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Mixed Development Messages from Africa: Macro-Economic Performance versus Poverty Models' Tests Results

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Abstract: This research is an attempt to explore what appears to be a contradictory development message coming out of Africa. On the one hand, several African nations are facing structural difficulties such as predatory regimes, political violence, civil wars, numerous diseases, and extreme poverty. An example of such countries is the Democratic Republic of Congo where what the United Nations called "Africa World War I" has caused the worst humanitarian disaster since World War II. On the other hand, the fastest growing economies are in Africa. An example is again the DR Congo, which, for the first fifteen years of the 21st century, has recorded growth rates higher than the average growth rates of all continents. The paper ends with one recommendation. With the exception of humanitarian aid, international institutions and Western governments should not provide financial assistance to African nations. Instead, a meaningful help should target institutional reforms in the political, legal and economic environments. Such reforms would give Africans a better chance to have legitimate, reliable and representative governments that formulate public policies that serve the interests of their people.

Key words: developing country; economic development; growth; least developed country

JEL codes: O1, O2, O4

1. Introduction

A case made by a small but growing number of researchers sometimes called "Afro-optimists" (by contrast to "Afro-pessimists") suggests that positive signs of Africa's economic turnaround are pointing to the horizon (Taylor, 2012). For example, in his book titled "Africa Rising", Mahajan (2009) advanced the idea that Africa was on the verge of becoming the new Asia. The basis for this idea is the proposition historically proven in developed countries that the middle class is the driving force behind economic growth (Kharas, 2010; Mpoyi, 2017). As the continent's middle class rapidly expands, Mahajan sees promising economic future for Africa. On their part, Smith and Lamble (2011) also suggested that the bourgeoning middle class was turning Africa from the hopeless continent to the hopeful continent.

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Afro-optimists offer an alternative explanation in support of the likelihood of a bright future for Africa. Their argument lies in the relative comparative advantage views and the neo-liberal rule of moving investments from high labor-cost countries to low cost ones. African countries are well endowed in natural resources, younger populations, sizable diaspora remittances, spending on basic infrastructures, market saturation in other regions of the world. Using Africa's comparative advantage, and the neo-liberal rule of moving investments from high labor-cost economies to cheap labor countries, Shrestha, McKinley-Floyd, and Mtwige (2008), and Bakare (2014) see African countries taking the lead in global growth in the twenty-first century. There are several other positive voices about the future of Africa. These include articles such as "Telling Africa's Untold Stories", "Africa Begins to Rise above Aid" (Gathigah, 2012). In its recent publication called "This is Africa", Financial Times magazine has been providing information that shows that the economic outlook for the continent is much brighter than was expected not long ago.

Africans themselves are changing their attitudes toward the economic development of their countries. They are now hailing the progress that is taking place on the continent. To underscore Africa's noticeable accomplishments during the first decade of the 21st century, Ibrahim Mayaki, the CEO of New Partnership for Africa's Development (NEPAD), said "… we cannot keep on offering a negative image of Africa …" (Essoungou, 2011). A survey conducted by both Gallup International and BVA (a French polling institution) revealed the optimism that Africans have about their economies (Agence Ecofin, 2011). In the survey, 51,000 respondents from 51 countries were asked to give their opinion about their country's economic prospects. Africans were the most optimistic (68%), compared to Asians (35%), North Americans (18%), and Western Europeans (7%).

Nonetheless, Africa is still largely viewed as a continent of political instability, uprisings and civil wars that are causing extreme poverty, refugee crises, widespread diseases and other humanitarian disasters (Muuka, Harrison, & McCoy, 1998; Mpoyi, Festervand, & Sokoya, 2006). The purpose of this research is to examine two conflicting messages coming from Africa. The negative message is the image that depicts Africa as an economically backward continent that has failed economic prosperity models' tests. The positive message is the rising optimism about Africa's future, largely supported by remarkable economic performance. The paper will in part use the case of the Democratic Republic of the Congo (where economic prosperity models were tested) to highlight and make sense of these apparent mixed economic signals from the African continent.

2. Economic Development: Conceptual Framework

Nations' economic progress has been extensively studied. This paper's intent is not to conduct an exhaustive literature review of economic development theories. To address their unique concern, the authors of this research have chosen two of these theories, for the following reason. Development is a multidimensional phenomenon whose content depends on political assumptions made in research (e.g., conservative versus liberal), the level of analysis (individual versus institutional, or organizational versus societal), and the choice of measurable indicators (such as growth versus quality of life) (Jaffee, 1988). As such, scholars have the latitude to organize their research around certain dimensions and leave out others, depending on their particular aim. The theories discussed below have identified key economic development factors subsequently integrated into four prosperity models specifically used to test Africa's ability (or lack thereof) to eradicate poverty and succeed in improving economic performance.

2.1 Theoretical Background

The two theories that this research focuses on are "Economic Convergence", and "Six Killer Applications". The economic convergence theory is well established and has a strong empirical support. The six killer applications theory is more recent, but it was included in this paper because it makes a compelling case for why Western democracies achieved economic dominance in the world.

2.1.1 The Economic Convergence Theory

The economic convergence theory proposes that in any long period, the gap in economic growth across countries tends to close. This proposition is based on the catch-up hypothesis, which asserts that being backward carries a potential for rapid advance (Abramovitz, 1986). Rapid advance will occur because rich countries' superiority in technology provides poor countries with a target to emulate, and this should arguably result in higher growth rates (Nelson, 1991). Technological backwardness presents therefore an opportunity for faster modernization. Numerous studies have empirically supported the catch-up hypothesis (e.g., Richeto, 1988; Dowrick & Nguyen, 1989; Nelson, 1991; Capolupo, 1998; Lusigi, Piesse & Thirtle, 1998; Nahar & Inder, 2002).

The following is a summary of how economic convergence has taken place. For the century leading up to World War II, the United States achieved significantly high economic growth rates (Abramovitz, 1986; Richeto, 1988). A few decades after the war, technology, productivity and per capita incomes of Western Europe and Japan converged toward those of the United States (Dowrick & Nguyen, 1989). Then the economies of newly industrialized nations (e.g., some Eastern European and Eastern Asian countries) grew faster and their economies caught up. Currently, emerging economies of Asia (particularly China) and Latin America are recording unprecedented growth rates. Although Africa is still far behind in terms of GDP and per capita incomes, some have speculated that the continent's turn to catch up was on the horizon (Mahajan, 2009; Mpoyi, 2017). For Shrestha, McKinley-Floyd and Mtwige (2008), the idea that Africa is about to start to rise makes sense because with its vital resource potentials and its cheap labor, Africa will undoubtedly prove to be the final frontier of globalization and global economy.

To begin to rise however, certain conditions are to be met. Economic convergence scholars have noted that some backward countries tended to catch up while others did not (this is referred to as conditional convergence). This is because for convergence to occur, two key conditions must exist, namely large technological gap, and enlarged social capabilities (Abramovitz, 1986; Nelson, 1991). There is no doubt that there is a wide technological gap between African countries and advanced nations (Mpoyi, 2017). Therefore, to understand whether African economies can catch up in the next few decades, one needs to look at the second condition, enlarged social capabilities, and examine where African nations stand in regard to this condition.

Convergence theorists defined social capabilities as tenacious societal characteristics (e.g., Abramovitz, 1986). Societal characteristics include such factors as political, legal and economic institutions, and education system (Nelson, 1991; Mpoyi, 2017). Political institutions are enlarged when the political system is democracy. A democratic political system is legitimate because it leads to a government that is representative of the will of the citizens. In turn, as it is accountable to the people that it represents, the government is likely to be reliable in its approach to formulating sound public policies (Mpoyi, Festervand, & Sokoya, 2006).

Legal institutions are enlarged when independent courts (little to no government interference) protect citizens and their rights to own property. With the guarantee that they are free to organize and manage the property they possess the way they want, people with entrepreneurial capabilities will start and run business activities that create both jobs and wealth. Last, economic institutions are enlarged when the production of goods and services is organized according to market mechanisms. Free market economy constitutes the best system of resource allocation because of its characteristics. Market economy is characterized by less government intervention, more investments, opening up of a nation to international trade, and emergence of a new class of managers trained in large-scale production, distribution and finance (Abramovitz, 1986; Dowrick & Nguyen, 1989; Morrison, 1993).

Besides institutions, social capabilities also include education system. Education system is enlarged when investments in schooling at all levels result in a nation's ability to both generate new knowledge domestically, and apply domestic knowledge as well as knowledge generated abroad (Lusigi, Piesse, & Thirtle, 1998). As the diffusion of knowledge is directly related to long-term economic growth, an effective education system is essential if a backward country is to converge by raising its levels of technology, productivity and per capita income toward those of developed economies (Mpoyi, 2017).

A technologically backward nation that has been able to advance (or enlarge) its political, legal and economic institutions, and its education system, is in a position to progress faster and catch up. This is the main argument made by the economic convergence theory.

2.1.2 The "Six Killer Applications" Theory

The second theory presented in this research is still in its infancy, but it has made its way into the paper because of the explanatory power of the factors it uses to explain why Western nations dominate world economy. In his book entitled "Civilization: The West and the Rest", Niall Ferguson (2011) tackled the question of why Western democracies achieved economic preeminence in the world. In his theory, Ferguson identified what he calls the "six killer applications" that the rest of the world lacked, but that enabled the West to become an economic superpower. For him, over a half millennium, Western economies achieved an unstoppable economic expansion because they came to excel in the following six social developments: competition, science, private property rights, medicine, consumerism, and work ethic. Furthermore, Ferguson attributed the economic success of non-Western nations to their ability to master those social developments. The following presentation of the six killer apps (Ferguson prefers to refer to applications as apps) is mostly based on a "Summary and Study Guide" from BookRags.com.

The first killer app is competition. In the course of the period that began around 1500, the West, that is, Europe and later its colonies and settlements, forged ahead of the rest, primarily because of competition among several small and politically fragmented states. The competition to get trade routes and wrestle them from the control of other countries resulted in the emergence of an age of exploration, navigation, commerce, conquest and colonization. Many small nations could compete with one another for wealth and influence. Within nations, various groups (cities, corporations) were also competing with each other for the same reason. Such competition did not happen in civilizations with a single ruling class that dominated a great and enormous landmass.

The second killer app is science. Because it exceeded in scientific knowledge, thus largely creating modern science, the West was able to gain military and economic dominance over the rest of the world. The third killer app is private property rights and the resulting rule of law and representative government. In some sense, this social development led to Western democracies with governments that were broadly responsive to the needs and interests of citizens and that protected their property so that individuals and groups could use what they earned or bought to create jobs and wealth.

The fourth killer app is medicine. Modern medicine significantly extended lifespans and cured a great many diseases. This allowed the West to expand its population, its workforce, and therefore its wealth. The fifth killer app is consumerism. Wealth, jobs, production and trade resulted in purchasing power for citizens to buy and consume enormous quantities of goods. The sixth killer app is work ethic. Work ethic, which grew out of Protestant Christianity, was particularly powerful in motivating individuals in the West to work hard in order to achieve personal success.

Because they have identified key factors that explain why nations' progress occurs, both economic convergence and the six killer apps provide a framework that can contribute to the design of economic development models. Perhaps unknowingly, the authors of prosperity models for Africa presented below have integrated development factors addressed in either the economic convergence theory and/or the six killer apps theory.

2.2 Economic Prosperity Models for Africa

Efforts to alleviate poverty and improve living standards in low-income countries have resulted in a number of economic prosperity models specifically targeting poverty in Africa. This study will focus on the following four models: Sachs' model, Collier's model, Acemoglu and Robinson's model, and NEPAD's model. These models were tested in the Democratic Republic of the Congo, and the test results will be provided later in the paper.

2.2.1 Sachs' Model

As a researcher interested in African development, Sachs studied the determinants of chronic poverty in Africa. These determinants are extensively explained in his book, "The End of Poverty: Economic Possibilities for our Time" (Sachs, 2005). According to him, several factors impoverish African countries and impede their prosperity efforts. The main factors that contribute to poverty and lack of economic progress include corruption of leaders, harsh colonial legacy (economic dependence on commodities for export), burden of infectious diseases (e.g., malaria, HIV/AIDS, tuberculosis), and ecological and geographic crisis (e.g., rural isolation, lack of navigable rivers, and drought).

2.2.2 Collier's Model

Collier is an Oxford University professor that was also the Director of the Centre for the Study of African Economies. He wrote a book titled "The Bottom Billion: Why the Poorest Countries are Failing and What can be Done About it?" (2007). Collier argued that African countries are confronted with five factors that undermine their ability to progress and achieve satisfactory prosperity. These factors are conflicts within and between nations, reliance on natural resources, being landlocked between bad neighbors, bad governance, and marginalization of African nations in the global economy.

2.2.3 Acemoglu and Robinson's Model

Acemoglu and Robinson (2012) attempted to provide the reasons why nations succeed or fail to achieve economic prosperity. In their 2012 book, "Why Nations Fail: The Origins of Power, Prosperity, and Poverty", Acemoglu and Robinson asserted that economic prosperity of a nation was determined by three factors, economic institutions, political institutions, and the role of the state in enforcing law and order. Economic institutions determines the rules that affect how a nation's economy works. For them, inclusive economic institutions lead to prosperity because they encourage the participation by the great mass of people in economic activities and therefore motivate them to achieve success. To the contrary, extractive economic institutions impede prosperity as they are designed to extract incomes and wealth from one subset of society (the vast majority of people) to benefit a different subset (the ruling elite).

Political institutions are comprised of actors that either facilitate inclusive economic institutions that create jobs and wealth, or put in place extractive economic institutions that constitute major obstacles to prosperity through predatory practices. Acemoglu and Robinson's third factor is the role of the state in enforcing law and order. According to them, a centralized state that enforces law and order encourages and regulates economic activity, whereas a state that fails in its centralizing role will lead to chaos. Acemoglu and Robinson's model suggests therefore that political institutions that facilitates inclusive economic institutions in a state that enforces law and order will create economic prosperity.

2.2.4 NEPAD's Model

NEPAD is an acronym for "New Partnership for Africa's Development". Designed in Africa by Africans, NEPAD was a development project adopted in 2001 by several African Union (AU) heads of state. In their 2005 book entitled "NEPAD and the African Renaissance", Venter and Neuland offer a full and comprehensive presentation of the essence of the NEPAD project. Venter and Neuland argued that poverty in Africa could be explained by a number of structural problems. Specifically, the factors that hindered economic growth in Africa included conflicts, diseases, hunger, poor infrastructures, lack of regional integration, lack of democracy and good governance, dependency on foreign aid, and human capacity constraints. To reduce poverty, the project has targeted the millennial objectives previously identified by Sachs and, in addition, has insisted on the necessity of regional and global partnership.

The four economic prosperity models depict quite well the factors that explain why African nations are very poor. These models have identified structural impediments to prosperity discussed in the economic theories presented above. Both the economic convergence theory and the six killer apps theory offer appropriate conceptual foundations that African economists and decision makers can draw upon to formulate good public policies aimed at reducing poverty and start the economic catch up process.

3. Africa's Economic Standing in the World

Africa is a continent plagued by persistent crises such as wars, civil unrests, refugees and internally displaced people, widespread diseases, rampant corruption and bad governance (i.e., kleptocracy or predatory system of governance whereby political leaders are looting their own country). The direct result of these problems is extreme poverty. This section will discuss the place of Africa in the world based on three economic metrics, gross domestic product (GDP), per capita income, and GDP growth rates.

3.1 Gross Domestic Product (GDP)

In 2015, the United Nations Conference on Trade and Development (www.unctad.org) estimated that Africa accounted for 16.12% of world population (1.19 out of 7.35 billions). However, for that year, the combined GDP of all African economies represented only 3.06% of global economic output (2.27 out of 74.18 trillion dollars). Interestingly, 40 years earlier (in 1975), Africa's share of world GDP was higher and represented 3.84% (Table 1).

As can be seen in Table 1, African economies were at the bottom of the developing world. Asia, which includes China, had the largest economy. Even though it has a little over half of Africa's population, developing economies of America (which include Brazil and Mexico) had a total GDP of more twice that of Africa in 2015. Oceania, whose population was less 1% of the world, is comprised of small islands located in South Pacific Ocean. For that reason, comparing Africa to Oceania would not be meaningful.

Table 1 Gross Domestic Product (US Dollars at Current Prices)

Groups of economies	1975		1995		2015	
	$ billions	%	$ billions	%	$ billions	%
Developed economies	4,603	69.42	24,434	78.74	43,189	58.22
Transition economies	722	10.89	544	1.75	1,944	2.62
Developing economies	1,306	19.69	6,055	19.51	29,044	39.16
Developing by region:						
- Asia	649	9.79	3,581	11.54	21,432	28.89
- America	397	5.99	1,880	6.06	5,300	7.15
- Africa	255	3.84	576	1.85	2,268	3.06
- Oceania	5	0.07	19	0.06	44	0.06
Total world	6,631	100.00	31,033	100.00	74,177	100.00

Source: Data compiled from UNCTAD online database.

3.2 Per Capita Income

When looking at how much income a person earned in 2015, the poverty level of Africans was shocking. At less than half of developing economies' per capita income, the average revenue that an African was making was by far the lowest in the world.

Table 2 Gross Domestic Product Per Capita (in US Dollars at Current Prices)

Groups of economies	1975	1995	2015
Developed economies	5,554	25,771	41,285
Transition economies	2,604	1,799	6,389
Developing economies	442	1,350	4,842
Developing by region:			
- Asia	293	1,093	5,135
- America	1,231	3,895	8,421
- Africa	614	800	1,914
- Oceania	1,142	2,725	4,195
World Average	1,633	5,412	10,095

Source: Data compiled from UNCTAD online database.

For the period 1975-2015, the average per capita income of developing economies increased by a factor of close to ten (from US$ 442 to US$ 4,842), and developing Asia's income rose by more seventeen times (from US$ 293 to US$5,135). For the same period, African countries' per capita income was multiplied by only about three (Table 2). In 2015, Africans were making on average US$1,914, which represented less than half of per capita income of developing economies as a group. What is remarkable is the fact that forty years earlier (in 1975), African countries' per capita income was higher than the average per capita income of all developing economies, and more than twice that of developing Asia. In relative terms, this shows how poor and less developed the African continent has become.

3.3 GDP Growth Rates

For the forty-year period from 1976 to 2015, GDP growth rates of developed economies were lower than those of developing economies. This is not surprising because advanced economies are at the forefront of technological advances, they have already reached high levels of productivity and per capita incomes, and their population growth has stabilized. The situation is much different in developing economies. Their average growth rates were higher because some of their economies (particularly emerging markets) were catching up (Table 3).

Table 3 Gross Domestic Product Growth Rates (5-Year Average in %)

Groups of economies	1976-1980	1981-1985	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015
Developed economies	3.53	2.66	3.48	2.04	3.20	2.10	0.83	1.55
Transition economies	5.08	4.04	4.09	(11.45)	1.95	6.52	4.16	1.62
Developing economies	5.23	2.52	4.34	5.08	4.58	5.36	6.18	4.75
Developing by region:								
- Asia	5.35	3.87	6.51	7.05	5.42	6.48	7.23	5.75
- America	5.70	1.10	1.88	2.99	3.26	2.69	3.74	2.11
- Africa	3.70	1.99	2.61	1.33	3.53	5.49	5.04	3.22
- Oceania	1.38	2.40	4.57	4.04	1.55	2.49	2.88	3.18
World Average	3.86	2.69	3.65	2.16	3.46	2.91	2.27	2.50

Source: Data compiled from UNCTAD online database.

As a group, emerging economies of Asia have been growing at higher rates, which explains why they have been converging. A study that focused on China concluded that with average annual rate of 10.09% rates during the period 1980-2010 (Mpoyi, 2016), this country's per capita income had risen from $205 in 1980 to $4,382 in 2010 (in 2015, it was $8,109).

A look at Africa's growth rates reveals two distinct periods, the last 25 years of the 20th century, and the first 15 years of the 21st. From 1976 to 2000, Africa's growth rates were mostly low, and more importantly they were consistently below developing economies' average rates. Since the beginning of the new century however, the continent's growth rates had reversed course. For the first 15 years of the new century, Africa grew at a pace that was catching up with the rates of developing economies. Most notably, it is growing faster than developing economies of the Western Hemisphere (America). The paper will expand on this point in the next section.

4. Is Africa Failing, Rising, or Both

Because of numerous structural problems, one can make the assertion that most African nations have been unable to enlarge their social capabilities. Therefore, a clear conclusion implied in the convergence theory would be that the continent has not, or has only slowly started to catch up. Indeed, when economic prosperity models for Africa were tested in the Democratic Republic of Congo (DR Congo), the results were disappointing. Interestingly however, macroeconomic data were pointing to a turnaround in the continent's economic performance. This apparent contradiction makes the question posed by the title of this section the more relevant. The following addresses this contradiction.

4.1 Is Africa Failing? Disappointing Economic Prosperity Models' Tests in DR Congo

DR Congo is often mentioned in publications on economic prosperity models for Africa because its population is living in extreme poverty while the country is scandalously rich in minerals, arable land, wildlife, and forest. With a population estimated to approach 80 million, DR Congo is the second largest country in Africa (right behind Algeria). It has a land area of 2.3 million square km, about the size of Western Europe, or the United States East of the Mississippi River. It has important reserves of minerals such as diamond, gold, oil, cobalt, copper, silver, uranium, Colombo-tantalite (known as coltan used in mobile phones), to name a few (Turner, 2007;

Eichstaedt, 2011). In fact, in 2004, the Fraser Institute ranked DR Congo number 15 in its Mineral Index[1].

In size, Congo River is second only to Amazon River. The river, its affluent streams, and its lakes cover a large portion of the country. With such amount of water, the country is plenty of arable land that is favorable to the cultivation of numerous subsistence and industrial produce, including among others corn, rice, cassava, coffee, tea, palm oil, cotton, peanuts, bananas, oranges, and several other agricultural products (Katunga, 2004). Its extensive forests represents 74% of the country, and is also home to 415 species of mammals, 736 species of birds, and about 11,000 species of plants (Katunga, 2004; Mazalto, 2008).

It would be an understatement to say that DR Congo has failed to enlarge its social capabilities (i.e. reliable political, legal and economic institutions, and a good education system). Beginning in 2005, the Fund for Peace[2] calculates an index that ranks 178 countries according to their level of fragility. Countries with higher scores are the most fragile and those with lower scores are the least fragile[3]. With a higher score in the 2014 ranking, the DR. Congo was ranked fourth, after South Sudan, Somalia, and Central African Republic and just before the Sudan. These five countries constitute the very high alert group. Over a period of ten years (2005-2014), the DR. Congo has been second four times, fourth two times, fifth two times, sixth one time, and seventh one time (Lawrence 2015). Based on the index of fragility, the DR. Congo offers a good case of a state that has failed to enlarge its social capabilities.

Because the DR. Congo is highly fragile even though it has tremendous economic potentials, it is understandable why it is repeatedly used as an example to see how the political leadership is making efforts (or lack thereof) to reduce poverty. Since its independence in 1960, the country has witnessed a succession of predatory political regimes. Its leaders have used violent repression to control the country's vast natural resources (Lezhnev, 2016). The repression has been so brutal that it resulted in widespread unrests, civil wars, invasion by neighboring countries, mass displacements of populations, a breakdown of civil services, with the ensuing extreme poverty and humanitarian catastrophe.

For about twenty years now, things have worsened to the point where DR Congo has become an almost lawless state. From the late 1990s until the first few years of the 21st century, it experienced what the United Nations called "Africa World War I" (Prunier, 2009), a war that involved some twenty militia groups and armies from well over half a dozen African countries (Roberts, Ngoy, Mone, Mwezse, Zantop, & Despines, 2003; Mpoyi, Festervand, & Sokoya, 2006). Furthermore, the untold story is that, the country has witnessed the worst humanitarian disaster since World War II. According to the International Rescue Committee (IRC, 2007), and the Enough Project (Lezhnev, 2016), the death toll has surpassed 5 million, and millions more are internally displaced. The IRC also estimated that another 45,000 people continue to die every month. This is the reason why the country has the largest UN peacekeeping force to date. Despite a strong presence of UN forces, the Congolese people still live in insecurity.

Clearly, it is not surprising to find the DR. Congo among the highest failed states. As such, it has provided a perfect backdrop for testing economic development models, in part to formulate policy recommendations in order to reduce poverty and improve economic conditions. A summary of the results from economic prosperity models' tests is presented below.

[1] http://www.fraserinstitute.org.
[2] http://www.fundforpeace.org.
[3] http://www.fragilestatesindex.org.

4.1.1 Sachs' Model

This model was developed by Sachs (2005) to alleviate poverty in developing countries. Its adoption by the UNDP led to the statements of the Millennium Declaration adopted by the United Nations. Later, it came to be known as the Eight Millennium Development Goals of the United Nations Development Program (UNDP). The eight goals aimed, by 2015, to eradicate extreme poverty and hunger, achieve universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health, combat HIV/AIDS, malaria, and other diseases, ensure environmental sustainability, and develop a global partnership for development. In 2015, the United Nations Economic Commission for Africa (UNECA) issued a report that evaluated the implementation of the program in DR Congo. The following are the main findings of the report (UNECA, 2015). The country's economy was heavily commodity dependent. Because of diseases, hunger and malnutrition, infant and maternal mortality rates were among the highest in the world. In particular, there were more than 100 deaths per 1,000 births. DR Congo accounted for 13.6% of Africans living below the poverty line ($1.2 per day), second only to Nigeria (25.89%). Malaria (a disease caused by mosquitoes) was the leading cause of death. Less than 50% of Congolese had access to safe drinking water. Overall, DR Congo missed almost all Millennium Development Goals that were at the center of UN program based on Sachs' model.

4.1.2 Collier's Model

Following critics made to the Sachs's model, Collier (2007) proposed five traps that impede prosperity, namely (a) conflict trap, (b) natural resource trap, (c) being landlocked between bad neighbors, (d) bad governance, and (e) marginalization of the poorest countries in the global economy. To correct these traps and overcome poverty, Collier suggested reevaluating the role of four instruments, (a) aid, (b) security, (c) laws and charters, and (d) trade. According to him, so far the aid instrument is used "quite badly" and the other three "scarcely".

As can be seen, the Collier's model focused more on foreign aid, security, and laws. With regard to its application to the DR. Congo, Trefon (2011) concluded that aid initiatives implemented by DR Congo's international partners to reconstruct the country had been unsuccessful. Usually international partners misunderstood the complexities of the political culture in Africa. Capitalizing on that misunderstanding, the Congolese authorities skillfully devised deceptive tactics to hamper reforms, stay in power, and then misuse a substantial percentage of financial aid from international institutions and foreign governments.

Concerning security, DR Congo has the largest peacekeeping force in the world. At its creation in 1999, it had few thousand troops. As the security situation deteriorated, the United Nations gradually increased its military presence in the country. This shows that the UN military presence was largely failing to ensure the security of Congolese as millions were dying (Turner, 2007). By 2016, the force numbered some 22,016 uniformed personnel (MONUSCO, 2016). Acknowledging the inability of the peacekeeping force to protect people, numerous non-government organizations (NGOs) grouped under the label of "civil society" stepped in to alleviate the suffering of the population (Nzongola-Ntalaja, 2002). The NGOs have been helping in such areas as human rights and civic education, and humanitarian and relief services. Unfortunately, some of these NGOs came to adopt the "dirty-tricks mentality" of fraud, mismanagement and other bad behaviors that further undermined the security of the already extremely fragile population (Giovannoni et al., 2004).

The third important factor in Collier's model is laws. The government passed a new constitution in 2006. It also enacted several laws in the form of codes to improve governance. They included investment, forestry and mining codes, codes of ethics and good conduct, and other codes in the areas of customs and trade. According to

Trefon (2011), these laws are "a masquerade", as they have been largely ignored by various actors, including political authorities interested only in amassing massive wealth (Nkongolo-Bakenda et al., 2016).

4.1.3 Acemoglu and Robinson's Model

Rejecting Sachs and Colliers's models, Acemoglu and Robinson's model emphasized the need for inclusiveness. It proposed the creation of pluralistic coalitions of power through civil society associations such as non-government organizations (NGOs) and community-based solidarity networks. These inclusive coalitions would design dynamic and multiform survival strategies related to various aspects of public life where the state has failed.

In the early 1990s, civil society associations exploded in DR Congo (Trefon, 2004). Although they provided some help for basic survival of individuals and their families, civil society associations were unable to contribute to a sustainable political and economic development suggested in Acemoglu and Robinson's model. In particular, to satisfy their desire to achieve personal success, prestige and power, the leaders of these associations engaged in socially irresponsible practices such as fraud, mismanagement, corruption, and even violence (Nzeza-Bilakila, 2004). In their analysis of the motivations and functioning of NGOs in DR Congo, Giovannoni et al. (2004) also found that the political leadership used them to recruit new members who were offered positions in the government or government agencies. So Acemoglu and Robinson's model of pluralistic inclusiveness at the grassroots level failed to play the intended role of counter-power to the corrupt and inefficient ruling class.

4.1.4 NEPAD's Model

The previous three models were developed outside Africa. Eager to formulate their own model, African rulers proposed a model known as the New Partnership for Africa's Development (NEPAD) project (Venter & Neuland, 2005). This model adopted eight millennial goals with a particular emphasis on regional integration and economic diversification of African economies. After examining the results of these two objectives, Venter & Neuland (2007) found that the regional integration goal was achieved on structural grounds (the continent had nine regional blocs). However, these blocs did not achieve a meaningful regional economic integration, in part because there were overlapping membership among them. DR Congo for example was a member of four regional blocs. These were COMESA (Common Market for Eastern and Southern Africa), SADC (Southern African Development Community), ECCAS (Economic Community of Central African States), and CEPGL (French acronym for Economic Community of Great Lakes Countries). Such overlapping membership could only lead to unavoidable conflicting integration objectives and commitment.

The other major goal of NEPAD was to reduce dependence on commodities through economic diversification. A review of economic diversification in Africa found limited progress (OECD, 2011). A number of barriers prevented African countries from carrying out successful diversification efforts. In DR Congo, a major barrier was the inability (or unwillingness) on the part of the government to mobilize key local stakeholders. Small to medium-sized enterprises that dominated Congo's economy (most of them controlled by government officials) were reluctant to collaborate with the government, as any economic diversification would likely result in resource-rich foreign stakeholders taking control of major companies (Nkongolo-Bakenda et al., 2016). Another barrier was DR Congo's membership to multiple regional economic integration efforts. Because the country belonged to four regional blocs, its government had a limited capacity to effectively cooperate with overlapping regional institutions in order to formulate appropriate regulatory frameworks in support of sound economic diversification policies (OECD, 2011).

4.2 Is Africa Rising? Encouraging Economic Performance

The earlier analysis of the economic standing of Africa in the world highlighted how badly the continent was trailing all others. Two metrics, gross domestic product and per capita income, illustrated this sad reality. A third metric however, GDP growth rates, presented a mixed picture (see Table 3 above). From 1976 to 2000, Africa's growth rates were lower. For the period 2001-2015 however, growth rates started to show signs of rising. The discussion will now focus on this latter period.

For the period 2001-2015, developed economies' growth rates were almost consistently lower. The reason is quite straightforward. The population was aging, birth rates were very low, and factors of production have been used to exhaustion. As a result, any economic growth would be the outcome of productivity increase. Over this 15-year period however, all developing economies were growing faster than developed economies (Table 4). As predicted by the convergence theory, some of these developing economies, especially emerging markets of Asia and Latin America, are on their way to catching up.

Table 4　Annual GDP Growth Rates by Grouping of Economies

Year	Developed economies	Transition economies	Developing economies		
			All developing	Africa	DR Congo
2001	1.54	5.82	2.83	4.07	(2.10)
2002	1.41	5.09	4.43	6.08	2.95
2003	1.97	7.33	5.39	5.45	5.58
2004	3.02	7.78	7.35	5.92	6.74
2005	2.57	6.60	6.79	5.94	6.14
2006	2.80	8.48	7.52	5.69	5.32
2007	2.39	8.71	7.87	5.92	6.26
2008	0.02	5.38	5.09	5.42	6.22
2009	(3.64)	(6.50)	2.69	3.01	2.86
2010	2.60	4.73	7.75	5.18	7.11
2011	1.52	4.60	5.94	1.14	6.87
2012	1.02	3.31	4.91	5.67	7.09
2013	1.20	2.04	4.71	2.37	8.48
2014	1.82	0.93	4.23	3.77	9.47
2015	2.19	(2.78)	3.95	3.13	6.98
Mean	1.50	4.10	5.43	4.58	5.73

Source: Data compiled from UNCTAD online database.

Several Asian nations are emerging economies that are progressing rapidly (in particular the two "Asian Tigers", China and India). Remarkably, however, from 2001 to 2015, African economies have been growing faster than developing economies of America (refer to Table 3). In addition, if average growth rates over this period are considered (The mean in Table 4), Africa is also growing faster than transition economies (4.58% compared to 4.10%). This suggests that African economies may have started to catch up (Mpoyi, 2017).

The United Nations Conference on Trade and Development (UNCTAD) maintains an online database for most of its member countries. Data from UNCTAD online database shows that in 2015, six African countries were among the ten fastest growing economies in the world[4]. At 9.61%, Ethiopia had the world's highest growth rate. The other five African countries were Cote d'Ivoire (9.47%), Mali (7.61%), DR Congo (6.98%), and Rwanda and Tanzania (both at 6.95%). Twenty developing economies were growing at the rate of 6.50% or more. Of those, ten were in Africa.

Even though Africa is far behind, in the long term, if the continent can keep such growth rates, the gap it has with developed economies, and now with emerging economies, will gradually narrow. Interestingly therefore, without enlarged social capabilities, African countries have begun a slow catch-up. Catching up will take a long period, as illustrated in the example of China. Despites its double-digit growth rates (an average of 10.09% over 30 years), China is yet to catch up, though the gap with developed economies is shrinking.

The Democratic Republic of Congo (DR Congo) is the African country where economic prosperity models for Africa were tested (the results were a failure). Undoubtedly, DR Congo has not enlarged its social capabilities (see the discussion of prosperity models' test results in this country). What is however shocking is to see that DR Congo's economy is growing more rapidly than the average growth rates of all continents or regions (Table 4). For the period 2001-2015, DR Congo's economy grew at an average rate of 5.73%. Based on DR Congo's performance, this study asserts that Africa is sending mixed messages regarding its development.

5. Conclusion and Discussion

The purpose of the research was to make sense of mixed signals coming from Africa: several failing states whose economies are performing surprisingly very well. The paper focused on two theories, economic convergence, and six killer apps, because they offered an appropriate conceptual framework that identified the determinants of economic development. Incidentally, as the authors noted, many of those determinants ended up in four prosperity models specifically developed to help African nations overcome structural difficulties they face, alleviate poverty for their people, and perhaps start the process of economic catch-up.

The subsequent question asked in this paper was "Is Africa failing, rising, or both?" After analysis, the answer seems to be "both". On the one hand, from the results of a test of all four prosperity models conducted in DR Congo, it was evident that the political leadership and several other politically connected actors were either unable or unwilling to address the numerous structural difficulties of the country. More importantly, those difficulties seemed to worsen. If the case of DR Congo was to be extrapolated to the continent, the application of all four prosperity models showed that African countries were unable to resolve the problems that were hindering their efforts to reduce poverty.

On the other hand, despites multiple development difficulties the continent was confronting, economic data paints a different picture. Six of ten fastest growing economies in the world were in Africa. Even more puzzling was the situation of DR Congo. While being one of African countries with the worst records in the areas of political violence, civil unrest, internally displaced people, widespread diseases, rampant corruption, DR Congo had an economy that was growing more rapidly than the average growth rates of all continents. The issue becomes therefore whether to provide help to African countries in an attempt to overcome the determinants of poverty, particularly since there is no evidence that Africa's impressive economic growth rates will be sustained in the long term.

For several decades, African countries have been receiving substantial financial aid from international institutions such as the World Bank and the International Monetary Fund, and from foreign governments. Yet the

[4] http://www.unctad.org.

problems that such aid was supposed to solve still exist. It is the position of the authors of this paper that the West needs to rethink its approach to the type of help Africa needs. At the core of Africa's poverty is kleptocracy, that is, the dominance of predatory political regimes. Heads of states and their associates are more preoccupied in, to paraphrase Acemoglu and Robinson, extracting incomes and wealth from one subset of society (the vast majority of the people) to benefit a different subset (the ruling elite).

As long as African nations have what Acemoglu and Robinson called extractive economic institutions, no amount of financial aid will eradicate poverty in Africa. DR Congo has many natural resources. However, its people have not benefited from them. Reports by several international and non-government organizations have linked the wars that have been taking place in DR Congo (i.e., Africa World War I, and subsequent small scale civil wars) to the exploitation of natural resources, in particular minerals (United Nations, 2001; Global Policy Forum, 2005; The Human Rights Watch, 2005; Lezhnev, 2016). Many stakeholders were involved in the exploitation of natural resources, including DR Congo's own predatory political leadership, neighboring countries, and multinationals. In its report titled "A Criminal State", the Enough Project estimated that beginning in 2001, up to US$4 billion per year have gone missing or stolen in DR Congo due the manipulation of mining contracts, budgets, and state assets (Lezhnev, 2016). As the regime in Kinshasa (capital of DR Congo) is a major actor in this exploitation, no amount of financial assistance will contribute to the end of poverty in the country. The only substantive assistance that the West and international institutions can provide is to help restructure DR Congo's institutions. This is a key lesson that Africans should draw from the conceptual framework presented in the paper.

African nations need to master Ferguson's six killer apps if they are to overcome poverty and achieve economic success. The six killer apps are competition, science, private property rights, medicine, consumerism, and work ethic (Ferguson, 2011). To master the six killer apps, African leaders must enlarge their countries' social capabilities. Consistent with the convergence theory (e.g., Abramovitz, 1986), African governments should implement major transformations in their political, legal and economic institutions similar to the ones carried out by today's emerging economies of Asia, Eastern Europe and Latin America.

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