

Authors:

WILFRED CATIN BOTCHUIN

Politiques Economiques et Modélisation, Université Alassane OUATTARA de Bouaké, Divo, Côte d'Ivoire

INCLUSIVE GROWTH ANALYSIS: EVIDENCE FROM CÔTE D'IVOIRE

ABSTRACT

The ultimate objective of this paper is to assess the effect of institutional and Socio-economic factors on inclusive growth in Côte d'Ivoire. The diversification of data, notably from the World Bank and the International Country Risk Guide, facilitated this study. Thus, we calculated an inclusiveness index using the principal component analysis method and estimated it in a nonlinear quadratic model over the 1984-2019 period. Our investigations have shown that household consumption expenditures, bureaucracy and population growth contribute to the improvement of the inclusiveness of Ivorian growth. Second, the PIBh and democracy hinder this inclusiveness in Côte d'Ivoire. On the other hand, the results reveal a non-linear relationship between final consumption expenditure and inclusive growth.

Keywords: Inclusive Growth; Institutional Factors; Quadratic Model; Socio-economic Factors

JEL Classification: C22; C015; K42; J11

RIASSUNTO

Analisi della crescita inclusiva: evidenze dalla Costa d'Avorio

Il fine di questo studio è valutare l'effetto dei fattori istituzionali e socio-economici sulla crescita inclusiva in Costa d'Avorio. La possibilità di disporre di dati diversi provenienti dalla World Bank e dall'International Country Risk Guide ha facilitato questa analisi. Abbiamo infatti calcolato un indice di inclusione utilizzando il metodo di analisi della componente principale e abbiamo effettuato la stima di un modello quadratico non lineare con riferimento al periodo 1984-2019. L'analisi ha mostrato che la spesa per i consumi finali delle famiglie, la burocrazia e la crescita della popolazione contribuiscono ad aumentare l'inclusività della crescita in Costa d'Avorio. Al contrario, il livello del PIBh e della democrazia ostacolano l'inclusività. Infine, i

risultati evidenziano una relazione non-lineare tra la spesa per i consumi finali e la crescita inclusiva.

1. INTRODUCTION

What is wealth? And where does it come from? Since Smith (1776), these questions have given rise to divergent concepts and points of view in early economic literature. A lot of answers have been formulated by authors, each one dealing with a specific angle of wealth creation process and raising economic growth to one of most important topics in modern economic research. According to macroeconomic literature, Growth is not enough to generate a sustainable improvement in individual well-being. The dual virtue of inclusiveness to growth is to widen the space of economic and social opportunities, while assuring better implementation of distributive equity.

Côte d'Ivoire is one of the largest and most dynamic economies in West Africa. However, the most worrisome fact is not its economic strength, but rather what policies should be pursued so that this growth can be inclusive. For this growth has been unevenly distributed between rich and poor, and has not been followed by a clear reduction in poverty. The 10% of the Ivorian population that lived in poverty during the 1980s and 1990s increased to 47% in 2015 (Keho, 2012). This attests *in extenso* to the observation that growth is considered a necessary but not sufficient condition for a country to improve the well-being of its population (Amuka *et al.*, 2019).

In addition, a significant portion of the population has not benefited from basic social opportunities such as education, health care, clean water and electricity during this period of high growth. Unfortunately, this dramatic growth has led to an increase in social and economic inequality. According to the World Development Indicators database, the income held by the poorest 10 percent increased from 1.8 percent in 2008 to 2.1 percent in 2015, while the share of income held by the richest 10 percent decreased from 32.6 percent to 31.9 percent. All these results led to an unsatisfactory GINI index, dropping from 43.2 to 41.5, and show that growth benefited the rich more than the poor over the same period.

Therefore, the need for inclusive growth becomes imperative for the country. In Ivorian context of growth planning, this is a fairly new vocabulary that has attracted the attention of

policymakers in the eleventh five-year plan. The recent interest in inclusive growth has resulted in a flood of contributions on a wide range of issues, from its complexity in conceptual and thematic analysis, to its difficulties in measurement and understanding of country-specific experiences.

Apart from the increasing calls for more inclusive growth, there is not yet a commonly accepted concept of “inclusive growth”. Defining and measuring inclusive growth is not difficult, but specifying what makes it inclusive is much more complex. It is generally accepted that it is a type of growth that “benefits the greatest number”, but ambiguities and disagreements abound behind this overarching idea.

Inclusive growth has emerged in the context of the ongoing evolution of development that no longer sees equity as an attribute of growth but rather as a by-product of growth. The quality of growth, its sustainability as well as its ability to benefit broader segments of society has continued to attract increasing attention (see Tandon and Zhuang, 2007; Ali and Zhuang, 2007; Rauniyar and Kanbur, 2010; Klasen, 2010; and Felipe, 2009; Hakimian, 2013, provide a broad overview of the recent literature).

In addition, the literature reveals many different definitions and measurement methods for inclusive growth. The definitions can be divided into two categories. The first asserts that growth is inclusive only if it is sustainable and effective in reducing poverty (Pernia and Kakwani 2000; Lachaud, 2003; Kraay, 2004; Habito, 2009; Berg *et al.*, 2012). The second suggests that growth can integrate employment and productivity, human capacity development, social safety nets, and targeted intervention (Rauniyar and Kanbur, 2010; McKinley, 2010; Vellala *et al.*, 2014; and Ncube, 2015). In terms of measurement methods, four are highlighted, namely: unified measurement, dashboard indicators, single value index and analytical framework.

The objective of this paper is to evaluate, in a limited empirical literature, the effect of institutional and socio-economic factors on inclusive growth in Côte d'Ivoire. How inclusive growth is defined is important for an empirical investigation. For this study, we take inclusive growth as defined by the OECD (2014), i.e., economic growth that is able to reduce poverty and inequality through the equitable redistribution of its fruits among all segments of society, that enables institutional quality, and that creates social opportunities. There are three main reasons why we embrace it.

First, Sembène (2015) used the same definition in a cross-country study of Sub-Saharan Africa and other Asian countries. Second, the definition considers that inclusive growth goes beyond solving the monetary problem, as the multidimensional standard of living reflects the outcomes of monetary, non-monetary and institutional components of well-being and their distribution across households. Third, the adoption of this definition will facilitate the construction of the inclusive growth index and its statistical estimation.

Our work will be subdivided into three parts: part 1 will focus on theoretical and empirical reviews on inclusive growth; part 2 will be devoted to the construction of a synthetic index of inclusive growth by the method of principal component analysis; the third part will be that of statistical facts; and the final part is that of the methodology applied to evaluate the effect of institutional and Socio-economic factors on inclusive growth.

2. LITERATURE REVIEW

Nowadays, the concept of inclusive growth has imposed itself as the ultimate model of economic development and has become the focus of sustainable development strategies and policies. Fighting against poverty, inequality and all forms of social exclusion that this concept implies, has since given it legitimacy, and its insertion in the international agenda and national development strategies (Nkamleu, 2017). So inclusive growth is essential to restore public confidence in the ability of democratic institutions, technological advances and international economic integration to support greater progress and well-being for all (Cordemans, 2019). In this section, we review the literature on the contributions of institutional and socioeconomic factors to growth inclusiveness. Inclusive growth has its roots in two fundamental theories: inequality theory and redistribution theory.

2.1 Theoretical Review

There are two theories of inclusive growth, notably inequality theory and redistribution theory.

2.1.1 Inequality Theory

Of course, the relationship between growth and inequality is the subject of considerable debate. Kuznets (1955) was one of the first to work on the issue of inequality. He suggests that in the

early stages of economic growth, relative income inequality rises, stabilizes for a while, and then declines in the later stages. This is known as the “inverted U” hypothesis of income distribution. The hypothesis also states that there is a high marginal propensity to save for the rich relative to the poor.

One possible explanation for this hypothesis is that the rich will accumulate capital and invest, leading to early growth in the economy and suggesting a decline in inequality as development takes hold and the benefits of growth begin to accrue to the poor. Second, the *per capita* income of low-income groups increases when government legislative decisions are made regarding education and health services, estate and income taxes, social security, full employment, and economic assistance to entire groups or individuals.

In addition, gender equality and its implications are important for inclusive growth. Indeed, a plethora of empirical literature supports this critical driver of inclusive growth (Anochie *et al.*, 2015; Adebola, 2019). As a consequence, inequality has the capacity to cripple or slow economic performance, while gender equality has positive outcomes for inclusive growth (Egbulonu and Eleonu, 2018). Most studies have stated that gender equality has positive outcomes at both the macro (Dollar and Gatti, 1999; Klasen, 2002; Klasen and Lamanna, 2003; Odozi, 2012) and micro levels (Bourguignon *et al.*, 2001).

Gender gaps or inequalities have negative effects on inclusive growth. Unfortunately, this gender gap in outcomes and opportunities is observed in a variety of dimensions, including education, income, access to formal employment, occupation, access to leadership positions, access to critical inputs for production, political participation and representation, and bargaining power within households (Kaat *et al.*, 2012). This disparity is often more pronounced in developing countries (Jayachandran, 2014).

Taken in isolation, the popularity of inclusive growth is largely due to two related trends (Lee *et al.*, 2016). The first is a widespread concern about the extent and consequences of inequality and the second is the significant economic and political growth of cities. Indeed, it turns out that cities are often the areas where inequality is most pronounced and evident, and rural-urban migration is increasing there, with local governments being given new responsibilities to stimulate economic growth. While cities are now seen as “engines of growth”, the benefits of growth are not shared equitably, with the poorest being left behind (Lee *et al.*, 2016). Despite the

fact that the most prosperous cities are often the most unequal, for the incomes of the already wealthy are rising while living standards stagnate for much of the population.

Poorly distributed access to education is a significant barrier to inclusiveness (Balakrishnan *et al.*, 2013). As the quality of employment one can access is related to the quality of education received, access to good quality education will be an important determinant of income and well-being. Yet, this quality is associated with prohibitive costs that can severely restrict the ability of poor households to access quality education over a sufficient period of time.

Doumbia (2019) emphasizes that education and improved infrastructure are key factors in reducing poverty and thus conducive to inclusive growth. Another important contribution is that the growth model and process are key determinants of inclusive growth (Thorbecke, 2014). All segments of society must be those who participate in this process: the poor, the middle class, and the rich. On the production side, participation is through productive employment.

Earlier research on inequality has focused more on its effects on economic growth, with little attention to its implications on inclusive growth. In other words, the difference in access to scarce and valued social resources, resources being understood in the broadest sense, including all possibilities of human action: political, economic, cultural, social, sexual. Clearly, social inequalities are therefore the result of an unequal distribution of resources within a society. Ali and Son (2007a) share this logic and argue that any economy cannot achieve sustainable development until all the fruits of growth are available to all segments of society.

2.1.2 Redistribution Theory

The increasing inequality of income and wealth is an urgent economic worry in the rest of the world. This has led to many calls for redistribution by means of more progressive taxes on income and wealth. As redistribution via taxes and transfers results in deadweight losses, an important question arises: which methods of redistribution are most effective in an unequal economy? The answer of Boar and Madigan (2020) to the question of the most efficient means of redistribution in an unequal society lies in the optimal form of non-linear taxes on income and wealth. When done properly, income redistribution has the potential to reduce poverty by reducing inequality. At the same time, income redistribution cannot significantly accelerate

growth, except perhaps by reducing social tensions arising from inequality and allowing some of the poor to dedicate resources to the accumulation of human and physical assets.

In a study on Tunisia, Jouini *et al.*, (2018) show that the redistributive fiscal policy adopted by the country has considerably reduced inequality and extreme poverty. Based on the national poverty line, however, it results that a large number of poor people contribute more in taxes than they receive in cash transfers and subsidies. This is because of a relatively high burden of personal income tax and social security contributions on low-income households. Indeed, to reduce inequalities in developing countries, fiscal policies must be effective in terms of redistribution, particularly taxation. This redistribution must also target or be favorable to vulnerable groups. This obviously involves subsidies and reforming the criteria for allocating bank credits and, better still, tackling the unequal distribution of education and health benefits between and within income groups. In contrast to Jouini *et al.* (2018), Lustig (2017) argues that this is not always the case for middle-income countries and that poverty and inequality increase after taxation and income transfers. Thus, at different levels of the tax system, a large proportion of poor people suffer net consequences. The reason for this phenomenon is the household consumption tax.

The theory of income redistribution developed by economists suggests that individuals redistribute voluntarily because of interdependent preferences and rely on the state for implementation because of the public good nature of redistribution. For this to be possible, Plotnick and Winters (1984) propose that efficient economic policy is required. Redistribution is the result of legislative decisions shaped by elector preferences for transfers, interest group pressures and against assistance, party competition, and the financial condition of the states.

Padovano *et al.* (2020) examine the effect of political institutions on different income redistributive performances. They suggest that good institutional quality is favorable to an equitable distribution of income among individuals. Most redistribution studies focus on demand-side factors. For instance, Alesina and Giuliano (2011) explore a number of variables that affect the preferences of people regarding redistribution, including perceived social mobility, religious beliefs and political ideology. Still, these indicators are poor proxies for aggregate demand for redistribution in countries, as their time variation is often limited.

In addition, the choice of variables is heavily dependent on data, as they must be present for the same country combinations in which Gini differences are observed. Because of these issues, the variables most often used as determinants of redistribution preferences of voters are the following (Scervini, 2012). The results reported by Sturm and De Haan (2015) imply that such outcome depends on the level of economic freedom: countries that are capitalist have a low degree of fractionation and redistribute more.

Income redistribution, if done properly, can reduce poverty by reducing inequality. It is essential to invest directly in opportunities for people living in poverty. Instead, they must strengthen the capacity of individuals to generate income, now and in the future. Important tools are access to education and skills training, health care, microcredit, water, energy and transportation. For example, conditional cash transfers will motivate individual families to send their children to school, improve their nutrition and monitor their health. But to achieve this goal, financing policies must be made available to the population.

2.2 Empirical Review

The first literature in inclusive growth was focused on how it was defined and measured, with all the discussions centered on what could lead to improved inclusiveness (Ali and Son, 2007b; Klasen, 2010; McKinley, 2010; Anand *et al.*, 2013; Hakimian, 2015). However, researchers such as Venkataraman (2013), Ogujiuba and Alehile (2011), and Islam (2014) highlighted the factors that can drive inclusive growth. They pointed to the importance of job creation in sectors that drive growth and the need for inclusive policies, such as education and health reforms, as the factors that can make growth inclusive.

However, very few studies attempt to measure inclusive growth and evaluate the effect of institutional and socioeconomic factors in an econometric model. We will devote this section to the empirical literature on inclusive growth.

Asongu and Roux (2016) in a study of ICT-enhanced inclusive human development in Sub-Saharan Africa for 49 countries during the period 2000-2012 use the HII, an inclusive growth index. Through instrumental variable Tobit regressions, they conclude that the level of inclusiveness of ICT development differs with respect to basic human development and policy environment conditions.

Khan *et al.* (2016) with the principal objective to measure Pakistan's inclusive growth by using the methodology developed by the Asian Development Bank empirically, examined its determinants using ARDL. Their results confirm that macroeconomic stability and social financial deepening are important determinants in terms of inclusiveness, and reduce poverty and inequality, while reforms in the trade sector are needed to increase their effectiveness in terms of inclusiveness.

Very few studies examine the effects of institutional quality on inclusive growth. Kouton (2019) uses GDP per person employed in purchasing power parity as a measure of inclusive growth to show the importance of institutional quality (economic freedom) in growth inclusiveness of developing countries in Sub-Saharan Africa from 1996 to 2016. Estimating a GMM system and testing for causality, shows a positive and significant effect of the level of economic freedom and changes in the level of economic freedom on inclusive growth.

In contrast to Kouton, Abbe (2019) captures inclusive growth in the WAEMU zone according to Ali and Son (2007a). Specifically, he focuses on the role of governance (the Kaufmann indices) in the relationship between unemployment and inclusive growth over the period 2002-2016. Thus, with the generalized method of moments system (GMM), the author finds that the interaction between the quality of all institutions and unemployment is positive on inclusive growth in the region and has a negative but negligible effect on inclusive growth in the region.

Next, Botchuin (2021), in his study on the effect of institutional factors on inclusive growth in Côte d'Ivoire, measured inclusive growth using Ali and Son's (2007a) method and the ICRG indices as institutional factors. The results of the ARDL bound test suggest that only government stability has a significant negative impact on the inclusiveness of Ivorian growth from 1984 to 2019.

Oladotun and Phocenah (2019) investigate the combined impact of military spending and institutional quality on South Africa's inclusive growth. Only corruption was selected as reliable proxy of institutional quality in the ICRG data from 1984 to 2017. Their results suggest a positive and significant impact of military spending on South Africa's inclusive growth while the impact of military spending in the presence of corruption retards South Africa's inclusive growth.

Amuka *et al.* (2019) used growth model and dynamic ordinary least squares method to analyze the determinants of Georgia's inclusive growth during 1996-2016. Measuring inclusive growth by the 10% income shares of the poorest and richest groups in Georgia generated from the World Bank's development indicators, they conclude that industry and service sector have been significantly responsible for increasing the income share of the poorest and richest groups in Georgia. And thus has allowed Georgia to be the country where growth appears to have been inclusive among emerging economies.

3. STYLIZED FACTS ON INCLUSIVE GROWTH IN CÔTE D'IVOIRE

In the empirical literature, there is no single method for constructing an inclusive growth index. A number of authors have endeavored to construct indices using different methods, such as the unidimensional and multidimensional approaches.

3.1 Building an Inclusive Growth Index

Before constructing this index, let's list the different measures presented to us in the literature.

3.1.1. Different Measures of Inclusive Growth

About the one-dimensional approach to measuring inclusive growth, which is to measure inclusive growth by income inequality, the first work dates back to Pigou (1912). After this author, research intensified with Atkinson (1970), Sen (1973) and Kolm (1966, 1976). These authors of the 1960s-70s used an axiomatic approach to measuring inequality based on fixed sample sizes. But Dalton (1920) generalized these indicators by introducing the population principle. Among these indicators of measurement by inequalities we have the Index of: Gini (1912), Theil (1979), Atkinson (1970) and Palma ratio (2011).

Measurements of inequality are generally based on a reduction of poverty to its monetary component only. However, non-monetary components such as education or health status, which play a key role in defining well-being, are not taken into account when measuring inclusive growth. According to this principle, transferring income or social opportunity from a rich to a poor individual reduces the level of inequality.

The weaknesses of measuring inclusive growth by inequality led to a new approach in the late 1990s: the multidimensional approach.

Apart from approaches based purely on income inequality, other features of measuring growth inclusiveness have been explored. Some have focused on the full measure of growth inclusiveness, others on measuring the incidence and quality that economic growth can govern. so we have: Growth Incidence Curve (Ravallion and Chen, 2003), Opportunity Index and Opportunity Equity Index (Ali and Son, 2007a; Ali and Zhuang, 2007), McKinley Approach (2010), Klasen Approach(2010), Social Mobility Index and Income Equity Index (Anand *et al.*, 2013).

However, these different methods of constructing indicators are focused on a panel of developed countries, particularly in Asia, America and Europe. The only works for Africa are those of Ncube (2015) for Africa, Abbe (2019) for WAEMU countries and Kouton (2019) in the sub-Saharan African zone. However, the studies carried out in developing countries taken individually are those of Amuka *et al.* (2019) for Georgia, Kacem *et al.* (2019) for Tunisia and Botchuin (2021) for Côte d'Ivoire.

3.1.2. Inclusive Growth Index in Côte d'Ivoire

A global index allows to measure the value of a complex quantity defined as the sum of a set of elementary indices. It is an instrument that aggregates all information contained in a set of variables. In this study, we will use principal component analysis (PCA) method to construct the synthetic index of inclusive growth (Kacem *et al.*, 2019).

In order to complete the previous theoretical analysis with a statistical approach based on the Principal Component Analysis (PCA) method, the purpose of this method is to build a classification that allows the detection of important characteristics in order to construct a synthetic indicator of inclusive growth. This indicator describes, in a single variable, the common component of variables that are highly correlated. This methodology provides weights that reflect the variability of the data. It relies on empirical weights resulting from the internal phenomenon of the data.

Presentation of the Variables

For this empirical work, a total of 12 variables according to different indicators are used. These data come from the World Bank (WDI) covering the period 1984-2019. These variables include three dimensions, each dimension contains sub dimensions and the sub dimensions are composed of four indicators and each indicator is composed of several variables. The following table gives results of the selected variables.

TABLE1 - *Presentation of the Variables*

Dimensions	Indicators	Variables	Names
Social	Education	inscrip	Ratio girls/boys in primary school enrollment (%)
		mort	Infant mortality (per 1000 live births)
	Health	exp	Life expectancy at birth, total (years)
		ferti	Fertility rate, total (births per woman)
institutional	Governance	depcns	Household final consumption expenditure
		wolaw	Women, Business and Law Index score (scale 1-100)
		gdp	GDP growth rate
Economic	Croissance	phone	Fixed-line telephone subscriptions (per 100 inhabitants)
		pibh	Annual growth rate
		rnb	RNB (\$ US courants)
		crpop	Ratio of inactive to active population, seniors (% of working age population)
	Environmental	Co2	CO2 emissions (metric tons <i>per capita</i>)

Source: Author from World Development Indicators.

Upcoming steps in the construction of the inclusive growth index will be based on preliminary data analysis.

Kaiser-Meyer-Olkin (KMO) Adequacy Index

As a result, the KMO index allows us to measure the adequacy of the variables used and to judge the relevance or not of using principal component analysis. This index is calculated for all the variables (KMO) and for each variable (MSA, i.e. Kaiser's Measure of Sampling Adequacy). It is therefore a summary indicator that allows us to know, for all the variables and for each variable

taken individually, whether the original correlations are greater than the partial correlations. Hence, a variable that is not correlated with any other should certainly be removed from the analysis, as we are interested in the common variance shared between the variables. MSAs values greater than 0.8 are considered good, while those less than 0.5 are not acceptable. Therefore, variables with MSAs less than 0.5 will be removed from the analysis.

TABLE 2- *Result of the MSA Test of the Selected Variables*
(Kaiser's Measure of Sampling Adequacy)

Variables	KMO
Exp	0,392
Ferti	0,681
Depcons	0,663
Inscrip	0,718
Co2	0,418
Gdp	0,400
Pibh	0,401
Rnb	0,548
Crpop	0,630
Phone	0,768
Wolaw	0,7996
Mort	0,368
All variables	Kaiser-Meyer-Olkin's Measure of Sampling Adequacy (KMO)=0,588

Source: Author from WDI.

The index KMO (Kaiser-Meyer-Olkin) is 0.588; this value, which is higher than 0.5, is proof of the acceptance of the sample of the variables obtained. However, the variables exp, Co2, gdp PIBh, pop and mort have their MSAs below 0.5, so they will be removed from the analysis.

Choice of Axes

However, the quest for improved results, based on the benchmark values suggested by Kaiser,

taken individually, whether the original correlations are greater than the partial correlations. Hence, a variable that is not correlated with any other should certainly be removed from the analysis, as we are interested in the common variance shared between the variables. MSAs values greater than 0.8 are considered good, while those less than 0.5 are not acceptable. Therefore, variables with MSAs less than 0.5 will be removed from the analysis..

TABLE 3 - *Result of Axis Selection*

	Axis					
	Axis 1	Axis 2	Axis 3	Axis 4	Axis 5	Axis 6
Eigenvalues	4,979	1,266	0,668	0,077	0,002	-0,010
% of variance	72,35	18,40	9,71	0,011	0,000	-0,001
% Cumulative	72,35	90,74	100	101	101	101

Source: Author from WDI.

For the choice of the axes, the Kaiser criterion is used. This criterion is based on two conditions: first, the contribution to the inertia must be greater than 1 and second the cumulated contribution must be greater than 80%. In the present case, the first axis, corresponding to the first eigenvalue, concentrates 72.35% and the second axis contributes a value of 90,74%. So it is sufficient to retain these two axes for the analysis; any information included on the others can be viewed as residual.

TABLE 4 - *Cosine Squares of the Selected Factors*

Variables	Factor 1	Factor 2
ferti	-0,962	-0,023
depcons	0,309	0,795
Inscrip	0,885	0,386
rnb	-0,093	-0,730
Crpop	0,784	-0,019
Phone	0,932	0,030
wolaw	0,953	0,264

Source: Author from Eviews 10.

Interpretation of the First Factorial Axis: Importance of the Technology Indicator, the Education Indicator and the Institution Indicator (72.35%)

The first constituent expressed on the factor axis is about 72.35%. This shows the importance of the technology, institution and education indicators in the growth model that the Ivorian state has followed since independence until the various socio-political crises. This pattern has produced fairly good macroeconomic results, which have enabled the country to avoid crises. Good results recorded by Côte d'Ivoire in the areas of institutional quality, technology and education have led to a significant level of growth.

Interpreting the Second Factorial Axis: Importance of the Household Consumption Expenditure Indicator (18.40%)

The magnitude of variance on this axis is lower than on the first axis. It accounts for the non-contribution of household consumption expenditure to the improvement in the level of growth because this factor is one of the institutional obstacles to economic growth.

Thus, common factor F is the result of the cosine squared of the selected variables multiplied by the % variance of axis 1 obtained from the principal component analysis which will serve as an inclusive growth index determined by the following equation:

$$F = 0,7235 * phone + 0,7235 * wolaw \quad (1)$$

The constructed value is between -10% and +10%. The values over the study period (1984-2019) are between 0% and +6%. The average value is 4.1% over the same period. In fact, the inclusiveness of growth is very poor if the constructed indicator has a value below zero; poor if the index has a value between 0 and 2%; fairly good if the index has a value between 2% and 5%; good if the index has a value between 5% and 7%; and favorable to economic growth if the index has a value greater than 7%.

The interest in this area and in particular in Côte d'Ivoire is explained by the fact that an in-depth examination of the World Bank's development indicators (2020) reveals that the area's growth is inclusive by 4.1% from 1984 to 2019. This index is positive and in line with studies by

Hussein *et al.* (2018) and Abbe (2019) in which they argue that West Africa has recorded inclusive growth, mainly due to income growth and improved income equity.

However, on a scale of 0 to 10%, this inclusiveness is poor. This justifies Abbe's (2019) findings on Côte d'Ivoire being the second country after Togo to show low inclusive growth over the past two decades. Moreover, sustainable development will be difficult to achieve in this developing country if growth is not more inclusive. Inclusive growth suggests that almost everyone is on board as the economy moves in a more progressive direction.

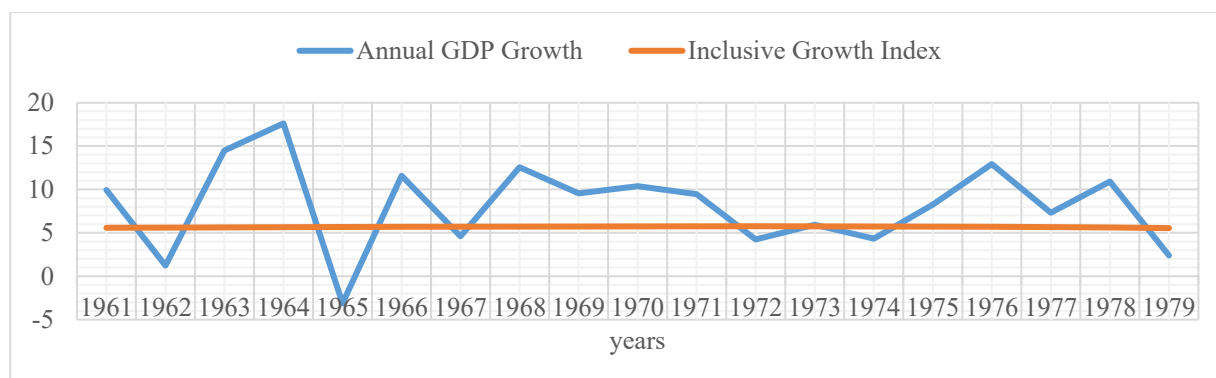
3.2 Inclusive Growth in Côte d'Ivoire

This state of work will show the evolution of inclusive growth and economic growth in Côte d'Ivoire over the period 1985 to 2019. For a better understanding, the period will be divided into three sub periods: from 1984 to 1979, from 1980 to 2000 and from 2001 to 2019.

1961 to 1979: Phase of Sustained Growth and Fairly Positive Inclusiveness

Graphic 1 of the evolution of annual GDP growth and the inclusiveness index shows the general trend (upward or downward) on the one hand, and the dynamics of the various events that took place during the period 1961 to 1979 on the other.

GRAPHIC 1- *Evolution of Annual GDP Growth and Inclusive Growth Index in Côte d'Ivoire from 1961 to 1979*



Source: Author's calculation.

This graphic shows overall changes in annual GDP growth and the inclusive growth index in Côte d'Ivoire from 1961 to 1979. The findings of this analysis are the significant presence of annual GDP growth over the period as a whole. However, the inclusiveness index dominates that of GDP during the period with an average of 5.7% compared to 3.8% for GDP. This inclusive growth index is considered as good during the whole period in contrast to the economic growth which is weak.

Indeed, from the early 1960s to 1978, Côte d'Ivoire experienced growth essentially linked to the boom in export products, particularly coffee, cocoa and wood. At the same time, known as the "Ivorian miracle", real GDP increased at a rate close to 8% per year on average. Even though its population growth is one of the highest in the world, estimated at 4.1% between 1960 and 1980, which led the country in the 1970s to the middle-income bracket and the highest standard of living in West Africa. As a result of an intensive forest clearing policy supported by the government, the area under export crops increased dramatically. Thus, extensive coffee and cocoa farming was established, to the point where nearly one out of two Ivorian working became planters, with the growing support of cheap immigrant labor (Burkinabe's or Malians).

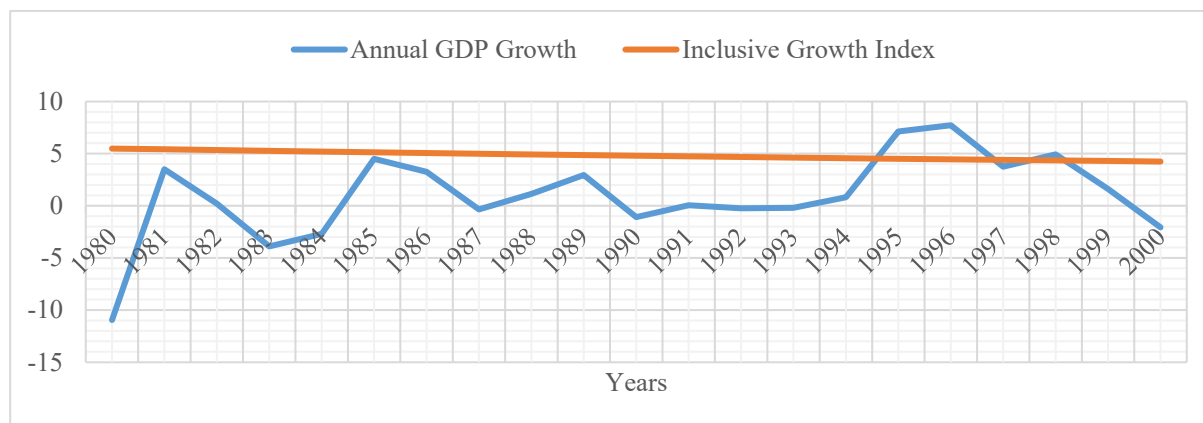
The country was faced with a sharp slowdown in economic growth and embarked on a Structural Adjustment Program (SAP).

From 1980 to 2000: Return to Growth, Crisis, Real Stabilization and Declining Inclusiveness

Between 1980 and 1993, Côte d'Ivoire suffered from a major financial crisis. Indeed, while GDP continued to decline between 1980 and 1993, with a lull in 1985-86, Côte d'Ivoire had to submit to the constraints of structural adjustment in order to avoid bankruptcy. Thus, the country called on IMF assistance for the first time in 1981. Two successive stabilization programs were signed with the Bretton Woods Institutions for the periods 1981-1983 and 1984-1986.

The graphic shows a declining inclusiveness index followed by trend economic growth. Growth inclusiveness (4.82%) is higher than economic growth (0.95%), but it is poor. Indeed, Côte d'Ivoire has not yet managed to absorb the consequences of a sharp drop in coffee and cocoa prices in 1979, following the 1973-1978 boom. During the stabilization programs signed with IMF in 1981-1983 and 1984-1986 and the "mini-boom" of 1985-1986, positive inclusiveness was revealed, respectively, while making people believe in the success of adjustments without devaluation, which was quickly disproved in 1987.

GRAPHIC 2- *Evolution of Annual GDP Growth and Inclusive Growth Index in Côte d'Ivoire from 1980 to 2000*



Source: Author's calculation.

A first three-year stabilization program was signed (1981-1983). This program focused on public finances, with a drastic reduction in investment spending, a plan to restructure public enterprises, the introduction of new fiscal measures and a restrictive monetary policy. A second adjustment program was then adopted, which lasted three years (1984-1986) and required further fiscal restraint and an increase in tax revenues.

After a major debt rescheduling at the Paris and London Clubs, a second adjustment plan was implemented. This was even more drastic: further cuts in public investment, further tax increases, elimination of subsidies and increases in administered prices, and waves of layoffs in public enterprises. Moreover, from a climatic point of view, a dramatic drought in 1983 caused losses of about 50% on agricultural crops.

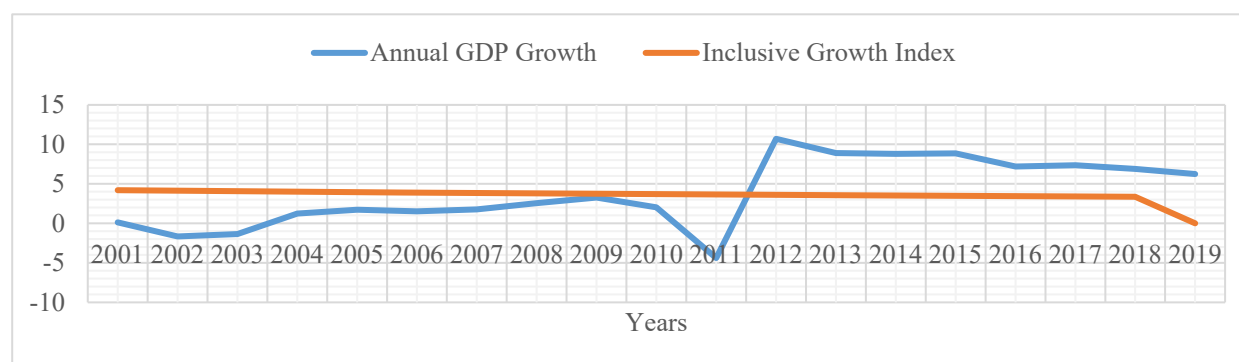
The first two adjustment plans did not improve the situation: public revenues were still uncertain and the economy was more vulnerable than ever to fluctuations in commodity prices. The diversification of the country's economic resources is still in progress. In 1989 Côte d'Ivoire suffered from the worst of it. The economic crisis persisted throughout the 1990s, with negative social consequences. A decade of unsuccessful internal and fiscal adjustment had left the country with excessive internal and external debt. Finally, since December 1999, Côte d'Ivoire has experienced socio-political instability, culminating in the armed crisis of September 2002. The military coup of December 1999 and the resulting political crisis have had a negative impact

on the economy. The consequences of this crisis were manifold at the social, economic and political levels. While the fighting has stopped, the socio-political situation remains fragile and uncertain.

From 2001 to 2019: A Combination of Crisis, Sustained Growth and Poor Inclusiveness

From 2000 to 2019, a series of socio-political crises and instabilities took place. During this period, the annual real GDP growth rate averaged 1.1% per year.

GRAPHIC 3 – *Evolution of Annual GDP Growth and Inclusive Growth in Côte d'Ivoire from 2000 to 2019*



Source: Author's calculation.

There are two trends in this graphic. The first one is the inclusive index, which is above the economic growth from 2001 to 2011, with an annual average of 4% and 0.61% respectively. This weakness is due to the socio-political crisis that the country has suffered.

The country's growth rate in 2000 was negative: -2.3%. Since 2004, Côte d'Ivoire has recorded positive real growth rates (+1.6% in 2004, +1.8% in 2005 and 1.2% in 2006), but these remain below the population growth rate, estimated at 3.3%. Inflation varies between 1.4% and 4.4%. Debt service, which represented 10.68% of exports in 2000, was reduced to 5% of exports in 2003, 3.3% in 2004 and 1.45% in 2005, reflecting the government's difficulties in meeting its external commitments. These problems persist despite the increase in the level of exports, which rose to 37.9% in 2000 and 47.8% of GDP in 2005.

The second tendency is the economic growth which is higher than the inclusive growth index. These indicators have an annual average of 8.11% and 3.04% respectively during the period 2012-2019. In short, faced with the rampant rise of current global imbalances, marked by the deepening of inequalities and poverty, an inclusive growth is rightly an urgent strategic and political imperative for Côte d'Ivoire. The structural adjustment programs (SAPs) have not been followed by inclusiveness and notable economic growth. Therefore, Ivorian economic growth is inclusive but of low quality.

Therefore, the question we are entitled to ask is: what factors influence this inclusiveness?

4. EMPIRICAL FRAMEWORK

This empirical analysis section deals with preliminary tests for the choice of the model and estimation method.

4.1 Preliminary Tests of the Choice of the Estimation Method

The preliminary test consists of the descriptive statistics of variables, unit root test and correlation matrix.

Choice and Description of Variables

This part of the paper focuses on institutional, social and economic indicator variables that can affect inclusive growth in Côte d'Ivoire.

Institutional Indicators of Inclusive Growth in Côte d'Ivoire

There are no institutional indicators of growth inclusiveness in the literature constructed from the International Country Risk Guide data produced by the Political Risk Service Group (PRS Group). Thus, following the empirical work of Keho (2012), the role of institutional factors in the financial and economic development of WAEMU countries and those of Botchuin (2021) on the institutional factors of inclusive growth in Côte d'Ivoire, we select two institutional indicators: quality of the bureaucracy and democratic accountability. **Democratic accountability** reflects how the government deals with the population and the ability of the government to build a democratic society. **Bureaucracy Quality** is institutional force and the quality of the

bureaucracy is a buffer that tends to minimize policy revisions when governments change. The bureaucracy in low-risk countries is somewhat autonomous from political pressures.

These are scored on varying scales with a high score indicating better institutional quality. The indicators are derived from the International Country Risk Guide database produced by the Political Risk Service Group (PRS Group). Regardless of the methodological and statistical reservations that may be made about these indicators, they are taken seriously by foreign investors and consulting organizations. The major advantage of these data over other governance indicators is their availability over a relatively longer period (1984-2019), which allows for analysis of the dynamics of the variables and their influence on financial development and economic growth. For ease of analysis, we transformed the variables into values from 0 to 10.

Economic Factors of Inclusive Growth

GDP *per capita* growth (PIBh): GDP *per capita* is a measurement that results from GDP divided by the size of the total population of the country. Thus, theoretically, this is the amount of money that each individual in that particular country receives. The growth contribution of capital accumulation is limited because of the phenomenon of diminishing marginal returns to all forms of reproducible capital. GDP *per capita* gives a much better determination of living standards than GDP by itself.

Household final consumption expenditure as % of GDP (Depcons): refers to the actual expenditure of resident families on goods and services to satisfy their own needs. However, this excludes expenditures that are partially or totally covered by social transfers in kind. Several papers have identified the effect of household final consumption expenditure and economic growth. Macroeconomic Keynesian model involves that household consumption expenditures have a significant impact on economic growth by affecting total expenditures (Alper, 2018a).

In line with Alper, in a study on Indonesia Handriyani *et al.* (2018) conclude that household consumption has a positive and significant effect on Indonesian economic growth especially in North Sumatera province. Ridzuan *et al.* (2014) also show in a study on Malaysia that there is a long-run relationship between household final consumption expenditure and economic growth in the ARDL model. They subsequently prove that in the short and long run this variable has a positive and significant effect on the Malaysian economy.

However, there is evidence to the contrary in a study by Beegle *et al.* (2010) on African countries, including Tanzania. In fact, these authors estimate that for the entire African distribution, growth in expenditure on education has been low (about 1 percent per year) and that this growth has been uneven and, as a result, the richest 5 percent of Africans have received about 40 percent of the total gains, while the bottom third has stagnated. Contrary to Nyambe and Kanyeumbo (2015) who find that there is a positive relationship between household spending and Namibian economic growth.

Social Factors of Inclusive Growth

Annual population growth (Crpop): is the growth over a given period of time in the number of people living in a country. The relationship between population growth and economic development has been a hotly debated topic since the world's population passed the two billion mark. A vigorous debate on the relationship between those two factors is taking place in all countries, whether they have a less developed economy, a developed economy or an economy in transition. Many theories abound on this subject.

Furthermore, it is also evident from the work of Menike (2018) that although a steadily growing population appears to be a hindrance to a country's economic development, they have for the most part accepted population growth as a boon. For his part, Wesley and Peterson (2017) confirms Menike's idea by comparing different economies. He comes to the conclusion that in high-income countries, high population growth is likely to create social and economic problems, while in low-income countries, high population growth may slow down their development. Based on economic analyses of inequality, it appears that lower population growth and limited migration could contribute to increased national and global economic inequality.

On the positive side, population growth implies an increase in the supply of labor, which is a basic factor of production. And the growth of population and labor supply has always been a major source of growth in known history. It is noteworthy that human labor, assisted by the necessary tools and instruments, has always been and remains the greatest productive asset of nations. So, increasing population leads to increasing total production. But it brings with it also a greater number of people among whom this production must be distributed. More productive hands but also more mouths to feed.

According to population theoreticians, when population growth is associated with high fertility and an increasing number of children relative to adults, then the number of consumers will grow faster than the number of producers, the dependency burden on the active workers in society will be greater, and the effect may be negative. On the other hand, if there is an increase in life expectancy that extends the productive years of society's workers, then the problem of an increased dependency burden can be at least partially offset. Except for the institutional variables, the others are taken from the Worldwide Development Indicators database and the period covered by this study is 1984-2019.

TABLE 5 - *Expected Effect of Different Factors on Inclusive Growth*

Dimensions	Indicators	Variables	Sources	Effect expected
Institutional	democratic accountability	Resdemo	ICRG, 2020	Positif
	Bureaucracy Quality	Qbur		
Social	Population growth rate	Crpop	WDI, 2020	positif
Economic	GDP <i>per capita</i> growth	PIBh	WDI, 2020	positif
	Household final consumption expenditure (% GDP)	Depcons		

Source: Author.

Evolution of Different Indicators over Time from 1895 to 2019

This section examines the evolution of various factors of inclusive growth in Côte d'Ivoire over the period 1984-2019.

Table 6 presents the averages by sub-period of the economic, social and institutional indicators of inclusive growth in Côte d'Ivoire. The indicators show some progress over time, with the exception of GDP growth and the quality of the bureaucracy. GDP growth and the quality of the bureaucracy deteriorated from 1984 and 1996 respectively. The deterioration of the Ivorian institutional framework was more pronounced in 2008, with a zero score for the quality of the bureaucracy. This trend is linked to the context of socio-political unrest in the country since 1999.

TABLE 6 - *Evolution of Institutional and Socioeconomic Indicators of Inclusive Growth in Côte d'Ivoire from 1984 to 2019*

Indicators	1984-1995	1996-2007	2008-2019
GDP <i>per capita</i> growth	-2,37	-0,91	3,13
Household final consumption expenditure	67,17	67,40	67,18
Population growth rate	3,66	2,5	2,45
Democratic accountability	3	2,2	2,7
Bureaucracy quality	3	1,1	0

Source: Author from WDI and ICRG.

From 1984 to 2007, Côte d'Ivoire experienced a negative GDP. Indeed, the amount of money that should be received by each Ivorian has not been distributed fairly. The final consumption expenditure of the households remained constant during all the period. Expenditures for the direct satisfaction of household needs as a percentage of GDP were on average satisfactory.

A decline in the Ivorian population has been felt since 2007. Indeed, the socio-political crises that the country has experienced have led to an increase in the rate of migration to developed countries and the infant mortality rate. Finally, the democratic responsibility presents a clear evolution over the last two periods. Therefore, a democratic country is able to promote inclusive growth.

Note that over the entire study period, Côte d'Ivoire scored higher than the minimum required for legal compliance and bureaucratic quality (Keho, 2012).

Descriptive Statistics of the Variables

Descriptive statistics are a better way to judge data reliability.

Table 7 highlights descriptive statistics of the variables. The analysis of the table reveals a low dispersion around the mean of the variables because their standard deviation is less than 10. This means that the variances are minimal between the values of the variables. It is therefore not necessary to perform a logarithmic transformation of the variables, as is often done to normalize the series. Also, it should be mentioned that the mean and median are approximately equal, so

the variables do not suffer from outliers. However, the values of the Bera probability are greater than 5% of Jarque – so we can conclude that the series are normally distributed.

TABLE 7- *Descriptive Statistics of the Variables*

	Cri	PIBh	Depcons	Crpop	Resdemo	Qbur
Mean	4,20	-0,15	80,76	2,88	2,60	1,31
Median	4,19	-0,63	80,37	2,55	3	0
Max	5,19	8,04	90,82	4,12	3,17	3
Min	3,36	-6,64	72,67	2,08	1	0
Ecart-type	0,55	3,86	4,43	0,64	0,57	1,47
Jarque-Bera	2,24	1,62	1,46	3,50	7,36	5,56
Probabilité	0,32	0,44	0,48	0,17	0,02	0,06
Observations	35	35	35	35	35	35

Sources: Author's calculation.

Correlation Matrix of the Variables

The correlation allows us to determine the relationship between the different variables and inclusive growth.

To conclude the absolute value of each coefficient ($|b| > 0.75$) of the first column is less than 0.75, so there is no risk of multicollinearity.

TABLE 8- *Correlation Matrix of the Variables*

Variables	Cri	PIBh	Depcons	Resdemo	Qbur	Crpop
Cri	1,000					
PIBh	-0,475	1,000				
Depcons	-0,145	-0,172	1,000			
Resdemo	0,062	-0,110	-0,080	1,000		
Qbur	0,665	0,062	0,101	0,569	1,000	
Crpop	0,602	0,008	0,055	0,644	0,917	1,000

Source: Author's calculation on Eviews 10.

Unit Roots Tests

We submit the different variables to stationarity tests of Augmented Dickey-Fuller (ADF) and Philip Perron (PP) tests for stationarity. In fact, ADF test is effective in case of autocorrelation of error and PP test is suitable in the presence of heteroscedasticity.

TABLE 9- *Unit Roots Tests*

Variables	Level		First difference	
	ADF	PP	ADF	PP
Cri	-2,283 (0,185)	1,471 (0,999)	-3,472 * (-3,229)	-11,041 *** (-3,639)
Depcons	-1,874* (-1,610)	-3,554*** (-1,610)	-2.166*** (-1,611)	-3,790*** (-1,611)
PIBh	-1,287*** (-3,206)	-3,854 (-3,209)	-4,445*** (-3,204)	-5,016*** (-3,204)
Crpop	-5,273*** (-4,252)	-2.326 (-0,409)	-45,748*** (-3,204)	-78,901*** (-3,207)
Qbur	-1,330 (0,862)	-2,695 (0,244)	-4,619*** (-4,204)	-6,182*** (-3,207)
Resdemo	-2.162*** (-3,207)	-4,995*** (-3,206)	-1.787 (0,689)	-80,255** (-3,207)

Note: ADF and PP stand for Dickey Fuller Augmenter (1981) and Philips-Perron (1988) tests respectively. The choice of lags is based on the Schwarz information criterion with a max lag = 4. The values in parentheses are the p-values. * (**) means the rejection of the unit root hypothesis at the 1% and 5% (10%) threshold.

Source: Author's calculation on Eviews 10.

Table 9 highlights the results of unit root tests for different indicators. It appears that all the variables are integrated of unit order (I (1)) in the Philip-Peron and Dickey-Fuller augment tests.

Stationarity Test on Long Term Residuals

From the stationarity tests of Augmented Dickey-Fuller (ADF) and Philips-Perron (PP) applied on the variables, it appears that all the variables are integrated of unit order (stationary in first difference) i.e. I (1). We then apply the unit root tests on the series of residuals deduced from the long term relationship. The results of the application of the ADF and PP tests are reported in the following table:

TABLE 10- *Stationarity Test on the Residual Series of the Long Term Equation*

	ADP	PP
Statistic	-3,665	-3,476
Critical value at 5%	-2,951	-2,951

Source: Author's calculation from Eviews 10.

4.1. Specification of Econometric Models

We would like to point out that econometric work on inclusive growth is scarce and mostly focused on panels of countries (Hakimian, 2013; Abbe, 2019; Kouton, 2019). Except for Kacem *et al.* (2019) and Botchuin (2021) who have used it for one country respectively, for Georgia and Côte d'Ivoire.

First, we present the specification of the model that will allow us to analyze the effect of institutional and socioeconomic factors on inclusive growth. Second, we describe the estimation method used to estimate the specified model. Finally, we present the results of the estimations.

According to the previous results, the series are all integrated of unit order (I (1)), i.e. they are stationary after differentiation. Also, we have demonstrated the presence of a long term relationship between the series studied. Therefore, the error correction model proves to be the adequate model. Thus, to analyze the effect of institutional and socio-economic factors on inclusive growth, a non-linear model of the quadratic type will be used. According to Mishra (2011) and Al-Rasasi *et al.* (2021), there is a non-linear relationship between household final consumption expenditure and growth.

4.2. Specification of the Augmented Quadratic Model

This model is the most widely used in solving problems of taxation and taxation of taxes in time series. Indeed, it makes it possible to explain economic growth through factors with which it presents a non-linear relationship. This method, which is based on the Laffer Curve principle, makes it possible to model an inverted bell-shaped relationship. This model is based on an optimal growth model à la Ramsey-Cass-Koopmans which is based on an AK-type production function that presents public capital as an input.

Thus, the augmented quadratic model is written as follows:

$$Y_t = \alpha + \beta\tau_t + \delta\tau_t^2 + \varepsilon_t \quad (2)$$

Where $\beta > 0$ et $\delta > 0$.

In this equation, Y denotes inclusive growth; τ , final household consumption expenditure, and ε the error term. In addition, the sign of the consumption expenditure variable must be positive in order to capture the beneficial effect of inclusive growth. While that of its square τ^2 must be negative in order to capture the undesirable effects associated with very high spending. As mentioned above, we will insert other variables into our basic model. We thus retain the GDP *per capita* and the population growth rate, democracy and the quality of the bureaucracy that affect Ivorian inclusive economic growth. The selected model is written as follows:

$$Y_t = \alpha + \beta\tau_t + \delta\tau_t^2 + \theta W_t + \varepsilon_t \quad (3)$$

With W_t GDP *per capita*, population growth rate, democracy and quality of bureaucracy and final consumption expenditure that maximizes inclusive growth is obtained by the following relationship: $\tau^* = \frac{\beta}{2\delta}$

From equation (2), let us deduce the empirical form of the model: $\tau^* = \frac{\beta}{2\delta}$

$$\begin{aligned} Cri_t = & a + b_1 PIBh_t + b_2 Depcons_t + b_3 Depcons_t^2 + \\ & b_4 Qbur_t + b_5 Re sdemo_t + b_6 Crpop_t + e_t \end{aligned} \quad (4)$$

Where: *Cri* is the inclusive growth index; *PIBh* GDP per capita; *Depcons* household consumption expenditure; *Qbur* quality of bureaucracy; *Resdemo* democratic accountability; *Crpop* population growth rate.

4.3 Results of the Estimates

The augmented quadratic model presents two results or tables, namely the Long Term Coefficients and Short Term Dynamics.

Long Term Coefficients of the Quadratic Model

As can be seen from the table below, the adjustment coefficient or force of recall is negative, statistically significant and lies between zero and a value that guarantees an error correction mechanism, and therefore the existence of a long term relationship (co-integration) between variables. This negative and significant sign is explained by the fact that an exogenous shock to inclusive growth will lead to a movement towards the initial equilibrium each year, so the equilibrium is stable.

TABLE 11- *Result of the Long Term Estimation of the Augmented Quadratic Model*

Variables	Coefficient	Std. Error	t-Statistic	Prob.
Depcons	0,431**	0,199	2,158	0,039
<i>Depcons</i> ²	-0,002**	0,001	-2,166	0,039
Pibh	-0,023***	0,007	-2,992	0,005
Crpop	0,627***	0,124	5,031	0,000
Resdemo	-0,372***	0,058	-6,355	0,000
Qbur	0,170***	0,046	3,654	0,001
C	-14,431*	8,324	-1,733	0,094
Adjusted R-squared	0,947	Durbin-Watson stat	1,216	

Note: (***) significance at the 1%, 5% and 10% thresholds. Crpop= annual population growth; Depcons= household consumption expenditure as % of GDP; PIBh= growth in GDP per capita; Qbur= quality of bureaucracy; Resdemo= democratic accountability.

Source: Author's calculation from Eviews 10.

All the variables in the table have a significant value and have very small coefficients. However, the variables with negative coefficients, notably PIBh, significantly worsen Ivorian inclusive growth in the long run. An unexpected result emerges from this table. Democracy has a negative and significant coefficient on inclusive growth. This does not mean that democracy hurts Ivorian inclusive growth. But all of the policies put in place by Ivorian governments to achieve democracy have not resulted in inclusive growth. Consumer spending, population growth, and the quality of the bureaucracy have a positive and significant effect on long-term inclusive growth.

Taken in isolation, the coefficients on final household consumption expenditure and its square are positive, negative and significant respectively. This result explains the asymmetry or non-linear relationship between consumption expenditure and inclusive growth.

From this formula $\tau^* = \frac{\beta}{2\sigma}$, we can calculate the final consumption expenditures that maximize inclusive growth in the long run. From this formula, we obtain the optimal final consumption expenditure that improve inclusive growth in long run:

$$Depcons^* = \frac{Depcons}{2Depcons^2}$$

$$Depcons^* = \frac{0,431}{2 \times 0,002}$$

$$Depcons^* = 107,75 \% \text{ of GDP}$$

The optimal rate of final consumption expenditure of households is 107,75% of GDP.

Short Term Coefficients (TC) of the Augmented Quadratic Model

The table below provides us with the short-run coefficients or elasticities of the estimated quadratic model. In contrast to the long-run results, the effects of institutional and socio-economic factors on inclusive growth in Côte d'Ivoire in the short run do not change except for the quality of the bureaucracy.

TABLE 12 - Result of the Short Term Estimation of the Quadratic Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(Depcons)	0,018*	0,011	1,585	0,125
D(<i>Depcons</i> ²)	-0,000*	7,27E-05	-1,556	0,131
D(Pibh)	-0,000	0,000	-1,136	0,266
D(Crpop)	0,073***	0,020	3,673	0,001
D(Resdemo)	-0,013**	0,006	-2,071	0,048
D(Qbur)	-0,003	0,004	-0,793	0,434
Resid 01(-1)	-0,052***	0,017	-3,076	0,004
C	-0,050***	0,001	-29,785	0,000
Adjusted R-squared	0,3092	Durbin-Watson stat		0,510

Note: (**) significance at the 1%, 5% and 10% thresholds. Cri= inclusive growth index; Crpop= annual population growth; Depcons= household consumption expenditure as % of GDP; = captures undesirable effects associated with very high expenditure; PIBh= growth in GDP *per capita*; Qbur= quality of bureaucracy; Resdemo= democratic accountability.

Source: Author's calculation from Eviews 10.

Table 12 shows that PIBh, democratic accountability, and bureaucratic quality have negative coefficients with short-term inclusive growth. PIBh provides a better determination of the standard of living than GDP. Thus, the negative and significant sign of this economic factor reveals that the amount of money that each individual in Côte d'Ivoire receives is very insignificant and therefore fails to raise the standard of living of its people. The negative sign of bureaucracy and democracy indicates that the measures taken to improve these factors have not been followed by inclusive growth in the short term.

This table also indicates that population growth and household final consumption expenditures positively and significantly affect inclusive growth in the short run. This counter-intuitive result is due to the lack of or less efficient economic policies, caused by the political instabilities that the country is experiencing. This is the moment to invite the country's political authorities to put in place realistic economic policies (supply-side policies), which are time-bound and likely to encourage the local business middle class and the production of capital goods.

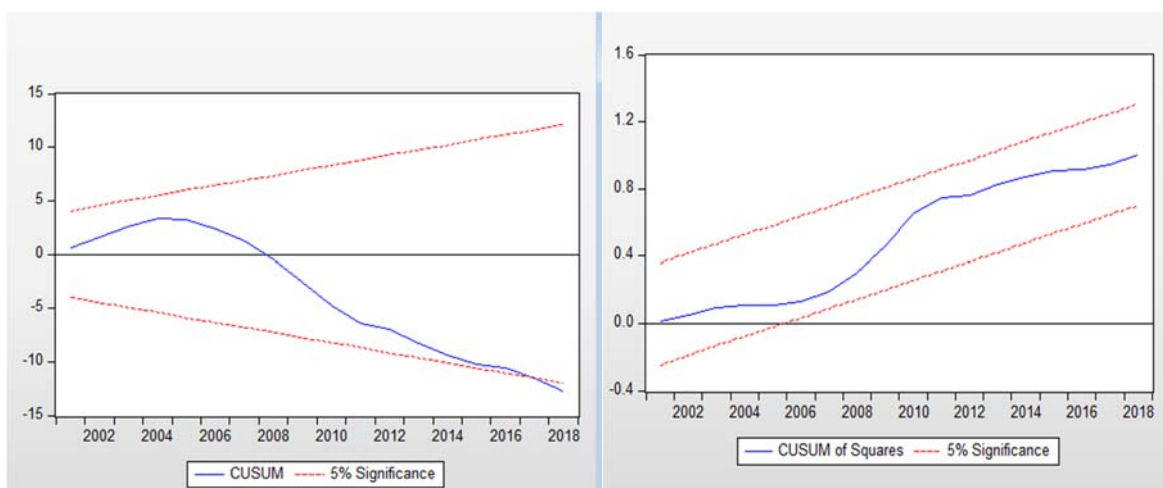
TABLE 13- *Diagnostic Tests of the Quadratic Model*

Hypothesis test of	Tests	Probability
Autocorrelation	Breusch-Godfrey	3,90 (0,052)
Heteroscedasticity	Breusch-Pagan-Godfrey	0,506 (0,868)
Normality	Jarque-Bera	1,486 (0,475)
Specification	Ramsey	125,764 (0,000)

Source: Author's calculation from Eviews.

After the estimation results, is the model stable?

This test aims to verify the stability of the model's coefficients over time, at the end of the forecast. We distinguish between the Chow (1960) and Brown-Durbin-Ewans (1975) tests. We will perform the Brown-Durbin-Ewans CUSUM test which offers the advantage of studying stability without defining *a priori* a break date on the coefficients. The CUSUM test allows us to detect structural instabilities and the square CUSUM test to detect point instabilities. Globally there is instability if the curve crosses the corridor (in red).

GRAPHIC 4- *Stability Tests of the Quadratic Model*

Source: Author from Eviews 10.

Finally, the stability tests of the estimated quadratic model allow us to confirm the stability of the model or not. Indeed, both versions of this test, namely the CUSUM, based on the cumulative sum of the recursive residuals, and the CUSUM SQ, based on the cumulative sum of the square of the recursive residuals, are conclusive. Thus, it is clear from these two graphs that the model is globally stable.

4.3.1 Discussion

The purpose of this research is to measure the effect of institutional and socio-economic factors on inclusive growth with reference to Côte d'Ivoire. In other words, to look for factors that can improve inclusive growth in Côte d'Ivoire. The interest in this area and in particular in Côte d'Ivoire is explained by the fact that a thorough examination of the World Bank's development indicators reveals that the area's growth is inclusive of 4.1% from 1984 to 2019. This index is positive and in line with studies by Hussein *et al.* (2018) and Abbe (2019) in which they argue that West Africa has recorded inclusive growth, driven mainly by income growth and improved income equity.

However, on a scale of 0 to 10%, this inclusiveness is poor. This justifies Abbe's (2019) findings on Côte d'Ivoire being the second country after Togo to show low inclusive growth over the past two decades. Moreover, sustainable development will be difficult to achieve in this developing country if growth is not more inclusive. Inclusive growth suggests that almost everyone is on board as the economy moves in a more progressive direction.

The nonlinear quadratic model estimation results reveal several interesting results. Firstly, concerning institutional factors, the findings show a negative and significant sign of the coefficient of democracy at the 1% level in short and long run. This does not necessarily mean that democracy worsens inclusive growth. But, it indicates that the exercise of democracy has not led to an improvement in the inclusiveness of Ivorian growth. It also shows that quality of bureaucracy is the only institutional factor that improve Ivorian's inclusiveness. These results seriously contradict Botchuin (2021) finding that government stability is the only institutional factor that significantly affects inclusive growth. In the same vein, they also depart from those of Kouton (2019), Abbe (2019), Keho (2012), and Habito (2009), which explore the significant and positive influence of institutional quality on economic growth and its inclusiveness.

Indeed, the measures put in place by the Ivorian government to achieve political stability have failed in terms of inclusiveness due to the various socio-political crises that the country has experienced. While our results differ from those of Zwane *et al.* (2021) on Southern Africa, which indicate a positive and statistically significant effect of political stability on economic growth in the region.

In fact, these crises have led to widening inequalities between social classes and areas. Also, this result is explained by the fact that the assessment of the Ivorian government's ability to carry out its stated program(s) and its ability to maintain a stable government leaves much to be desired or even highly contested. With such a negative institutional indicator coefficient (-0.9), Côte d'Ivoire unfortunately has a high risk of government instability, weak legislation, and decisions that are not at all appreciated by its population.

Second, the results suggest that population growth as a social factor has a significant and improving effect at the 1% threshold on inclusive growth in Côte d'Ivoire. Biyase and Malesa (2019) agree with this study by also finding that population boosts growth. Unlike Abbe (2019), this factor is one of the most important factors that positively affects growth inclusiveness in the WAEMU zone. In the short run, 1% of this indicator improves inclusive growth by 0.073% and 0.067% in the short and long run, respectively. This research also is in contradiction with the work of Zwane *et al.* (2021) which postulates that the population growth rate has a negative and statistically significant impact on growth. Thus in turn detracting from inclusive growth.

More specifically, population growth in Côte d'Ivoire has only worsened over the period studied. From 3.66 percent in the 1960s, it has fallen to 2.45 percent. This is due to the migration of the population in search of a better future to developed countries. In addition, working women are limiting births. This is also good news for the environment, as it will reduce pressure on food production systems and limit CO₂ emissions. Thus, a small population is good for inclusive growth.

In this same vein, Menike's (2018) work reveals that while a steadily growing population may seem to be an obstacle to a country's economic development, most countries have accepted population growth as a blessing. Wesley and Peterson, (2017) justifies Menike's idea by comparing different economies. He concludes that low population growth in high-income countries is likely to create social and economic problems, while high population growth in low-

income countries may slow their development. They are robust to controlling for any reverse causality between life expectancy and economic growth, controlling for additional variables like inflation, trade openness, and government spending, and modifying the country sample (Biyase and Malesa, 2019).

For economic factors, the negative and significant coefficients on GDP *per capita* growth reveal that it worsens the inclusiveness of Ivorian growth in the long run. This is in contrast to the work of Asongu and Roux (2016) who find a positive and insignificant effect of GDP growth on inclusive growth.

Indeed, GDP growth *per capita* is a measure that results from the change in gross domestic product divided by the size of the nation's total population. So, in essence, it is theoretically the amount of money each individual in the country receives per year. This indicator allows for a better determination of the standard of living in relation to the GDP. Thus, the negative and significant sign of this economic factor reveals that the amount of money that each individual in Côte d'Ivoire receives is very insignificant and therefore does not manage to raise the standard of living of its population.

Another economic factor, namely household final consumption expenditure, has a positive and significant effect on Ivorian inclusive growth in the short and long term. That said, this factor is the one that enhances inclusive growth. However, its relationship with inclusive growth is nonlinear and the optimal rate of final household consumption expenditure in Côte d'Ivoire would be 107,75% of GDP. This finding is consistent with those of Mishra (2011) and Al-Rasasi *et al.* (2021), that there is a nonlinear relationship between household final consumption expenditure and growth.

5. CONCLUSION

The purpose of this paper was to examine the effect of institutional and socio-economic factors on inclusive growth in Côte d'Ivoire so that other developing countries could learn from it. This study therefore attempts to define a conceptual and empirical framework through a limited review of the main contributions on this issue. First, we set out to measure inclusive growth using the principal components analysis method while determining the periods of inclusiveness

in Côte d'Ivoire. However, Côte d'Ivoire has experienced periodically positive but low inclusive growth throughout the study period 1984-2019.

In the second part of the study, we attempted to estimate the institutional and socioeconomic factors of inclusive growth in a nonlinear quadratic model over the period 1984-2019. The diversification of databases, notably those of the Worldwide Development Indicators and the International Country Risk Guide (ICRG), facilitated this study. The findings of the econometric estimates show that household final consumption expenditure, population growth, and the quality of bureaucracy positively and significantly affect inclusive growth.

But GDP *per capita* and democracy are not conducive to inclusive growth in Côte d'Ivoire. A new finding is the non-linear relationship between inclusive growth and household final consumption expenditure.

Inclusive growth is the way to achieve sustainable development, because it means that almost everyone will get on board the development ship. Achieving this objective in developing countries, particularly in Côte d'Ivoire, will not be an easy task. It requires unity, discipline and dedication on the part of every Ivorian. Sincerely, the realization of an inclusive growth is not easy to achieve if one believes the definition. This is why Côte d'Ivoire has not yet achieved it. The country must reinforce its industrial growth policy to continue to reap the benefits of inclusive growth and the reduction of inequalities.

REFERENCES

- Abbe, H. (2019), "Qualités institutionnelles, chômage et croissance inclusive dans l'UEMOA", *Revue Internationale de Gestion et d'Economie (RIGE)*, 1(7), 125-148.
- Adebola, O.G. (2019), "Disparities in Access to Improved and Unimproved Sources of Drinking Water and Toilet Facilities in Nigeria: A Socioeconomic Dichotomy", *Nigerian Journal of Technological Research*, 14(1), 84.
- Alesina, A. and P. Giuliano (2011), *Preferences for Redistribution*, in: J. Benhabib, A. Bisin, M.O. Jackson (Eds): "Handbook of Social Economics", Vol. 1A, 93-131, North-Holland: The Netherlands.
- Ali, I. and H.H. Son (2007a), "Measuring Inclusive Growth". *Asian Development Review*, 24(1), 11-31.
- Ali, I. and H.H. Son (2007b), "Defining and Measuring Inclusive Growth: Asian Prescriptions", ADB ERD Working Paper Series No. 98.
- Ali, I. and J. Zhuang (2007), "Inclusive Growth toward a Prosperous Asia: Policy Implications", ADB ERD Working Paper Series No. 97.
- Alper, E.A. (2018), "The Relationship of Economic Growth with Consumption, Investment, Unemployment Rates, Saving Rates and Portfolio Investments in The Developing Countries", *Gaziantep University Journal of Social Sciences*, 17(3), 980-987.
- Al-Rasasi, M.A., Y. Alzahrani and M. Alassaf (2021), "On the Causal Relationship between Household Consumption and Economic Growth in Saudi Arabia", *Business and Economic Research*, 11(2), 165-177.
- Amuka, J.I., F.O. Asogwa, C.F. Ezeudeka, R.O. Ugwuanyi and T. Onyechi (2019), "What Drives Inclusive Growth? Evidence from Georgia", *Journal of Economics and Business*, 2(3), 883-890.
- Anand R., S. Mishra and J.S. Peiris (2013), "Inclusive Growth: Measurement and Determinants", IMF Working Paper No. 13/135.
- Anochie, U.C., C.O. Osuji and C.N. Anumudu (2015), "Effect of Gender Inequality on Economic Growth in Nigeria", *International Journal of Current Research*, 7(9), 20778-20783.
- Asongu, S. and S.L. Roux (2016), "Enhancing ICT for Inclusive Human Development in Sub-Saharan Africa", African Governance and Development Institute Working Paper WP/16/029.

- Atkinson, A. (1970), "On the Measurement of Inequality", *Journal of Economic Theory*, 2(3), 244-263.
- Balakrishnan, R., C. Steinberg and M. Syed (2013), "The Elusive Quest for Inclusive Growth: Growth, Poverty, and Inequality in Asia", IMF Working Paper No. 13/152.
- Beegle, K., J. De Weerd, J. Friedman and J. Gibson (2010), "Methods of Household Consumption Measurement through Surveys Experimental Results from Tanzania", The World Bank Policy Research Working Paper Series No. 5501.
- Berg, A., J.D. Ostry and J. Zettelmeyer (2012), "What Makes Growth Sustained?", *Journal of Development Economics*, 98(2), 149-166.
- Biyase, M. and M. Malesa (2019), "Life Expectancy and Economic Growth: Evidence from the Southern African Development Community", *Economia Internazionale/International Economics*, 72(3), 351-366.
- Boar, C. and V. Midrigan (2020), "Efficient Redistribution", NBER Working Paper No. 27622.
- Botchuin, W.C. (2021), "Institutional Factors of Inclusive Growth: Evidence from Côte d'Ivoire", *Journal of Economics and International Finance*, 13(1), 13-23.
- Bourguignon, A., V. Malleret and H. Nørreklit (2001), "Balanced Scorecard versus French Tableau de Bord: Beyond Dispute, a Cultural and Ideological Perspective, Working Papers hal-00597021, HAL SHS Sciences Humaines e Sociales .
- Brown, R.L., J. Durbin and J.M. Evans (1975), "Techniques for Testing Constancy of Regression Relationship over Time", *Journal of the Royal Statistical Society, Series B*, 37(2), 149-192.
- Chow, C.G. (1960), "Tests of Equality Between Sets of Coefficients in Two Linear Regressions", *Econometrica*, 28(3), 591-605.
- Cordemans, N. (2019), "Inclusive Growth: A New Societal Paradigm?", *Economic Review*, 1(Spring), 29-50.
- Dalton, H. (1920), "The Measurement of the Inequality of Incomes", *The Economic Journal*, 30(199), 348-361.
- Dollar, D. and R. Gatti (1999), "Gender Inequality, Income, and Growth: Are Good Times Good for Women?", The Policy Research Report on Gender and Development, Working Paper Series No. 1, World Bank.
- Doumbia, D. (2019), "The Quest for Pro-Poor and Inclusive Growth: The Role of Governance", *Applied Economics*, 51(16), 1762-1783.

- Egbulonu, K.G. and I.S. Eleonu, (2018), "Gender Inequality and Economic Growth in Nigeria (1990–2016)", *International Journal of Gender and Women's Studies*, 6(1), 159-167.
- Felipe, J. (2009), "Inclusive Growth, Full Employment and Structural Change: Implications and Policies for Developing Asia", The Anthem-Asian Development Bank Series, AnthemPress: London, New York, Melbourne, Delhi.
- Gini, C. (1912), *Variabilità e mutabilità (Variability and Mutability)*, Cuppini: Bologna.
- Habito, C. (2009), "Patterns of Inclusive Growth in Developing Asia: Insights from an Enhanced Growth-Poverty Elasticity Analysis", Asian Development Bank Institute Working Paper Series No. 145.
- Hakimian, H. (2013), "La recherche d'une croissance inclusive en Afrique du Nord : une approche comparative", Note économique de la Banque africaine de développement: Tunis.
- Handriyani, R., S. Sahyar, and M. Arwansyah (2018), "Analysis the Effect of Household Consumption Expenditure, Investment and Labor to Economic Growth: A Case in Province of North Sumatra", *Economics Series*, 28(4), 45-54.
- Hussein, K., A. Mukungu and Y. Awel (2018), *Les moteurs de la croissance inclusive en Afrique*, Nations Unies : Commission Economique pour l'Afrique.
- Islam, R. (2014), *Human Capital and Inclusive Growth: The Challenge for Bangladesh*, in: S. Ahmed, M. Alamgir, M.K. Mujeri, A. Rahman (Eds), "Bangladesh Vision 3030 – Framework for Economic Making and Strategy Formation in a Pluralistic Democracy", Bangladesh Institute of Bank Management <<https://www.gbv.de/dms/zbw/1014529166.pdf>>.
- Jayachandran, S. (2014), "Incentives to Teach Badly: After-School Tutoring in Developing Countries", *Journal of Development Economics*, 108(May), 190-205.
- Jouini, N., N. Lustig, A. Moumami and A. Shimeles (2018), "Fiscal Policy, Income Redistribution, and Poverty Reduction: Evidence from Tunisia", *Review of Income and Wealth*, 64(s1), s225-s248.
- Kaat, J., D. Yoko, A. Kristien, S. Pascal, J. Frederic, D. Laurent and C. Vanderhoeft (2012), Final Report: Energy Consumption Survey for Belgian Households, VITO, ICEDD, and FPS Economy, under the authority of EUROSTAT, Brussels: Belgium.
- Kacem, S., L. Abid and S. Ghorbel-Zouari (2019), "Measurement of Inclusive Growth: Evidence from Tunisia", *Economics of Development*, 18(3), 19-33.

- Keho, Y. (2012), “Le rôle des facteurs institutionnels dans le développement financier et économique des pays de l’UEMOA”, *Revue économique et monétaire*, 12, 9-43.
- Khan, A., G. Khan, S. Safdar, S. Munir and Z. Andleeb (2016), “Measurement and Determinants of Inclusive Growth: A Case Study of Pakistan (1990-2012)”, *The Pakistan Development Review*, 55(4), 455-466.
- Klasen, S. (2002), “Low Schooling for Girls, Slower Growth for All? Cross-Country Evidence on the Effect of Gender Inequality in Education on Economic Development”, *The World Bank Economic Review*, 16(3), 345-373.
- Klasen, S. (2010), “Measuring and Monitoring Inclusive Growth: Multiple Definitions, Open Questions, and some Constructive Proposals”, Asian Development Bank Sustainable Development Working Paper Series No. 12.
- Klasen, S. and F. Lamanna (2003), “The Impact of Gender Inequality in Education and Employment on Economic Growth in the Middle East and North Africa”, Background Paper for a World Bank Report on gender in the MENA region, <<https://www.uni-goettingen.de/de/sh/download/d393147d20889b6084364424cfa64150.pdf/klasenlamanna.pdf>>.
- Kolm, S-C. (1966), *Les Choix Financiers et Monétaires Modernes: Théorie et Technique Modernes*, Dunod: Paris.
- Kolm, S-C. (1976), “Inequal Inequalities. I”, *Journal of Economic Theory*, 12(3), 416-442.
- Kouton, J. (2019), “Relationship between Economic Freedom and Inclusive Growth: A Dynamic Panel Analysis for Sub Saharan African Countries”, *Journal of Social and Economic Development*, 21(1), 143-165.
- Kraay, A. (2004), “When is Growth Pro-Poor? Cross-Country Evidence”, IMF Working Paper No. 04/47.
- Kuznets, S. (1955), “Economic Growth and Income Inequality”, *The American Economic Review*, 45(1), 1-28.
- Lachaud, J. (2003), *Dynamique de pauvreté, inégalité et urbanisation au Burkina Faso*, Presses Universitaires de Bordeaux: Pessac.
- Lee, N., P. Sissons and K. Jones (2016), “The Geography of Wage Inequality in British Cities”, *Regional Studies*, 50(10), 1714-1727.
- Lustig, N. (2017), “Fiscal Policy, Income Redistribution and Poverty Reduction in Low and Middle Income Countries”, Center for Global Development Working Paper No. 448.

- McKinley, T. (2010), "Inclusive Growth Criteria and Indicators: An Inclusive Growth Index for Diagnosis of Country Progress", Asian Development Bank Sustainable Development Working Paper Series No. 14.
- Menike, H.A. (2018), "A Literature Review on Population Growth and Economic Development", *International Journal of Humanities Social Sciences and Education*, 5(5), 67-74.
- Mishra, P.K. (2011), "Dynamics of the Relationship between Real Consumption Expenditure and Economic Growth in India", *Indian Journal of Economics and Business*, 10(3), 553-563.
- Ncube, M. (2015), *Inclusive Growth in Africa: Current Performance and Prospects*, in: E. Zedillo, O. Cattaneo, H. Wheeler (Eds), "Africa at a Fork in the Road: Taking off or Disappointment once again?", Yale Center for the Study of Globalization, e-book p. 87, <<https://ycsg.yale.edu/sites/default/files/files/africa.pdf>>.
- Nkamleu, B.G. (2017), "Croissance inclusive : la performance du Djibouti", Série de documents de travail N° 289, Banque africaine de développement : Abidjan, Côte d'Ivoire.
- Nyambe, J.M. and J.N. Kanyeumbo (2015), "Government and Household Expenditure Components, Inflation and their Impact on Economic Growth in Namibia", *European Journal of Business, Economics and Accountancy*, 3(4), 81-86.
- Odozi, J.C. (2012), "Socio Economic Gender Inequality in Nigeria: A Review of Theory and Measurements", Department of agricultural economics, University of Ibadan: Nigeria.
- Ogujiuba, K. and K.S. Alehile (2011), "Inclusive Growth in Nigeria: Policy Issues and Determinant", *International Journal of Social and Economic Research*, 1(1), 71-82.
- Oladotun, A. and N. Phocenah (2019), "Military Expenditure, Institution and Inclusive Growth in South Africa", *Acta Universitatis Danubius. Oeconomica*, 15(5), 142-153.
- Padovano, F., F. Scervini and G. Turati (2020), "Comparing Governments' Efficiency at Supplying Income Redistribution", *Constitutional Political Economy*, 32(1), 68-97.
- Palma, J.G. (2011), *National Inequality in the Era of Globalization: What do Recent Data Tell us?*, in: J. Michie (Ed.), "The Handbook of Globalization", Second Edition Chapter 7, Edward Elgar Publishing.
- Pernia, E. and N. Kakwani (2000), "What is Pro Poor Growth?", *Asian Development Review*, 18(3), 1-16.
- Wesley, E. and F. Peterson (2017), "The Role of Population in Economic Growth", *SAGE Open*, 7(4), <<https://doi.org/10.1177/2158244017736094>>.
- Pigou, A.C. (1912), *Wealth and Welfare*, MacMillan and Company.

- Plotnick, R.D. and R.F. Winters (1984), "A Politico-Economic Theory of Income Redistribution", *The American Political Science Review*, 79(2), 458-473.
- Rauniyar, G. and R. Kanbur (2010), "Inclusive Growth and Inclusive Development: A Review and Synthesis of Asian Development Bank Literature", *Journal of the Asia Pacific Economy* 15(4), 455-469.
- Ravallion, M. and S. Chen (2003), "Measuring Pro-Poor Growth", *Economics Letters*, 78(1), 93-99.
- Ridzuan, A.R., M.I. Md Razak, Z. Ibrahim, A. Halim, M. Noor and E.M. Ahmed (2014), "Household Consumption, Domestic Investment, Government Expenditure and Economic Growth: New Evidence from Malaysia", *Journal of Scientific Research and Reports*, 3(17), 2373-2381.
- Scervini, F. (2012), "Empirics of the Median Voter: Democracy, Redistribution and the Role of the Middle Class", *Journal of Economic Inequality*, 10(4), 529-550.
- Sembène, D. (2015), "Poverty, Growth and Inequality in sub-Saharan Africa: Did the Walk Match the Talk under PRSP Approach?", IMF Working Paper 15/122.
- Sen, A. (1973), *On Economic Inequality*, Clarendon Press: Oxford, UK.
- Smith, A. (1776), *Recherches sur la nature et les causes de la richesse des nations*, GF Flammarion: Paris.
- Sturm, J-E. and J. De Haan (2015), "Income Inequality, Capitalism, and Ethno Linguistic Fractionalization", *American Economic Review*, 105(5), 593-597.
- Tandon, A. and J. Zhuang (2007), "Inclusiveness of Economic Growth in the People's Republic of China: What Do Population Health Outcomes Tell Us?", ADB ERD Policy Brief Series No. 47.
- Theil, H. (1979), "World Income Inequality and its Components", *Economics Letters*, 2(1), 99-102.
- Thorbecke, E. (2014), "The Structural Anatomy and Institutional Architecture of Inclusive Growth in Sub-Saharan Africa", WIDER Working Paper Series 2014/041.
- Vellala, P.S., M.K. Madala and U. Chattopadhyay (2014), "A Theoretical Model for Inclusive Economic Growth in Indian Context", *International Journal of Humanities and Social Science*, 4(13), 229-235.
- Venkataraman, L. (2013), "Growth, Inequality and Social Development in India: Is Inclusive Growth Possible?", *European Journal of Development Research*, 25(2), 329-330.

World Bank (2020), World Bank Development Indicators, <<https://datatopics.worldbank.org/world-development-indicators/>>.

Zwane, T., M. Biyase and T. Binda (2021), "Institutions and Technical Efficiency: A Stochastic Frontier Approach", *Economia Internazionale / International Economics*, 74(4), 415-438.

