using E-views 10.

Table 4.2 presents the panel unit root test of Levin Lin and Chu (LLC) and Im Pesaran and Shin (IPS) unit root test. The tests show that real gross domestic product, health outcome, and indicators of good governance are stationary at level or are integrated of order zero (I(0) process) while education output, education expenditure, health expenditure and foreign aid are stationary at first difference or are integrated of order one (1) process.

### Generalized Method of Moment (GMM)

**Table 4.7 Generalized Method of Moment (GMM)**

Variables	Coefficient	Standard Error	T-statistics	P-Value
LRGDP(-1)	0.688222	0.011121	61.88536	0.0000
IGG	0.059013	0.007065	8.352769	0.0000
EDUEXP	0.011116	0.000259	4.300895	0.0000
PSE	0.000780	0.000207	3.768795	0.0002
LE	0.005805	0.001024	5.665967	0.0000
HEXP	-0.010672	0.000427	-24.98030	0.0000
FAID	0.204605	5.179106	6.187414	0.0000
J-statistic				3.242543
Prob(J-statistic)				0.645789
Arellano-Bond Serial correlation test				
AR(1)				0.0950
AR(2)				0.1801

Source: Researcher computation using E-views 10.



Table 4.7 shows the Generalized Method of Moment (GMM) result of the estimated model in the study. The result indicates that the dependent variable (real gross domestic product) at lag 1 is positive and statistically significant. This implies that the dependent variable is largely dependent on itself. Indicators of good governance show positive and statistically significant effects on real gross domestic product in the selected countries. This implies that a single-digit increase in indicators of good governance by a single digit will increase real gross domestic product by 5% in the selected African countries.

Furthermore, education expenditure indicates positive and statistically significant effects on the real gross domestic product in the selected African Countries, and this means that an increase in education expenditure by N1 will cause a 1% increase in real gross domestic product in the selected African Countries, This conforms to the economic apriori expectation when government increases its expenditure on education there will be an increase in real gross domestic product in the selected African Countries. Primary school enrolment shows positive and statistically significant effects on real gross domestic product in the selected African Countries. This conforms to the economic apriori expectation, which assumed the existence of a positive relationship between primary school enrolment and real gross domestic product. Life expectancy indicates positive and statistically significant effects on real gross domestic product in the selected African Countries. By implication, a single-digit increase in life expectancy by a single digit will increase the real gross domestic product in the selected African countries. This conforms to the economic apriori expectation, which assumed the existence of a positive relationship between life expectancy and real gross domestic product. Furthermore, health expenditure indicates negative but statistically significant effects on real gross domestic product in the selected African Countries. This means that an increase in health expenditure by N1 will cause a 1% decrease in real gross domestic product in the selected African Countries. This counters the economic apriori expectation when the government which assumed a positive relationship between health expenditure and real gross domestic product in the selected African Countries. Foreign aid indicates positive and statistically significant effects on real gross domestic product in the selected African Countries. By implication, an increase in foreign aid will result in a 20% increase in real gross domestic product in the selected countries; this conforms to the economic apriori expectation, which assumes the existence of a positive relationship between foreign aid and real gross domestic product.

Furthermore, the J-statistic from Table 4.7, which tests the over-identification restriction in the model, is close to zero, and its corresponding p-value is far from zero. This means that the conditions of good fitness of the model are satisfied, and we can conclude that the model is robust. The Arrelano and Bond serial correlation test shows that both AR (1) and AR (2) p-values' are greater than 5%. This means we cannot reject the null hypothesis and conclude that the model has no serial correlation problem. In other words, the model is free from serial correlation problems.

## CONCLUSIONS AND RECOMMENDATIONS

The Generalized Method of Moment (GMM) results show that indicators of good governance have positive and statistically significant effects on real gross domestic product in the selected African countries. Education expenditure has a positive and statistically significant effect on real gross domestic product in the selected African Countries. Primary school enrolment has a



positive and statistically significant effect on real gross domestic product in the selected African Countries. Life expectancy has a positive and statistically significant effect on real gross domestic product in the selected African Countries. Health expenditure has a negative but statistically significant effect on real gross domestic product in the selected African Countries. Foreign aid has a positive and statistically significant effect on real gross domestic product in the selected African Countries. The paper recommends that African countries should ensure an adequate supply of medical facilities at the level, minimise the incidence of insecurity challenges, and have a good standard of living to increase the life expectancy of African people. All things being equal, the economic growth will increase.

## REFERENCES

- Acemoglu, D. (2009). *Introduction to Modern Economic Growth*: Massachusetts Institute of Technology, Cambridge, USA.
- Adams, S. & Mengistu, B. (2008). Privatisation, Governance and Economic Development in Developing Countries. *Journal of Developing Societies*, Vol. 24, no. 4, pp. 415–438.
- Adams, S. & Mengistu, B. (2008). Privatisation, Governance and Economic Development in Developing Countries. *Journal of Developing Societies*, Vol. 24, no. 4, pp. 415–438.
- Afolabi, J.O. (2019). The impact of governance on economic development in West Africa: a system GMM dynamic panel approach. *Acta University -Danubius*, 15(3), 217–231.
- Aigjheyisi and Edore, (2015). Public procurement, governance and economic growths: some policy recommendation for Africa growth and development, *International Journal of Development and Management Review*, Vol. 10.
- Alomaisi, N.; Schomacker, R. & Shmaileh, A. (2016). The Impact of Governance on Economic Growth in Yemen: An Empirical Study. *International Journal of Management and Applied Sciences*, Vol. 2, no. 2, pp. 116-170.
- Amadi, K. C. & Ajolole I. A (2019). Human capital investment as a catalyst for sustainable economic development in Nigeria. *International Journal of Management Science and Business Administration*, Vol. 5, pages 13–22.
- Anheier HK, Seibel W (1990) *The third sector comparative studies of non-profit organisations*. Walter de Gruyter, New York.
- Arellano, M., and Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *Review of Economic Studies*, 58(2), 277–297.
- Arellano, M., and Bover, O. (1995). Another Look at the Instrumental Variable Association with Human Development: A Cross Country Analysis. IIMB
- Arellano, M., and O. Bover (1995), “Another Look at the Instrumental-Variable Estimation of Error Components Models,” *Journal of Econometrics*, 68, 29–52.
- Arellano, M., and S. Bond (1991), “Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations,” *Review of Economic Studies*, 58, 277–297.
- Badamasi and Deyi (2017). The impact of health expenditure on the economic growth in Sub-Sahara Africa. *Journal of Science Research Publishing*.
- Bayar, Y. (2016). Public governance and economic growth in the transitional economies of the European Union. *Transylvanian review of administrative sciences*, 48(2), 5–18.
- Bingham LB et al. (2005) The new governance: practices and processes for stakeholder and citizen participation in the work of government. *Public Adm Rev* 65(5):547–558.





- [Ceri Sedgley](#), (2013), The responsibilities of being a physiotherapist, Unite Stated Time Magazine.
- [Ceri Sedgley](#), (2013), The responsibilities of being a physiotherapist, Unite Stated Time Magazine.
- Emara, N. & Chiu, I. (2016). The Impact of Governance on Economic Growth: The Case of Middle Eastern and Northern African Countries. *Topics in Middle Eastern and African Economics*, Vol. 18, no. 1, pp. 126–144.
- Emara, N. & Chiu, I-M. (2015). The Impact of Governance on Economic Growth: The case of Middle Eastern and North African countries. MPRA paper, no. 68603.
- Engell P, (2015). The impact of good governance in the economic development of western Balkan countries: *European Journal of Governance and EconomicS*; Vol. 4 no.1
- Fatima and Boussalem (2004). The relationship between public spending on health and economic growth in Algeria, *Economics review*.
- Fayissa, B. & Nsiah, C. (2010). The Impact of Governance on Growth: Further Evidence for Africa. Department of Economics and Finance Working Paper.
- Feng, Y. (2003). *Democracy, Governance and Economic Performance: Theory and Evidence*. Cambridge: MA, MIT Press.
- Goodwin (2001), *A Survey of Sustainable Development: Social and. Economic Dimensions*. Washington, D.C. Island Press.
- Graham J et al. (2003) Governance principles on protected areas in the 21st century. A discussion paper. Institute on Governance, the Fifth World Bark Congress, Dublin.
- Grindle, M.S. (2010). Good Governance: The Inflation of Idea. HKS Faculty Research Working Paper series, RWP10-023. John F. Kennedy School of Government, Harvard University. *ACTA UNIVERSITATIS DANUBIUS* Vol 15, no 3, 2019 230.
- Habtamu, F.N. (2008). Roles of Governance in Explaining Economic Growth in Sub-Sahara Africa. *Africa Policy Journal*, John F. Kennedy school of government, Harvard University.
- Habyarimana, J-B. & Dushimayezu, B. (2018). Good Governance, Economic Growth and Development: Insightful from a 22-year Econometric Analysis in Rwanda. *East Africa Research Papers in Economics and Finance*, no. 2018, p. 19.
- Halfani M et al. (1994) Towards an understanding of governance: the emergency of an idea and its implication for urban research in developing countries. The Center for Urban and Community Studies, University of Toronto, Toronto.
- Halfani M et al. (1994) Towards an understanding of governance: the emergency of an idea and its implication for urban research in developing countries. The Center for Urban and Community Studies, University of Toronto, Toronto.
- Hamid, A. A. (2017). Corruption, political instability and development nexus in Africa: a call for sequential policies reforms. (Munich personal archive) MPRA paper no. 8527.
- Hossain F (2001) Administration of development initiatives by non-governmental organisations: a study of their sustainability in Bangladesh and Nepal. Published doctoral dissertation. University of Tampere Press
- Innocent Makuta and Bernadette O’Hare, (2015), Quality of governance, public spending on health and health status in Sub Saharan Africa: a panel data regression analysis. Published by BMC Public Health.
- Innocent Makuta and Bernadette O’Hare, (2015), Quality of governance, public spending on health and health status in Sub Saharan Africa: a panel data regression analysis. Published by BMC Public Health.



- Jordan A et al. (2003) Has governance eclipsed government? Pattern of environmental instrument selection and use in eight states and the EU, CSERGE working paper EDM 03-15, University of East Anglia, Norwich.
- Kaufmann, D.A.K., Kraay, A. & Mastruzzi, M. (2006). Governance matters V: Aggregate and individual governance indicators for 1996–2006, World Bank Policy Research Paper No. 4012, Washington, DC.
- Muhammad Afzal, Hafeez Ur Rehman, Muhammad Shahid Farooq, Kafeel Sarwar, (2011), Education and economic growth in Pakistan: A cointegration and causality analysis.
- Przeworski, A.; Alvarez, M.; Cheibub, J.A. & Limongi, F. (2000). Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990. Cambridge: Cambridge University Press.
- Samarasinghe, T. (2018). Impact of governance on economic growth.  
[Http://www.researchgate.net/publication/329630083](http://www.researchgate.net/publication/329630083).
- Samarasinghe, T. (2018). Impact of governance on economic growth.  
[Http://www.researchgate.net/publication/329630083](http://www.researchgate.net/publication/329630083).
- Tarek, B.A. & Ahmed, Z. (2013). Governance and Economic Performance in Developing Countries: An Empirical Study. Journal of Economics Studies and Research, Vol. 2013 (2013), pp. 1–13.
- World Bank (2021). World development indicators. Available at:  
<http://data.worldbank.org/indicator>, accessed 28 October 2021.