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**Conflict Prevention through
Natural Resource Management?
A Comparative Study**

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Conflict Prevention through Natural Resource Management? A Comparative Study

Abstract

Natural resources are often held responsible for intrastate conflicts. As a consequence, both national and international measures to avoid the detrimental impact of resource endowments have increasingly been discussed and implemented in resource-rich countries. These measures include stabilization funds, subregional development programs, revenue-sharing regimes, and transparency initiatives. However, comparative empirical studies of the actual impact of these measures, particularly regarding their contribution to conflict prevention, are scarce. This paper contributes to the filling of this gap: combining a medium-N sample of oil-dependent countries and three in-depth case studies (Algeria, Nigeria, and Venezuela), we evaluate different instruments of resource management and their effects on conflict risk factors. On the one hand, the findings do not show any systematic connection between the countermeasures and a reduction in resource-related risks; on the other, the paper highlights common causal factors for the lack of implementation of resource-related countermeasures.

Keywords: Oil, violent conflicts, political stability, resource management

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Zusammenfassung

Chancen und Grenzen von Konfliktvermeidung durch Ressourcenmanagement in vergleichender Perspektive

Natürliche Ressourcen gelten als häufige Ursache für innerstaatliche Konflikte. Seit einigen Jahren werden daher Gegenmaßnahmen zur Vermeidung des „Ressourcenfluchs“ verstärkt diskutiert und teilweise bereits umgesetzt. Zu diesen Maßnahmen zählen Stabilisierungsfonds, regionale Entwicklungsprogramme, feste Verteilungsmechanismen für Ressourcenerlöse sowie nationale und internationale Antikorruptions- und Transparenzinitiativen. Bisher liegen jedoch wenige vergleichende Untersuchungen zur Wirkung dieser Maßnahmen hinsichtlich einer Konfliktvermeidung oder -verringerung vor. Mit diesem Arbeitspapier soll dazu beigetragen werden, diese Lücke zu schließen. Anhand von 31 Erdölexportoren und von drei Fallstudien (Algerien, Nigeria und Venezuela) wird untersucht, welche Gegenmaßnahmen in rohstoffabhängigen Ländern bisher umgesetzt wurden und inwieweit dies einen Einfluss auf ressourcenbezogene Konfliktrisiken hatte. Zwar ist mittels empirischer Analyse kein systematisch positiver Zusammenhang zwischen Gegenmaßnahmen und einer Verminderung dieser Konfliktrisiken festzustellen, jedoch werden gemeinsame Erklärungsfaktoren für eine mangelhafte Implementierung der Gegenmaßnahmen herausgearbeitet.

Conflict Prevention through Natural Resource Management? A Comparative Study

Annegret Mähler, Miriam Shabafrouz, and Georg Strüver

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1 Introduction

Natural resources, especially oil, are frequently held to be responsible for conflict.¹ In general, natural resources promote conflicts through three mechanisms (Collier/Hoeffler 2004; Fearon/Laitin 2003; Le Billon 2001; Ross 2003, 2006): First, resources can provide a motive for conflict, as violence results from disputes over the benefits (for example, revenues) or the costs (for example, ecological damages, socioeconomic stress) of resource extraction. Second, natural resources, particularly lootable resources, provide opportunities for violence by financing warfare. Third, resources can cause conflict through indirect mechanisms: resources may weaken political institutions and impair the effectiveness of public bureaucracy, as they

¹ This paper was written as part of the project “Is Resource Wealth a Risk Factor? On the Importance of Contextual Conditions for the Connection between Natural Resources and Violence in Non-OECD States,” funded by the German Research Foundation (DFG), at the German Institute of Global and Area Studies (GIGA).

increase the incentives for corrupt behavior. Also, dependence on natural resources and high rents from the resource sector may negatively affect socioeconomic development (for example, “Dutch disease,”² high vulnerability to trade shocks, “white elephants”) (Auty 2001), thus indirectly contributing to internal instability.

However, various largely peaceful and stable resource-exporting countries show that natural resources do not necessarily lead to violent conflict. The existence of these countries also suggests that the emergence or absence of conflict depends on some further conditions (Hegre/Sambanis 2006; Basedau/Lay 2009; Basedau/Mähler/Shabafrouz 2010). Context conditions that proved to be crucial are the level of resource abundance per capita and outside protection by international actors (Basedau/Lay 2009), the quality of political institutions, particularly at the beginning of resource extraction (Boschini/Petterson/Jesper 2004; Karl 2007), and the ownership structure in the resource sector (Weinthal/Luong 2006). Another important factor—which influences whether natural resources contribute to violence and economic distortions or whether they lead to socioeconomic development and peace—is the quality of resource management. Recent studies by Le Billon (2008) and the United Nations Environment Programme (Halle 2009) argue that resource management can help to avoid resource-related conflicts and may—especially in post-conflict societies—facilitate the funding of peace-related needs (for example, spending on health care, economic revitalization).

Despite the acknowledged importance of resource management, comparative empirical studies of the capacity of resource management instruments to reduce resource-related conflict risks remain scarce. This paper contributes to the filling of this gap, by exploring the link between resource management and conflict in oil-exporting countries. We investigate two research questions: First, on which resource management measures—if any—do resource-dependent countries rely in their response to resource-related risk mechanisms? Second, what are the effects of these countermeasures on resource-related risk mechanisms in general, and on violent conflict in particular?

The paper proceeds as follows: The subsequent section provides a concise review of the recent literature on resource management, in order to systematically assign the particular countermeasures to specific resource-related risk mechanisms. The third section outlines the methodology used in the following empirical analyses. The fourth and fifth sections explore the presence of countermeasures in a sample of petroleum-dependent countries, and analyze in detail the interplay between countermeasures and resource-related conflict risks in three case studies (Algeria, Nigeria, and Venezuela). Finally, we summarize the results and discuss the theoretical and methodological implications, as well as make policy recommendations for natural resource management in future.

² The “Dutch disease” effect implies that overvalued real exchange rates undermine the international competitiveness of alternative economic sectors in each respective country.

2 The Natural Resources–Peace Link: A Literature Review

2.1 Conceptual Approaches to Tackling Resource-related Risks

Regarding resource-related risks associated with the motive mechanisms, some authors suggest the creation of specific revenue-sharing regimes (for example, Bennet 2002). These regimes should regulate the allocation of resource revenues between the central government, regional authorities, and corporative groups (for example ethnic representatives, trade unions) in both producing and non-producing regions in a legally-binding way, and thus should pacify national disputes and conflicts (particularly secessionist conflicts) over the distribution of resource income. Moreover, resource revenues might be used to increase social spending at the countrywide level. An improvement in public welfare and infrastructure can lead to a dilution of the motives—in other words, grievances—that spur insurgents on (Collier et al. 2009: 25 ff.). Another possibility for breaking up the motive mechanisms is the implementation of subnational development initiatives that compensate for the negative impacts of resource exploitation (for example, ecological damage, and rural deprivation). Such initiatives might include regional programs for environmental protection, infrastructure development, or employment promotion.

Facing the opportunity mechanism, on the one hand, the number of security forces can be increased and further safety measures to effectively protect production sites and pipelines—and thus to impede illegal oil bunkering, the kidnapping of oil workers, and assaults by rebels—may be adopted (Ross 2001). On the other hand, foreign countries can also provide additional assistance by, for example, supporting the military protection of oil facilities or through the maintaining of military bases (Basedau/Lay 2009).

Turning to the indirect economic risk mechanisms, several authors stress the importance of stabilization funds. These funds help to reduce the vulnerability of resource-exporting nations with regard to the high volatility of commodity prices in the short term (Davis et al. 2001). In theory, stabilization funds neutralize windfall gains from the extractive sector in times of high commodity prices and help to save revenues for periods of dwindling commodity prices. A related option is the creation of pension or saving funds to put aside financial assets for the era post-resource depletion. In addition, savings in foreign assets may help against “Dutch disease”-effects like exchange rate appreciation (Stevens/Mitchell 2008: 30). Mitchell and Stevens (2008) underline that stabilization and saving funds must be endorsed and supported by broader fiscal discipline (for example, control of inflation). Moreover, in the long term the only option for avoiding the economic risks attendant with resource extraction is economic diversification (Auty 1994; Collier/Hoeffler 2000).

Concerning indirect political-institutional risks, scholars focus on national and transnational transparency initiatives to limit corruption and (unproductive) self-enrichment by the political and economic elites (Karl 2007; Halle 2009; Kolstad/Søreide 2009). Political institu-

tions should thus be rendered more effective and democratic to curb their contribution to economic and social distortions and, on a more general level, to reduce political instability.³

In sum, the countermeasures able to curb resource-related risk mechanisms can be summarized as shown in Table 1.

Table 1: Resource-related Risk Mechanisms and Countermeasures

Causal mechanism	Sub-mechanism	Level	Countermeasure
Motive		National	revenue sharing regimes social spending
		Subnational	regional programs for environmental protection, infrastructure development programs, employment promotion
Opportunity		national and subnational	security sector amplification and/or reform military assistance provided by international governments
Indirect mechanisms	economic distortions	national and subnational	stabilization and wealth funds economic diversification combating inflation (fiscal austerity)
	political–institutional distortions	national and subnational	transparency and anti-corruption initiatives environmental accounting

Sources: Authors' own compilation based on the literature review.

2.2 The Emerging Body of Empirical Studies

While the number of conceptual studies on how to counter resource-related risks increases (for example, Le Billon 2008; Halle 2009; Stevens 2008), empirical studies of the outcomes of measures to curb resource-related risk mechanisms remain sparse. A first step in this endeavor has been made by Franke et al. (2007). The authors statistically analyze the impact of resource governance on the resource–conflict dynamic in 92 resource-dependent countries, and find that “good” – in a conceptually very broad sense – resource governance is related to a decrease in conflict duration and an increase in peace duration.

Regarding the impact of resource management in post-conflict periods, ongoing studies give a hint that wealth-sharing agreements in peace processes are not consistently positively related to sustainable peace (Binningsbø/Rustad 2010). Nevertheless, some case studies suggest that revenue-sharing schemes can have a positive effect on peace processes after resource-driven conflicts, if carefully implemented (Boege/Franks 2011). In a previous small-N analysis of peacebuilding in resource conflicts, Le Billon and Nicholls (2007) conclude that

³ In theory, natural wealth accounts or environmental accounting also improve transparency (Sandbu 2006; Auty 2007). Natural wealth accounts convert resource revenues into tax revenues and thus promote stronger political pressures on the governments of resource-dependent states (Sandbu 2006: 9ff.).

revenue-sharing agreements correlate with conflict termination, albeit not with durable peace.

In addition, several comparative papers analyze the functioning of stabilization and wealth funds, especially in oil-rich countries with mixed results in their ability to macroeconomic stabilization (for example, Fasano 2000; Davis et al. 2001; Asfaha 2007). In contrast to the aim of the present analysis, however, these studies are not integrated into broader investigations of the entire resource management of the country in question. Beyond that, they focus on economic development as a dependent variable and not on conflict.

Furthermore, there are various case studies of resource management and approaches to peacebuilding in single countries, for example Botswana, Sierra Leone, and Indonesia (Saraf/Jiwanji 2001; Iimi 2007; Rosser 2007; Le Billon/Levin 2009). These single case studies constitute valuable contributions to the analysis of the impact of country-specific resource management strategies. However, because of the varying concepts and research designs, these studies' value for comparison and further generalizations is ultimately limited.

3 Methodology

Due to the findings of the recent literature on natural resources and intrastate conflict, which prove a (more or less) robust relationship between petroleum and the onset of civil war (Ross 2004; Hegre/Sambanis 2006; Dixon 2009), this paper focuses specifically on oil-producing nations. Basedau and Lay (2009) further show that high resource dependence is linked with the onset of violent conflict, but not with abundant resources per capita.

Accordingly, the sample under investigation includes countries which fulfill three conditions: First, it is a country that the Petroleum Dataset of the Peace Research Institute Oslo (PRIO) has recorded the discovery of oil or gas deposits for (Lujala/Rød/Thieme 2007; Thieme/Lujala/Rød 2007), and/or where petroleum reserves have been reported by the US Energy Information Administration (EIA).⁴ Second, the country qualifies as a petroleum-producer (PRIO and/or World Bank).⁵ Third, one fifth, on average, of a country's merchandise exports during the last two decades have been made up of oil (UNCTAD).⁶ This procedure results in a sample of 31 oil-dependent countries (for the full list of countries see Appendix 1).

The notion of conflict is captured in two ways. First, changes in political stability are assessed by drawing on the composite index "Political Stability and Absence of Violence" of the Worldwide Governance Indicators (WGI). The index "measures the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or vi-

⁴ See <<http://tonto.eia.doe.gov/country/index.cfm>> (June 29, 2010).

⁵ Detailed information on the sources used in this and the following section are given in Appendix I.

⁶ The variables distribution in a scatter plot points to a threshold of 20 percent.

olent means, including domestic violence and terrorism.”⁷ Second, in the case studies the conflict assessment is refined by drawing on qualitative country reports.

The empirical analysis starts with an overview of the implementation of countermeasures related to indirect risk mechanisms (see Table 1) in the oil-dependent countries of the sample. For practical reasons, the existence of sovereign wealth funds and the involvement in international transparency initiatives (for example, Extractive Industries Transparency Initiative, Publish What You Pay) are taken as proxies for a country’s willingness to engage in resource sector management. Thereafter, we will explore in detail which countermeasures were implemented in response to resource-related risks in Algeria, Nigeria, and Venezuela and, further, assess the reasons for these measures’ failure and/or success.⁸ The analysis concentrates on the period from 2000 to mid-2010. This not only allows us to take into account periods of both rising (2003–2008) and declining oil prices (2008–2009); it is also ascribed to the fact that the discussion and implementation of countermeasures against resource-related risks gained momentum particularly during the last decade.

4 Dealing with Resource-related Risks in Petroleum-dependent Countries

This section provides an overview of the participation of petroleum-dependent nations in international transparency initiatives and their disposition towards the establishment of commodity sector-related funds and, thus, their engagement in countermeasures to reduce the risk of resource-related conflict.

Participation in the Extractive Industries Transparency Initiative (EITI), which was launched in 2003, can be considered as a proxy for the willingness of resource-dependent nations’ governments to deal with political–institutional distortions in general and with corruption and a lack of transparency in the resource sector in particular. The initiative seeks agreements with governments with the objective of the publication and independent auditing of company payments and government revenues in the extractive industry sector.⁹ Currently, 33 countries participate in the EITI. The majority of these are candidate countries carrying out the two-year validation process that precedes acceptance as a compliant country. Three countries (Azerbaijan, Liberia, Timor-Leste) have been accepted as compliant countries so far and another three (Ethiopia, Indonesia, Ukraine) have announced their intention to implement the EITI. Petroleum-dependent countries are not prominent among the EITI participants. Barely a

⁷ See <<http://info.worldbank.org/governance/wgi/pdf/pv.pdf>> (September 4, 2010). The Political Stability Index is used instead of armed conflict data from the Uppsala Conflict Data Program (UCDP) because it allows for the tracing of smaller changes in political stability and violence.

⁸ The criteria for case selection will be presented in the following section. The empirical analysis encompasses all resource management measures that are listed in Table 1. However, the presentation of the analysis is limited on countermeasures, which respond to existent resource-related risk mechanisms.

⁹ For information on the EITI, see <<http://eiti.org/>> (September 1, 2010).

fourth of the medium-N sample's countries have initiated the validation process (see Appendix 1). In Southern Africa the majority of oil-dependent countries participate in the EITI, whereas in the remaining regions the bulk of countries remain outside of the EITI process.

Similar to the EITI, the international coalition Publish What You Pay (PWYP), founded in 2002, aims to achieve "full transparency in the payment, receipt, and management of natural resource revenues; public disclosure of extractive contracts; and civil society participation in the monitoring of revenue expenditures" (van Oranje/Parham 2009: 28). In contrast to the EITI, the main stakeholders of PWYP are not national governments but non-governmental organizations. At the moment, the PWYP network spans almost 70 countries, mostly in Southern Africa and Europe.¹⁰ In almost a third of petroleum-dependent countries non-governmental organizations affiliated to PWYP were active, with most of the PWYP-related activities taking place in Southern Africa (five countries) (see Appendix 1). In the remaining world regions, civil society is not involved in PWYP in the majority of oil-dependent nations.

As discussed in Section 2 of this paper, macroeconomic stabilization and saving funds offer the possibility of reducing the short- and long-term vulnerability of resource-dependent countries. Eighteen countries in the sample (58 percent of the cases) possess stabilization and/or saving funds (see Appendix 1). Half of them have been launched in the 2000s. In contrast to those participating in international transparency initiatives, Middle Eastern and North African countries alone own half of the sovereign wealth funds of oil-dependent nations.

The second question raised in this paper relates to the effects of the implementation of resource management measures on resource-related risks and violent conflict itself. It would be unwise to draw any causal conclusions based on the very preliminary results that are presented below. On the one hand, only three countermeasures—limited to indirect risk mechanisms—are considered. On the other, most of the measures have only been implemented in recent years, and thus it is too early to assess their influence on resource-related risk mechanisms and conflict (de-)escalation in oil-dependent countries. Nevertheless, three observations should still be pointed out.

First, oil-dependent countries committed to both of the transparency initiatives did not experience a significant improvement in the control of corruption.¹¹ In the Congo and Gabon, who participate in both the EITI and PWYP, the level of corruption significantly increased. In the remaining countries that participate in both initiatives (Cameroon, Kazakhstan, Nigeria, Norway, Yemen) the level of corruption in public power did not substantially change. In none of the countries engaged in the EITI and PWYP did the level of corruption decrease significantly; nevertheless, in Cameroon and Nigeria the situation did improve slightly (see Appendix 1).

¹⁰ For further information on PWYP, see <www.publishwhatyoupay.org> (September 1, 2010).

¹¹ The WGI variable Control of Corruption "measures the extent to which public power is exercised for private gain, including petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests" (see <<http://info.worldbank.org/governance/wgi/pdf/cc.pdf>>, September 2, 2010).

Second, comparing the change in political stability in the years 2000–2009 in oil-dependent countries that experienced a post-1946 civil war shows that nations with a high willingness to implement countermeasures (in other words, Nigeria) experienced a significant deterioration in political stability since 2000, but also that countries with two initiatives (except Yemen) generally showed higher political stability—or at least no further deterioration. In cases with only one measure implemented, three out of five of countries experienced a deterioration in the political stability (see Table 2).

Table 2: Political (In-)Stability in Oil-dependent Countries

Implemented countermeasures ^a	Change in average political stability 2000–2009 ^b			
	Improvement	No significant change	Deterioration	Cases
0	Belarus, Colombia	Brunei Darussalam, Kuwait, Oman, Syria , Turkmenistan, United Arab Emirates, Vietnam	Egypt, Saudi Arabia, Sudan	7 (12)
1	Libya	Bahrain, Ecuador, Qatar, Russia, Trinidad & Tobago	Iran, Iraq, Venezuela	5 (9)
2	Algeria, Azerbaijan, Angola, Congo	Cameroon , Gabon, Norway	Yemen	6 (8)
3	Kazakhstan		Nigeria	1 (2)
Conflict cases (total cases)	5 (8)	6 (15)	8 (8)	19 (31)

Notes: Countries in bold denote those that experienced a civil war after 1946.

^a Only countermeasures that have been implemented from the late 1990s are included.

^b Changes below 0.2 points are classified as non-significant.

Source: Authors' own compilation based on the sources listed in Appendix 1.

Third, the willingness of petroleum-dependent countries to initiate resource-related countermeasures (none, one, or two countermeasures) seems to deepen with an increasing degree of political instability and the existence of (prior) armed conflicts (see Appendix 1).

To scrutinize the interplay between resource-related risk factors, countermeasures, and internal conflict the following section provides a more detailed study of resource governance in three petroleum-dependent countries: Algeria, Nigeria, and Venezuela. These countries hold a similar list of resource-specific and several non-resource-specific context conditions (for example, a low level of resource revenues per capita, high population growth, cultural heterogeneity, a high level of socioeconomic inequality) but differ in their levels of political stability and/or in their engagement in resource management. The rationale behind the selection of Algeria and Nigeria lies in both countries' apparently strong efforts to implement countermeasures and their differences in the development of political stability. Also, both countries experienced an ongoing intrastate armed conflict during 2010. Venezuela, in con-

trast, was seen as a paradigmatic case for countries showing a rather low level of willingness to engage in countermeasures, as well as a sharp deterioration in political stability.¹²

5 Evidence from Three Major Oil-producing Countries

5.1 Oil Risks and Countermeasures in Algeria

In contrast to the other country cases that follow, Algeria has gained significantly in political stability since 1996 (see Appendix 1)—mainly due to the fact that the conflict intensity was very high in the years after 1991. During the intrastate war period (1993–2001), various Islamist groups challenged the state authority, and the death toll is estimated between 100,000 and 200,000. The hydrocarbon rich regions, however,—located in the Sahara Desert—were widely spared from clashes between conflicting parties.

The conflict, which still persists, albeit at a lower level of intensity, is not directly about resources. A partial link between the three causal mechanisms underlying our study (motive, opportunity, and indirect effects) is nevertheless possible (Basedau/Mähler/Shabafrouz 2010; Shabafrouz 2010b). As the intrastate war was nurtured by indirect problematic effects of high dependence on hydrocarbons by the Algerian economy (Shabafrouz 2010a), it is necessary to look for countermeasures aimed at improving these conditions. Also, motive and opportunity could have played a part for the insurgents: they tried to attack the oil infrastructure so as to weaken the regime (opportunity) and might also have considered the control of resources as one of the key advantages should they take over power (motive). The rulers, for their part, clung to power, in which they were supported by, among others, the oil sector that they controlled. They also used their hydrocarbon income to sustain military power and to buy off parts of the opposition (following the assumptions of the rentier state theory).¹³

Violence is now more and more directed towards gaining international attention, a fact also symbolized by the new label of the largest terror organization in Algeria: “Al Qaida of the Islamic Maghreb” (AQIM). Aside from this, there is a lot of delinquency, a situation favored by the distorting effects of the resource-based economy. Paired with general social developments such as the demographic dynamics (mainly the “youth bulge” and the continuing urbanization), they nurture the persistent potential for conflict.

¹² The case selection is further a consequence of practical considerations. The three cases were previously studied in a research project, which identified crucial contextual conditions for systematically explaining the resource–conflict link (see Footnote 1). In this project a sample of four “comparable oil exporters” (in other words, Algeria, Iran, Nigeria, Venezuela) had been studied (cf. Basedau et al. 2010). We discarded the case of Iran from the present sample, as in this case the imposed international economic sanctions on trade and investment might have substantially altered the effects of any potential resource management measures.

¹³ The rentier state effects are still observable today, with 79 percent of the state income in 2008 deriving from the hydrocarbon sector (calculation based on IMF 2010: 24).

5.1.1 *Countermeasures Related to the Motive Mechanisms*

In Algeria, oil revenues automatically belong to the central government—no special resource revenue distribution scheme has yet been established. Nevertheless, there has been an increase in social spending in the last years. The five-year plan for the years 2010–2014 deploys 40 percent of its total budget, and the state budget of 2011 allocates an additional 18 percent (1,200 billion DA) to the social sector (La Tribune, October 4, 2010). This distribution of funds can be understood as an instrument by which to increase social satisfaction and to buy political loyalty.

At the subnational level, both the living conditions and the measures for their improvement need to be taken into consideration, as they can provide serious grounds for frustration and thereby for violence. Up to now, the lack of coherent and regionally-balanced efforts in support of development have hardened and increased the already existing disparities in Algeria between the more developed and urbanized north and the less densely populated south (Mattes 2008: 50), where the resource-rich regions are located. However, in the last years, this situation has been increasingly acknowledged by decision-makers who, as a result, introduced more programs for regional planning and employment creation, for, among others, young adults. Decentralization policy has had some positive effects, not only for poverty reduction and agricultural services, but also for the wider participation of the population in politics and society. Their impact, however, on infrastructure (health, housing, education) and on environmental policy was less significant.

5.1.2 *Countermeasures Related to the Opportunity Mechanism*

To reduce the opportunity mechanism, which can be linked to all activities intended to weaken the state or oil companies through violence, the authorities have put great effort into enhancing the security sector. As the state controls the resource flows tightly, via the state-owned Sonatrach (the national oil and gas company), it is a major source of its income. But this also makes it its Achilles heel: the insurgents sometimes target personnel and infrastructure in the resource region.¹⁴

The main measure taken against these security threats is the high presence of the military in the resource extraction region (and in other sensitive areas, such as the country's capital, Algiers) and the obligation for multinational oil and gas companies to protect their workers, sometimes by private security firms or by state security forces. Therefore, the military presence in the extractive regions is high, which makes attacks difficult and the looting of oil resources risky. The level of theft remains low and therefore the insurgents cannot finance their activities through stolen oil, as has been the case in Nigeria. It is noteworthy that Algeria has been classified as the ninth biggest arms importer in the world during the 2005–2009 period,

¹⁴ Kidnappings and attacks are a constant risk for foreign companies in the hydrocarbon sector (Mapplecroft report 2010).

and the second largest in the Arab region after the United Arab Emirates. In Africa, Algeria accounts for 43 percent of the continent's arms imports, followed by South Africa, which is responsible for 18 percent of arms imports (SIPRI 2009b: 7). Military expenditure in Algeria amounted to US\$ 5.7 billion in 2009 (3 percent of GDP), representing a constant increase over the last years. Ten years ago, the amount was half as high (in constant 2008 US\$, SIPRI 2009a).

In most of the cases, the countermeasures against violence are employed on a national scale. For some security activities—such as the Trans-Saharan counterterrorism initiative—there is to a certain extent also cooperation with the United States and several states of the Sahel region.

5.1.3 *Addressing Indirect Mechanisms*

Several efforts have been undertaken to reduce the economic distortions caused by oil dependence. Based on the awareness of the risks created by the oil price changes, in 2000 a regulation fund for windfall revenues of foreign currencies was created. Budget surplus, which were on a special benchmark value of the oil price, were saved here.¹⁵ The fund is now, since the drop in oil prices, used for balancing the lower revenues. In 2007 the fund disposed of US\$ 43 billion, in 2009 of approximately US\$ 57 billion and now around US\$ 47 billion (Worldbank Blog). Currently, it is used for covering the deficit (more than 35 billion Euro) in the current state budget of 2011. This amount also shows that, in case of lesser revenues in the coming years, the fund could rapidly be depleted.

Some programs also aim at pushing an economic diversification agenda, such as the Support Plan for Economic Relaunch (2001–2004), in which US\$ 7 billion were invested in infrastructure programs, as well as the Plan for the Consolidation of Economic Growth (PCCE) with a budget totaling US\$ 65 billion.¹⁶ Despite some initial success in creating employment, it is too early to assess the overall success of these initiatives. Some dissatisfaction has been aroused by the fact that many contracts have been given to foreign—most notably Chinese—companies, who bring their own experts and workers and thereby offer only limited new employment opportunities to Algerian nationals. A clear gap can be observed between the official declarations and the actual government spending in this direction, as compared to other sectors such as infrastructure or social distribution. For small and medium enterprises, promotional programs are offered, but the bureaucratic hurdles remain serious impediments to success (Hadjadj 2007).

¹⁵ This benchmark value was fixed very conservatively on a price of US\$ 19 per oil barrel for the period 2000–2007, and since mid-2008 at US\$ 37.

¹⁶ The PCCE has six priorities: the improvement of the living conditions of the population, including a broad housing construction programme (US\$ 25 billion), the development of infrastructure, among others the construction of the East–West Highway (US\$ 22 billion), the privileged development of the high-plateau and the southern territories (US\$ 10 billion), the general support of economic development (US\$ 4 billion US), the modernization of the public sector (US\$ 3 billion), and the massive distribution of new information technologies (US\$ 1 billion) (Mattes 2008: 57).

In terms of macroeconomic stability, the assessment is slightly more positive. Following the IMF (2010), the Algerian government has inflation under control (at approximately 3 percent), despite the sharp increase in fresh food prices. The state has tried to circumvent an overheating of its economy by holding a large portion of its revenues abroad, mainly in the US.¹⁷ The withdrawal of these sums can only be done in a several-step procedure, thus Algeria has no direct and quick access to these funds.

Even if some investment has been made to modernize the public administration, no fundamental reform is in sight which would improve the obscure decision-making process and remedy the concentration of power in the hands of the Algerian president. Corruption and fraud thus remain serious problems, and ones which are rarely prosecuted by the judiciary (Hadjadj 2007). The Corruption Perception Index ranked Algeria 111th out of 180 countries in 2009, far behind its neighbors Morocco (89th) and Tunisia (65th) (Transparency International 2009), which represents a clear deterioration as compared to previous years.¹⁸ It is extremely likely that the oil and gas sectors are highly susceptible to corruption, as particularly good “earnings” are to be made there, even if it is difficult to provide evidence of this.

Beyond national (rather ineffective) initiatives and institutions for enhancing transparency in the resource sector, there is no membership or candidature by Algeria for the EITI. The “Association Algérienne de Lutte contre la Corruption” is a member of PWYP, but its scope, as an NGO, to do anything more than campaign is limited. But individual initiatives do sometimes succeed in revealing large-scale corruption.¹⁹ As the corruption and self-enrichment of several members of the state class has led to a deep distrust from parts of the population, and can provide—in combination with worsening socioeconomic conditions and ideological affinity—a fertile ground for further recruitment by violent Islamist groups, this ongoing challenge needs to be taken particularly seriously.

5.2 Oil Risks and Countermeasures in Nigeria

While the UCDP/PRIO registered only one violent conflict in the Niger Delta—Nigeria’s main oil-producing region—in 2004, qualitative reports indicate that there has been an increase in violence since 1999. Estimated death tolls for 2003 and 2004 run up to several hun-

¹⁷ Karim Djoudi, the Algerian Finance Minister, announced publicly that the entire Algerian reserves—around US\$ 135 billion—were placed abroad, mainly in the US Treasury and European central banks. *L’Expression*, November 11, 2008.

¹⁸ Nevertheless, the WGI variable “Control of Corruption” has shown an improvement since the 2000–2009 era.

¹⁹ Recently, oil expert Hocine Malti initiated, for instance, an investigation of corrupt practices within the Sonatrach by the publication of an open letter directed to the Département Renseignement et Sécurité (DRS), in which he indicated three major issues (oil/gas projects and the privatization process of oil production) to be looked at. This led to the suspension of more than ten officeholders of the Sonatrach, among them the CEO, Mohamed Meziane, and four of his five vice-presidents. Still, Malti regrets that the investigations are limited only to technocratic personnel and thus do not also affect influential political and military personalities (*Jeune Afrique* February 7–13, 2010).

dreds of people (Internal Displacement Monitoring Centre), and for 2008 to approximately 1,000 people (IRIN 2009). The rise of internal instability is also reflected in the falling Political Stability Index (see Appendix 1).²⁰ Since August 2009 a fragile peace agreement has been in force, which has recently been endangered, however, by several renewed assaults. Alongside violent clashes between armed groups and security forces, as well as intercommunal violence, there has also been a surge in violent crime, notably kidnapping.

Oil has a substantial influence upon conflict dynamics, yet it nevertheless fails to completely explain the violence. The conflicts are marked by a complex interplay of various causal resource-specific and non-resource-specific factors. In many cases, the root causes of the conflicts go back to the pre-oil era.²¹ Oil served as an additional conflict-triggering factor; firstly, by being a motive for national and subnational conflicts. Thus, conflicts over the distribution of oil revenues have intensified the polarization between the economically less developed, Muslim, northern states of the country and the, mainly Christian, ethnically heterogeneous south of the Niger Delta. Moreover, at the subnational level, there are conflicts between different (ethnic) communities within the Delta that have been exacerbated by oil. Finally, conflicts within the resource region are also motivated by the destruction of farmland and the pollution of water and air due to oil production.

The second way in which oil has triggered violence is through the opportunity mechanism. Particularly since 1999, oil has contributed to the perpetuation of violence in the Niger Delta through the illegal oil trade and the kidnapping of oil workers. A third factor is that oil has also had conflict-inducing indirect economic and institutional impacts. Oil dependence has deepened the socioeconomic distortions of the national economy. Although the direct link with violence can scarcely be proven, it can be assumed that these aspects at least enhanced the disposition towards (violent) protests. Moreover, oil revenues have boosted corruption and patronage, and thus further weakened unconsolidated political institutions.

5.2.1 *Countermeasures Related to the Motive Mechanisms*

There is an increased awareness within the Nigerian government of the north–south polarization over the issue of oil revenue distribution. As a reaction, in 1999 a reform of the derivation formula—specifying the share of oil revenues distributed to the regions where the oil is extracted—was enacted. The share of the oil extraction regions was increased from 3 percent up to 13 percent. In practice the reform has—combined with a rising oil price—brought a considerable increase in the state budgets and local political agencies in the southern states, leading to a certain appeasement of the political elites. But, as much of the revenues are

²⁰ In employing the Worldwide Governance Indicators a fact that must be taken into consideration is that they measure the national average of instability—which includes further internal conflicts, for example in Northern Nigeria, circumstances that are not related to oil.

²¹ For example, cultural and political cleavages, weak political institutions, and an unconsolidated statehood. For further details, see Mähler (2010).

squandered or used by politicians for private gain (Omeje 2006), the benefits do not sufficiently reach the majority of the population in the Niger Delta. Consequently, demands persist for higher shares of the oil revenues. In sum, this means that the north–south polarization remains high; however, due to the financial appeasement of the state’s political elites there is hardly an immediate risk of escalation.

The social redistribution of oil rents has increased moderately during the last years (World Bank). The effects of this redistribution are, however, rather low (EIU 2009: 13). The increase of social spending has been far too limited to deal with the enormous socioeconomic imbalances within the country—especially given the continually high population growth. Still, specific distributional policies through broad clientelistic networks—encompassing groups of the political, military, and economic elite—are continuously perpetuated, and to some degree help to stabilize the government.

At the subnational level, in the Niger Delta, various socioeconomic development initiatives, infrastructural and environmental protection measures—such as the Niger Delta Development Commission (2000) or the Niger Delta Regional Development Master Plan (2007) — have been established. Most of the programs and initiatives have thus far been inadequately implemented (due to similar problems as those illustrated at the national level). While the regional poverty line decreased from 59 percent of the population in 1996 to 50 percent in 2004 (UNDP 2006: 35), it is still alarmingly high. The present situation of the Niger Delta is, moreover, characterized by very poor infrastructure and limited access to health care and education; concomitantly, oil production continues to cause severe ecological destruction.²²

5.2.2 *Countermeasures Related to the Opportunity Mechanism*

Given the incitement of violence spurred by the illegal oil trade, the kidnapping of oil workers, and the attacks on oil facilities, the Nigerian government has launched several law enforcement initiatives—including the seizure of weapons and machinery as well as the prosecution of arms smugglers. Furthermore, national military expenditure doubled from US\$ 835 million in 2000 to US\$ 1.68 billion in 2009 (SIPRI 2009, data in constant 2008 US\$). In 2003 a Joint Task Force, composed of the army and police forces, was founded and subsequently posted in the oil-producing areas. These national measures have been accompanied by some further initiatives within the regional organization ECOWAS—mostly against arms smuggling (Hettmann 2004). Moreover, Nigeria has strengthened military cooperation with both the United States and the United Kingdom. The US has provided increasing military educa-

²² Aside from the government initiatives, there are several local development projects by NGOs, development agencies, and private oil companies. The oil companies commonly provide financial support and development projects to their so-called “host communities.” The impact of these initiatives is ambiguous: while they bring some immediate mitigation of poverty at the local level, they can also induce conflict-triggering factors. The donations have repeatedly fostered violence between host communities and other (ethnic) communities, which do not benefit from such support (HRW 1999: 102).

tion and training to their Nigerian counterparts, but no permanent deployment of US-military in the Niger Delta has taken place so far.

All the initiatives to curb oil-related opportunity mechanisms for rebels have thus far enjoyed scant success. Although the enhanced presence of armed security forces made attacks on oil facilities more difficult, it has not discouraged militants. Thus, hostage taking—mostly of foreign oil workers—has been on the rise (ICG 2006a: 1). Moreover, the illegal trade in oil has increased significantly since 2000 (Human Rights Watch (HRW) 2005: 9), and continues to be a source of revenue for rebel activity. As far as data is available, it seems that weapons are also still easily available throughout the Niger Delta (United Nations Office on Drugs and Crime (UNODC) 2009).

The failure of opportunity-related countermeasures can be traced back to the fact that the illegal oil trade is a financial source not only for militants, but also for some Nigerian politicians, powerful national and international “businessmen”, and for agents of the security forces themselves (ICG 2006: 9; Lubeck/Watts/Lipschutz 2007: 9). By taking bribes to avoid hindering illegal actions, by providing militants with weapons, or even by actively participating in the oil theft itself, parts of the security forces thus contribute to the decisive undermining of their own work. On the other hand, the security forces are notorious for human rights violations (HRW 1999, 2006)—provoking even more counterviolence and increasing the support of the local population for militants. With regard to the increasing US military assistance no effects are thus far visible from this, although this phenomenon is, admittedly, still relatively novel.

5.2.3 *Addressing the Indirect Mechanisms*

To address the negative economic effects of oil dependency, the Nigerian government set up a stabilization fund (Excess Crude Account) in 2004. The fund was originally endowed with US\$ 5.1 billion, in other words 5.8 percent of the GDP (WDI online 2010). While the fund considerably increased in volume until the end of 2008, it is still quite small in comparison to the funds in other oil countries. This means that genuine protection against oil-induced price shocks is barely offered. Moreover, the fund is lacking in transparency and accountability. In 2009 the fund diminished substantially, down to US\$ 460 million (see Appendix 1), most of the money has been lost on short-term financial calculations, so that the fund must ultimately be classified as being largely ineffective.

The Nigerian government has, furthermore, pursued several initiatives to foster the non-oil export sector (Walkenhort 2006: 19). These initiatives have been intensified more recently, and, although they still constitute mostly single measures and as such are not comprehensive concepts, the economic performance of the non-oil sector (in other words, agriculture and services) has improved (EIU 2009: 3). This tendency, however, cannot yet be qualified as a general turnaround, because oil exports still account for 90 percent of total exports. More-

over, all sustainable economic development is hampered by the chronic lack of infrastructure, by the low incomes of consumers, and by the energy deficiencies (EIU 2009: 21).

To combat endemic corruption, the Nigerian government has adopted special measures both within the oil sector and beyond. For example, Nigeria has participated since 2004 in the international transparency initiatives of the EITI and PWYP. It was accepted as an official EITI candidate in September 2007. Moreover, since Spring 2009 a far-reaching reform of the oil sector has been initiated, which aims at increasing productivity of the national oil company (NNPC) and at the advancement of transparency within the oil sector. On top of this, there are also increased efforts at sustaining more general anti-corruption policies, through such means as the creation of the two central anti-corruption agencies: the Independent Corrupt Practices and Other Related Offences Commission (ICPC) in 2000 and the Economic and Financial Crimes Commission (EFCC), which was established in 2002 for the prosecution of financial corruption and money laundering.

While some minor progress in the implementation of anti-corruption policies is indeed identifiable (BTI 2010)—it should also be noted that during the last years, for the first time, high-ranking politicians have been prosecuted for illegal financial activities—corruption remains endemic. Moreover, the implementation of anti-corruption policies has been much less effective at the regional states and local levels than it has been at the central government level (Higgins 2008: 7). Political will for the actual implementation of these transparency initiatives seems to have finally become less enthusiastic recently. Thus, Nigeria has made improvements in its ranking in the Corruption Perception Index during the last ten years, but its assessment slightly worsened again between 2008 and 2009.²³ A similar tendency can be recognized with regard to the WGI Indicator “Control of Corruption,” which has improved substantially since 2000, but still, nevertheless, remains clearly well below the regional average (WGI). Finally, the basic reform of the oil sector has not yet been implemented; it is still discussed in the National Assembly and is, furthermore, criticized by several private oil companies.

5.3 Oil Risks and Countermeasures in Venezuela

Generally, the level of internal violence has been low in Venezuela. Thus, the UCDP/PRIO data does not register any intrastate armed conflict in Venezuela in the 2000s. Still, it should be noted that there had been a period of a relative increase in internal violence at the end of the 1980s and the beginning of the 1990s. Moreover, since 2000 the country has been characterized by an increasing internal polarization, which led to a failed coup d'état (2002) and numerous mass protests—repeatedly marked by violence, and occasionally by fatalities. This trend is reflected in the WGI data, which reports a significant deterioration of political stability in Venezuela since 2000.

²³ CPI: from 1.6 in 1999 up to 2.7 in 2008 and 2.5 in 2009.

Although the presence of oil cannot sufficiently explain the surge of internal violence,²⁴ the increase in conflict is at least partly associated with the petroleum-factor. The oil-related risk factors in Venezuela are mostly indirect ones—economic mechanisms and, of secondary importance, political–institutional mechanisms. The oil sector has caused deep socio-economic distortions to emerge in the national economy: single-sided dependency; decline of agricultural sector; price shocks and, consequently, the rise of poverty and unemployment. Furthermore, oil has boosted the corruption and ineffectiveness of the political institutions, so that they have become more and more incapable of peaceful conflict resolution. There has been no internal violence due to the opportunity mechanisms that oil may provide. Although the production sites and transport routes are, theoretically, accessible targets, they have not actually been assaulted, and neither has there been any substantial illegal oil trade so as to finance warfare.²⁵

Until the 1990s virtually no (violent) conflicts occurred about how the benefits and costs of resource production should be distributed between different groups in Venezuela. The national motive mechanism has, however, been somewhat increasingly at work during recent years, fostering low-level conflicts—in the form of disputes over the distribution and spending of oil revenues. At the subnational level, the intensity of conflicts in the oil-producing regions has also remained rather low.²⁶

5.3.1 Countermeasures Related to the Motive Mechanisms

While no special revenue distribution scheme has been established—the oil revenues automatically belong to the central government revenues—, there has been a substantial increase in social spending since 2003 (López-Maya/Lander 2009), which has resulted in a reduction of poverty (INE 2009). Furthermore, the Gini index, which measures social inequality, declined down to 0.434 in 2009 (CEPAL 2010). Although the impact of the government initiatives has partly been undermined by ineffective and corrupt institutions and by incoherently designed programs, the effects are nonetheless still significant. The measures have a conflict-reducing effect, as well as a stabilization effect for the current government. The sustainability

²⁴ Further core reasons are the delegitimization and decomposition of political institutions, increasingly offensive behavioral patterns of the elites, and the growing relevance of political ideologies (for more details, see Mähler 2009).

²⁵ Consequently, there have been very few countermeasures taken against the opportunity mechanisms either. The analysis of such measures will hence be skipped in the Venezuelan case. Still, it is worth mentioning that during recent years in Venezuela there has been a rise in the salaries of the army in particular and a substantial increase in military spending in general (SIPRI 2009a). This increased clientelistic allocation of oil rents works relatively successfully as an instrument of appeasement and gratification.

²⁶ This can be attributed to the fact that the main sites of oil production are, on the one hand, in the sparsely populated rainforest and the Orinoco Delta, and, on the other, in the giant Lake Maracaibo. Thus, although oil production does cause pollution, in both of these cases there are only a small number of people who are significantly negatively affected by the detrimental consequences of oil production (Mähler 2009).

of the initiatives (and thus their stabilizing impact) is, however, disputable, as the majority of the initiatives are not self-supporting, but depend on permanent governmental subsidies (D'Elia 2008).

Despite the government's awareness of the highly conflictive relationship with opposition groups, there seems to be no intention on the part of the former to diminish this polarization, and the resulting conflicts, by further changing distribution patterns. Here, the strategy of the Venezuelan government rather seems to be the increasing containment of oppositional actors by political-institutional transformations, such as growing presidential centralization, the interference of the judicial power, or the establishment of parallel political institutions (Corrales/Penfold 2008; Gratius 2007). While the opposition actually has been constrained by these reforms, disputes and low-level conflicts over the distribution and spending of oil revenues remain virulent.

When the results of the countermeasures related to the motive mechanisms are put together, the impact of the initiatives at the national level may be classified as relatively successful, in the short term. Due to the low level of risk of there being protests within the resource regions, there are, at the subnational level, only very few identifiable countermeasures. There are no substantive regional socioeconomic development initiatives. The legislation concerning environmental policy by the Chávez government can be considered relatively advanced in comparison to the regional average. Projects such as the reforestation initiative "Misión Árbol", established in 2006, and the "Misión Piar", established since 2003 to advocate for sustainable development in mining communities, have been compassed. Moreover, new laws for the protection of indigenous territories, also in the oil producing regions, have been issued. There is, however, a significant mismatch between the articulated plans of environmental policy and their actual implementation. Deforestation, water and soil pollution, and erosion continue to be key environmental problems associated with the exploitation of oil (European Commission 2007: 46), so that in Venezuela environmental policy in practice has had only very little success thus far. Still, regional protests or conflicts are at a rather low level. This is, on the one hand, due to the geographical-demographical conditions mentioned above; on the other, it can also partly be attributed to the general increase in social spending by the government.

5.3.2 Addressing the Indirect Mechanisms

To reduce short-term socioeconomic fragility, a stabilization fund—the "Fondo de Inversión para la Estabilización Económica" (FIEM)—was established in 1998. The fund was originally endowed with US\$ 215 million, and it ran up to US\$ 4.25 billion in 2000 (this means 3.6 percent of the country's GDP) (IMF 2008: 39). The stabilization fund has been managed in a very nontransparent way, and has been used for the short-term expenses of the government (Davis et al. 2001: 26). Since 2001 the fund shrank rapidly; at the end of 2008 it contained less than US\$ 1 billion and thus is far too negligible to have a real stabilization effect (see Appendix 1).

In addition, an economic development plan was enforced in 2001,²⁷ which targeted, among other aspects, the fulfillment of the objective of “freeing the national economy from an excessive dependence on the exports of crude oil” (MPD 2001: 16–17). The explanations concerning the future realization of a more diversified national economy remain quite vague, however. In practice, there has been some promotion of the agricultural sector by government subventions (López-Maya/Lander 2009); the results with regard to national food production are, however, poor. In sum, the output figures of the agricultural sector, which had already previously been low, have further decreased during the last years (Germany Trade & Invest 2009). Consequently, the dependence of the national economy on oil rents has further intensified (EIU 2009a: 3). Sharp economic distortions are still at work and, due to extensive public spending, inflation is very high and peaked at 30.4 percent in 2008 (EIU).

In order to face the oil-induced political–institutional risk mechanism of widespread corruption, President Chávez declared anti-corruption policies as one of his central goals during his electoral campaigning of 1998. Since 1999 three newly-established anti-corruption agencies (the Public Prosecutor, the Comptroller General, and the Human Rights Ombudsman) have been active, and a new, comprehensive “Anti-Corruption Law” was issued in 2003.

Still, there is no coherent anti-corruption policy in practice, and fighting corruption is not one of the priorities of the government. This implies that the implementation of the anti-corruption measures is weak, that the existing anti-corruption agencies de facto do not have sufficient power to realize their mandate and to keep political autonomy (Global Advice Network 2010), and that repeated cases of corruption in state administration are simply not investigated (U.S. Department of State 2009). In the Corruption Perception Index, Venezuela descended from the already quite bad figures of 1999 down to 1.9 in 2008, which is, after Haiti, the worst figure anywhere in Latin America. Similarly, the Worldwide Governance Indicators “Control of Corruption” and “Government Effectiveness,” have deteriorated and nowadays are far below the Latin American average. Finally, Venezuela refuses to participate in international transparency initiatives such as the EITI or PWYP.²⁸

6 Conclusion

In this paper we have addressed two questions: First, on which countermeasures do resource-dependent countries rely in their response to resource-related conflict risks? Second, to what extent have these countermeasures reduced resource-related conflict risk mechanisms and contributed to political stability? We have also strived to identify the conditions for the failure and/or success of the different countermeasures applied. To answer these

²⁷ *Líneas Generales del Plan de Desarrollo Económico y Social de la Nación 2001–2007.*

²⁸ On the other hand, sporadic prosecutions for corruption partly have been deemed to be motivated by political intentions.

questions, we explored a medium-sized sample of petroleum-dependent countries and analyzed in more detail the petroleum-related conflict risks and countermeasures in three major oil-producing states.

The analysis finds that, in recent years, a growing number of petroleum-dependent countries have engaged in initiatives regarding indirect risk mechanisms and that at least some countries gained in political stability (Algeria, Azerbaijan, Angola, Congo, and Kazakhstan). While not all nations with a high risk profile have shown the same eagerness to join initiatives like the EITI or PWYP or to establish a sovereign wealth fund, several conflict-prone countries have done so. In contrast, countries with a low risk profile and very high per capita rents from the petroleum sector do not participate in international transparency initiatives and limit themselves to the establishment of sovereign wealth funds (with the exception of Gabon and Norway) (see Appendix 1). This general tendency that conflict-prone countries engage in countermeasures is also reflected in our case studies.

However, both the medium-N analysis and the case studies could not prove a systematic positive correlation between the resource management measures and a reduction in resource-related risk factors. As a central result of our study, we consequently infer that no robust conclusions could be drawn about the countermeasures' contribution to the stabilization or destabilization of a country. For instance, although there have been numerous new resource management measures in Nigeria, violence in the oil-producing areas increased until the middle of 2009, and it was only recently that a rather fragile peace accord could be agreed.²⁹ In contrast, in Algeria the overall political stability improved between 2000 and 2009, albeit with the acknowledgement that indirect conflict mechanisms have until now not been tackled adequately. Despite an ongoing violent intrastate conflict, the oil-producing regions in Algeria were widely spared from clashes between conflicting parties—only a few attacks and kidnappings by armed groups have occurred—indicating that the Algerian government has so far succeeded in maintaining the security of the producing areas and thereby also limiting the opportunity mechanism. In Venezuela, the government first of all built upon specific distributional policies to curb the motive mechanisms. This single-sided approach has failed to contain rising political instability, but it has nevertheless helped to impede a further conflict escalation thus far.

A comparative assessment hence indicates that high social spending to curb the motive mechanism—and the amplification of the security sector to confront the opportunity mechanism—have been the most successful countermeasures, at least in the short term. However, the Venezuelan case shows that disputes and low-level conflicts over the distribution and spending of oil revenues can continue to be prominent and virulent. Moreover, the redistribution can hardly be considered sustainable because of its vulnerability to future decreases in oil price.

²⁹ Although this agreement reduced, at least temporarily, violence, its long-term impact has to be regarded with skepticism, as the recent renewed eruptions of violence indicate.

A common feature within all the case studies is the substantial lack of implementation of the different measures. This helps to explain why in countries that were engaged in several resource-related countermeasures, no significant positive results have shown up. For example, the failure to curb the opportunity mechanisms in Nigeria can by and large be traced back to the fact that the financial revenue derived from the illegal trade in oil is a source of income not only for militants, but also for a complex network of powerful Nigerian and international actors, who clearly serve as spoilers, undermining effective implementation. The most frequent reasons discovered in our case studies for inadequate implementation are the lack of political will among government elites, weak political institutions (in all three country cases), and only limited pressure from civil society—either because of repression, as in Algeria, and in the past in Nigeria, or, as in Venezuela, because of the apparent lack of willingness among the population. Furthermore, many of the realized countermeasures have been enacted too much in isolation and, particularly, have not sufficiently considered the broader interplay of risk mechanisms in the country in question.

These preliminary results have to be put into perspective, however. It is too early for a conclusive or definitive evaluation of the consequences of these initiatives as the full impact may only become visible in the long term. We also did not test the full range of possible countermeasures in the medium-N sample. To generalize our results, future research should not only factor in the whole set of countermeasures—especially an increase of social spending or the enlargement of the security sector as our cases studies suggest—related to existent resource-related conflict risks but also allow for the inclusion of other natural resources (for example, diamonds). One promising avenue by which future efforts might unpack the natural resources–peace link could be analytical techniques, such as Qualitative Comparative Analysis (QCA), which is especially suitable for medium-N analyses and allows for the identification of necessary and sufficient conditions for successful countermeasures.

To conclude the present study, it can be reasoned—from a conceptual perspective—that the perfect type of countermeasure does not exist; rather, the systematic identification of the different resource-specific and non-resource specific risk factors, and the interdependent risk mechanisms, at work in each respective country is a necessary precondition for the successful design of countermeasures. In other words, revenue-sharing regimes lacks effectiveness if they are not combined with major improvements in the transparency of the oil sector and with the combating of corruption at much broader levels. Otherwise, the failure of resource management initiatives has been revealed to be extremely probable, when the most virulent risk mechanisms are not addressed. These risk mechanisms might even turn into obstacles for the implementation of any further countermeasures. On the whole, future resource management measures should be integrated into more comprehensive policies that address the underlying issues and divergent causes of the different conflict risks. This also, and in particular, implies that the existence of transnationally relevant risk factors ultimately requires internationally-binding answers and regulation for the successful implementation of any countermeasures.

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Appendix 1: Petroleum-dependent Countries and Measures of Resource Management

	(1) First production year	(2) Intrastate armed conflicts	(3) Political stability		(4) Control of corruption		(5) Depend.	(6) Rents p.c.	Participation in transparency initiatives		(9) Sovereign wealth fund(s)		
									(7) EITI	(8) PWYP	Year	Size	% of GDP
Algeria	1967	1991–2009	-1.4	↑	-0.5	↓	60.5	330	-	yes	2000	56.7	40.3
Angola	1956	1991–2009 1975–2002	-0.9	↑	-1.3	↑	93.3	629	-	yes	2010**	.	.
Azerbaijan	1873	1991–2005 1993–1995	-0.9	↑	-1.1	→	80.2	574	2009*	no	1999	18.1	42.1
Bahrain	1933	none	-0.1	→	+0.5	→	43.3	2,726	-	no	2006	9.1	41.5
Belarus	1990	none	+0.1	↑	-0.8	↓	24.9	36	-	no	-	-	-
Brunei	1929	none	+1.2	→	+0.4	↑	51.5	5,220	-	no	1983	30.0	261.6
Cameroon	1978	1960–1984	-0.5	→	-1.0	→	44.0	58	2007	yes	-	-	-
Colombia	1918	1964–2009	-1.8	↑	-0.2	↑	25.8	133	-	no	-	-	-
Congo	1957	1993–2002	-1.1	↑	-1.0	↓	88.5	710	2008	yes	-	-	-
Ecuador	1917	none	-0.8	→	-0.9	→	44.4	350	-	yes	-	-	-
Egypt	1910	1993–1998	-0.7	↓	-0.5	→	37.4	92	-	no	-	-	-
Gabon	1957	none	+0.1	→	-0.7	↓	77.8	2,009	2007	yes	-	-	-
Iran	1911	1979–2009 1946–1996 1979–1980	-1.0	↓	-0.5	↓	80.7	564	-	no	1999	23.0	6.9
Iraq	1934	1958–2009 1961–1996	-2.5	↓	-1.5	↑	88.2	686	2010	no	-	-	-
Kazakhstan	1911	none	+0.3	↑	-1.0	→	49.5	580	2007	yes	2000	38.0	34.8
Kuwait	1946	none	+0.3	→	+0.8	↓	83.3	10,403	-	no	1953	202.8	137.0
Libya	1961	none	-0.1	↑	-0.9	↓	93.0	2,626	-	no	2006	70.0	112.3
Nigeria	1958	1966–2009 2004 (2) 1967–1970	-1.8	↓	-1.2	→	96.0	160	2007	yes	2004	0.46	0.3
Norway	1971	none	+1.3	→	+2.0	→	43.5	5,055	2009	yes	1990	512	134.1
Oman	1967	1969–1975 1957	+0.8	→	+0.6	→	75.1	3,118	-	no	1980	8.2	13.6
Qatar	1949	none	+0.9	→	+1.0	↑	61.4	8,445	-	no	2005	65.0	91.5
Russia	1893	1994–2007 2007 1999 1993 1990–1991 1990	-0.7	→	-0.9	→	37.0	541	-	no	2004	142.5	11.6
Saudi Arabia	1938	1979	-0.4	↓	-0.04	→	86.5	4,158	-	no	1971	420.3	113.8
Sudan	1992	1971–2009 1963–1972	-2.2	↓	-1.3	↓	48.9	63	-	no	-	-	-
Syria	1968	1966–1982	-0.6	→	-0.8	↓	61.8	268	-	no	-	-	-
Trinidad & Tobago	1908	1990	-0.04	→	-0.1	↓	46.3	1,004	-	no	2000	2.9	13.8
Turkmenistan	1911	none	-0.2	→	-1.4	↓	34.3	336	-	no	-	-	-
UAE	1962	none	+0.8	→	+1.0	↑	36.4	6,575	-	no	1976	675.1	258.3
Venezuela	1917	1962–1992	-1.2	↓	-1.0	↓	77.0	1,124	-	no	1998	0.8	0.2
Vietnam	1986	1965–1975	+0.2	→	-0.6	→	20.3	33	-	no	-	-	-
Yemen	1986	1948–2009 1994 1948–1982	-1.6	↓	-0.8	→	89.6	172	2007	yes	-	-	-

Notes: (1) First year of oil and/or gas production according to the PRIO Petroleum Dataset (PRIO, Lujala/Rød/Thieme 2007).

(2) Periods of unique intrastate armed conflicts since 1946 according to the UCDP/PRIO Armed Conflict Dataset v.4, 2010 (Gleditsch et al. 2002). Conflicts with 2009 as the end year are ongoing in 2010.

(3) and (4) Mean of Political Stability and Control of Corruption indices 1996–2009 (Worldwide Governance Indicators, WGI). The arrow indicates the direction of post-2000 change of the variable: ↑ = improvement, → = no significant change (<0.2 points), ↓ = deterioration.

(5) Mean of share of petroleum exports in total merchandise exports after 1988 (UNCTAD trade data, SITC Rev. 1, 33).

(6) Mean of per capita rents of petroleum production in US\$ after 1988 (World Bank).

(7) Start year of EITI candidateship (EITI).

(8) Membership of national nongovernmental organizations PWYP initiative. Bold letters indicate that an organized national coalition affiliated to PWYP exists. In all other cases individual member organizations are active in the country (PWYP).

(9) Year of establishment of first sovereign wealth fund, its size in billion US\$ and percentage share of last available GDP (SWF, World Bank).

* Azerbaijan is an EITI-compliant country since 2009.

** The Fondo Soberano Angolano is anticipated to be launched in 2010.

Sources: Authors' own compilation. PRIO, <www.prio.no/CSCW/Datasets/Geographical-and-Resource/Petroleum-Dataset/> (April 6, 2010); UCDP/PRIO, www.pcr.uu.se/research/ucdp/datasets/ (October 10, 2010); WGI, <http://info.worldbank.org/governance/wgi/index.asp> (October 9, 2010); UNCTAD, <http://comtrade.un.org/db> (June 29, 2010); World Bank, <http://go.worldbank.org/OV4R25M150> (Oil rents, October 8, 2010), <http://data.worldbank.org/country> (GDP, October 23, 2010); EITI, <http://eiti.org/implementingcountries> (June 28, 2010); PWYP, www.publishwhatyoupay.org/ (August 24, 2010); SWF, www.swfinstitute.org/statistics-research/foreign-exchange-reserves-by-country-or-geopolitical-entity/ (October 23, 2010).

Appendix 2: Comparative Overview of Countermeasures in Algeria, Nigeria, and Venezuela

Country	Causal mechanism	Relevance of Causal M.	Implementation of Countermeasures	Effectiveness of Countermeasure in reducing the respective risk mechanism	Problems in Implementation	Decrease of general resource-related conflict risks
Algeria	Motive: national	Partly	Partly	Partly	Lacking political will	No
	Motive: subnational	Partly	No	n.a.	n.a.	No
	Opportunity	Partly	Yes	Partly	Vicious cycle of reaction and counterreaction between state security forces and violent Islamist Groups	Partly
	Indirect M.: economic distortions	Yes	Partly	Partly	Efforts to diversify the national economy do not reach far enough	No
	Indirect M.: political-institutional distortions	Yes	No	n.a.	n.a.	No
Nigeria	Motive: national	Yes	Yes	Partly	Undermined by corrupted subnational elites + general lacking political will	Partly
	Motive: subnational	Yes	Yes	No	Undermined by corrupted local elites + failing institutions	No
	Opportunity	Yes	Yes	No	Undermined by national and international spoilers + excessive use of violence of state actors boosts counter-violence	No
	Indirect M.: economic distortions	Yes	Yes	No	Misuse of the fund's revenues	No
	Indirect M.: political-institutional distortions	Yes	Yes	Partly	Undermined by subnational elites + general lacking political will	Partly
Venezuela	Motive: national	Partly	Yes	Yes	Slightly weakened by ineffectiveness + Measures are somewhat counteracted by discrimination of former elites	Yes (short-term)
	Motive: subnational	No	Partly	No	Lacking political will + hardly any pressure from population	No
	Opportunity	No	No	n.a.	n.a.	n.a.
	Indirect M.: economic distortions	Yes	Yes	No	Misuse of revenues + lacking political will + ineffective institutions	No
	Indirect M.: political-institutional distortions	Yes	Partly	No	Lacking political will	No

Notes: n/a = not applicable.

Sources: Authors' own compilation.

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