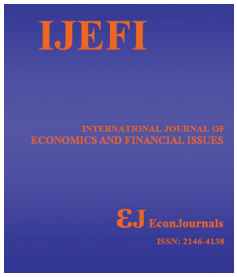

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Effect of Economic Growth on Well-being in Sub-saharan Africa: Does Institutional Quality Matter?

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ABSTRACT

This study analyzes the role of institutional quality in the relationship between economic growth and improved well-being in Sub-Saharan Africa over the period 2007-2021. This study collected data from the World Bank and Legatum Prosperity Index websites for 35 Sub-Saharan African countries. Methodologically, the study uses the generalized method of moments (GMM) in a two-stage system. The results reveal that economic growth reduces the well-being of populations, while institutional quality improves it. Furthermore, institutional quality mitigates the negative effect of economic growth on the well-being of populations. However, this effect is more pronounced in Anglo-Saxon countries than in French-speaking countries. Similarly, there are minimum thresholds of institutional quality beyond which economic growth contributes to improving the well-being of populations in Sub-Saharan Africa.

Keywords: Growth, Institutions, Well-being, GMM, Sub-Saharan Africa
JEL Classifications: O40, O43, I30, I33, C33

1. INTRODUCTION

Well-being is the essence of all human action (Ranis and Stewart, 2007). It is multidimensional, encompassing both objective well-being and subjective well-being. Objective well-being refers to the quality of material and immaterial living conditions, while subjective well-being refers to individuals' perceptions of their living conditions (Sen et al., 2009). Well-being in a society also involves social and economic aspects. Socially, easy access to healthcare, quality education, sanitation, and housing, as well as healthy and sufficient food for all, characterizes it, accompanied by reduced inequalities and a safer society (Blaauw and Pretorius, 2013). Economically, decent jobs and sufficient income to eradicate monetary poverty and ensure greater consumption of goods and services manifest well-being (Deaton, 1980).

Initially, wealth accumulation was central to the assessment of well-being. Rostow's (1960) theory of the stages of economic growth predicts that economic growth improves well-being by maximizing consumption, transforming a poor society into a mass consumer society. Furthermore, Ranis and Fei's trickle-down theory (1968) argues that economic growth significantly reduces poverty by creating jobs and economic opportunities for the population. However, economic prosperity is not always synonymous with well-being. Easterlin (1974) highlights the paradox that there is a certain level of wealth beyond which any further improvement in economic prosperity has almost no impact on individual well-being. Building on Easterlin's ideas (1974), Todaro (1997) argues that economic growth only benefits the middle classes and the rich. The theory of degrowth is based on the idea that economic growth reduces well-being through its devastating effects on the environment (Latouche, 2010).

The mixed results in the literature on the link between economic growth and well-being have given rise to new areas of research. The effect of economic growth on well-being now appears to depend on

several factors. These factors include human capital (Afzal et al., 2012), social capital (Sarracino and Piekalkiewicz, 2021), natural resources (Sachs, 2003), and institutions (Devangi et al., 2013). Law et al. (2013) identify institutions as the fundamental factors explaining how growth affects well-being. Indeed, institutional quality promotes better redistribution of wealth. It curbs waste and misappropriation of funds intended for public spending (Mtiraoui, 2015). It distributes power widely throughout society and sets limits (Acemoglu and Robinson, 2012).

Devangi et al. (2013) showed that economic growth has a positive effect on poverty reduction, but institutional variables hurt poverty and inequality reduction. Hamdène and Allaoui (2012), meanwhile, studied the impact of economic growth and corruption on poverty in seven Mediterranean countries in Africa from 1995 to 2007. Using generalized least squares (GLS), they show that economic growth is a determining factor in the fight against poverty, but also that the interaction between corruption and growth has a very significant positive effect on poverty. Dada and Fanowopo (2020) find that institutional quality and economic growth play substitutable roles in improving well-being in the long term, but complementary roles in the short term. Wu et al. (2024) examine the ability of economic growth to reduce poverty in sub-Saharan Africa using a large sample of 575 growth periods between 1981 and 2021. The study confirms that growth has had a weaker effect on poverty in this region, even after taking into account initial differences in poverty, income, and inequality. The lack of consensus justifies conducting an in-depth investigation in African countries where growth is struggling to deliver on its promise of contributing to well-being (Hamdène and Allaoui 2012; Dada and Fanowopo, 2020; Wu et al., 2024). Thus, the overall aim of this study is to analyze the role of institutional quality in the relationship between economic growth and improved well-being in Sub-Saharan Africa.

Although numerous studies have addressed the relationship between economic growth and certain aspects of well-being (Hamdène and Allaoui, 2012; Nurudeen et al., 2014; Mikucka et al., 2017; Mouhamed, 2020; Dada and Fanowopo, 2020; Lee and Goh, 2023), these studies are limited. While there seems to be a consensus on the importance of institutional quality in the relationship between economic growth and well-being, there are shortcomings, particularly about the type of institutional variable that best captures this relationship and the measurement of well-being. Furthermore, in a sample as heterogeneous as the countries of sub-Saharan Africa, failing to take into account the specific characteristics of each group, such as colonial origins, may bias the implications of the results obtained.

Well-being is often measured using indicators that do not reflect all its dimensions, including the Human Development Index (HDI), the Multidimensional Poverty Index (MPI), and household consumption expenditure. This study uses the Legatum Institute's Prosperity Index (2022), which is based on 300 indicators, thereby incorporating many aspects of well-being. The article is organized as follows: Section 2 presents a summary of the literature; Section 3 discusses the methodology; Section 4 is devoted to the presentation and discussion of the results; and the final section concludes.

2. REVIEW OF THE LITERATURE

In this review, we discuss the relationship between economic growth and well-being, followed by the role of institutional quality in the relationship between economic growth and well-being.

2.1. Relationship between Economic Growth and Well-being

Economic literature offers us a diverse range of perspectives on the link between economic growth and the well-being of populations. Economic growth and collective material well-being are generally linked. Indeed, low growth leads to higher unemployment, stagnant incomes, increased constraints on consumption, and, overall, lower average well-being than during periods of strong economic growth and high incomes. In his theory of the stages of economic growth, Rostow (1960) predicts that economic growth improves well-being by maximizing household consumption. According to Ranis and Fei's trickle-down theory (1968), economic growth contributes to improved well-being through poverty reduction. Thus, they expected poverty reduction to occur gradually and hierarchically, affecting capitalists and other classes first. This belief is because these benefits would spread to the masses through jobs and economic opportunities. Economic literature presents a diverse overview of the interactions between economic growth and population well-being. Economic growth and collective material well-being have a positive relationship. Indeed, weak growth leads to higher unemployment, stagnant incomes, restrictions on consumption, and, overall, lower average well-being than that observed during periods of strong economic growth and high incomes.

On the other hand, according to Kuznets (1955), the poor benefit only from a relatively smaller share of economic growth. Indeed, during periods of rapid growth, income inequality tends to increase, at least in the early stages of development. In the same vein, Todaro (1997) argues that economic growth can undermine individual well-being by exacerbating poverty through inequality. Furthermore, Simon (1973) identifies three conditions under which an increase in total production may not translate into improved well-being.

First, income-related well-being may only be relative. In other words, well-being may only depend on a person's relative position in the income distribution. If this is the case, then a proportional increase in income for everyone may leave everyone's well-being unchanged, while a non-proportional increase may increase, decrease, or leave total well-being unchanged.

Second, an increase in income may lead to lifestyle changes that would negatively affect well-being. This is the case that social critics so often emphasize, namely that wealth can lead to a whole range of social and personal ills.

Third, an increase in goods and services measured by GNP may be accompanied by a set of unmeasured disutility that are difficult to avoid, such as air pollution.

Empirically, Cole (2019) reexamined the effect of economic growth on health, focusing on infant mortality, life expectancy, and caloric

consumption using data for 134 developing countries between 1970 and 2015. The results show that the effects of growth are more pronounced on infant mortality rates, but its effects depend on income levels. In fact, as countries become richer, the positive effects of growth on health diminish. For Patterson (2023), policies focused exclusively on economic growth risk harming not only the health of the population, but also economic growth itself. Furthermore, Lee and Goh (2023) question the ability of happiness-focused growth policies implemented in certain countries to achieve greater economic well-being (measured by GDP per capita).

Using a panel dataset covering 104 countries between 2006 and 2018, empirical results indicate that economic growth of 1 to 3% can be achieved by increasing happiness. The positive effect of happiness is about four times greater in developed countries than in developing countries. Wu et al. (2024) examine the factors that limit the impact of economic growth on poverty reduction in sub-Saharan Africa using a large sample of 575 growth periods between 1981 and 2021. The analysis confirms that growth had a weaker effect on poverty in this region, even after considering initial differences in poverty, income, and inequality. This result can be explained by the weak transmission of per capita GDP growth to household income or consumption, particularly for the poorest. These authors identify the lack of basic services and the slow pace of structural transformation of the economy as factors limiting the impact of growth on household well-being.

2.2. The Role of Institutional Quality in the Relationship between Economic Growth and Well-Being

Institutional differences could explain why economic growth has no impact on well-being. At least, that is what Ravallion and Chen (2003) admit, arguing that in a good institutional policy environment, growth reduces poverty. Conversely, poor-quality institutions hinder growth and consequently slow the pace of poverty reduction (Mikucka et al. 2017). For Dada and Fanowopo (2020), there may be complementarity or substitutability between economic growth and institutional variables in their relationship with well-being. Altindag and Xu (2017) studied the role of institutional factors in differences in subjective well-being between rich and poor countries, using an ordered Probit model on a sample of approximately 200,000 individuals from 74 countries between 1981 and 2002. The results show that better civil rights, stronger democracy, and lower levels of corruption increase well-being in rich countries, while increased income has no impact. Conversely, in poor countries, increased income has a positive effect on well-being, but institutional variables have no influence. Similarly, Mouhamed (2020) studied the effect of corruption on intertemporal well-being, approximated by adjusted net savings per capita, in 34 African countries from 2002 to 2017. The results, obtained using the ordinary least squares method, show that corruption is detrimental to well-being.

It is also argued that countries with high natural resource endowments tend to have lower levels of social well-being due to the socio-political conflicts that these resources can generate.

Devangi et al. (2013) analyzed the impact of economic growth and institutional quality on poverty and inequality in nine developing Asian countries between 1985 and 2009. The results indicate that economic growth reduces poverty, but institutional variables exacerbate it. Hamdène and Allaoui (2012) studied the effect of economic growth and corruption on poverty in seven Mediterranean African countries from 1995 to 2007. The study concludes that economic growth helps to combat poverty and that the quality of institutions improves this link. Dada and Fanowopo (2020) examined the role of institutions in the relationship between economic growth and poverty reduction in Nigeria from 1984 to 2018. The results indicate that economic growth and institutional quality have positive effects on household consumption in the short and long term, and that these two factors are complementary in the short term but substitutable in the long term in improving well-being.

The existing literature seems to indicate a consensus on the importance of institutional quality in the relationship between economic growth and well-being. However, gaps remain regarding the most relevant institutional variables, the measurement of well-being, the optimal level of institutional variables, and the influence of colonial heritage.

3. METHODOLOGY AND DATA

This section is devoted to the econometric specification of the model and the description of the data.

3.1. Econometric Specification

The relationship between growth and well-being is a matter of debate. While Ranis and Fei (1968) argue that economic growth contributes to improving well-being by reducing poverty, Todaro (1997) maintains that economic growth degrades individuals' well-being by exacerbating poverty through inequality. For this study, we follow institutional theories, which argue that institutional differences explain the differences in economic development between countries (Acemoglu et al., 2005). Several studies support this view (Hamdène and Allaoui, 2012; Nurudeen et al., 2014; Mikucka et al., 2017; Mouhamed, 2020; Dada and Fanowopo, 2020; Lee and Goh, 2023). A common pitfall in these various contributions is the measurement of well-being. Indeed, if the production and consumption of goods and services per capita are considered the fundamental criterion of human well-being, then the natural conclusion is that growth and well-being go hand in hand. Easterlin (2017) expresses reservations about this conception of well-being. First, the measurement of well-being focuses solely on the "material goods" component of people's lives. While it is true that material living standards are important, other essential determinants of well-being are neglected, such as family life, health, work, and aspirations. Furthermore, the judgment of what constitutes well-being is made by an outside observer—the social scientist or statistician—and not by the people being observed. However, the judgments of outside observers can vary considerably on the appropriate content of well-being, and indeed they do. Yet who is better equipped to judge their own well-being than the people being observed?

Although the Human Development Index (HDI) and the Human Poverty Index (HPI) are sometimes used as measures of well-being, these indicators fail to capture the dimension of well-being described by Easterlin (2003; 2017) and Easterlin and Angelescu (2009). The Legatum Prosperity Index is a framework that evaluates countries

based on their promotion of the fulfillment of their residents, reflecting both economic and social well-being, and seems well suited to translating well-being. It captures the richness of a truly prosperous life, going beyond traditional macroeconomic measures of a nation's prosperity, which rely solely on indicators of wealth such as average income per person (GDP per capita). A country's Legatum Prosperity Index is defined as the sum of two combined standardized statistics: the income score and the well-being score.

Each of these is the weighted sum of nine standardized sub-indices: "Economy," "Entrepreneurship and Opportunity," "Governance," "Education," "Health," "Safety and Security," "Personal Freedom," and "Social Capital." Each sub-index is in turn composed of two elements: one relating to subjective well-being and the other to income (Legatum, 2011). For these reasons, we adopt this measure of well-being in this study. The variables inflation, population growth rate, and investment are used as control variables. We use a dynamic panel specification for this study based on the generalized method of moments. There are two variants of the GMM estimator in dynamic panels: the difference GMM estimator developed by Arellano and Bond (1991) and the system GMM estimator developed by Arellano and Bover (1995) and Blundell and Bond (1998). One limitation of the difference GMM estimator is that it does not allow us to identify the effect of time-invariant factors. Furthermore, in the presence of persistence over time in the lagged dependent variable, this method becomes inconsistent, unlike the system GMM (Roodman, 2009). The system GMM proposed by Blundell and Bond (1998) is used in this study according to the following specification:

$$\text{WELLB}_{it} = \alpha\ \text{WELLB}_{it-1} + \beta_1 X_{it} + \beta_2\ \text{GDP}_{it} + \beta_3\ Inst_{it} + \beta_4 (\text{GDP}_{it} \times Inst_{it}) + \beta_5\ Pop_{it} + \beta_6\ Invest_{it} + \beta_7\ Infl_{it} + \varepsilon_{it} \quad (1)$$

$$\varepsilon_{it} = \mu_i + \epsilon_{it}$$

In addition, the use of GMMs in the system requires testing the validity of the instruments and the absence of autocorrelation in the residuals. The validity of the instruments is verified using the Hansen/Sargan overidentification test (Blundell and Bond, 1998).

A marginal effect of economic growth on well-being will then be identified, after the long-term relationship, using the following formula:

$$\frac{\partial \text{WELLB}}{\partial \text{GDP}} = \beta_2 + \beta_4\ INST$$

This equation shows that the marginal effect of economic growth on well-being depends on institutional quality. Thus, institutional quality is expected to improve the marginal effect of economic growth, which should result in a coefficient $\beta_4 > 0$.

This gives rise to three possible scenarios:

If β_2 and β_4 are both positive, economic growth increases well-being and institutional quality accentuates this effect.

If $\beta_2 > 0$ and $\beta_4 < 0$, then economic growth increases well-being, but institutional quality mitigates this effect.

If $\beta_2 < 0$ and $\beta_4 > 0$, economic growth reduces well-being, and institutional quality improves the effect of growth on well-being.

With the condition that coefficient $\beta_4 > 0$, we deduce a minimum threshold level of institutional quality beyond which economic growth improves the well-being of populations in Sub-Saharan Africa.

According to the first-order condition:

$$\frac{\partial \text{WELLB}}{\partial \text{GDP}} = \beta_2 + \beta_4 Inst \geq 0$$

$$\Rightarrow \beta_2 + \beta_4\ Inst \geq 0$$

$$\Rightarrow \beta_4\ Inst \geq -\beta_2$$

$$\Rightarrow Inst^S \geq \frac{-\beta_2}{\beta_4}$$

$Inst^S$ is the minimum threshold of institutional quality above which economic growth improves well-being in Sub-Saharan Africa. However, it would be misleading to associate a positive and significant marginal effect with any value of institutional quality above this threshold. It is therefore necessary to calculate the standard deviation of the conditional marginal effect of economic growth on well-being in order to make a correct inference (Keho, 2012). This gives us the following equation:

$$\sigma\left(\frac{\partial \text{WELLB}_{itit}}{\partial \text{GDP}_{it}}\right) = \sqrt{var(\beta_2) + Inst_{it}^2\ var(\beta_4) + 2 Inst_{it} cov(\beta_2, \beta_4)}$$

3.2. Data

The data in this study covers 35 countries in Sub-Saharan Africa and spans the period 2007-2021, based on availability. Table 1 provides a description of the variables and the source of the data used in this study.

The descriptive statistics for the study variables are shown in Table 2. Descriptive statistics are useful because they provide a summary description of the data.

On a scale of 100, we see that the level of well-being remains low in Sub-Saharan Africa, which has an average value of 45.43. Total investment by African economies over the study period represents only 22.48% of GDP. GDP growth averaged 4.12% over the study period.

4. RESULTS AND DISCUSSION

Estimates based on the two-stage GMM model (Table 3) reveal that economic growth has a negative and statistically significant effect on well-being at the 1% threshold in all analyses performed. Therefore, it can be concluded that economic growth is not inclusive. In order to verify whether this negative effect of growth on well-being is linked to the low level of institutions in sub-Saharan Africa, we have incorporated institutional quality into the relationship between economic growth and well-being. All estimation results show that the interaction between economic growth and each institutional variable has a positive effect on well-being, implying that economic growth contributes to improving well-being when accompanied by good institutions. This result confirms the findings of Mikucka et al. (2017).

Table 1: Variables and data sources

Variables	Variable descriptions	Data sources
Explained variable		
WELLB	Well-being measured by the prosperity index	Legatum institute (2022)
Explanatory variables		
GDP	GDP growth rate	WGI (2022)
CCOR	Corruption control	WGI (2022)
PRORI	Property rights	Heritage Foundation (2022)
FREEINV	Freedom of investment	Heritage Foundation (2022)
POSTAB	Political stability	WGI (2022)
EFFGOUV	Government efficiency	WGI (2022)
RLAW	The Rule of Law	WGI (2022)
INVEST	Private investment	WDI (2022)
POP	Population growth rate	WDI (2022)
INFL	The inflation rate	WDI (2022)

Source: Authors, based on literature

Table 2: Descriptive statistics

Variables	Mean	SD	Min	Max	Observations
WELLB	45.438	6.286	33.597	66.629	525
GDP	4.125	4.156	−20.598	20.715	525
CCOR	−0.605	0.579	−1.572	1.039	525
PRORI	35.04	13.917	5	78.4	525
FREEINV	48.142	16.214	0	90	525
POSTAB	−0.511	0.795	−2.4	1.2	525
RLAW	−0.623	0.570	−1.852	0.996	525
EFFGOUV	−0.693	0.579	−1.775	1.056	525
POP	2.482	0.810	−0.151	3.907	525
INVEST	22.483	8.743	3.285	81.021	525
INFL	8.933	32.548	−21.165	558.56	525

Source: Authors, based on data from Legatum Institute (2022), WDI (2022), WGI (2021), and Heritage Foundation (2022)

Although economic growth contributes to improving well-being when institutions exceed a certain threshold, there are minimum thresholds beyond which economic growth actively contributes to improving well-being in sub-Saharan Africa. These thresholds are 0.76, 40.075, and 25.75 for control of corruption, property rights, and investment freedom, respectively, and 1.88, 1.048, and 1.103 for political stability, rule of law, and government effectiveness, respectively (Table 4).

The significance thresholds are proven by the fact that each t-student is greater than 1.96, which makes them reliable. In addition, to verify whether the influence of institutional quality on the relationship between economic growth and well-being in sub-Saharan Africa differs according to colonial origin, the sample was divided into two groups (English-speaking countries and French-speaking countries). Institutional quality was approximated by two indices constructed from the six initial indicators using principal component analysis (PCA): an economic institutional quality index (InstEco) and a political institutional quality index (InstPo). The results in Table 5 show that, although institutional quality improves the effect of economic growth on well-being in sub-Saharan Africa, this effect is more pronounced in English-speaking countries than in French-speaking countries. This distinction is evident in the interaction coefficients: the interaction coefficient between economic growth and economic institutional quality is higher in English-speaking countries (0.401) than in French-speaking countries (0.183); Similarly, the interaction coefficient between economic growth and political institutional quality is higher in English-speaking countries (0.263) than in French-speaking countries (0.19). These results imply that economic and political institutions have a greater impact on the effect of economic growth on well-being in English-speaking countries than in French-speaking countries.

Table 3: Results of GMM model estimates

Variables	Economic institutions			Political institutions		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
D.WELLB	0.324***	0.416***	0.987***	0.168**	0.433***	0.331***
	(0.000)	(0.000)	(0.000)	(0.010)	(0.000)	(0.000)
	[0.028]	[0.104]	[0.087]	[0.065]	[0.029]	[0.034]
GDP	−0.049***	−0.320***	−0.020***	−0.147***	−0.047***	−0.099***
	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)
	[0.003]	[0.073]	[0.006]	[0.016]	[0.003]	[0.013]
CCOR	1.970***	-	-	-	-	-
	(0.000)					
	[0.396]					
GDP.CCOR	0.064***	-	-	-	-	-
	(0.000)					
	[0.004]					
PRORI	-	0.135***	-	-	-	-
		(0.000)				
		[0.011]				
GDP.PRORI	-	0.008***	-	-	-	-
		(0.000)				
		[0.001]				
FREEINV	-	-	0.131***	-	-	-
			(0.000)			
			[0.015]			
GDP.FREEINV	-	-	0.0008***	-	-	-
			(0.003)			
			[0.0002]			

(Contd...)

Table 3: *(Continued)*

Variables	Economic institutions			Political institutions		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
POSTAB	-	-	-	4.675*** (0.000) [0.425]	-	-
GDP.POSTAB	-	-	-	0.0787** (0.012) [0.031]	-	-
RLAW	-	-	-	-	5.765*** (0.000) [0.524]	-
GDP.RLAW	-	-	-	-	0.042*** (0.000) [0.006]	-
EFFGOUV	-	-	-	-	-	2.844*** (0.000) [0.697]
GDP.EFFGOUV	-	-	-	-	-	0.090*** (0.000) [0.018]
POP	−3.828*** (0.000) [0.387]	−5.401*** (0.000) [0.747]	−7.800*** (0.000) [0.603]	−7.249** (0.013) [2.927]	−5.419*** (0.000) [0.632]	−1.780*** (0.000) [0.497]
INVEST	0.069*** (0.000) [0.009]	0.049*** (0.006) [0.018]	0.069*** (0.000) [0.008]	0.010 (0.686) [0.024]	0.038*** (0.000) [0.007]	0.020** (0.010) [0.007]
INFL	−0.003*** (0.000) [0.0002]	−0.042*** (0.000) [0.008]	−0.003*** (0.000) [0.0003]	−0.011** (0.018) [0.004]	−0.004*** (0.000) [0.0003]	−0.008*** (0.000) [0.0008]
CONS	55.33*** (0.000) [1.058]	54.66*** (0.000) [1.712]	56.65*** (0.000) [1.865]	48.26*** (0.000) [0.859]	62.14*** (0.000) [1.243]	52.31*** (0.000) [1.282]
AR (1) P value	0.025	0.012	0.041	0.037	0.023	0.007
AR (2) P value	0.308	0.274	0.167	0.677	0.316	0.682
Hansen J-test	0.728	1.000	0.459	1.000	0.663	0.770

Source: Authors, based on data from Legatum Institute (2022), WDI (2022), WGI (2021) and Heritage Foundation (2022). (***), (**) and (*) represent significance at the 1%, 5% and 10% thresholds, respectively. ( ) represents significance and [ ] represents standard deviations.

Table 4: Results of the calculation of institutional quality thresholds

Variables	Thresholds	Standard deviation	T-student	Confidence interval
CCOR	0.76***	0.0047	159.96	[0.7504; 0.7695]
PRORI	40.075***	0.0029	13,706.53	[40. 0691; 40.0808]
FREEINV	25.75***	0.0090	2,852.397	[25.7319; 25.7680]
POSTAB	1.88***	0.0003	5,849. 59	[1.8793; 1.8806]
RLAW	1.048***	0.0039	268.58	[1.0401; 1.0558]
EFFGOUV	1.103***	0.0194	56.579	[1.0640; 1.1419]

***Indicate significance at 1%. Source: Authors, based on data from Legatum Institute (2022), WDI (2022), WGI (2021), and Heritage Foundation (2022)

This result could be explained by the different colonial and legal systems applied in the colonies. In addition, French-speaking countries inherited French law, while English-speaking countries inherited British law, known as common law (Crowder, 1964). Many arguments are made in favor of the superiority of common law over French law. As Curren (2009) points out, common law is essentially based on case law, it is mainly enacted by the courts as individual decisions are made, and it relies on similar previous legal facts to resolve a case, which gives it an aspect of fairness, continuity, and legal certainty. Furthermore, common law does not distinguish between private law and public law, as all individuals are subject to the same rules, unlike French civil law, which distinguishes between private law and public law and is based primarily on legislation that may sometimes be inappropriate. Furthermore, it is accepted that common law is stricter in its application than French law. It is therefore all of these advantages that have enabled the British legal system to contribute to greater respect for institutions in English-speaking countries in sub-Saharan Africa. Population growth has a negative impact on well-being, meaning that an increase in population reduces well-being in Sub-Saharan Africa. High population growth, combined with inequality and unemployment, are the causes of insecurity and poverty, in line with Malthusian theory.

The results show that investment has a positive effect on well-being in sub-Saharan Africa. An increase in investment promotes improved well-being among the populations of this region. This result confirms expectations, as investment promotes increased production, job creation, and higher incomes, thereby enabling households to have sufficient resources to meet their needs. Investment also increases

Table 5: Results of GMM model estimates according to colonial origin

Variables	Economic institutions		Political institutions	
	English-speaking countries	French-speaking countries	English-speaking countries	French-speaking countries
d. WELLB	2.916***	0.583***	3.091***	0.267***
	(0.000)	(0.024)	(0.000)	(0.051)
	[0.762]	[0.258]	[0.619]	[0.137]
GDP	−0.524***	−0.019	−0.373**	−0.112*
	(0.004)	(0.821)	(0.017)	(0.093)
	[0.180]	[0.084]	[0.156]	[0.066]
INSTECO	2.179***	1.159***	-	-
	(0.001)	(0.007)		
	[0.683]	[0.431]		
GDPINSTECO	0.401***	0.183***	-	-
	(0.000)	(0.021)		
	[0.096]	[0.079]		
INSTPO	-	-	3.139***	2.24***
			(0.000)	(0.004)
			[0.628]	[0.777]
GDPINSTPO	-	-	0.263***	0.19**
			(0.000)	(0.043)
			[0.068]	[0.095]
POP	−2.095	0.147	0.060	−8.155***
	(0.382)	(0.932)	(0.980)	(0.003)
	[2.396]	[1.730]	[2.468]	[2.730]
INVEST	−0.139	0.003	−0.249	−0.025
	(0.542)	(0.916)	(0.142)	(0.389)
	[0.228]	[0.034]	[0.169]	[0.029]
INFL	−0.048***	0.028	−0.032**	−0.026
	(0.001)	(0.174)	(0.011)	(0.554)
	[0.014]	[0.021]	[0.012]	[0.045]
CONS	58.87***	42.63***	50.44***	67.05***
	(0.000)	(0.000)	(0.000)	(0.000)
	[9.893]	[5.543]	[5.450]	[7.828]
N	16	14	16	14
AR (1) P value	0.024	0.021	0.032	0.002
AR (2) P value	0.746	0.324	0.566	0.433
Hansen J-test	0.521	0.754	0.982	0.489

Source: Authors, based on data from Legatum Institute (2022), WDI (2022), WGI (2021) and Heritage Foundation (2022). (***), (**) and (*) represent significance at the 1%, 5% and 10% thresholds, respectively. ***( )*** represents significance and ***[ ]*** represents standard deviations

physical capital and provides the population with numerous infrastructure facilities. However, inflation has a negative effect on well-being in sub-Saharan Africa, as it erodes household purchasing power, leading to a decline in consumption and an increase in poverty, while widening inequalities.

5. CONCLUSION

This study mainly aimed to analyze the role of institutional quality in the relationship between economic growth and improved well-being of populations in sub-Saharan Africa. Due to a lack of data in some countries, the study focused on a sample of 35 countries, covering the period from 2007 to 2021. The Legatum Institute's Prosperity Index (2022) was used as a measure of well-being. Institutional quality was approached through economic institutions (control of corruption, property rights, freedom of investment) and political institutions (political stability, rule of law, government efficiency). A sequential approach was favored in order to determine the individual role of economic and political institutions in the relationship between economic growth and well-being. The study also compared the effect of institutional quality on this relationship between English-speaking and French-speaking countries with a colonial past, constructing indices of economic and political institutional quality for each of the subsamples using principal component analysis.

The use of the two-stage GMM model revealed that economic growth reduces the well-being of populations in sub-Saharan Africa. However, when economic growth is combined with institutional variables, it contributes to improving well-being. This suggests that the quality of institutions makes the effect of economic growth on the well-being of individuals in this region positive. In addition, there are minimum thresholds of institutional quality, such as control of corruption, property rights, freedom of investment, political stability, rule of law, and government efficiency, beyond which economic growth improves well-being. However, the results indicate that institutional quality mitigates the negative effect of economic growth on well-being more in English-speaking countries than in French-speaking countries, due to more rigorous enforcement and better integration of national values and traditions into the institutions of English-speaking countries. Ultimately, economic growth alone is not enough to improve the well-being of populations in sub-Saharan Africa; it must be accompanied by an improvement in the quality of institutions.

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