What Are the Factors Creating Poverty in Africa and Their Alleviations?

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Abstract
The previous poverty studies in Africa emphasized per capita GDP and economic growth to analyze poverty, and results varied across datasets. Unlike that, this study focuses on human poverty through analyzing the role of culture, government, politics, and economy in creating poverty and its reduction in using data sourced from AFDB (1997-2007). The Paper Applied the panel method and other techniques; the study finds that (1) an increase in family size increases poverty substantially while education remains the best mechanism for reducing both poverty and population growth that will enhance the quality of life. (2) The study also reveals that gender inequality and political stability have a considerable impact on human poverty in Africa.
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1. INTRODUCTION

Poverty becomes global phenomena that hastened the adoption of the Millennium Development Goals (MDGs) proposed by the UN and signed by 189 countries in 2000. This millennium summit was consisting of eight goals for improving the lives of the global poorest people by 2015 for the first phase (United Nations, 2000). Global poverty has various magnitude and trends at a different rate (Dhongde & Minoiu, 2013; Chen & Ravallion, 2010; Pinkovskiy & Martin 2010). Although there is a widespread concept of world poverty decreasing estimates over time, many studies reveal the decline rates of poverty considerably varies among poverty studies (Pinkovskiy & Martin 2009; Chen & Ravallion 2010; Dhongde & Minoiu 2013). The common mistakes of poverty studies were the use of GDP per capita and Economic growth. A research concentration on economic growth studies cannot discover the deeply rooted complex issues of poverty that differ substantially across countries and regions (Bergh & Nilsson 2014; Dollar & Kraay, 2004; Bhagwati & Srinivasan 2002). This study uses the Human Poverty Index that comprises different types of poverty as well as other systematic poverty causes to produce more realistic results. Hence, this study focuses on the poverty of Africa and analyzes the role of culture, government, politics, and economy in poverty creation and its reduction.

Economic growth studies, particularly per capita GDP cannot explain poverty trends, and an increase in growth does not represent poverty alleviation because it does not consider how the community shares that growth, specifically in developing countries with the weak institution. When there is no effective institution system of wealth redistribution, the free-market economy becomes a double-edged sword for making some people poor while making others rich in the same society. Gender inequality is a systematic poverty creator through the education system, market opportunity, and wealth ownership. Females are more than male or at least equal in some countries, yet they are culturally and economically fewer wealth owners relative to males. So, they are contributing less to the national economy but consumers that ultimately diminishes per capita income, which is a measure for an economic development indication. The gender inequality of wealth ownership makes most females being consumers and dependent. Eradicating gender inequality in education was part of the long-term strategy of the United Nations Millennium Development Goals. Study shows that gender disparity in primary and secondary education has a negative and significant impact on income (Baliamoune–Lutz and McGillivray, 2015).

Poverty reduction needs a national plan for two parallel strategies: (a) to ensure no new people join the poverty;(b) and at the same time to sustainably reduce the current poverty level. Africa should stop behaving like the Middle East countries where most women are stay-at-home spouses having natural resources working for them. It is a shame culture in Africa that allows such high gender disparity in education and wealth ownership.

Research on 113 countries over 25 years reveals that countries with high-income inequality encounter a high rate of domestic terrorism and violence (Krieger & Meierrieks, 2019), while countries with an effective system of wealth redistribution system associated with fewer acts of violence and terrorism. Poverty is a big weapon of conflict. The high-income inequality existence in developing countries indicates poor public institution conditions.

High-income inequality usually caused by rent-seeking entities, corporatocracy, and weak public institutions that prevail in the environment. Poverty in Africa must be defined differently where a large share of the population is nomad having livestock and living in the traditional way of life, happily. The measuring unit of poverty condition should not be the number of dollars one has in the pocket in each time. The meaning of having enough money is to maximize utility, which means maximizing well-being and happiness.

1.1 What is poverty?

Poverty is easy to understand but hard to define. There are plenty of partial definitions of poverty due to theoretical perspective differences among researchers. An appropriate definition of poverty is a lack of well-being and happiness. The good thing about this definition is that it comprises the four forms of poverty (Absolute, relative, chronic & transient poverty). A poor man is poor for a reason while a rich person is rich for reasons. No one is poor accidentally; it is a consequence of the previous action.[1]

1.2 Sending girls to schools

For Africa to fix its long-stood poverty, it should ensure every girl finished high school. The benefits of sending girls to high schools are that the girls are likely to pursue higher education after high school. Being in an academic life saves girls from early marriage and producing too many kids due to young marriage that increase the family size and poverty magnitude. Therefore, the educated girls become more productive and family size becomes smaller relative to an early married one. Both mechanisms reduce poverty and increase life quality as well as community quality as a result. In countries with a high rate of young marriage, poverty increase substantially. Educating girls is making them independent and escape from poverty while not educating is meant accumulating people for joining disadvantaged groups. Gender disparity reduction in primary and secondary education has positive effects on income per capita GDP (Baliamoune–Lutz and McGillivray 2015).[2]

2. AFRICA ECONOMIC OVERVIEW

The population of Africa is increasing in all regions, women fertility rate still high, with an average of 5.4 kids in 2005–2010, declined from 6.5 children per woman in 1950–1955, and by 2060 the Africa will have 2.8 billion population. Africa is marked as the world's poorest inhabited place, but most African countries will be expected to achieve "Middle Income" Status by 2025 if present growth rates remain (World Bank 2013). In Africa, unemployment rate is still high and workforce participation of youth and woman remain low, where vulnerable employment and underemployment is rampant in sub-Sahara (World Economic & Social Outlook 2016). Fundamental elements making Africa poor are poor governance, low economic productivity, high fertility rate, poor quality education, illiteracy, gender inequality in education and wealth ownership.

In Africa, high rate of underemployment deteriorates the poverty condition. Many skilled people are working in low-skilled jobs and receiving low wage that cannot cover workers' economic needs leading underutilized workers to live in poverty. For instance, in Cameroon, for example, is estimated to stand at 75.8% of total employment, while in Ghana, more than one-third are underutilized with a low unemployment rate of 5.2 percent. Approximately 37% of the globe's extreme working poor resides in sub-Saharan Africa, where 34.3% of the region's employed people live below the poverty threshold of US$1.90 per day and 64% on less than US$3.10 a day. Northern Africa's unemployment rate remains the highest of all regions at 12.1% the decreasing from 12.5% in 2014. labor force participation for women and youth remains constantly low in Northern Africa, at 22.5% and 31.9%, respectively in 2015. Vulnerable employment remains prevalent in sub-Saharan Africa at almost 70% of total employed, beating the global average of 46.3%. And in Northern Africa, over one third of workers are in vulnerable employment. In sub-Saharan Africa, the unemployment rate increased slightly to 7.4% in 2015, from 7.3% in 2014, ILO (2016).

3. DATA

Different datasets from various sources were applied in the paper and data were organized and used as following: first dataset is panel data from AFDB in period of 1997-to-2007 and it was used for basic model of human poverty. The analysis is to illustrate the major factors influence on Human Poverty and their prospect magnitude effects. second dataset is panel data from AFDB (1997-2007), and this data is applied for gender inequality and governance impacts on poverty.

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[1] Precisely saying, poverty is a result of bad human intelligence. for instance, corruption, conflicts, the disparity of wealth ownership and education, and poor education quality are all consequences of bad human intelligence.

[2] Theoretical education makes Africa poor. From primary schools to higher education must be practical study with a concentration on science courses (math, physics, chemistry, and biology). Practical education would transform Africa from where it is now to a better position. Africa should also have a plan to tackle its protracted Brain-Drain Problem to make Africa a better place for Indigenous people. Africa losses its best-educated people to the rest of the world.

4. METHODOLOGY

This study analyzes the major human poverty creating factors in Africa and how to alleviate it using panel method techniques and other several analytical tools. Dependent variable is Human Poverty Index, and it is better measure for poverty studies because it comprises three essential elements. Human Poverty Index shows the standard of living in a country, introduced by UN 1997 and it is calculated from three factors (1) Adult illiteracy rate, (2) Probability at birth of not surviving to age 40, and (3) Unweighted average of population without sustainable access to an improved water source and children who are underweight for their age. The basic model is as following.

$$y_{ijt} = \gamma_0 + \beta_1 x1_{ijt} + \beta_2 x2_{ijt} + \beta_3 x3_{ijt} + \beta_4 x4_{ijt} + \beta_5 x5_{ijt} + u_{ijt} \quad (1)$$

Where Y denotes human poverty index of country i in region j at time t. The $X1$ represent population growth rate, $X2$ is unemployment rate, $X3$ is gross capital formation, $X4$ stands for education and $X5$ denotes controls. And u is unobservable term and $\gamma\ is\ constant$. To ensure the robustness of estimates, various analytical techniques were applied in the full sample and throughout study. Column 1 to 3 of table 1, the study finds population growth increases human poverty level substantially in full sample. Classically, Population growth increases poverty because economic growth and population growth have negative relationship. But reversely, poverty itself increases population growth through early age marriage of girls for better life seeking reason and this is why this study has chosen Human Poverty Index (HPI) instead of just poverty.

Population growth increases human poverty around 16 percent and unemployment increase poverty about 7 percent. High rate of population growth in Africa are pushed by high rate of infant mortality, marrying multiple wives, cultural boy preference, early marriage, illiteracy, conflicts, and poverty itself. [1] Capital formation is an investment made by private and public in creation of new business activities in economy that generate jobs and pay wages to workers. According to result, capital formation reduces the poverty around 18 percent. Capital formation might reduce poverty in several forms include but not limited to job creation, tax and stimulating economy. For public capital formation, government should first analyze type of unemployed and their skills to undertake projects that create suitable jobs. Same to apply for international investors, attract and encourage multinational enterprises engage in business activities that your people can take full benefits of employment.

Table 1: Basic Model

Variables	(1)	(2)
Population Growth	0.163***	0.163***
	(0.0426)	(0.0426)
Unemployment Rate	0.0709**	0.0709**
	(0.0285)	(0.0285)
Capital Formation	-0.181***	-0.181***
	(0.0634)	(0.0634)
education	-0.605***	-0.605***
	(0.165)	(0.165)
Gender Inequality	0.364*	0.364**
Political Stability	-0.511***	-0.511***
R-squared	0.784	
Region	Yes	Yes
Time	Yes	Yes

- Significance Level, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

The education indicates large negative and three-star significant relationship with human poverty, which shows that education reduce human poverty (-60) percent, on average. Let us say it differently, Education eradicates human poverty at rate of 60 percent, regionally. The reasons behind huge coefficient of education are that education is the best weapon to eradicate poverty and education has multi-dimensional impacts on poverty. education has effects on poverty through reducing population growth because long duration of academic life leads to late age marriage diminishing number of children to be produced. Producing many kids itself causes high rate of infant mortality via low hygiene and high rate of infant mortality create high rate of woman fertility rate for maximization number of babies survive. Educated people have higher saving rate than uneducated one that forms

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[1] If governments can provide free public schools, introducing high school completion as minimum requirement for urban girls could improve life quality. Studies show that girl's early age marriage take place before high school age and girls are very likely to pursue higher education they complete if high schools. After obtaining university degree, they attain intellectual maturity becoming very selective in marriage, ceteris paribus.

gross capital formation and create jobs in alleviating poverty level through creating employment opportunity and reducing unemployment rate. Good quality education also reduces infant mortality rate through healthcare system and building up couple's confidence in shaping family size. [1]

$$y_{ijt} = \gamma_0 + \beta_1 GI_{ijt} + \beta_2 PS_{ijt} + \beta_3 Cs_{ijt} + u_{it} \qquad (2)$$

Where Y is human poverty index, GI represents gender inequality of country i in region j at time t. PS represents Political Stability while Cs represents control variables and u is error term.

Table 2: Gender Inequality and Governance

VARIABLES	Coef.	Std. Error	Coef.	Std. Error
Gender Inequality	0.364*	0.02	0.364**	0.15
Political Stability	-0.511***	0.0872	-0.511***	0.0768
R-squared	0.544			
Region FE	yes			yes
Time FE	yes			yes

Note: entire the study, Gender Inequality means the inequality between female and male in job market, wealth ownership, and education. Political Stability, is one of governance indicator that shows country's Political Stability and Absence of Violence/Terrorism.

Wealth ownership inequality between gender is systematic economic destruction. The result shows that ownership inequality increase human poverty at rate of 36 percent. Population proportion of female is higher than male but wealth ownership of male including employment opportunity triples times more than female, it is obvious self-sabotaging culture. After this happens, the resources of female are wasted or underutilized because their economic contribution is negligible, but they remain big liability economically (dependents). As result, they hugely reduce the economic development indicators (Per Capita GDP). Whenever dependents people become more than independent people, then poverty starts prevailing. The political stability and absence of violence have negative and significant correlation to human poverty, it decreases about (-51) percent. Political stability makes life easier through accessibility of socioeconomic factors and tranquility. Increasing in political stability reduces poverty because it builds current and potential investor's confidence to invest in the country and no violence costs. It gives chances to everyone to explore opportunities and study that would improve life.[2] The terror attacks and other types of wars destroy wealth and lives of important people who may be only source of income for many dependent people and causing these vulnerable people to become poor.

$$y_{ijt} = \gamma_0 + \beta_1 GI * Pop_{ijt} + \beta_2 Edu * Cap_{ijt} + u_{it} \qquad (3)$$

Dependent variable (y) is human poverty, $GI * Pop$ is interaction between Gender Inequality and Population Growth, $Edu * Cap$ denotes education's interaction with capital formation and u_{it} is error term where γ (gamma) is constant term. The researchers use numerous techniques to analyze the relationship between explanatory and explained variable to see main effects. But, in real life, assessing only the main effects are inadequate because some studies are too complex. However, explanatory variables might interact with each other and create third variable. Interaction between independent variables show the effect of third variable on outcome.

Table 3: Interaction

independent variable	(1)	(2)
Gender Inequality x Population	0.118***	0.118***
	(0.0171)	(0.0216)
Education x Capital Formation	-0.0596***	-0.0596***
	(0.0167)	(0.0202)
R-squared		0.767

Note: this interaction between independent variables shows how they impact on poverty when they interact. We

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[1] High rate of baby mortality induces couples to producing many kids to mitigate risks of mortality, thus education increases survival probability (via better health care and nutrition) so that couples have no worries about mortality and consequently choose qualities over quantities. Further, educated parents are very likely to have family plan because they want to work so as to live in livable life standard which finally affects the quality of life, family size, community, and economy at large.

[2] Political instability induces parents to maximize their children and marriage. For instance, many fathers try their best to have more boys marrying many wives for two reasons;(1) boys carry ancestral lineage forward, so fathers exert themselves to maximize likelihood of boys' survival from protracted conflicts. (2) culturally, unlike the westerners, children are insurance for their parents, children take care of their parents when parents got old. So, more children mean luxury life standard for parents. These two factors inflate the fertility rate and consequently the population. When family size become large, life standard diminishes, and life struggle starts. If children do not get their fundamental rights from parents, children become more aggressive due to hardship and struggle of life. When this happens, things become complex. Girls get marry at very young age for the sake of life betterment and their fertility rate increases leading to poor hygiene and malnutrition which causes a surge in mortality rate, while boys participate conflicts, economic costs of violence dramatically increase, and then human poverty becomes rampant.

reveal that each of them is independent and has impact on poverty, but here is to show what happens when they interact and their influence on poverty.

Interaction between gender inequality and population growth rate increase human poverty about 11.8 percent while capital formation's interaction with education reduce human poverty is about 6 percent. Intuitively, if two different situations coincide, they create other situation or worsen the existing condition, and this is what interaction is about.

5. CONCLUSION AND RECOMMENDATION

Most previous poverty studies in Africa concentrated on per capita GDP and economic growth to analyze poverty and results varied across datasets. This study focuses on human poverty and analyzes the role of culture, government, politics, and economy in creating poverty and its reduction using panel method and other several techniques. The result finds that (1) a family size increases poverty substantially and education remains the best mechanism for reducing both poverty and population growth that will enhance quality of life. (2) The study also reveals that gender inequality, and political stability have huge impact on human poverty in Africa. (3) finally, job creation from FDI inflow to Africa is depends on hosting country's policy, local labor quality, industry, and investing foreign firm.

As many countries consider eighteen years old and older girls marriageable age, African countries should set high school completion as prerequisite for urban girl's marriage. After completion of high school, girls are intellectually matured, economically more productive and most importantly, very likely to pursue higher education. Comprehensive research centers for social science research and practical quality education system would transform Africa from where it is residing now to industrialized continent. Attracting international investments could help Africa in job creation, if countries have a plan for inward FDI to take full benefits it brings. Technically, before encouraging the international investors, it is an important to study skill type of your unemployed people to invite right companies that will generate jobs your people can perform. [1]

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[1] In Africa, Countries have different level of poverty caused by multiple factors, therefore, the influences of these factors on poverty may varies across countries. Research on Poverty should be household or/and individual level studies for a particular location (e.g., village, district, city, and province), and set up poverty threshold for each place, accordingly and periodically. The sad reality is, the most of research on poverty in Africa conducted by international organizations (e.g., WB & IMF) and even many countries have no poverty studies center. On other hand, in developing countries, there are public and private research centers for poverty and ant-poverty studies. When the poverty studies are on household or/and individual level is more the closer to the reality in ground and as a result the research outcome become more valid and realistic.

Variable	Description
Dependent	
Human Poverty Index	The HPI shows the standard of living in a country, introduced by UN 1997
Independent	
Population	Annual population growth rate
Unemployment	Unemployment rate, total (% of total labor force).
Capital Formation	Gross fixed capital formation (% GDP). It is a measure of gross net investment (acquisitions minus disposals) in fixed capital assets by enterprises, government, and households within the domestic economy, during an accounting period of time.
Education	Literacy rate, Average Education
Income	Per Capita Gross Domestic Products (GDP)
Political Stability	Political Stability and Absence of Violence/Terrorism
Vice & Accountability	Voice and Accountability-Governance indicator
Gender	Gender Inequality Index, value (GII)

Source: (a) Socio Economic Database of _Africa_ 1960-2050, AfDB. (b) African Development Bank, Food Security, December 2011. (c) UN, 1997.