Changing Dynamics of Armed Conflicts in Africa: Impact on Economic Growth and Wellbeing

Abel E. Ezeoha
Ebonyi State University
Abakaliki, Nigeria

Abstract

This study is primarily motivated by the cyclical waves in the intensity of armed conflicts in different parts of Africa and the persistent poor state of economic development in the Continent. The study makes use of a panel dataset involving 46 African countries over the period 1997-2013 to investigate the individual and interactive impact of the changing dynamic of armed conflicts on economic growth and wellbeing in Africa. Using a two-step robust Dynamic System General Method of Moment (GMM) estimation technique, the study revealed that conflict intensity (measured as the log of annual fatalities) had a negative and highly significant effects on both the growth and wellbeing variables; and that socioeconomic factors like unemployment, military spending and dependent population are very important in explaining the state of economic growth and wellbeing in Africa. The results of the interactive models also show that the reported constraining impact of conflict intensity is particularly exacerbated by the negative impact of unemployment and rising military spending. The outcome of the study suggests that addressing issues relating to unemployment and fiscal imbalances induced by military spending is crucial in the current and prospective post-conflict economic policymaking process in Africa. Sound fiscal policies that ensure prudent military spending and higher proportionate budgetary allocation to productive economic sectors will help to calm socio-political tensions and improve economic wellbeing of the citizens.

1. Introduction

Globally, the meaning and management of armed conflict is influenced by geographical considerations and the intensity of the conflict. Geography here borders on whether a conflict is between two states or between a state and a non-state actor. Where the conflict involves two states as major actors and warrants the intervention of armed forces it is classified as international armed conflict, regardless of the level of intensity. On the other hand, armed conflict is non-international when it occurs "in the territory of a 'high contracting party' between its armed forces and dissident armed forces or other organized armed groups which, under responsible command, exercise such control over a part of its territory as to enable them to carry out sustained and concerted military operations and to implement this Protocol" (ICRC, 2008). Consistent with the framework of ICRC, two conditions must be present for an intra-state conflict to qualify as armed conflicts – namely: the hostilities must reach a

minimum level of intensity, and non-governmental groups involved in the conflict must possess organized armed forces and have the capacity to sustain military operations[1]. This emphasis implies that hostility between government and unarmed civil groups does not qualify as armed conflict, and so should not attract an armed intervention by the government agent. In Africa, though, these conditions are rarely observed especially in the light of the fact that most conflicts involving non-state actors are always matched with state maximum military actions, regardless of whether the non-state actors are armed or not. In the cases of Cote d'Ivoire, for instance, the sporadic violence that followed the declaration of President Laurent Gbagbo the winner of the 2010 Ivorian general election and the subsequent trial of the president for genocide.

Essentially, the nature and intensity of armed conflicts in Africa have changed over time, since the colonial era. Before independence in the early 1960s, most of the recorded cases of armed conflicts took the form of nationalistic struggles by groups who were then fighting for the independence of their countries. Initially targeted at the colonial powers, but shifted after independence to resistance to indigenous governments based on ethnic considerations. The latter, which was specifically an "attempts by group to alter existing political arrangements in Africa and create new states"[2], was prevalent in multi-ethnic and multi-racial states, and occurred in states where race and tribes were the major instruments of control. It represented an attempt to resist the dominance of a race or ethnic group. Those struggles, according to Otunbanjo (1980:38), were motivated by nationalist rather than revolutionary objectives. During that time, resistance to state sovereignty and authority was so intense that it degenerated to post-independence civil wars in some of the countries (examples were the cases of Nigeria, Kenya, Congo Republic, Chad, Mozambique, Angola and so on). Such guerrilla warfare was very less successful in terms of achieving the goal of displacing indigenous governments[3], but at the same time very persistent.

The persistence of the post-independent conflicts emanating from political struggles degenerated to series of military coups and counter-coups that were later to characterize Africa's independent states. The coups, according to Furley (1995), were 'often only the beginning of a long internal conflict, and led to counter-coups or a succession of coups as in

[1] The focus legally is whether the non-state actors are organised or not. This legal dimension, according to the United Nations Geneva Convention of 1949 and the 1977 Additional Protocol II, is hat conflict must involve protracted hostilities carried out by organized non-state armed groups against governmental forces in the case of domestic armed conflicts or protracted hostilities involving the military forces of two opposing countries.
[2] Otubanjo (1980)
[3] Otubanjo, 1980, p. 39

Nigeria'. Illustrating this phenomenon, Furley (1995) contended that the rate of military coups in Africa in the past decades had been alarming , and that 'over half of all African countries since independence have had them, and even comparatively stable states have suffered attempted coups, as in Gambia in 1981 and Kenya in 1982. Others, especially in Francophone Africa, have avoided them only because of support of the existing regimes by the former colonial power'. Consequent to this also is the fact the level of political instability induced by violent resistance to democratic principles and ethnic dominance posed real threats to the development of most of the then newly independent states. Such resistances, as recorded in most parts of the continent, was responsible for some of Africa's deadly civil wars in countries such as Liberia, Sierra Leone, Rwanda and Burundi, Congo Democratic Republic, Sudan, and so on.

Since the return to democratic rule in most African states in the beginning of the 21st Century, the nature of armed conflicts has again shifted from incessant political violence occasioned by military interventions to what is currently referred to as terrorism and insurgences. The intensification of acts of terrorism became an intrinsic feature of armed conflicts in most of the Third World regions largely due to the 9/11 al-Qaeda-led attack on World Trade Centre in the United States, that involved four coordinated terrorist air attacks resulting to about 3,000 deaths. The attack on World Trade Centre in the United States popularized the concept of terrorism against states and expanded the limit of state intervention and protection. Consequently, most of the rebel movements started identifying themselves with and enjoying solidarity from international terrorism groups, so much so that non-state domestic armed conflict became internationalised all over the continent. In return, resistances to state authorities began to be matched with brutality and joint government forces more than before. It was this development that brought about increased intensity of armed conflicts even in countries erstwhile assumed to be politically stable.

As would be expected, the socioeconomic implications of such conflicts are felt more in terms of their tendencies to disrupt the functioning of the society by causing widespread human, material or environmental losses that exceed the ability of the affected society to cope using its own resources (Dunne and Mhone, 2003); to cause injuries capable of rendering erstwhile productive population to a dependent population, increase the population of refugees and displaced persons, and to lead to widespread human rights abuses (Copson, 1994). By disrupting production, also, armed conflicts induce scarcity, raise prices of basic goods and services and induce a decline in the standard of living. It is these imminent risks of

armed conflicts that make them attractive for use by the perpetrators as bargaining chips (Rustad, 2012; Herbst, 2000).

The peculiar economic and political characteristics of African states equally accounted for the dynamism in the scope and intensity of armed conflicts in the region. First is the high level of disparity in the sizes of African countries, whereby between countries the spillover of conflict incidents tend to be faster and wider than the spillovers of economic progress. The second reason can be attributed to the fact that, in recent times, there has been increased number of democracies, increased investments flows and liberal economic reforms leading to improved market access. Whereas scientific evidence exists to explain how these developments could aid economic growth, there is little evidence on the implications of the contradictory interaction among armed conflicts, economic growth and citizens' wellbeing.

Whereas armed conflicts may not be peculiar to Africa, the case in the region for instance is adjudged unique because of the alarming prevalence with which they occur (Date-Bah, 2001:63). As at mid-1999, for instance, over one-fifth of Africa's 53 states were said to be engulfed in severe crisis[4]. Despite the increasing intensity of conflicts in the continent, Africa from the start of the 21st Century has recorded consistent economic growth, with per capital gross domestic product almost doubled from a level of US$1,110 in 2005 to as much as US$1,905 in 2012 (United Nation's African Statistics Yearbook, 2013). Broadly also, Africa's economic growth rate increased from an average of 4.7 percent in 2013 to an estimated level of 5.2 percent in 2014, according to the World Bank statistics. This impressive growth potential notwithstanding, Africa still lags far behind other regions in all indices of development.[5] In a good number of the countries, improved economic growth statistics failed woefully to reflect in improve wellbeing and reduced poverty rates. Attempts at explaining the unusually inverse relationship between economic growth and economic wellbeing in Africa have amount only to rhetoric, with very scanty scientific evidence available to explain the dilemma.

Another possible explanation is the cyclical and persistent nature of armed conflicts which is believed to have eroded the gains of impressive economic growth in Africa in the last decades. The pattern in the continent is such that the intensity of conflicts maintains a cyclical

[4] Africa Confidential, Vol 40 No 15, July 1999, p. 1.
[5] A 2014 United Nations report on poverty, for example, shows that sub-Saharan Africa remains "the only developing region that has seen a regular increase in the number of people living in extreme poverty - from 290 million in 1990 to 414 million in 2010".

dimension, moving from one area or country to another and the perpetrators of conflicts changing their tactics and targets. In the mid-2000s, for instance, some African countries that were traditionally judged to be the most stable democracies in the region (examples: Ivory Coast and Kenya) erupted into serious armed conflicts and insurgences to a scale that was internationally adjudged as genocide and massacre. Interestingly also, historically conflict-prone countries such as Angola, Burundi, Rwanda, Liberia, Sierra Leone, Congo Republic and Senegal, witnessed considerable reduction in the intensities of armed conflicts and internal political crisis between 1997 and 2012. In the Horn of Africa, armed conflicts, terrorism and civil unrests persisted over the period under review, whereas the traditionally stable North African countries were cut in the web of the Arab Spring that took place between the period 2010 and 2012. On individual country-level, figure 1 below shows the twists in the intensity of armed conflicts in 1997 and 2012. As revealed in the figure, countries such as Sudan, Egypt, Mali, South Africa, Libya, Ethiopia, and Tunisia, over the period, moved from their positions as the least volatile to being among the top 10 most volatile African countries within the same period.

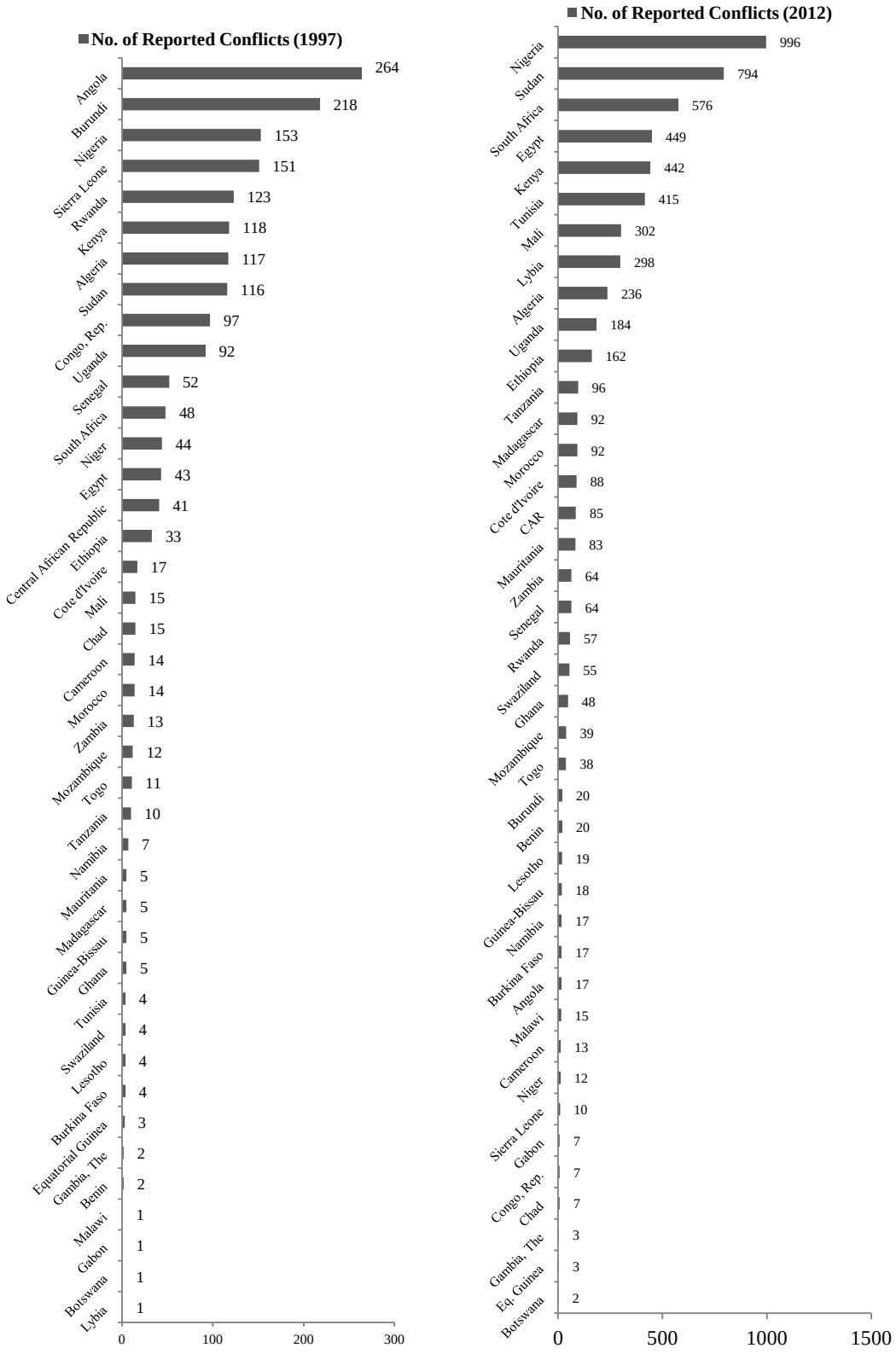

Figure 1: Changing Directions of Conflicts in Africa (By Country)
Source: Data used were compiled from Armed Conflict Location and Event Data Project (ACLED), 2014

Using the case of Africa, therefore, the current study is designed to provide empirical accounts of the relationship between the changing patterns of conflicts and economic well-being. The study contributes to the conflict-development literature by specifically examining not just the impact but also the channels through which conflicts affect development. Along this line, the investigation is based on a set of presumptions that the inability of Africa's growth potentials to translate to economic development and wellbeing is caused by conflict-induce economic outcomes such as unemployment, increased military spending, increased population dependency, resource control struggle, and poor investments in infrastructure.

2. Theory and Literature

Some important theories have been used to explain the causes and implications of armed conflicts around the world. The classical insurgency theory, for instance, provides insights based on the assumption that the core motive for conflict is the replacement of an existing order (Kilcullen, 2006). Using the case of the Boko Haram insurgence, the 2010 Handbook for Internally Displaced Persons, prepared by Global Protection Cluster Group, provides a framework for contextualising the degree and impact of armed conflicts globally. According to the Handbook, internally displaced persons (IDP) are "compelled to leave their homes and often cannot return because they face risks at their places of origin from which State authorities are unable or unwilling to protect them, because they might have been specifically prohibited to return, or because their homes have been destroyed or are being occupied by someone else. They also may face the risk of forced return to an area that is unsafe" (p. 9). This population of the citizenry are hence at that point denied of access to better life and improved wellbeing.

Other very important theoretical insights are drawn from the 'economic interests' and the ' relative deprivation' hypotheses. The economic interests hypothesis is anchored on the assumption that the occurrence of internal war is the outcome of rational calculations in terms of costs and opportunities (Humphreys 2003:4, Lemarchand 2009:42). In support of this argument, Querido (2009) demonstrates how the existence of natural resources in a country and the consequent ethnic struggle for control can prompt a government to exercise violence against its civilians. The underlying interest can be the struggle for the ownership and exploitation, or even for the sharing of the fiscal proceeds. There are also in existence evidence in support of private economic interests igniting conflicts. One of the most recent evidence emanated from the work of Lei and Michaels (2014) who find that giant oilfield

discoveries, for instance, has the tendency of 'increasing the incidence of armed conflict by up to 5 to 8 percentage point, particularly 'for countries that had already experienced armed conflicts or coups in the decade prior to discovery'. Citing the civil war in Sierra Leone, Davies (2000) also showed how, out of greed and the quest for the control of the diamond-rich regions of the country, the Revolutionary United Front (RUF) challenged the government's forces - resulting to situations where both the RUF and the government sold future exploitation rights to finance their war. The consequence, according to Davies was that 'those who had the power to end the war were the ones who benefited most from its conduct'.

The 'relative deprivation' hypothesis, originally postulated by Robert Gurr (1970) demonstrates 'the widespread perception of discrepancies between the goals of human action and the prospects of attaining those goals'. Socioeconomic deprivation in the sharing of political power or national resources constitutes a common cause of armed conflicts in those African countries with sharp ethnic divides. Such deprivation has had the tendency of implanting grievance and acrimonies in ethnic and inter-regional relationship among the citizens of the affected country. Consequently, the arising 'grievances often result from policies of ethnic discrimination in the domains of education and employment and under-representation in governance' (Tzifakis, 2013). Providing empirical supports for the deprivation hypothesis, Blomberg et al. (2004) showed that groups that were unsatisfied with the prevailing state of a country's economy and were unable to exact institutional changes might find it rational to engage in terrorist activities.

Whereas the greed and the deprivation conflict hypotheses appear theoretically distinct, a great deal of overlaps exists between them in practice. In line with this, Collier (2000) 'contents that ethnic grievances are actively manufactured by rebel organizations in order to motivate their forces and create the essential divisions in the societies'.

Studies on the effect of armed conflicts on economic development are under-estimated because of the general belief that conflicts have the tendency of undermining development. As for civil wars, for instance, the generally believed view is that such events are undoubtedly devastating for the countries in which they occur. Africa, for instance, is a region whose development is widely acclaimed to be disrupted by incessant and persistent armed conflicts. Thus, the nature of conflicts in the region directly connotes its dire consequences. In the word of Dunne and Mhone (2003), 'crises encompass disasters and other events where the functioning of a society is seriously disrupted, causing widespread

human, material or environmental losses that exceed the ability of the affected society to cope using its own resources' (Dunne and Mhone, 2003). While the impact might appear very obvious, especially in the case of Africa, what makes the analysis of the patterns of conflict necessary borders to on the need for planning effective response to the developmental issues prevalent in the region (Dunne and Mhone, 2003:iii).

In the case of Sudan, Human Right Watch document revealed how the civil war in the country since 1983 had claimed about 1.3 million persons, stripped the civil population of their assets and exposed them to starvation and disease. Some of the obvious implications of armed conflicts are captured in a number of channels. This, in his title on 'Africa's Wars and Prospects for Peace', Raymond Copson captured as being inherent in the fact that wars cause injuries capable of rendering erstwhile productive to dependent population; increase the number of refugees and displaced persons; and lead to human rights abuses (Copson, 1994). In the cases of the Chadian and CAR conflicts, African Confidential[6] quoted the UN High Commissioner for Refugees as estimating in October 2007, there were 233,700 refugees from Darfur and 178,900 displaced people in eastern Chad. More than 50,000 people from the Central African Republic had fled into Chad and a similar number of Chadians into Darfur.

A number of empirical studies have as well attempted to validate some of the above claims and assertions. A more traditional focus in this area of literature has been on the broad impact of armed conflicts on the domestic economies (Miguel et al., 2004; Serneels and Verpoorten, 2012; Lopez and Wodon, 2005; Murdoch & Sandler. 2004; and Rodrik, 1999; Bussmann, 2010; Benassy-Quere et al., 2007; Nitsch and Schumacher, 2004; among others). Complementarily, there have equally been some empirical efforts to test for the sensitivity of the impact across different economic sectors. Some examples here include the study on the impact on: the tourism industry (Bilson et al., 2012; Drakos and Kutan, 2003); discriminate impact on mineral and non-mineral resources (Ashby and Ramos, 2013); bilateral trade (Oetzel et al., 2007; Nitsch and Schumacher, 2004); as well as the relationship between various forms of terrorism and FDI (Bandyopadhyay et al., 2014). Broadly, very few attempts have been made to examine, from a macroeconomic point of view, how armed conflicts comparatively affect economic growth and citizens' wellbeing in developing countries; and specifically in the case of Africa, empirical efforts on how the intensity of conflicts interact to influence economic growth and wellbeing remain largely unverified. Most recent among such

[6] African Confidential, 15 February, 2008, Vol. 49(4), p. 8

works is that of Poireri (2012) who find in the case of Sub Sahara Africa that armed conflicts, especially civil wars pose negative consequences on educational performance and that the rates of primary and secondary school enrolment were very sensitive to periods of crisis. This is similar to the findings of Wharton and Oyelere (2011) in the case of Colombia that children living in municipality with high conflict suffer some defects in education enrolment and accumulation.

The findings of a study by Polachek and Sevastianova (2010) intensify the need to more carefully examine the impact of armed conflicts in Africa. The findings highlighted most significantly that for the non-democratic, low income countries and countries in the region of Africa, the detrimental effect of conflict on growth is more severe. Collier and Duponchell (2010) established a negative impact of conflict on employment in Sierra Leone; and Pshisva and Suarez (2010) that found that a significant negative relationship existed between the level of kidnapping and firms' investment decisions in Colombia. More specifically, Gates et al. (2012) examined the effect of armed conflict on progress in meeting the United Nation's Millennium Development Goals. Their findings indicate that 'conflict has clear detrimental effects on the reduction of poverty and hunger, on primary education, on the reduction of child mortality, and on access to potable water. A medium-sized conflict with 2500 battle deaths is estimated to increase undernourishment an additional 3.3%, reduce life expectancy by about 1 year, increases infant mortality by 10%, and deprives an additional 1.8% of the population from access to potable water'.

Along this line, the study will build on previous empirical efforts that tried to link civil conflicts and economic activities, including a work by Collier and Duponchell (2010) that established a negative impact of conflict on employment in Sierra Leone; Pshisva and Suarez (2010) that found that an significant negative relationship exists between the level of kidnapping and firms' investment decisions in Colombia.

3. Empirical Model and Data

Data Description

In this study, we use updated panel dataset from 46 African countries for the period covering 1997 to 2013. The choice of these countries is informed by the inclusion in the Armed Conflict Location and Event Data Project (ACLED) database. Specifically, 'the ACLED project codes reported information on the exact location, date, and other characteristics of

politically violent events in unstable and warring states' (Raleigh et al., 2014). The ACLED database also estimates the number of fatalities arising from conflicts based either on the actual reported number in the original source or estimated if 'estimated number if several sources report various totals'. The other approach used by the ACLED includes: reporting the lowest number of fatalities 'if records from sources differ or a vague estimate is provided'; report the number as 10 if the original sources mentioned '*several, many, or plural civilians and 'unknown' and no other reference*'; report 12 'if report mentions *massacres*' (Raleigh, 2014).

Economic growth and wellbeing constitute the main observable variables under study. In the baseline estimation model, we consecutively used their proxies as the dependent variable. We define the growth proxy as per capita GDP Growth Rate and wellbeing using the conventional measure 'Human Development Index (HDI). The need to comparatively use GDP and HDI is underscored by the age-long argument in economic literature about GDP not capturing the real essence of economic development and wellbeing, and the paradox of high GDP growth rate and high incidence of poverty, as in the cases of most African countries. Figure 2 provides graphical illustration of this paradox, with good examples found in countries like Sierra Leone, Mozambique, Ethiopia and so on.

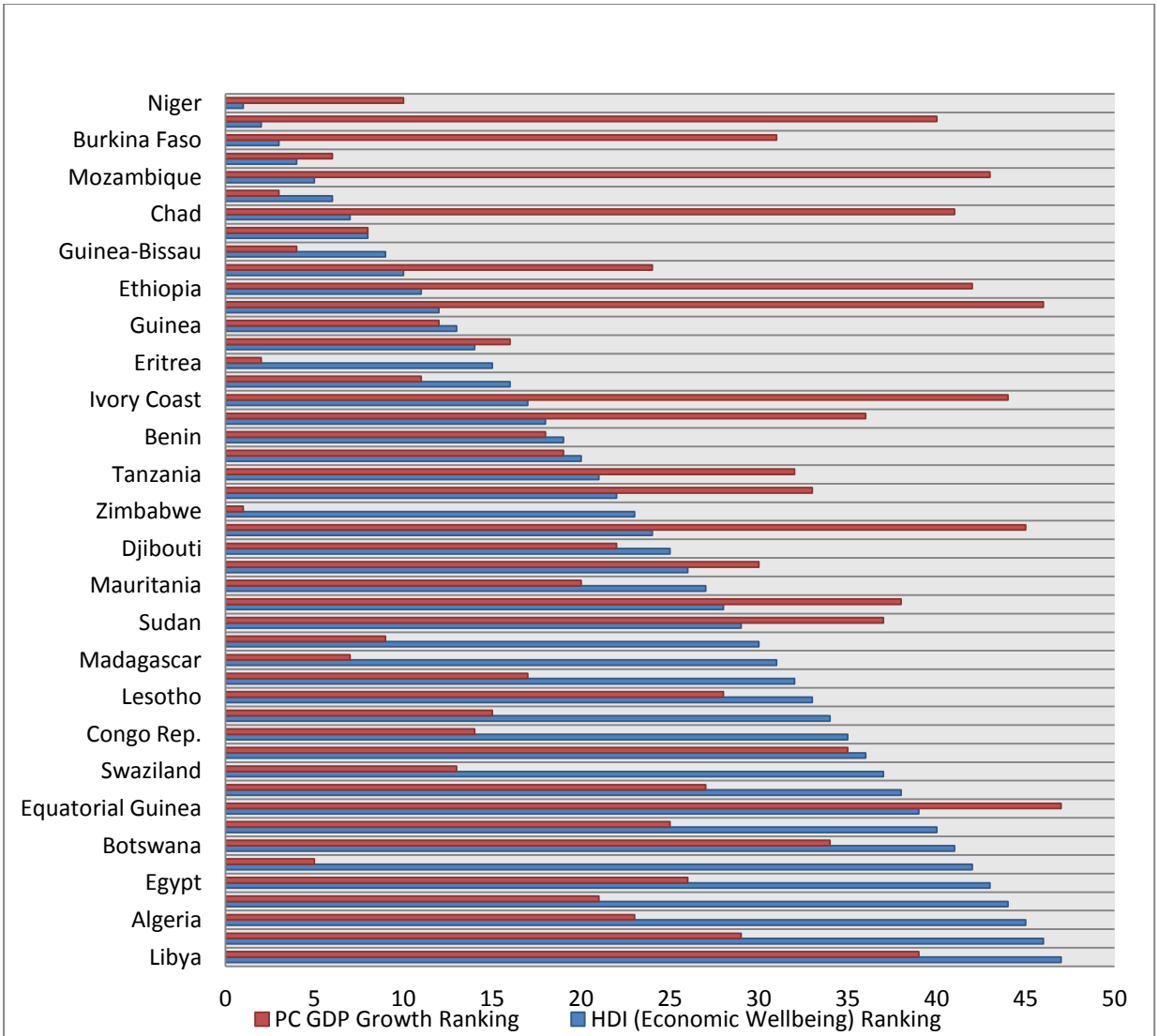

Figure 2 – Countries' Rankings on Growth and Wellebing Indicators

Against the dependent variable, following the earlier methodology used by Nitsch and Schumacher (2004), we constructed a measure based on the severity of conflicts – by estimating the proportion of fatalities in each year. The choice of fatality rate as a measure of conflict intensity is based on the premise that the actual impact of armed conflicts is felt more in the degree of destruction of life occurring there from.

To examine the channels through which armed conflicts can affect economic wellbeing, we interactively introduce variables such as unemployment, military spending, dependent population, infrastructure, and natural resource endowment. By introducing unemployment, we account for the apriori position that armed conflicts cause distortion in the income generating activities of residents and induce business migration. Camacho and Rodriguez (2011), for instance, have shown that in Colombia armed conflict significantly induces firm

exit, and that such impact was higher for smaller [manufacturing] firm. Also, the introduction of the ratio of military spending allows us to examine the theoretical claim by Orugon (2003) that armed conflicts weakens 'state capabilities, strained the financial resources of nongovernmental organizations and even raised provocative questions about the political will and sustaining capacities of the international community and regional security organizations to keep the peace and create conditions that are conducive to long-term, sustainable and viable political stability and economic development in the conflict-ridden and war-ravaged Sub-Saharan African States' (pp. 283-284). This is essentially important in examining the impact of armed conflicts in Africa where military spending is exacerbated by the high incidence of corruption and strict arms dealings (IMF, 2000) and where the growth rate in military spending in Africa is the fastest in the world (The Economist, 2014).

Increase in population dependency ratio is capable of undermining the quality of life in a particular society. This it does by causing deaths of household breadwinners and exacerbating the population of displaced persons and refugees, and by so doing undermine quality of life of both the victims and the refugee host communities. In the event of conflicts, 'whether internally or cross-nationally, the majority of refugees are clearly women, children, and the elderly. They are often subject to various forms of exploitation, rape and sexual abuse, and are exposed to political violence and torture' (Pedersen, 2002:181). On the consequences refugee concentration, UNICEF (1996) reported for Rwanda 'virtually every adolescent girl who had survived the genocide of 1994 was subsequently raped'. Available literature have also shown that armed conflicts increase the risk and costs associated with doing businesses in the affected country, and weaken the country's socioeconomic institutions and its capacity to attract and retain investments (Faria and Mauro, 2009; Benassy-Quere et al., 2007; Drakos and Kutan, 2003)[7]. By so doing, armed conflicts undermine the economic wellbeing and growth in the affected areas. Finally, the introduction of natural resource endowment in the baseline model is based on the generally acclaimed positive correlation between resource endowment and conflicts in Africa (see for instance Alao, 2007; Ross, 2004).

Adopting the proxies as specified in the World Development Indicators (WDIs) Database, we define unemployment as the percentage of unemployed persons to total labour force in the country; military spending as the percentage of military expenditure to GDP; dependency is measured as the percentage of dependent population to working population; natural resource

[7] For an empirical evidence of the link between infrastructure and development in africa, see Calderon and Serven (2010).

endowment is measured as the ratio of mineral rents to GDP; and infrastructure is defined in terms of the ratio of gross fixed capital formation to GDP. The descriptive characteristics of these variables are reported in table below.

Table 1: Summary statistics on FDI & the independent variables used in the estimation

	Observations	Mean	Standard Dev.	Minimum	Maximum
Wellbeing	729	0.4850	0.1214	0.1180	0.8470
Growth	796	2.6400	9.1622	-62.4650	142.0705
Conflict Intensity	799	572.7297	3636.8260	0.0000	73978.0000
Unemployment	799	10.9984	10.0724	0.6000	60.0000
Military Spending	748	2.6578	3.7054	0.1000	34.3764
Resource Endowment	782	16.7351	16.7781	0.3219	86.1680
Dependency	799	84.0579	14.3761	43.4788	111.4636
Infrastructure	780	20.4987	16.5907	-36.5273	218.9930

As shown in the table 1 above, the high standard deviations associated with the research variables underscore the high level of disparities in the economic profiles of African countries. Based on the 2013 World Development Report, for instance, GDP values vary from up to US$500 billion for Nigeria to less than US$1 billion for The Gambia. Similarly, the level of economic wellbeing measured as HDI varies from 0.337 in Niger to as high as 0.784 in Libya; infrastructural development measured as gross fixed capital formation to GDP varies from 4.18 percent in Burkina Faso to 58.36 percent in Equatorial Guinea; whereas the level of mineral rents to GDP varies from 1.87 percent in Namibia to 59.82 percent in Republic of Congo. The high standard deviations associated with the armed conflict variable are also an indication of the skewed nature of conflict intensity in the continent – ranging from 0 rate of mortality per year in Botswana to 6,816 per year in Sudan in 2013.

Empirical Model

The baseline estimation model used in the study is presented as follows.

$$Y_{i,t} = \alpha + \sum_{i=1}^{J} \beta_i (L) Y_{i,t} + \sum_{i=1}^{K} \eta_i C_{i,t} + \sum_{i=1}^{L} \gamma_i \chi_{i,t} + \sum_{i=1}^{L} {}_i \chi.\chi_{i,t} + \varepsilon_{i,t}$$

where $Y_{i,t}$ represents consecutively economic growth rate and economic wellbeing in country i at time t; $C_{i,t}$ represents the proxy for conflict intensity; the sigma sign represents the lag order of the series, while L is the lag operator (with $LGrowt_{i,t} = Growt_{i,t-1}$ or $LHDI_{i,t} = HDI_{i,t-1}$ as the case may be) ; $\chi_{i,t}$ and $\chi.\chi_{i,t}$ stand for vectors of the control and the multiplicative variables, respectively; $\beta_i, \eta_i, \gamma_i \; and \; _i$ are the respective coefficients of the conflict variable and each of the multiplicative variables. α and $\varepsilon_{i,t}$ are the constant term and the white noise, respectively. All the data series are converted to their natural logarithms in order to smoothing the series and to reduce the level of inter-correlation. Following Levine et al. (2000) and Ezeoha and Cattaneo (2012) log(100% + per capita GDP growth rate) is used to minimise the number of missing observations due to logging series with negative values. Table 2 below contains correlation coefficients of both the normal and logged series.

Table 2: Correlations between the variables used in the different functional estimations

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Wellbeing	1.0000							
Growth	0.0872	1.0000						
Conflict Intensity	-0.0671	-0.0469	1.0000					
Unemployment	0.3639	-0.0402	-0.0367	1.0000				
Military Spending	-0.0458	-0.0944	0.1077	0.0842	1.0000			
Resource Endowment	0.1300	0.0402	0.1200	0.0167	-0.0001	1.0000		
Dependency	-0.7420	-0.0061	0.1010	-0.4415	0.0092	-0.0020	1.0000	
Infrastructure	0.1799	0.3494	-0.0043	0.0637	0.0517	0.0762	-0.0422	1.0000
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
LogWellbeing	1.0000							
LogGrowth	0.0599	1.0000						
LogConflict Intensity	-0.2000	-0.1043	1.0000					
LogUnemployment	0.4159	-0.0492	-0.1143	1.0000				
LogMilitary Spending	0.0721	-0.0595	0.1360	0.2598	1.0000			
LogResource Endowment	-0.1361	-0.0033	0.2608	-0.0932	-0.0183	1.0000		
LogDependency	-0.6967	0.0134	0.1648	-0.4427	-0.1162	0.1374	1.0000	
LogInfrastructure	0.2072	0.0270	-0.1108	0.0884	0.0309	-0.0187	-0.0701	1.000

Considering the likelihood of multicorrelation in the baseline model (i.e. the fact that the elements of the vector $\chi_{i,t}$ are theoretically related to each other and that $\chi_{i,t}$ are correlated with the error term (α)), as well as $\chi_{i,t}$ being endogenous to $Y_{i,t}$, estimating the regression parameters using only an OLS fixed-effects or a traditional random effects model might prove inefficient. An attempt such endogeneity and multicollinearity problems in a conventional growth estimation equation have resulted to the preference of dynamic system estimation techniques in place of the traditional regression models (see for instance, Ezeoha and Cattaneo, 2012; and Asiedu and Lien, 2011). In this study, I used the dynamic system general method of moment (SYS GMM) estimation model. This technique has been proved to be more robust and efficient in the presence of multicollinearity problem (Arellano and Bond, 1995) – that is in an estimation process involving theoretically inter-related macroeconomic variables[8]. As in Asiedu and Lien (2011), the first different of all the exogenous variables are used by the difference and system estimators as standard instruments; and the lags of the endogenous variables are applied to generate the system GMM-type instruments described in Arellano and Bond (1991). The system estimations make use of lagged differences of the endogenous variables as instruments for the level equation.

Evidence from all the functional specifications, as shown in table 4, provides strong confirmation of the null hypothesis that the over-identifying restrictions for a system GMM model are valid in all the functional equations. This is reflected in the probability value of the Sargan χ^2, which range from 0.314 to 0.347 for columns 1 to 7 of table 3. The result also provides justifications for the choice of the exogeneity of the levels and differenced instruments, as required in a system GMM model. The post-estimation evidence also leads to the rejection of the *null hypothesis* of no serial correlation at order one in the first-differenced errors but a failure to reject same at order two (with AR(1) = -1.803 (0.071)* in column 4 to -1.182 (0.070)* in column 3; and AR(2) = -0.598 (0.550) in column 7 to -0.911 (0.362) in column 4). There is thus no evidence to invalidate the model considering that, according to Arellano and Bond (1991), the GMM estimates are robust in the presence of first-order serial correlation, but not in the second-order serial correlation in the error terms.

[8] The Deprevation hypothesis assumes a bi-directional relationship between conflicts and poor economic wellbeing. Whereas dpereciation can cause people to take up arms against the government, persisten arm conflict itself can further undermine citizens' wellbeing.

4. Results

Non-Dynamic Estimation Results

I first undertake a non-dynamic estimation in order to establish a comparative basis for the results of the system dynamic model. This require that I carryout consecutively pooled regression (which does not account for any individual or time effects in the model), fixed-effect, and random-effect regression estimations. Comparatively, the arising results show that the lagged values of both the economic growth and economic wellbeing variables have positive and significant impact on their current values, which is an indication of the dynamic nature of both variables. Next, examining the armed conflict intensity variable, the results reveal a consistent negative and largely significant effect, which is a confirmation of the theoretical expectation that armed conflicts have the capacity to undermine development. Expectedly also, military spending appears to have constraining effects on growth and wellbeing, although the coefficient is significant only in the fixed-effect model and for the wellbeing equation. Uniformly also, infrastructural development is found to have positive and largely significant effect on both wellbeing and growth, whereas dependency ratio has consistently negative effect but only significant for the pooled and the random effect models. The impact of unemployment and natural resource endowment is found to be inconsistent across the different estimation models in the non-dynamic model.

Table 3: Non-Dynamic Regression Estimations for the Wellbeing and Growth Equations

	Well-Being			Growth		
	Pooled	**FE**	**RE**	**Pooled**	**FE**	**RE**
Wellbeingt-1/Growtht-1	0.6531***	0.169***	0.382***	0.1328***	-0.2363***	-0.1328***
	(0.0251)	(0.291	(0.0288	(0.0360	(0.0354)	(0.0360)
Conflict Intensity	-0.0031*	-0.0064***	-0.0060***	-0.0020**	-0.0087***	-0.0020**
	(0.0018	(0.0021	(0.0021	(0.0010	(0.0015)	(0.0010)
Unemployment	0.0198***	-0.0256	0.0445***	0.0034	-0.0180	-0.0034
	(0.0061)	(0.0259)	(0.0105	(0.0033)	(0.0173)	(0.0033)
Military Spending	-0.0029	-0.0394***	-0.0109	-0.0044	-0.0094	-0.0044
	(0.0065)	(0.0103)	(0.0089	(0.0035)	(0.0070)	(0.0035)

Resource Endowment	-0.0008	0.0071	-0.0055	0.0017	0.0028	0.0017
	(0.0044)	(0.0076)	(0.0061	(0.0024)	(0.0051)	(0.0024)
Dependency	-0.3022***	0.0306	-0.3923***	-0.0012	-0.0132	-0.012
	(0.0326)	(0.0764)	(0.0457	(0.0139)	(0.0515)	(0.0139)
Infrastructure	0.0833*	0.0518	0.0901*	0.0596**	0.0661**	0.0596**
	(0.0494)	(0.0490)	(0.0513	(0.0267)	(0.0327)	(0.0267)
Constant	0.2807***	-0.4047***	0.3394**	2.1583***	2.3972***	2.1583***
	(0.1170)	(0.1742)	(0.1384)	(0.0938)	(0.1361)	(0.0938)
R2 Adjusted	0.7755	0.1974	0.7477	0.0259	0.0274	0.0355
F Statistic	354.30***	10.15***		3.71***	11.72***	
Wald X2			635.95***			25.99***
Hausman Test			166.20***			58.05***
No. of Observations	717	717	717	717	715	715
Year	1997-2013	1997-2013	1997-2013	1997-2013	1997-2013	1997-2015

Dynamic Estimation Results

Table 4 contains the outcome of the two-step robust error correction system GMM estimation based on the economic wellbeing equation and using different functional equations. I focus specifically on the economic wellbeing as the main dependent variable because of the relative importance of such subject matter in Africa's economic development discuss. The arising results, for all the functional estimations, provide strong confirmation for the dynamic assumption of the system GMM model, with the coefficient of the lagged wellbeing and growth variables, Y (β_i) appearing significant mostly at 1 per cent level. This agrees with the assumption depicted in the baseline estimation model that both economic growth and economic wellbeing, as respectively proixed by per capita GDP growth and HDI, maintain a dynamic pattern in most African countries.

For the results appearing in columns 1 to 7 of table 4, for instance, the coefficient of the lagged values of the wellbeing variable is consistently positive and significant at 1 percent level. The introduction of interactive terms (between conflict and the controlled variables) does not also invalidate this baseline result. Columns 1 to 6, which measures the interactive impact of armed conflicts on economic wellbeing, shows a very significant and negative outcome – a result that is very consistent with the outcomes of the non-dynamic models, prevailing theoretical projections and the earlier empirical evidence by Polachek and

Sevastianova (2010) and Miguel et al. (2004). This is a confirmation of the general expectation that armed conflicts intensity has the tendency of constraining economic growth and undermining the wellbeing of the residents of the places affected. This further suggests that the persistent instability and chronic poverty situation in most parts of Africa might largely be a corresponding outcome of the persistence of armed conflicts in the continent.

The constraining impact of conflict intensity, as revealed by the system dynamic GMM estimations, is exacerbated by the negative impact of unemployment, rising military spending, increase in the number of the dependent population. Consistent with the earlier finding by Camacho and Rodriguez (2011) and Collier and Duponchell (2010), increased unemployment rate worsens a country's level of economic wellbeing. From the estimation, it is shown that a unit increase in the level of unemployment causes a high proportionate decrease in the level of HDI. In similar vein an increase in military spending, and dependency population possibly induced by rising in armed conflicts and insurgences, brings about a higher proportionate of decrease in the level of HDI.

The above reported results provide strong proof that in Africa armed conflicts more significantly affect economic wellbeing though the unemployment and fiscal channels. It proved that prolonged armed conflicts leading to displacement and destructions render erstwhile productive population into dependent population. Such displacement and destruction consequently cut people off from their means of livelihood and intensify incidence of poverty in the affected country. Outside displacement, another explanation arising from the results of this study is that the usual destruction of public infrastructure and private investment outlets during conflicts destroys employment potentials and capacity of the affected areas. As shown by the interactive impact of military spending, prolonged armed conflicts brings about diversion of fiscal resources from the socioeconomic development-oriented sectors of the economy to the acquisition of arms and military hardware needed to combat persistent conflicts and insurgence.

Table 3: Dynamic Regression Estimations for the Wellbeing Equation, based on the System Dynamic GMM Model

	1	2	3	4	5	6	7
Wellbeingt-1	0.8330***	0.4143***	0.7370***	0.6033***	0.2065***	0.2276***	0.1843**
	(0.0766	(0.1278)	(0.1056)	(0.1455)	(0.0865)	(0.0948)	(0.0779)
Conflict Intensity	-0.0250***	-0.0417***	-0.0299***	-0.0396**	0.1025**	-0.0559*	0.0785
	(0.0079)	(0.0126)	(0.0082)	(0.0205)	(0.0433)	(0.0345)	(0.1024)
Unemployment		-0.2181***					0.0566
		(0.0526)					(0.0411)
Military Spending			-0.1810**				-0.0549
			(0.0925)				(0.0394)
Resource Endowment				-0.0882***			0.0367***
				(0.0354)			(0.0142)
Dependency					-0.1361***		-0.0167
					(0.0159)		(0.1582)
Infrastructure						-0.1230***	-0.1801
						(0.0157)	(0.1472)
Conflict*Unemployment		0.0306***					-0.0169
		(0.1200)					(0.0113)
Conflict*Military Spending			0.0311**				0.0036
			(0.0147)				(0.0062)
Conflict*Resource Endowment				0.0200			-0.0045
				(0.0152)			(0.0051)
Conflict*Dependency					-0.0577***		-0.0863***

					(0.0231)		(0.0330)
Conflict*Infrastructure						0.0229	0.0466
						(0.0161)	(0.0514)
Wald X2	1456.28***	389.42***	1305.59***	1498.36***	1112.32***	809.38***	1222.58***
AR(1)	-1.6727	-1.6315	-1.1815	-1.8031	-1.5272***	-1.4727	-1.5167
	(0.0944)	(0.1028)	(0.0695)	(0.0714)	(0.1267)	(0.1408)	(0.1293)
AR(2)	0.6627	0.263	0.4389	0.9113	-0.4079	-0.3118	-0.5977
	(0.5075)	(0.7926)	(0.6607)	(0.3621)	(0.6834)	(0.7552)	(0.5500)
Sargan Test	46.459	46.321	46.03	45.682)	46.668	46.944	42.877
	(0.332)	(0.337)	(0.348)	(0.361)	(0.324)	(0.314)	(0.477)
No. of Instruments	45	47	47	47	47	47	55
No. of Observations	744	744	707	728	744	729	681
Year	1997-2013	1997-2013	1997-2013	1997-2013	1997-2013	1997-2013	1997-2013

Table 4 also reveals the results of the interactive effects of armed conflicts on economic wellbeing, which forms the major thrust of this paper. First, the positive and significant coefficient of the interaction between conflict and unemployment, suggests that the negative impact of conflicts on economic wellbeing intensifies as the rate of unemployment increases in the affected countries (see column 2 of table 4 above). Similar evidence is found on the impact of military spending, with the results showing that economic wellbeing deteriorates in the presence of rising military spending associated with prolonged and intense armed conflicts – a result that is consistent with the conclusion of Orugon (2003) that armed conflicts strain the financial resources of the actors and by so doing undermine sustainable and viable political stability and economic development in the conflict-ridden. A rather surprising outcome is the fact that the interactive variable between conflict and dependency population is significantly negative. This might suggest that the negative impact of armed conflict is moderated by the proportion of dependency population in a country. Although this falls short of the apriori expectation, such result in the case of Africa can be explained by the aid-dependency nature and extended family system that is prevalent in most African societies. I find no significant outcome for the natural resource endowment and infrastructure variables, considering the non-significant nature of their respective interactive coefficients.

5. Conclusion

The nature and intensity of armed conflicts in Africa have followed a very dynamic process since the colonial political era. The patterns of conflicts have continued persistently from the nationalistic struggles by groups who were then fighting for the independence of their countries prior to early 1960s, to resistance to indigenous governments based on ethnic considerations and individual political interests immediately after independence, then to series of military coups and counter-coups that were later to characterize Africa's independent states, and then to the current strategy of terrorism and insurgences against the authority of the states. Amidst the persistent intensity of armed conflicts in the Continent, few countries have managed to achieve high economic growth without a significantly corresponding improvement in their citizens' economic wellbeing. At the same time also, a good number of the countries have made insignificant progress in both the attainment of reasonable economic growth and improvement in citizens' economic wellbeing. Few countries that managed to achieve high growth rates failed to evolve effective policies and strategies to guarantee the growth sustenance. This is also coupled with the cyclical wave

from historically conflict-prone countries to increased intensity of armed conflicts even in countries erstwhile assumed to be politically stable.

In this study, I used a panel dataset involving 46 African countries over the period 1997-2013 to investigate the individual and interactive impact of the changing dynamism of armed conflicts on economic growth and wellbeing in Africa. Applying a two-step robust Dynamic System General Method of Moment (GMM) estimation technique, the coefficient of the lagged values of the economic wellbeing variable is consistently positive and significant at 1 percent level – confirming the dynamic nature of the baseline estimation models. The results also reveal that interactively, the impact of armed conflicts on economic wellbeing is negative and highly significant in most of the function equations used in the estimation. This is true for both the dynamic and the non-dynamic models, and a confirmation of the general expectation that armed conflicts intensity has the tendency of constraining economic growth and undermining the wellbeing of the residents of the countries affected. It further suggests that the persistent instability and chronic poverty situation in most parts of Africa might largely be a corresponding outcome of the persistence of armed conflicts.

Regarding the strength of the interactive impact of armed conflicts on economic wellbeing and the likely channels through which that occurs, the results of this study more consistently reveal a negative and significant impact of unemployment and military spending interactive variables. Whereas the interactive result with unemployment suggests that the negative impact of conflicts on economic wellbeing intensifies as the rate of unemployment rises in the affected countries, the result with military spending shows that economic wellbeing deteriorates in the presence of rising military spending associated with prolong and intense armed conflicts. The outcome of the study suggests that addressing issues relating to unemployment and fiscal imbalances induced by military spending is crucial in the current and prospective post-conflict economic policymaking process in Africa. Sound fiscal policies that ensure reduced military spending and higher proportionate budgetary allocation to productive economic sectors will help to calm socio-political tensions and improve economic wellbeing of the citizens.

References

Alao, A. (2007), Natural Resources and Conflicts in Africa: The Tragedy of Endowment, Rochester: University of Rochester Press

Ashby, N. J. & Ramos, M. A. (2013). Foreign direct investment and industry response to organized crime: the Mexican case, *European Journal of Political Economy,* 30, 80–91

Arellano, M. & Bover, O. (1995). Another look at the instrumental variable estimation of error component models, *Journal of Econometrica*, 68, 29-51.

Asiedu, E. & Lien, D. (2011). Democracy, foreign direct investment and natural resources, *Journal of International Economics*, 84(1), 99-111

Bandyopadhyay, S.; Sandler, T. & Younas, J. (2014). Foreign direct investment, aid, and terrorism, *Oxford Economic Papers*, 66(1), 25-50

Benassy-Quere, A.; Coupet, M. & Mayer, T. (2007). Institutional determinants of foreign direct investment, *The World Economy,* 764-781

Benassy-Quere, A.; Coupet, M. & Mayer, T. (2007). Institutional determinants of foreign direct investment, *The World Economy,* 764-781

Bilson, C.; Brailsford, T.; Hallett, A.; & Shi, J. (2012). The impact of terrorism on global equity market integration C Bilson, *Australian Journal of Management:* 37, 47

Blomberg, S. B.; Hess, G. D. and Weerapana, A. (2004), Economic conditions and terrorism, European Journal of Political Economy, 20: 463–478

Bussmann, M. (2010). Foreign direct investment and militarized international conflict, *Journal of Peace Research*, 47(2), 143-153

Calderon, C. And Serven, L. (2010). Infrastructure and economic development in Sub-Saharan Africa, *Journal of African Economies*, 19, i13-i87

Camacho, A. and Rodriguez, C. (2011), Firm Exit and Armed Conflict in Colombia, UNU-WIDER Project Workshop on Entrepreneurship and Conflict, March

Collier, P. (2000), Economic Causes of Civil Conflict and their Implications for Policy. Washington DC: The World Bank.

Collier, P. and Duponchel, M (2010), *The Economic Legacy of Civil War: Firm Level Evidence from Sierra Leone*, WIDER Working Paper, 90

Copson, R. W. (1994), Africa's Wars and Prospects for Peace, M. E. Sharpe Publishers.

Date-Bah, E. (2001), Crises and Decent Work: A Collection of Essays, InFocus Programme on Crisis Response and Reconstruction, International Labour Office. Recovery and Reconstruction Department, International Labour Organisation.

Davies, V. A. B. (2000), Sierra Leone: Ironic Tragedy. *Journal of African Economies* 9, no. 3: 349-369.

Drakos, K. & Kutan, A. (2003). Regional effects of terrorism on tourism in three Mediterranean countries, *Journal of Conflict Resolution*, 47, 621-641

Dunne, P. and Mhone, G. (2003), Africa's Crises: Recent Analysis of Armed Conflicts and Natural Disasters in Africa, InFocus Programme on Crisis Response and Reconstruction, International Labour Office. Recovery and Reconstruction Department, International Labour Organisation.

Ezeoha, A. E. & Cattaneo, N. (2012). FDI flows to South Saharan Africa: impact of finance, institutions and natural resource endowment, *Comparative Economic studies*, 54, 597-632

Faria, A. & Mauro, P. (2009). Institutions and the External capital Structure of Countries, *Journal of International Money and Finance*, 28, 367-391

Furley, O. (1995), Conflict in Arica, London: Tauris Academic Studies, Edited, 134-179

Gates, S.; Hegre, H.; Nygard, H. M. and Strand, H. (2012), Development Consequences of Armed Conflict, World Development, 49(9): 1713-1722

Global Protection Cluster Working Group (2010), *Handbook for the Protection of Internally Displaced Persons*, UNHCR, March

Gurr, Ted Robert. 1970. Sources of Rebellion in Western Societies: Some Quantitative Evidence. *Annals of the American Academy of Political and Social Science* 391: 128-144.

Herbst, J. (2000), Economic Incentives, Natural Resources and Conflict in Africa, *Journal of African Economies*, 9(3): 270-294

Humphreys, M. (2003), Economics and Violent Conflict, Harvard: Harvard University Press, http://www.preventconflict.org/portal/economics

Jemera, R; Prendergast, J. and Sorensen, K. (1994), Civilian Devastation: Abuses by All Parties in the War in Southern Sudan, Human Rights Documents: Africa, Volume 3169, Issue 122.

ICRC (2008), How is the Term "Armed Conflict" Defined in International Humanitarian Law? International Committee of the Red Cross (ICRC) Opinion Paper, March

IMF (2000), Corruption and Military Spending, *Issues 0-23 of IMF Working Papers*

Kilcullen, D. (2006), Counter-Insurgency Redux, in: Survival: The IISS Quarterly, 48(4).
Lei, Y. And Michaels, G. (2014), Do Giant Oilfield Discoveries Fuel Internal Armed Conflicts?, Journal of Development Economics, 110:139-157

Lemarchand, R. (2009), *The Dynamics of Violence in Central Africa*. Philadelphia: University of Pennsylvania Press.

Levine, R.; L. Norman and Beck, T. (2000). Financial intermediation and growth: causality and causes. *Journal of Monetary Economics*, 46(1), 31–77.

Lopez, H. and Wodon, Q. (2005), The Economic Impact of Armed Conflict in Rwanda, *Journal of African Economies,* 14(4): 586-602

Miguel, E.; Satyanath, S.; and Sergenti, E. (2004), Economic Shocks and Civil Conflict: An Instrumental Variables Approach, *Journal of Political Economy*, 112(4): 725-753

Minoiu, C. and Shemyakina, O. N. (2014), Armed conflict, household victimization, and child health in Côte d'Ivoire, Journal of Development Economics, 108:237-255

Murdoch, J. C., and T. Sandler. 2004. ''Civil Wars and Economic Growth: Spatial Dispersion.'' American Journal of Political Science 48:138–51.

Nitsch, V. & Schumacher, D. (2004). Terrorism and International Trade: An Empirical Investigation, *European Journal of Political Economy,* 20, 432-433

Oetzel, J., Getz, K.A., Ledk, S. (2007), The role of multinational enterprises in responding to violent conflict: a conceptual model and framework for research, American *Business Law Journal* 44, 331–358.

Orogun, P. S. (2003), Plunder, Predation and Profiteering: The Political Economy of Armed Conflicts and Economic Violence in Modern Africa**,** *Perspectives on Global Development and Technology*, 2(2): 283-313

Otubanjo, F. (1980), African Guerrillas and Indigenous Governments, Conflict Quarterly, 1, pp. 32-41

Pedersen, D. (2002), Political Violence, Ethnic Conflict, and Contemporary Wars: Broad Implications for Health and Social Well-being, *Social Science & Medicine* 55: 175–190

Poireri, T. (2012), The effects of armed conflict on schooling in Sub-Saharan Africa, International Journal of Educational Development, 32(2): 341-351

Polachek, S. W. and Sevastianova, D. (2010), *Does Conflict Disrupt Growth? Evidence of the Relationship between Political Instability and National Economic Performance*, IZA DP No. 4762 February

Pshisva, R. and Suare, G. (2010), Capital Crimes: Kidnappings and Corporate Investment in Colombia. *In The Economics of Crime: Latin America and International Perspectives.* University of Chicago Press

Querido, C. (2009), State-Sponsored Mass Killing in African Wars – Greed or Grievance? *International Advances in Economic Research* 15(3): 351-361.

Raleigh, C.; Linke, A.; and Dowd, C. (2014), Armed Conflict Location and Event Data Project (ACLED) Codebook 3, University of Sussex and University of Colorado, Boulder

Rodrik, D. 1999. ''Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses.'' Journal of Economic Growth 4:385–412

Ross, M. L. (2004), What Do We Know about Natural Resources and Civil War, Journal of Peace Research, 41(3): 337-356

Rustad, S. A. (2012), A Price Worth Fighting for? Natural Resources and Conflict Recurrence, *Journal of Peace Research*, 49(4): 531-546

Serneels, P. and Verpoorten, M . (2013), The impact of armed conflict on economic performance Evidence from Rwanda, Journal of Conflict Resolution 201X, Vol XX(X) 1-38

Stewart, F. (2000), The Root Causes of Humanitarian Emergencies. *In War, Hunger, and Displacement: The Origins of Humanitarian Emergencies*, ed. E. Wayne Nafziger, Frances

Stewart and Raimo Väyrynen, 1-42. Oxford: Oxford University Press, UNU/WIDER Studies in Development Economics, 1.

The Economist (2014), Defence Spending – Arms and the African, November 22

Tzifakis, N. (2013), Economic Motivations for Armed Conflict, Encyclopedia Princetoniensis: The Princeton Encyclopedia of Self-Determination, Edited by W. F. Danspeckgruber, Princeton University, Liechtenstein Institute on Self-Determination.

UNICEF (1996), Impact of Armed Conflicts on Children, Fifty-first session of the United Nations, A/51/150

Wharton, K. and Oyelere, R. U. (2011), Conflict and its Impact on Educational Accumulation and Enrolment in Colombia: What We Can Learn from Recent IDPs, IZA DP No. 5939, August