

Conflict costs and economic development: Niger Delta conflict

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Abstract

Economic growth is a prerequisite to economic development. Conflict is associated with costs that affect economic development levels. Identifying conflict costs could be a difficult task but the categorization of conflict costs into physical costs, human costs, social costs, natural costs and environmental costs as provided by Harris(1997) was used to determine the costs of the Niger Delta conflict. The aim of this paper is to examine the costs of conflict in the Niger Delta and the level of economic development in the region. This paper will investigate the relationship that exists between the costs of conflict and the level of economic development in the Niger Delta. The study uses development indicators such as the Human Development Index (HDI) and the Gini coefficient. Findings show that there was economic growth in the Niger Delta as the PCE level increased in the year 2004 compared to the year 1996. However, this economic growth did not lead to economic development in the Niger Delta. This is evident in the low level of human development in the region. Also the distribution of income in the region was far from equal as reflected by the gini-coefficient trends. It was found that the relationship between conflict costs and the level of economic development in the Niger Delta was negative, a sign that physical costs, human costs, social costs and natural costs of conflict all reduce the human standard of living.

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Introduction

Conflict situations are not desirable to any country. The effects of conflicts are felt not just by individuals, but the environment and society. The individuals are affected by the loss of loved ones. The environment can be affected through pollution which can negatively affect agriculture when chemicals and machinery is used in conflict situations. The problems to the individual and the environment are problems to the society in general. This is because the rulers of the society have to make decisions that would affect the lives of individuals and the environment. Conflict sometimes is initiated by the desire of one group to pass across a message to another or to the government.

The issue of conflict and economic development is one that we can liken to a vicious cycle. This is evident in the Niger Delta where economic underdevelopment is a reason for conflict, while conflict is known to cause underdevelopment. Initially the indigenes of the Niger Delta tried to use non-violent means to register their displeasure about the underdevelopment of their region. The failure of the diplomatic means led to the introduction of violent and more aggressive tactics to let the government know about the underdevelopment in the Niger Delta. These violent means of protest have also resulted in the encouragement of economic underdevelopment of the region. The conflict has caused environmental damage, affected food supply and income levels in the Niger Delta. Agriculture the primary source of survival for the indigenous people of the Niger Delta has been affected. "Pollution arising from oil spillage destroys marine life and crops, makes water unsuitable for fishing and renders many hectares of farmland unusable. Brine from oil fields contaminates water formations and streams, making them unfit as sources of drinking water" (Ibeanu, 2006:28).

Underdevelopment is not the only reason for conflict, just as conflict is not the only reason for underdevelopment. The struggle for control of oil and other resources is a major reason for the Niger Delta conflict. We will try to identify conflict costs and their effects on economic development in the Niger Delta case. The paper will explore the effect of using conflict to

achieve economic development in this region. We will assess the level of economic development in this region compared the rest of Nigeria and other countries that have similar circumstances and resources.

The major aim of this paper is to examine the relationship that exists between conflict, conflict costs and economic development. It will point out the major costs associated with conflict and try to show the implication of these costs on economic development. The specific aim of this paper is to identify the major costs of the conflict in the Niger Delta and its implications on the level of economic development.

The key motivation for this study is the development problems afflicting the Niger Delta in Nigeria. The high level of unemployment, issues of environmental degradation, the high poverty and inequality rate are but a few of the developmental issues in the Niger Delta. These issues are part of the reasons for the conflict in the Niger Delta. Unfortunately the conflict has only resulted in expanding the level of underdevelopment. If the aim of the protests was to fight for economic development, the conflict has only been counterproductive.

Another motivation is the fact that Angola briefly overtook Nigeria in the middle of 2010 as the largest oil producer in Africa due to a wave of militant attacks in the oil-rich Niger Delta. Nigeria was estimated to produce 1.75 million b/d and Angola produced 1.78 million b/d (Onwuka, 2010). This shows that the conflict in the Niger Delta is significant in determining Nigeria's position in oil production.

The research intends to fill a gap in the literature on conflict and economic development. There are many studies on conflict, and other separate studies on economic development, but few studies try to relate the costs of conflict to economic development levels. This study will try to establish possible relationship between conflict costs affect economic development.

The paper relied on secondary sources data from textbooks, journal articles, government publications and papers sourced online. Only reliable sources of data would be used for this research. Internet sources included the World Health Organization, the Central Intelligence Agency and United Nations websites. The research methodology would largely comprise of literature review and use of descriptive analysis. The major limitation of this study is the limited availability of statistics on the Niger Delta region. Most of the data obtained are not up to date or do not give direct statistical data on the Niger Delta. Most of the data focuses on Nigeria and few on the Niger Delta states. The time limit and availability of funds for this research did not permit the possibility of field research to take place.

The paper is divided into five sections. Section 2 reviews literature on economic development and the costs of conflict. Section 3 analyzes the costs of the Niger Delta conflict and the level of economic development in the region. Section 4 tries to investigate any links between the costs of the Niger Delta conflict and the level of economic development in the region. Conclusion and policy proposals are presented in Section 5.

The Niger Delta conflict

Oil is said to be the major cause of the conflict in the Niger Delta for decades. It can be likened to the resource curse situation. This is because before the discovery of oil, the indigenes of the Niger Delta depended on farming and other agricultural activities as their primary source of income. Agriculture still remains a significant revenue generator for the region as it accounted for about 44% of employment in 2006 (UNDP, 2006).

The southern border of the Niger Delta is surrounded by water which was and is still used by indigenes of the Niger Delta for fish farming. "Crude oil was discovered in commercial quantity in the region specifically in the present Bayelsa State in 1956" (Eregha and Irughe, 2009:160). Since the discovery of oil, Nigeria engaged in oil exploration in large quantities. The discovery of

oil also brought about the investment by multinational oil and gas companies such as Shell and Chevron and commercial oil production commenced in 1958.

Oil production and trade contributes a large portion to the Nigeria budget revenue. Revenue from the sale of oil, taxation of oil companies and royalties paid to the Nigerian government by oil companies is significant in determining the Nigeria budget. This is one reason why the conflict in the Niger Delta region is of importance to the Nigerian government. Oil “accounts for 40% of the Gross Domestic Product” (Ikelegbe, 2005: 1) “Nigeria’s former military rulers failed to diversify the economy away from its overdependence on the capital-intensive oil sector, which provides 95% of foreign exchange earnings and about 80% of budgetary revenues” (CIA, 2011).

Despite 40 years of oil production and hundreds of billions of dollars of oil revenue, the local people of the Niger Delta remain in abject poverty; without even the most basic amenities such as water and electricity (Ejibunu and Tuschl, 2007:9). To properly illustrate the development situation in the Niger Delta, “there is one doctor per 82,000 people, rising to 132,000 people in some areas, especially the rural areas, which is more than three times the national average of 40,000 people per doctor. “Only 27% of the people in the Delta have access to safe drinking water and about 30% of households have access to electricity” (Ibeanu, 2006:12).

Oil revenue is not used to develop the Niger Delta which is the oil producing region of Nigeria. The life of the indigenes of the Niger Delta has not improved since the discovery of oil in the 1950s. The indigenes of the Niger Delta claimed the property right to the oil discovered in the region and decided to protest against the government so as to claim the rights attached to the oil resource. “In 1966 AdakaBoro led a rebellion with his Delta Volunteer Services (DVS) against the Federal Government and formed the Niger Delta Republic” (Ejibunu and Tuschl, 2007:9). The aim was to ensure that development would come to the Niger Delta. The DVS did not engage in violent protest but a ‘diplomatic’ protest against the government.

The DVS was not successful in its campaign but it motivated other indigenes to rise up as leaders and speak against the underdevelopment in the Niger Delta. Ken Saro-Wiwa was one of such motivated leaders that emerged in the 1990s. "He applied peaceful, non-violent means reminiscent of the strategy and tactics of Mahatma Ghandi" (Ejibunu and Tuschl, 2007:9). His diplomatic strategy also proved to be ineffective as he and other eight compatriots were eventually killed by General SanniAbacha Nigerian a military dictator who saw their protest as a threat and were accused of inciting members of MOSOP to kill four Ogoni leaders (Ejibunu and Tuschl, 2007:9).

The failure of these diplomatic protest tactics used by historic activists like Saro-Wiwa and AdakaBoro led the indigenes of the Niger Delta to form groups that engaged in violent protests against the government. Of late "Various militant groups have sprung up of recent to undermine the activities of the oil companies using different methods and tactics, thereby daring the Nigerian State. Prominent among such groups are the Movement for the Emancipation of the Niger Delta (MEND), the Niger Delta Peoples Volunteer Force (NDPVF), the Joint Revolutionary Council (JRC), and the Movement for the Survival of the Ijaw Ethnic Nationality (MOSEIN)" (Ejibunu and Tuschl, 2007:10). To communicate their displeasure at the level of underdevelopment in the Niger Delta to the government, these groups engaged in "regular attacks on oil installations, kidnapping of foreign workers whom they usually release unharmed after they feel they have made their point" (Najibo and Umukoro, 2009:36).

The Niger Delta situation can be likened to a 'resource curse situation'. The huge revenue that is gotten from oil causes different parties connected to the resource to claim certain privileges to the resource. Contrasting privileges results in conflict. The oil resource is supposed to be a source of growth and development to the Niger Delta unfortunately it has only resulted in conflict. This is a typical resource curse situation.

Economic development

This paper is looking at the effect of conflict on economic development. This effect would not be effectively understood without proper knowledge of what economic development is. Traditionally “development has meant the capacity of a national economy, whose initial economic condition has been more or less static for a long time to generate and sustain an annual increase in its gross national income (GNI) at rates of 5% to 7% or more (Todaro and Smith, 2009:14). Unfortunately this definition does not do justice to the concept of economic development. This is because there are economies that have experienced economic growth as defined traditionally but do not see this growth in GNI translated into good life of the people. They still had problems of poverty, unemployment and discrimination.

These societal problems led to the redefinition of the term economic development. “During the 1970s, economic development came to be redefined in terms of the reduction or elimination of poverty, inequality and unemployment within the context of a growing economy (Todaro and Smith, 2009:15). It is issues of poverty, inequality and unemployment that would be used to gauge economic development in the Niger Delta. Basing our understanding of economic development around issues of unemployment, inequality and poverty, this paper is going to look at the effects that conflict has on poverty, inequality and unemployment. Economic indicators of poverty, inequality and the unemployment are used to determine economic development in the Niger Delta.

Defining economic development could be a very difficult task. A proper definition of the term ‘economic development’ is one that adequately addresses the diverse range of activities that are associated with the term. The following quote from Simon summarizes the continuous debate and differences around the definition economic development:

In an attempt to properly define ‘economic development’, *“debate, dissension, contestation and negotiation is ever-present, both on the*

ground in particular localities and among numerous official and unofficial agencies engaged in development work” (Simon, 1997:184).

One importance of a proper definition of economic development is the need for proper appraisal of different development activities in society. The ‘broadness’ and the ‘dynamic’ nature of economic development are critical in assessing economic development. The broadness attribute refers to the diverse range of activities that are associated with economic development. The dynamic element refers to the changing or evolving nature of the concept of economic development over time. For example, the understanding of economic development in the 1980’s is going to be different from its understanding in the 1950’s.

When discussing issues of economic development, the norm is the existence or prevalence of a positive change or improvement in economic indicators. The dynamic nature of economic development can be seen in the definition provided by Todaro and Smith (2009) and Roy (2004). Todaro and Smith (2009) look at the concept initially from a ‘traditional’ angle or with a ‘primitive eye’. There was a general assumption in those days that as per capita GNI rises, everyone in the world becomes better off both in economic and social terms (Todaro and Smith, 2009; Roy, 2004). This early definition of economic development narrowed it down to issues of GNI/GDP growth rates in a stable economy.

The traditional definition proved to be faulty, because it was found out in the 1950s and 60s, that a large number of Third World nations did achieve the overall UN growth targets but the living standards of the masses remained unchanged (Todaro, 1981). In the 1960s, income distribution statistics from India also revealed that income inequality was higher in poor countries than it was in richer countries (Roy, 2004). The events of the 1960s showed that higher GNI levels do not necessarily translate into happiness or better lifestyle in the economy.

In the 1970s, economic development was redefined to address three major issues. These issues are the reduction of poverty, inequality and unemployment within the context of a growing

economy (Todaro and Smith, 2009). The redefinition of economic development accepts the increase in GDP, but this increase in income in the economy should reduce poverty, should circulate round the economy equitably so as to reduce the inequality gap and also be used in ways that would generate jobs so as to reduce unemployment.

Bokhari and Duka (2008) in their historical analysis of economic development noted that in the early 20th century, the conceptualization of economic development was only with respect to economic growth and industrialization. This narrow the definition of economic development to only quantitative issues is actually what economic growth was all about (Kindleberger, 1965; Hess and Ross, 1997). Kindleberger (1965:3), in trying to make a distinction between economic growth and economic development, is of the opinion that “economic growth means more output, and economic development implies both more output and changes in the technical and institutional arrangements by which it is produced”.

What then does this imply for the dynamic nature of economic development? Willis (2005) mentions this when talking about the similarity between economic development and modernity. ‘Modernity’ in its broadest sense means the condition of being modern, new or up-to-date. It can be said that ‘the idea of “modernity” situates people in time’ (Ogborn, 1999:153). This tells us that what is seen to be modern today may be old fashioned tomorrow. According to Willis (2005) it is due to social, political and cultural dynamics that there tends to be this changing nature of modernity. Likewise, structures in society therefore change our conception of economic development.

Hess and Ross (1997) define economic development as the diffusion of economic growth and an expansion of economic opportunities. The quality of quantitative growth or the impact of quantitative growth on society is taken into consideration. This quote from Hess and Ross (1997) gives us an idea of how economic development transcends quantitative growth.

Economic development has a qualitative dimension; entails structural change and encompasses the reduction of poverty and widespread gains in nutrition, health, education and the standard of living. Economic development also involves the transformation of poor, stagnant primarily agrarian economies into diversified, urban-based economies capable of economic growth (Hess and Ross, 1997:8).

Indicators from these institutions also have to be considered when making calculations on the level of economic development that exists in a region. For example there are indicators that will tell us the level of poverty or education in a certain region or country. From the discussion so far, we have seen that there is a distinction between economic growth and economic development. Economic growth deals with quantitative growth, while economic development deals with qualitative and quantitative growth. However economic growth is a prerequisite to attaining economic development.

Measuring economic development is as controversial as the definition of economic development itself. In an attempt to adequately measure economic development there are a variety of indicators used by different organizations such as the World bank, IMF (International monetary fund) and OECD (Organization for Economic Cooperation and Development) in measuring economic development. These include GDP/GNI per capita, Gini coefficient, and the Human Development Index (HDI).

Economic growth indicators

There are a lot of economic growth indicators that are used by government to determine the level of economic growth in the economy. The most common of them is the GDP (Gross domestic product) or the GDP per capita. There is the GNI (Gross national income) or the GNI per capita. There is also the PCE (Per capita expenditure). The PCE can be examined with respect to different sectors in the economy. For instance there is the PCE in health and there is also household PCE. The GNI can simply be defined as GDP (Gross domestic product) plus the net receipts of primary income from abroad (OECD, 2011; World Bank, 2010). So basically it is

the GDP of a country that takes the income flow of non-residents of an economy into consideration. For development purposes it is the per capita indicators that will be examined. The GNI p.c. is the GNI divided by mid-year population (UNICEF, 2011; World Bank, 2010). The PCE (Total expenditure divided by the mid-year population) is calculated using the same process as the GNI p.c. The per capita indicators (GNI p.c. and PCE) are better indicators of development because they tell us what the situation in an economy should be if resources were divided equally.

Unfortunately there is a problem associated with using the per capita indicators (GNI p.c. and PCE). This is because the per capita indicators tells us what ought to be if the total GNI or expenditure was equally distributed among the population, but the reality is that the GNI is not equally distributed among the population in the economy.

For example, if the distribution of income were highly concentrated or very unequal, then a nation with a high per capita GNP might also have a large percentage of the living population living in poverty (Hess and Ross, 1997:11-12).

Another problem of per capita indicators is that the figures do not tell the actual composition of expenditure in the economy. "If a nation allocated a large percentage of income towards military expenditures, then per capita GNI might overstate the average level of personal consumption" (Hess and Ross, 1997:12). An overestimated GNI p.c. will give the wrong idea about the development level of an economy. These growth indicators have problems that can only be addressed by looking at other development indicators in the economy.

Gini coefficient and Gini index

Using per capita indicators as measurements of economic development, does not tell us the actual distribution of income in the economy. This problem is addressed using the Gini coefficient and the Gini index. They measure either income inequality or inequality in

consumption between individuals, households and groups in an economy (Willis, 2005). The Gini coefficient uses a range to tell you the level of equality or inequality that exists between households or groups. "Gini coefficients are aggregate inequality measures and can vary from zero (perfect equality) to one (perfect inequality)" (Todaro, 1981:124). The Gini index of zero represents perfect equality and the Gini index of 100 represents perfect inequality (OECD, 2006; World Bank, 2011; CIA, 2011; Willis, 2005). Figure 1 in 'Appendix A' shows a graphical representation of the Gini coefficient and index using the Lorenz curve. In figure 1, the closer the 'Lorenz curve' is to the line of equality, the more the existence of equality in distribution income between individuals and households. Figure 2 represents a case where income is not evenly distributed. We see that the Lorenz curve is further away from the line of equality. This also means that the value of the Gini coefficient is closer to one and the Gini index is close to 100. The Gini coefficient is not an independent determinant of economic development but it complements the economic growth indicators in analyzing development levels.

Human Development Index (HDI)

There is a long list of development indicators in existence that are used to complement the Gini coefficient or Gini index. Included in this list is the 'under-five mortality rate' which tells us the "probability of dying between birth and exactly five years of age expressed per 1,000 live births" (UNICEF, 2011; World Bank, 2011). The infant mortality rate tells us the "probability of dying between birth and exactly one year of age expressed per 1,000 live births" (UNICEF, 2011). There is the adult literacy, the net primary school enrollment and the list goes on. Due to this vast number of indicators, the next development indicator that will be examined by this paper is one that approaches the measurement of living levels in a holistic way. This is the 'Human development index' (HDI). The HDI was developed in the 1990's and is a measure that addresses not just the economic parts of development, but also well-being (Todaro, 2009; Willis, 2005). It is used by the UNDP to determine the development level of a country and ranks the development levels as developed country, developing country, or under-developed country. Country's that fall into the range of 0.463-0.579 has a high range and are said to be developed.

Those that range from 0.462-0.347 are said to be medium range and can be referred to as a developing country and any country that range from 0.346 to 0.299 is in the low range and can be said to be under developed (Duru, 2011; UNDP, 2006).

The HDI is said to be a holistic measure of living levels because of the number of variables that are considered when calculating the HDI. These measures are categorized under three categories which are a long and healthy life, education and knowledge, and a decent standard of living (Willis, 2005; Todaro, 2009). As good as the HDI is a determinant of development level, it also has its drawbacks. The major ones are that the HDI does not take quality into consideration. For instance the gross enrollment in primary, secondary and tertiary institutions does not take into consideration the quality of education being received by students (Todaro, 2009).

Costs of conflict

Every conflict situation has costs or negative outcomes. "First conflict causes direct and indirect casualties, the latter (much larger than the former) occurring largely as a result of reduced food supplies and access to health facilities which are sometimes the result of a deliberate strategy of war" (Harris, 1997:269). Harris carried out a study to estimate the war related deaths between 1980 and the early 1990s. In sub-Saharan Africa "of 64 wars, all but ten took place in developing countries. Of these 54, twenty were in sub-Saharan Africa. Total deaths from these wars were around 6.5 million of whom roughly 70 percent were civilians" (Harris, 1997:270). This can be interpreted to mean that the cost of conflict in the case of the conflicts in sub-Saharan Africa is the life of majority of innocent civilians. The death of innocent civilians has a negative impact on the productive and economic sectors of an economy. The loss of capable manpower to death has an effect on productivity.

The loss of productivity as a cost of conflict was also seen in a study carried out in Sudan. Mohammed (1997) carried out a study on the impact of the second Sudanese civil war of 1983-

1993. "The most worrying and alarming impact of the conflict in southern Sudan is the volume of destruction caused to the economically productive sectors" (Mohammed, 1997:238). The study found that the war had negative impacts on the agricultural sector, the industrial sector and the mining and petroleum sectors. Harris is of the opinion that "conflict and war result in longer-term impacts on humans such as forced relocation, post-traumatic stress and the psychological effects, the loss of skills impact on infancy and childhood malnourishment on subsequent adult productivity" (Harris, 1997: 271). Conflict forces the emigration of innocent civilians to other peaceful settlements. This emigration would have a negative impact on productivity because available manpower in the society would be reduced. The mental capacity of the civilians would also be damaged as images of the violence and bloodshed of the conflict would continue to flash and disturb their minds.

Conflict situation also has impact on the environment. While physical capital is being destroyed in times of war there is also no maintenance of infrastructure. The absence of maintenance causes infrastructure to deteriorate at a high rate (Harris, 1997: 270; Eregha and Irughe, 2009; Mohammed, 1997:239). Mohammed's research in southern Sudan looked at the damages done to the railway network, roads and bridges, hotels and tourist attractions, the water and irrigation system.

The other cost of war that is very controversial is the emergence of new diseases such as SARS (Severe acute respiratory syndrome) and HIV/AIDS (Acquired immune deficiency syndrome). SARS emerged in 2003 and its effects gave the world a cause for concern. "The factors causing concern included the new and unfamiliar nature of the disease and the fact that the causative agent and its natural reservoir and modes of transmission were not known, making it impossible at first to identify reliable containment methods, let alone cure the vaccine" (Njuguna, 2004:699). Research into the cause and cure of the disease were done but SARS was a very effective killer and had taken a lot of lives before the cure was found.

In May 2003, the WHO (World Health Organization) reported 7919 probable cases of SARS diseases and 622 deaths from 28 countries. With these statistics, the number of probable cases compares with that of the previous day increased by 60 cases and the number of deaths from the previous cases increased by 19 deaths globally (Global Alert and Response, 2003). The World Bank statistics show that the death rate rose by a hundred percent (19 deaths to 28 deaths) in a day. "Researchers, governmental organizations, non-governmental organizations (NGOs) and other observers have linked the SARS epidemic to biodefence issues, taking it as an opportunity to evaluate how well prepared the world is for a biological attack" (Njuguna, 2004:708). The disease could have been made by man and used as a weapon, or evolved from the interaction of chemicals used as biological weapons and other chemicals. If the SARS disease is a biological weapon or the result of the use of a biological weapon, its effectiveness in killing should be a cause of concern for the global community.

The goal of every business is to make profit. Businesses will apply different strategies in order to achieve maximum profit. Unfortunately, while undertaking in profit maximizing activities there are certain negative externalities associated with the business activities. An example could be air pollution associated with mechanization. The goal of the business is to make profit, but this profit generates the negative externality of pollution. The same logic can be applied to conflict situations. Most conflict situations are motivated by certain goals that the different conflicting parties aim to achieve. The conflict could result in the loss of life, destruction of infrastructure, revenue loss due to the suspension of different revenue generating products. These effects of the conflicts are the negative externalities associated with the conflict and can also be said to be the 'costs of the conflict'.

The costs of conflict are enormous and affect a diverse range of activities. In essence the cost of conflict is not just limited to the loss of life, or the damage to infrastructure, it goes beyond that. Harris (1997) categorizes these various costs of conflict into three groups. These are 'damage and destruction', 'loss of potential output' and 'the cost of additional military expenditure'. Harris (1997:276) provides us with Table 1 below that shows the categorization of the economic costs of conflict and the measurements for these costs. The paper will use this

model as a yardstick for investigating the economic costs of the Niger Delta conflict. For instance the subcategories of 'damage and destruction' (physical, natural human and social), to a certain extent address the different kinds of damages that can result from a conflict situation.

We can see examples of the physical costs of war when we look at the damage to infrastructure in the second civil war in Sudan. About 20 roads and 17 bridges were either totally destroyed or rendered non-motorable (Mohammed, 1997). Mohammed (1997) also pointed out that certain projects that were in progress to develop the infrastructure of Sudan were halted, such as the digging of the Jonglei canal which started in 1977 and stopped in 1983 due to the conflict. The war damage in Iran and Iraq (1980-1988) amounted to US \$450 billion and US \$67 billion respectively (Harris, 1997). Hotels and tourist attractions were destroyed due to the conflict. Nadir (1997) estimated that the total loss resulting from the conflict in tourism from 1983-1989 was US \$ 607 million.

Under the category of human costs the first costs that comes to mind is the loss of human life. This covers both civilians and the military. The best reference to make relates to Hiroshima and Nagasaki. A nuclear bomb was detonated on the 6th of August 1945 and resulted in the death of about two hundred thousand people (Raico, 2004). In South Sudan the first civil war (1955-1972) resulted in the death of 170,000 people. The second civil war took the life of 6000 persons by the end of 1988 (Mohammed, 1997). In Libya the National Transitional Council (NTC) says that by July 2011, 50 people had died, of which most of them were civilians and three more mass graves were discovered (Wishesh, 2011). There are other costs such as the physical and emotional damage, the loss of jobs and therefore a source of income, the desires of the public to emigrate in search for peaceful settlements.

Table 1: The economic costs of war

Category Description	Measurement
<p>1. <u>Damage and destruction</u></p> <ul style="list-style-type: none"> • Physical: Destruction, damage, rundown through non-maintenance. • Human: Death, physical and emotional damage, emigration, internal displacement. • Natural: Destruction, damage • Social: Damage to the operation of social and commercial interaction. 	<p>Measured by such costs as demobilizing combats, repairing damage and destruction, and displaced persons, and creating the social, political, and economic conditions for post-conflict society.</p>
<p>2. Lost potential Output</p> <ul style="list-style-type: none"> • As a result of the physical, human and natural damage. 	<p>Measured by the gap between actual and projected GDP during war.</p>
<p>3. The cost of additional military expenditure</p>	<p>Measured by the additional military expenditures</p>

Before ending the discussion on the human costs of conflict, it is important to mention the cost of the ‘emergence and spread of new diseases’. The use of biodefense in conflict situations can result in the emergence of new diseases. This is because the chemicals from bio weapons can interact with other dangerous chemicals in the environment resulting in the creation of deadly diseases. Such a disease includes the emergence of the SARS. Also in 1918 at the end of the First World War over 9 million people died, most were a result of the influenza (Spanish flu) outbreak. The war did not cause the outbreak but the movements of troops amplified the effect of the flu and caused it to spread rapidly (Enzler, 2006).

It is why conventions such as the Biological and Toxic Weapons Convention (BTWC) and the Chemical Weapon Disarmament (CWC) have been formulated. The BWTC entered into force on 26 March 1975, and by 14 November 2003, 151 states had ratified it. Also in December 2003,

158 states had ratified the CWC and a further 22 states has signed it. In 2003 Antigua and Barbuda, Palau, Sudan and Timor-Leste (East Timor) acceded to the BTWC convention, and Mali ratified it. An additional 16 states have signed but not ratified the BTWC convention (Guthrie et al, 2005:661). This tells us that the severity of the use of bio weapons in conflict situations is a serious matter as the governments of different states have begun to commit to conventions that are proactive towards eradicating the use of biodefense.

The next cost of war has to do with the destruction of 'mother nature'. The use of bombs, the destruction of infrastructure, and the use of nuclear weapons is harmful to the environment. What makes this attack on 'mother nature' really bad can be seen in Hastings' comment:

When the toxic preparation for war turns to actual firing of weapons towards the enemy, the Earth begins to suffer much more widespread, immediate damage and that environmental destruction is ironically more easily ignored (Hastings, 2000:29).

It is usually after the conflict that the environmental impacts of the conflict are considered. "Displacement created by civil war threatens the fragile land to which people move, putting more pressure on host environments. This led to the increased cutting down and even eradication of entire forests as refugees seek food, wood fuel, and building materials for the construction of temporary settlements" (Mohammed, 1997:241). The use of bombs also affects the environment in a negative way. 9000 acres of forest was burned to the ground in 2006 when Lebanon used the Hezbollah bomb to attack Israel (Enzler, 2006).

What we notice is that the harm to the environment is practically inevitable in a conflict situation. The use of bombs, nuclear weapons and the destruction of properties all have negative impacts on the environment, although the intention of conflicting parties is not to destroy the environment. The costs of conflict can be likened to the negative externalities associated with the process of achieving the goal of the conflict.

The final cost of conflict addressed by Harris is in the 'social' category. It is assessing the damage to social and commercial interaction brought about by conflict. In society the industrial

sector engages in trade with society, but in times of conflict this trade is no longer possible. The production process of industry is halted and the society is more concerned with security than trade. In Sudan projects such as “the Anazara Industrial Complex, established at a cost of 2.5 million Kuwait Dinars, for textiles, soap, and sugar and other food processing industries” (Mohammed, 238:1997) were halted due to the conflict. Mohammed (1997) in his study on the second Sudanese civil war identified the costs to the productive sector of the country. The agricultural sector, the mining and petroleum sector and the industrial sector were all affected negatively by the conflict. Some of the losses include the loss of 6.6 million heads of cattle, 2 million sheep’s and 1.5 million goats. The mining sector lost 2 million American dollars in revenue a day between 1985 and 1986. The total loss by 1989 reached 3 billion American dollars (Nadir, 1997). In Libya the productive sector of the economy is also being affected by the 2011 conflict. Libya recorded a growth rate of over 7% in 2010 but the economy is practically paralyzed now. It is speculated that the economy is likely to experience a double digit contraction in 2011 (Santi *et al*, 2011).

The cost of conflict extends to a wide range of activities in society and is not desirable. The categorization of these activities by Harris helps us analyze these costs better. These different costs of conflict (physical, human, natural and social), all make up the lost potential output that results from a conflict situation. This loss in potential output is detrimental to the economy as rebuilding after conflict is costly. Identifying conflict costs is essential for governments because as Hastings points out that most conflicts are entered with ignorance to the environmental costs. This is also applicable to other conflict costs as they are only considered after the damage of the conflict has been done. The different costs of conflict affect or exacerbate the human costs of conflict. Basically at the end of the day all the other costs of the conflict are bore by the human. It is for this reason why the study focuses on the HDI.

Conflict costs in the Niger Delta

The Niger Delta conflict has resulted in costs to the indigenes of the Niger Delta. These costs affect different aspects of the life of the indigenes of the Niger Delta. In the previous chapter

the costs of different conflict situations have been analyzed. The trends of economic development indicators will be looked at to see the level of economic development that exists during the conflict period. The conflict costs will be analyzed using the same frame work used by Harris (1997). The structure used by Harris (1997) will not be used religiously, because some of the costs of the conflict overlap each other.

'Human costs' has to do with death, emotional damage and emigration and human damage (Harris 1997). Basically any damage to the human as a result of the conflict is a human cost of the conflict. The loss of jobs (unemployment level), the lack of access to good water and food supply can be categorized as human costs of conflict. "The World Bank estimates that a typical civil war reduces average incomes by 2.2 per cent each year" (Guest, 2005:55). The conflict in the Niger Delta has resulted in the shutdown of some companies which consequently resulted in increasing the unemployment level in the region. In 2007, the Shell Development Company was set to retrench 3,500 workers by September of that year. Prior to that in 2004, 1,500 Shell workers were retrenched as a result of the conflict. In Indorama, a region in the Niger Delta, the shutdown of their petroleum operations resulted in the joblessness of 3,000 youths in the community (Ejibunu, 2007).

This next human cost of the Niger Delta conflict is the deprivation of the indigenes of access to clean water, food and other basic services. The conflict affects agriculture negatively and also pollutes water which is a social and environmental cost of the conflict. Degradation of environmental resources has led to food and water poisoning, extreme poverty and the presence of diseases (Ufo and Isike, 2009).

The natural costs as explained by Harris (1997) relates to the destruction and damage to the environment and to natural resources. The destruction of 'mother nature' is almost inevitable in a conflict situation. The natural cost of the Niger Delta conflict can be assessed under three categories which are the costs to land, the cost to water and the cost to air. There are two

activities in the Niger Delta conflict that result in the pollution to the environment. These are gas flaring and oil spillage.

The cost of the conflict is in the form of air pollution, the release of dangerous gases into the environment. Gas flaring is the major source of air pollution in the Niger Delta. Eregah and Irughe (2009) point out that in the Niger Delta region there are about 123 flaring sites. In 1995 it was estimated that 76 per cent of natural gas from the production of oil is flared. This percentage compared to the United States which is 0.6 percent, 4.3 per cent in the United Kingdom and Libya's 21 per cent. This makes Nigeria the country that flares gas the most compared to rest of the world (Ufo and Isike, 2009; Eregah and Irughe, 2009). The oil that is flared results in the discharge of 45.8 billion kilowatts of heat into the atmosphere of the Niger Delta from 1.8 billion cubic feet of gas everyday (Eregah and Irughe, 2009). The rise in the atmospheric temperature will have adverse effects on plants and animals.

Oil spills are responsible for water and land pollution in the Niger Delta. "Spills result from the corrosion of oil pipes, poor maintenance of infrastructure, spills or leaks during processing at refineries, human error and as a consequence of deliberate vandalism or theft of oil" (Amnesty International, 2009:14). Presently most of the oil spills in the Niger Delta are as a result of deliberate vandalism by the indigenes of the Niger Delta. Oil spills pollute land and water and has a negative effect on agricultural activities. The pollution of water also affects human activities as water is not drinkable or useable for other domestic purposes. This intensifies the human cost of the Niger Delta conflict. Eregah and Irughe (2009) found that between the years 1976-2001 about 6,817 oil spills occurred with losses of approximately three billion barrels of oil in the Niger Delta. Twenty five per cent of this spill went into swamps and sixty-nine percent in off-shore.

The pollution to water destroys not just the water but the livestock that live in the water such as fishes, crabs and snakes that will also be killed in the process. This will reduce the food supply available to the indigenous people of the Niger Delta (Ibeanu, 2006). Amnesty international provides a different dimension to the damage or cost to the individual caused by the polluted water. The pollution caused by oil is also said to damage fishing equipments such as nets. Such damages means an end to livelihood as the source of income of the fisher man is lost and the cost of replacing the nets are high (Amnesty International, 2009). This is also a case of an environmental cost of the Niger Delta conflict resulting in a human cost of the conflict.

The natural cost of the Niger Delta conflict cannot be underestimated. The environment is still trying to cope with the oil spill that resulted from industry errors but the deliberate damage to pipes as a result of the conflict puts more pressure on the environment. In Ebubu, a location in the Niger Delta oil spill that took place between the years 1967 to 1970 had negative effect on the environment even 40 years later. The vegetation in the area has not fully recovered and the SPDC (Shell Petroleum Development Company) is having problems accessing the area (Amnesty International, 2009). So the environmental costs of the conflict are not just immediate but also have long-term implications like we see in Ebubu.

The conflict in the Niger Delta affected business organization and normal activities of the society. This disturbance to business activities, government activities or social activities in general is referred to as the 'social cost' of conflict. In Rivers State in the Niger Delta, about 80 per cent of companies have stopped operations. This is because expatriates have gone to seek refuge in their home countries to avoid being kidnapped by the armed militants in the Niger Delta (Ejibunu, 2007). This social cost to business activities imposes a human cost to the indigenes of the Niger Delta as it renders some members of their population that were previously employed by these companies jobless.

The social cost of the Niger Delta conflict has implications for both Nigeria and the global community. Earlier in this paper it was mentioned that oil revenue accounts for about 80 percent of government expenditure. The destruction of the oil production process affects the economy negatively as foreign exchange needed to finance national development is lost. The global community is also affected. The attack by gunmen on oil workers in the region on the 8th of June in 2007 caused oil price to rise by more than \$1.50 to \$63.38 a barrel (UNDP, 2006; Ejibunu, 2007). Oil price rise affect a wide range of business activities in the world due to increasing transportation costs. This means that the social cost of the Niger Delta conflict is not just the halting of business activities and the loss of foreign exchange but also an increase the cost of living for the world as a whole.

Regarding the military expenditure made by the Niger Delta government to provide security to its indigenes data is not made available. However, Ejibunu (2007) points out that the Nigerian army is responsible for ensuring security. However the Nigerian military has failed in that regard as the militant groups in the Niger Delta have access to more sophisticated weapons than that of the Nigerian government. This means that the conflict in the Niger Delta poses a security threat to the Nigeria.

Economic development in the Niger Delta

After examining the costs of the conflict in the Niger Delta, it would be expected that the level of economic development in the region should be low. Here some economic indicators with regards to the Niger Delta will be examined. The focus here is more on the trend of the indicators. Earlier in this paper we discussed some economic indicators of development, these include the per capita indicators (PCE and GNI p.c.), the Gini coefficient and the HDI. This part of the paper is going to examine the PCE, 'Gini coefficient' and the 'HDI' with particular reference to the Niger Delta. The PCE deals more with the economic part of development. With the knowledge of the PCE trend in the Niger Delta, the level and movement of economic growth in the region will be determined. The Gini coefficient will tell us the level of inequality that exists

in the Niger Delta. The HDI will give a more holistic idea of the level of living of the indigenes of the Niger Delta.

Per Capita Expenditure and Gini Coefficient in the Niger Delta

Table 2 shows us the inequality and PCE figures in the Niger Delta for the year 1996 and the year 2004. From these statistics we see a significant increase in the PCE from 4695.1 Naira in 1996 to 41036.0 Naira in 2004. It is therefore safe to say that on the economic side of development the Niger Delta region developed more in 2004 compared to 1996.

The Gini coefficient of 0.49 in 2004 is an increase compared to 0.43 in 1996 in the Niger Delta. This increase is not good as it implies that the level of inequality in the Niger Delta increased from 1996 to 2004. The impact that conflict has on the level of equality in society is only seen when certain variables such as poverty and unemployment are examined. Conflict situation generates unemployment as many people are left without jobs due to the halting of productive activities. However, it is a source of revenue for arms dealers that fuel conflict and also corrupt government officials could use the opportunity to embezzle funds during the conflict period. This increased poverty level would widen the gap between the rich and the poor in the society which is evident in the increasing gini coefficient value in the Niger Delta.

Human Development Index in the Niger Delta

The HDI is the more holistic measure of economic development. It looks at the economic side of development because it considers the GNI per capita in its calculation and it also looks at other noneconomic aspects of development. The higher the value of the HDI, the higher will be the level of human development in the Niger Delta.

Unfortunately data is not sufficient to examine the trend in the HDI movement in the Niger Delta. Reference is made to Table 3 which contains data from the UNDP (2006) and Akpomovie (2011) on the HDI in the Niger Delta in the years 1992 and 2005. In 2005 all the states that belong to the Niger Delta had a high rank in the HDI. The Niger Delta as a region had a high rank

as well with an HDI figure of 0.564. The data available for states that can be compared showed that compared to 1992, they all improved in 2005. Cross River state had a HDI value of 0.513 in 1992, and in 2005 the value increased to 0.584. Imo and Rivers had HDI values of 0.466 and 0.539 respectively in 1992 making them have a high rank and these values increased to 0.547 for Imo and 0.591 for Rivers. Ondo state is the only state that ranked below the low range in 1992 from the data available with a HDI value of 0.212. The value increased in 2005 to 0.529 which is a remarkable increase compared to the other states.

This positive shift in the HDI levels for Imo state, Rivers state, Cross Rivers state, and Ondo state can be attributed to the introduction of civilian rule in Nigeria in the year 1999/2000. Unlike the military dictators, the civilian government in Nigeria attempted to address the developmental issues in the Niger Delta. Also the violent conflict decreased mildly at the beginning of democracy in Nigeria because under military rule most of the violence was perpetuated by the military dictatorship government. However, despite the increase in the HDI levels, the levels are still low.

Conflict costs and the level of development in the Niger Delta

Scholars such as Ejibunu (2007), Eregha (2009) and Irughe (2009) that are of the opinion that the Niger Delta conflict has been in existence since the discovery of oil in the region in 1957.. However, prior to the year 2002, the violence was perpetuated by the military government in power at the time. In the years after 2002 the indigenes of the Niger Delta began to respond violently to the ill-treatment and discriminatory behavior towards them by the government.

The Niger Delta conflict has resulted in a variety of costs that affects a range of activities in the region. These costs have been categorized into physical, economic, social and natural costs of conflict. In the first chapter it was mentioned that there is a cyclical relationship between conflict, the costs of conflict and levels of economic development. Conflict is associated with costs that negatively affect economic development. Low levels of economic development could lead to conflict. If conflict costs lead to low levels of economic development, then the lack or low levels of economic development can be identified as a cost of conflict. Therefore the costs

of conflict are expected to put negative pressures on economic development indicators in the economy. The trend in development indicators in the Niger Delta should therefore be examined to determine if the conflict costs in the region is putting negative pressures on these development indicators. It will be hypothesized that the costs of the Niger Delta conflict significantly affect the development levels in the region.

To determine the relationship between the costs of conflict and the level of economic development in the Niger Delta, a comparison will be done between the trends of development indicators in the Niger Delta and rest of Nigeria. This is to determine if the Niger Delta development trends are just following the national trends. A comparison will also be done with other oil producing countries (especially countries not in conflict) to predict what the development level in the Niger Delta should have been if there was no conflict. The indicators that will be analyzed are the HDI, the PCE and Gini coefficient.

PCE and HDI levels in the Niger Delta

Crude oil production and sale has generated high revenue levels for Nigeria over the years. The growth rate in Nigeria declined to 2.10% in 1993/1996 as a result of a fall in oil prices. This shows the strong impact that the production and sale of oil has on the Nigerian economy. 2.2 million barrels of oil were produced a day in Nigeria. This meant that Nigeria generated 289 million dollars a day at a price of a hundred and thirty dollars per barrel (Reuben, *et al.* (2008). The per capita expenditure in the Niger Delta has also increased overtime. The PCE in the Niger Delta increased in the year 2004 compared to the year 1996. The figure grew from 4695.1 Naira (\$36) in 1996 to 41036 Naira (\$316) in 2004. This is approximately a nine times increase. The Nigerian trend in the same period is similar as it grew from 4350 Naira (\$34) in 1996 to 33659 Naira (\$259) in 2004. The PCE figure for the Niger Delta appears to be more than that of the national level. The positive movement in the PCE indicated the presence of economic growth in the Niger Delta. It also shows that the costs of the Niger Delta conflict did not affect expenditure levels negatively. However, the PCE is more of a economic growth indicator. It

shows that there was economic growth in the Niger Delta but does not say much about the level of economic development.

The HDI value of the Niger Delta for the year 2005 is 0.564. The level of human development in Nigeria as a country is generally low and appalling with a HDI value of 0.448. We see this low level of human development when a comparison is made with other oil producing countries. The HDI figures for these countries are available in Table 4 in the Appendix. We see that Libya has the highest HDI value as it has not been affected by conflict (prior to 2011) when compared to the other countries in the table. The Niger Delta has the lowest HDI values if compared to other countries in Table 4. This means that without conflict costs, the level of human development should have been higher in the Niger Delta. The Niger Delta has the potential to attain much higher levels of human development in the region but the conflict hinders the possibility of achieving higher levels of human development or higher HDI values.

Equality levels in the Niger Delta

Looking at the Gini coefficients in the Niger Delta for the years 1996 (0.43) and 2004 (0.49) in Table 2, it is evident that there is more inequality in the latter year than the former. This however fares better than Venezuela whose Gini coefficient fell from 0.618 in 2003 to 0.514 in 2005 (Delacor, 2006). While the inequality level in Venezuela is reducing, that of the Niger Delta is increasing. The inequality in the Nigeria remains at 0.49 for the years 1996 and 2004 (Reuben, *et al* 2008). The balance of the rich and the poor has stayed the same in the two different years. The inequality levels in the Niger Delta did not follow the Nigeria trend. This could definitely have been caused by the human costs of the Niger Delta conflict. The unemployment caused by the loss of jobs and the stoppage of production processes due to the conflict deprived some indigenes of the Niger Delta access to income thereby increasing the poor people in the region. Data on the incidence of poverty in the Niger Delta shows that the value has increased from 0.27 in 1998 to 0.49 in 2004. This means that in 2004, there were more households that were

living under \$1 a day in the Niger Delta compared to 1996. Unfortunately more recent data on the inequality levels in the Niger Delta is not available to examine the present level of inequality in the region. However, we see here that the human cost of conflict (unemployment and death) has caused a negative movement in development levels in the Niger Delta with respect to income distribution.

Conclusion

Conflict situations are usually accompanied by a variety of costs that are not desirable to any society. These costs are counter-productive towards achieving the goal of economic growth or development. This paper used the model provided by Harris (1997) to categorize conflict costs to make it easier to analyze the costs associated with conflict. The main categorization was the physical costs, the social costs, the natural costs and the human costs. This paper showed that these conflict costs are interrelated as it is possible for the environmental costs to lead to social costs. It then concluded that the physical, social and natural costs of conflict are eventually born by humans, thereby exacerbating the human costs of conflict.

The case of the Niger Delta showed the presence of economic growth as the PCI in the region increased. However, this increase in growth levels did not have overall developmental effects. This is evident in the relatively low levels of human development and the rising level of inequality in the region. These low development levels could be attributed to the costs of the Niger Delta conflict. The physical, human and social and natural costs of the Niger Delta conflict negatively affected human standards of living which is the reason for the low human development indicators. The rising poverty and unemployment levels are also responsible for the rising levels of inequality in the region.

Achieving economic development is not an easy task. It requires a lot of planning, effective use and allocation of resources and time. There economic growth in the Niger Delta could enable higher levels of economic development in the region. The indigenes of the region should be encouraged to stop violent forms of resistance and allow the developmental process take its course. We believe that democratic leadership should give better attention to the

developmental issues in the Niger Delta. The government should come up with strategies to address the different forms of conflict and corrupt activities. These strategies should be non-violent and promote the participation of indigenes in the economy. Resource ownership is a major issue that needs to be addressed if the conflict is to stop.

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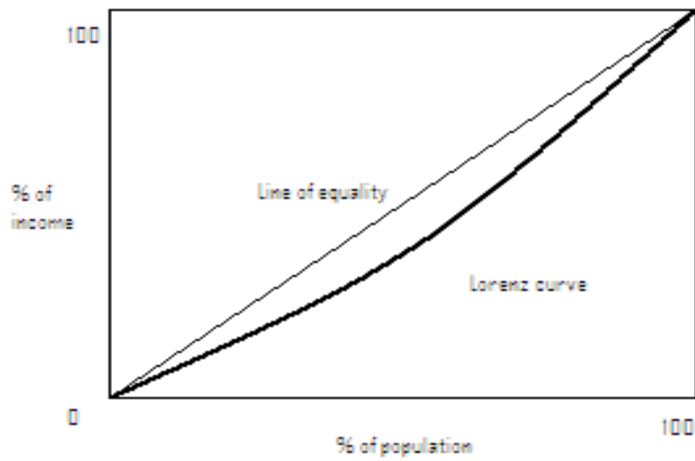
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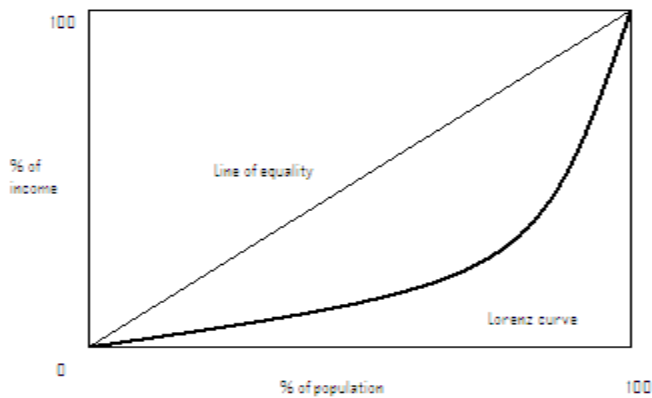
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APPENDIX A:



(Todaro 1981:124)

Figure 1: Lorenz curve showing relatively equal distribution



(Todaro 1981:124)

Figure 2: Lorenz curve showing relatively unequal distribution

Table 2: Trend in inequality and Per capita expenditure in the Niger Delta

State	Inequality in 1996	Inequality in 2004	Mean PCE 1996	Mean PCE 2004
Niger Delta	0.43	0.49	4695.1	41036.0

(Reuben et al, 2008: 414)

Table 3, HDI Figures in the Niger Delta for Years 1992-2005

STATE/REGION	1992	2005
Abia	N/A	0.543
Akwalbom	N/A	0.576
Bayelsa	N/A	0.499
Cross River	0.513	0.584
Delta	N/A	0.615
Edo	N/A	0.594
Imo	0.466	0.547
Ondo	0.212	0.529
Rivers	0.539	0.591
Niger Delta	N/A	0.564

Table 4, HDI LEVELS IN 2005

Countries/ Region	Niger Delta	Nigeria	Saudi Arabia	Kuwait	Libya	Venezuela	Indonesia
Average HDI	0.564	0.448	0.815	0.864	0.896	0.886	0.834

(Ufo and Isike 2009)