



Gas and Development: Rural Territorial Dynamics in Tarija, Bolivia

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Summary. — Framed by concepts of territorial project, social coalitions, and scalar relationships, we analyze rural territorial dynamics under conditions of rapid expansion in natural gas extraction. Analyzing recent economic, political, and territorial transformations of Bolivia's gas-rich region, Tarija, we argue that pre-existing territorial projects of a diverse set of subnational and national actors have: (i) shaped the influence of the gas industry on local dynamics; (ii) changed the scale relationships between local communities, the state, and companies; and (iii) mediated the transformation of territories in ways determined by the nature and aspirations of these territorial projects. © 2015 Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Key words — rural development, social coalitions, territory, extractive industries, Latin America, Bolivia

1. INTRODUCTION

While debates over the role of natural resources in development typically focus on the national scale, tracing links between mineral dependence, the quality of national institutions, and aggregate indicators of growth, poverty, conflict, and democracy (Auty, 1993; Collier & Hoeffler, 2005; Karl, 2009; Sachs & Warner, 2001), recent literature suggests the existence of a specific form of the resource curse that exists at the subnational level (Arellano-Yanguas, 2011, 2012). At the core of this curse are the distortionary effects that large royalty and fiscal transfers to local authorities can have on local economy and politics. The argument that fiscal transfers are damaging may appear counter-intuitive, given that local social movements frequently call for a greater share of the financial resources generated by extractive industries. However, Arellano-Yanguas (2011, 2012) has demonstrated that subnational authorities are frequently unable to invest these transfers in sustainable forms of growth and poverty reduction and that such transfers induce rent seeking among politicians and catalyze a range of socio-political conflicts as different groups contest access to and control over these resources or simply express vocal dismay at their ineffective use. These distortions lead to disappointing indicators of growth and poverty reduction in those regions where extractive industries are located (see also Ponce & McClintock, 2014).

The identification of these sub-national effects as a new form of resource curse is a vital contribution to the literature. Yet, we would also note that the phenomenon is not purely local, nor modern, nor curse. First, the production of (or escape from) the local resource curse is a scaled process involving interactions among sub-national, national, and supranational factors. Second, actors' responses to the availability of rents are very probably rooted in long-standing, historical ideas and projects. Third, the emergence of extractive industries transforms the social, political, and economic life of territories in complex and multiple ways that can remain

unrecognized if the analytical focus is only on whether a “curse” exists or not.

This paper seeks to capture some of the complexity that is at play when an extractive economy becomes consolidated in a territory. We do not argue against the existence of a local resource curse—indeed in some ways the territory we discuss might be said to have suffered a mild case of the resource curse, insofar as it has prospered far less than one might have expected given the scale of resource extraction that it has experienced (just as Ross, 2013, has identified curse like effects at a national scale in those countries that have performed less well than they “should” have given their large resource endowment). Nor is our purpose to argue against generic accounts and to claim that every case is complex and different. Instead we are interested in giving a fuller account of how extractive industries transform territories, and to identify themes that may not be adequately captured by the typical lists of factors that resource curse studies identify: e.g., “government capacity,” “corruption,” “rent-seeking,” “distrust,” “violence”, etc. We approach this complexity with three hypotheses in mind. First, the local effects of extraction depend considerably on the pre-existing structure of the rural and regional economy. Second, “imaginaries” and ideas regarding appropriate strategies for territorial development and the futures to which residents of these territories might

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aspire are significant in molding the effects of resource extraction, even when the rise of resource extraction also changes these imaginaries (Rodríguez-Carmona, Castro, & Sanchez, 2013). Third, these diverse imaginaries reflect the prior existence of distinct territorializing projects (c.f. Wilson, 2004) that intersect in different ways with the expansion of extractive industries, doing much to determine their final effects on local development. These projects foster, resist, mold and/or take advantage of such extractive investments in pursuit of a certain vision of territory. They are constituted by views on how space should be demarcated, governed, and used, by whom and to what ends, and embrace issues of identity and rules for relations with other territories and with other scales of government (Delaney, 2009). These projects are carried forward by actors—and more generally social coalitions of distinct actors—each pursuing the political and institutional changes required in order to render their projects viable (Berdegué, Bebbington, & Escobal, 2014; Coleman, 1970; Cox & Mair, 1991).

These struggles to define the institutions governing territorial dynamics frequently exceed the boundaries of the territory in question (Allen, 2011) insofar as actors and social coalitions pursuing distinct territorial projects operate through networks that connect them to other actors operating at multiple scales. In this sense, territorial projects are rarely if ever pursued at a single scale, and instead involve efforts to change scalar relationships. Often, and certainly in the case of mining and hydrocarbons, these scalar relations are not independent of the natural resources being mobilized or contested as part of a territorial project.

Likewise these projects exceed the boundaries of “the present.” They have long histories and are affected by memories and pre-extraction patterns of economic organization. Indeed, the social coalitions associated with a particular vision of territory can change over time, just as the territorial imaginations of particular actors can also change. The point is that coalitions respond to the arrival of extractive industry through the lenses of these pre-existing projects in ways that affect the impact of extraction on patterns of growth and poverty reduction within a territory.

Framed by these concepts of territorial projects, social coalitions, and changing scalar relationships, this paper analyzes the rural territorial dynamics that have been catalyzed by a rapid expansion in the extraction of natural gas in the Department of Tarija, Bolivia. Through an analysis of recent economic, political, and territorial transformations at both regional and municipal scales, the paper argues that the rise of natural gas extraction has: (i) changed the scale relationships that are inherent in pre-existing territorial projects; (ii) itself been affected by these projects; and (iii) transformed territories in ways determined by the nature of, and the aspirations underlying, a range of prior territorial projects. While the paper is not an assessment of whether Tarija is or is not suffering the local resource curse, we do argue that though development indicators have evolved positively, they have not departed significantly from national trends, and that this relatively muted impact to date has much to do with the three dimensions of transformation noted in the preceding sentence.

2. RURAL TERRITORIAL DYNAMICS IN MULTI-SCALE TERRITORIAL PROJECTS

(a) *Rural territorial dynamics and large-scale resource extraction*

Our study is located conceptually in the debate on *rural territorial development* in Latin America (Boisier, 2005; FAO,

2012; Schejtman & Berdegué, 2004). These approaches emphasize the interactions between economic, political, and institutional factors in defining patterns of resource access and productivity, and the implications for territorially differentiated development outcomes. In a context in which a number of governments in Latin America have been promoting the extraction of minerals and hydrocarbons as an accelerated means of overcoming constraints on fiscal resources and domestic savings and to foster growth and tackle high poverty levels (Bebbington & Bury, 2013; Kaup, 2013), these debates on rural territorial dynamics necessarily have to engage with debates on resource extraction and power relations (Bjorvatn, Farzanegan, & Schneider, 2012).

Extractive industry-based development strategies of the sorts promoted by governments in Latin America imply a dominant role for large-scale investments in determining the organization and use of rural space.¹ Such investments inevitably originate from beyond the territories in which resources are located, and frequently from beyond the countries. Furthermore these resources circulate as commodities in national and international markets. Consequently, the dynamics of such rural territories are affected by scale relations in which these rural territories become important nodes in supra-territorial economic and political networks (Bridge, 2008). Some authors (e.g., Boisier, 2005) have made the more general argument that embedding territories in processes operating at multiple scales can create space for local development within globalization processes, but that for this to occur requires the explicit socio-political construction of territorial projects that deliberately seek such local room for manoeuvre. For the specific case of extractive industries, one question, then, is what sorts of territorial project might create conditions that facilitate local development in the presence of large-scale mining and hydrocarbon investments. As the “local resource-curse” literature suggests, these conditions are not obvious, and frequently local governments and community organizations are unable to make effective use of the significant increase in local financial resources produced by resource extraction, and also lack the political weight to establish more or less symmetric relationships with international companies and national governments (c.f. Arellano-Yanguas, 2011; Bebbington, Hinojosa, Bebbington, Burneo, & Warnars, 2008; Hinojosa, 2012). Furthermore, as the case in this paper shows, spatial convergence need not only policies that affect the average income of local populations, but explicit policies that address intra-regional and intra-locality structural inequalities (see also Modrego & Berdegué, *this issue*).

(b) *Territorial projects*

The concept of territorial projects draws attention to the ways in which actors and coalitions negotiate and construct visions of what territories should become, how and by whom they should be governed, the economic activities, patterns of resource access, and public investments on which they should be based, and the ways in which resources and revenues should be controlled (see also Berdegué *et al.*, 2014). In this sense, this concept recalls that of territoriality (Delaney, 2009) which invokes the imaginaries, discourses, and practices that attempt to make one development strategy prevalent over others. Wilson (2004) relates the concept to the ways in which the state seeks to structure and control space through mechanisms such as public investments in infrastructure. For others, territorial projects or territorialities can hinge around the “re-spacing” of rural development (Marsden, 2004) or the emergence of new forms of governance based on the rescaling

of statehood in which the primacy of the national scale of political-economic life is decentered and other levels of government become more significant (Brenner, 2004). Rather than implying a “hollowing out, erosion, withering, or demise” of the state, such a rescaling involves a “transformed form of statehood” (Brenner, 2004, 34). In these processes of rescaling, multiple territorial projects, fostered and undertaken by different levels of government, might converge on the same space in ways that exist in synergy or in tension with each other.

Territorial projects do not, though, emanate only from states. Indeed, state-led processes of rescaling, and the territorial projects and social coalitions that underlie them, frequently encounter attempts by other groups (peasantries, indigenous peoples, landless laborers, small-scale entrepreneurs, regional elites, etc.) with distinct notions of territory and projects of resource governance (Bebbington & Bury, 2013; Escobar, 2008; Wilson, 2004). These subaltern or subnational actors often harness powers and instrumentalities at other scales (Slater, 1998), building alliances and coalitions to counter or re-negotiate state-led projects of re-scaling. These different territorial projects frequently reflect longer standing aspirations for resource use and control, and ideas of how territories should relate to other spaces and scales.

(c) *Social coalitions and institutional change*

Coalitions are often understood as groups of actors who coordinate how to deploy their resources jointly through processes of collective decision-making (Coleman, 1970). Coalitions might be understood as mobilizing both social and political capital (Fuchs, Minnite, & Shapiro, 1999) as they pursue their territorial projects: social capital residing in the exclusive networks that actors can mobilize in order to access resources, and political capital residing in the ability of some groups, through the accumulation of social capital, to influence broader decision-making processes. Such social and political capitals are not, however, sufficient for crafting viable territorial projects. The literature on resource-based development suggests the link between mineral wealth and subnational development also depends on the power balance within the country (Bjorvatn *et al.*, 2012) and a set of institutional and social arrangements (c.f. Dietsche, 2008; Rosser, 2006) that formally “devolve” authority at the same time as promoting investment in the territory, allowing mediation among conflicting territorial projects in ways that arrive at some degree of consensus. This institutional change can also lead to new forms of democracy that lead to the emergence of policy networks that are more effective in managing a resource-dependent economy (Orihuela, 2013) and to the formulation and implementation of economic policies for local territorial development (for example, through the mechanisms of neocorporatist democracy fostered by the Ecuadorian indigenous movements analyzed by Ospina Peralta, Santillana Ortiz, and Arboleda (2008)). The emergence of such territorialized institutions is not straightforward, especially in contexts where national governments might also seek to strengthen their control over the resources generated by resource extraction with a view to using them for national social and political projects. National government might also have an interest in reducing the scope for consensus building among territorial actors (and thus weakening the emergence of co-ordinated territorial projects that conflict with the government’s) or might unwittingly aggravate territorial disputes through other interventions. Indeed, some have argued that certain interventions of the current Bolivian government have weakened regional institutions and so created scope for

conflict (see Gustafson & Fabricant, 2011 and Farthing & Kohl, 2014 for discussions that throw light on such claims).

(d) *Scalar relationships*

Given the distinct territorial projects that different parts of state and society pursue through resource-based development strategies, it is probable that expanded investment in mineral extraction will lead to increased segmentation of the regional economic structure, new forms of social differentiation and conflict, and the emergence of new and potentially fragmented territorial identities. Such processes of differentiation and segmentation can elicit the emergence of new economic elites (de Janvry & Sadoulet, 2004) and integrate rural areas into national and supranational economies in new and diverse ways, as well as create conditions for the emergence of new forms of mobilization led by local actors seeking to use exercise voice through existing institutions. Examples of such processes have been described, for example, by Jaskoski (2014) who notes cases of effective local participation in the environmental impact assessment of mining projects in Peru, and by Yanez-Pagans and Machicado-Salas (2014) who note the emergence of local monitoring capacity. Prior and emerging regional economic structures thus influence how local territories are related to other scales, the actors and coalitions that emerge to build or resist these relationships, and the ideas underlying different territorial projects (Neumann, 2009; Taravella & Arnaud de Sartre, 2012). In Bolivia scale relationships constructed and mobilized during hydrocarbon struggles involved the production of imaginative geographies of the country and its hydrocarbon resources (Perreault and Valdivia (2010), which in turn draw on historical memories of nationhood and struggles over the meanings of development, citizenship, and the country itself (Perreault, 2013).

3. TERRITORIAL PROJECTS, RURAL DYNAMICS, AND GAS EXTRACTION IN TARIJA, BOLIVIA

The case of Bolivia, until recently the second most important country in terms of natural gas reserves in Latin America after Venezuela (though since 2013 it has moved into fifth place as a result of new exploration activity in Argentina, Brazil, Peru, and Trinidad and Tobago: BP, 2014), illustrates how the territorial projects of different coalitions interact with large-scale extractive activity, how these projects begin to incorporate new relationships of scale as a response to the presence of natural gas, and how these projects go on to affect territorial dynamics. We address these themes for the case of the Department of Tarija, in Bolivia, with a particular focus on Villamontes and Entre Rios, two municipalities in its eastern lowland “Chaco” region, where gas deposits are located (see Fig. 1). Following a brief presentation of the methodology underlying this research we discuss how gas production has become part of longer standing as well as future-oriented territorial imaginaries of different types of actors in the region, how coalitions of these actors have crafted new projects of territorial intervention on the basis of these imaginaries, and the extent to which these processes have led to material changes in the outcomes and nature of territorial development in the region as well as in the social and political relationships that underlie this development. We then explore the social coalitions involved in different territorial projects. While we draw indicative conclusions regarding the local resource curse in Tarija, our primary concern is to show the complex ways in which gas has transformed these territories, how the rents it



Fig. 1. Study area.

generates have been used in ways affected by pre-existing territorial projects in the region, and how the economy of gas and the central government's gas-related interests have frustrated the emergence of Tarija-wide coalitions and more coordinated territorial projects.

(a) Methodology

This study was conducted as part of a continent-wide project on the drivers of rural territorial dynamics in Latin America. That project sought to identify: (i) how Latin America's territories were performing in terms of growth, poverty, inequality, and environmental quality; and then—for those territories that had experienced improvements in income, poverty, and inequality—(ii) the factors that explained such “successful” performance. A prior welfare mapping exercise in Bolivia (Hinojosa, Chumacero, & Chumacero, 2009; Modrego & Berdegué, *this issue*) identified areas that had shown such improvements over an inter-census period (see Table 1). Several of these territories were in Tarija. The department was purposively selected for in-depth qualitative study on the grounds that it had also experienced rapid and significant growth in natural gas extraction since the early 2000s, meaning that the case would allow the overall project to consider how extractive industries interact with territorial dynamics, and how far gas extraction might be a driver of a territory's improvements in income, poverty, and inequality. Two municipalities, Villamontes and Entre Rios, were selected for more in depth case study research. The municipalities were

selected on the basis of their important gas deposits, as well as our prior research experience (Humphreys Bebbington, 2010, 2012; Humphreys Bebbington & Bebbington, 2010) and the longstanding institutional presence of the Center for the Regional Development of Tarija (CERDET) in each of them (CERDET, 2006). Fieldwork, carried out during 2009–10, included 130 semi-structured interviews with representatives of public and private sectors and community organizations, open-ended interviews with key informants from government, gas companies and coalitions, and participant observation of public fora. After an initial analysis of findings, validation workshops were held with representatives of different groups in Tarija, Entre Rios, and Villamontes. A further component of the research, not reported on here, modeled observable environmental change through satellite imagery (Hinojosa & Hennermann, 2012).

(b) Gas and the production of territorial projects in Tarija

Historically, the formation of territory in Tarija has reflected the combined tension and convergence inhering in efforts to combine multiple territorial identities into a shared “regional project” defined in contradistinction to some sort of “central” authority. Some projects are organized around a notion of “Tarija” defined in opposition to the country, while others revolve around a notion of “the Chaco” defined in opposition to the city of Tarija, and yet others around a notion of one part of the Chaco as distinguished from other parts (Lizárraga Aranibar & Vacaflores Rivero, 2007, 25).

Table 1. Change in demographic and social indicators in the 2001–12 intercensus period

	Bolivia	Tarija	Villamontes	Entre Rios
Population growth rate	1.7	1.9	1.1	1.0
Difference of literacy rates (15+ years old)	8.3	8.5	5.1	12.2
Difference of school attendance rates (6–19 years old)	3.8	6.1	8.8	5.9
Dwellings growth rate	39.1	47.7	115.0	41.6
Difference of percentages of dwellings with water provision from a public network	3.8	6.0	2.1	3.0
Difference of percentages of dwellings with electricity	13.8	17.8	9.9	16.0
Difference of percentages of dwellings with sanitation	6.2	−1.1	−1.2	13.3
Growth rate of dwellings with provision of some kind of cooking fuel	41.8	44.9	100.6	39.0
Growth rate of dwellings with provision of cooking natural fuels	−5.5	−5.9	−3.1	−4.3
Growth rate of dwellings with provision of cooking industrial fuels	73.1	74.2	197.9	361.1
Growth rate of pregnant women who attended a health center for delivery	54.9	62.3	108.6	126.8
Infant mortality rate (average 2005–10) (a)	45.6	37.2	34.1	44.5
Difference of poverty rates (2001 and 2011) (b)	7.9	5.2	n.d.	n.d.

n.d. is no data. 2001 and 2012: based on Census of Population and Dwellings of Bolivia, and Hinojosa (2013) for (a) and (b).

"To understand the territorial dynamics of Tarija you have to appreciate that Tarija has never been in the loop of national public investment because of the centralism that has characterized how resources are used Peripheral regions are absent from national policies and investment [The regional project for Tarija] was embodied in the program that Cossio [Tarija's then governor] presented in 2005 . . . a project that had a very clear identity that contrasted with the identity of the national government. . . . When we speak of territory, territory is expressed spatially. . . . The towns of Yacuiba and Villamontes identify Tarija as a city, not a department—they identify the city and its centralism as the source of all their ills. To counteract this, Villamontes has developed its own urban infrastructure as a counterweight to Tarija" (Project Director, Regional Government of Tarija, August, 2010).

"There's a big difference between Entre Rios and Villamontes. Entre Rios is pluricultural and has both agriculture and livestock sectors; Villamontes is based purely on livestock, combining ranching and river fishing among the Guarani. . . . In Entre Rios we are like the black sheep of the Department of Tarija: sitting between Tarija and the Chaco, we don't know where to seek support" (civic leader, Entre Rios, August 2010).

As the gas economy grew and became more contentious in the 2000s, it changed how these different territorial projects were articulated. Urban elites within the city of Tarija began to argue that the region's development should hinge around natural gas extraction, and that this in turn meant building a regional project by inserting the departmental economy into global processes of energy production and distribution. They argued that this insertion would generate fiscal resources that would expand opportunities and could be used to build large-scale infrastructure that would integrate Tarija not only with the rest of Bolivia but also with neighboring countries (Chile and Argentina: Humphreys Bebbington, 2010). This vision has indeed been born out, and one of the primary mechanisms through which this has occurred has been the construction of roads financed by gas revenues and linking the department more effectively to Santa Cruz, the highlands and Brazil.

"During my administration there were clear problems of roads connecting the Chaco to the rest of Tarija. People from the city of Tarija and from the Chaco really don't know each other because the Chaqueños are more linked to Santa Cruz. Because of this we began to propose building roads in order to more easily market the agricultural produce of O'Connor, the fish of the Chaco, the grapes and wine of other provinces. . . . To be able to use the [gas rents] we got permission from the central government. . . ." (Former Prefect of Tarija 2004–05, July 2010).

This was not, however, an entirely novel proposal, for agrarian capitalists, wine-producers, and others had long been calling for roads (Machicado, 2010). The difference was that gas and hydrocarbon rents were now being appropriated as a means of realizing these visions.

Elites from the Chaco have had similar visions, except at a more local scale. They have sought to increase municipal governments' control over gas revenues, promote linkages between municipal production and major urban markets, and more generally use gas to increase the standing and centrality of the Chaco:

"The Chaco was invisible in national debates, it was only after gas that it began to attract attention. . . . We took advantage of the period of disorder under the Sánchez de Lozada government to get laws passed that were specifically for the Chaco and that ensured that the money would not stay only in the city of Tarija. . . ours was a vision of regional autonomy, in which the Chaco would sit alongside the three big cities of La Paz, Cochabamba and Santa Cruz as an exporter to Argentina and Brasil." (Ex-mayor of Villamontes, September 2009).

"There's going to be a dramatic change in [Villamontes] when the road linking Bolivia and Paraguay is completed. Villamontes will grow and become a great city." (Farmer organization leader, Villamontes July 2009).

For their part, since the 1980s and more consistently in the 1990s, indigenous groups' have built a project based on the demand for the recognition of their ancestral territorial rights (Gustafson & Fabricant, 2011; Humphreys Bebbington, 2010).

"Since the 1980s they [Weenhayek leaders] have been charged with securing recognition for the TCO [territory] . . . titling has been achieved through contacts with representatives and senators in La Paz. . . [and] pressure and the threat of roadblocks, now only four communities remain to be titled" (Weenhayek leader, September 2009).

These indigenous territorial projects have also been molded by the expansion of the gas industry. On the one hand, the expansion is seen as a threat to their territory—and yet on the other hand, indigenous groups have sometimes come to believe that securing territorial rights in areas where gas fields were found would enable them to negotiate financial remuneration or compensation from government and hydrocarbon companies (see also Anthias & Radcliffe, 2013).

"In 2007, 2008, and 2009 the Prefecture signed commitments [for development projects in the communities] but nothing materialized. . . . you can write anything. . . but we Weenhayek know the power of our vote. . . . NN [anonymized gas company] is in our territory and that's why we pressure them. . . now the leaders have motorbikes and can get to meetings. . . Also NN2 [another company] gives money for projects which the municipal government then matches" (Weenhayek leader, September 2009).

Control of, or access to, gas revenues is thus central to elite and indigenous discourses alike, insofar as it provides the financial base with which to carry out their long-standing territorial projects. However, even though coalitions each see gas as a means to their ends, they pursue their different territorial projects in a tense and latently conflictive relation to each other. One consequence of this tension has been to weaken the possibility of crafting a Tarija-wide project for "gas and development." By the same token, national actors' projects have conflicted with these coalitions' territorial visions. This has been clear in the on-going struggle between Tarija (as well as other lowland regions) and the MAS central government regarding the election of departmental prefects and the distribution of gas revenues between the treasury (i.e., the central government located in La Paz) and subnational levels of government (Humphreys Bebbington & Bebbington, 2010). These tensions also reflect deeply rooted prejudices and longer standing conflicts between the territorial projects of coalitions from Bolivian lowland departments and those of the central government and highland peoples (Perreault, 2013). The tensions were made particularly clear in 2010 when a new politico-administrative unit, the Gran Chaco, became an "autonomous region" within Tarija, negotiating with the central government that any fiscal transfers it received from gas would go directly to the Gran Chaco, and no longer be controlled by the Department of Tarija. This in turn weakened the departmental government's project for Tarija, which appeared to have been a primary objective of the central government.² In this sense, by building a link to central government, Gran Chaco strengthened its own territorial project, weakened that of the department and in turn strengthened the central state's own view that Tarija's gas revenues should be governed under the tutelage of central government in ways that would ultimately consolidate its own, quite explicit, territorial project:

"When President Evo Morales assumed power, and began to rebuild the presence of the State in the economy and broaden the base of social rights. . . he also involved the Armed Forces in this expansion of the state. . . If in addition we also consider their involvement in road building, the distribution of national rents (through Renta Dignidad, Bono Juancito Pinto, Bono Juana Azurduy) and the control of border territories previously dominated by local *caciques* and local mafias, what

we have now is a strategy of renewed territorial expansion of the State through its own structures of coercive power” (Vice President of Bolivia, [García Linera, 2010](#), pp. 409–410).

(c) *Social coalitions and territorial projects in Tarija, Villamontes and Entre Ríos*

(i) *Elites and urban coalitions*

There are clear and distinguishable elites based in the urban settlements of Villamontes, Entre Ríos and the city of Tarija, even if these elites still retain important ties to the countryside and invest in agriculture. In Tarija this group includes upper-middle and high-income family networks who invest in agribusiness, construction, media, transport, health, education, and legal services; it also includes the Court of Justice authorities, intellectuals, and the military. Some of these people are members of right and center-right political parties and also belong to Masonic Lodges and social clubs. Traditionally, this group has controlled the departmental government (*Prefectura*) and Tarija’s city council (regardless of the party in power). Over the last decade and a half, they have used these positions to build an argument for investing in gas-generated fiscal revenue linked to a longer standing territorial project. This project hinges around the creation of a bi-oceanic corridor linking Tarija to Santa Cruz and on to Southern Brazil to the east, and to the Pacific coast to the west. This corridor—which is also part of a far larger vision of regional integration for South America ([Cortez, 2012](#); [Humphreys Bebbington, 2010](#); [Pieck, 2013](#))—would facilitate exports of wine, *singani* (a popular spirit made from grapes) and vegetables from areas that have no gas potential. This project has been carried forward through two main mechanisms: by investing resources in road construction; and by using departmental government revenues to make strategic investments in diversified agricultural production networks between Entre Ríos and the city of Tarija and other western provinces which could then take advantage of this new road infrastructure (see [AUTAPO, 2009](#)).

Traditional urban elites from Villamontes are comprised of “extended families” that have, through access to public office, been able to combine economic power with political power. With urban growth occurring since the 1990s, these elite groups—most with strong roots in local agriculture—are increasingly engaged in commerce and the provision of services. The younger generation of this elite is largely urban and gains access to political power either through positions in local government or other state agencies, while at the same time keeping close ties with their families who continue to live in rural areas and are engaged in cattle breeding. As indicated by [Cortez \(2012\)](#), these rural connections influence the decisions taken with regard to public investment and regional alliances. Investments have again hinged around road-building but also the construction of marketing infrastructure for agricultural produce.

The urban elite of Entre Ríos is both weaker and younger. It has emerged much more recently, and remains closely linked with the city of Tarija for reasons of proximity. This elite moves back and forth between the two cities, and is employed in public administration, commerce, and small-scale services. Again, its political power derives from controlling the municipal administration. Its territorial project is much less clearly articulated and mostly hinges around improving accessibility and ties between the city of Tarija and rural producers in Entre Ríos. This is a project that also sees the availability of gas rents as a means of achieving this vision through

investment in road-building, as shown in interviewee quotations above.

(ii) *Rural actors and coalitions*

Rural Villamontes and Entre Ríos have historically been occupied by ranchers, peasants, and indigenous peoples. Since the exploitation of oil and gas, hydrocarbon operations also make up part of the rural landscape. The Land Reform of 1953³ structured the consolidation of these different groups of actors insofar as it created legislative and political means for them to gain access to land. The reform resulted in a *de facto* occupation by urban and migrant farm-working families many of whom, on gaining access to land, steadily became medium- and small-scale ranchers (livestock raising being the defining economic activity in the Chaco, especially Villamontes). In addition, during the Land Reform process indigenous groups continued to be driven onto more remote, less productive areas or ended up as workers (and in the worst cases, forced labor) on ranches ([Gustafson & Fabricant, 2011](#); [Humphreys Bebbington, 2010](#)). These production conditions limited indigenous peoples’ options to fishing, small-scale agriculture, and above all the need to sell their labor to ranchers (because their own lands were insufficient to guarantee social reproduction).

Leaders of ranchers’ and farmers’ organizations have been closely linked to urban centers in both Villamontes and Entre Ríos. They have sought to participate directly in municipal government and build alliances with political parties in regional and national government. Given the centrality of ranching (and the lack of water for agriculture), the political clout of Entre Ríos’ farmers has been less than that of the organization of Villamontes’ ranchers. Furthermore, ranchers in Villamontes have formed alliances with all levels of local and departmental governments while, in Entre Ríos, efforts have largely focused on strengthening relations with the departmental government.

The 1952 land reform did somewhat less to consolidate the land rights of a regional peasantry. This peasantry has been dedicated primarily to crop cultivation and is composed of members of the local population as well as migrants who are from highland Tarija and the neighboring departments of Potosí and Chuquisaca. As these families were not native to the region, they benefited less from the land-titling process ([Chumacero, 2012b](#)). Furthermore, they have been far less able to gain access to positions of political or bureaucratic power in municipal and departmental government (municipal elections began in the early 1980s). However, since the early 2000s departmental and municipal peasant federations have gained greater political leverage by offering clientelistic electoral support to national political parties. Thus, for instance, the peasant federation of Villamontes (a grassroots organization that represents farmers but not ranchers) supports the Movimiento al Socialismo (MAS), which has been in control of central government since 2006, in order to secure farmer representatives in the Legislative Assembly of Tarija and the country’s Plurinational Assembly (the new title for Bolivia’s Congress).

Indigenous Guarani, Weenhayek and Tapiete groups who historically occupied much of the Chaco, have suffered significant reduction in their access to land and natural resources as a result of dispossession and other processes ([Kay & Urioste, 2007](#)). However, they remain important actors within the rural economy and develop multiple livelihoods strategies that combine commercial fishing, agriculture, production of simple handicrafts, small-scale cattle husbandry, and migration. Since

the 1990s, supported by NGOs, activists and the Church, and in a context in which international conventions such as the ILO Convention 169 recognized indigenous peoples' rights, their levels of organization have strengthened (Gustafson & Fabricant, 2011; Humphreys Bebbington, 2013) and their presence has increased in regional and national politics. In Tarija, indigenous organizations emerged in the late 1980s, along with other lowland groups especially from within the department of Santa Cruz. One of the first was the Asamblea de Pueblos Guaraníes (Guaraní Assembly or APG), of which the APG Itika Guasu in Entre Ríos became a part. The organizational process of the Weenhayek in Villamontes began somewhat later and in more geographically restricted areas (Humphreys Bebbington, 2010, 2013), while the Tapiete (a group of less than 100 in Bolivia) are poorly organized (CERDET, 2006).

While different segments of the rural population have therefore found organizational strategies and ways of engaging national and departmental institutions that give greater visibility to their territorial projects, they have been chronically unable to develop coalitional relationships among themselves. This reflects three primary facts: first, these three groups—small scale ranchers, peasants, and indigenous peoples—all compete for the same scarce land resources; second, longstanding differences, grievances, and prejudices have existed between highland peasants and lowland indigenous people and complicate possibilities of coalition building; and third, indigenous groups have long found it difficult to collaborate among themselves (as reflected in the difficulty that different Guaraní captaincies have in agreeing on common platforms). Indeed, rather than form coalitions these groups have at times engaged in pitched battles over access to land as well as over how indigenous people in Tarija will be represented and by whom. As a result, no hints of articulated rural or subaltern territorial projects have emerged in Tarija, leaving political space open to projects conducted from urban centers and by the national government.

(d) *Social coalitions and institutional change after the gas war*

In the early 2000s, the then center-right national government, in alliance with traditional political sectors of Tarija and large hydrocarbons companies, sought to expand the production of natural gas for export to Mexico and the US via Chile (Humphreys Bebbington, 2010). This resulted in a dispute with other groups and other parts of the country that ultimately triggered the so-called “gas war” in 2003, reflecting the struggle for control over hydrocarbon rents as well as for the sovereignty of Bolivia's natural resources (Laserna, Gordillo, & Komadina, 2011; Molina, Laserna, Miranda, & Zaratti, 2009; Perreault, 2006, 2013; PIEB, 2005). The conflict over gas reflected the growing empowerment and organizational capacity of popular sectors under the auspices of the emerging Movement Towards Socialism (García Linera, 2010), and a struggle among different coalitions in Bolivia to impose their particular territorial projects, pitting a vision for an integrated plurinational state against a model of sub-national autonomies led by regional elites (Hinojosa, Chumacero, Cortez, Bebbington, & Bebbington-Humphrey, 2012; Perreault, 2013). Conflicts surrounding the distribution of hydrocarbon revenues subsequently led to devolved powers and authorities for sub-national governments and indigenous peoples, as well as legal, fiscal, and constitutional reforms linked to revenue redistribution, state ownership, and control of almost all natural resources other than land.

While the “gas war” was national in its resonance, the fact that the majority of Bolivia's gas reserves were located in Tarija meant that this was a national struggle over a subnational space (three major gas fields in Tarija Sábalo, San Antonio, and Margarita produce some 70% of Bolivia's natural gas, and the Department has nearly 85% of the country's known gas reserves: *Fundación Jubileo*, 2013). It also meant that the territorial projects of all actors and social coalitions in Tarija necessarily became embroiled in national politics and national policy disputes. The centrality of natural gas to Bolivian development and political economy (Molina *et al.*, 2009) meant that there was no way for political actors in Tarija to avoid having their projects and relationships affected. Their territorial projects *had* to be articulated with the gas question—and as a result, these different actors progressively sought to make gas functional to these projects. They sought to do so, however, in a context of acutely asymmetric power relations—relations in which the central government and hydrocarbon companies were far more powerful, and in which relationships among actors *within* Tarija were also asymmetric. Furthermore, actors pursued these projects in a national context in which the election and re-election of a MAS government meant that the political leverage of actors within Tarija shifted substantially, with peasant and landless groups aligned with the MAS gaining power, while urban conservative and white elites lost leverage.

Three types of “gas effect” on territorial projects are particularly important. First, the national strategy of “development through gas” has meant that different agencies of the national government have become much more active and assertive within Tarija in an attempt to create conditions that would facilitate public and private hydrocarbon companies' access to gas. For instance, the national hydrocarbons company, YPFB and the Ministry of Hydrocarbons and Energy appear to “guide” the processes of prior consultation that they implement such that the results align with their mandate to grant contracts for exploration (Bebbington & Bury, 2013; Schilling-Vacaflor, 2012). The effect is that local groups, especially indigenous populations under whose claimed territories much of the gas is found, have become increasingly vulnerable to decisions taken outside their territories and the region (Chumacero, 2012b; *Fundación Tierra*, 2009). Operations of the National Institute of Agrarian Reform (INRA), which regulates the allocation and control of land and territory, also appear to facilitate the extraction of gas. Since the early 2000s and particularly under Evo Morales' government, the agrarian reform gave indigenous and peasant communities title to more than 16 million hectares of common land, mostly in the eastern and Amazonian lowlands. However, titling has largely stalled for those territorial claims that are located in areas with gas deposits, while private lands which overlapped with proposed gas infrastructure and gas exploration/production have been titled more quickly, leading to the often heard complaint from indigenous leaders that the land titling process has done more to secure the land rights of third parties within their TCOs than secure the territorial integrity of indigenous groups. The suspicion has been that the gas companies have preferred to deal with private land owners and not indigenous groups to negotiate surface rights. For instance, many individual farmers' lands located along the Tarija-Entre Ríos-Villamontes road that runs parallel to a principal gas pipeline were titled and then subsequently expropriated in order to extend both the pipeline and the road. Notably, INRA's work in those areas was financed by TRANSREDES, the company in charge of the pipeline (Chumacero, 2012a) (see also Fig. 2).

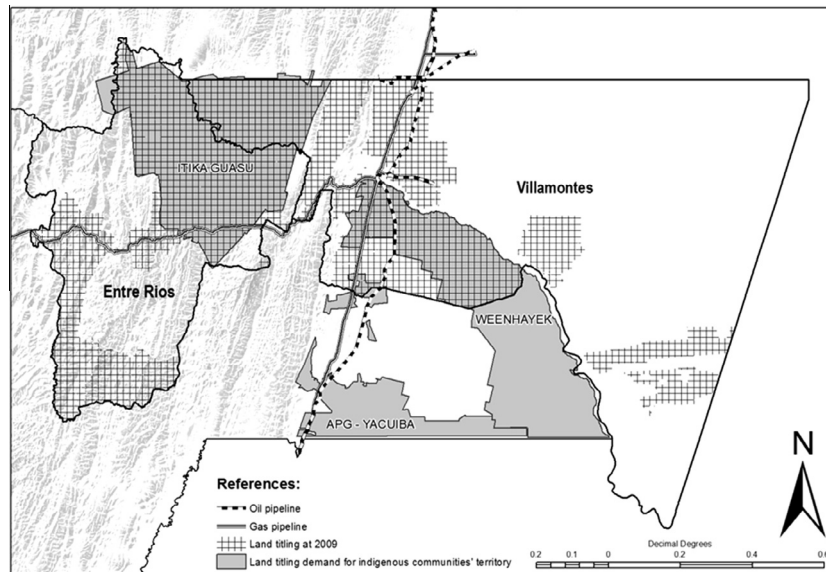


Fig. 2. Land titling, indigenous territories, and pipelines in Entre Rios and Villamontes.

Similarly, Repsol appears to have advised INRA on where to recognize private land titles and, like TRANSREDES, paid INRA to conduct the land titling process in within the TCO Itika Guasu.

Second, and in the face of the presence of these national and transnational actors, elite coalitions and indigenous and peasant organizations alike have oscillated between confrontational and clientelistic strategies as they pursue their territorial projects and seek access to a portion of the revenues generated by gas. The effect has been to weaken these organizations, as well as any possibility of coalitional relationships among them. For instance, federations of indigenous peoples that were created in order to pursue territorial agendas (such as the CCGT, the Council of Guarani Captains in Tarija, and ORCAWETA, the Organisation of Weenhayek Captains of Tarija) have also become vehicles for engaging in client-patron relationships with gas companies as well as with the national government. This strategy of seeking gas-rents has complicated relationships among indigenous organizations and also reduces the development impact of gas rents.

“The Chaco has improved in terms of cement, but not in the quality of life of rural people . . . There is no support. The funds generated by hydrocarbons . . . don’t generate resources to allow an escape from poverty . . . Today there are consultation mechanisms, but they have also become instruments of blackmail. . .” (M.F., Company representative, Santa Cruz, August 2010).

“Those who pressure hardest are the indigenous people, but they’ve developed bad habits and live by fleecing the oil companies, demanding money instead of development projects.” (Ex-mayor of Villamontes, September 2009).

“Before [the gas boom] our livelihoods were based on the collection of wild fruits and honey, hunting and fishing until August. . . women used to cultivate for feeding their families only. . . in August the elders used to clean their plots to then crop maize and anco [a local vegetable]. . . in the rainy season women used to collect carob tree fruits for *chicha* [a traditional drink] or flour to feed the household until the dry season. . . Now, with the arrival of gas companies into the community, everything [referring to the companies’ social corporate activity within the community] has become a business”. (A.P.A., Leader of the Quebrachal Weenhayek community, July 2010).

A similar phenomenon is apparent among public institutions. Thus, while most public authorities agree that gas

extraction should be expanded, they disagree on how gas revenues should be distributed within Tarija, and how the expenditure of these revenues should be controlled. For example, the Gran Chaco province lobbied for an *ad-hoc* law (Supreme Decree 138, 15/10/2009) to be recognized as an autonomous region in order to receive gas revenues directly from central government and so avoid any influence from departmental authorities over the use of these revenues. In these disputes, and reflecting the new constellation of national power embodied in the MAS government, the principal losers within Tarija have been the old political class and the traditional parties (Seoane, 2005; Vacaflores & Lizárraga, 2005). In their place, a new regional political class has emerged, composed of farmers’ unions, regional civic committees, local development committees, and the leadership of indigenous organizations. However, relationships among these factions are complicated, as they each fight over the distribution of hydrocarbon revenues in ways that complicate coordinated development planning (Chumacero 2012a; Cortez, 2012; Hinojosa, 2012):

“Although rural territorial dynamics here are a product of the absence of planning, there *are* planning instruments . . . they just aren’t taken into consideration . . . those who make decisions don’t receive any technical advice. For instance, Entre Rios has a land use plan but doesn’t use it.” (NGO staff member, Tarija).

To reiterate, this ultimately undermines the possibility that a Tarija-wide coalition might emerge and articulate a shared set of territorial projects for the department.

“In Villa Montes each group defends its own position, there’s no sense of a collective role, there’s no interaction among them to elaborate a project for the whole of Villa Montes. Seen from Tarija, it is as if the only thing that unites them is the idea that “the centralism of the city of Tarija is to blame” (Project Director, Departmental Government of Tarija, August 2010).

The third effect of gas has been through the revenues that it has generated, which have been far greater than territorial actors initially imagined.⁴ During the initial promotion of gas in Tarija, local actors already knew that they would receive royalties because Bolivian legislation had stipulated since 1955 that hydrocarbon producing departments receive 11% of royalties (this legislation came about in response to demands

from the Santa Cruz elite). The Tarijeño elite had presumed that gas royalties would be moderate and would be used to help support their territorial projects based on an agrarian capitalism grounded in export crops, wine, livestock, etc. However, in the mid-2000s the boom in gas exports, the spike in oil prices in the world market, and Tarija's renegotiation of its contracts with Brazil and Argentina giving it a much higher price, all meant that these departmental revenues became extremely large. This in turn attracted more attention from the central government and other actors in and beyond the region than Tarija's elite had initially anticipated. On the one hand this catalyzed conflicts between Tarija and the center, and on the other hand meant that a wider range of "territorial projects" saw royalty and tax revenues as the means to their fulfillment. It also meant that these projects began to imagine far larger types of infrastructure investment than had initially been the case: larger roads, larger marketing centers, etc. Also, in both Villamontes and Entre Ríos, the "gas effect" enabled the peasantry to negotiate their political support in exchange for gas-fueled attention to and recognition of their demands. Indeed, in 2007, the departmental peasant federation was able to negotiate with departmental authorities an annual cash transfer of approximately US\$285 per family farm for the purchase of animals or farming implements (this amount increased to US\$570 in 2012). This arrangement, known as PROSOL, was the only one of its kind in the country.

(e) *Territorial dynamics after gas*

While the expanded investment in gas extraction has interacted with territorial projects and political alliances in complex ways, its effects on income, poverty, and distribution to date have been more limited. This seems to be related to the prior economic structure of the region. While economic dynamism in the majority of Bolivia's lowland and valley regions can be explained by growth in medium- and large-scale commercial agriculture, Tarija's regional economy has been characterized by greater diversity (see Table 2). Significant sectors of the economy have included: oil in the southern-central region (Bermejo) up until the early 1990s; an increasingly dynamic grape, wine and *singani* producing sector since the early 1990s, concentrated in the valleys of the central and western provinces; significant trans-border commerce between Tarija and Argentina; and, since the mid-2000s a more widespread consolidation of small- and medium-size enterprises across sectors (services, agriculture and cattle ranching, agribusiness, and retail), many of them triggered by public investments and expenditures financed by the revenue (via tax redistribution) and income (via employment) from the

hydrocarbons sector (see also Table 4 for the case of Villamontes and Entre Ríos). This diversified economic structure has continued to be the main driver of patterns of income, poverty, and distribution in the region.

The role of Tarija's capital city and other smaller urban centers has been central to these local strategies in so far as they became market places and centers of basic services for agriculture and agribusiness activity (Beck, Paniagua, & Preston, 2001). As a result, the composition of departmental economic activity has remained relatively similar, except for the significant increase of the public sector administration (by about 7% during 2001–11) (see Table 2). Overall, the impact of these dynamics on social welfare has been positive: the percentage of the population with unsatisfied basic needs declined from 70.3% in 2001 to 63.5% in 2011 (though this reduction is slightly lower than the reduction of 8.6 points observed at the national level). Poverty rates in Tarija fell from 61.6% to 41.3% in the same period, two percentage points more than at the national level (Hinojosa, 2013, based on figures from Bolivia's Institute of Statistics).

The rural economic dynamics of Villamontes and Entre Ríos have not changed substantially since the exploitation of gas expanded across their territories (see Table 3). In both municipalities, the population occupied in services related to the gas sector, such as construction, hotel and catering, unskilled services and trade has increased (see Table 4) and there has also been some internal migration from other regions of the country to Villamontes. However, the principal multiplier effects deriving from the gas industry (the provision of high-tech services, the creation of sub-contractor companies, etc.) have not been felt in Tarija but instead in the far larger (and distant) city of Santa Cruz, the hub of the hydrocarbon industry and the commercial capital of Bolivia, reflecting the concentration of urban services, infrastructure, and human capital there.

Natural gas's most significant impact on the economies of Villamontes, Entre Ríos, and the city of Tarija has derived from transfer of gas-generated tax revenues to the region. This revenue has been invested primarily in transport infrastructure, social infrastructure, urban development, rural electrification, education, and health services in rural areas and, most recently, water infrastructure (Chumacero, 2012a; Hinojosa, 2012). This infrastructure has increased access to basic services and there are also some early signs of asset accumulation among indigenous groups (Cortez, 2012). However, as noted earlier, while income poverty has declined in the same period (Hinojosa, 2012), it has not declined any more rapidly than at the national level; and while Tarija has among the highest human development indices, these measures may be distorted by natural gas production. To date, then, natural

Table 2. *Change in economic activity in Tarija during 2001–11 (percentage of occupation)*

Sector	Tarija		Bolivia	
	2001	2011	2001	2011
Agriculture, forestry and fishing	25.5	27.4	29.3	32.3
Other sectors	31.7	23.0	32.7	27.8
Commerce and automobile servicing	18.9	18.8	16.9	16.4
Building	8.3	10.0	6.1	7.5
Public administration	3.0	9.1	2.4	3.2
Transport and storage	6.0	4.5	5.5	5.5
Health and social assistance	2.0	3.6	2.0	2.5
Education	4.6	3.5	5.0	4.8

2001: Census of population and dwellings of Bolivia (INE, 2005); 2011: National households survey (INE).

Table 3. *Change of main economic occupation in Villamontes and Entre Rios (percentages)*

	Villamontes				Entre Rios			
	2000		Around 2010		2000		Around 2010	
	Men	Women	Men	Women	Men	Women	Men	Women
Agriculture and small scale livestock rising	33.3	22.2	27.8	24.4	50.0	26.2	50.0	35.7
Livestock rising (medium and large scale)	22.2	6.7	22.2	7.8	7.1	2.4	4.8	4.8
Fishing	13.3	6.7	14.4	8.9	0.0	0.0	7.1	2.4
Hydrocarbons-related activity	1.1	0.0	1.1	0.0	0.0	31.0	2.4	0.0
Other sectors	30.0	64.5	34.4	58.9	42.9	40.5	35.7	57.2

Based on 130 semi-structured interviews with representatives of local organizations (2010).

Table 4. *Benefits from hydrocarbons activity in Villamontes and Entre Rios (percentage of responses)*

	Villamontes	Entre Rios
Employment	7.0	16.0
Employment for men	14.4	11.2
Employment for women	7.5	8.8
Roads	11.4	14.4
Machinery and equipment	3.5	6.4
Health infrastructure	13.4	15.2
Education infrastructure	10.9	16.8
Training	7.5	0.8
Entrepreneurship initiatives	3.5	0.8
Increased commerce	4.5	5.6
New markets	3.5	1.6
None	11.9	2.4
No opinion	1.0	0.0

Based on 130 semi-structured interviews with representatives of local organizations (2010).

gas has mostly been associated with a sharp increase in investment in infrastructure and social programs, in ways that are consonant with the demands of prior territorial projects and also, in some cases, with corruption. There is not yet strong evidence that this infrastructure has led to significant improvements in income-based poverty reduction and so, while Tarija may not show strong evidence of a local resource curse, nor is there evidence of any substantial gains from the gas boom. This is particularly true in the perceptions of indigenous people.

“The main occupation of men and women before the arrival of gas companies was fishing, though sometimes there is fish and others there is not, selling it is also uncertain... Also, poor people had no jobs. When there was not food we had to go somewhere else to look for tusa [a local crop] for our breakfast... Women used to knit *llicas* [bags made from a local cactus]. When the gas companies arrived to the community, their representatives only promised [support] but did not give anything. We do not know what their projects for the community are. We know that companies make a lot of money, but very little in the community has changed... only a few people [referring to those community members who relate to a particular activity of the company] have benefited” (J.P.R. Leader of the Weenhayek community, Resistencia, July 2010).

In addition, some interviews identified trends that suggest elements of a nascent resource curse. Ranchers interviewed in Villamontes were concerned that the sector's productivity has fallen, that their cattle stock has not grown significantly, and that they were suffering increased competition from farmers in Santa Cruz and contraband beef entering from Argentina. The possible implication is that the expansion of the gas economy has been accompanied by an inhibition in investment among ranchers, and the strengthening of the Bolivian currency has fueled imports of Argentine meat.

Farmers also grapple with increased employment costs because of a dwindling labor supply as the available workforce moves into higher-paying sectors such as construction.⁵

“Since the companies came here, work in the countryside has changed a lot. Before, people would come looking for work, but today you can't find workers, they all go to work for the companies... The companies improve one thing but undermine the development of other sectors.” (Local leader, Entre Rios, August, 2010).

Perhaps the principal adverse consequence of national government intervention to promote the expansion of gas exploitation in Tarija has been the increased conflict over gas rents. This in turn has weakened social cohesion in the department as well as in the two municipalities. This is not to invoke a romanticized image of a past in which there was great social cohesion—but it is to note that effective territorial development requires that distinct actors are able to negotiate, compromise, and collaborate. These capacities have been weakened by conflicts over gas. Thus, while shifts in power relations at the national level have led to the strengthening of the *Movimiento al Socialismo* (the political party in government since 2006), with important and positive consequences for the country's ability to benefit from its gas revenues, the high level of fractionalization at a sub-national level suggests that a large part of these increased gas revenues has been wasted. While this pattern would confirm the argument that a strong national government tends to be correlated with hydrocarbon rents making a positive contribution (Bjorvatn *et al.*, 2012) in oil-rich countries, it also suggests that a strong (national) government can co-exist with (or even lead to) segmented coalitions at a sub-national level that reduce the extent to which subnational territories are able to take advantage of national gains.

A second adverse consequence has been environmental. While at a departmental level, the aggregate effects of gas extraction on land cover and water availability seem thus far limited (Hinojosa & Hennermann, 2012), localized impacts have been significant. There are serious concerns regarding the potential future impact of expanded hydrocarbon extraction on the Serranía de Aguarañe ecosystem (Humphreys & Bebbington, 2012). These different impacts have affected communities' water, soil, and forest resources. Additionally, the construction of gas pipelines in the Pilcomayo River has fragmented the fishing areas of the Weenhayek (CERDET, 2006).

There is environmental damage going back to earlier operations of YPF, though in reality it is not as dramatic as is claimed. The big problem is that not much is known... Petrobras is careful when it releases saline water into the River Pilcomayo because it doesn't want to lose its ISO certification. Other companies store their water in the subsoil and in those cases we don't know the impacts. What is true is that the operations do contaminate. By definition they contaminate, above all in the exploration phase. Indigenous territories and colonists have a right to be compensated by the companies. Currently though,

companies pass the bill to the state (YPFB) and this makes no sense.” (YPFB representative, Tarija, August, 2010).

Compensation for environmental damage and measures to avoid it may need explicit public and private policies ([Ospina, Bebbington, Hollenstein, Nussbaum, & Ramírez, this issue](#)).

4. CONCLUSIONS

In this paper we have argued, through a case study of the gas producing Chaco of Bolivia, that the expansion of extractive industry transforms territories in ways that are clearly influenced by territorial projects of different coalitions of actors that precede the arrival of gas and the revenues that it generates. In the case of Tarija, the gas economy has strengthened territorial projects both of the central state as well as of sub-national governmental bodies in ways that have deliberately fragmented historical attempts to build a department-wide regional project with its primary locus of power residing in the city of Tarija. While the territorial projects of Guarani, Weenhayek and Tapiete indigenous groups have also been compromised by the rise of gas extraction, in the sense that the consolidation of their claims to legal territory has been truncated, these groups have nonetheless been able to mobilize financial resources for these projects in the form of direct compensation payments from hydrocarbon companies.

The narratives accompanying each of these territorial projects have also been transformed by gas. Control of gas resources, access to and use of revenues deriving from gas, and arguments over how those revenues should be distributed among different government jurisdictions and different social actors have become themes in all these narratives. These narratives and the regional political economy have thus become “hydrocarbonized” ([Humphreys Bebbington, 2010](#)). In a similar sense, the national scale has become a constitutive part of these narratives in that they each invoke, in different and new ways, ideas about how the national government should, with resources deriving from gas, be supporting these sub-national and local projects (see also [Berdegué et al., 2014](#)).

The combination of narratives and the social mobilization underlying these territorial projects have contributed to patterns of subnational institutional change that have changed how resources are allocated and invested in the region. Elite led projects that imagine a gas-based Tarija developing on the basis of intensified integration into national and international markets have led to large-scale investments in economic infrastructure, in particular in roads but also market infrastructure in Villamontes. Other elite led projects have led to investments in more spectacular and wasteful forms of

infrastructural consumption such as the palatial town halls and marketplaces gracing municipalities such as Carapari. Meanwhile the mobilization of peasant and small farmer groups has induced quite different forms of expenditure that provide cash transfers to significant parts of the rural population. To some extent, this resembles the strategy used by local coalitions elsewhere (c.f. [Jaskoski, 2014](#), for the case of Peru) which mobilize to take advantage of existing institutional instruments to influence the ways in which, and where, extractive industries expand.

At one level each of these uses of revenues generated by gas might be seen as rent-seeking. Indeed, the case study has made clear that different actors and coalitions have clearly sought to capture or affect the use of rents whether through occupying political office, trading political support for social programs or (in the case of central government) entering pacts with specific territorial actors with a view to weakening other actors.⁶ However, we have also sought to demonstrate that the reasons that motivate different actors and coalitions to capture rents and use those rents in particular ways reflect visions of territory that precede the gas boom. These territorial projects are therefore an important causal factor in determining how gas has affected the development of Tarija. Furthermore, these projects have grown out of the prior economic and cultural diversity of Tarija, the implication being that prior socio-economic structures of territories influence subsequent territorial dynamics not only through the productive and entrepreneurial capacities that they bequeath but also through the political actors and territorialial visions to which they give rise.

We insisted at the outset that the purpose of this paper was not to determine whether the resource curse had or had not been visited upon Tarija. We have presented data to suggest that Tarija has performed relatively well on development indicators but that this performance is not substantially different from Bolivia’s as a whole and also that it has much to do with the relatively diversified agrarian economy that preceded the gas boom. Thus, while the expansion of the hydrocarbon economy in Tarija has been accompanied by economic and social progress, this progress can be related to both national and historical trajectories of change and the ability of specific coalitions to direct public investment toward their territories and particular sectors, more than the exclusive results of sub-national expenditure of gas rents. In that sense, the extent to which gas has contributed to “successful” territorial dynamics in Tarija must be viewed as disappointing, in particular given the high expectations that were held by the regional population at the onset of the gas boom, as well as the official discourse of central authorities regarding the many benefits that a development strategy based on extractive industries would deliver.

NOTES

1. In the mining sector (less so in oil or gas), extractive industry can also be organized around small- and medium-scale producers. These are not, however, the producers envisaged by Ministries of Economy and Finance when they seek to support extractive industry as a national growth strategy ([Hilson & McQuilken, 2014](#)).

2. See <http://eju.tv/2009/10/regalas-para-el-gran-chaco/> for a debate on the change of transfers of gas royalty from Tarija to El Chaco.

3. The Servicio Nacional de Reforma Agraria (National Agrarian Reform Service) and the Land Distribution Scheme were reformulated and ultimately became the INRA Law (No. 1715 of October 18, 1996).

4. We are especially grateful to one of our reviewers for pushing us on this point and making clear its importance.

5. That said, another factor in the increasing cost of labor is immensely positive—namely the inability of traditional farmers to enforce historically exploitative labor relationships of indigenous people (though this change is due to longer histories of indigenous organizing and legal activism rather than the gas economy).

6. We have not spent time documenting corruption, as another form of rent capture, though clearly corruption has also occurred in Tarija.

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