Local resource-based growth, inequality, and state capacity

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A local resource “curse”?

Recently, Andean countries, including Bolivia, Colombia, Ecuador, and Peru, have experienced sustained growth, with average annual rates of 4.9% in the period 2011–2014. Peru averaged an annual rate of 6%, higher than the approximately 4.5% rates experienced by the other countries. Growth was led mainly by mining and hydrocarbons exports. Each sector’s growth in these countries has depended on external (international prices) and internal (private investment incentives) conditions (Arellano-Yanguas 2011a). The most important commodities in each country were gas in Bolivia, coal and oil in Colombia, oil in Ecuador, and copper and gold in Peru, with 2003 clearly being the starting year for the price boom in the most important commodities.

The extractive industries (referred to here as “extractives”) have also been the main source of investments in the Andean region, resulting in income and tax revenues. Different rules make it difficult to compare estimates of fiscal collection from the extractive resources in each country; however, the Economic Commission for Latin America and the Caribbean (ECLAC) has estimated that between 2000 and 2012, tax revenues from the extractive sectors grew as a share of total collection in all countries under review (Figure 1).

Another key aspect during this recent boom was the consolidation of the rules for fiscal transfers to sub-national governments of a portion of tax revenues from the extractive sectors in countries like Bolivia, Colombia, and Peru. These rules establish that revenues from extractive activities must be shared between central governments and producing local governments. As this essay later shows, rules for sub-national transfers are important to understand public investments, including rural investments, in extractive local territories.

The macroeconomic impact of the metals and hydrocarbons price boom in Andean countries is undeniable. However, major doubts regarding the distribution of the social impact of this growth at the local level remain. Local analysis of resource boom effects features less in the literature, which focuses mainly on the national level. Nonetheless, there is a new and growing interest among economic development studies to build a local perspective on the effects of growth driven by non-renewable natural resource extraction. Examples are Larsen (2005, 2006) and Hajkowicz et al. (2011); and regarding Peru, Zegarra et al. (2007), Herrera and Millones (2011), Aragón and Rud (2013), Ticci and Escobar (2012) and Loayza et al. (2013) are some of the existing cases of economic research on this country’s version of this local growth model. These results are not yet conclusive, and dialogue between the evidence found and theory is still weak.

The aim of this essay is to present some ideas on an aspect of local resource-based growth. This is the relation between group inequalities and state capacity in resource-based local economies. Inequality in general tends to be ignored in the empirical analysis of growth driven by extractive industries. In particular, the analysis misses how gaps between groups evolve during boom cycles. A focus on resource-based growth and inequality, particularly on social gaps between groups, is crucial, as equity is directly threatened by extractive industries. These industries distort distributional arrangements among different groups. This is the case, for instance, in urban and rural territories.

Figure 1: Income shares of non-renewable natural resources in total income (%) Source: ECLAC
The concept of “horizontal” inequality or inequality “between groups” was introduced by Frances Stewart to differentiate inequalities between groups of people (with individuals sharing specific and important characteristics, e.g. gender, ethnicity, class, region) from inequalities between individuals, which are regularly analyzed (Stewart 2008, 2). Individuals, ascribed or assigned to these categories (Sen 2007), are frequently trapped in vicious circles of exclusion (Paredes and Thorp 2015). Thus, economic growth based on extractive industries can consolidate and enhance bad distribution for these groups in the future.

In addition to the direct effects of extractives at the micro level and on group inequalities, this essay considers the mechanisms through which the dependence on extractives may distort state institutions and policy competence to manage these effects at the local level. As previous works with co-authors have shown, extractives development itself has particularly paradoxical and often detrimental effects on the development of local state institutions while at the same time posing huge local management challenges. The “local resource curse” is expressed in the challenge of managing two opposing forces. The political economy produced by extractives tends to weaken key institutional development needed for inclusive and sustainable development, while the direct consequences of extractives on inequality, conflict, and environmental damage simultaneously make the absent or deficient institutions even more necessary. 3

This short essay first discusses the challenging undertaking of managing local and group inequalities together and building state capacities when both are simultaneously subject to the negative effects of extractive industries. The literature and collected evidence indicate that the emerging political dynamics in contexts of abundant windfall rents from extractive industries undermine the good governance that is needed to reverse negative direct effects on inequality. Second, the essay briefly presents general data on the evolution of social inequalities between rural and urban territories in Andean countries during the most recent extractive boom (2000–2014). The data indicate sustained and increasing gaps between rural and urban territories throughout the recent cycle of the commodities boom. Third, focusing on Peru, the essay examines these results in dialogue with studies on the local effects of extractives on rural communities. It then goes on to discuss why in these contexts building state institutions becomes a problem rather than being the solution to the portrayed problem.

The evolution of rural–urban inequality, 2000–2014

A study prepared for the Natural Resource Governance Institute (NRGI) assesses the evolution of rural–urban inequality during the recent cycle of boom in commodities in four Andean countries (Bolivia, Ecuador, Colombia and Peru). 5 This section draws on these results to show increasing rural–urban social gaps.

In general terms, the percentage of households living in poverty has been reduced significantly for the total population in the Andean region.

Poverty rates fell in Bolivia, Colombia, Ecuador, and Peru during the 2000–2014 cycle. At the beginning of the boom cycle, poverty rates were approximately between 50 and 70 percent, and at the end of the same cycle they were between 20 and 40 percent. The biggest drop, from 70 to 20 percent, is in Colombia. The same tendency is replicated with respect to extreme poverty, where the results show similar patterns. Colombia is again the country that reduces the extreme poverty rate from 50 percent to less than 10 percent, while in Ecuador it goes from 40 to 10, in Peru from 25 to 10, and in Bolivia from 45 to 20 percent.

It is thus irrefutable that this reduction in poverty has been achieved through economic growth during this cycle of expansion of extractive industries. Some studies indicate that much of the improvement occurs through non-labor income, by direct transfers. This has been possible through the social programs of governments that have more income in a time of boom of resources and also of remittances (Jaramillo & Saavedra, 2011). More non-labor income than labor income is not a bad thing in itself, but it raises the question of long-term sustainability that is so recurrent in these natural resource economies.

The distribution of the reduction in poverty, nonetheless, is not the same for all groups or territories. Poverty fell faster in urban areas than in rural areas. The urban–rural poverty ratio grew in the 2000–2014 period as a result of mining and hydrocarbons exports. In Bolivia the ratio grew from 1.5 to 2 and in

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Peru from 1.8 to 3. In Ecuador it also grew from 1.5 to 2.7. Colombia is the only country that maintained its urban–rural poverty ratio at around 1. In the case of extreme poverty, the great increase observed in Peru is notable, where the ratio of rural–urban poverty goes from 5, a high amount per se, to almost 12.5. A rural household is thus 12 times more likely to be poor than an urban household. The rest of the countries, except for Colombia, also show a positive trend, but to a lesser extent.

In absolute terms, the income per capita and the poverty gap between households in urban and rural territories have increased significantly in the four countries. At the income level, urban households now have almost 100 USD more per capita income than rural households. The poverty gap has also increased. Poverty is 10 percentage points higher among rural households. This increase is greater in the case of Colombia. However, extreme poverty gaps between households in urban and rural territories have been reduced considerably in all countries except Colombia. This would indicate that inequality between groups has increased in the highest welfare dimensions but diminished in the most elemental, extreme poverty. This can also be understood given that before the boom, almost all extreme poverty was concentrated in rural areas.

Another relevant fact to highlight with respect to poverty gaps for urban and rural territories is that there are no significant differences between extractive and non-extractive areas in any of the countries analyzed. These results are consistent with other studies. Orihuela et al. (2014), based on data from the Agricultural Census, indicates that mining, for instance, does not generate tangible benefits for agricultural activity, while it is strongly associated with a negative perception of the quantity and quality of water. Other studies have shown that impacts of mining on household income gradually disappear as they move away from the urban areas (Aragón and Rud 2013).

In addition to monetary income, this analysis reveals that gaps in access to education, drinking water, and sanitation by the public networks have remained almost unchanged between urban and rural households. In the case of Peru, the study reveals only a small reduction in the case of access to water. The exception is access to electricity: in all four countries it has fallen by around 20 percentage points. In addition, results indicate that urban–rural gaps in access to services such as education, drinking water, and sanitation have increased more in extractive industries areas than in non-extractive areas.

These exploratory results indicate that rural households, in absolute terms, have benefited from higher state revenues and income transfer programs. However, in relative terms the gaps between rural and urban territories are far from closing, despite the extractive bonanza. Moreover, this bonanza may be fueling greater inequality, as this essay attempts to explain in the next section.

### Direct impacts of extractive industries on rural communities

Many studies point to the importance of linkages between modern mining and local economies and their sustainability (Sachs & Warner 1995, Ross 1999, Humphreys et al. 2007, Lederman & Maloney 2006, Larsen 2005, Hajkowicz et al. 2011, Gilberthorpe et al. 2015). In Peru, several of these studies have been carried out with mixed results. Moreover, these investigations use heterogeneous definitions that are not easily comparable (Orihuela et al. 2014). Overall, the studies arrive at different conclusions about the impact of mining on local development.

When explaining the differentiated impacts on variables such as household income and expenditures only for urban households, Arellano (2012), Barrantes et al. (2005) and Zegarra et al. (2007) find mining to have no significant impact. At the same time, Loayza and Rigolini (2016), Águedo et al. (2016), Zambrano et al. (2014), Aragón and Rud (2013), Macroconsult (2012), Del Pozo et al. (2013), Loayza et al. (2013), and Ticci and Escobal (2014) do find impacts. However, these impacts are mainly concentrated in urban areas. In other words, the direct local socio-economic positive impact on family income generated by mining decreases with increasing distance from urban centers. Orihuela, Huaroto and Paredes (2014) point out that a problem with this literature is that these studies do not analyze the impacts on different types of populations or territories – urban and rural, for example – which is key to evaluating inclusive development. Based on census data, they come to the conclusion that the impacts do not reach rural areas and places that depend on agriculture.

Rural communities’ linkages with mining have never been strong. Extractive industries have always operated as enclaves (Thorpe and Bertram 1978) and had direct impacts on the environment. Today, however, mining arrangements with rural communities have lost legitimacy, as mining and oil operations cannot offer rural communities direct positive effects through employment. In the past, mining and oil towns were highly contaminated, but partly in the eyes of communities they offered “modern lives” with basic schooling, water, and sanitation (Li 2017). Today, distributional arrangements of labor and natural resources between companies and their rural neighborhoods
have changed dramatically due to technological transformations in the extractive industry on a global scale, and relations have become highly conflictive.6

These changes have been triggered by technological transformations. Open-pit technology has led to an increasing geographical extension of operations, facilitating the expansion of mines and oil operations into local rural communities and territories where the industry had yet to venture. Mining activity, for instance, was formerly concentrated in a few big mining towns. However, towards the end of the 1960s underground mining became a relic of the past (Dore 2000, 16). Economical for exploiting high-grade subterranean veins, it gave way to open-pit mining, which along with the development of new machinery and chemical processes, such as lixiviation, allowed the exploitation of low-grade ores scattered along extensive areas (Dore 2000, 16). In Peru, for instance, there has been impressive growth in the number of land and water concessions for mining.7

With technological transformations, the newly expanded mining industry has a reduced demand for a highly qualified workforce. Likewise, direct services required by these companies have high levels of complexity and specialization. Small rural firms from localities close to the operations cannot offer these services. In sum, the highly sophisticated needs of the companies differ from the expectations of the rural town where mining takes place. Towns in Peru, where mining has arrived tend to have high levels of poverty, low productivity, and little state presence (Barrantes et al. 2005; Zegarra et al. 2007; Orihuela et al. 2014). The relationship becomes even more complicated when operations overlap with the territories of indigenous communities and other localities traditionally dedicated to agriculture, both for small markets and for self-consumption.

In addition to reduced demands for employment and services from communities, mining continues to have direct effects on the agricultural activities and the social lives of rural communities. The increases in prices of non-agricultural products affect the cost of living for rural families. Alongside the increasing cost of living, these communities suffer drastic losses in production due to the migration of young labor.

A recent case study of the Tintaya mine in the highlands of Cusco (Peru) shows how mining has affected production. Respondents reported negative changes in agriculture and livestock activity. Fewer young people are available for collective labor to work the land, clean the irrigation systems, or build agricultural and livestock facilities. The younger and stronger members of the community have migrated to the city of Yauri to look for jobs related to the mine. As one peasant farmer put it, “We rarely see each other nowa-

days. In the past we used to work together, as a community, today it is different.”8 These reports were confirmed with data from the national agricultural censuses. We compared agricultural and livestock production between 1994 and 2012, and the result is a clear decline in both agricultural and livestock activity. The decline is particularly drastic in the case of sheep (50%), historically the most important and extended form of livestock production for peasant families in the province of Espinar.

Why institutions are not the solution, but the problem

As the direct impact of extractives in rural territories is causing problems, the focus of policies in this new cycle has been on fiscal redistribution of extractives and the indirect impact of these rents through the work of local governments. Looking at the results in Peru, the governments had little capacity to reinvest the income from the extraction of natural capital in other types of capital – human, infrastructure, and political – that promote inclusive and sustainable development (Dasgupta and Heal 1974, 1983).

The government in Peru created a new rent redistribution scheme for producing regions, called Canon. According to this scheme, fifty percent of the tax on profits from extractive companies is redistributed to the producing regions. The larger share goes to the regional government and significant sums also go to municipal governments at the provincial and district level. The money must be spent on approved investment projects. Such payments have been an important element in the political economy of extractives to persuade local governments and the constituencies behind them that they should welcome large-scale mining. However, the result has been that relatively inexperienced local governments have received sudden increases in investment budgets with little or no capacity for feasibility studies or monitoring and evaluation (Ponce and McClintock 2014). In addition, these new governments face the high expectations of communities on mining. Communities demand rapid and visible public works, while the political opposition is interested in seizing the resources by overthrowing the government. Finally, they face rigid bureaucratic control from central government (See Dargent et al. 2017).

Considering the literature on state capacity and extractive industries, these results are not surprising. There are a vast number of studies explaining the political paradox of abundance, which also applies to bad state performance at the local level. The simple mes-
The association between extractives’ windfall rents and the formation of weak state capacities is through the lack of accountability (Karl 1997). This applies when governments do not respond economically to their constituents but only to a few extractive companies. Thus, governments do not have the incentives to extract income from their constituents, or to promote alternative profitable economic activities for them. The constituents in turn have no interest in negotiating arrangements to hold governments accountable for their expenditures in favor of the public. Without this accountability, studies show that governments in extractive economies are more inclined towards ineffective intervention, clientelistic practices, and corruption (Ascher 1999, Ross 1999, 2001, Rosser 2006, Leite and Weidman 1999, Luciani and Beblawi 1987, and Gunn 1993).

Likewise, local leaders or elites could become rent-seekers and demand short-term jobs or gains (Levi 1988, Robinson et al. 2006, and Trovik 2002), abandoning requests for long-term investments in human capital, infrastructure, and productive activities to support the competitiveness of alternative economic activities. When elites are able to demand coherent public policies from the national state, these actors can counterbalance the rent-seeking actions of local governments and politicians, and help to build state capacities (Paredes 2013, Saylor 2014).

Examples of these problems are the large number of “white elephant” projects carried out by municipalities that receive Canon. The main form of rapid and profitable spending is the construction of buildings, monuments, and other public works. With these buildings, local authorities can offer a large number of jobs in a relatively short space of time to seek political support for re-election. A striking case study is that of Terata, a mine being developed by Southern Peru Copper Corporation an hour and a half by truck from the city of Moquegua in southern Peru. Perla (2008) describes how very large sums were received through Canon ($20,000 per inhabitant), which resulted in short-term employment creation but to little or no productive effect. The municipality had built a market, but there was nothing to trade, so it had been taken over for municipal offices to the extent that public sector officials had three secretaries each, que no saben ni donde sentarse – who did not know where to sit themselves.

Fearful of low levels of competence and the possibility of corruption, the Ministry of Economy and Finance (MEF) retained the money as a central fund and disbursed it monthly. This created delays and reduced the autonomy of local governments. In addition, up to 2010, instead of building capacities from the center and responsibility at the local level, the MEF launched “restraints” in local budget spending. The result was limited “trickle down” of institutional capacities (Dargent et al. 2017).

Because most governments lack the vision and capabilities, mining companies have begun to play an increasingly important role in social development activities for surrounding communities. This is largely because most conflicts are still caused by community complaints about benefits, jobs, and opportunities that do not materialize. The concept of a “social license to operate” emerged as an industry response to the local opposition and a mechanism to guarantee the viability of the sector (De Sa 2018). According to a World Bank study, many companies have considered the use of foundations, trusts and funds (FTF) as vehicles to share the benefits of mining operations with the surrounding communities (Wall and Pelon 2011).

This incursion of companies into fostering the development of communities represents another problem regarding the construction of local government capacities. Companies take on roles and responsibilities that are of the local governments or the central state. Communities thus begin to see the companies as providers of the main services for the communities, instead of demanding them from local governments. Local governments are seen as weak, without power or resources to meet community demands. In Peru, companies have formalized a “volun-
tary tax” agreed to in 2006 with the García government. This tax goes into a special fund under the control of the companies and raised 518 million soles in 2006 and 485 million in 2007 – some six percent of total tax revenue.9

Conclusions

Two aspects that we highlight in this analysis are the direct effects of the extractive industries in creating inequalities between groups, where we have focused on the inequities between rural and urban territories, and the institutional weakness of the state at the local level in carrying out inclusive development.

It is not impossible to end the curse. However, this essay indicates the importance of addressing fundamental problems. One is the centralization of the state and the bureaucracy, with limited capacity for subsidiarity. Another is the limited enthusiasm for diversification due to the satisfaction among political and economic elites with activities that are unsustainable and based on exhaustible resources. Finally, the third is the confusion over public and private roles, which makes it difficult to act on the lack of transparency and responsibility. Only a clear recognition of the deep roots of institutional imperfections, but also of the new causes, and strong policies that purposely compensate for these roots and causes can transform the apparent local curse of extractives into some form of blessing.

Endnotes

This essay draws heavily on previous work, in particular on “Comparative and Descriptive Analysis of the Effects of the Extractive Industry Boom on Social Indicators,” a policy paper prepared for the Natural Resource Government Institute in 2016.

1 In the same period, the annual average rate of growth in Latin America was 3.5%.

2 Stewart defines horizontal inequalities as those existing between culturally defined groups and not among individuals (see also Costa et al. 2017). The inequalities “between groups” are persistent historical constructions, principally of categorical couples such as female/male, black/white, immigrant/native, or rural/urban (Tilly 1999, 8).

3 This point comes from work coauthored with Thorp et al. (2012).

4 This paragraph draws on work coauthored with Thorp et al. (2012).

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