

Globalization and Income Inequality; A Panel Data Analysis of 37 Developing Countries in Africa

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Abstract

Shortage of economic facts on the effects of globalization and income inequality in Africa has made it difficult for effective economic policy response to the problem of inequalities in the continent. Against this backdrop, this paper will examine the nexus between Globalization and Income Inequality in Africa over the period 44years (1970-2014). Data from the Standardized World Income Inequality Data (SWIID) of (Soltz, 2016), KOF globalization index and variables from World Development Indicators (WDI) will be analyzed through Ordinary Least Square (OLS) and Random effect model for a panel of 37 developing countries in Africa. The paper is expected to validate the Kuznet's U hypothesis of relationship between income level and income inequality in Africa, and give more insight on the relationship between globalization and income inequality among African countries

Keyword: *Globalization, Income Inequality, Gini Coefficient, Africa*

JEL: C23, F62, O55

1.0.Introduction

The effects of globalization on income inequality had been a source of debate to researchers and policymakers. The background of the debate on globalization; the gainer or losers within and between countries of the worlds are utmost concerns for economists (Ogunyomi *et al.*, 2013). Globalization was generally perceived as a tool for promoting global economic growth, while Stiglitz, (2003) and Mahnoor and Kashif, (2016) criticized it for growing income inequality, difficulty in competition, social and environmental degradation especially in developing countries like Africa. Globalization is a multidimensional phenomenon that captures all aspect of social, political, economic and cultural domain. It is a comprehensive process of economic integration which develops international mobility of national resources and increases interdependency of national economic (OECD, 2005).

Many scholars in the last decade had reported a positive relationship between globalization and income inequality (Bergh and Nilsson 2010; Jaumotte *et al.*, 2013; Dabla-Norris *et al.*, 2015; Gozgor and Ranjan 2017; Dorn *et al.*, 2018), especially in the emerging countries. These positive effects of globalization are vividly seen among the Asia Tigers like Japan, China, Singapore and South Korea. The remarkable growth of these countries of East Asia rose per capital income by eightfold and raised hundreds of millions out of poverty (OECD, 2005). However, most African countries that had embraced globalization had resulted to structural economic divergence by widening income inequality, collapsed of infant industries because of the dependency on international theory and less of economic convergence informed by technology transfer, increased market size and relative employment generation (Ogunyomi *et al.*, 2005). The actual benefit of globalization to Africa countries face more uncertainty due to serious data concerns, which are more likely to be subject of measurement errors and lack of data records in the time past (Deaton, 2005; Jenkins, 2015). These lacks of economic fact on the effects of globalization and income inequality in Africa has make it difficult for effective economic policy response to the problem of inequality in the continent. This call for a sound understanding of the key factors that drives the inequality trends. Various factors are likely to play a role, these include globalization, real Gross Domestic Product (GDP), age dependency ratio, human capital, skill biased technological change, economic reforms such as deregulation in financial markets, rolling back the welfare state or reforms of the tax system, the growing role of telecommunication and the mass media, growing regional disparities within countries and many more (Dorn *et al.*, 2018).

This research established the relationship between globalization and income inequality in Africa, using expanded and recently updated data. The impact between globalization and its sub indicators was differentiated on i) market income inequality and ii) net income inequality, i.e. income inequality after taxes and transfers Gini indices taken from Solt's (2016) Standardized World Income Inequality Database ((SWIID7_1). Due to multifaceted nature of globalization, KOF index of globalization such as economic, trade, social and cultural globalization index (Dreher 2006; Dreher *et al.*, 2008), were used to see the effect of each on income inequality in Africa.

The rest of the paper is organized as follows: Section two concisely reviews the relevant literatures on the globalization and income inequality. The third section presents models for estimating the influences of globalization on income inequality along with a description of the data and variables applied in the paper. The results of the models are interpreted in section four. Conclusions and policy considerations are presented in the final section.

2. Methodology

The baseline panel model was estimated following the characteristic model (Park 2017) had utilized, where countries are described by i and 5-year-periods by t as follow:

$$Gini_{it} = \alpha + \beta_1 \ln Y_{it} + \beta_2 (Y_{it})^2 + U_{it} + \varepsilon_{it} \quad (1)$$

Where;

Gini is the Gini index, an indication of income inequality

$\ln Y$ is shorthand for the logarithm of income of per capita GDP, which generally represents the level of economic development.

u_{it} is the between-entity error and ε_{it} is the within-entity error. All variables are included as averages in each of the nine periods ($t = 1, \dots, 9$). A positive sign was assumed for a_1 while a negative sign is predicted for a_1 .

Other explanatory variables were included into the baseline model along with the income variables to better analyze income inequality. The variables included are; country's globalization level, its degree of freedom, human capital index, population and age dependency ratio. Relevant significant control variables are added to equation (2) as shown below;

$$Gini_{it} = \alpha + \beta_1 \ln Y_{it} + \beta_2 (\ln Y_{it})^2 + \beta_3 \ln HCI_{it} + \beta_4 \ln KOFI_{it} + \beta_5 \ln P_{it} + \beta_6 \ln A_{it} + \beta_7 \ln EFI_{it} + U_{it} + \varepsilon_{it} \quad (2)$$

where $\ln HCL$ represent logarithm of human Capital Index, $\ln KOFI$ is the logarithm of KOF globalization index, $\ln P$ is the logarithm of population, $\ln A$ is the logarithm of age dependency ratio and EFI is the logarithm of economic freedom index.

Table 1: List of variable and data sources, based on nine 5-year averaged periods between 1970 and 2014

Variable	Data Source	Definition
Dependent variable		
Gini net	Solt's (2016), (SWIID7_1)	Gini post-tax and transfer
Gini market		Gini pre-tax and transfer
Globalization variables		
Globalization index	Dreher (2006), update KOF 20162016	KOF index of globalization index
Economic globalization index		KOF index of economic globalization index 2016
Trade globalization index		KOF index of trade globalization index 2016
Social globalization index		KOF index of social globalization index 2016
Political globalization index		KOF index of political globalization index 2016
Cultural globalization index		KOF index of cultural globalization index 2016
Covariate variables		
Real Gross Domestic Product	Feenstra <i>et al.</i> , (2015), PWT v9.0	Real Gross Domestic Product, billion USD
Human capital index		Index based on the rate of return to education and average years of schooling
Population		Total population, in million
Age dependency ratio	World Bank (2017), WDI	Age dependency ratio
Economic freedom index	Gwartney <i>et al.</i> , (2015)	Index of economic freedom

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