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Extractive Industries, Revenue Allocation and Local Politics

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List of Acronyms

CEPE	Corporación Estatal Petrolera Ecuatoriana
CONAIE	Confederation of Indigenous Nationalities of Ecuador
EI	Extractive Industries
FAM	Federation of Municipal Associations
IDH	
MAS	Movimiento al Socialismo
MEF	Ministry of Economy and Finance
OCADs	Organos Colegiados de Administración y Decisión (Inter-institutional Bodies for Management and Decision)
PFM	Public Financial Management
SD	Supreme Decree
SNIP	National System of Public Investment

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Summary

The success of a developmental strategy based on the extraction of non-renewable resources is largely dependent on the share of revenues captured by the state from the extractive sector and the modalities that governments adopt to use and distribute those revenues. In the last two decades, local populations and subnational governments have demanded a greater decentralisation of extractive industry (EI) related revenues but the modalities and mechanisms adopted varied widely across cases. This paper looks at the existing criteria and reform modalities adopted to allocate and use EI revenues, and examines the political bargains that enabled such distribution. The paper focuses on four specific questions: a) How do central governments share (or distribute) the revenues from extractive industries with different levels of subnational government (vertical distribution)?; b) How do governments distribute EI revenues across extractive and non-extractive jurisdictions at subnational level (horizontal distribution)?; c) Which are the mechanisms and rules adopted by governments to allocate these resources?; and d) What is the bargaining potential of subnational territories to demand a more proportionate share of revenues?

We identify two critical dimensions that have an impact on redistributive outcomes: the degree of bargaining power of subnational actors and the alignment between national and subnational political actors. We contend that local actors with strong bargaining power tend to obtain clearer and greater revenue sharing gains, but the political alignment between national and local elites will tend to produce, other things equal, a better redistribution of revenues across producing and non-producing regions. We posit that improved development outcomes may emerge in a context where revenue sharing agreements result from elite bargains that combine earmarked and flexible decision making mechanisms and benefit the whole of the population, however more research is needed. Finally, the paper identifies some knowledge gaps regarding the effectiveness of different decentralisation modalities to improve development outcomes at the local level.

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Introduction

The recent price and investment boom in the mining and hydrocarbon sectors has triggered widespread expectations for greater economic and social development, especially among developing countries. The success of a developmental strategy based on the extraction of non-renewable resources is largely dependent on the share of revenues captured by the states from the extractive sector and the modalities that governments adopt to use and distribute those revenues (Bebbington 2012). This paper acknowledges the existing dilemmas around the extraction of revenues – in the form of taxes or royalties - but focuses on the latter aspect: the criteria for the allocation and use of extractive industries' (EI) revenues.

The choice of mechanisms for the use and distribution of extractive revenues is an inherently political process. In the first place, minerals, oil and gas are frequently concentrated in specific territories within the producing countries and the corresponding populations are likely to demand a share of the proceeds from the extraction as a form of compensation for the use of their resources and the negative externalities associated with extraction.¹ Secondly, minerals and hydrocarbons are non-renewable, which puts additional pressure on replacing the extracted resources with some investment in perdurable assets, whether in the form of tangible (for example physical infrastructures) or intangible (e.g. education) benefits. The combination of these different demands has favoured a greater decentralisation of EI-related revenues in recent years, but the modalities and mechanisms adopted to facilitate fiscal decentralisation varied widely across cases. In this paper we contend that variation does not only depend on country specific characteristics of the extractive industry or on technical considerations for optimal distribution but also on the absolute and relative bargaining strength of local governments and stakeholders. Specifically, we argue that the different distribution modalities of natural resource revenues depend on two political dimensions: the degree of bargaining power of subnational actors and the linkage between national and subnational political actors.

In establishing the linkages between distributive regimes and political processes at different jurisdiction levels, this paper explores four questions in greater detail:

- How do central governments share (or distribute) the revenues from extractive industries with different levels of subnational governments (vertical distribution)?
- How do governments distribute EI revenues across similar jurisdictions, some of which are extractive but others not (horizontal distribution)?
- Which are the mechanisms and rules adopted by governments to allocate these resources?
- What are the policy responses, political strategies and bargaining potential of subnational territories to engage with central government authorities and demand a more proportionate share of revenues?

This paper offers a political economy approach to understanding reform processes around the distribution of EI revenues. As such, it brings a comparative perspective to balance ethnographic case based accounts of reform, but also explores some causal mechanisms absent in existing cross-country statistical analyses. The paper proceeds as follows: Section 2 reviews the existing modalities, rules and practices with their pros and cons for allocating and utilising resource revenues at a subnational level in ten

¹ Depending on the property rights regime established in each country, this may be a debatable point as in some cases it is the central state that has a say in the way natural resources are extracted and invested, whereas in others the decision making ability is in the hands of the communities living in the area.

countries worldwide for which we have identified reliable and comparable data on the distribution of revenues. Sections 3 and 4 further explore the political factors influencing the adoption of different revenue allocation formulas by looking at four countries in the Andean region. The purpose of these sections is to offer a more nuanced understanding of the *political process* through which key stakeholders in selected countries bargain the allocation and distribution of EI revenues. Section 3 focuses on the outcome of the reforms (dependent variable) adopted in Bolivia, Colombia, Ecuador and Peru. Section 4 compares the different political factors leading to the adoption of different distribution modalities (independent variables). These two sections build on original field research undertaken from 2010-2013 in the four Latin American countries.² Finally, Section 5 summarises the key arguments and identifies some knowledge gaps regarding the effectiveness of different decentralisation modalities to improve development outcomes at the local level.

Modalities for the allocation and the use of resource revenues

This section offers an overview of the main allocation modalities used to redistribute EI-related revenues from central to subnational governments (vertical distribution) and across subnational governments (horizontal distribution). A brief review of comparative evidence available suggests that modalities vary widely and are displayed in complex forms rather than pure types. These modalities tend to reflect pre-existing political cleavages and power asymmetries between central and subnational actors. In general terms, the comparative evidence suggests that: a) there is no relationship between the unitary or federal nature of the country and the share of transfers to subnational governments, b) unitary governments prefer to devolve to municipal rather than regional governments, and c) the devolution mechanisms often feature a mix of discretionary devolution and redistribution formulas across producing and non-producing territories.

Vertical distribution of revenues from the EI

Regarding vertical distribution of EI revenues, the key issue in order to get an effective use of resources is to strike the appropriate balance between a centralisation of revenues that would help finance national policies and reduce fiscal volatility or financial liabilities, and a sufficient level of devolution that would appease social demands in producing regions. There are three criteria commonly taken into consideration when deciding the share of EI revenues that corresponds to subnational governments (Ahmad and Singh 2003): a) matching (administrative) responsibilities to the level of fiscal transfers, b) ensuring a political equilibrium between the centre and the periphery, and c) managing volatile revenues.

a) Matching responsibilities. According to this criterion, the volume of EI related transfers should add to all other fiscal transfers plus the revenues raised at the local level, and be compared with the revenue that subnational governments need to fund the public services they are responsible for (Schoeder and Smoke 2002). In practice, the

² The authors conducted 130 semi-structured interviews (46 in Bolivia, 29 in Colombia, and 65 in Peru) with current and former parliamentarians, ministers of the government, senior managers of mining and oil companies, representatives of business associations, business consultants, NGOs, local and regional authorities in mineral-producing regions and civil society leaders. The processes of reform of tax and redistribution policies in the extractive sector were the main focuses of those interviews. In this paper, the codes of the interviews have three parts. The first three letters identify the country, the following figures refer to the sequence of interviews within each country, the third part is the date in which the interview was conducted.

evaluation of the "appropriate" level of public services as well as the "matching revenues" needed to fund them are difficult to assess and therefore subject to political interpretations and intense bargaining. The level of demands is particularly intense for extractive territories that claim greater entitlements to benefit from EI related revenues.

b) Political equilibrium between centre and periphery. In recent decades, the agenda of good governance has privileged political decentralisation (Houtzager 2003). In countries where the extractive sector plays an important role, decentralisation has encouraged demands from subnational governments for managing part of the proceeds from EI. Frequently this has been formulated as a "right" that has been enshrined in the constitutions of the countries (Ahmad and Mottu 2003; Ross 2007). Despite this general tendency, policies in each country depend finally on the relative power of regional and national political groups. The specialised literature has suggested that pre-existing levels of fiscal and political decentralisation have reinforced the strength of opposition parties/actors at the subnational level and increased the pressure for greater decentralisation (Falleti 2010).

c) Managing volatile revenues. Revenues from extractive industries have the potential for inducing fiscal volatility in national and subnational public finances given the unpredictable nature of commodity prices (Ahmad and Singh 2003). To minimise the impact of revenue volatility, some have advocated a centralised management of EI revenues through a savings or a stabilisation fund (Ahmad and Mottu 2003). This is done partly to accumulate savings at the central level, but also to protect subnational entities from the liabilities of handling revenue windfalls. If fiscal centralisation is not technically feasible or politically undesirable, it is recommended to devolve more "stable" revenues that are independent from international prices in the form of royalties (when these are calculated based on gross production), payment of licenses and other fees. Finally, if the option is for the decentralisation of volatile tax revenue, it is convenient to introduce mechanisms to stabilise the flow of resources (Davis et al. 2003).

A brief comparison of ten resource rich countries (oil and mining) for which reliable and comparable data was collected, shows significant variations in the degree of decentralisation of natural resource revenues. Table 1 summarises the distribution of EI-revenues, the type of revenues distributed to regional, state and local government levels, and the date of the last reform for Bolivia, Brazil, Colombia, Ecuador, Ghana, , Indonesia, Mexico, Nigeria, Papua New Guinea and Peru. We have grouped countries according to their degree of decentralisation of EI revenues: a) *low* if subnational governments receive less than 10 per cent of state revenues (Ecuador, Ghana and Papua New Guinea); b) *medium* if subnational governments receive between 10 per cent and 50 per cent of the EI-revenues (Colombia, Indonesia and Mexico); and c) *high* if subnational governments receive more than 50 per cent of the EI-revenues accrued to the central government (Bolivia, Brazil, Peru and Nigeria).³

³ These data tend to underestimate the participation of the central government because generally they do not incorporate all the types of EI-revenues. Profits of state-owned oil and mining companies are the most salient examples of non-included revenues that are generally managed by the national government.

Table 1: Models of decentralisation of EI revenues in selected countries*

	Bolivia (oil and gas)	Brazil** (oil and gas)	Peru (mining and gas)	Nigeria (oil)	Colombia (oil since 2011)	Mexico (oil)	Indonesia (oil)	Ecuador (oil)	Ghana (mining)	Papua New Guinea (oil and gas)		
Type of revenue transferred	Royalties and IDH	Royalties and participation	Royalties and income taxes	Total oil revenue	Royalties	Total oil revenue	Total oil revenue	Total oil revenues	Royalties	Royalties		
Date of the last reform	2007	1989	2004	1999	2011	1978	2004	2010	1992-1999	1998		
Degree of decentralisation	High	High	High	High	Medium	Medium	Medium	Low	Low	Low		
Vertical Distribution	National government and centralised funds	37%	31%	45%	46%	52%	83%	85%	98%	91%	93%	
	Regional/state governments	37%	45%	12%	36%	48%	17%	3%	1%	5%	3%	
	Local governments	26%	21%	43%	18%		—	12%	1%	2%	2%	
	Private landlords	—	3%	—	—	—	—	—	—	2%	2%	
Horizontal distribution	Devolution	Producing region/state	28%	45%	12%	13%	10%	—	3%	1%	5%	3%
		Producing localities	13%	17%	5%	—		—	6%	1%	2%	2%
		Localities in producing regions	—	4%	38%	—	—	—	6%	—	—	—
		Total devolution	41%	66%	55%	13%	10%	—	15%	2%	7%	5%
	Formula based	Region/state	9%	—	—	23%	38%	17%	—	—	—	—
		Localities	13%	—	—	18%		—	—	—	—	—
		Total formula-based	22%	—	—	41%	38%	17%	—	—	—	—

- Some data on percentages reflect quantities for some specific years.

** In March 2013 the Brazilian parliament approved a reform to distribute oil royalties more evenly across the country; however, the law is currently under revision by the Constitutional Court.

Sources: Agustina et al (2012); Banful (2011); Departamento Nacional de Planeación-Colombia (2012); Energy Sector Management Assistance Programme (2005); Illedare & Suberu (2012); Morgandi (2008)

The first striking feature is that decentralisation of EI revenues is not directly related to whether the country has a unitary or federal administration. While some federal countries like Brazil or Nigeria effectively allocate more EI wealth to their regions, the federal country of Mexico transfers less than 20 per cent of revenues. Conversely, the formally unitary countries of Bolivia or Peru redistribute up to 55 per cent of their revenues to subnational units. While the formal territorial organisation may not be a decisive factor in the allocation, we would argue that federal states would be better equipped to effectively process the administrative and fiscal demands of managing natural resource revenues at a local level.

The second feature is that there is further variation as to which of the subnational governments (regional, state or local level) actually benefit from the revenues. In federal states like Brazil, Nigeria and even Mexico, the bulk of the transfers go to the state level government, probably because the central government has to respond to the existing fiscal decentralisation structure of these countries. When revenues are also transferred to the local level as seen in two of the three cases, regional or state level governments receive more than twice the share of revenues that local or municipal governments receive (45 per cent to 21 per cent in Brazil and 36 per cent per cent to 18 per cent in Nigeria). In the unitary systems of Peru and Indonesia, in which decentralization is a relatively new policy, the distribution tends to favour local level governments at the expense of state level units (43 per cent for municipalities compared to 12 per cent for regions in Peru and 12 per cent compared to 3 per cent in Indonesia). In Bolivia where there was a more equitable distribution across the three tiers of government (37 per cent to the national government, 37 per cent to the regional government and 26 per cent to municipalities), the government introduced changes aimed at gradually shifting revenue transfers *away* from regional level governments (*prefecturas*). Rather, the president has focused on financing cash transfer schemes formally administered by municipal governments but managed by the central government. These changes in allocations confirm the preference of national executives in unitary countries to favour local governments: “if confronted with the opportunity of need to decentralize, the national executive prefers to do it toward the local level, since mayors pose less of an electoral and financial threat than governors” (Falleti 2010, 47). We will explore the political dynamics and bargaining processes in Section 4 of this paper.

The next criterion for distribution focuses on the distribution of revenues among the different territories, especially between the ones that host extractive activity and the ones that do not.

Horizontal distribution of revenues from the EI

A key discussion around the allocation of EI revenues across different subnational jurisdictions focuses on whether to redistribute revenues solely to territories that host extractive activities or not, and whether the central government should reallocate revenues through discretionary or institutionalised rules, such as the adoption of a proportionality formula. The existing literature has identified three types of mechanisms: a) direct allocation from the central government; b) formula-based participation, and c) devolution. In practice, countries combine two or more criteria when adopting reallocation formulas.

a) Allocation from the central government

In this scenario, central governments will seek to centralise the macroeconomic management of revenues to reduce the liabilities of uncontrolled subnational

expenditure. Government expenditures are usually transferred on an annual basis in the form of research and development or regional investment funds. Governments could also distribute available revenues through competitive investment grants aimed at supporting specific types of projects.

In principle, the adoption of competitive grant mechanisms by the central government has the potential to reinforce pre-existing economic inequalities and power asymmetries between subnational governments if some territories with solid public finances have greater expenditure capabilities or possess the technical ability to apply and win competitive grants. On the other hand, when executives adopt equalising mechanisms to compensate for regional disparities they may open the door to protracted negotiations and further political divides.

b) Formula-based participation

Through this mechanism subnational governments receive a pre-determined share of the revenue raised nationally. A formula set by law determines both the amount to be allocated and the obligation of the central government to transfer those resources to both producing and non-producing territories. The different needs and characteristics of each jurisdiction can be factored into the formula to compensate for pre-existing inequities, the size of the population and, in some cases, the tax gap. The allocation formula can also reflect different variables on government performance, such as the fiscal effort of each territorial unit.

While formulas can become more complex to reflect different dynamics, the ultimate challenge for policy makers is to ensure fairness and efficiency. Excessive complexity can trigger conflicts regarding the interpretation of the formula, counteracting any marginal gain in terms of equity and efficiency. However, formula-based participation, even if well designed, can also have some drawbacks. It reduces the flexibility of the central government to manage the macroeconomic challenges associated with EIs and does not take into consideration the geographical source of tax revenue.

c) Devolution

Devolution involves the transfer of revenue, or a proportion of it, to the jurisdiction where the income has been generated.⁴ In the case of revenues from EI, devolution makes the producing regions, and sometimes those that host some infrastructure for exploitation (mainly ports), the only recipients of transfers. This mechanism aims to compensate the producing regions for negative externalities linked to extraction and the need to adjust infrastructure and public services to the presence of mining and oil operations (Brosio 2003). However, the concentration of transfers to producing regions might generate three types of problems: a) inequality between producing and non-producing regions, b) problems of revenue volatility in producing regions, c) discouragement of collection of local taxes and distortion in the allocation of resources at the local level because of the abundance of transfers.

The implementation of devolution mechanisms requires identification of the jurisdictions that should be prioritised. The following two criteria are the most frequently used: a) the geographical origin of the revenue, and b) territories affected by

⁴ According to Ahmad and Mottu (2003, 228), this mechanism is known as “derivation” but we prefer to use the term “devolution”.

negative externalities linked to extraction.⁵ The criterion of origin tries to compensate the loss of natural capital (the mineral) with financial transfers to the governments of the territories where the extraction takes place. Such transfers should in principle help to develop other types of capital (human, physical, etc.) to enhance the developmental potential of those territories. Frequently, the strict application of this criterion leaves out neighbouring jurisdictions that are also affected by extraction. The criterion of negative externalities tries to solve this limitation. It takes into account environmental damage, but also the need to improve physical infrastructures (roads, the electrical grid, etc.) and to scale up public services in order to respond to the likely increase in population due to immigration from other regions of the country.

Table 1 shows significant variation in the existing modalities for distributing EI revenues across similar territorial units (horizontal distribution). First, there are different models of horizontal redistribution within similar levels of decentralisation. At high levels of decentralisation, countries like Bolivia and Nigeria use devolution mechanisms for producing districts and formula based mechanisms. Nigeria prioritises the principle of formula-based participation of all the subnational governments and restricts the funds going to the producing states (Kâ Diongue, Giraud, and Renouard 2011), whereas Bolivia has adopted a formula based mechanism to allow redistribution to non-producing states, but prioritises devolution.

In contrast, Brazil and Peru prefer formulas that devolve revenues back to the producing region or state and localities in producing regions. While Peru has maintained the priority of transferring EI-related fiscal revenues towards the producing regions only, Brazil has moved in the opposite direction to also include jurisdictions providing infrastructures that are essential to the extractive activities: the ports from which oil, gas and minerals are exported, and territories crossed by roads, pipelines, and railways. Furthermore in Brazil, congress has adopted new legislation in 2013 to redistribute oil revenues among all federal states and is currently in the process of approving a law that allows the use of oil related revenues in education sector expenditure. However, the three producing states (and original beneficiaries of devolution) have stopped the law's implementation through an appeal to the constitutional court (Reuters 2013; Fick 2013).

In countries with a medium level of decentralisation of EI-revenues, revenues tend to be distributed through a combination of devolution and formula based mechanisms. While the identification and selection of the affected areas in all cases is challenging, Colombia has moved in the direction of Brazil from a system that concentrated the transfers of royalties on the producing regions to a mixed system in which most of the royalties are distributed among all the subnational jurisdictions. In Indonesia, oil-related transfers go exclusively to the producing areas (provinces and districts), but 50 per cent of the value of these transfers is discounted from the ordinary transfers that these provinces and districts should receive from the national government (Morgandi 2008, 23-24). More recently, a percentage of the EI-revenue is given to the jurisdictions adjacent to the producing ones. However, these criteria frequently generate grievances because negative externalities do not coincide with the boundaries of official jurisdictions. This fact opens the way for continuous claims making from those populations that perceive themselves to be excluded from fiscal distribution. Only in Mexico, EI-revenues are proportionally distributed across the entire country through an allocation formula.

⁵ Those territories are usually identified with those hosting infrastructures needed for the exploitation or transportation of minerals.

In countries with low levels of EI transfers (Ecuador, Ghana and Papua New Guinea), only a small part of revenues is devolved to producing regions. In Ecuador, subnational governments (provinces and municipalities) benefited from fiscal decentralization since the mid-nineties, but this devolution did not include the specific transfer of EI revenues. With the advent of the commodities boom after 2004, the government further centralised the distribution of revenues, and indirectly diminished the political importance and fiscal relevance of the producing regions.

In the next section we will further explore how the different political strength and party alignment of subnational political actors helped to reinforce or revert the centralising tendencies of the government.

Rules for the use of EI-transfers at subnational level

In most of the countries, EI-related transfers to subnational jurisdictions come along with rules for their use. In some cases the subnational governments are mandated to spend a percentage of the amount transferred in specific sectors such as education or health (for example in Bolivia). However, the most common rule is to spend a high proportion of EI-transfers in capital investment (Bolivia, Brazil, Ecuador, Ghana, Mexico and Peru). Two reasons are behind these restrictions. First, it is deemed necessary to replace the natural capital that is extracted by other types of capital in order to avoid the loss of productivity after the exhaustion of the mineral resource (Auty 2004). The second reason relates to the volatility of income (Ahmad and Singh 2003). It is risky to use EI-transfers to pay recurrent costs because the amount of funding varies according to the price of minerals in international markets.

These two reasons support decisions to prioritise investment in physical infrastructure provided that it demands diminishing recurring costs. If the opposite is true, and there are high maintenance costs associated to new infrastructure, it is likely that this type of investment may not be sustainable in the long run. The tendency to invest in physical infrastructure may also undermine public investment in human capital (education and health) and in the strengthening of institutions. Although both types of investments have the potential to improve long-term productivity, they generate recurring costs because they are intensive in terms of human resources and staff costs. This bias against investment in human and institutional capital could be solved, at least partially, with the introduction of stabilisation mechanisms that allow having a relatively constant flow of resources over a longer time.

Some countries (for example Colombia) have tried to simultaneously advance flexibility and efficiency in public spending by formulating a set of goals for the improvement of social indicators and by mandating subnational governments to invest in those sectors until they reach these goals. The idea of linking fiscal transfers to the achievements of results seems appropriate. However, the implementation of these ideas has at least two problems: a) when the goals and the strategies to achieve them are set from the central government it generates a *de facto* recentralisation; and b) usually there is insufficient data and mechanisms to monitor the evolution of social indicators at the local level.

The next two sections explore in greater detail the *political process* through which key stakeholders in four different countries made specific bargains to define the allocation and distribution of EI revenues. Section 3 focuses on the outcome of the reforms (dependent variable) adopted in Bolivia, Colombia, Ecuador and Peru. Section 4 compares the different political factors leading to the adoption of different distribution

modalities (independent variables). This section builds on original field research undertaken during the last three years in the four Latin American countries.

Distributing EI revenues in the Andes

The Andean region offers a unique “natural experiment” setting to analyse in a comparative perspective, how political actors in different institutional settings sought to redistribute EI revenues accrued from the commodities boom in the past decade. Much of the existing literature exploring the political management of natural resource revenues has focused on detailed case study analysis or comparative studies based on a large number of cases to understand the fiscal impact of the commodities boom. Yet, case studies tend to over-emphasise country specific characteristics while large analyses tend to oversee the causal impact of political dynamics on reform processes. The comparison between the Andean cases of Bolivia, Colombia, Ecuador and Peru offers an alternative research strategy to understand in greater detail the impact of political incentives and institutional constraints on different fiscal arrangements. Previous to the commodities boom, these countries shared some broad institutional and political features that had influenced the redistribution of natural resource revenues across different levels of government. However, the reform processes to manage and distribute EI revenues evolved in unique ways. The next two subsections present the similarities and analyse briefly the different policy outcomes.

Similar starting points

Bolivia, Colombia, Ecuador and Peru shared at least three important features with a potential to affect the redistribution of EI-revenues. Firstly, these countries embraced ambitious decentralisation reforms along political, fiscal and administrative lines since at least two decades earlier (O'Neill 2005; Fallei 2010). This move was prompted by re-democratisation and decentralisation tendencies worldwide, which mobilized constituencies at the local level demanding for greater government responsiveness and accountability. While all Andean countries adopted diverse fiscal and political decentralisation formulas in the 1990s, not all of them decided to decentralise EI-related fiscal revenues. Governments in Bolivia, Colombia and Peru transferred a substantial share of EI revenues to subnational units, whereas in Ecuador, only a negligible share of EI revenues was devolved to producing provinces. In no cases were there provisions to benefit other areas outside the producing districts.

The second commonality is that all countries benefited from a dramatic increase of mineral and oil prices that started in 2004 and lasted until 2012, which produced a dramatic and unexpected surge in fiscal revenues. In all cases, the fiscal boom prompted central governments to extract more wealth from the EI sector through stricter taxation regimes and/or through the adoption of changes in the contracts between the companies and the state (Vivoda 2009). Countries like Bolivia and Ecuador undertook important legal reforms to quasi nationalise the sector (in 2006 and 2010 respectively) and to increase the share of hydrocarbon revenues that private firms should pay to the national treasury (Grupo Faro 2012; Velasquez 2011). The governments of Colombia and Peru were also under popular pressure to increase the tax burden on mining companies, however they opted for attracting new investment in the extractive sector over the long run (Arellano-Yanguas 2012; Rudas Lleras and Espitia Zamora 2013).⁶

⁶ Only in 2011, the government of Ollanta Humala introduced some new taxes on mining companies' profits. However, their actual impact was very moderate. The Colombian parliament passed in December 2012 a reform of the law regulating the corporate taxes aimed at reinforcing the fiscal contribution of

The third similarity resulting from the commodities boom was the attempt of the national government to strengthen its control over the allocation and use of EI-revenues (Dickovick and Eaton 2013, 3). In Colombia and Peru, presidents and important sectors of the public openly questioned the wisdom of devolving fiscal transfers to producing regions, partly because windfall revenues revealed the weaknesses of some recipient governments to make efficient use of new resources (Perry, Olivera, and Restrepo 2012; Arellano-Yanguas 2011b). The public in Ecuador and Bolivia called for a better distribution of revenues across subnational jurisdictions to redress existing economic and social inequalities. In the context of growing demands for reforming the distribution of EI-revenues presidents perceived the bonanza as an opportunity to expand or regain political capital and use some of these revenues to equalise wealth through the adoption of formula-based transfers or through the implementation of social policies like conditional cash transfers.

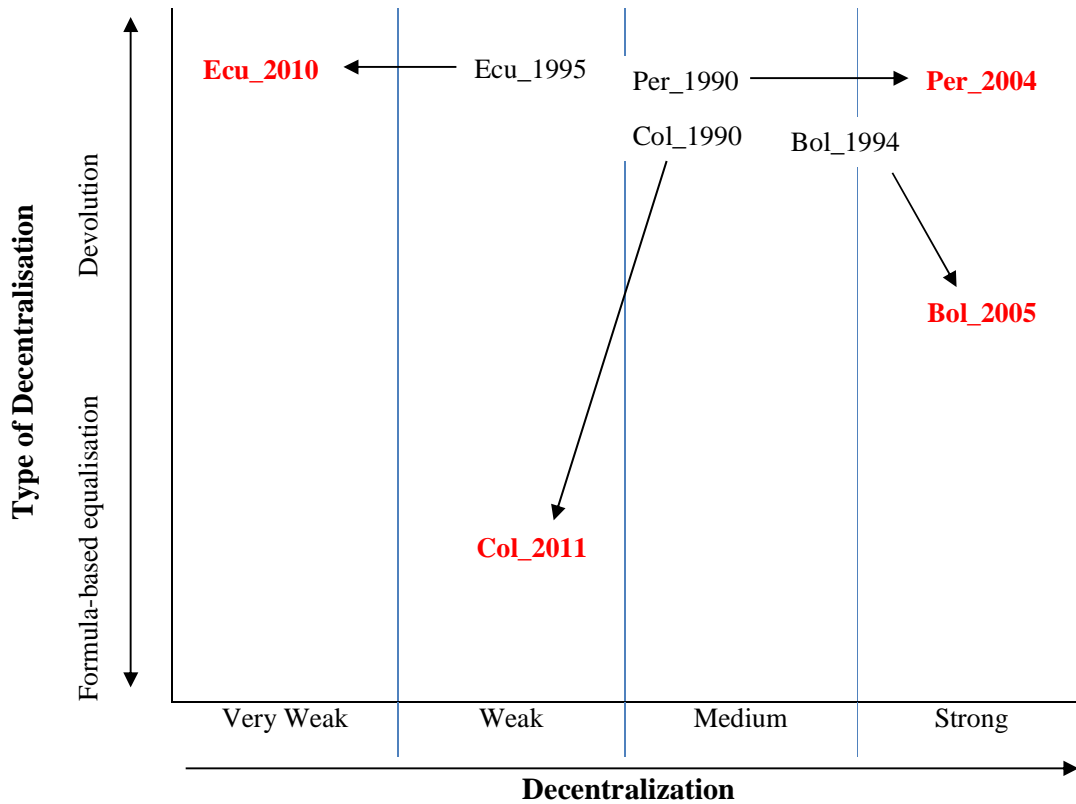
Different policy outcomes

Despite similar starting points, reform processes in each country led to diverse policy outcomes. Figure 1 illustrates different reform paths in the four Andean countries depending on the degree of decentralisation (along the X axis) and whether the distribution mechanism tends to favour producing regions through devolution or redistributes more widely through formula-based participation (along the Y axis). The graph illustrates that the countries started from a similar “cluster” of weak to medium levels of fiscal decentralisation and a shared preference for devolution formulas, privileging extractive regions only. After reforms, all countries have moved in centrifugal directions, with Peru and Bolivia deepening the devolution of revenues to the regions whilst Ecuador and Colombia recentralised the management of revenues in the hands of the executive and at the expense of subnational governments. The reform trajectories also produced different policies according to their redistributive effects. Judging by the distribution formula adopted, we argue that Peru and Ecuador maintained devolution formulas to benefit extractive territories only, whereas Bolivia and Colombia have adopted more redistributive formulas to share the EI wealth with non-producing territories as well.⁷ The following pages explain the nature of reform outcomes in greater detail.

mining and oil companies. However, fiscal experts report that the reform has not achieved its objectives due to the existence of design flaws (Rudas Lleras and Espitia Zamora 2013).

⁷ This may appear a harsh statement to evaluate the use of EI revenues in Peru and Ecuador, since the central governments may use some of the EI wealth to fund items of a redistributive nature such as conditional cash transfers (Juntos and Bono Solidario respectively) or regional investment funds (Foniprel in Peru). However, we do not reflect these expenditures in Figure 1, partly because cash transfers do not redistribute across regions and Foniprel is designed for rewarding efficiency instead of redistribution, but also because these funds are not only funded by EI revenues but also non-extractive fiscal sources.

Figure 1: Patterns of reform in redistributive policies in Bolivia, Colombia, Ecuador and Peru



Source: Authors

Bolivia

In Bolivia, the introduction in 2005 of the Direct Tax to Hydrocarbons (IDH)⁸, an extra source of state revenue from the oil and gas sector, facilitated changes in the distribution of those revenues. Initially, the government and the Movement for Socialism (MAS) - still in the opposition - supported a further decentralisation of this extra income to municipalities and prefectures. However, given its strong presence across the country, the MAS argued that a substantial part of the new IDH tax should also go to non-producing regions in order to equalise the transfers of royalties. When the MAS government came into power, it realised that its main political opponents were concentrated in the rich areas of the Eastern regions that used the royalties and the IDH to build their own political base to stand up to the MAS (Eaton 2011). Thus, the government put forth a revision of IDH distribution criteria that recentralised a part of resource management to finance centrally sponsored social schemes.⁹ The government needed to overcome resistance from subnational actors, including the MAS regional bases that had gained power in many municipalities across the country and needed to respond to local demands for defending the transfers (Barja Daza, Villaroel Böhr, and Zavaleta Castellón 2012). The MAS and the Federation of Municipal Associations (FAM) negotiated the new criteria for distributing the revenues. They agreed on

⁸ *Impuesto Directo a los Hidrocarburos* in the Spanish original version.

⁹ Especially cash transfers for children and old people.

maintaining the percentage of IDH revenue going to municipalities and reducing the transfers to prefectures. This political move managed to neutralise a potential united front made up of municipalities and prefectures.¹⁰ Finally, although the central government directly manages part of the IDH, there was a moderate equalisation, as the total amount of transfers to the subnational governments increased, both for producing and non-producing regions.

The results of the reform are difficult to assess. In terms of the actual use of the transfers and its impacts, as is the case in Ecuador, the lack of data at subnational level does not allow for a rigorous evaluation. At the moment, there are some partial attempts that reach quite different conclusions. Some authors highlight that the allocation of these resources does not contribute to the development of alternative economic activities and tends to lead to fragmentation of public investment (CEDLA 2011). Wanderley and Mokrani (2011) show that both municipalities and prefectures tend to support small projects with relatively little impact. However, Hinojosa (2012) analyses the case of Tarija and concludes that the hydrocarbon rent has fostered investment in social services that have been instrumental in the reduction of poverty. In all the cases, the authors show concern about the sustainability of the fiscal effort due to the volatility of these revenues.

Colombia

In 2011, Colombia implemented the most radical reform of revenue distribution among the four cases. It involved a substantial equalisation across the different regions and municipalities of the country, and also an important degree of recentralisation in the management of the revenues. Three reasons explain the lack of power of oil and carbon producing regions to seriously oppose the government's move. First, for years the government and some think tanks had been reporting the misuse of the royalties transferred to the producing regions (Perry, Olivera, and Restrepo 2012). In some cases, this misuse included the capture of the transfers by illegal groups such as drug cartels, and paramilitary and guerrilla groups (Massé and Camargo 2013). Second, these regions were not densely populated and due to the strong militarisation of the country mobilisations were not very likely to be sustained. Moreover, there had been important immigration flows into the oil and mining regions that were said to undermine the construction of a regional identity and the development of collective action for the defence of royalty transfers.¹¹ In this context, the government sought to approve reforms with the support of legislative representatives from non-producing regions. Conversely, legislators from producing regions were not able to convincingly sway public opinion against recentralisation. Rather, they preferred to maintain a low profile to avoid antagonising the central government and sought to cultivate the support of the latter's discretionary power to finance constituency development projects. Given that parliamentarians' re-election prospects in Colombia depended on demonstrating their

¹⁰ Interview with former official of the FAM (BOL-002, 02-11-2011).

¹¹ Rausch (2009) document the inflow of population into the Colombian oil territories and the subsequent social and political transformations. Our field research in the Meta region confirms these processes. The population of Puerto Gaitan, one of the municipalities with oil fields, has increased from 17,000 in 2007 to more than 45,000 in 2013. These accelerated changes have diminished the local capacity to build an agenda for mobilization going beyond the demand of more jobs in the oil industry for the "new locals" Interviews with the president of the Civic Committee of Villavicencio (COL-27, 02-07-2013) and the general manager of Puerto Gaitan (COL 17, 24-06-2013)

capacity to serve their constituencies by extracting resources and favours from the central government, they preferred not to block the proposed reforms.¹²

It is still too early to evaluate the impact of the new National Royalty System (NRS). However, regional participants in the Inter-institutional Bodies for Management and Decision (OCADs)¹³ and different experts are sceptical about the efficiency of the system. In fact, they pointed out that the new mechanism has not addressed some of the main problems of the old system: excessive fragmentation of public investment in small-scale local projects that do not address the main deficits in public infrastructure - for example the improvement of the national road network - and lack of coordination among different levels of government.¹⁴

Ecuador

Traditionally, Ecuador has maintained a formal unitary structure of government despite historical regional differences. For most of its republican history since independence, the country elites from the main two (Coastal and Andean) regions alternated terms in office while preventing other territories from seeking greater access to central government (Hurtado 1990). When municipal and regional governments pushed for greater decentralization in the late nineties, the new legislation (requiring the central government to transfer up to 15 per cent of central government revenue did not include oil revenues.

With the advent of the boom in oil prices after 2003, the central government was in a solid position to centralise the management of EI-revenues. This is partly because there was no binding legislation requiring revenue sharing with subnational governments, but also because, in 2005, congress eliminated many of the spending and earmarking constraints set by the 2001 Fiscal Responsibility Law (Mejía-Acosta, Albornoz, and Araujo 2009). The formal recentralization in the allocation and management of oil revenues was furthered by another legislative reform, which reallocated oil-revenues to a Single Treasury Account (Cuenta Única del Tesoro) that was part of the national budget (Mejía-Acosta and Albornoz 2010).

The set of reforms were adopted in the context of growing citizen disaffection with party politics at the national level and widespread support for the proposed reforms of President Rafael Correa, especially after 2006. The political opposition was too weak to articulate an alternative revenue sharing proposal and the oil producing districts lacked the strong partisan representation or elite connections to bargain a more proportional distribution of revenues. Instead, local and municipal elites joined the central government to access some resources and advance their own political careers.

In developmental terms, the outcomes of the recentralization strategy are uncertain in the medium-term. Regarding the impact at the local level, there is no disaggregate data to analyse the variation of social indicators in oil producing regions. At the national level, Ecuador has reduced its poverty levels significantly over the last years, in line with the other three countries studied. However, in contrast to Peru and Colombia,

¹² The central government played with this in the negotiation of the reform. Interviews COL-02, 09-05-2013; and COL-06, 14-05-2013.

¹³ “*Organos Colegiados de Administración y Decisión*” in the original Spanish version.

¹⁴ Interviews COL-12, 19-05-2013; COL-28, 02-07-2013.

redistribution of income through social policies is responsible for almost two thirds of this reduction (ECLAC 2013, 56-58).

Peru

The Peruvian reform over the period 2001-2003 was different from the other three countries. The combined pressure from actors in producing regions and mining companies fostered greater decentralisation and concentration of the EI-related transfers in the producing regions. Most recently, the government tried to equalise the transfer system, but it failed to build a coalition able to make the reform viable. The government judged the regional resistance to be too strong. Three reasons lie behind the political strength of local and regional movements. First, the transfers received by municipalities and regional governments in mining regions have helped to construct the regional identity around the defence of the local interests, among which, mining-related transfers stand out as the most important (Arellano-Yanguas 2011b). Second, with increasing mobilisations and conflicts looming on the horizon, the need of mining companies to gain local consent to their operations granted the regional and local authorities an extra leverage in the negotiations around the transfers (Arellano-Yanguas 2012). Third, authorities in mining regions are only accountable to the local population. The current electoral system, with regional electoral jurisdictions, weakened the influence of national parties. Local political leaders frequently gain popular support confronting the policies of the central government. This situation promotes centrifugal tendencies in which each region and municipality concentrates on its own interest (Tanaka 2005). This disconnection between local and national politics hinders any attempts to equalise distribution.

EI-related transfers have created important inequalities because during recent years, the amount of transfers has been so substantial that the government cannot compensate the differences through its ordinary transfers. Moreover, different studies have shown that those transfers have failed to improve the situation of the population living in the mining regions.¹⁵ Moreover, as it happens in other countries, the mechanism for the allocation of resources incentivised fragmentation of public investment and lack of coordination among subnational governments (Arellano-Yanguas 2008).

Why do these four countries present so different or unexpected policy outcomes? Which actors or political institutions were key to trigger different policy responses? At which point in the reform process have these changes taken place? The next section offers a political economy framework to understand different policy outcomes and presents a systematic review of the country specific political processes to reform the distribution of EI revenues at the local level.

Reform coalitions and redistribution of EI revenues in the Andes

We argue in this paper that the connecting link that explains different reform trajectories can be found in the configuration of distinct reform coalitions in all four countries. This section proposes a framework for analysing these and tests the framework using the four Andean cases.

¹⁵ (Arellano-Yanguas 2011b; Loayza, Mier y Teran, and Rigolini 2013; Ticci 2011)

Bargaining reforms: A proposed framework

We argue that the different modalities for the distribution of natural resource revenues result from different political coalitions or alignments of actors between national and subnational actors. While we acknowledge the roles played by organised social groups and extractive companies in defining the territorial distribution of EI-revenues, the paper focuses on the interaction of two political variables: the degree of bargaining power of subnational actors and the linkage between national and subnational political actors.¹⁶

a. The degree of local bargaining power

We define “local bargaining power” as the capacity of the relevant subnational actors (local mayors, provincial or state governors) to gain sufficient leverage (influence, blackmailing power) in their negotiations with the national government. The cases show that subnational governments have greater leverage vis-à-vis the centre if they have previously benefited from EI-related transfers, they have the capacity to mobilise the population, and they have the capacity for disrupting services or obstructing the development of strategic projects.

First, following Falleti’s “sequential theory of decentralisation” (2010, 15-20), the amount of EI-related transfers previously received by the subnational governments affect the bargaining power of local actors and also their political incentives to take radical stances. Simply put, the more money they receive the harder it is to take money away from them. There are two types of reasons for this. The first relates to the construction of a local perception around extraction as dispossession that needs to be compensated. The estimation of the “adequate” compensation is difficult, but what is clear is that hardly anyone would accept less than the amount received previously. As a result, equalisation among territories is easier if there are additional resources to distribute and reduction of the amount of resources received previously can be avoided. The second reason relates to the policies that subnational governments develop with the resources that they receive. In the best case, they build public infrastructure and improve social services that benefit the local population. However, even if services do not improve significantly, the increase in public spending and local employment generates incentives for different sectors of the population to come together in the defence of the transfers. Not surprisingly, in Bolivia, Colombia and Peru, the political life of localities and regions that receive high amounts of EI-related transfers revolves around the use and control of these resources (Arellano-Yanguas 2011b; Laserna 2009).

Second, the local bargaining power also depends on the capacity to mobilise the population, whether through electoral means or through social protest. Given that the population in affected regions is not large enough to affect electoral outcomes, social protest becomes the most powerful instrument to gain bargaining power (Fundación UNIR 2013; Defensoría del Pueblo 2013). In that context, the defence of the transfers that have been previously conquered and the perception of any attempt to reduce the transfers as an unacceptable grievance are important reasons to mobilise, but they are not enough. People’s rooting in the territory and popular identification with the local political institutions is conducive to popular mobilisation. This regional identification is

¹⁶ The decision is made with the analytical purpose of providing a more streamlined explanation of political coalitions although indirectly, we acknowledge the influence of organized social groups as part of the broader group of subnational political actors, whereas extractive companies are likely to affect the bargaining power of national and subnational actors alike.

common in Peru and Bolivia, frequently linked to the existence of a particular regional culture. However, the extraction of minerals and oil attract economic migrants from other regions in search of employment. When there are a significant percentage of immigrants, as is the case in oil-producing regions of Colombia, it often reduces the capacity for collective action on issues not directly related to job opportunities.

Third, local actors' capacity for disrupting services or obstructing the development of strategic projects also increases their bargaining power. The capacity to disrupt some key public services often depends on circumstantial coincidences such as the proximity to highways or oil pipelines that could be blocked. Blocking the development of strategic projects is mostly relevant with regard to regions with rich mineral resources. In many countries, companies and governments need to have the social license to explore and to exploit the deposits. The existence of mineral reserves that could be exploited in the future provides the local populations with an important leverage in the negotiation with the central government. Companies frequently team up with the local population to defend local interests in order to gain the social license and minimise disruptions to their operations. The importance of this bargaining instrument also depends on the political culture of each country. In Bolivia and Ecuador the use of severe repression against popular protestors entailed political costs that the government tends to avoid. On the contrary, in Colombia, the strong militarisation of most of the country makes the utilisation of social protest more difficult.

b. The linkage between local and national political actors

The second variable that determines the reform outcomes is the connection between local and national political actors. The degree of interconnection influences the local political actors' access to resources and power. The stronger the connection the easier it is for them to get projects, discretionary transfers, influence and space in the electoral lists to jump to the national political arena. However, stronger connection also means more dependency from the centre and less autonomy to pursue political strategies aimed purely to benefit their local constituency. The greater or lower degree of connection between local and national political actors is a feature of the polity and depends on long-term historical process.

In order to make the analysis clearer, this study considers that the variable can take two alternative values: disconnected and connected (see table 2). This approach is a simplification to signal that, in the disconnected-connected continuum, some countries are closer to one end than the other

During the last decades, Ecuador and Peru have gone through a process of growing disconnection between local and national political actors, while Bolivia and Colombia have maintained a greater level of interdependency between the two levels, despite the profound transformation of their political systems. The next paragraphs illustrate briefly the historical patterns followed by the four countries regarding the connection between national and local political actors.

In **Ecuador**, political power has been traditionally divided between a powerful and conservative political elite in the Quito Highlands, and the influential economic and more liberal elite of the coastal region based in Guayaquil. This de facto balance of power ensured an ideological bipolarism that was reflected in political alternation (Eaton 2011). The division of power and resulting institutional arrangements, however, excluded the participation and benefits of the Amazon provinces in the Oriental oil-

producing region during the seventies and did not change with the return to democracy in 1979. Only in the mid-nineties did the Confederation of Indigenous Nationalities of Ecuador (CONAIE) emerge as a powerful umbrella organisation of highland and Amazonian indigenous groups and a strong alternative political actor with presence in municipal governments and the national legislature (Basabe, Pachano, and Mejía-Acosta 2010). Despite several attempts at political consolidation, the indigenous PACHAKUTIK party did not become a consistent coalition partner in the fragmented Ecuadorian political scene. The presidential election of Rafael Correa, at the height of the commodities boom in 2005, captured the popular discontent with traditional political parties who played an instrumental role in the fall of three previous elected presidents: Abdalá Bucaram (1996-1997), Jamil Mahuad (1998-2000) and Lucio Gutiérrez (2003-2005). Correa was able to channel the anti-party sentiment and convened a constitutional assembly to rewrite a new constitution in 2008. Paradoxically, Correa used the antiparty discourse to fuel mistrust of local authorities and gradually replaced or realigned independent local authorities with his own party supporters. With the gradual realignment Correa has eliminated the need to bargain reforms or concessions with local opposition actors and further pushed for a recentralisation of revenues or administrative prerogatives that had been devolved in the mid-nineties (Mejía-Acosta and Albornoz 2010).

The case of **Peru** is very different. For several decades, Peruvian politics has been marked by fragmentation. The Velasco Alvarado's land reform in the 1970s and the internal armed conflict between the Peruvian state and the Shining Path led to the concentration of the political and economic elite in Lima (Cotler et al. 2009, 13-23; Manrique 2006, 24).¹⁷ In recent years, alternative political forces have emerged in rural areas and regions. Political parties' poor reputation and decentralisation of tax resources have triggered the emergence of a new type of leadership. Local politicians no longer need to be members of a party or demonstrate their loyalty to national political leaders. As regional and municipal elections results underscore, preference is given to politicians who demonstrate independence rather than obedience to party discipline or any other authority that goes beyond the local level they control. At the subnational level, politics has become the playing field for local leaders without connections to national parties. This has created conflicts between the centre and regions and between regions and districts. Local leaders usually champion people's demands against higher levels of governments, which allow them to build their own political agenda.

In **Bolivia**, the origin of the current political map can be traced back to the return to democracy in the 80s. The economic stagnation, the implementation of a extremely radical stabilization package, and the power-sharing agreement between the two main political forces debilitated the party system, creating wider spaces for indigenous and regional groups (Albó 2009). Furthermore, the economic crisis boosted immigration from mining areas and prompted Andean peasants to move to the city of El Alto and the lowlands of Chapare, which became two politically dynamic spots. Meanwhile, the indigenous peoples' organisations, especially those based on the Aymara tradition, made a strong comeback after decades of very weak public presence. With this backdrop, Congress approved the Law of Popular Participation put forth by the Gonzalo

¹⁷ The Shining Path is a Maoist insurgent guerrilla organization. Between 1980 and 1995 the violence of the Shining Path and the subsequent repression from the Peruvian army swept the countryside, causing terror, thousands of victims, and the frequent destruction of the existing forms of political organisation (Stern 1998). Some Shining Path's squads continue active today, although since the mid-1990s their operational capacity has been progressively reduced.

Sánchez de Losada administration as part of the state's neoliberal agenda. Paradoxically, this law, which focused on decentralisation of the state, institutionalised pre-existing areas of autonomy, transferred resources to them and thus strengthened regional movements and indigenous peoples' and peasants' organisations (Albó 2002). This was the breeding ground for the Movement for Socialism (MAS), founded in 1995. The MAS quickly spread to other rural areas before becoming the second most voted party in the 2002 national elections.

In December of 2005, Evo Morales, leader of the MAS, won the presidential elections heading a coalition of indigenous peoples' organisations, peasants and coca farmers' associations, trade unions and some left-wing groups (McNeish 2006, 237-238). Although these pre-existing groups supported the MAS government, they maintained their autonomy in order to pursue their own objectives. In clear contrast to what happens in Ecuador, the MAS cannot impose their policies on their regional bases. As a local leader in Potosí said when asked about their demands to the central government, "initially we needed Evo to come to power, but now Evo needs us to stay in power".¹⁸ The power of the regions is also reinforced because "conservative citizens' movements" in the eastern *departamentos* controlled by the economic elite became the only meaningful political opposition (Eaton 2011).

Finally, in **Colombia**, the regional elites have been historically intermediaries between the central state and the regional societies. The central state was unable to control the whole national territory and these elites, through their adscription to one of the two dominant parties (liberals and conservatives), represented the state in exchange of having some room for defending their own interests (Gutierrez Sanin 2010). The decentralising reforms that started in 1983 transformed this type of intermediation, making it more complex and diverse across regions. In some territories, the traditional elites were displaced by armed groups and groups with interests in illegal economic activities. In other cases, extractive companies and agribusiness investors have strengthened their stance at the local level, exerting strong political influence at local and national level (García Villegas and Espinosa Restrepo 2011). Although there are very diverse contexts, often these new elites maintain linkages with the centralised state. They need some degree of support from the centre to carry out their activities whatever they are, while representatives in the national parliament need votes from local levels, and frequently the money to finance their electoral campaign.

¹⁸ Interview BOL-022, 11-10-2012.

Table 2: Analysis of policy reform outcomes according to the degree of local bargaining power and the connection between local and national political actors

	Local bargaining power	
	Relatively strong	Relatively weak
Subnational political actors disconnected from national politics	Peru Failed equalising reform, greater decentralisation	Ecuador Recentralisation reforms with low equalization
Subnational political actors connected to national politics	Bolivia Moderate equalising reform with more decentralisation	Colombia Radical equalising reform with recentralisation

Source: Authors

Table 2 summarizes the argument presented in this section. Countries who experimented a disconnection between national and subnational actors (Peru and Ecuador) moved along the devolution of EI revenues to producing districts with greater decentralisation of revenue allocations where actors were strong, but more centralised management where actors were weakened. In cases where subnational actors had stronger ties to or influence on national elites, the thrust of reforms moved towards the adoption of greater redistribution of revenues to benefit non-producing districts as well. Furthermore, the degree of local bargaining power further determined whether the executive could recentralise the management of EI revenues as in Colombia or had to accept a greater decentralisation in the management instead, as in the case of Bolivia. The next section expands and explains these scenarios in greater detail.

The politics of changing the distribution of EI-revenues

This section examines how the political processes affected policy outcomes by illustrating how the proposed two dimensions played a fundamental role in shaping the bargaining process of reform in each of the four countries.

Ecuador: Unexpected (re)centralisation without a formal equalization reform

Since the discovery of oil reserves in the 1970's by the military, the Ecuadorian state had maintained a centralised control over the extraction, allocation and use of oil wealth. The transition to civilian government in the late 1970s did little to promote a greater redistribution of oil wealth, partly because the military maintained significant influence over the Corporación Estatal Petrolera Ecuatoriana (CEPE), the state owned oil company, and partly because the oil producing provinces of the Amazon had, as mentioned above, traditionally lacked a strong political representation (Hurtado 1990). The return to democracy however, was key to decentralize some of the political power to subnational governments when municipal and provincial elections were held in the 80s. The presence of party politics at the local level further pushed the central government for a wave of fiscal decentralisation reforms in the 1990s. The result was

the adoption of a special law in 1997 (*Ley Especial de Transferencia del Presupuesto Nacional para los Gobiernos Seccionales*) which transferred up to 15 per cent of central government revenue to subnational governments (Mejía Acosta and Alborno 2010). However, this special law did not determine if oil revenues should be included in those transfers (CONAM 2006). By the end of the next decade, it was estimated that only around two per cent of the total oil-rent collected by the state went to subnational governments (Grupo Faro 2009, 10-16). The meagre oil revenues devolved came from three sources: a) the Fund for the Eco-development of the Amazon Region, generated through the collection of one USD per every oil barrel sold; b) the Substitutive Rents, which are composed of a fee of five USD cents per barrel transported through the Trans-Ecuadorian oil-pipeline; and c) the Fund for the Development of the Amazonian Provinces that received a percentage of all the goods and services purchased by the oil companies in the Amazonian jurisdictions. By 2006, oil transfers from these sources accounted for USD 97 million a year - compared to 4.1 billion accrued to the central state (Grupo Faro 2009). The transfers benefited the municipal governments and provincial councils of the Amazonian regions where oil is extracted and through which it is transported.¹⁹

If the political representatives of provincial and municipal governments could not organise and mobilise to demand greater transfers before the commodities boom, it became even more difficult to challenge the dominance of the central government that directly benefited from the boom (Mejía-Acosta and Alborno 2010). President Correa, who has been re-elected two times since 2006, has gradually strengthened his personal political power and does not need the support of subnational leaders. The new situation has led to the disconnection of local and national politics and has yet more reinforced Correa's control over the management of natural resource revenues. Firstly, the 2010 Hydrocarbons Law tightened the investment conditions for oil companies. The private oil companies sign a service contract with the state to receive a fixed fee for each barrel that they extract. The state retains the ownership of the extracted oil, assumes its commercialisation, and keeps the profits from its sale. Secondly, the Hydrocarbons Law established that the revenues from the "Eco development Fund" and the "substitutive rents" would go into a Single Treasury Account, managed by the President, rather than being distributed to the subnational governments. Finally, the government approved a bylaw in April 2012 to recentralise the allocation of royalties and other oil revenues (that amounted to just 0.8 per cent of the total state income from oil) to finance investment projects in the extraction sites; the executive however, reserves the right to decide which projects are to be supported. Through this series of reforms, the executive has strengthened its power over the extraction and allocation of oil revenues while undermining the bargaining power of the political opposition, private companies and subnational governments (Mejía Acosta and Alborno 2010).

With regard to future developments, Correa's current policies to promote international investment in the mining sector could challenge the extreme centralisation in the management of the EI-revenues. The gold and copper deposits are placed in territories more densely populated than the lowlands where oil is extracted. Moreover, the population in those regions has reacted to these mining projects with open hostility. This will probably lead to negotiations over compensations and guarantees of profit shares for the producing territories.

¹⁹ These benefit five of the 27 Ecuadorian provinces: Napo, Sucumbios, Pastaza, Orellana and Esmeraldas.

Bolivia: Moderate equalising reform (with more decentralisation)

Bolivia saw unprecedented social protests in 2003 during the so called “gas war” to demand greater state participation in the extraction and management of gas revenues (Crabtree 2005). An agreement between oil companies and the government to export gas to the US via a gas pipeline to the Chilean coast triggered popular mobilisation. The death of some demonstrators unleashed a wave of protests that put an end to Sánchez de Lozada’s government and forced him to leave the country in October 2003. The new government of Carlos Mesa initially tried to appease the population with some minor reforms. However, the popular pressure led by then opposition leader Evo Morales forced the government to call a referendum on the participation of the state in the profits from the exploitation of the gas. The result of the referendum went into effect with Law 3058, passed in May 2005. It introduced the IDH, a direct tax of 32 per cent on the production value of hydrocarbons, in addition to the existing 18 per cent royalty payments (see Table 3).

Table 3. Bolivia: Criteria for the calculation and distribution of royalties, national government shares and direct tax on hydrocarbons

Type:	Criteria for calculation	Beneficiaries
<i>Departamento</i> ²⁰ royalties	11% of hydrocarbons production in the <i>departamento</i>	Producing <i>departamentos</i> : Tarija, Santa Cruz, Cochabamba and Chuquisaca
National compensatory royalty	1% of hydrocarbons production in the country	<i>Departamento</i> of Beni (2/3) <i>Departamento</i> of Pando (1/3)
National Treasury share	6% of hydrocarbons production in the country	National Treasury
IDH	32% of hydrocarbons production in the country	Various public and private institutions

Source: Authors’ elaboration based on Law 3058

The distribution of tax revenue from hydrocarbons was also modified. Since 1972, the prefectures of the producing departments received 11 per cent of the total production value generated in their territory. In 2005, the debate on Law 3058 dealt simultaneously with increasing taxation and the redistribution of the extra-income. At the time, the Federation of Municipal Associations (FAM) proposed that, in addition to royalties, 20 per cent of the new IDH should be distributed among the country’s municipalities. Finally, the parliament approved a version which did not establish distribution percentages, thus postponing the issue.

Distribution of the IDH was later regulated in two stages in 2005 and 2007 through Supreme Decrees 28421 and 29322 (see Table 4). Debates on setting the distribution amounts were preceded by pressure from the interested parties. Mass mobilisations and marches to La Paz also took place to defend the rights of different departments. The popular pressure was directed towards more decentralisation, increasing the bargaining power of subnational jurisdictions. In general, the debates did not take technical aspects into account and decisions were made in response to the capacity for mass mobilisation demonstrated by the various players. In 2005, the discussions took place in a climate of marked instability and the laws were based on weak agreements between

²⁰ In Bolivia and Colombia, the term *Departamento* refers to the jurisdiction of a region.

parliamentarian groups. After coming to power following elections in 2005, the Movimiento al Socialismo (MAS), that had previously demanded more decentralisation, pushed for an additional reform (Velasquez 2011).

Table 4: Distribution of IDH according to SD 28421 and SD 29322

Beneficiaries	Percentages	Distribution 2005 (SD 28421)	Distribution 2007 (SD 29322)
Producing departamentos	12.5% [proportional to production]	- Municipalities 34.48% - Universities: 8.62%	- Municipalities 66.99% - Universities: 8.62%
Non-producing departamentos	31.25 % [6.25 % per dept.]	- Prefectures: 56.9%	- Prefectures: 24.39%
National Treasury	56.25%	<ul style="list-style-type: none"> - 8.78 % Compensatory fund for municipalities (80%) and universities (20%) departamentos with the highest population - 8.78 % Fund for the development of indigenous people and peasants. - 8.78 % Fund for the promotion of gas use - Variable: Compensation for producer departments which received less than non-producers - Variable: the military and police. - Remaining amount for the National Treasury 	

Source: Authors' elaboration based on Supreme Decrees 28421 and 29322

The reform of IDH redistribution introduced by the MAS government in 2007 had visible political objectives and consequences. In line with the new government's social policy, part of the IDH revenues helped to finance the social pension programme *Renta Dignidad*, which grants a monthly benefit to everyone over age 60. To bypass pre-existing fiscal commitments, the government decided that all IDH receiving institutions should "give up" 30 per cent of the amount they were entitled to finance the programme (Miranda 2009). A related goal of the reform was to undermine the opposition's capability to mobilise popular discontent against the central government by using IDH revenues on social programmes. Finally, the proposed redistribution of IDH revenues sought to squeeze out the transfers allocated to the prefectures (regional governments), which is precisely where the MAS had encountered the strongest political opposition, and instead increasing the participation of municipalities, where the MAS had gained important institutional power (see Table 4). This was important in the eastern part of the country, where municipalities and prefectures had set up collaborative schemes to jointly finance some projects (Hinojosa 2012). The agreement between the government and the municipalities eroded this collaboration that balanced the MAS' dominance. The recentralisation attempt in Bolivia encountered further political opposition and the result was a political compromise whereby the central government acknowledged the need of a (more moderate) transfer of revenues to municipal and provincial governments, but the central government retained the capacity to fund and implement

social programmes and ensured a better balance between producing and non-producing jurisdictions.²¹

Colombia: Radical equalising reform (with recentralisation)

The question of the collection and distribution of oil and mining royalties has been central to the Colombian politics for a long time. The right of oil producing territories to receive royalties goes back to the political constitution of 1886 (Torres Rico 2008, 29). After different periodic changes, the political constitution of 1991, and later the Law 141 of 1994, established a new system of royalties that regulated both the payment of royalties and their distribution. These criteria suffered only minor changes until the introduction of the new National Royalties System in 2011.

Table 5. Criteria for distribution of royalties in Colombia

Before the 2011 reform		After the 2011 reform (to be applied in 2015 and beyond)	
Entities	Percentage*	Entities	Percentage
Royalties National Fund	19.5%	Pension Fund	9.8%
Port municipalities	8%	Science, Technology and Innovation Fund	9.8%
Producing municipalities	25%	Saving and Stabilisation Fund	29.4%
Producing departments (regions)	47.5%	Producing departments and municipalities	9.8%
		Regional Compensation Fund	23.52%
		Regional Development Fund	15.68%
		Monitoring and control	2%

* This percentage is an average of different criteria that depend on the volume of production. Source: Velázquez Carrillo 2011: 78

Regarding the collection of royalties, the previous system enforced the payment of between eight per cent and 25 per cent of the value of the hydrocarbon production and between one per cent and 10 per cent of the mining production.²² The distribution of this income greatly benefited the producing *departamentos*, municipalities and the port facilities used to export the production (see table 5). They received over 80 per cent of the total amount of royalties.

The system did not work well. On average, the subnational jurisdictions (both municipalities and *departamentos*) receiving the royalties did not improve their social outcomes more than the rest of the country (Perry, Olivera, and Restrepo 2012, 69-74; Velásquez Carillo 2011). Additionally, the increase in the prices of minerals and oil, and the subsequent escalation in royalty transfers generated strong inequalities among

²¹ Interview with former manager of the FAM (BOL-2, 02-11-2011).

²² In the case of hydrocarbons the percentage depended on the scale of production, while in the mining sector the percentage is independently fixed for each mineral.

subnational jurisdictions.²³ For several years the national government tried to influence the public opinion in order to change the system. Examples of corruption, mismanagement, inefficient investments, and capture of royalties by mafia groups and paramilitary and guerrilla forces were repeatedly publicised, eroding the bargaining power of local political actors in the producing regions.²⁴ In 2010, the first legislative initiative of the new government of President Santos was to send to the Parliament a proposal for the new regulation of the oil and mining royalties. According to the Minister of Finance, the proposal aimed at “spreading the jam over the whole toast. All the Colombians should receive a share of the royalties”.²⁵ As it has been the rule during the Santos’ period, parliamentarians from different political groups and regions supported the reform. They depended on the benevolence of the government, in the form of centrally sponsored public investments that benefit their constituencies, in order to increase their chances of re-election. This time it was even easier for the government to strike the deal because the vast majority of parliamentarians came from non-producing regions and had little to lose. The new law was enacted in July 2011.

The new regulation imposes a radical change in the amount distributed to each jurisdiction and in the procedures used to decide the investment projects to be supported through these resources. Regarding the distribution, Table 5 shows the comparison between the previous and the present criteria. Producing *departamentos* and municipalities directly receive only 10 per cent of the total amount of royalties against 80 per cent received before. The Regional Compensation and Development Funds that jointly account for almost 40 per cent of the total amount will be distributed to all municipalities and *departamentos* in proportion to their population and poverty indicators. However, the subnational governments are no longer free to decide on the projects to be financed. The new law generates the OCADs, tripartite institutions which include the representatives of the national government, the National Planning Department and the particular subnational government. There are as many OCADs as subnational governments and they must examine and take decisions on the projects proposed by a specific subnational government. Given that two of the participants represent national institutions and that the national government has veto power, the mechanism entails a clear centralisation of the decisions to be taken. The fact that the national government also manages the other three funds (Pensions; Science, Technology and Innovation; and Saving and Stabilisation) suggests that the reform involves a strong recentralisation of the royalties, a reform result that is seen as problematic by critics.²⁶ The resources go to the subnational level, but the National Government has regained the power to take decisions on the way they are spent.

Peru: Greater decentralisation and failed equalising reform

In 1992, the new General Mining Act introduced the “mining canon”, as devolution mechanism that distributed 20 per cent of the corporate income tax paid by mining companies to areas where the income had been generated. In 2001, the Peruvian Parliament approved the Canon Law, Law No. 27506, which extended this mechanism to other extractive industries.²⁷ In the cases of mining and gas, it raised the percentage

²³ According to the National Planning Office, in 2011, 89 per cent of the total royalties were to subnational jurisdiction that accounted just for the 17% of the total population.

²⁴ Interviews COL-01, 06-05-2013; COL-02, 9-05-2013; COL-04, 14-05-2013; and COL-07, 14-05-2013.

²⁵ Juan Carlos Echeverry, Minister of Finance, repeatedly used this image (García Tapia 2011).

²⁶ Interviews COL-01, 06-05-2013; COL-02, 9-05-2013.

²⁷ In Peruvian Spanish, *canon* has come to mean ‘a rule for the devolution to sub-national governments of revenue collected by central government’.

from 20 to 50 per cent of the corporate income tax paid by companies. Interestingly, mayors in mining areas had spent many years pushing for this change without any success. However, in 2000, in the context of growing local resistance to the construction of some new mines, they managed to win the support of some business leaders who were interested in getting support from local communities so as to counteract the growing pressure against mining operations (Arellano-Yanguas 2012).²⁸ This alliance provided the local authorities of producing regions with additional bargaining power in their negotiation with central authorities regarding the distribution of revenues.

During the debates, discussion on revenue shares to be distributed to different subnational governments was based on emotional arguments about historical injustices and the need for greater compensation. In the following year, some technical problems led to the undertaking of at least two further reforms of the Canon Law. Finally, in July of 2004 the Law No. 28332 was unanimously passed in parliament (Congreso de la República - Perú 2004). The distribution criteria established by this law are shown in Table 6. The recipients of the transfers are supposed to spend at least 75 per cent to finance capital investment projects that should comply with the criteria set by the SNIP (National System of Public Investment).

Table 6. Criteria for the calculation and distribution of canons since 2004

	<i>Canon minero (mining)</i>	<i>Canon gasífero (gas)</i>
Calculation of amount	50% of the profit taxes paid by mining companies	50% of the profit taxes and royalties paid by gas companies
Distribution	25% to the government of the producing region 10% to the municipality of the producing district 25% to municipalities of the producing province 40% to municipalities of the producing region	

Sources: Laws N° 28332, 24300, 28699, 23630 and 23871

When the law was approved in 2004, mining canon transfers amounted to 308 million new soles in 1996 constant prices (USD 90 million). Higher world mineral prices boosted the transfers to 4,085 million new soles (USD 1192) in three years (Ministerio de Economía y Finanzas 2012). This increase affected only a few regions, causing severe inequalities. Moreover, in 2005 a group of congressmen from mining regions presented a draft bill to introduce mining royalties against the opinion of the powerful MEF (Ministry of Economy and Finance) and the mining companies.²⁹ The congressmen were not interested in increasing fiscal revenues at the central level, but in achieving greater devolution to the regions. Thus, the bill proposed that royalties should automatically go to the producing regions and municipalities.³⁰ The Congress passed the

²⁸ Interviews with Eduardo Carhuaricra (PER-019, 26-10-2011) and Augusto Baertl (PER-021, 17-11-2011)

²⁹ Before this law, only gas and oil exploitation paid royalties.

³⁰ Formula for distribution of mining royalties: 20% for the district municipality where the resource was extracted (in theory, 50% of this amount should go to the peasant communities affected.); 20% to the provincial municipalities where the resource was extracted; 40% to the regional municipalities where the resource was extracted; 15% to the regional government and lastly, 5% to the state universities in the region where the resource was extracted.

draft bill and President Toledo, who had less than 10 per cent popular support in the opinion polls and was worried about the escalation of mass mobilisations against the government, decided not to use his constitutional veto power to stop the enactment of the bill that was not supported by the Minister of the Economy and Finance.³¹ This was a clear example of local bargaining power in shaping outcomes of distribution of mining rent.

In the last years, several studies have shown that the extraordinary amount of transfers to mining regions has failed to improve social indicators (Arellano-Yanguas 2011b; Loayza, Mier y Teran, and Rigolini 2013). In addition to the pervasive lack of managerial capacity in the sub-national governments, political incentives for short-term spending, rent seeking, and the distortion of local labour and services market are responsible for the lack of positive results (Vialé 2012; Arellano-Yanguas 2011b). This inefficient use of the canon resources prompted attempts to reform the Canon Law, generating also political room for a more equitable distribution across regions. In 2008, a congressional committee studying possible reforms had to be dissolved before a proposal was even submitted because the local population and governments from mining areas began mass mobilisations to stop any attempts to change the canon as soon as they heard about the committee (Zeballos 2008). The national parties had to withdraw the committee because they had little sway over local authorities in the mining regions. When Ollanta Humala took office in 2011, he announced the reform of the Canon Law as one of his priorities. In fact, the MEF hired international consultants and spent months designing different technical proposals to be used as an outline for the reform. The resulting studies made it clear that any reform would call for fairer distribution of the canon, at least among municipalities within the producing regions. The government could have found support for reforms of this type in municipalities in the producing regions that do not host the mines. However, it preferred to postpone the reforms due to the conflicts in some mining regions and the foreseen resistance of people from producing municipalities to changes in the status quo.

Conclusions, implications and knowledge gaps

The paper offers a political economy approach to understanding reform processes around the distribution of EI revenues. It offers a comparative approach to look at how diverse institutional arrangements are associated with redistribution formulas; in this sense, the paper expands on existing single-case ethnographic accounts of reform, but also explores some of the causal mechanisms absent in existing cross-country statistical analyses. By looking at four most similar countries, the paper explores the political coalitions and dynamics leading to different redistributive outcomes in all cases. It argues that the main distribution modalities of natural resource revenues depend on two political dimensions: the degree of bargaining power of sub-national actors and the linkage between national and subnational political actors. The evidence collected so far suggests that countries tend to favour greater decentralization of revenues where subnational actors have traditionally bargained for strong decentralization reforms in the past (Peru and Bolivia). In those cases transfers tend to be distributed more equally (across producing and non-producing districts) when there is greater alignment between central and subnational actors (Bolivia). Conversely, national governments tend to centralize revenues where subnational actors have not imprinted decentralization reforms (Colombia and Ecuador). In those cases also, transfers are equally distributed when there is greater alignment between central and subnational levels (Colombia).

³¹ Interviews with Eduardo Carhuaricra (PER-019, 26-10-2011) and Cecilia Blume (PER-001, 5-10-2011)

This section draws some of the main conclusions and policy implications of the country study cases with a view towards improving the political management and bargaining of EI related revenues. It then outlines some pending knowledge gaps that deserve further attention to achieve a fairer and more accountable balance of transfers between the center and periphery and a better redistribution across producing and non-producing districts.

Policy implications

The significant increase in commodity prices and the subsequent windfall of revenues and investment accruing from the EI sector has triggered an intense political debate about decentralisation and distribution of revenues across different stakeholders in resource rich countries. Some concrete emerging policy implications include:

1. Fiscal decentralisation matters. The discussion about the adoption and implementation of distribution formulas for EI transfers must take place within broader fiscal decentralisation debates. As one Colombian presidential candidate stated, “the government has used the debate over the distribution of royalties to avoid the discussion over the remaining 95 per cent of the fiscal revenues”.³² Fiscal decentralization debates should also consider:

- a. The fiscal capacity of the central and subnational governments to manage extractive and non-extractive revenues in an efficient and accountable manner
- b. The political-administrative structure of every country which sets the incentives, responsibilities and prerogatives to manage public finances available to each government tier (Ahmad and Mottu 2003)
- c. The relative weight or contribution of non-extractive revenues to the overall fiscal effort made by government entities
- d. The borrowing capacity and other revenue raising abilities available to subnational governments and how central governments cope with such liabilities

2. Flexibility matters. The study illustrates that there is no unique distributive solution or allocation mechanism that is per se more adequate. Ideally, the paper suggests that a combination of fixed devolution with some equalising criteria according to subnational needs (poverty levels, local extractive capacity, basic infrastructure, etc.) would work best to promote sustainable development objectives. Furthermore, distribution formulas tend to work best when they combine some degree of fixed expenditure rules with a good degree of flexibility. Fixed rules are needed to establish for example spending priorities on specific sectors, or privileging capital over current spending, and the mechanisms for disbursement (who decides, how to allocate the revenues). This should not undermine, however, fiscal flexibility so that local authorities can prioritize spending according to local objectives, while preventing that revenues are used for private gain. The key to avoid flexibility translating into unbridled discretionality is to promote the adoption of effective and transparent accountability mechanisms so local government officials remain responsible for the use and investment of revenues vis-à-vis their electorate and the central government (González Espinosa 2013).

³² Interview COL-09, 16-05-2013.

We find that the case of Bolivia presents an interesting combination of these attributes, because it promotes a good degree of devolution of revenues to subnational actors and territories while promoting a fairer distribution of resources across producing and non-producing districts. Unlike other cases, there is no single agent or territory that receives a greater share than others, nor is there scope for discretionary allocation of revenues without an active participation of the local government. Maybe the national government preferred to centralize, but had to negotiate because of local bargaining power. The effective presence of subnational governments in Bolivia has produced in principle, a de facto system of checks and balances that oversees the performance and execution of central government programs.

3. *Coordination matters.* The paper suggests that it is important to coordinate public spending across government sectors and tiers to avoid duplication or wasteful spending. One of the unexpected consequences of windfall revenues in the Andean cases has been the fragmentation and inefficient use of public spending. Analysts and interviewees have identified three areas where the problem needs to be addressed. These suggest

- a. To go beyond the logic of a “project” as the main unit of intervention and improve national level planning, so that it can coordinate spending priorities across government sectors regarding specific development goals and indicators;
- b. To coordinate the planning and implementation strategies between national level policies with regional dynamics and subnational needs; and,
- c. To embrace broader development goals with specific development indicators that are aligned with national priorities and promoting social development.

For example, the countries in the region have invested in the design and implementation of cash transfers for poverty alleviation, some of which are partly financed with natural resource revenues. While existing research shows how these programs have contributed to inter sectoral coordination and poverty reduction in Peru for example, there is not enough evidence to suggest that they promoted greater policy coordination across government tiers (Mejía-Acosta and Haddad 2014).

4. *Saving matters.* It is well known that given the variation in commodity prices and production costs, EI-related revenues are too volatile to make long term spending commitments or develop long-term investments. Moreover, sudden revenue windfalls can exceed the spending capacity of small subnational districts (as was the case in some Bolivian, Colombian and Peruvian regions), thus opening the door to clientelistic or wasteful spending. Yet, the case studies show that the option to (re)introduce stabilisation funds at the national and local level is at its best an emerging policy discussion (Bauer 2013). Ecuador adopted a savings and stabilization fund as a way to support efforts towards fiscal discipline in the late 1990’s but the parliament chose to dismantle the savings and earmarked spending of this fund in the context of rising oil prices (Mejía-Acosta and Albornoz 2010).

In the cases under study, the introduction of sub-national stabilisation mechanisms would allow countries to consider long term investment options in human capital and infrastructure, while decreasing the political pressure to spend resources in a short period of time. The maintenance of saving funds will require strong political commitment and adherence to medium term expenditure frameworks to make these instruments compatible with national budgeting priorities. While such changes are

likely to be politically and legally difficult to implement (as they may require further legal and constitutional reforms) it is nevertheless necessary to reinvigorate discussions about the adoption and implementation of revenue smoothing formulas and implementing the political safeguards to ensure that such funds will be invested and used in a responsible manner.

Sequencing matters. A practical corollary of this research is that the design and implementation of redistributive formulas tends to follow path dependent trajectories: once a structure of transfers is in place, it is fairly difficult to change or revert them without upsetting existing political balances or institutional arrangements. In the cases of Peru and Ecuador, the instruments to promote devolution of revenues (mining canon and fiscal transfers to regional governments) were adopted before the commodities boom. In both cases, the presence of large windfall revenues helped to reinforce the existing distribution of powers between central and subnational governments. In Ecuador it will be difficult to include the transfer of oil revenues in the allocation of fiscal transfers to subnational governments, while in Peru it will be difficult to promote a fairer redistribution of revenues between producing and non-producing localities. This should be a warning for policymakers thinking of EI reforms as a quick fix for appeasing local tensions against extraction, as temporary solutions could lead to increased conflicts and negative developmental results in the future (Arellano-Yanguas 2011a).

Knowledge gaps and challenges

From the previous list of implications and the desk review outlined here, there are several knowledge gaps that deserve further research.

1. Fiscal decentralisation and public finance management systems. More research is needed to study the extraction and allocation of extractive revenues in the context of broader fiscal decentralisation debates. Specifically, more work is needed to understand the interaction between existing Public Finance Management (PFM) systems, the ability of subnational governments to manage fiscal flows, and their ability to raise additional revenues (or not). To advance this, it is important to collect and analyse data on the different types of revenues raised as well as the levels and rules for spending such revenues. This research assumes that the political power of actors stems from their management of extractive revenues, but it could also be the case that the relative strength or weakness of sub-national actors is related to their ability to raise revenues through other sources.

2. To improve the availability and reliability of data. The existing lack of reliable sources of data obstructs the objective assessment of the magnitude of the problem, impedes the evaluation of existing policies, and allows rooms for discretionary decision-making. Despite the importance and intensity of debates around EI revenues, the availability and quality of subnational data has worsened in the last decade. The lack of data makes it more difficult for other political actors to compare their current versus expected allocations in order to demand a fairer share of revenues from the central government. Without reliable data it is also difficult for other civil society organizations to monitor government allocations and spending patterns, thus allowing space for mismanagement. It is recommended to improve the survey, collection and compatibility of existing sources of subnational revenue, socio-economic indicators and production data produced by governments and extractive industries.

3. *Role of other actors and networks over time.* Greater research effort is needed to understand – and capture existing studies on – the role of the private sector in promoting and hindering the good governance of natural resource revenues. This integration of research agendas should include a systematic analysis of the private sector efforts to influence the budgeting and planning priorities, the spending and allocation decisions and their contribution for the provision of public goods. Some associated topics include looking at the role of policy networks in the design of policies for the management of revenues in resource-rich countries (Orihuela 2012).

4. *Development impact.* More research is needed to define and measure the impact of different types of investments (capital, human, infrastructure) on achieving long term development goals. Greater precision is needed to distinguish and evaluate the development consequences of adopting flexible or discretionary spending versus rigid or earmarked spending patterns at the local level. More broadly, greater effort is needed to define and measure development impact as a result of a larger devolution of EI revenues, and the role that different stakeholders have (which extractive industries, donors, governments and civil society groups) in producing meaningful change (Mejía-Acosta 2013). Conceptually, the review shall define and measure specific notions of good local governance in the management of EI revenues, including the existence of accountability mechanisms, local fiscal effort, as well as process and outcome indicators. Such review may include a systematic analysis of cases where subnational governments have successfully and effectively used EI-revenues to promote development outcomes.

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