CSAE WPS/2007-09

Oil-dependence and Civil conflict in Nigeria

June 2007

Aderoju Oyefusi
Department of Economics and Statistics,
University of Benin, Nigeria
E-mail address: aderojuoyefusi@yahoo.com

Abstract

This paper examines oil-dependence and civil conflict in Nigeria focusing on the economic dynamics of resource-induced conflicts. It identifies two dimensions to oil-related civil conflict in the country. The first is the violent rent-seeking political violence that oil-availability generates between the various ethno-regional groups; the second is the Niger Delta crisis. The former is linked to excessive government dependence on oil revenues, an institutionally unstable revenue allocation system, weak political institutional arrangements, lack of effective agencies of restraints to demand transparency and accountability on the part of political office holders, failure to translate oil wealth to sustainable growth and increased standard of living for a larger majority of Nigerians, and a defective property right structure in relation to mineral resource endowment. Violence in the Niger Delta area is attributed, in the main, to weak institutional arrangements manifesting in poorly-conceived laws, lack of enforcement, "regulatory capture", and a marriage of interest between the State and oil companies which often encourage the State to use repressive measures against host communities in cases of disputes. There are also the looting and secession incentives as well as the rent-seeking contests that oil-availability and the allure of ownership creates among local participants. Three factors (educational attainment, income level and asset possession) consistently explain the propensity to general violence among individuals in the region in the Ordered and Multinomial regressions on civil disobedience. The paper concludes with a discussion of some measures that may be used to break the "conflict trap" and overcome the corrupting influence of oil-dependence in Nigeria.

INTRODUCTION

In the early 1950s, some development economists, especially those associated with the *Staple theory of growth*, suggested that natural resource-abundance would help the "backward" states to overcome their capital shortfalls and provide revenues for their governments to provide public goods and lift citizens out of the doldrums of poverty. However, since the 1990s, a growing number of researches have established a link between resource-abundance and a number of socio-economic problems. Natural resource-abundance has been associated with slow growth (Sachs and Warner, 1995), greater inequality and poverty for a larger majority of a country's population (Gravin and Hausmann, 1988; Ross 2004b), corruption of political institutions (Lane and Tornell, 1999; Ross, 1999, 2001), and more fundamentally, an increased risk of civil conflict (Collier and Hoeffler, 2001)[1]. At the same time, there is an established link between resource-motivated conflict and economic collapse (Collier and others, 2003; Skaperdas 1992; Deininger, 2003).

Of all natural resources, oil has been found to have the highest risk of civil conflict because of the large rents it offers and the shocks to which the government and the national economy are exposed (Collier and Hoeffler, 2005; Fearon and Laiton 2005). According to Collier and Hoeffler (2002), 23 percent of states dependent on oil exports have experienced civil war in any 5-year period, a figure that dwarfs the 0.55 for countries without natural resources. However, while the experiences of oil exporters across the globe shows that oil-dependence is most often a perilous development path, it is also evident that the negative outcomes of oil (and other resource) booms can be avoided. Norway, for example, has used the benefits from North Sea oil to earn the highest place on the UN human development rankings (Gary and Karl, 2003). Mexico and Malaysia have also fared well among developing oil- exporters.

Nigeria is the largest oil-producer in Sub-Saharan Africa, with about 32 percent and 34.2 percent of Africa's oil and gas reserves respectively, the fifth largest exporting country in the Organization of Petroleum Exporting Countries (OPEC) and the fifth largest oil-exporting country to the US (eia.doe.gov/). Like many oil-producing countries, the nation has not been spared the agony of recurring violent conflicts associated with the management of her oil resource. In early 1967, oil-related disputes motivated an insurrection by a major ethnic group in the Niger Delta (the repository of almost all of the nation's oil and gas reserves)[2]. Less

---

[1] According to Renner (2005), resource-driven conflicts killed more than 5 million people, forced 5 to 6 million people to flee to neighbouring countries and displaced about 15 million people inside the borders of their home countries during the 1990s alone. At the same time, "rebels", "warlords', corrupt governments and other predatory groups earned an estimated US $12 billion worldwide in revenues from marketing their countries natural resources. The incidence of civil conflicts was also highest in Africa, a fact that has been shown to be connected with the continent's heavy natural resource-dependence (Collier and Hoeffler, 2001; Elbadawi and Sambanis, 2000).

[2] The reference is to the "rebellion" led by Issac Boro and some youths from the *Ijaw* ethnic extraction in February 1967.

than a year after, the nation experienced a civil war (the *Biafran* war of 1967-70), which was not unconnected with disagreements over the sharing of oil revenues. While the country has managed to maintain a fragile post-war peace, since the mid 1990s, there has been on-going violence and uprising in the Niger Delta region with a renewed call for self-determination and/or local control of oil resource. These conflicts, often attended by kidnapping of foreign oil workers for ransom (hostage-taking), vandalization and sometimes blow-up of oil installations, have taken on frightening dimensions over the years. According to a report by Hamilton and others (2004), violence in the Niger Delta alone is estimated to have killed about 1000 persons a year between 1999 and 2004 on a par with conflicts in Chechnya and Columbia. In addition, there has been continuous tension between the various ethno-regional groups in the country (and also between local actors) over access to oil wealth through control of political power (see Table 1, where I attempt to summarize the many dimensions to oil-availability and civil conflict in Nigeria). The increasing incidence of oil-induced civil conflict is also taking place against the background of dismal economic performance and a high level of poverty, as well as an emerging "new African oil boom" (Gary and Karl, 2003: 5).

This paper raises and seeks to provide answers to some fundamental questions: Why has oil wealth failed to translate into rapid economic growth and increased standard of living for majority of Nigerians? Why has oil become a catalyst for violent conflicts in the country? What role does oil-availability and other factors play in the propensity to civil disobedience among the people of the Niger Delta? How may Nigeria escape from the "oil curse"? Section 2 of the paper reviews developments related to oil-dependence and civil conflict in Nigeria. In section 3, I review related theoretical and empirical literature and develop a simple model of participation in civil disobedience in a resource-rich region. The basic predictions of the model are tested in section 4, while section 5 discusses findings, implications and recommendations and concludes.

2. BACKGROUND

2.1 The Nigerian Oil Industry

Nigeria is a country with a population of over 120 million and approximately 300 ethnic groups. The three dominant ethnic groups are the Hausa/Fulani in the northern region, the Yoruba in the Southwest and the Igbo in the Southeast. Production of crude oil began in the country in December 1957. Current estimates of Nigeria's oil and gas are about 27 billion barrels and 4.007 trillion cubic meters respectively (*CIA* Fact Book, 2003). Six major foreign oil companies presently dominate Nigeria's oil industry[3]. The Nigerian government, through the Nigerian National Petroleum Corporation (NNPC) established in 1971, has traditionally held majority shareholding interests in these companies. The NNPC operates two contractual

---

[3] These are Shell, Mobil, Chevron, Elf, Agip and Texaco. In an effort to boost indigenous participation in the upstream sector, the Nigerian government granted about 38 licenses to private Nigerian companies between 1990 and 1994. However, indigenous companies have not being able to register their presence in the upstream sector of the Nigerian oil industry in any significant measure.

arrangements between the Nigerian Government and Oil companies (Table 2). Through these arrangements, the company receives 57 percent of total crude oil, most of which is subsequently exported.

Until very recently, corruption has been the bane of the Nigerian oil industry as weaknesses in the control system, complicated tax rules and limited technical and institutional capability makes it difficult to monitor oil revenue (Emmanuel, 2004)[4]. Despite the high political risk, the escalation of civil conflicts and rise in oil-related litigations over the last twelve to sixteen years, potential and actual profits in the country's oil industry has made it very attractive to foreign investors (Omalu, 1996:74; Frynas, 2000:20). A number of authors (Frynas, 1998; Danler and Brunner, 1996; Fryner, 2000: 22) also point to hidden benefits of operating in the country owing to companies' operational control of Joint Venture Contracts (JVCs).

The oil-related legal arrangements for the protection of local communities from the negative effects of oil exploration and production activities are summarized in Table 3, which also reveal their inadequacies. The Federal (and States) Environmental Protection Agencies (FEPA and SEPAs) are largely responsible for the enforcement of these legislations. However, the agencies have limited control over the oil industry[5] and are made ineffective by corruption, limited funding, weak monitoring and enforcement capacity, and limited qualified staff (World Bank 1995, Volume II, annex J; Fynas, 2000: 87)[6]. A release by the *Nigerian Conservation Foundation* (NCF), asserts that the poor management of Nigeria's environment is costing the country about $5 billion a year in ruined land and forest, most of which takes place at the Niger Delta (*Reuters* 19 September 2001). According to the World Bank (1995), the three major constraints to the regulation of the energy and mineral sector in Nigeria are the absence of requirement for community participation in the planning and development of oil activities, corruption and inadequate compensation for damage to property, and the lack of enforcement of environmental regulations. In addition, unlike other oil-

---

[4] For example, according to Soremekun (1995), the Nigerian state lost N12.5billion in oil revenue as a result of fraudulent practices arising largely from what he calls "private middlemanship" during the civilian rule of 1973-83. In comparison, the country's total government revenue from oil was N8.9 billion in 1979. The *Oxford Analytical Brief* (9/7/1999) asserts also that the award of contracts for export sales was a notorious route of political patronage involving an estimated forty-one companies in the last year of the Abacha presidency. Similarly, *Africa Confidential* (24 Oct 1997) reveals that some US $3-4 billion were siphoned in oil deals by the ruling elite and its business partners in less than four years from November 1993, when the late dictator came to power (*Africa Confidential*, 24 Oct, 1997). In contrast Nigeria's total government revenue from oil was US$12 billion in 1997 (Frynas, 2003. p 40). Emmanuel (2004) also notes that since the mid 1990s, the official cost of producing oil in Nigeria has risen each year, despite a trend in the opposite direction in the international oil industry.

[5]For example, in October 1996, the chief executive of the FEPA was arrested for fraud involving N1, 115 million (Guardian, Lagos, 27 January 1997).

[6] Several sections of the FEPA *Act* create loopholes which enable the offending oil company to escape legal responsibility for pollution (Adewale, 1992:58; Frynas, 2000:85).

producing countries, Nigeria lacks a separate statute for the conservation of oil (World Bank, 1995, Volume II, annex J; Frynas, 2000:90).

2.2 Oil and Nigeria's Socio-Economic performance

Over the last 25 years, Nigeria has received over $300 billion in oil revenues after deducting payments to the foreign companies (Gary and Karl, 2003; Sala-i-Martin and Subramanian, 2003). Yet the country is marred in poverty. In 1965 when Nigeria's oil revenue per capita was about US$33, per capita GDP was US$245. However, in 2000 when oil revenue grew to US$325 per capita, per capita GDP remained at the 1965 level, implying that oil revenue accumulated over the 35 year period between 1960 and 2000 did not add value to the standard of living of Nigerians (Sala-i-Martin and Subramanian, 2003). Nigeria's per capita GDP (in PPP terms) was US $1, 113 in 1970. It is estimated to have fallen to US$1, 084 in 2000, a figure which places the country among the fifteen poorest in the world. The percentage of Nigerians living below the United Nation's US$1 per day absolute poverty line has risen from 27 in 1980 to 66 in 1996, and 70 in 2000. At the same time, income distribution has deteriorated sharply with more and more people pushed towards poverty and towards extreme wealth. With a Gini index of 50.6 in 1996-97, Nigeria's richest 10 percent controls 40.8 percent of the country's wealth and the poorest ten percent only a negligible 1.6 percent (*CIA Fact Book, Nigeria, 2005*), whereas in 1970 the top 10 and bottom 17 percent of the population earned the same amount of income (Sala-i-Martin and Subramanian, 2003).

The Nigerian economy has also been substantially unstable (Table 4), a consequence of the heavy dependence on oil revenue, and the volatility in prices. The oil boom of the 1970s led to the neglect of non-oil tax revenues, expansion of the public sector, and deterioration in financial discipline and accountability. In turn, oil-dependence exposed Nigeria to oil price volatility which threw the country's public finance into disarray[7]. According to Sala-i-Martin and Subramanian (2003), waste and "Dutch disease" manifesting in rapid capital accumulation and negative Total Factor Productivity (TFP) characterized Nigeria's forty year post-independence development experience. While capacity utilization averaged about 77 percent in 1975, it had declined to about 50 in 1983 and until very recently has languished at about 35 percent since the mid 1980s.

---

[7] For example, the Nigerian government's budget for 1998 was based on the assumption of an average oil price of US$ 17/b. But in the same month the budget was announced, the crude oil price fell from about US$16 to US$14.73/b, thus threatening the viability of the entire budget (*Newswatch*, 16 Feb 1998). Also, in the first quarter of 1998 alone, Nigeria reportedly lost US$700 million as a result of the global drop in oil prices out of the US$8 billion lost by all OPEC counties combined (*AP*, 19 April, 1998).

2.3 Oil and Intergovernmental Fiscal Relationships in Nigeria

Since oil revenue dominates Nigeria's Federation Account (Fig.1), the sharing of oil rents govern intergovernmental fiscal relations in the country with an on-going tension between agitations by oil-producing states for greater share of resources and demands for redistribution from other regions, particularly relatively less endowed ones. Also the history of successive revenue allocation arrangements in Nigeria has been most unstable and accompanied by distrust, inadequate information flows, a lack of transparency, and uncertain accountability (Ahmed and Singh, 2003). The authors argue that the present intergovernmental fiscal arrangement prevailing in Nigeria generates a large vertical imbalance in favour of the center (Fig.2) while allocations to the states do not depict any clear pattern of redistribution between regions or any correlation with relative needs. While in theory the arrangement takes into account the effort of each state to mobilize internal revenue, in practice, an equal weight is given for this variable in allocations. Thus, apart from failing to create an incentive to increase states' efforts at revenue generation, the federation transfer does not appear to have any significant equalization effect.

Oil-availability has also fundamentally altered governance in Nigeria. Like most other oil-producing countries, Nigeria has suffered from poor institutional quality stemming from oil (Table 5), a factor which according to Sala-i-Martin and Sambaramanian (2003) has contributed to lower long run annual growth of 0.5 percent. Indeed the nation's politics has been fundamentally shaped by securing access to oil rents. As so aptly described by Suberu and Diamond (2001), "*in forty years of independence the country has fashioned six separate federal constitutions, witnessed the rise and replacement of eleven different national administrations, and straddled the political poles between democratic pluralism and military authoritarianism, between pseudo federalism and institutionally balanced federalism, between Westminster-style parliamentary government and American-type presidentialism, and between inter-ethnic reconciliation, and fierce, often violent, ethnic conflict*". Crude oil is almost exclusively located in the South eastern part of the country, which is home to some minority ethnic groups[8] but these groups have traditionally wielded little political power. In contrast, until very recently, the nation's political economy has been dominated by the North (Table 6).

2.4 Oil and the Niger Delta Crisis

Current oil exploration and production activities in Nigeria is concentrated in the Niger Delta, a wetland of about 70000 sq km spread over a number of ecological zones along the Gulf of Guinea, and the third largest

---

[8] The Ijaws, Ikwerres, Edos, Itsekiris, Urhobos, Isokos, Ndonis, Andonis, Ibibios, Etches, Ogonis and other small ethnic groups.

wetland in the world (*Tell*, Lagos, 6 September 2004)[9]. The region alone accounts for over 90 percent of the nation's oil revenue and its gas reserves are now touted as the nation's next greatest potential revenue earner. Geological research shows that the Niger Delta (both onshore and offshore areas) is particularly conducive to the formation and accumulation of oil and gas (Hyne, 1995:90-98). Despite this abundant natural resources, the region is said to be poorer than the national average (Emmanuel, 2004; *Tell*, 6 September 2004; Gary and Karl, 2003: 50) and according to Clark (2005) has remained "the most backward and underdeveloped region in Nigeria".

Conflicts between oil companies and local communities in the Niger Delta have basically revolved around land ownership and compensation for land appropriation as well as compensation for environmental damages due to oil operations[10]. In addition, there has been frequent disputes over the causes of oil spills and whether oil companies are eligible to pay compensation, and if so, to what extent. At the national level conflicts have centered on the sharing of oil revenues and the allocation of public goods between various ethnoregional groups, and the failure of the Nigerian government to take adequate measures to mitigate the environmental effects of oil operations on local communities or to adequately compensate for such damages. Beginning with the *Ogoni* uprising of the late 1980s to the *Kiama Declaration* by the *Ijaws* in 1998 and the emergence of militant groups such as the *Niger Delta People's Volunteer Force* (NDPVF) and the *Movement for the Emancipation of the Niger Delta* (MEND), protests in the Niger Delta has taken on a more violent and militarized form.

As a result of this rising militancy, the number of community disruptions to oil operations in Nigeria has risen enormously over the last five to ten years. Some estimates suggest that militancy and protest cut onshore oil production by a third in 2001-2003 (UN IRIN, 2003, Gary and Karl, 2003). Apart from the loss in oil production, there have been accompanying financial losses to oil companies, a move that has prompted oil companies to begin to redirect their attention to offshore oil activities (Gary and Karl, 2003).

---

[9] Officially, the Niger Delta is made up of nine states and has an estimated population of about 26.7million (*Tell*, 6 September 2004). These states are Abia, Akwa-Ibom, Bayelsa, Cross River, Delta, Edo, Imo, Ondo and Rivers. Six of the States (Akwa-Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers) constitute the South-South geopolitical zone (SSZ) of Nigeria, and inhabits the so-called minority ethnic groups. Two of the states that constitute the Niger Delta (Abia and Imo) are situated in the southeastern part of Nigeria while the remaining one of the nine states (Ondo) is located in the Southwest. Distinction is sometimes made between the official Niger delta and the geographic Niger Delta consisting only of Bayelsa, Delta and Rivers states.

[10] For example, a report by the *Essential Action and Global Exchange* (2000) document cases of environmental pollution arising from gas flaring, acid rain and oil/gas pipeline leaks. Depending on the location, oil spills can poison water, destroy vegetation and kill living organisms (van Dessel, 1995; Amajor 1985). The situation is made worse in the Niger Delta where as a result of floods; waters carry the oils to villages and onto farm lands (Moffat and Linden 1995:527). This also renders the cleaning of oil spills all the more difficult. According to a Report prepared by the Center for Social and Corporate Responsibility, Port Harcourt, Nigeria, (Emmanuel, 2004), less than 50 percent of oil spills in the Niger Delta are cleaned up. A 2001 Report by the Minister of State for Environment also shows that about 68 percent of the associated gas production in the Niger Delta is flared (*The Guardian*, Lagos, 1 October 2001).

In response to increasing anti-oil protests and under pressure of public opinion, the Nigerian government and foreign oil companies have made attempts to increase their developmental commitments to the Niger Delta. For example, the government established the Oil and Mineral Development Commission (OMPADEC) and the Niger Delta Development Commission (NDDC) in 1992 and 2001 respectively[11]. In addition, Shell, being the operator of the NNPC/Shell/Elf/Agip joint ventures, carries out community development projects on behalf of the organizations. The federal government (being the majority share holder in the joint venture) contributes significantly (about 60 percent) to these initiatives, a factor which some analysts have argued had made the government to neglect the oil-producing communities for so long (*THISDAYonline*, 4 August 2003; 28 July 2003).

Since the 1990s, the scope of oil companies' development activities in the oil-producing communities has been greatly expanded. (It is claimed that oil companies even pay some individuals in oil-producing communities on a regular basis to induce peaceful behaviour!). However, some pieces of evidence (Danler and Brunner, 1996:23; *Tell*, 27January 1997; *The Guardian*, Lagos, 18 January 1998; Frynas, 2000:53; *THISDAYonline*, 28 July 2003.) seem to suggest that many oil companies engage in community development projects primarily for public relations purposes rather than the need to address the real life problems of local communities; sometimes advertise projects that are non-existent; and artificially inflate figures quoted to have been spent on community development in order to avoid tax payments. The Report by the *Center for Social and Corporate Responsibility*, Port Harcourt, Nigeria (Emmanuel, 2004), shows that development assistance to local communities by oil companies are often philanthropic, do not follow any needs assessment, have no participating rural appraisal, and as such, lack ownership and sustainability.

---

[11] The NDDC is an attempt to break away from past practices and results, and is supported by the World Bank and the United Nations Development Program (UNDP). The agency is funded by the federal government and the oil companies. While the government transfers 15 percent of the money due the oil-producing communities under the 13 percent derivation rule to the agency, each of the oil and gas companies operating in the Niger Delta contributes 3 percent of its annual budget. In turn, the NDDC adopts an allocation formula, whereby 60 percent of funds received is spent in proportion to the amount of oil produced in each state. The governing board of the NDDC is appointed by the President with representatives drawn from the oil-producing state governments, other States, federal government agencies, and oil companies. While the NDDC has carried out many laudable projects in the Niger Delta in the short five years of its existence and has received various local and international recognitions, there are reports that the agency's operations have been greatly hindered by inadequate funding. In addition, the composition of the board without the visible presence of members of the civil society from the oil-producing areas and the absence of a well defined arrangement for monitoring and evaluation, has limited the agency's effectiveness and popularity. Indeed, there have been allegations of biasedness in the allocation of projects by the Commission, with claims that past and current chairmen have influenced projects in favour of their own states and communities to the neglect of communities that are even in greater need. Recently, the Delta State House of Assembly committed a bill seeking to establish a state-owned oil-producing areas development commission

Also, while both the oil companies and the Nigerian government have been willing to grant some financial concessions to the oil-producing communities at various times, a more frequent response to protests by communities has been the use of repressive security measures (*HRW* 1995; Frynas, 2003:54; *Reuters*, 31 December 1998; *Phone News International*, 25 January 1999; *AP*, 1 February 1999; *HRW* 1999b; *Tell*, Lagos, December 1999). Oil companies have in turn, supported the repression of community protests, and in some cases instigated the Nigerian security forces against oil communities[12]. The Nigerian government has also failed to take any positive steps to implement the reports of the various Commissions of Enquiry set up at various times to investigate cases of large-scale human rights violations by oil companies and security agents (*IPCR*, 2003). Based on the implementation of the provision of the 1999 constitution that not less than 13 percent of oil revenue be transferred to oil-producing states on the basis of derivation, there has been significant jump in the share of oil revenues going to these states[13]. However as Gary and Karl (2003) rightly observe, a lack of transparency and mismanagement pervades States and Local government structures, so that it cannot be said that the massive flow of funds have largely benefited the local people.

3. REVIEW OF THEORETICAL AND EMPIRICAL LITERATURE

Three major lines of argument have been employed in the theoretical literature to explain the "resource curse" (the tendency of natural resource abundance/dependence to immiserise growth and development). One line follows what has come to be known as the "*Dutch disease*"[14]. The second focuses on the *volatility effect* of natural resource export-dependence (IDB, 1995; Gravin and Hausmann, 1996; Ramey and Ramey, 1995; Aizenren and Manon, 1999; and Caballero, 2000), while the third discusses the *rent-seeking effects*. The rent-seeking view assert that resource-dependence (especially oil) often lead to a "vicious development cycle" whereby all actors (public and private, domestic and foreign) have overwhelming incentives to seek links with the state in order to share in the resource pie. This incentive for rent-seeking penalizes productive activities, distorts the entire economy and hinders economic growth. In a dynamic setting, this may produce a "*voracity effect*" (Lane and Tornell, 1999).

---

[12] The "Umuechem massacre" which occurred in Rivers State in 1991, is a commonly-cited example.

[13] For example, a total sum of N886.570 billion is reported to have been transferred to the nine states of the Niger Delta in just a period of five years between June 1999 and July 2004, apart from the allocations to the local governments in the state (*Vanguard*, Lagos, 23 November 2004).

[14] The "*Dutch disease*" thesis asserts that an increase in resource-based revenues (due to a boom) leads to an appreciation in the local currency, increases the capacity of the country to import *tradables* and also enlarges the demand for other goods and services, including *non-tradables* which must be produced locally. This forces a structural adjustment in the domestic economy as resources are diverted out of the non-resource tradable sector (represented by manufacturing) into the production of *non-tradables*. Thus typically, resource booms lead to the contraction of the non-resource (manufacturing) sector (Hausmann and Rigobon, 2003).

Similarly, explanations of the causal mechanism linking natural resources to civil conflict have followed four prominent lines of argument: a "*grievance hypothesis*" (Klare, 2001:208), '*weak states*" hypothesis (Fearon and Laitin, 2003, Karl 1997; Mahdavy, 1970), a "*separatist incentive*" hypothesis (Ross, 2003; Collier and Hoeffler, 2002, and Le Billion, 2001), and a "*looting*" hypothesis (Collier and Hoeffler, 1998, 2004). By the "grievance mechanism", resource extraction creates grievances among local population due to land expropriation, environmental hazards, inadequate job opportunities and social disruption accompanying labour migration and perceived injustice in the distribution of resource rents. By the "state weakness" mechanism, natural resource (particularly oil) wealth increases the probability of civil war by weakening the state's bureaucracy (Fearon and Laitin, 2002); by creating a state that is less responsive to its citizens (Mahdavy, 1970); and by impeding the ability of states to resolve social conflicts (Karl, 1997; Fearon and Laitin 2002).

According to the "looting" mechanism, natural resources increase the risk of civil conflicts by providing a source of finance for nascent rebel groups either by extracting and selling the commodities directly or by extorting money from extractive firms, which unlike manufacturing firms are location-specific[15]. By the "separatist" incentive mechanism, resource wealth increases the risk of a secessionist war by giving residents in a resource-rich region an incentive to form a separate state (Ross, 2004a). Since natural resource income accrues to ownership rather than to effort, "ownership of a natural resource discovery has some of the same appeal as winning a lottery" (Collier and Hoeffler, 2002b). Furthermore, because the state controls the revenues from natural resources, the state itself represents booty (Addison et al, 2003). Thus apart from motivating secessionist civil wars, natural resource-abundance may lead to a whole range of pathologies, such as adverse regime changes, and other manifestations of state failure. Other authors (e.g., Goldstone and others, 2003; Goodhand, 2003; Gurr and others, 2001:13; Collier and Hoeffler (2002); Collier and others, 2003:101-25), emphasize the role of economic development. Collier and others (2003:101-25), for example, provide empirical evidence to show that a country in economic decline, dependent on primary commodity exports and having a low per capital income that is unequally distributed, is at a higher risk of a civil war.

The emerging consensus on the study of natural resources and civil conflict emphasizes the role of institutions. Natural resource abundance easily leads to violent conflicts in environments where institutional arrangements are weak (Ron, 2005). For example, governments in resource-abundant countries may face a

---

[15] In Columbia, for example, oil pipelines were bombed 98 times in 2000 alone. In addition, rebel groups are said to have earned a whopping US$1.5billion from kidnapping ransoms between 1991 and 1999, a windfall which enabled a group (the *National Liberation Army*) to grow from fewer than 40 members to at least 3,000 (Dunning and Wirspa, 2002; Ross, 2003b).

number of constraints which makes the looting of natural resource rents a more "profitable" strategy[16].   In general, availability of large resource rents easily provides finance for patronage, reduce the need for taxation, and undermine checks and balances in environments where institutions that can restrain behaviour are lacking. Contrarily when there is the right set of institutions, those who control the state employ political power not to extract wealth but to support the creation of wealth as by safeguarding property rights and policing behaviour of those who might be inclined to violate them (Bates and others, 2003).

In addition multinational oil companies are not only the main private economic actors in most oil-dependent less-developed countries, but are also the main political brokers. This often has implication for the political and economic trajectories of these countries[17]. It also means, however, that oil companies may have to confront a number of extremely difficult dilemmas, which present alternative lines of actions with implications for both host communities and governments (Mack, 2003). In this context, the prevailing state of socio-economic development and institutional quality is likely to determine strategies and actions.

The incentive for host communities to approach the courts in cases of disputes would also depend on the remedies available, the cost of judicial actions, delay in getting court judgments and individuals' confidence in the judiciary as an impartial administrator of the rule of law. Where legal institutions are weak or there is open complicity between extractive firms and the government against a community for example, the latter may turn to "informal regulations" (Hettige and others, 1996; Pergal and Wheeler, 1996) such as peaceful rallies or protests, blocking of oil production processes, vandalizatioin of oil installations, and kidnapping oil company's staff either for ransom or to give strength to other demands. The latter may even be a preferred option if civil disobedience is believed to yield larger payoffs than peaceful behaviour.   Thus conflict rather than co-operation or bargaining over resource wealth may emerge as a rational, though inefficient, outcome of repeated interactions between governments, extractive firms and host communities in resource-rich regions (Garfinkel and Skaperdas, 2000; Skaperdas and Syropoulos, 1996; Skaperdas, 2001). And where this is greed-motivated, it may be difficult to achieve any enforceable, credible or time-consistent bargain (Sambanis, 2004). This breakdown in bargaining may lead to a general case of loss of order within a society

---

[16] According to Collier and Hoeffler (2005), elites in power may choose to loot resource rents rather than invest in the public good of growth in four circumstances: (i) when time horizons are short, (ii) when the elite is narrowly based on a fixed and identifiable support group, (iii) when the public assets (e.g. resource rents) is very valuable relative to the income of the society and (iv) when democratic electoral competition degenerates into patronage. The temptation for the government to deviate from "prudential behaviour" may also be overwhelming when power can be readily transferred into wealth through resource appropriation and in the face of limited economic opportunities. Predatory behaviour by government can also result from advances from extractive firms which the government finds irresistible (i.e. "*government capture*').

[17] Many studies have shown, for example, that powerful oil companies, including domestic ones, come to play a disproportionate role in the decision-making of oil-exporting countries, a role which permits them to sometimes manipulate legal structures in their favour (Karl,1997).

and its subsequent movement along a continuum between order and violent disorder (Brough and Elliot, 200*).

3.1 A simple Model of Participation in Civil disobedience

I posit that the willingness of an individual to participate in various acts of civil disobedience ("informal regulation") is dependent on some individual and community-level characteristics that define the expected benefits and the cost of participation. Let economic agents be endowed with a unit of labour, l, stock of human capital, h, as well as physical capital or asset, k. Each agent can allocate her labour endowment either to productive activities (l_p) or to civil disobedience (l_d) so that

$$l_p + l_d = 1 \qquad\qquad (1)^{18}$$

The benefit derived from productive work is

$$U(l_p) = f(w_p) \qquad\qquad (2)$$

where $\qquad w_p(h, k, g, a)$ $\qquad\qquad (3)$

$$\partial U(l_p)/\partial(w_p), \ \partial w_p/\partial h, \ \partial w_p/\partial k, \ \partial w_p/\partial g, \ \partial w_p/\partial a > 0$$

In other words, benefit from productive work is a function of the wages in the productive sector (w_p). This in turn depends on endowments of human and physical capital and on the economy's growth rate, g, which defines the opportunities in the economy and the labour market conditions. Again, since many individuals in resource-rich communities are likely to be engaged in the informal sector and land-based activities, I add a, which measures the exogenously-determined productivity of agricultural lands. This is independent of the individual's levels of h and k (which also determine productivity) and may be affected by the negative effects of resource extraction.

The benefit derived from civil disobedience is given by

$$U(l_d) \quad = f(oil, \alpha\tau) \qquad\qquad (4)$$

$$\alpha(p_g, \ inf), \quad 0 < \alpha < 1 \qquad\qquad (5)$$

---

[18] An individual may engage in productive work and intermittent acts of civil disobedience. However, the focus here is endemic violence, i.e., when violence and rent-seeking activities becomes an "occupation" of a sort. This is not a remote possibility. Results from Author's survey (March, 2005) reveal that in Bayelsa state, for example, violence has become a way of life and about the only way communities are able to get the attention of multinational oil companies and the government to attend to some of their demands. The erstwhile governor of the State, Alayemesie, once lamented the fact that he had spent the greater part of his tenure settling oil-related disputes (Issac-Onilu, *This Day*, April 22, 2005). Violence is often used to force oil companies to the negotiation table where they would be expected to make long run commitments and offer immediate and temporary concessions.

$\partial U (l_d)/\partial \tau < 0, \partial \alpha /\partial (p_g) > 0, \partial \alpha /\partial (inf) > 0$

Oil availability (*oil*), especially when it is onshore and "obstructable"[19], offers potential benefits from civil disobedience in terms of the possibilities of getting money from extractive firms through "legitimate demands" such as compensations, and from extortions and ransoms; and also from the sale of bunkered oil from vandalized pipeline etc. However, it incurs a cost (τ) (the possibility of government repression in the case of "legitimate demands", and the punitive measures that would be applied when caught in the case of involvement in other criminal activities). This cost is incurred with a probability α which increases in government's presence (p_g), and in the endowment of social infrastructure in community *(inf)*[20]. For low values of *h*, *k*, *g*, and *a*, and sufficiently low values of p_g and *inf* , $U(l_d) > U(l_p)$, in which case agents will prefer to allocate the whole of *l* to civil disobedience rather than to productive work[21].

3.2 Hypotheses

The following hypotheses can be derived from the theoretical and empirical literature and from the predictions of the model above

> **H₁:** *Oil-related civil conflict episodes in the Niger Delta can be traced to institutional and policy failures.*

> **H₂:** *Oil-availability in community of residence increases the propensity to civil disobedience among individuals in the region by creating an incentive for rent-seeking and/or generating negative environmental spill-overs that create grievance.*

> **H₃:** *A larger endowment of social infrastructure at the community-level and/or government presence in community reduces the propensity to civil disobedience among by reducing grievance and/or increasing the risk of participation.*

---

[19] According to Ross (2002), a resource is obstructable "when its transportation can be easily blocked by a small number of individuals with few weapons", and is relatively unobstructable "when it can be blocked with many soldiers and heavy equipment". Oil and natural gas are highly obstructable when they have to be transported long distance through above-ground pipelines and trucks. This is majorly the case in Nigeria's Delta.

[20] Government's presence in terms of government establishment in community serves as a liaison centre and helps to facilitate flow of information between community and state capital. It also means that the government can easily get information on developments in the community, a factor which increases the risk associated with civil disobedience. By the same token, a higher endowment of social infrastructure assists in the policing of the community.

[21] In reality, this decision will be affected by the individuals' attitude to risk and subjective discount rate.

H₄: *A higher educational attainment, a higher income level, possession of a valuable asset, being a student or apprentice, reduces the propensity to civil disobedience among individuals by increasing the opportunity cost of participation.*

H₅: *Unemployment status, personal socio-economic exclusion, creates personal grievances which increase the propensity to civil disobedience among individuals.*

H₆: *Higher episodes of violent conflict in community of residence increase the propensity to civil disobedience by creating grievance or by increasing the stock of conflict capital.*

4. EMPIRICAL ANALYSES AND RESULTS

The study presents a two-fold analysis. The first (which is mainly descriptive) attempts to provide an empirical test of H_1 using conflict episodes drawn from selected communities in the Niger Delta. The results (summarized in Table 7) lend broad support for H_1. The second is an econometric analysis of the determinants of the propensity to various outcomes on civil disobedience among individuals in the region, and provides an empirical test of H_2 through H_6.

4.1 Sample Design, Data collection Methods and Sample Characteristics

The sample was drawn from twenty-three communities in 12 local government areas of three States in the Niger Delta (Bayelsa, Delta, and Rivers) which account for the bulk of Nigeria's oil production and have been the sites of most oil-related civil conflicts in the country over the last six to eight years. The first phase of the field study involved carrying out a preliminary investigation of the selected communities and conducting focused group discussions (FGDs) and personal interviews with individuals and non-governmental organizations (NGOs). The second phase involved administering 1,500 structured questionnaires on selected males[22] (with a bias towards those who by casual observation are above 15 years old) using systematic sampling technique[23]. The exercise yielded a functional sample size of 1337 individuals.

---

[22] The focus on males was deliberate. While females (women) have been involved in oil protests in the Niger Delta in recent times, young males remain the best recruits for armed struggle (Collier, 2000; Elbadawi and Sambanis, 2000).

[23] First, we selected some catchments (areas), where youths could easily be found (e.g., community halls, motor parks). Secondly, we determined the number of streets (or major streets) in the community and allocated a fixed number of questionnaires to each street. We then determined the residential houses/business premises to be visited using a simple formula $j = N/n$, where N is the number of residential houses/business premises in the street and n is the number of questionnaires to be administered. Only, one individual is selected from each premise. In order to avoid any bias arising from group influence, selected individuals in the catchments areas were interviewed separately. The questionnaire was initially pre-tested on twenty-five respondents randomly selected from two communities in Delta state.

Descriptive analyses of the sample (Tables 8) show significant variations in communities in terms of oil-availability, social infrastructure and conflict history; and in income and socio-economic access (personal inclusion) among individuals. Only 27.67 percent of sampled individuals are unemployed but income level is generally low. With a mean income class of 0.99, 69.36 percent of the sampled population earns below N7, 000 (about US $51.47) and 90.08 percent below N15, 000 (about US $110) monthly. Formal educational attainment is also low with only 9.27 percent having completed tertiary education and 51.49 percent never going beyond primary educational level. Economic security appears to be most pressing need individuals (Table 9). Most communities surveyed lacked basic amenities. About 67 percent of houses in surveyed communities depend on neighbours' goodwill, water vendors, rains, streams and rivers for their water needs, about 28 percent get water from centrally-located taps/boreholes, while only a low of about 5 percent have private wells or boreholes. Similarly, about 22 percent of communities have no electricity supply, 11 percent have electricity provided by their respective state governments, 28 percent derive electricity from the national grid, while the remaining 39 percent depends on oil companies for electricity, which is often rationed. In the same vein, about 72 percent of houses surveyed either has no toilet facility or uses pit latrine or bowl buckets, while the remaining 28 percent uses flush toilet (including non-automated flush type) (Table 10). 77.74 percent of communities surveyed have experienced at least one violent conflict[24] over the past ten years from the date of survey.

4.3 Variables and Data

The **dependent variable** (*civildisobedience*) is a discrete variable indicating that the respondent is willing to be engaged in one of three outcomes on civil disobedience (peaceful protest: *peacepro*; violent protest and associated criminality, such as pipeline vandilization etc.: *violence;* and armed struggle for self determination: *rebellion*) The variable takes on a value of 0 if respondent does not indicate a willingness to participate in any one of the three outcomes, 1 if respondent indicates willingness to participate in a peaceful protest but not in a violent protest or armed struggle, 2 if respondent indicates willingness to participate in a violent protest and/or associated criminality but not in an armed struggle, and 3 if respondent indicates willingness to participate in an armed struggle[25].

---

[24] I define a violent conflict as one involving destruction of life and/or property.

[25] Three questions were used to generate the data on *civildisobedience*. (1) *Assuming you come across a burst petroleum pipeline, what are you **most likely** to do?* (2) *Will you be willing to participate in a protest to demand that the people of your community be allowed to own and manage the oil in their land?* (3) *Will you be willing to join a group that will be able to fight to ensure that your community and other communities in the Niger Delta own and manage the oil in their lands?* Once a respondent expressed a propensity to "tap" from a busted pipeline in (1), I ignore whatever response is given to (2) and moved to (3). If the response to (3) is "No", I attach a value of 2 to *civildisobedience*. If, on the other hand, the response to (3) is "Yes", the variable takes on a value of 3. Contrarily, if the respondent reveals no propensity to "tap" from a busted pipeline, I consider (2). If the response to (2) is "Yes" (rather than "Yes, if it is not violent"), and

Independent Variables

Individual-level variables

unemployment is a dummy measuring the state of unemployment. It takes the value of 1 if the individual is currently unemployed and is not a full-time student or apprentice, and 0 otherwise.

studentship is a dummy indicating that respondent is currently a full-time student in a formal educational institution or apprentice in a vocational training.

education is a discrete variable that measures the level of respondent's formal educational attainment. The variable takes on a value of 3 if respondent completed tertiary education, 2 if respondent completed secondary but not tertiary education, 1 if respondent completed primary but not secondary education, and 0 if respondent has no formal education.

asset is a dummy that takes on the value of 1 if respondent has a physical asset and 0 otherwise. Three types of assets are considered: landed properties and farmlands, motor vehicles and motor bikes, and machineries that could be used to generate income.

income is respondent's average monthly income if employed. The variable takes discrete values ranging from 1 to 7 based on respondent's income bracket. The purpose of measuring income level by income groups rather than the absolute value of income is to avoid having a very large standard deviation for the variable relative to others (Long, 1997:54).

inclusion is a measure of respondent's personal and economic access. It is a discrete variable derived by summing values on some measures of socio-economic access, which includes access to three basic amenities: pipe borne water, modern toilet facility, and electricity. Others are access to education (if respondent is of school-going age) *or* access to employment (by type), and access of children or siblings to secondary or primary education. The variable takes on values from 0 to 11.

Community-level characteristics

oil is a dummy that takes on the value of 1 if the community in which respondent is resident has a proven oil endowment and 0 otherwise.

---

the response to (3) is "No", I attach a value of 2 to *civildisobedience*. On the other hand, if the response to (2) is "Yes, if it is not violent", *civildisobedience* takes on a value of 1. Finally, if the response to (3) is "Yes", a value of 3 is attached.

infrastructure is a discrete variable that measures the extent to which the community the individual is resident is endowed with physical (social) infrastructure. The value is derived by summing up available tarred (paved) roads (measured in kilometers and scaled down by the minimum kilometer of tarred road in the communities covered), the number of functional public schools and hospitals, and other public projects such as town halls or recreational sites available in the community; and ranges from 2 to 22.

government is a discrete variable denoting government presence in the community. This is measured by the number of state or federal government establishments in the community. Its value ranges from 0 to 2.

conflict is a variable measuring the extent to which the individual's community of residence has been exposed to violent conflicts. The value is determined by the number of violent conflicts the community has experienced in the last ten years from the date of the survey (March, 2005).

delta is a geographic dummy indicating that respondent's community is geographically located in Delta state.

rivers is a geographic dummy indicating that respondent's community is geographically located in Rivers state.

There are some limitations associated with the data employed in the study, given the absence (or inaccessibility) of official data on most variables. For example, decision on what should be the basis for measuring *inclusion* and the weights attached to each of the factors used is arbitrary, while the data on *infrastructure* basically ignores the quality of existing social infrastructures. The *asset* dummy also ignores the number or quantity of assets an individual may posses (e.g., an individual with one residential building is treated the same as one with two or more residential buildings) and the variation in the quality of each asset type while information on *conflict* are taken as given by community leaders with verification only where possible. In spite of these, the data is considered fairly reliable for the purpose of this study.

4.4 Estimation Techniques

I use two modeling approaches (the *Multinomial Logit* and the *Ordered Logit*) to estimate the propensity to civil disobedience in the region. The general form of the multinomial model can be expressed in the equation

$$P_{ij} = \frac{e^{X_i \beta_j}}{\sum_{k=1}^{j} e^{X_i \beta_k}} \qquad (6)$$

Where P_{ij} is the probability that individual i choose outcome j; x_i is a vector of individual and community-level characteristics (variables), j is the number of outcomes, and βj measures the contribution of variable i to the occurrence of j. The multinomial model assumes that the various outcomes (the j's) are various

unordered alternatives. The logit version of the model (which is employed in the analysis that follows) is inexpensive to estimate and the logit probabilities can be easily interpreted (Train 1993).

When the multinomial choice variables are inherently ordered, the multinomial model will lead to a loss of efficiency (Greene, 2003:736; Long, 1997:149). It seems rational to assume that violence escalates from low to high levels (Sambanis, 2004; Reagan and Norton, 2005; O'Brien, 2002) in which case the multinomial model will be inadequate. The *Ordered Logit Model* takes account of the ordered nature of outcomes on the dependent variable. The probability of any observed outcome in this model is

$$\text{Pr}\,(y_i = m \mid x_i) = \mathbf{F}\;(\tau_m - x_i\,\boldsymbol{\beta}) - \mathbf{F}(\tau_{m\text{-}1} - x_i\,\boldsymbol{\beta}) \qquad\qquad (7)$$

where $y_i = m$ is the outcome observed for individual i, for a given x_i, $\mathbf{F}$ is the cumulative distribution function assumed (in this case the logistic distribution), the τ's are thresholds or cutpoints, and the extreme categories 1 and j are defined by open-ended intervals with $\tau_0 = -\infty$ and $\tau_j = \infty$. To employ this modeling approach, I assume that the three outcomes on civil disobedience (*peacepro*, *violence* and *rebellion*) indicate a movement from one to a more intense form of civil disobedience. Thus 3>2>1 in an *ordinal* sense. I also made some assumptions concerning the responses to the questions that form the basis of the data on the dependent variable[26].

Estimation Results

Four individual-level and two community-level factors determine the propensity to civil disobedience in the ordered regression model (Table 11). The propensity to civil disobedience reduces in income level (*income*), educational attainment (*education*), asset possession (*asset*), socio-economic inclusion (*inclusion*) and the endowment of social infrastructure (*infrastructure*) at the community-level, but increases in oil availability (*oil*). However, from the multinomial regressions (Table 12), *infrastructure* and *oil* appear to matter only for rebellion. Also *conflict* appears to increase the propensity to each outcome on civil disobedience in the multinomial model, while *unemployment* tends to increase the propensity to participate in peaceful protest but does not appear to significantly affect the willingness to participate in violence (and associated criminality)

---

[26] I assume that (i) An individual who is willing to "tap' some fuel from a busted petroleum pipeline would also be willing to burst the pipeline if he has the opportunity to do so (i.e., if he can do it without being observed). This appears logical since bursting a pipeline or "tapping' fuel from a busted pipeline constitute the same offence under the existing Nigerian law. (ii) The individual who is willing to "tap" from a busted pipeline or burst a petroleum pipeline would also be willing to engage in a civil protest against the government or oil companies, whether such protest is peaceful or violent (iii) An individual who is willing to engage in an armed struggle for self-determination will also be willing to "tap" fuel from a petroleum pipeline if it can be done successfully (even if it is done with the intent to finance a justice-seeking rebellion) and to take part in civil protests against the government and/or oil companies whether peaceful or violent.

These assumptions yielded a kind of ordering as follows: If 3, then 2 and 1, If 2 then 1. It also provided a way of ascertaining the genuineness and consistency in the responses provided.

or rebellion. Also, while *government* appears to constrain participation in peaceful protests, it does not appear to statistically determine the propensity to violence or rebellion in the multinomial model.

While different factors tend to explain the propensity to the different outcomes on civil disobedience and state-level differences appear to be significant, three factors (*education*, *income* and *asset*) consistently explain the propensity to general violence as opposed to civil peace and peaceful protests in the two models. For example, a one unit increase in *education* (such as a movement from no formal education to complete primary education or from the latter to complete secondary education etc), other factors held constant, reduces the odds that an individual will participate in violent protest and associated criminality relative to peaceful protest by a factor of 0.66 (or 34 percent) and the odds that the individual will participate in an armed struggle relative to peaceful protest by a factor of 0.558 (or 44 percent) (Table 13). Similarly a one unit increase in *income* (a movement from one income bracket to the upper level), other factors remaining the same, reduces the odds of participation in violent protest and associated criminality by a factor of 0.398 (or 60 percent) and the odds of participating in rebellion by a factor of 0.573 (or 42 percent), while a movement from no asset to asset possession reduces the odds by a factor of 0.459 (or 54 percent). This corroborates the view that higher income and educational attainments reduce the risk of violence in resource-rich countries by increasing the opportunity cost of participation and encouraging political participation and the channeling of conflicts through institutional pathways (Collier and Hoefler, 2002a; Hegre, 2003).

5.0 IMPLICATIONS OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1 Implications of Findings and Recommendations

Nigeria as a nation faces two dimensions of oil-related conflict risk, each of which is capable of generating a civil war or a violent disintegration. The first is the violent rent-seeking political conflicts that oil-availability and dependence generates between the various ethno-regional groups; the second is the Niger Delta crisis. With about 56.5 percent of the sampled population revealing a propensity to general violence as opposed to peaceful behaviour, sustainable civil peace may elude the region, and by extension, the country unless effective measures are taken to reduce this propensity.

The first dimension of conflict is linked to excessive government dependence on oil revenues, an institutionally unstable revenue allocation system, weak political institutional arrangements, lack of effective agencies of restraints to demand transparency and accountability on the part of political office holders, and a defective property right structure in relation to mineral resource endowment. The second is attributable to weak institutional arrangements manifesting in poorly-conceived laws, lack of enforcement, "regulatory capture", and a marriage of interest between the Nigerian state and oil companies which often encourage the State to use repressive measures against oil communities in cases of disputes. There are also the looting and

secession incentives, as well as the rent-seeking contests, that oil availability and the allure of ownership creates among local participants.

Two factors appear to be fundamental in the recurring violent conflict between oil companies and local communities in the Niger Delta. The first is communities' almost total dependence on oil companies for the provision of basic amenities and employment. The second is the absence of an effective way of assessing damages occasioned by oil exploration and production activities and channelling compensation to the affected individuals or communities. These have often put oil companies in dilemmas, encouraged them to use "divide and rule" tactics, and have generated bloody rent-seeking conflicts among individuals and parties in a community and between communities. Also, the operation of Joint Venture Contract (JVC) arrangements between the Nigerian government and oil companies has done much to increase the incidence of oil-related civil conflict in the region. Quite apart from the fact that such contracts are uncommon among oil-producing countries and imposes huge financial responsibilities on the government, its operation has made oil companies in the country almost entirely involved in government administration. In addition, reliance on oil companies to operate community development programmes under the JVCs (a responsibility they are not suited to fulfill) has made both Federal and State governments in the region to abandon their statutory responsibilities, and has bred corruption and lack of transparency on the part of oil companies and government officials. It has also deprived local communities of the much needed development.

Overcoming the first dimension of conflict risk enjoins that the country to sincerely address some core challenges, which include reducing government's dependence on oil revenue through effective diversification, a deliberate focus on non-resource revenues, and reform of the tax system; tackling corruption and the lack of transparency and accountability in the management of oil wealth; dealing with patronage politics at all levels of government; and addressing the agitation for local (or increased local participation in the) ownership and control of mineral resources[27]. In relation to the second, efforts to reduce violent conflicts in the Niger Delta would be more effective if they also address the factors that increase individual's propensity to participate. In this connection, measures that increase the opportunity cost of participation such

---

[27] An effective tax system coupled with dependence on non-mineral tax revenues, rather than natural resource rents, has lots of benefits for a country's political economy. First it promotes transparency and accountability on the part of government, since citizens are more concerned about what their taxes are used for. Second it significantly reduces rent-seeking violent contests among politicians, since there are little or no rents to loot. Third and as a derivative of the above, it helps create a bond between government and citizens.

Also transparency in the management of resource wealth is a requirement for civil peace. First it could help reduce misconceptions arising from exaggerated claims by potential rebel leaders about the economic gains from secession (Collier and Hoeffler, 2002c). For example, Aluko (2002) argues that the Nigerian government earns less than 25 percent of the price of a barrel of crude oil after deducting oil-related expenses. Ross (2004) also mentions the large risks and huge up-front costs associated with the extraction of mineral resources. Secondly when citizens are able to see that the nation's resource wealth are not being transferred into private pockets, squandered or misappropriated, there is less likely to be resource-related protests.

as increasing formal educational attainment (human capital development) and increasing the income levels and asset endowment of the lower strata of society (most of which are not employed in formal settings and are likely to depend on the environmental resources for their livelihood) appear to be fundamental. In addition, the creation of the right set of institutional arrangements that clearly define the legally enforceable responsibilities of governments at the three levels and of oil companies in relation to the provision of public goods, social amenities, and employment to local communities and assigns oil revenue shares to each party in a way commensurate with assigned responsibilities; provide an effective way of channeling compensations and minimizing conflict between oil companies and communities; and promote property and human rights, ensure the rule of law, and compel extractive firms to adopt internationally accepted standards of operation cannot be ignored[28].

The agitation for increased local control of mineral resources may also require the restructuring of property rights to such resources, for example, by the delegation of certain aspects of fiscal authority in oil matters to state and local governments (as in Ahmad and Mottu, 2003) or by transferring full property rights to *onshore* mineral resources to states and local communities, while the Federal government retains full ownership and control of *offshore* resources. To ensure that individuals in local communities benefit from such a transfer and that it does not translate to increased rent-seeking conflicts at the local level, it must be accompanied with the creation of restraining institutions at the local level and the targeting of oil spending to pro-poor activities[29].

---

[28] It will appear that a way to achieving a lasting peace in the Niger Delta would be to relieve oil companies of the responsibility of providing public goods (social amenities) to local communities and providing "employment" to the indigenes "at all cost". Rather, the Federal, State and Local governments should take on these responsibilities, even if the share of oil companies in oil revenue has to be reduced while oil companies are encouraged to fulfill other aspects of social responsibilities towards the communities in which they operate.

Effective conflict management between oil companies and communities and between communities especially in the area of compensations for oil-related externalities may require the creation of an independent and statutory-empowered board with members drawn from oil-producing communities and from the civil society to assess damages associated with oil exploration and production, determine compensations and channel same to affected parties, and to mediate in disputes between oil companies and local communities.

[29] For example, resource-endowed states and local governments could be required by law to take up the EITI and PWYP initiatives. The management and distribution of resource revenue could also be entrusted to an independent board with representations from all communities in the affected state and from the civil society. As a way of control, the accounts of such boards can be subjected to regular external audit. As Ross (2004) suggested, this could be complemented with the establishment of an international system of performance-based ratings, similar to ratings produced by Transparency International (TI) to encourage improved practices.

In relation to the use of oil wealth, Chad's oil revenue management law provides an example. It spells out priority areas where oil revenues are to be spent. These are sectors typically associated with basic services for the population, such as education, health care, infrastructure, including roads and rural development (livestock, water and environment) (World Bank, 2005). However, Sala-i-Martin and Subramanian (2003) appear to support a direct distribution of all oil proceeds to individuals. As the authors argue, apart from removing lootable rents from the reach of politicians, such an arrangement also takes care of the volatility effects of resource rents on the economy. Ross (2003) also echoed an

CONCLUSION

Even though this research work has focused on oil-dependence and civil conflict in Nigeria, the discussions and recommendations can be applied to mineral resources in general. Like oil and gas, the exploration, production and dependence on other mineral resources are capable of generating civil conflicts through one or more of the mechanisms that have been highlighted in the study. In general, Nigeria needs a detailed programme for the effective management and sustainable development of her vast mineral resources. Again, each of the policy implication drawn from the findings of the study throws up some challenges in the area of implementation which need to be carefully examined. In sum it would require appropriate economic policies, institutional reforms and massive political will for the country to address the "resource curse" and to break the "conflict trap" associated with oil-dependence.

References

Adewale, O. 1992. "The Federal Environmental Protection Agency Decree and the Petroleum Industry", *Journal of Private and Property Law* 16, 17 & 18:51-64 (combined edition for 1992 and 1993)

Addison, T; P. Le Billon and S. M. Murshed. 2003. "Conflict in Africa: The cost of Peaceful Behaviour". *Journal of African Economics*, 11(3). 365-86

Ahmad, E. and E. Mottu. 2003. "Oil Revenue Assignments: Country Experiences and Issues". In Davis *et al* (eds) *Fiscal Policy Formulation and Implementation in Oil-Producing Countries*. Washington D.C: International Monetary Fund. Pp. 216- 242

Ahmad, E. and R. Singh, 2003. "The Political Economy of Oil Revenue sharing in Nigeria". Working Paper Series WP/03/(?). International Monetary Fund, Washington, D.C.

Akpan, G. S. 1997. "Nigeria's LNG Programme: Problems and Prospects", *Oil and Gas Law and Taxation Review* 7:264-271.

Aluko, O. 1990. "The Nationalisation of the Assets of British Petroleum," in Gabriel O. Olusanya (ed.), *The Structure and Processes of Foreign Policy Making and Implementation in Nigeria, 1960 – 1990,* Lagos: Nigerian Institute of International Affairs

Amajor, I.C. 1985. "The Ejamah-Ebubu Oil Spill of 1970: A Case History of a 14 years Old Spill," in *Petroleum Industry and the Nigerian Environment,* Lagos: NNPC/Federal Ministry of Works and Housing.

Ashton-Jones, N. 1998. *ERA Handbook to the Niger Delta.* London: Environmental Rights Action.

Bates, R.H., A. Greif, M. Humphreys, and S. Singh. 2003. "Institutions and Development". Paper prepared for Presentation at the Plenary Session of the Bi-Annual Meetings of the African Economic Research Consortium, November 2003, Nairobi.

Brough, W. T. and V. Elliott, (200*), "The Economics of Insurgency", In *Institutions and Collective Choice in Developing Countries.* ed. Kimenyi M. S. and J. M. Mbaku . Ashgate

Caballero, R. 2000. "Macro-economic volatility in Latin America: A view and Three Case Studies". *Economica* September

Clark, E. K.2005. "Full Text of an Address Presented to the National Political Reform Conference, Nigeria", Thursday, March 17, 2005.

CIA. 2005. *Fact Book: Nigeria.* Available online.

Collier, P. 2000. "Rebellion as a Quasi-Criminal Activity". *Journal of Conflict Resolution* 44(6): 839-853.

arrangement similar to the "Alaska fund" when he argued that given the size of Nigeria's oil windfall, had each year's oil rents been invested in a fund that yielded just 5 percent real interest, at the end of 1999, the fund would be worth US $454 billion, which if divided among the general population, every man, woman and child would receive about US $3,750, equivalent to about 15 years of wages.

Collier, P. and A. Hoeffler. 2005. Resource Rents, Governance, and Conflict. *Journal of Conflict Resolution,* 49(4): 625-33.

_____ . 2002a. "Greed and grievance in civil war", Oxford University, Centre for the study of African Economic, WP 2002-01 (http://www.csae.oxiac.uk/workingpaper/pdfs/2002-011ext-pdf.)

_____ . 2002b. "On the Incidence of Civil War in Africa", *Journal of Conflict Resolution,* 46:1, February 2002:13-18

_____ .2002c. "The Political Economy of Secession manuscript, June 30 (http://www.worldbank.org/ogmc/pdfs/Paul-Collier.pdf)

_____ . 1998. "On economic courses of civil war", *Oxford Economic Papers* 50 (4): 563 – 573

Collier, P., L Elliot, H. Hegre, A Hoeffler, M. Reynal-Querol and N. Sambanis. 2003. *Breaking the Conflict trap, Civil War and Development Policy.* World Bank and Oxford University Press

Danler, D., and M. Brunner. 1996. "Shell in Nigeria", *Koln: Broft fur die Welt* (August)

Deininger, K. 2003. "Causes and Consequences of Civil Strife: Micro-level Evidence from Uganda". World Bank. Processed.

Dunning, T. and L. Wirspa. 2002. "Andean Gulf? Oil and the Political Economy of Conflict in Columbia and Beyond", Manuscript, May 31

Ekemike, C. E. 1978. *Understanding the Nigerian Land Use Decree: Its Uses and Abuses.* Benin City: Kems.

Elbadawi I. and N. Sambanis. 2000. "Why are there so many civil wars in Africa? Understanding and Preventing Violent Conflicts", *Journal of African Economies.* Oxford, U.K

Emmanuel, O.E. 2004. "Gauging Progress on Oil in Nigeria: Community Relations, Development Impact and revenue Transparency". Center for Social and Corporate Responsibility, Port Harcourt, Nigeria.

Essential Action and Global Exchange. 2000. *Oil for Nothing: Multinational Corporations, Environmental Destruction, Death and Impunity in the Niger Delta:* Available on: http://www.essentialaction.org/shell/report/intro.html

FEPA (Federal Environmental Protection Agency). 1991. *Guidelines and Standards for Environmental Pollution Control in Nigeria,* Abuja: Federal Government of Nigeria

Fearon, J D. 2005. "Primary Commodities Exports and Civil War". *Journal of Conflict Resolution,* 49(4): 483-507.

_____ . "Rationalist Explanations of War". *International Organisation* 49 (summer) 379-414

Fearon, J. D. and D. D. Laitin, 2003. "Ethnicity, Insurgency, and Civil War". *American Political Science Review* 97(1): 75-90

_____ . 2002. "Ethnicity, Insurgency and Civil War", Manuscript, July 12

Frynas, J., G. 2003. "Oil in Nigeria: Conflict and Litigation Between oil Companies and Village Communities", in Kapel, R. and U. Engel (eds). *Politics and Economics in Africa, Vol. 1,* LIT VERLAG Munster – Hamburg- London.

_____. 1998. "Political Instability and Business: Focus on Shell in Nigeria," *Third World Quarterly* 19(3): 457-478.

Garfinkel M. R. and S. Skaperdas. 2000, "Conflict without Misconception or Incomplete Information. How the Future Matters". *Journal of Conflict Resolution* 44(6): 792-806

Gary I. and T. L. Karl. 2003. *Bottom of the Barrel, Africa's Oil Boom and the Poor,* Catholic Relief Services

Goldstone, J., A., Gurr, T. R., Harff, B., Levy, M.A., Marshall, M.G, Bates, R. H., Epstein, D. l., Kahl, C.H., Surko, P.T., Ulfeldea, J.C., Unger, A.N. 2000. *State Failure Task Force Report: Phase III Findings, September 30, 2000.*

Goodhand, J. 2003. "Enduring Disorder and Persistent Poverty: A Review of the Linkages between War and Chronic Poverty. *World Development* 31(3): 629-46

Gravin, M and R. Hausmann. 1998. "Nature, Development, and Distribution in Latin America. Evidence on the Role of Geography, Climate and Natural Resources". WP-378.

Greene, W. H. 2003. *Econometric Analysis.* New Jersey: Pearson Education, Inc

Gurr, T., M. Marshall and D. khosla. 2001. *Peace and Conflict 2001. A Global Survey of Armed Conflict, Self Determination Movements and Democracy.* College Park, MD: Centre for International Development and Conflict Management, University of Maryland.

Hallmark T. 1998. "Political Risks in West Africa: A Comparative Analysis", *Oil and gas Law and Taxation Review* 11:399-404.

Hamilton, J., Stockman, L., Brown, M., Marshall, G., Muttitt, G., and Rau, N. 2004. "The case for an oil-free future", www.nonewoil.org

Hausmann and Ribogon

HeHige, H., M. Hag S. Pargal, and D. Wheeler 1996. "Determinants of pollution a baterment in developing countries: evidence from South and Southeast Asia", *World Development* 24: 1891-1904.

Hegre, H. 2003. "Disentangling Democracy and Development as Determinants of Armed Conflict." Paper presented at the Annual Meeting of International Studies Association, February 27, Portland, Oreg. Available on http://econ.worldbank.org/files/2463_ddcwwb.PDF

——————————. 1995. "Anarchy and its Breakdown". *Journal of Political Economy* 103: 26-52.

HRW (Human Rights Watch). 1995. "Nigeria, The Ogoni Crisis: A Case Study of Military Repression in Southeaster Nigeria," New York: Human Rights Watch.

-----------. 1999a. *The Price of Oil – Corporate Responsibility and Human Rights Violations in Nigeria's Oil Producing Communities.* New York: Human Right Watch.

-----------.1999b. "Nigeria: Crackdown in the Niger Delta," New York: Human Right Watch.

————————. 2005. "Rivers and Blood: Guns, Oil and Power in Nigeria, Rivers State. A Human Rights Watch Briefing Paper. Available on…

Hyne, N. J. 1995. *Non technical Guide to Petroleum Geology, Exploration, Drilling and Production*, Tulsa, Oklahoma: Penn Well.

IPCR (Institute for Peace and Conflict Resolution). 2002. *Strategic Conflic Assessment, Nigeria: Consolidated Report.* Nigeria: Institute for Peace and Conflict Resolution; The Presidency.

IDB. 1995. Economic and Social Progress in Latin America. 1995 Report.

Karl, T. 1997. *The Paradox of Plenty; Oil booms and petrol States.* Berkeley: University of California Press.

————————————. 2001. *Resource Wars*. New York: Metropolitan Books

Lane, P.R. and Aaron Tornell. 1999. "The Voracity Effect", American Economic Review, 28, 22-46.

Le Billon, P. 2001. "The Political Ecology of War: National Resources and armed conflicts", *Political Geography* 20: 501 – 554.

Lane, P.R. and Aaron Tornell. 1999. "The Voracity Effect", American Economic Review, 28, 22-46.

Lichbach, M.I (1995), *The Rebel's Dilemma*, University of Michigan Press. Ann Arbor

Long, J.S. 1997. *Regression Models for Categorical and Limited Dependent Variables.* Advanced Quantitative Techniques in the Social Sciences Series. London: **SAGE** Publications.

Mack, A. (200*) "The Private Sector and Conflict Global Compact Policy Dialogue". Available online.

Mahdavy, H. 1970. "The Pattern and Problem of Economic Rentier States: The Case of Iran". In *Studies in the Economic History of the Middle East*, ed. M.A. Cook. 428-67. London: Oxford University Press.

O'Brien, S. P.2002. "Anticipating the Good, the bad and the Ugly". *Journal of Conflict Resolution* 46(6):791-811

Odunze, A. 2004. New Age. 2(47), Wednesday, Sept. 29, 2004. Lagos: Century Media Ltd.

Ogbnigwe. A. 1996.*Legal sector, NDES Phase 1,* Port Harcourt: Anpez Environmental law Center.

Omalu, M. K. 1996. "Development in Petroleum Exploration and Production Arrangements in Nigeria", *Oil and Gas Law and Taxation Review* 14:70-76.

Omotola, J.A. 1980. *Essays on the Nigerian Land Use Act 1978*. Lagos University Press.

——————————. 1990. "The Quantum of Compensation for Oil Pollution: an Overview," in J.A. Omotola (ed.), *Environmental Laws in Nigeria including Compensation,* Lagos: University of Lagos. Department of Law.

Pergal, S. and D. Wheeles (1996), "Informal regulation of industrial pollution in developing counties: evidence from Indonesia". *Journal of political Economy*, 104: 1314-1327.

Ramey, G and V.A. Ramey. 1995. "Cross-Country Evidence on the Link Between Volatility and Growth". *American Economic Review* 85, 1138-1151.

Reagan, P. M. and D. Norton.2005. "Greed, Grievance and Mobilization in Civil War". *Journal of Conflict Resolution* 49(3):319-226

Renner, M., L. 2005. *Beyond Oil:The Oil Curse and solutions for an Oil-free future*, available online.

Ron, J. "Paradigm in Distress?" 2005. Primary Commodities and Civil War. *Journal of Conflict Resolution*, 49(4):443-450.

Ross, M. L. 2004a. "How Does Natural Resource Wealth Influence Civil War? Evidence from 13 Cases, International Organization 58.

——————— . 2004b. "Mineral Wealth and Equitable Development". Background Report for the World Development Report 2006. Available online.

——————— .2004c. "How should States Manage the Distributive aspects of Resource Revenues? Some Considerations. Processed.

——————— . 2003a. "Nigeria's Oil Sector and the Poor". Paper prepared for the UK Dept for International Development (DFID) "Nigeria: Drivers of Change" Programme Available online

——————— . 2003b, "Oil, Drugs and Diamonds, The varying role of National Reserves and Civil War". In The *Political Economy of Armed Conflict: Beyond Greed and Grievance.* ed. Karen, B. and J. Sherman. Boulder, co:Lynne Reiner (47-60)

_____ . 2001. "Natural Resources and Civil Conflict: Evidence from Case Studies", Paper prepared for the World Bank/UC Irvine workshop on "Civil Wars and Post-Conflict Transitions" May 18-20, 2001, Irvine, CA

_____ . 2001. "Does Oil Hinder Democracy? "*World Politics* 53 (April): 325-61

_____ . 1999. "The Political Economy of the Resource Curse", *World Politics*, 51(2).

Sachs, J. D. and A. M. Warner.1995 "Natural Resources Abundance and Economic Growth", Development Discussion Paper No. 517a, Harvard Institute for International Development. Cambridge, MA: (http://www.cid.havard.edu/hiid/517.pdf.)

Sala-i-Martin, X. and A. Subramanian, 2003. "Addressing the Natural Resource Curse: An Illustration from Nigeria" Working Paper Series WP/03/139. IMF, Washington, D.C.

Sambanis, N. 2004. "Poverty and the Organisation of Political Violence: A Review and Some Conjectures". Available online.

_____. 2000. "Partition as Solution to Ethnic War" *World Politics* 52(4): 437-83.

Santhakumar, V. 2003. "Citizens' actions for protecting the environment in developing countries: an economic analysis of the outcome with empirical cases from India", *Environment and Development Economics* 8: 505-528.

Skaperdas, S. 2001. "Warlord Competition". *WIDER Discussion Paper*, No. 2001/54.

_____. 1992. "Cooperation, conflict and power in the absence of property rights". *American Economic Review* 82:720-39

Skaperdas, S. and C. Syropoulos, 1996 "Can the Shadow of the Future Harm Cooperation?", *Journal of Economic Behaviour and Organisation* 29(3), 355-322

Suberu, R. and L. Diamond. 2001. *Institutional Design, Ethnic Conflict Management and Democracy in Nigeria*. Washington, USIU.

Train, K. 1993. Quantitative Choice Analysis. The MIT Press.

Van Dessel, J.P. 1995. "Internal Position Paper: The Environmental Situation in the Niger Delta," (February).

World Bank. 1995. *Defining an Environmental Development Strategy for the Niger Delta.* Industry and Energy Operations, Division, West Africa Dept. of the World Bank (May 25)

_____. 1996. *Nigeria: Poverty in the Midst of Plenty: The Challenge of Growth with Inclusion,* Population and Human Resources Division, western Africa Department, Africa Region. World Bank (31 May)

_____. 1996. *National Environmental Action Plan: Towards the Development of an Environmental Action Plan for Nigeria*. World Bank: Washington (December)

_____. 2002. *Human Development Report*. World Bank: Washington.

_____.2005. "Making Petroleum Revenue Work for the Poor". World Bank: Washington.

Table 1: Dimensions to Oil-dependence and Civil Conflict in Nigeria

Conflict Level	Goal	Instruments	Actors
1. National	Control of oil rents	Capture of political power at the centre	Ethno-Regional Groups (ERGs)
2. National	Increased share of revenue from Federation account	State creation, Census manipulation, Manipulation of Revenue Allocation formula	ERGs, States
3. National	Increased share of oil rents	Manipulation of Revenue Allocation formula, Local control of oil resources ("Resource control")	Oil-producing States, Other States, Federal Government
4. Regional	Control of benefits from Property rights to land where oil production activities take place	Capture of Political power at State and local government levels, capture of traditional and local authorities, Assertion of ownership rights to land	Ethnic groups, Communities and Opinion leaders within the Niger Delta
5. Regional	Maximization of Benefits from exploration and production activities	"Divide and Rule", Exploitation of weak institutional arrangements, Regulatory capture, Repression, Civil disobedience, Rebellion	Oil companies, ethnic groups & communities in the Niger Delta, Federal government

Table 2: Operation Agreements between the Nigerian Government and Oil companies

JOINT VENTURE CONTRACTS (JVCs)	PRODUCT SHARING CONTRACTS (PSCs)

1. Partners share in cost of petroleum operations in the proportion of their equity share holding.
 	
2. Each partner can lift and separately dispose of its interest share of crude oil production, subject to payment (to Government) of petroleum profits tax, and royalty
 	
3. One of the partners is designated as the operator of the joint venture.
 	
4. The operator prepares and proposes programmes of work and budget of expenditure, for approval by NAPIMS, the major shareholder.
 	
5. The operator has freedom of action in specific matters, and each party can opt for, and carry out sole risk operations.
 	
6. The contractor pays no corporate tax on its profit.
 	
7. NNPC reserves the right to become operator
 	
8. The commercial aspects of the agreement are covered in the Memorandum of Understanding (MOU). The current MOU provides the companies a guaranteed minimum profit of $2.30 per barrel after tax and royalty on their equity crude, and a reserves additional bonus, in any year that a company's addition to oil and condensate ultimate recovery exceeds production for that year.
	1. The contract areas for the OPL's are located in deep offshore or inland basin.
	
	2. The term of the PSC is for a period of 30 years, inclusive of 10 year exploration period.
	
	3. The contractor bears all the cost of exploration, and if oil is found, also bears the cost of subsequent development and production of operations. If no oil is found, the contractor is not reimbursed for exploration expenses.
	
	4. Crude oil produced is allocated as follows
	   Tax Oil- This is to offset tax, royalty, and concession rentals due to government
	   Cost Oil – This is for reimbursement to the contractor for capital investment and operating up to certain limits.
	   Profit Oil- The balance after deduction of tax oil and cost oil elements will be shared between the contractor and NNPC.

Source: NNPC, 2005.

Notes: JVCs are uncommon among oil producing countries in general. Nigeria provides an exception. Rather, PSCs are attractive to governments as they avoid risks (Gary and Karl, 2003). The NNPC has also not been able to meet its share of maintenance and running costs associated with the JVCs. For example, lack of arrears payments and finance from NNPC to joint venture partners, amounting to N26 billion, led to a drop in exploration and production activities by the oil companies in 2002 (*This Day*, Nov 18, 2002). PSCs were particularly introduced in 1991 to alleviate the organization's funding problems, but production under this arrangement is still limited (an estimated 3 percent of total as at 2002: Gary and Karl, 2003).

Table 3: Legislation to Protect Communities, compiled for the NDES-Commissioned Report in 1996

Legislation Areas	Laws/ Regulations	Degrees of Community Protection
Noise	- Workmen Compensation Act 1990 - State Environmental Sanitation Edicts - Factory Act - FEPA and SEPA Decrees &Edict	Zero Enforcement Inadequate laws
Wildlife Conservation	- Endengered Species Act Cap 108 LFN* 1990 - Natural Resources Conservation Council Act Cap 286 LFN 1990 - Forestry Law	Weak Enforcement Inadequate Laws
Pest Control	- Public Health Laws - FEPA Act Cap 131 LFN 1990	Laws are antiquated in terms of penalties, implementation and Application, and have been dropped in the present laws of the federation
Fishery	- Fisheries Act Cap 404 LFN 1990	Zero Enforcement, poor co-ordination and inadequate laws
Water	- Mineral Oil (Safety)Act Cap 350 LFN 1990 - Mineral Resources Act Cap 226 LFN 1990 - Oil in Navigable water Act cap 339 LFN 1990 - Petroleum Act Cap 350 LFN 1990 -River Basins development Authorities (RBDA) Act Cap 396 LFN 1990 -FEPA Act Cap 131 LFN 1990	Inadequate, antiquated and finally omitted in the Federal Laws but still effective in Delta state Colonial and not in use [sic] Weak Enforcement, do not favour local communities
Land	-Land Use Act Cap 202 LFN 1990 - Handful Wastes Act Cap 16 SLFN 1990 -Natural Resources Conservation Council Act Cap 131 LFN 1990 -FEPA Act Cap 131 LFN 1990	Favour and protect interest of government and not communities Not properly enforced
Industry	-FEPA Act Cap 131 LFN 1990 -Harmful wastes Act Cap 165 LFN 1990 -Environmental Impact Assessment (EIA) Decree 1992, No.86 -SEPA Edicts	Not properly enforced FEPA not equipped to enforce regulation Provisions to witch hunt communities and rob them of right to compensate i.e., through claims of sabotage
Oil and Harzadous Substance	-Petroleum Act Cap 350 LFN 1990 -Petroleum (Drilling and Production) Regulation 1969 -Associated Gas Re-Injection Act Cap 20 LFN 1990	Did not adopt environmental considerations and hence cannot protect communities' interests Not Effective
Sanitation	-Public Health Law -Environmental Sanitation Edicts -FEPA Act Cap 131 LFN 1990	Antiquated Weak enforcement Weak enforcement
Air	-FEPA Decree No. 56 of 198	

*LFN stands for Laws of the Federation of Nigeria.   Source: Ogbnigwe (1996:16-17); Frynas   (2000:91).

Table 4: Comparative Indicators: Oil and Macroeconomic Instability in Nigeria

	Nigeria	Oil Producing Countries	Developing Countries	All Countries
Per capita GDP, PPP, 1998	955	3,579	2,076	3,029
Standard deviation of growth Of per capita GDP	0.1465	0.111	0.078	0.0703
Coefficient of variation	0.110	0.101	0.051	0.040

Source: Adapted from Sala-i-Martin and Subramanian, 2003

Fig 1: Nigerian Federation Account: Main Revenue Sources (2003 Estimates)
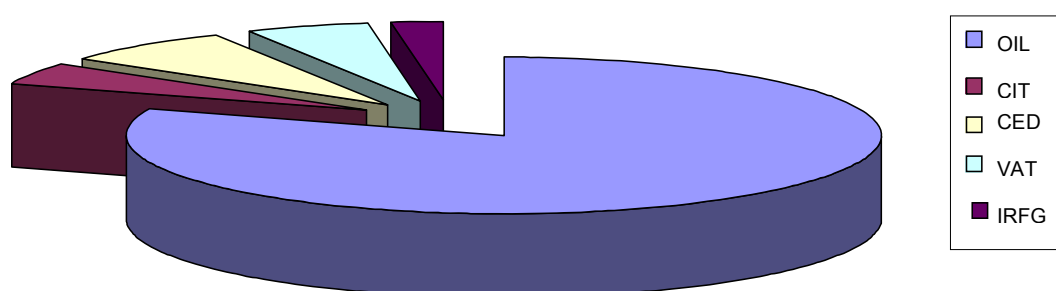
KEY
OIL= Oil Revenue (Gross) (consist of exports and domestic Oil Revenue), CIT= Companies Income Tax
CED= Customs & Excise Duties, IRFG= Independent Revenue of Federal Government (incl. GSM)
Source: CBN, Annual Report and Statements of Accounts, December, 2003

Fig.2: Allocation of Revenue from the Nigerian Federation Account

Source: Adapted from Ahmad and Singh, 2003

Table 5: Comparative Institutional Quality: Nigeria and Selected Countries and Country groups

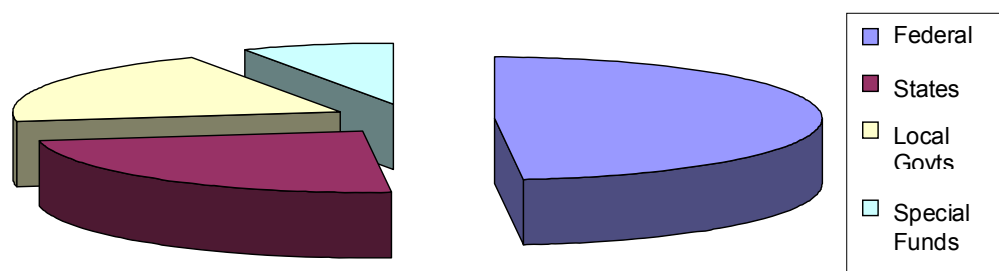|	VA	PS	GE	RQ	ROL	COC
Benin	0.03	-0.63	-0.62	-0.56	-0.42	-0.61
Botswana	0.73	0.75	0.87	0.81	0.72	0.76
Ghana	0.01	-0.11	0.01	-0.29	-0.51	-0.40
Nigeria	**-0.70**	**-1.49**	**-1.12**	**-1.18**	**-1.35**	**-1.35**
Senegal	0.15	0.25	-0.18	-0.22	-0.20	-0.17
Tanzania	0.41	-0.25	-0.51	-0.55	-0.49	-1.0
LIC	-0.73	-0.78	-0.76	-0.78	-0.81	-0.76
SSA	-0.70	-0.70	-0.73	-0.71	-0.76	-0.68

KEY: VA= Voice and Accountability; PS= Political stability, GE= Government Effectiveness; RQ=Regulatory Quality; ROL=Rule of law; COC= Control of Corruption. LIC= Low Income Countries; SSA= Sub-Saharan African Countries. Indices for LIC and SSA are by Author's Calculation and represent averages. LIC countries are based on World Bank classification. **Source**: Kaufmann, Kraay and Mastruzzi, 2003(2002 estimates).

Table 6: Political Economy of Revenue Sharing in Nigeria

Region	No of States	Federal Transfers Per capital as % of total (1998)	Average Transfer Per capita (Naira) (1998)
East	9	23.63	676
North	18	52.22	747
West	9	24.15	691

Source: Author's calculations based on data in Ahmed and Singh (2003)

Table 7: Policy and Institutional Factors in the Causes of Violent Conflicts (Selected cases)

S/N	IMMEDIATE CAUSES OF CONFLICT, CONFLICT EPISODES AND ACTORS	REMOTE CAUSES OF CONFLICT	POLICY/ INSTITUTIONAL WAEKNESSES
1	**Demand for social infrastructure (water, light, roads, schools, hospitals) from oil companies**. E.g. Edagberi/Better land community, Rivers State, and SPDC, 1998), (Edagberi, Biseni, Idu, Mbiama communities, Rivers State SPDC, 2005), (Akinima community, Rivers State and SPDC/Agip, 1997/2002), (Imiringi community, Bayelsa State and SPDC, 1999,2000), (Gbarantoru community, Bayelsa State and SPDC, 2001, 2005), (Eleme Alesa community, Rivers State and Federal Government, 2005), (Biseni community, Bayelsa State and SPDC, 1996).	Failure of state to provide public goods and infrastructure\n\nFailure of oil companies to honour MOUs	Absence of well defined "rules of the game" (i.e, who is responsible and accountable for what)\n\nState failure
2.	**Demand for employment from oil Companies** (Edagberi/Better Land community, Rivers State, and SPDC, 2004), (Afiesere community, Delta State and Shell, 2004), (Evremi community, Delta State and SPDC, 2004), Biseni community, Bayelsa State and SPDC, 1996).	Failure of state and private sector to create employment opportunities	Economic policy failure
3	**Environmental damages and failure to get redress through established courts.** (E.g. Ekakpame community, Delta State and SPDC, 1999), (Edagberi/Better Land community, Rivers State, and SPDC, 1995),		Inadequate/ineffective environmental regulation and compensation mechanism\n\nWeakness of Legal Arrangements for conflict resolution\n\n(Sometimes oil companies do not obey court orders)
4	**Competition among local communities and between groups in a local community for benefits from oil companies.** E.g. (Edagberi, Biseni, Idu, Mbiama communities, Rivers State SPDC, 2005), Afiesere community, Delta State and SPDC, 1999) , (Obotobo 2 community, Delta State and SPDC, 1998), (Ugbolu, Asaba communities,2003/4), Evremi community, Delta State and SPDC, 1999), (Join-Krama 3, Edagberi communities, Rivers State, and SPDC, Agip, 2005), (Obioma and Obioku communities, Rivers State and SPDC, 2005), (Biseni and Agbere communities, Bayelsa State and SPDC, 1995).	Improper channeling of benefits to communities\n\nFailure of state to provide public goods and infrastructure\n\nFailure of state and private sector to create employment opportunities	State (Governance) failure\n\nEconomic Policy failure

Note: Based on Author's survey. SPDC is Shell Petroleum Development Company, Nigeria. MOU is Memorandum of Understanding, a form of social contract between oil company and host community. Examples are drawn from selected communities. **Source**: Author's Field Survey, March- April 2005.

Table 8: Descriptive Statistics

Variable	Mean	Std. Dev.
civildisobedience	1.804	1.062
education	1.516	0.747
income	0.994	1.408
asset	0.671	0.470
studentship	0.347	0.482
Oil	0.611	0.488
government	0.389	0.756
inclusion	3.689	1.939
unemployment	0.281	0.469
infrastructure	8.305	5.049
conflict	1.610	1.458

Table 9: Respondents' Answers to the Question: What is your most pressing need?

	Frequency	Percentage
1. A job or business that can provide enough income for self and family	658	48.89
2. Provision of electricity/water, road to respondent's community	349	25.93
3. Respondent community be allowed to own and manage the oil and Gas resources in its land	324	24.07
4. Others	14	1.11

Source: Author's Field Survey, March- August 2005

Table 10: Access to Basic Amenities and availability of Social Infrastructure in Surveyed Communities

Amenities	Fraction of Communities Surveyed		
	Bayelsa	Delta	Rivers
Water			
Private Connection to pipeline	0/6	0/6	0/6
Private well/borehole	0/6	5/6	0/6
Centrally located taps/borehole	0/6	1/6	0/6
Others (Neighbors goodwill, water vendors, rain, streams/ rivers)	6/6	0/6	6/6
Electricity			
Provided by Federal government	0/6	5/6	0/6
Provided by State government	2/6	0/6	0/6
Provided by Oil Company	3/6	1/6	3/6
No Electricity (kerosene/gas lamp/candles/battery flashlights etc)	1/6	0/6	3/6
Toilet			
Flush Toilet (include non-automated flush type)	0/6	5/6	0/6
Others (Pit latrine, bowl bucket, No toilet)	6/6	1/6	6/6
Aggregate Measurement of Social Infrastructure (tarred roads, functional Public hospitals, schools etc) (Community Average)	8.7	5.58	10.58

`

Table 11: Ordered Logit Regresion on *civildisobedience*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
income	-0.466	-0.468	-0.467	-0.423	-0.426	-0.396	0.673
	(0.061)	(0.061)	(0.061)	(0.047)	(0.047)	(0.042)	(0.028)
Delta	1.334	1.343	1.291	1.298	1.364	1.370	3.934
	(0.169)	(0.168)	(0.154)	(0.154)	(0.145)	(0.145)	(0.569)
oil	0.620	0.607	0.657	0.670	0.654	0.641	1.898
	(0.134)	(0.131)	(0.115)	(0.115)	(0.114)	(0.114)	(1.215)
Asset	-0.634	-0.633	-0.634	-0.651	-0.630	-0.640	0.527
	(0.117)	(0.117)	(0.117)	(0.116)	(0.114)	(0.114)	0.060
Education	-0.382	-0.382	-0.384	-0.391	-0.382	-0.359	0.698
	(0.097)	(0.097)	(0.097)	(0.097)	(0.096)	(0.095)	(0.066)
infrastructure	-0.039	-0.038	-0.040	-0.040	-0.042	-0.043	0.958
	(0.012)	(0.012)	(0.012)	(0.012)	(0.011)	(0.011)	(0.011)
Inclusion	-0.062	-0.063	-0.060	-0.059	-0.057	-0.076	0.927
	(0.039)	(0.039)	(0.039)	(0.039)	(0.038)	(0.036)	0.034
studentship	-0.310	-0.312	-0.294	-0.170	-0.188		
	(0.173)	(0.173)	(0.171)	(0.130)	(0.129)		
Rivers	-0.172	-0.176	-0.175	-0.156			
	(0.129)	(0.128)	(0.128)	(0.127)			
unemployment	-0.191	-0.189	-0.186				
	(0.166)	(0.166)	(0.166)				
conflict	0.030	0.035					
	(0.045)	(0.043)					
government	-0.030						
	(0.073)						
τ_1	-3.764	-3.751	-3.790	-3.650	-3.577	-3.537	
	(0.263)	0.216	0.256	(0.223)	(0.215)	(0.213)	
τ_2	-1.746	-1.732	-1.773	-1.638	-1.563	-1.527	
	(0.243)	(0.241)	(0.236)	(0.202)	(0.193)	(0.191)	
τ_3	-0.706	-0.693	-0.734	-0.599	-0.524	-0.488	
	(0.240)	(0.237)	(0.232)	(0.198)	(0.188)	(0.186)	
Observations	1347	1347	1347	1347	1347	1347	
Pseudo R^2	0.102	0.102	0.102	0.102	0.101	0.100	
Log likelihood	-1585.98	-1586.06	-1586.38	1587.0	-1587.76	-1588.82	

Notes: Columns (2) through (6) progressively omit the least significant variable from previous model. (6) contains only variables that are significant at the conventional 5% level. (7) reports odd ratios for the statistically significant variables. The τ_s are the ancillary parameter estimates of the thresholds or cutpoints that separates between the various outcomes. Standard errors in parenthesis.

Table 12: Ordered Logit Regresion on *civildisobedience*

	Multinomial Logit		
	(1) Peacepro	*(2)* violence	*(3)* rebellion
Education	0.002	-0.414*	-0.582**
	(0.182)	(0.200)	(0.185)
income	-0.061	-0.983**	-0.619**
	(0.094)	(0.154)	(0.109)
asset	-0.245	-0.544*	-1.024**
	(0.232)	(0.246)	(0.230)
studentship	-0.354	-1.512**	-0.520
	(0.294)	(0.376)	(0.306)
unemployment	0.782*	-0.464	0.308
	(0.345)	(0.414)	(0.355)
Inclusion	-0.030	-0.143	-0.107
	(0.065)	(0.079)	(0.067)
oil	-0.404	-0.267	0.625**
	(0.234)	(0.262)	(0.240)
government	0.332*	0.250	0.127
	(0.133)	(0.152)	(0.142)
Infrastructure	0.017	0.019	-0.051*
	(0.021)	(0.023)	(0.022)
conflict	0.270**	0.289**	0.196*
	(0.082)	(0.090)	(0.087)
delta	-0.365	0.734*	1.575**
	(0.307)	(0.355)	(0.320)
rivers	-0.881**	-0.052	-0.647*
	(0.239)	(0.264)	(0.258)
Observations	1347	1347	1347
Pseudo R^2	0.153		
Log likelihood	-1497.059		

Note: Outcome *civildisobedience* = 0 is the comparison group.
Standard errors in parentheses, * significant at 5%; ** significant at 1%.

Table 13: Effects of educational attainment, Income level and Asset possession on the odds of participation in violence and armed struggle relative to peaceful protest

	Violence	Rebellion
education	0.660	0.558
Income	0.398	0.573
Asset	0.742	0.459