

Inequalities in mining and oil regions of Andean countries

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Desigualdades en las regiones mineras y petroleras de los países andinos

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Abstract

The difficulties of translating mineral richness into tangible development outcomes have been widely covered in academic research in the last decade. However, only very recently has the issue of inequalities in the context of extraction received attention. This paper contributes to emerging literature by proposing and applying an analytical framework in which inequalities catalyzed by mining and oil operations are reviewed across three thematic axes (political, socioeconomic, and environmental) and three levels (between institutional actors, between territories, and between groups within a given territory). This systematic analysis uncovers the ways in which the costs and benefits of extraction affect institutions, territories, and social groups differently. In the second part of the paper, it is applied the framework to a mining operation in Peru (Antamina) and an oil field in Colombia (Rubiales). The empirical analysis reveals a set of contextual factors that influence the generation of inequalities.

Keywords: extractive industries, mining, inequality, Peru, Colombia.

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Resumen

Las dificultades de traducir la riqueza mineral en resultados tangibles de desarrollo han sido ampliamente cubiertas en la investigación académica en la última década. Sin embargo, solo recientemente se ha prestado atención a la cuestión de las desigualdades en el contexto de la extracción. Con este trabajo se contribuye a la bibliografía emergente, al proponer y aplicar un marco analítico en el cual las desigualdades catalizadas por las operaciones mineras y petroleras se revisan a través de tres ejes temáticos (político, socioeconómico y ambiental) y tres niveles (entre actores institucionales, entre territorios y entre grupos dentro de un territorio determinado). Con este análisis sistemático se revelan las formas en las que los costes y beneficios de la extracción afectan a las instituciones, territorios y grupos sociales de manera diferente. En la segunda parte del trabajo se aplica el marco a una operación minera en Perú (Antamina) y un campo petrolero en Colombia (Rubiales). El análisis empírico revela un conjunto de factores contextuales que influyen en la creación de desigualdades.

Palabras clave: industrias extractivas, minería, desigualdad, Perú, Colombia.

1 Introduction

In visits to large mining and oil operations, the contrast between the «two sides of the fence» is striking. Modern mines and oil fields are spaces marked by massive physical transformations, advanced technology, a readable functional order, and a strong image of power. The surrounding world is frequently poor, troubled, and technologically backward and experiences a sense of subordination to companies and national authorities. Numerous studies have addressed these contrasts, aiming to explain the prevalence of poverty around extractive operations.

Two perspectives prevail in those explanations. From an economic perspective, the dominant explanation is the «enclave» effect. The problem is that modern mining and oil operations work with weak or no links to the local economy (Kruijt & Vellinga 1977; Auty 2006). The solution is the promotion of policies to strengthen backward linkages to local businesses (McPhail 2008). The rationale for this perspective is that poverty and backwardness precede extraction. The presence of modern companies is seen as the opportunity to escape economic deprivation.

The alternative perspective incorporates a critical political stance. The problem is not disconnection between the operations and local communities, but a form of connection that dissociates territories from people. The main corporate goal is to extract mineral wealth while transferring some of the costs to locals (Bebbington *et al.* 2008a; Emel *et al.* 2011). The extractive sector follows the paradigm of «accumulation by dispossession» (Harvey 2003; Perreault 2013). Resolving this type of problem would demand transformations in the institutions governing extraction (Bebbington *et al.* 2008a; Thorp 2012; Bebbington 2012).

That second perspective links poverty to inequality: poverty is not the situation before extraction but the result of the asymmetric power relationship between companies and local populations (Kirsch 2014). Nevertheless, this approach to inequality focuses on a relatively narrow set of immediate interactions between the company and «the other side of the fence». It does not address the wider range of inequalities that extractive operations generate. Large operations are like stones thrown into a pond. The difference in pressure between the impact zone and the immediate surrounding area generates waves that spread across the pond to produce change. In the context of extraction, inequality spreads across actors and institutions and has economic, social, environmental, and political effects.

Researchers have started to examine some of these inequalities. Socioeconomic, environmental, and gender inequalities have received most attention. Denise and Anthony Bebbington (2010)

study the socioenvironmental impacts of intensive gas exploitation in Tarija (Bolivia). They reveal that job opportunities, economic compensation, royalty transfers, loss of livelihoods, and environmental deterioration are unequally distributed among social groups. Ethnic origin, geographic location, and links to national and local elites are key variables that determine the distribution of those costs and benefits. Similar processes have been described in Peruvian mining localities (Bury 2004). Recently, econometric analyses have backed the conclusions of those case studies. Loayza, Mier and Rigolini (2013) use variations in mining across Peruvian districts to investigate the impact of mining activity and government transfers on local socioeconomic outcomes. They discover that mining activities and their related fiscal transfers generate statistically significant differences in the per capita average expenditure between districts hosting mines and neighboring districts of the same province. In the former, extreme poverty and illiteracy rates are also lower. Those differences are greater compared to similar districts in non-mining provinces. However, Loayza *et al.* also discover that income inequality in mining districts is higher than in non-mining districts. Finally, some authors have addressed the different, and frequently harsher, way in which mining has a negative effect on gender inequality. They confirm that women have very limited access to job opportunities in the extractive sector, experience the effects of environmental degradation more intensively, and suffer the increase of many forms of gender-based violence (Eftimi *et al.* 2009; Lahiri-Dutt 2011).

Inequalities are frequently correlated with factors hindering development, such as increases in social conflict, weak collective action, decreases in social capital, and erosion of institutional legitimacy (Woolcock 1998; Wilkinson & Pickett 2007; Stewart 2008; Thorp 2012). The incipient focus on inequality offers a new perspective for the academic analysis of the developmental potential of Extractive Industries (EI). The pending task starts with a systematic analysis of the types of inequalities that the extractive sector catalyzes. This paper contributes to that task by proposing and applying an analytical framework in which inequalities are reviewed across three thematic domains (political, socioeconomic, and environmental) and three levels (between political institutions, between territories, and between social groups within a given territory). The application of the framework to the Antamina mine (Peru) and Rubiales Pacific oil operation (Colombia) uncovers the way in which the costs and benefits of extraction are unequally distributed and reveals the set of factors that have a significant influence on the generation of inequalities. Although some of those factors are context-specific, this analytical framework is applicable to other contexts, because it helps to think systematically about EI-induced inequality as a result of the interaction between a wide range of actors operating at different levels. The rest of the paper is struc-

tured as follows. The second section introduces and explains the analytical framework of the study of inequalities generated by the extractive sector. In the third and fourth sections, it is applied the framework to the analysis of the impact of the Antamina mine in Ancash (Peru) and the Rubiales oil field in El Meta (Colombia). In the fifth section, it is presented the main conclusions.

2 An analytical framework for the study of extraction-related inequalities

The attempt to systematize fieldwork data collected over the last eight years in the mining and oil-producing regions of Bolivia, Peru, and Colombia has triggered this reflection on different forms of inequality. The analysis of transformations that EI catalyzes reveals a complex web of actors and relationships. Those relationships are asymmetric, polarizing, and tend to augment differences between actors. A review of the influence of EI across two axes helps to clarify different types within that set of unequal relationships. The first axis encompasses the three thematic domains: politics, socioeconomic, and environmental. The second axis refers to three levels of analysis: inequality between political institutions,¹ between territories, and between social groups within the territory.² The combination of the two axes defines a three-by-three matrix (see Table 1). The cells of the matrix display processes that the presence of EI catalyzes and that, in turn, cause inequality; they are intermediate causes in a longer cause-effect chain.

The study of gender differences catalyzed by EI could constitute either a fourth thematic domain or, alternatively, a fourth level of analysis. The former is logically more consistent with the idea of an analytical «domain» that can be studied at different levels. While acknowledging the importance of gendered inequality, its study is beyond the scope of this article. The rest of this section systematically reviews the main elements of the proposed analytical framework.

2.1. Political inequalities

Politics is the first domain to be analyzed, because differences in political power tend to be translated into other domains through its consolidation into institutions and public policies in key sectors. The extraordinary influence of politics accounts for the detailed elaboration of this first dimension of the framework. The politics is understood as the process of using different sources of power to define and impose goals that affect the society or certain social groups. Political power is the capacity of institutions and social groups to influence those processes to advance an agenda. The presence of large mining and oil operations has important conse-

- 1 In this article, the term «political institutions» refers to officially recognized public bodies responsible for enacting and implementing public policies, such as the parliament, different levels of government, ministries, and regulatory and monitoring agencies.
- 2 In this article, it is assumed «territory» as a socially constructed identity, as a space that is recognized as a functional unit by the inhabitants, and by other agents (Schejtman & Berdegúe 2004).

THEMATIC DOMAINS				
	Politics	Socioeconomic	Environmental	
LEVEL OF ANALYSIS	Political institutions	National politics Corporate influence on policy making Centralization of EI governance Local politics Local veto power Empowerment of local authorities Corporate cooptation of authorities	Strengthening of government sectors responsible for the promotion of investment in the extractive sector Increased influence of corporate interests on taxation policies and allocation of revenues	Weak development of environmental public institutions, regulations, and monitoring bodies
	Territories	Territory building subordinated to the logic of extraction Local political actors increase their bargaining power <i>vis-à-vis</i> companies and the central state, but only in relation to compensation	Differences in the allocation of public budgets Generation of new employment opportunities and increase in population Economic dependence on extraction	Impact of extraction on environment spreads to different territories
	Social groups within territories	Empowerment of: «Representative» institutions and organizations Local entrepreneurs Disempowerment of: Ordinary «non-affiliate» citizens	Unequal distribution of economic costs and opportunities depending on participation in the extractive sector	Differences based on degree of dependence on availability of water, land, and ecosystem services

Table 1

Matrix defining different types of unequal relationships

quences for the reconfiguration of political power at different levels. In this section, it is looked at what happens to the distribution of political power between political institutions, territories, and groups in a given territory.

In the analysis of the relationships between political institutions it is necessary to differentiate national from subnational politics. At the national level, a strong extractive sector fosters two effects that tend to multiply inequalities: increased corporate influence on policy making and the centralization of the governance of extraction and related activities (Bebbington 2012; Haslam & Heidrich 2016). The growing influence of corporations on government policies is the most salient feature in countries with a large extractive sector. This tendency is especially important in countries in which private companies are key actors in the sector. In such countries, governments rely on companies' activities and investments to guarantee state revenue and to maintain the pulse of the economy. This crucial position in the national economy provides companies with political leverage to shape policies regulating extraction in their favor. The feature also applies to countries with strong national companies,

because they frequently determine the policies, overruling the corresponding Ministry. The promotion of business-friendly fiscal policies and loose environmental regulations are among the main interests corporations advance (Arellano-Yanguas 2016). The second effect is the growing centralization of power related to the regulation of key aspects of extraction. The strategic nature of the extractive sector provides incentives for the central government and the mining and oil companies to simplify the processes of negotiation, dialogue, and control by giving the national government a monopoly on those powers.³

At the subnational level, in the localities and regions hosting mining and oil operations, the balance of power is adjusted in response to national political processes. Frequently, local authorities use the presence of large operations to strengthen their bargaining power (Arellano-Yanguas & Mejía-Acosta 2014). Prior to actually investing, some local leaders may have the capacity to mobilize people against the operation, putting the viability of the projects at risk. This capacity confers local authorities a *de facto* veto power that they can use to negotiate benefits, either collective or private. The sustained materialization of threats through periodic claims and mobilizations extends that power over the life of the operation. Yet, it would be deceptive to present the companies as powerless victims of selfish populations looking for material advantages. Corporations also hold enormous power at the local level. Through their purchasing power, the provision of jobs, the award of outsourcing contracts, and their Corporate Social Responsibility (CSR) schemes, companies can co-opt the will of the people and their leaders (Arellano-Yanguas & Bernal-Gómez 2017). Moreover, sometimes they attempt to gain the benevolence of local authorities by supporting the political campaigns of candidates with a chance of victory in local and regional elections (Arellano-Yanguas 2011b).

In the second level of analysis it is addressed the distribution of power between territories hosting the operations and other national territories. Subordination and compensation are the two logics that mark the relationship of mining and oil regions with the rest of the country. First, the presence of large mining or oil operations subordinates the territory to the logic of extraction. In the name of the national interest, those territories become part of global markets led by powerful actors that determine their future. The central government overrules local powers to guarantee stability for investors, while social and environmental impacts are systematically downplayed in favor of the potential advantages for the country. Thus, extraction territories are frequently understood to be areas «sacrificed» for the general good of the country (Göbel & Ulloa 2014).

Second, in the context of democratic regimes and growing concern about corporate reputation, the imposition of mining and oil operations cannot work without some kind of compensation. To gain political leverage, local populations and authorities take ad-

3 Such monopolies are less frequent in federal states, where the states hold responsibility for some of those policies. Nevertheless, in recent years the general tendency has been towards re-centralization of those decisions (De Castro *et al.* 2016).

vantage of the companies' need for formal popular consent to their operations and their growing aversion to controversy and conflict. However, that local power is restricted. Companies and central governments tend to veto discussions about the defining features of extraction. Thus, pragmatically, local populations often used power to negotiate material compensation. Local actors ally with companies to encourage the central government to enact policies that officially sanction those compensations (Arellano-Yanguas 2011b). As a result, extraction regions usually benefit from larger fiscal transfers, corporate social responsibility projects, and higher job quotas than other regions.

However, those territories are not unified entities. Thus, the presence of mines and oil wells also changes the power balance between the social groups within the host territories. Local processes revolve around the agenda of those new powerful actors. Companies «read» the environment and the society around them through the lens of corporate needs and interests. They need to relate to the «locals» to gain legitimacy. However, the «local» implies a complex web of interactions that are difficult to decipher. Companies make the «local» readable, reducing its complexity (Scott 1998). Companies' operational definition of locals is the set of social organizations and public institutions with which they can negotiate directly; those organizations and institutions are usually also the actors that can articulate local opposition to their activity. This strategy strengthens the role of formally constituted social organizations that become intermediaries with the companies and, frequently, with the central government. Depending on the context, negotiators might draw from indigenous, peasant, and community organizations, local business associations, local political parties, NGOs, faith based organizations, or surveillance groups (Bebbington *et al.* 2008b). Companies often support the functioning of those groups to signal the corporate will to collaborate. The strategy provides incentives for the creation of new organizations and competition for leadership. Fragmentation of the local society often occurs (Ballard & Banks 2003; Arellano-Yanguas 2011a).

Local businesses are the other actors that gain political leverage with the arrival of large companies. On one hand, contracting with local businesses is a widely recognized good practice to promote local development (Tordo *et al.* 2013). On the other hand, larger transfers to subnational governments in extraction regions lead to an increase in public investment and the consequent workload for local business. In turn, local businesses need to hire new employees, resulting in an increase in popularity. The close relationship and mutual support between those local businesses and the authorities responsible for managing the local budget is neither surprising, nor is the fact that in local elections the firms support candidates who will favor them, reinforcing their mutual dependence.

2.2. Socioeconomic inequalities

At the level of political institutions, efforts to develop a strong extractive sector are usually correlated with the empowerment of the ministries and public agencies responsible for the promotion of the extractive sector *vis-à-vis* those in charge of regulating and monitoring problematic aspects of extraction. The usual pattern is the subordination of environmental agencies and policies to those responsible for the promotion of investments (Bebbington 2012). Frequently, ministries responsible for the improvement of infrastructure that facilitate the exploitation of resources, such as electricity generation and roads, are also strengthened. Mining and oil companies tend to enjoy important leverage in the negotiation of taxation policies in their sector and in the allocation of revenues from extraction (Arellano-Yanguas 2016).

Differences in socioeconomic opportunities between territories that host extractive operations and the rest of the country may be produced through state-led and market-driven mechanisms. State-led mechanisms derive from the logic of compensation from extraction related externalities (Brosio & Jiménez 2012). Subnational governments in mining and oil regions tend to receive larger fiscal transfers, and those jurisdictions enjoy preferential allocation of public funds from the central government. Market-driven mechanisms relate to backward linkages of the extractive activity to the local economy with the consequent increase in employment opportunities. However, these two mechanisms do not guarantee an actual advantage for the people of those regions. In fact, numerous academic accounts highlight important difficulties in translating the abundance of resources into public wellbeing. EI's potential positive effects may be offset by the combination of one or more of the following factors: (i) an unplanned increase in population due to massive immigration, demanding new services; (ii) political distortions, including corruption, leading to an ineffective allocation of resources; (iii) dependence on the extractive sector and the impossibility of substantial diversification; (iv) vulnerability to variations in international prices; (v) increases in prices of consumer goods; and (vi) deterioration of environment and traditional livelihoods.

Socioeconomic differences between groups in territories marked by extraction are also important to note. The degree of direct connection to the extractive economy is the main discriminating feature. The employees of the main mining and oil companies benefit the most, followed by employees of subsidiary companies and local traders. Third level beneficiaries are the employees of public works financed with natural revenue transfers. In contrast, those working in traditional sectors completely disconnected from extraction bear the brunt of environmental transformations and higher prices of consumer goods without benefiting directly from the extractive industry.

2.3. Socioenvironmental inequalities

In the context of rural populations, the socioeconomic impacts of EI are frequently related to changes in ecosystems. Physical geography, the intensity of activities, technological standards, and regulations are the variables that explain differences in the impact of mining and oil operations. At the level of political institutions, the intensification of extraction tends to go hand in hand with looser environmental regulations and limitations in the responsibilities entrusted to environmental agencies (Bridge 2004).

On the ground, the large scale of modern operations generates significant transformations in the environment, even in the case of clean technologies that reduce their impact per unit of product. Those transformations also affect territories and social groups differently.

Without a doubt, the extracted territory is usually the most affected. Water pollution and reduction of river flows, accumulation of toxic sediments on the land, reduction of farmland, and destruction of landscapes and valuable ecosystems are among the most often reported problems (Bebbington & Bury 2009; Perreault 2013). However, those impacts are not circumscribed to the space closest to the operations. What happens to the quality and quantity of available water illustrates the spatial dimension of those impacts. The impact on the availability of quality water is more evident in the territories that are downstream from mining and oil operations. Sometimes, affected communities can be hundreds of kilometers away from the source of the pollution. The problem worsens when there is a cumulative impact due to the presence of more than one operation. The individual impact of each operation on its immediate vicinity may not be pronounced, but the accumulation of negative impacts downstream can be severe (Preston 2012). The inhabitants of lowlands suffer pollution and decreased water flow without any direct benefit from the operation.

Finally, environmental transformations have different impacts on diverse social groups according on their degree of dependence on the availability of particular natural resources, such as water, land, diversity of plants, or wildlife. Traders, public servants, and generally all those connected to the new economic opportunities the EI brings suffer less from environmental transformations than peasants, farmers, and indigenous groups. In the Latin American context, indigenous groups carry the heaviest burden. In addition to limited availability of resources, the arrival of an extractive operation to an indigenous territory frequently means restrictions on indigenous peoples' mobility and a loss of economic, cultural, and political autonomy.

Summarizing, with the analytical framework presented above, it is intended to assist in a systematic review of the different types of inequalities associated with EI, beyond the direct relationship

between companies and local populations. Not all boxes of the framework are equally relevant for all cases. In some cases, specific types of inequalities are more relevant than others. However, the proposal helps to generate a simple and systematic review of inequalities that might unveil unexplored aspects of some cases. The next two sections present the analytical framework at work through its application to the cases of the Antamina mine in Ancash (Peru) and the Rubiales oil field in El Meta (Colombia). In many ways they are two divergent cases. Antamina is company with a positive reputation, while Pacific Rubiales does not enjoy such a respected position. Their comparison helps to explain the utility of the analytical framework in different contexts. Data for the analysis is based on interviews conducted from 2008 to 2015 with key actors in companies, communities, local NGOs, peasant organizations, and subnational governments. Visits to communities and municipalities around Antamina were carried out from 2008 to 2010, and fieldwork in El Meta was undertaken from 2013 to 2015.

3 Antamina: a dinosaur incubating a chick?

Large-scale mining is a comparatively recent development in Ancash. Antamina, the main company in the region, is the epitome of the new mining sector, with modern operations and high social and environmental standards. Antamina's operations, located over 4,300 meters above sea level, extract copper and zinc in the most underdeveloped districts of the region, the Conchucos Valley, which has about 62,500 inhabitants. The company started production in 2001 after making the largest mining investment in the world over the previous 15 years. The result is one of the biggest and most profitable mining operations ever undertaken. Annual profits after reinvestment and taxation ranged between USD 1.3 and 1.8 billion for the 2006 to 2008 period (BHP Billinton 2009, p. 29). These profits also generated considerable *canon minero's* transfers to the region, especially to the districts surrounding the mine in the province of Huari.⁴ Moreover, Antamina's social responsibility program was the most ambitious in the country and in 2007 amounted to nearly USD 67 million for local development.

Between 2004 and 2014, the poverty level in Ancash as a whole improved by 22 percentage points over the national average. However, public services and social indicators in the districts closest to the operation improved less than in the rest of the region. The situation was even more negative in the rural areas of those districts. Thus, although the presence of Antamina generated some positive results, it seems that they are unevenly distributed. Paradoxically, the localities with the poorest outcomes are those receiving the

4 In Peruvian Spanish, *canon* has come to mean «a rule for the devolution to sub-national governments of revenue collected by the central government». In the case of mining revenues, those revenues are transferred back in diminishing proportion to the district hosting the mine, the districts of the province hosting the mine, and the districts of the region hosting the mine. Thus, jurisdictional borders between districts are the main factor determining the distribution of canon.

most in fiscal transfers and those in which Antamina has historically had greater direct involvement in development activities. This paper's analytical framework shows that independent of the good will of the company, the presence of such a large operation generates inequalities and distortions of different types that explain the paradoxical lack of general positive results. A metaphor helps to illustrate the situation. Since 2009, Antamina has promoted cultural and tourist activities connecting Ancash to the prehistoric presence of dinosaurs in the region. Today, Antamina's involvement in the development of Ancash is like a dinosaur trying to incubate a chick. The creature is unaware of the several ways in which its enormous size and its activities impact the society it wants to nurture; its attempt does not work well for the chicks.

3.1. The impact on the distribution of political power

Antamina has had enormous political influence, shaping the relative power of actors at various levels. At the national level, although the National Society for Mining, Oil, and Energy (NSMOE) usually represents corporate interests before the national government, the largest mining companies have had a direct say in negotiations about the main issues regulating the mining sector in Peru. Antamina has participated directly in three crucial policy changes in the recent history: (i) the canon law —Law N° 27506— in 2001; (ii) the Mining Program of Solidarity with the People (MPSP) in 2006; and (iii) the fiscal reform of the mining sector in 2011.

In 2001, Augusto Baertl, then CEO of Antamina, was instrumental in the approval of the Canon Law, which raised the canon in the mining sector from 20 to 50 % of the corporate income tax paid by companies. Mayors in mining areas had spent many years working to achieve this change without success. However, in 2001 they won the support of Augusto Baertl, who wanted to quell the growing protests against mining by ensuring that the population around the mines received some benefits.⁵

In 2006, Antamina participated in the negotiation of the MPSP, a voluntary scheme proposed after the corporate veto to pay new royalties or windfall taxes.⁶ The companies committed to invest around USD 150 million per year in social development projects in the mining regions for the subsequent five years. Each company would be required to contribute and manage its contribution. Due to its size, Antamina contributed over USD 65 million per year to boost its CSR budget. Finally, in 2011 senior managers of Antamina were among the corporate representatives in negotiation with the new Premier, Salomón Lerner, regarding the taxation of mining activities. On this occasion, the companies, including those with tax stability agreements, agreed to pay new taxes. In that negotiation, Antamina proposed that companies could manage some of these

5 Interviews with the former president of the Congressional Committee on Mining in 2001 (LIM008 – 18/10/2011) and the mayor of one of the main mining cities (LIM009 – 19/10/2011).

6 Companies with tax stability agreements can refuse the introduction of new taxes and royalties.

extra resources to continue with the developmental activities of the MPSP. The proposal was not considered.

Regarding environmental policies, mining companies have been reluctant to transfer the responsibilities for the approval of environmental impact studies (EIS) and the monitoring of their operations from the Ministry of Energy and Mining to the Ministry of Environment. Antamina was neither one of the belligerent companies on that front, nor did it openly detach itself from the position of the NSMOE.

Antamina and other large companies have adopted a dual strategy. They have defended their interests before the national government without including local stakeholders directly affected by the outcomes of those negotiations. This has reinforced centralization in the management of the extractive sector. In parallel, they have tried to placate local authorities and populations through an increase in fiscal transfers to the subnational governments of the producing municipalities and regions—a strategy without direct cost for the companies, because it is all about public money.

At the local level, the situation is more complex. Most of the mayors in the districts around the mine took office with radical platforms that endorsed historical grievances against Antamina. Although the company exerts great power and influence at the local level through employment offers, comprehensive CSR schemes, and advertising contracts with local media, it needs to reach a compromise with local authorities to counteract their mobilization capacity. For some years, Antamina has tried to gain their favor by allocating CSR budgets to supporting municipal projects, and, on some occasions, by awarding contracts to people close to the mayors. The result is that local authorities, once in office, assume a more positive approach towards the company (Arellano-Yanguas 2011b). Through that shared strategy, Antamina and the local authorities have increased their power *vis-à-vis* other public authorities and more critical local actors. For example, Antamina's support shielded the municipality of San Marcos, at least for a while, against the attempts of higher levels of government to exert stricter controls on municipal management. That type of perverse «empowerment» applied also, although to a lesser degree, to the rest of the districts in the province of Huari, which also received fiscal transfers linked to Antamina's activity. Those institutional dynamics influence the distribution of power between local groups. Organizations with a formally recognized structure benefit the most. Antamina and the municipalities need their participation to provide legitimacy to institutionalized spaces of dialogue such as public consultations for the expansion of mining operations or the municipal participatory budget. Urban organizations with easier access to communication and transportation and a few peasant communities take advantage of the necessity to make progress on their collective agenda and, sometimes, their leaders' personal interests. The value of the «formal» recognition has led to the multiplication of local organiza-

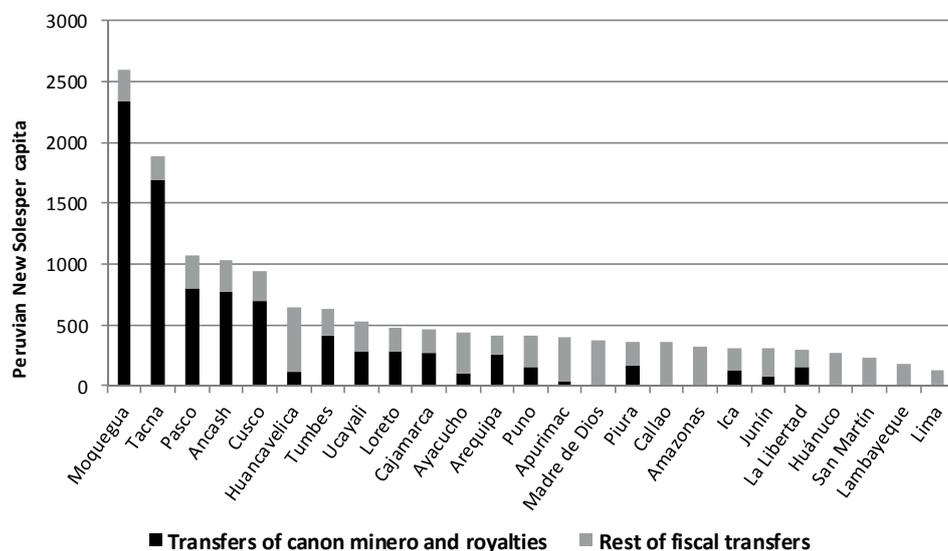


Figure 1

Annual average of transfers per capita to subnational governments of Peruvian regions (Peruvian New Soles) from 2005 to 2010

tions with very limited representativeness.⁷ Sometimes Antamina and local governments have promoted the creation of such organizations to ensure support for their proposals. The result has been the fragmentation of the local society and the hijacking of the voice of the weakest sections of the population (Arellano-Yanguas & Bernal-Gómez 2017).

The colonization of local politics by economic gangs aggravates the situation. The enormous budgets of mining towns attracts consultants, project designers, engineers, and companies, but also unscrupulous entrepreneurs. Since 2006 some of these gangs have been embedded in the municipalities in order to win contracts. The next step was to support their own candidates in the municipal and regional elections of 2010. In July 2008, the mayor of one of the districts of Huari reported the purchase of guns for personal defense due to threats from a group that had been denied a contract.⁸ The anti-corruption prosecutor confirmed that Ancash had become a «mafia territory».⁹ The degree of corruption was only apparent some years later when numerous mayors, among them the Mayor of San Marcos, and the President of Ancash, were charged with serious crimes of corruption and attacks on individuals.¹⁰

3.2. Socioeconomic inequalities

In the Peruvian context, *canon minero's* transfers are the main factors driving the unequal distribution of public resources between regions and municipalities. Figure 1 presents the average of the fiscal transfers to the subnational governments of all Peruvian regions, distinguishing those linked to EI (*canon minero* and royalties)

7 Such as neighborhood, peasants, traders and cultural associations.

8 Interview ANC133 – 08/07/2008.

9 Interview ANC092 – 17/06/2008.

10 See <http://elcomercio.pe/peru/ancash/alcalde-san-marcos-orden-prision-preventiva-noticia-1766450> [accessed February 13, 2016]; <http://elcomercio.pe/peru/ancash/ancash-investigaran-uno-mas-grandes-casos-corrupcion-noticia-1875212> [accessed February 13, 2016].

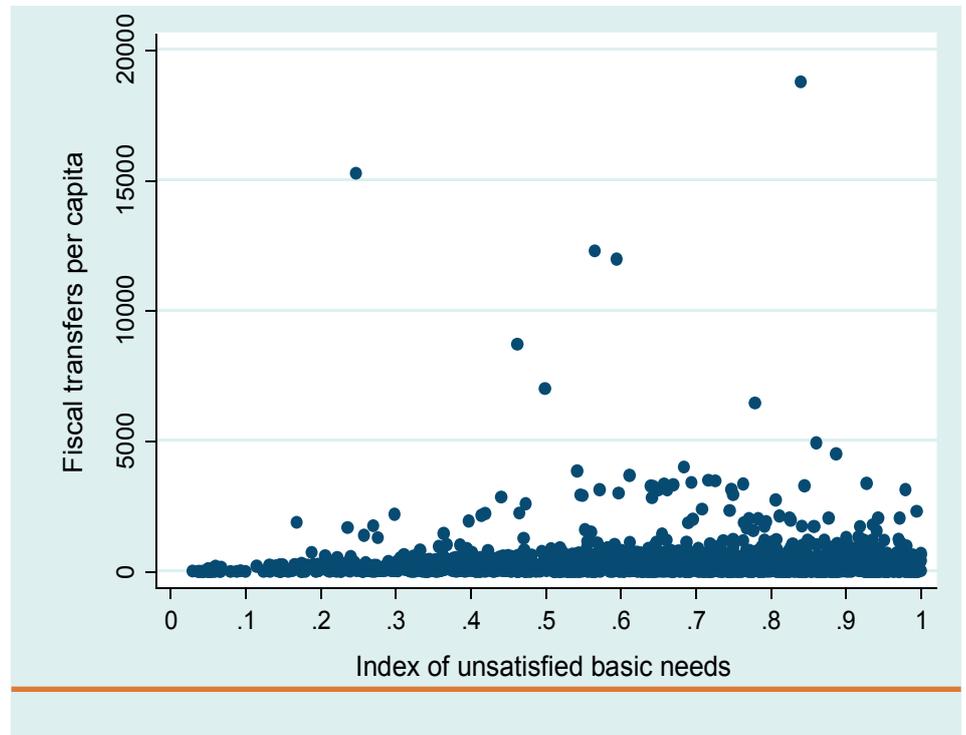


Figure 2
Relationship between transfers per capita and unsatisfied basic needs in 2011

from the rest of the fiscal transfers. The differences in EI-related transfers are so important that the national government cannot equalize those differences through ordinary transfers.

Differences are even more acute between local governments. In 2011, the 30 local governments that received the most *canon minero's* resources and royalties accounted for 5 % of the total population of the country but received 32 % of all EI related transfers.¹¹ In the same year, while the average budget per capita for all local governments was around USD 200, local governments of the districts close to the main mines had annual budgets per capita between USD 1,000 and 16,000. For example, San Marcos, the district hosting Antamina, had a per capita budget of USD 8,950, of which more than 95 % came from *canon minero's* transfers.

This allocation of resources tends to exacerbate preexisting inequalities between regions and between localities within the producing region, because it is not correlated in any way with poverty indicators. The Pearson correlation index at district level between transfers per capita received in 2011 and the percentage of people with unsatisfied basic needs is 0.0253, extremely low. Figure 2 graphically shows that lack of correlation.

Despite the concentration of resources in a relatively small number of localities, the record of wellbeing indicators is not great. Most recent academic studies on Peru reach the conclusion that *canon minero's* transfers have not significantly improved the lives

11 The Gini index of those transfers to local governments in per capita terms and weighted the size of the population of each locality is 0.789 [extremely high].

of the people around the mines (Arellano-Yanguas 2011b; Ticci & Escobal 2015). Some authors detect a decrease in poverty in the host districts, but that effect disappears in the rest of the districts of the province and, furthermore, it goes hand-in-hand with an increase in inequality among the population of those districts (Loayza *et al.* 2013). In the case of Antamina, there is no new data at the district level after the census of 2007. The analysis of census data reveals that there was limited improvement in the living conditions in the districts around the mine (Arellano-Yanguas 2011b); however, that improvement neither matches the scale of the operation nor the amount of *canon minero's* transfers. A visit to the region revealed that capitalization of the economic activity had taken place in Huaraz, the capital of the region, and Chimbote, the main city of Ancash on the coast. The pattern of capital accumulation in some spaces, which does not coincide with the geography of extraction, continued in the following years (INEI 2014). This tendency is consistent with complaints of the rural population about the unequal distribution of EI-related resources. According to their accounts, only local business, the myriad of consultants circulating in the region, and the employees of NGOs working for Antamina benefit from the presence of the mine.¹²

3.3. Environmental inequalities

Despite its high environmental standards, a mine of the size of Antamina has inevitable impacts. The construction of the open pit, the processing plant, the large tailings pond, the mining dumps, and the roads destroyed natural settings including lagoons and wetlands. Those changes affected the livelihoods of the adjacent communities. In theory, the payment of canon transfers and the investment of those resources should compensate for that loss. However, there is a striking case in which the administrative logic works against the geographical logic. Antamina is situated on the border of San Marcos and the district of Llata, belonging to the region of Huanuco. Part of Antamina's productive infrastructure is in Llata, but the open pit is in San Marcos. Although Llata suffers similar direct impacts, it does not receive any *canon minero's* transfers, because the rules for transfer distribution are linked to the administrative jurisdiction in which the resource is extracted.

Something similar happens with the 320 kilometers pipeline that transports the minerals directly from the mine to the seaport in Huarmey. It passes across several districts. In July 2012 the pipeline broke in the district of Cajacay generating an important spill. Pollution problems have also been reported in Huarmey. However, none of those districts received compensation for that infrastructure.

Effects on water are the most important cases in which the geography of extraction and the geography of impact do not coincide.

12 Interviews in peasant communities of Carhuayoc, Huaripampa, and Ayash.

Complaints about the availability and quality of water have been the most cited source of conflict between local communities and Antamina. Although the issue has been raised by almost all peasant communities of the surrounding area, the communities of Ayash Pichiú and Santa Cruz de Pichiú are the two most affected. Both are located downstream from the tailings dam of Antamina in the basin of the Ayash River. The communities were not directly affected by the operation and did not play a relevant role in the initial negotiations with Antamina, but they ended up carrying the heaviest burden.¹³ In contrast, the question of water did not receive much attention in the discussion in the urban areas of San Marcos, apart from the lack of piped water to households due to mismanagement on the part of the municipality.

4 Rubiales oil field: a dinosaur gobbling a chick

The Rubiales oil field is located in the rural area of the municipality of Puerto Gaitán, department of Meta, Colombia. Puerto Gaitán is the third largest municipality in the country, with an area of 17,499 square kilometers. The oil field is at the east end of the territory, about seven hours away from the capital district traveling on an unpaved road. Oil companies entered the area in the late 1990s. However, the presence of the FARC guerrilla and paramilitary groups forced some of these companies to depart. Since 2002, the army, within the frame of the Democratic Security policy of President Alvaro Uribe (2002 to 2010), has regained control of the area. In 2004, Pacific Rubiales Energy (PRE), a small Canadian company, entered the area. The company soon managed to intensify extraction and became the second largest oil producer in the country behind Ecopetrol, the state-owned company. In 2013 and 2014, PRE extracted 25 % of Colombia's total oil production from the Rubiales Field.

The oil boom completely transformed Puerto Gaitán. The locality changed from being neglected and economically irrelevant into one of the richest localities. In 2011, the municipality of Puerto Gaitán received the most royalties in the country. Its budget increased from USD 600,000 in the early 2000s to USD 36 million in 2011. However, the population grew more than its capacity to provide adequate public services. In 2005, the National Census reported that Puerto Gaitán had 15,450 inhabitants, of whom 6,350 (41 %) lived in the urban area and 9,125 (59 %) resided in rural areas. At that time, around one-third of the population was made up of indigenous people of the Sikuani, Piapoco, and Sáliba groups

13 13 Interviews in peasant communities of Ayash Pichiú and Ayash Santa Cruz (ANC137 – 14/07/2008).

living in «resguardos».¹⁴ Some of the Sikuni communities are in territories directly impacted by oil exploitation.

Just six years of oil exploitation tripled the population. By 2012, the local government of Puerto Gaitán estimated that there were 45,000 people living in the municipality. Although new services in the capital absorbed some of the newcomers, most of them moved closer to the oil field searching for job opportunities. They sometimes created entirely new villages with promissory names such as *El Oasis* and *El Paraíso*. This massive inflow of people has deeply transformed the territory. Their lack of embeddedness makes the construction of shared collective projects difficult. Puerto Gaitán has become a space of extraction in which newcomers accumulate resources to build their future somewhere else, while Pacific Rubiales has been as a thirsty dinosaur with little interest in local processes.

4.1. The impact on the distribution of political power

Puerto Gaitán is an internal colony. Interviews with local authorities reveal the prevalence of a sense of powerlessness and the lack of a shared project for the territory. The logic of extraction has become embedded in the lives of people and institutions, subordinating their future to decisions taken beyond the territory. In comparison to the Peruvian case, the exploitation of oil in Puerto Gaitán has disempowered local institutions and authorities. Four sets of reasons explain the process. The first relates to the behavior of the company; the second, to the growing centralization of regulatory policies; the third, to the weak capacity for collective action, and fourth, to the management of fiscal revenues.

First, the way in which PRE arrived in the territory and established its realm signals that its legitimacy is independent from local approval. PRE was established in 2007 when a small Canadian company, Pacific Stratus, bought Rubiales Holdings Corp (RHC), a Caiman Island registered company that had an agreement with Ecopetrol for the exploitation of the Rubiales oil field.¹⁵¹⁵ The exploitation of that oil field gave the name to the company and promoted its growth, and it became the largest private Latin American oil company in 2013 (Pacific Rubiales Energy Corp 2009; Ahumada Rojas 2015).¹⁶ PRE's purchase of RHC in 2007 and the consequent increase in production and influence cannot be explained without understanding the support of the Colombian Government. How did that small company get State support? Reliable media sources reveal that Bill Clinton intervened in favor of PRE, offering the Colombian Government his support in the negotiation of the Free Trade Agreement between Colombia and the USA in exchange for a go-ahead to the purchase operation. In return, the Bill Clinton Foundation received a generous donation from an investor with direct interests in PRE (Emshwiller 2008; Hamburger 2015). The result is

14 The «resguardo» is a legal institution of Spanish colonial origins that recognized the rights of the indigenous community over a territory and its special autonomous status.

15 Through Meta Petroleum Corp, a subsidiary of RHC.

16 In August 2015 the company announced its new name: Pacific Exploration and Production Corporation. The change reflected the aim to expand its scope of operations beyond the Rubiales oil field.

that the company enjoyed total support from the central government, leaving little room for the influence of local authorities.

Second, the powers over land use, local taxes to the oil industry, environment, use of water, and, in general, all policies linked to the oil sector have been gradually concentrated on national agencies. The result is that local authorities frequently feel unable to plan for the future of the locality, including the provision of basic services.¹⁷

Third, immigration and militarization reduced collective action and, in turn, local bargaining power. The inflow of population into the Colombian oil territories radically transformed social and political dynamics (Rausch 2009). In Puerto Gaitán, these accelerated changes have undermined the construction of a regional identity and the capacity to mobilize people in support of a shared development agenda beyond the demand for more jobs in the oil industry for locals. Moreover, the strong militarization of the area and the enduring political influence of paramilitaries made social mobilization unlikely. In turn, the difficulty of catalyzing collective action meant less bargaining power with PRE and the central government.

Finally, the lack of local bargaining power explains how in 2011, Colombia was able to implement a radical recentralization of the distribution of mining and oil royalties.

For years the government and some think tanks reported the misuse of royalties transferred to the producing regions (Perry *et al.* 2012). Despite the government's clear intention to recentralize, oil producing localities and regions did not have the capacity to promote significant mobilizations to defend the previous system of regulating royalty transfers. After the 2011 reform, oil localities suffered from a cut in royalty transfers of close to 90 % of the previous amounts. The result is that Puerto Gaitán is a territory of extraction, subordinated to logics over which locals have no power.

However, this lack of local power to decide the future of the territory does not mean that all groups in Puerto Gaitán are powerless. In fact, the intensification of extraction has empowered at least two actors: Community Action Committees (CAC)¹⁸ and some representatives of the Catholic Church.

The role of CACs has changed radically since the arrival of PRE, increasing their importance. PRE discharged in the CACs the responsibility for the selection of non-qualified workers for the company and its suppliers —*i.e.*, the CACs manage job quotas—. In the urban area, Asojuntas, the umbrella organization of all CACs manages a unified list of job offers. In the rural area, each CAC has a quota negotiated directly with PRE and its suppliers. The result is that the CACs, especially their presidents, enjoy remarkable power. As could be expected, the scheme led to the creation of a lucrative market in which CAC authorities demand money in exchange for including people seeking job opportunities in the oil sector on the

17 Interviews with the general manager of the municipality of Puerto Gaitán (PTG017 – 24/06/2013) and the secretary for planning of the Meta Governorate (PTG028 – 02/07/2013).

18 CACs are civic non-profit organizations comprised of neighbors of a geographical area whose mission is to promote citizen participation and the management of common interests.

list.¹⁹ The scheme also nurtured patronage linked to the political aspirations of some community leaders (Montero 2011). In parallel, this new role for the CAC has eroded their legitimacy to promote the civic engagement of the community.

A section of the Catholic Church is the second local actor that the intensification of extraction has empowered. This peculiar process began in May 2011. An oil worker strike escalated into violent clashes in the town of Puerto Gaitán. The parish priest of Puerto Gaitán's Cathedral took over the leadership of the town and offered the Church's premises to begin a dialogue between PRE, the unions, and local representatives. The conflict deescalated, and seven sectoral dialogue tables were set up. PRE did not sit at those tables; instead, the priest mediated conversations between the tables and the company. Although the trade unions were suspicious of the process, the dialogue advanced and the young priest became a popular figure in Puerto Gaitán. Simultaneously, the cleric established the *Siglo XXI Foundation* devoted to improving the living standards of the local population. PRE, realizing the priest's leadership and potential legitimizing power, entrusted him with the management of the dialogue tables and channeled a significant proportion of its local CSR budget through his foundation. In a very short time, the priest began to back PRE's policies and became the main operator for the company in Puerto Gaitán. He regularly distributed money to needy families, teachers, and other Catholic priests who performed pastoral work in the area near the oil field. Moreover, his reference was invaluable for those seeking employment in the oil operation. The cleric built a patronage network that provided legitimacy to PRE's presence in Puerto Gaitán and, in return, he gained an astonishing level of power both in society and within the Church. In contrast, opponents to PRE, especially the unions and some progressive clerics, lost power.

4.2. Socioeconomic inequalities

Oil exploitation in Puerto Gaitán generates socioeconomic inequalities between territories and between social groups. Puerto Gaitán does not perform well in comparison with other territories on changes in social indicators. Neither public investment of oil related transfers, nor employment generated by the oil sector, offset the negative challenges linked to the oil industry. Until 2012, Puerto Gaitán had been, for some years, the municipality that benefited the most from the fiscal transfers of royalties generated in the territory. Even in that advantageous position, coverage of public services in the jurisdiction languished due to authorities' incapacity to respond to the increase in population. In 2012, the introduction of the new General System of Royalties equalized the distribution of royalties among producing and non-producing territories, reducing the «advantage» of jurisdictions hosting mines and oil fields.

19 Personal interviews with a municipal manager (PTG101 – 13/11/2014) and president of a CAC (PTG102 – 18/10/2014).

An increase in employment is the second channel through which the oil industry could generate positive social outcomes. However, few of the well-paid workers in the oil industry live in Puerto Gaitán, staying on location only during their shifts. That practice reduces the linkages of the oil sector to the local economy. The result is that, in aggregated terms, Puerto Gaitán has not translated its oil abundance into improved wellbeing indicators for most of its population (Rudas Lleras & Espitia Zamora 2013).

Within Puerto Gaitán, socioeconomic differences are acute between urban and rural spaces, and between groups that benefit directly from the oil economy and those that do not. The 2005 census, taken at the moment in which PRE entered the territory, shows that the levels of poverty in the rural areas of Puerto Gaitán were more than twice that of urban areas: 83 % versus 40 %. Despite the lack of updated statistics, most experts confirm that this tendency has continued. Most public expenditures have been concentrated in the urban area, mainly in the construction of conspicuous infrastructure. In contrast, the demands of people in rural and isolated areas have not received adequate attention.²⁰ The creation of new villages around the oil field has worsened the situation, because the municipality cannot invest in those informally recognized settlements.²¹ Moreover, the social projects of PRE and its interventions through the Siglo XXI Foundation are also concentrated in urban areas that have greater capacity to articulate and voice their demands.

The degree of participation in the oil industry is the other cleavage differentiating winners and losers of the intensification of extraction. The increase in demand for goods and services led to a general increase in local prices: food, lodging, travel, etc. That increase was not relevant for people working in the oil sector, because their earnings also increased at least at the same proportion. However, peasants and other people outside the oil sector struggled to meet their basic needs.

4.3. Socioenvironmental inequalities

The environmental impacts of intensive oil exploitation in Puerto Gaitán are evident in terms of water availability, restrictions on the use of local resources, and dust pollution along the unpaved roads connecting the oil field with Puerto Gaitán. As in the other dimensions, those impacts are unevenly distributed among territories and groups.

The concentration of the power to regulate and monitor environmental impacts in the National Environmental Licensing Authority (NELA) has been a significant consequence of the intensification of extraction. In 2011, the Colombian Government created the NELA and granted it powers that some regional agencies had previously exercised. However, the NELA has a limited capacity to monitor the

20 Personal interview with leader of La Loma (PTG030 – 15/10/2014).

21 Meeting with leaders of El Oasis (PTG024 – 26/06/2013).

daily activities of the oil field. The result is that local denunciations of the negative impacts have multiplied, but there is no way to assess their reliability and the real scale of the impact. For example, it is clear that PRE injects an enormous quantity of water into the wells to extract the oil.²² Rural settlements around the oil field have reported increasingly recurrent drought periods and pollution in some of their water sources. Although the complaints look to be credible, the lack of reliable data makes the denunciations of PRE activities ineffective. In any case, deficits in the quantity and quality of water affect rural populations directly during the dry session.

Restrictions on the use of natural resources are the second type of environmental impact affecting the local population. The pervasive presence of fences that impede access to wide sections of the territory is the most conspicuous signal of that restriction. Agricultural areas have been abandoned, and the population cannot access other valuable resources such as wild animals and building materials. Those restrictions are particularly harmful to the Sikuani people. In fact, the Rubiales oil field is on Sikuani ancestral territory that was not recognized as part of their nine *resguardos*. The company's occupation of that territory has limited the mobility of the Sikuani people. Additionally, inhabitants of the *resguardos* located close to the oil field have reported that seismic exploration has scared the wild animals that they used to hunt.²³

Finally, the massive generation of dust along the unpaved road that connects the oil field to the town of Puerto Gaitán is the third significant impact. The road is transited daily by 1,300 oil tankers in each direction. In the words of the Governor of Meta, «it is an oil pipeline on wheels».²⁴ The heavy traffic has generated an overwhelming cloud of dust that can be seen kilometers away. That large amount of dust has negative effects on the health of the population living on the edge of the road, especially on the children and on the quality of pastures for livestock. Again, the impact is especially negative for the rural population.

5 Conclusions

Most analyses of the impact of the EI at the subnational level have focused on persistent poverty, challenges for economic development, environmental degradation, and increases in conflict. Although many of these phenomena are intuitively associated with different types of inequalities, explicit analyses of EI from the perspective of inequality have been infrequent. In this article it is proposed an analytical framework for the systematic review of three types of inequalities —political, socioeconomic, and environmental— generated by the presence of large mining and oil operations. The analysis is undertaken at three levels: between political insti-

22 Managers of Ecopetrol confirmed that they use the equivalent of 10 barrels of water for each barrel of oil extracted, and their intention is to inject even more water in the future to extract the remaining oil.

23 Personal interviews with Sikuani captains of the resguardo Tigre (PTG022 – 27/06/2013; PTG023 – 27/06/2013).

24 Data and quotation from personal interview (PTG028 – 02/07/2013).

tutions, between territories, and between social groups within the same territory. This systematic analysis leads to a better understanding of the different impacts of EI from a dynamic perspective that takes into account the context and the actors' agency. The use of this framework for the study of the cases of Antamina (Peru) and Rubiales Oil field (Colombia) helps us to reach some concise conclusions.

First, the inequalities generated by EI have multiple manifestations and they are the result of complex interactions among actors at different levels. This perspective goes beyond the traditional focus on the direct relationship between communities and mining and oil companies. Second, IE related inequalities vary from country to country, from company to company, and from locality to locality, depending on political context, local history, the material conditions of extraction, corporate culture, and the relative strength of the actors involved. Third, some of the negative externalities of extraction are neither accidental nor peripheral, but central to the politics and economics of extraction. Fourth, power inequalities are the main determinant of socioeconomic and environmental inequalities. In other words, the negative externalities of extraction tend to focus systematically on those territories and groups with less political power. Fifth, inequalities between local groups are crucial in understanding local political dynamics and the actual capacity to galvanize coherent collective action. Sixth, social mobilization is the last and main resource that groups with less power have to improve their relative position against more powerful actors. In this sense, increased inequality may be one of the main explanatory factors accounting for the prevalence of social conflicts around EI. Seventh, some actors not directly affected by the extraction, like the parish priest of Puerto Gaitán, consultancy firms, or NGOs can play an important role in legitimizing, reinforcing, or counteracting the power or powerlessness of different actors. Their actions can help to reduce or expand inequality.

These conclusions are necessarily preliminary. The main message is that inequality provides a new analytical perspective for a better understanding of the impact of EI. This proposal deserves a systematic analysis of more cases to complete these early findings.

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