



**Importing Energy, Exporting tensions
Capital expansion through hydroelectric dam in the
Amazons of Peru and Brazil**

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List of Acronyms

ANEEL	Agência Nacional de Energia Elétrica
APRA	Alianza Popular Revolucionaria Americana
BNDES	Banco Nacional de Desenvolvimento Econômico e Social
BRICS	Brasil Russia India China South Africa
CVRD	Companhia Vale Do Rio Doce
DAR	Derecho Ambiente y Recursos Naturales
ESG	Escuela Superior de Guerra
FDI	Foreign Direct Investment
IIRSA	Iniciativa para la Integración de la Infraestructura Regional
IMF	International Monetary Fund
ISEB	Instituto Superior do Estudios Brasileiros
ISI	Import Substitution Industrialization
ILO	International Labor Organization
MEM	Ministerio de Energía y Minas
MERCOSUR	Mercado Común del Sur
NGO	Non Gubernamental Organization
PAC	Programa de Aceleração do Crescimento
PT	Partido dos Trabalhadores
SPDA	Sociedad Peruana de Derecho Ambiental
USD	United States Dollars
UN	United Nations
UNASUR	Unión de Naciones del Sur
US	United States
WTO	World Trade Organization

Abstract

Over the past decade the Brazilian State and Brazilian private companies have started a new period of construction of large hydroelectric dams. In 2009 Brazil has found favorable economic and political conditions in Peru to import electricity. This paper analyzes the interactions of State-State and State-Capital driven by the different interests of the uses of electric energy. It is argued that the expansion of capital through hydroelectric dams depends on the degree of autonomy and capacity of the State(s) and Capital to pursue such projects.

Through the chapters the linkage between electricity, the extracting sector of mining and the current resource demand of minerals from China is stressed upon. Finally, while there have been considerations given to the unequal power relations of both States, there has also been claims about the necessity to understand the role of the Peruvian State as the facilitator of the process. In doing so a historical review of State construction helps to comprehend the phenomena.

Keywords

Hydroelectric dams, State, State-Capital, Amazons, Brazil, Peru.

Chapter 1 Introduction: Electricity and its *ties* to economic growth

Until nowadays, current patterns of development are “intimately tied” to the energy supply (IPCC 2007: 256). Energy has become in opportunities for private sector and matter of national security for many nation-states, specially the largest economies. At the same time the access to energy sources (e.g. oil) often entails the use of power (Harvey 2003). By taking the case of large-scale hydropower centrals, this research paper attempts to illustrate how the dynamics of State-State relations and State-Capital relations facilitates the expansion of capital in non-capitalist systems. In doing so, I will present the internationalization of the electric system of Brazil through the construction of hydroelectric dams in the Amazonian region of Peru.

The geographical expansion of capital represents to be a solution to the depreciation of excessive accumulated capital within an economic system (Harvey, 2003). Capital can be displaced through long-term investments that provide access to cheap resources (*ibid*). This is of interest to both State and private capital as they share the common function of capital accumulation. But the process of accumulation can lead to contradictions for the State which affects its second important function, to preserve its political legitimacy (Fox 1993). The State has to take different actions in order to balance its two main tasks. One of the most contested debates about the State is whether it can act autonomously from internal or external influences. The whole apparatus of the State is shaped by a set of institutions and actors. Jonathan Fox (1993: 12) stresses that focusing only on the autonomy of these “state actors” can be misleading thereby their capacity to act has also to be considered. The debate about the autonomy of the State is also addressed at the State-State level. This paper has been of interest to review the theory surrounding inequity of power between States. In these approaches it is assumed that a dominant State can influence the actions of the other(s) through different means of power. Nevertheless, to focus primarily on the *dominant* State can misrepresent its actions (Destradi 2010).

By building over the strong aspects of both approaches State-society and State-State approaches, this paper proposes an analytical framework to illustrate the interaction of State(s) and Capital.

Initial inputs

Brazil the last decade has become part of the most relevant actors globally, getting the place of the 6th largest economy in the world. In the context of South America, Brazil has reached a considerable economic asymmetry with the rest of the countries giving him a powerful and influential status. The asymmetry is also reflected in the total electricity consumed (table 1).

Table 1 Electricity consumption in South America in 2012

Country	Electricity consumption (billion kWh)
Argentina	104,70
Bolivia	6,30
Brazil	455,70
Chile	56,35
Colombia	38,82
Ecuador	14,92
Guyana	0,69
Paraguay	8,50
Peru	34,25
Uruguay	7,96
Surinam	1,44
Venezuela	85,80

Source: based on data from indexmundi 2013,

Brazil's electricity consumption is increasing at an average rate of 3,5% year (appendix 1) In comparative terms such amount represents 46,2% of the total consumption of Peru in 2012. The share of the electricity consumption in 2012 is 41,5% for industry, 26,0% for household, 17,4% for commerce and 15,1% to other sectors (EPE 2013). The two main demanding sectors, namely industry and household, have passed through recent domestic and external changes that influence in the increasing of electricity demand.

The current government of Brazil has launched distributive policies directed to low income classes of Brazil. The program "Luz para todos" aimed to offer permanent and good access to electricity to new homes and until 2010 reached to 2.6 million of families located in rural and poor areas (Portal Brasil, 2010). This "stimulus for economic and social development of the communities" (Portal Brasil, 2010b) resulted in the acquisition of electrical artifacts such televisions (79,3%), refrigerators (73,3%), water bombs for irrigation (24,1%) and other electrical equipment (ibid). The government highlights not only to have being able to accomplish a program of great scale in few time but also by subsidizing totally the costs for the new consumers (ibid).

Global economic changes leaded by Asia have increased the demand on resources. As most of the countries in the region, the Brazilian economy has been influenced especially by China demands. Brazil exports to China have increased from 2,1% to 26,0% in the decade of 2000s (appendix 2). Of the total share of exports from Brazil to China, iron ores and concentrates alone have the most important share (43,3%) (appendix 3) and represents the main export from Brazil (14,7%) (Annex 1). Companhia Vale Do Rio Doce (CVRD) is the second largest mining company and the main iron producer in the world and ranks as the main export company of Brazil. The mining and metallurgy sectors are the main consumers of electricity. CVRD alone has consumed 5% of the total electricity in Brazil in 2005 (CEDIB 2013).

The Brazilian electricity matrix is founded in the hydropower originated by 929 plants (Portal Brasil 2010b) which in 2013 produced the equivalent to 73,6% of total electricity generation¹ complemented with gas-fired generation (11,0%), biomass (3,8%), oil derivatives (5,1%), nuclear (3,0%), wind en-

¹ Data from the year 2005 shows 85,4% from hydroelectricity where 77,1% was indigenous generation and 8,3% belonged to the importation of the Itaipu dam located in Paraguay (OECD/IEA 2006: 1).

ergy (0,9%), and solar energy (<0,01%) (Ministério de Minas e Energia 2013). This amount situates Brazil in the third position of hydropower generation after China and Russia (MAB 2011). The government of the former President Lula da Silva of Brazil has launched the Programa de Aceleração do Crescimento (PAC, Accelerated Growth Program). PAC has two phases PAC 1 (2007 – 2010) and PAC 2 (2011 – 2014 and post 2014). PAC2 contemplates an investment of USD 58,6 billion in new hydropower dams. The interest of this paper is another goal of PAC: the internationalization of the Brazilian public energy enterprise, Eletrobrás (Zibechi 2012).

The construction of large-scale hydropower dams has become a State goal that joints actions of Eletrobrás, the Banco Nacional de Desenvolvimento Econômico e Social (BNDES, National Bank for Economic and Social Development) and private construction companies of Brazil. In the last years bilateral negotiations and in some cases the construction of dams have started in Argentina², Bolivia³, Ecuador⁴, Nicaragua⁵, and Peru.

In 2010 the States of Peru and Brazil have signed an agreement that considers the construction of hydroelectric dams to generate 6,000 MW year. The conditions for Peru included facilitate the concessions to (Brazilian) companies for construction and distribution of electricity for 30 years.

1.1 Research questions

The main research question proposed to guide the paper is:

How and to what extent does the need of electric energy influence the expansion of capital into non-capitalist systems in a context of State-State and State-Capital relations between Brazil and Peru?

Sub secondary guiding questions are:

- Which are the reasons of the Peruvian State and which are the gains with the hydropower dams?
- Which are the logics of interactions between State(s) and private capital?

² The Garabí project started to be planned in the decade of 1980, recent agreement in 2009 between Brazil and Argentina includes new studies to develop 1,800 to 2,700 MW. The project is part of IIRSA (M'Biguá 2009).

³ There is not yet an official agreement between Bolivia and Brazil but there are public interest for the construction of the dams Cachuela Esperanza (2,500 MW) and El Bala (2 400 MW) (CEDIB 2013)

⁴ The Ecuadorian government denounced inappropriate administration for the construction of San Francisco dam in charge of the Brazilian company Odebrecht (Aguirre 2010). The company accepted the terms in order to proceed (Reuters, 2008).

⁵ Queiroz Galvão is in charge of the construction of the hydroelectric Tumán, the most important hydroelectric project of the country. From the total cost estimated in USD 1,100 million, BNDES is providing a loan to cover 32%, Queiroz Galvão 47% and the rest other international banks. (EFE 2013)

1.2 Organization of the paper

The research paper includes four following chapters. Chapter two includes an overview of the theoretical approaches of State-society and State-State relations. Drawing from both approaches includes an analytical tool adapted for the purposes of this paper. Chapter three includes official documents, the identification of main actors and an historical review to State-building processes of both countries. Chapter four compress the whole analysis that provides the answers to the guiding question(s) which are addressed on the final chapter.

Chapter 2 Analytical Framework

The main topic which is investigated in this paper relates to the interactions between States, in this case Brazil and Peru, and private capital driven by the necessity to generate energy and transform as an essential means for the further accumulation of capital. This chapter first presents a conceptual framework to understand this capital expansion. It continues with an attempt to comprehend the State and the internal and external forces that influence and shape.

2.2 The geographical expansion of capital

The geographical expansion of capital takes a central place in David Harvey's work. Harvey (2003: 29) cites Arrighi who distinguished two "logics" in which capital acts: the "territorialist" and the purely "capitalist". The territorialist logic limits the actions of the State to a fixed territory. The capitalist logic is characterized by a constant movement and shifts by private actors over space. The temporality of their actions also distinguishes them from each other. Capitalist logic acts in a more limited period of time while the State, which, with exceptions, is a fixed entity over time. Despite these differences "[y]et it is also undeniable that the two logics intertwine in complex and sometimes contradictory ways" (ibid 2003:29)

For Harvey, if capital cannot find lucrative opportunities to keep expanding this can result in a crisis (or capital devaluation). Therefore, capital surpluses must be invested in new areas. Profits, then, can be generated through "geographical expansion" and "spatial reorganization" of capital (e.g. the opening of new markets). Meanwhile there are also "temporal shifts" done through investments in long-term projects, such as transport and communication that facilitate the mobilization of capital (Ibid). However, besides this *temporality aspect*, long-term projects are also considered in another concept of Harvey, namely as "spatial fixes" which take "many different forms of spatial reorganization and geographical expansion that serve to manage...crisis-tendencies inherent in accumulation" (Jessop 2006: 146). Furthermore, these different forms depend on other two aspects, a) what capital tries to fix, such as the case of "localized overaccumulation", and b) the ways of how it is done, as is the case of export of surplus capital in the form of new investment opportunities (as Harvey in Jessop 2006). Overaccumulation for Harvey (cited in Jessop 2006: 152) is understood as:

[A] condition of...surplus capital (registered as a glut of commodities on the market that cannot be disposed of without a loss, as idle productive capacity, and/or as surpluses of money capital lacking outlets for productive and profitable investment). Such surpluses may be absorbed by (a) temporal displacement through investment in long-term capital projects or social expenditures..., (b) spatial displacements through opening up new markets, new production capacities and new resource, social and labour possibilities elsewhere, or (c) some combination of (a) and (b), the combination of (a) and (b) is particularly im-

portant when we focus on fixed capital of an independent kind embedded in the built environment.

With respect to the spaces on which capital is displaced, according to Jessop, David Harvey relates to two forms of “capital transformation”: the “inner” and “outer” one (Jessop 2006: 147). While the first one corresponds to the transformations within a specific territory, the second one is associated to the “transformation through export of surplus capital...beyond the boundaries of the space or region in which it was generated” (ibid: 147).

Harvey’s explanations on capital expansion help to understand four aspects: i) the causalities, ii) the material expression of capital, iii) the spaces of transformation, and iv) the logics of interaction. These four aspects are also relevant to take into account when addressing the case of hydroelectric dams and energy production. To begin with, Brazil – as a booming economy – has great availability of surplus capital that needs to be invested in profitable production. It is out of the scope of this paper to analyze in depth the economic growth of Brazil, but it is remarkable that this country is currently the 6th largest economy of the world. Moreover, the surplus capital \square that is argued Brazil’s has \square is reflected in the budget of USD 687,2 billion for the growth acceleration programs PAC 1 and PAC 2 which are mainly directed to infrastructure of all kind. This leads us to the second point since large-scale hydroelectric dams constitute part of these long-term investment projects.

The third aspect is the core interest in this study. The space in which Brazil has found conditions to invest is not only domestically, but also across its borders. One of the five countries with which Brazil is currently in negotiations is Peru (see Chapter 1). It is understood in this paper that when the space of transformation of capital involves another territory, the dynamics are also different for both logics of interaction: the territorial – State –, and capital – private actors. Therefore, this more complex relation requires further conceptual elaboration about the State and State-State relations.

2.2 The State and State-society relations

The State is one of the most contested concepts among the different ideologies and, as such, there are many debates around its interaction with society. A classical liberal (or pluralist) approach grants to the State a mere neutral (or benevolent) role susceptible to competing groups of the society, and is made to serve its inhabitants without interests for itself (see Schwarzmantel as quoted in Heywood 2002). A more recent neoclassical notion can include looking at the State as a “predatory” institution which acts independently of the society seeking to increase its control over economic and social life (Heywood 2002). On the contrary, the State in classical Marxism thinking is conceptualized as an instrument of domination ruled by the interests of the elite class in detriment of the working class. Finally, the Weberian school understands the State as a set of institutions that governs independently of group interests.

As the reader may note the debate surrounding the State is about whether or not and to what extent the State acts with autonomy. Fox (1993) lumps together the competing views of State-society relations in two broader branches. On one hand, State-centered approaches arguing for a State that has a (ideal) autonomy; and on the other hand, society-centered approaches claim-

ing that the State is subject of control of societal groups' interests or of structural constraints. In summary, the diverse approaches diverge in whether the outcomes of the State's actions are the result of external or internal forces. Moreover, Fox (1993: 20) affirms that in order to fully understand the *why* and *how* State reforms fail or succeed to the benefit of the poor, it is necessary to distinguish State power in two ways: its autonomy and its capacity. Autonomy is defined as "the independent goal formation" of State actors (as Skocpol 1985:9 in Fox 1993:12); and capacity as "the ability of State leaders to use the agencies of the State to get people in the society to do what they want them to do" (as Migdal 1988: xi in Fox 1993:12). Furthermore, Fox (1993: 20) stresses the importance to analyze the different "conflicts", "constraints", "interests" and "identities" in both the State and society. Moreover, by citing O'Connor (1973), he locates "two basic and often mutually contradictory functions" of the State: "accumulation and legitimization" (O'Connor 1973:3 cited in Fox 1993:15) The accumulation is a function required by the State in order to maintain balance in the national economy (Fox 1993). At the same time, the social balance depends on its ability to maintain its second function, its political legitimacy. (ibid)

By combining the strengths and weaknesses of the State-centered and society-centered approaches, Fox (1993) proposes a new comprehension of the State. This "interactive approach" analyses the degree of autonomy and capacity of the State and has been used by Fox (1993: 21) to explain successful top-down agrarian policies that have empowered the peasantry. Both authors argue that neither a State-centered nor society-centered approaches can solely explain certain distributional policies that have had positive changes on the '*subclasses*' of the society. In doing so, and following a Marxist approach, he seems to agree on the understanding of the State apparatus as an institution which privileges the capital-dominant classes above others.

In the very specific case we will consider the generation of electricity as a form of energy – and produced by hydropower – as a key resource for the continuous development of both State and Capital. In that sense, the actions pursued in order to obtain access to more energy might be conditioned by the State, Capital and civil society, but all to different degrees and in various forms. Since the question involves two States with an evident different degree of political and economic power, there is a need to understand the debates around State-State relations.

2.3 State-State and unequal power relations

Brazil is by far the single largest economy in Latin America. There are several actions that this nation has pursued at the international level especially in the last decade, as a regional global power. Next to the actions at the global level (UN, WTO and the so called BRICS) at the regional level has also pushed for the creation of different supra-national entities in both political and economic spheres. In the political sphere Brazil's role in the foundation of UNASUR was important, which is the common and representative political arena of the twelve South American countries. In the economic sphere, has formed the

MERCOSUR⁶ (Common Market of the South), which became the main economic entity of South America. It is also the main contributors to IIRSA (Initiative for the Integration of the South American Regional Infrastructure) that is the operational arm of UNASUR for infrastructure and communication.

Therefore, Brazil has an influential role amongst other countries on the region. This strengthens the geographical expansion of its capital, as the State can use the asymmetry of power relations to its advantage. There have been different authors that analyzed Brazil regarding its development of international relations. Some authors have used Mauro Marini's concept who described Brazil in 1975 as "sub-imperialist" in the sense of his semiautonomous action related with foreign interests, (Zirker, 1994; Flynn 2007; Zibechi, 2012). Others understand Brazil as achieving a "consensual hegemony" (as Burges in Destradi 2010: 907) or as being a "cooperative regional leading power" (as Gratius in Destradi 2010: 906). In order to understand the differences to situate Brazil in the international arena, in this paper the main definitions are explored that conceptualize the State-State relations of powerful nation-States. These are the concept of "hegemon" and the "leader" (Destradi 2010: 909, Harvey 2003:37), and the "empire" (Destradi 2010: 909).

The "regional power" in terms of Destradi (2010: 903), would have an imperialist behavior if it uses the material powers and more specifically, its military power directly or through threats in order to obtain the desired benefits.⁷ Considering military force as part of the factors which emphasize the power of dominance, it is understandable that Marini developed the sub-imperialist concept since he was trying to explain Brazilian foreign relationships under the military regime in the 1970s. Zirker, who applies the same concept in 1994, realize that during the early democratic period the military force would still have some sort of influence on government decisions and following the US interests. Fly (2012) gives less emphasis to State control on these decisions, giving more relevance to transnational Capital which is encompassing Brazil to accomplish their goals in a globalized world. Military power then results to have less relevance than it is expected to have in order to distinguish clearly from a hegemon or even if it is understood as sub-empire.

The concept of hegemony has its starting point in Antonio Gramsci's work who referred to the ideological dominance of a group as a means through which it would reach consensus, not with but over the majority of society. When this concept is translated to State-State relations, the hegemon seeks to prevail the consensus around its interests and by doing so remains a form of dominance in which coercion can be either used or not (Destradi 2010). Both Destradi and Harvey differentiate a *harder* and *softer* use of power in favor of the hegemon. For Harvey "[m]oney, productive capacity, and military are the three legs upon which hegemony stands under capitalism" (Harvey 2003: 42). From Arrighi's perspective a State can have two forms of influence, through "domination" and as "intellectual and moral leadership" (Ibid: 37). In the first one, it acquires a form of "model" for the other States which enhance their power, while the second one reaches to similar results but its actions are "wide-

⁶ Facilitates the free trade among five permanent members (Brazil, Argentina, Paraguay, Uruguay and Venezuela) and associated members (Chile, Bolivia, Colombia, Ecuador, Peru, Guyana and Surinam)

⁷ Harvey makes reference more than conceptually in terms of practice through the example of the Iraq and the US war

ly perceived as pursuing a general interest” (Harvey 2003: 37). Besides the way on how the hegemony is exercised it also differs, for him, how power is concentrated among the actors. If the hegemon gains power at expense of others in an exclusive mode it is a “distributive” power, while “collective” power is given when the hegemon leads a certain degree of unification with other States which would result in a better position as a region (Ibid).

For Destradi (2010: 917) the main two characteristics of a hegemon are: a) it is “self-interested” since it pursues, in first place, its own objectives which are “presented to subordinate States as collective goals”, and b) it has strategies that are “a combination of material incentives and ‘ideational’ power instruments...in order to gain consensus in the subordinate states” (i.e. trade facilitation and economic assistance). Moreover, the construction of the relation would lead to subordinate a State to adjust its normative and national interests to the interests of the hegemon.

With respect to the role of leader, Harvey holds that leadership is one of the means to be used, complemented with material forms in which power is finally expressed. In that sense, leadership is understood as a more subtle form of hegemony which “is widely perceived as pursuing a general interest” (ibid: 37). Destradi argues that the leader can be distinguished as different from the hegemon since it is “characterized by the pursuit of common objectives and, therefore, by a commonality of interests between leader and followers”; moreover, remarks “... the interests and motivations of followers are of central importance in conceptualizing leadership – and ignoring the dynamics of followership can be misleading” (ibid: 923).

2.4 A multilevel interactive approach

In this section an analytic framework will be constructed, drawing from both the State-society and the State-State relations’ approaches. This paper deals with dynamics of capital expansion across space and with the interaction of both State and private actors and civil society. of two different territories. However, it is also problematizes the analysis of the State in both its autonomy and capacity, especially for the one where its space is transformed. As Stated above, Fox (1993) used an interactive approach to explain State-society relations of top-down policies that benefitted disadvantaged groups. Nonetheless, an integral understanding of the State can be also applicable in a broader context to understand the reasons behind various policies that favor very different sectors of the society, and moreover, that the State actions can be influenced by foreign actors.

Drawing from this framework, three aspects are considered i) the gains of a given policy and how it can benefit different groups of the society, ii) how the degree of autonomy and capacity of the State can be influenced by external agents, and not only internal ones, and iii) how a given State policy has different phases starting from the its planning, its implementation and (unintended and intended) results or outcomes.

To begin with, using a traditional Marxist school approach, State-actions are benefitting the private sector (and particular that of the dominant class). Furthermore, about the external influence I will argue that while Fox’s framework provides a basis to analyze State-society relations within a given

territory, the proposed *multilevel* approach also requires an understanding of other levels, in particular that of the State-State relations. Moreover, these relations should be considered taking into account the uneven power relations between States. As shown, the State-State level of analysis tries to explain how and to what extent a dominant State – in its forms of (sub)empire, hegemon or leader – exercises its power over other State(s). These theories assume that the dominant State obtains its benefits at the cost of the ‘*subordinate*’ one by using strategies of power (and force). I will refer to these theories as the dominant State-centered approach. Theories in this approach assume that the dominant State limits the degree of autonomy of the sub-ordinate State, albeit it is accepted that the latter can gain some benefits. Nevertheless the subordinate one acts – and even transforms its policies – following the dominant State’s mandates. It is only the character of leadership stressed by Destradi (2010: 907), which includes a more important role for the “follower” but even though it is accepted that it follows the interests of the leading State. By stressing the power relations between States, the multilevel approach analyzes the means of power of the dominant State, but more importantly, opens the arena to understand the subordinate State assuming a certain degree of autonomy⁸ – at the domestic level i.e State-society relations – to take sovereign decisions. It is important to distinguish that it is at the external level (i.e. State-State) where the autonomy and capacity can be finally influenced. This continues the interactive line of Fox’s, and furthermore, challenges the reductionist [structural] understanding of the Dominant and subordinate States.

Finally, with regards to the third factor it is necessary to distinguish the distinct phases of the policy process. First, the phase of planning (i.e. establishment of the bilateral agreement) that gives functionality to the second one, the implementation (construction of the hydroelectric dams). As result of the three considerations and drawing on Fox’s interactive framework I propose to analyze – for each State in question – the autonomy and capacity at different dimensions of *space* and *time*.

Table 2 Multilevel approach

	Elaboration	Implementation
Foreign	Autonomy: the independent formulation of goals by the State Capacity: the ability of State A to use its means of power to get State actors of the State B to do what A wants them to do	
Domestic	Autonomy: the independent formulation of their specific goals different State actors within State A Capacity: the ability of State leaders of State A to use the agencies of the State to get people in the society to do what they want them to do	

Building on this idea, *space* is referred to at two levels, i) *domestic* as the space of the internal relation between one State, its Capital and its society, and ii) *foreign* as the space in which both groups of actors – full or partially – inter-

⁸ As long as the character of Dominant State does not use means of coercive power e.g. military forces.

act. By *time* is understood the phases of the process in which – in this case – there are two, namely: i) the very process of planning, preparation and legitimization, which is done at both domestic and external spaces, and ii) the process of implementation (which happens in the space that is transformed).

As next step, each level of analysis is conceptualized. The above mentioned concepts of autonomy (as Skocpol 1985 in Fox 1993) and capacity (as Migdal 1988 in Fox 1993) are fully applicable for one space – the domestic – across time, but differ in the external space. After that these concepts are somewhat adapted by: i) maintaining the spirit of the actions, ii) changing the units of analysis, and iii) including the State-State power relations. As is seen in table 2, the concepts can be used for the different phases of the project at domestic level but there is a slight modification at the foreign level.

Chapter 3 Large scale hydroelectric dams in the Amazonian Region

This chapter examines the interaction between States, Capital and society driven by the different interests on obtaining electric energy through the intended construction of large-scale hydroelectric dams. This chapter has been centered in the relation between States and Capital and has taken the official agreement of 2010 between Brazil and Peru to illustrate the logics of interaction. An historical review of the conformation of the States is included for a better understanding of the recent State-actions. A final section demonstrates the resistance of local communities and new strategies from the companies.

3.1 The bilateral agreement and the actors

The relations in terms of energy projects between Peru and Brazil started in November of 2006 during the government of Alan Garcia and Lula da Silva respectively. In August 2007 an official commission was formed in order to work under the premise of exporting electricity through hydropower generation to Brazil. Three years later, on June the 16th of 2010, both States signed an agreement⁹ for the supply of energy in Peru and the export of the surplus to Brazil. Peru has the compromise to export an equivalent of 6,000 MW. There are five potential projects to develop with an investment of around USD 4 billion Paquitzapango (2,000 MW), Tambo 40 (1,286MW), Tambo 60 (560 MW), Imainique (607 MW) Inambari (2,200 MW) (Andina 2009, Heck 2013 personal interview¹⁰).

The agreement had 15 articles including the objectives, commitments and conditions. The text carefully gives the impression of equality between two States pursuing common interests and benefits. In the text, and starting with the title, it is understood that Peruvians need to have priority, and once they are fulfilled in terms of energy supply, the energy *surplus* is going to be exported to Brazil. Nevertheless, there are important elements in the agreement which reflects the asymmetries in the Peru-Brazil power relations. Article two stresses the right of Peru to decide independently about the energy required for its domestic supply. In that sense Peru can, firstly, regulate the energy market; secondly, use a free market; and thirdly, prioritize exports to the Brazilian market (Ministerio de Energía y Minas 2010). However, the calculation of these quantities should be done over a period of 30 years (Ibid). All the procedures on how to develop these decisions are the realm of the Peruvian State (Ibid). The article three stresses that once Peru decides about the quantities to attend his domestic demand, then “the Peruvian State is going to define the surplus of power and electricity energy associated, values which are going to note on the Concession Contracts of the [power] generation centrals, that are going to be

⁹ “Agreement between the Government of the Republic of Peru and the Government of the Federative Republic of Brazil for the supply of electricity to Peru and export surpluses to Brazil”

¹⁰ Personal interview with C. Heck 1 November 2013

fixed for a period of 30 years, and can be compromised for being exported to the Brazilian market for an equivalent period of time" (Ibid: 4). Furthermore, the same article affirms the necessity of Peru to provide licenses in order to construct and operate each hydroelectric power central.¹¹ Once this is formalized the licensed entity has the possibility to sell the electricity to the Brazilian regulated market for also 30 years. After that time, Peru is going to have the full rights over the whole infrastructure and system. In the article four, the States express the agreement to "adjust" their legal norms and to "promote solutions" to develop the projects (Ministerio de Energía y Minas 2010: 6). If possible disagreements arise between the States, they cannot denounce each other before a period of fifteen years, as is stated in article 14, and these will not be considered if they concern the quantities of energy established in the article three. Finally, as is highlighted the article 12 the agreement is giving a duration of 50 years (Ibid).

With regards to the quantities the agreement required in article three, there is not yet official information. The closest reference is a letter from the Ministry of Mines and Energy of Peru to its counterpart of Brazil in 2009. The letter contains most of the points later included in the agreement – and Peru offers to export to Brazil 80% of the electricity produced in the first decade, 60% in the second one, 40% in the third one (Ministerio de Energía y Minas 2009). Concluding the 30 years, Peru is going to have the right over the entire infrastructure. Moreover, the letter also stresses the Peruvian willingness to "assist in the efforts for obtaining the required licenses" (ibid: 2) to those who will award the concessions.

Taking into account the differences between the economies of Brazil and Peru, it is understandable to realize that there is an "asymmetric" use of power in, what Harvey calls, the "spatial exchange relations" (Ibid: 31). The "uneven ways" used in the exchange relations characterize the performance of a hegemon State (Ibid: 31). However, Destadi (2012: 907) argues that certain actions are not necessarily taken as a hegemon but a "leader" State. Nevertheless, while this might provide an understanding of how Brazil operates in the field of regional energy generation, there is a necessity to understand the performance of the "subordinate" of the hegemon, or the "follower" of the leader that accepts these "asymmetries" (Ibid: 907). Why Peru does facilitate the process of the hydroelectric projects in coordination with Brazil, while it will only benefit possibly in the long run?

There are at least two reasons for which Peru gives importance to hydropower dam development on its territory, financed by Brazil. First, similarly to Brazil, it has a historical dependency on hydroelectricity as main source for his domestic energy supply. Second, the bilateral agreement on electricity is part of recent State policy which gives high priority to Brazil above others foreign investments. About the first point, energy production in Peru is predominantly produced by hydro-power, with 54.5% of the total installed power (5,054 MW in 2008) (CEPLAN 2011: 2008). According to DAR (2011), Peru currently has an energy surplus and with the construction of the intended dams is going to double its current capacity. In 1973, a report financed by the gov-

¹¹ A central includes according to the agreement, all the infrastructure of the hydropower dam able to produce electricity

ernments of Germany and Peru, declared potential 138 hydroelectric projects above 5 MW and a theoretical power of 200,000 MW (Ministerio de Energía y Minas 1973). Among the total, the study focused on 10 projects where the Inambari river is taken as “one of the most attractive projects... that might satisfy the electric energy demand of the south of the country and that would allow the economic development of the region by using very cheap energy” (Ibid: 2.40) The Inambari river nowadays is the first site in dam development in order to accomplish the agreement with Brazil. With regards of the second point, the agreement was signed during Alan García’s government. García has been elected twice. While in his first mandate (1985-1990) he devoted reluctance to conditioned foreign capital, in second mandate (2006 – 2011) provided an important priority to FDI. In this government period the Plan Nacional Bicentenario 2010 – 2021 (Bicentennial National Plan) was launched, which defined the general State politics based on strategic themes. The document stresses the importance of the foreign and national investments for Peru; moreover, as it is emphasized by DAR (2011) the document clearly prioritizes Brazil as a strategic ally.

The conformation of economic corridors to integrate the regional economies of Peru to the world economy, and in particular to neighboring countries of strategic importance such as Brazil, would allow to create incentives for national and foreign investment in new economic activities of goods and services with high productivity and added value, and therefore a source of adequate employment [*Own translation from Spanish*] (CEPLAN 2011: 12)

The specific attention to Brazil is given since the Peruvian State recognizes the global economic changes towards a “multipolar world” (ibid: 17). Brazil is recognized as the new economic power with which Peru has the advantage of sharing borders.

For Peru, this global tendency provides a challenge of taking advantage of the neighborhood with Brazil and its accelerated economic expansion to develop new economic opportunities and business. For that it requires to access our markets through the road and commercial interconnections and look for a strategic alliance with that country [*Own translation from the Spanish*] (CEPLAN 2011: 17)

Moreover, the “exceptional conditions” (Ibid: 119) of its geographic location bordering an economy in rapid expansion, situates the strategic alliance with Brazil within the four priorities that were mentioned in the National Plan. In summary, Peru recognizes the current economic global changes situating Brazil within the most relevant actors. To this, Peru argues in favor of a rapid integration of markets, in part through sharing physical (hydro-power) infrastructure, taking into account the geographic closeness.

3.2 The Giant’s thirst: Brazil

The latest great expansion of the Brazilian economy, and therefore the plans of the electricity producing sector as an engine of its growth, have been realized during the social democrat government of Lula da Silva. In his famous “*Carta do povo Brasileiro*” (Letter to the Brasilian people) a public declaration before the

elections of 2002, Lula remarks the desire of the people and the country to change the (neoliberal) economic model that had ruined the national economy in the past decades. The solution the Workers Party (PT) proposed was to promote massive domestic consumption and a “competitive import substitution in the short term” (Da Silva 2002: iii). Lula’s reference to the Import Substituting Industrialization (ISI) is important in order to understand the spirit of the necessity to re-engage the Brazilian State into a more *developmentalist* path.

Electricity and mining sector in Brazil

There is a very crucial role of the State in undertaking actions to secure energy supplies for the domestic economy (Harvey 2003, Muradian et al 2012, Scheidel and Sorman 2012). With respect to Brazil, there are three elements which can be considered determinant to base – to a large extent - its energy security on hydro-power from the rivers; i) historically insufficient domestic reserves of oil and natural gas, which made Brazil dependable on oil imports; ii) a strong national security thinking influenced already by the early ISI strategies and strengthened by the geopolitical military thinking, and iii) Brazilian territory has one of the most important river basin complexes in the world.

By following the vision of national security without a “reliance in foreign oil”, the ISI doctrine influenced in the energy planning since the 1940s (Randall 1993: 1). Despite the emerging domestic oil industry, oil imports became important to literally fuel the fast industrial growth. After the oil crisis of 1973 a strong self-sufficient energy system was deemed necessary by the State (Randall 1993). It is important to highlight the existence of a very important oil reserve in the Brazilian coast of the Ocean Atlantic discovered in 2007, as this might influence the current and future energy system of Brazil, which until now has been largely dependent on hydro-power development. Despite this recent discovery, Brazil still plans to exploit its rivers for hydroelectricity with 11 expected dams in the Amazons (see figure 1).



Figure 1 New hydroelectric dams in the program PAC 2

(Source: PAC2 2010)

The extended hydrology system allows to Brazil to actually increase its already important hydroelectric sector. The Brazilian territory covers a large part of two important basins. The Amazon basin, recognized as the most important basin in the world, lies to a great extent in the Brazilian northern part;

and the Rio de la Plata basin is located in the southern zone. The water flows of the Amazon basin start in the Andes and runs over 6,600 km of rivers (WWF 2013). Therefore, the hydrological potential over the fifth largest country in the world¹² provide to it with the possibility to base its energy matrix on a relative independence of thermic generation (oil, coal, gas). In 2013, hydroelectricity represented 76.3% of the Brazilian electric supplies¹³ complemented with gas-fired generation (11.0%), biomass (3.8%), oil derivatives (5.1%), nuclear (3.0%), wind energy (0.9%), and solar energy (<0,01%) (Ministério de Minas e Energia 2013).

Although Brazilian industry – largely supported (and protected) by the State in various periods – is the main beneficiary of electricity availability, and within the industry there are certain sectors which require a more intense use of electricity than others. Amongst them both mining and metallurgy are the most electricity intensive. As shown in the first part of this chapter, the global demand for primary resources – driven particularly by China – has incremented the exports of countries in Latin America. Brazil is not the exception and for Peru also represents one of its main markets. A review of the mining and industrial sector therefore helps to situate the necessity for expanded electricity supplies, and also the increasing influence of the corporate private sector in electricity production.

Mining and the electricity-intensive industry

The term “*electro-intensive*” industry (MAB 2009; Leroy & Malerba 2010) is used to denote the extraordinary intensive use of electricity in the industrial process. Next to the mining sector, other industries are also catalogued as ‘electro-intensives’ such as aluminum, iron, steel, cellulose, cement and chemical industries (Leroy & Malerba 2010). While 41.5% of the total electricity in Brazil is consumed by industry¹⁴ a total of 30% is consumed alone by the electro-intensive industry (Ibid).

Minerals have become the main export product in Brazil in the past decade. Until September 2013, 88.8% of the total export corresponded to primary resources and within that iron ores remain as the main product (USD 10,411 billons) (Ministério do Desenvolvimento, Indústria e Comércio Exterior 2013b). The leading company in exporting ores is the Companhia Vale Do Rio Doce (CVRD), ranking No. 1 among all the exporting industries (Ibid). Amongst the rest of the 20 companies only two other companies are directly related with mining and metallurgy. Nonetheless, some regions concentrate most of the mining operations. The Estado do Pará, is located in the Amazons – on a lesser distance to Peru than to the industrial region of São Paulo. In total ten of the main exporting industries located in the Estado do Pará in 2010 accounted for 84.6% of the total exports of the region, of which seven belong to the mining and metallurgy sector (see Table 3).

¹² Brazilian territory has 8,515,767 Km²

¹³ Data from the year 2005 shows 85,4% from hydroelectricity where 77,1% was indigenous generation and 8,3% belonged to the importation of the Itaipu dam located in Paraguay (OECD/IEA 2006: 1).

¹⁴ 26,0% for household, 17,4% for commerce and 15,1% to other sectors (EPE 2013)

Table 3 Exports of the main industries in Estado do Pará in 2010

Main exporting industries	Amount exported (USD dollars)	Share in the total exports (%)	Cumulative share
Vale S.A.	341.681.380	52,0	52,0
Alunorte – Alumina do Norte do Brasil	92.049.015	14,0	66,1
Albras – Aluminio Brasileiro S/A	26.568.002	4,1	70,1
Mineração Buritirama S.A	18.179.980	2,8	72,9
Kaiapos Fabril e Exportadora Ltda	16.491.360	2,6	75,4
Jari Celulose S.A.	16.039.313	2,4	77,8
Sidepar – Siderúrgica do Pará S.A.	12.435.800	1,9	79,7
Cosipar – Companhia Siderúrgica do Pará	11.245.800	1,7	81,4
Minerva S.A.	10.951.341	1,7	83,1
Mineracao Rio do Norte S.A.	9.979.899	1,5	
Others	---	15,4	100,0

Source: Ministério do Desenvolvimento, Indústria e Comércio Exterior in Leroy & Malerba 2010;

CVRD S.A. is the second largest mining company in the world. While Alcoa Aluminio, VOTORANTIM, and BHP BILLITON, are also recognized among the most important companies in the world (CEDIB 2013). All these companies own completely or partially hydroelectric dams. For instance, Alcoa reports that it acquired electricity from four dams, fIn the Estreito hydroelectric dam¹⁵ of 1,087 megawatts Alcoa has 25.49% share, while the other companies are Tractebel Energia (40,1%); Vale (30,0%) and Camargo Corrêa Energia S.A (4,4%) (Alcoa 2013). The concession for its use was acquired through an auction organized by Agência Nacional de Energia Elétrica (ANEEL, Brazilian Electricity Regulatory Agency) in 2002 (Ibid), as part of the privatization process of the Brazilian economy. While ANEEL has the function to regulate the energy market, the institution who operates most of the production and distribution is Electrobras; which plays a key role in the international expansion of the system. Moreover, two companies alone, the CVRD and Votorantim consume together around 9% of the total electricity in Brazil (CEDIB 2013); the latest one possesses 31 hydropower dams (ibid).

Nevertheless, the interest of private capital in the hydroelectric dams is not only as consumers of the electricity. The construction and management of the hydroelectric dams is mainly driven by specialized private companies. In the case of Brazil, there is an oligopoly sector of construction dominated by companies with domestic capital: Odebrecht S.A., Queiroz Galvão, Andrade Gutierrez, OAS, Furnas and Camargo Correa (Ibid). Odebrecht S.A. for in-

¹⁵ The Hydroelectric Estreito is located at the Northern part between the states Maranhao and Tocantins

stance, reports its investments in different construction projects in 10 countries of Latin America (Odebrecht 2013) besides other countries overseas¹⁶.

State actors: Eletrobrás and its expansion strategic plan

The Eletrobras System – part of the Minister of Mining and Energy – is the national¹⁷ company in charge of the Brazilian electric power sector and is the largest in Latin America. The company operates through various subsidiary and distribution companies, but has lost some of its original functions after the privatization period (Eletrobras 2010). In its strategic plan 2010-2020, Eletrobrás identifies two external elements: 1) global economic growth putting pressure on energy and 2) growth of the demand of electric energy (Eletrobrás 2010b: 5). It also identified “potential and ongoing changes” that concern Eletrobrás, the first one being: “Central and South America exploring processes of electro-energetic integration between neighbor countries” (Ibid: 6). It stresses that the government has an important role to stimulate the expansion of the system, but its intervention is limited to the strategic concerns. Therefore Eletrobrás has a great level of autonomy for self-regulation and its functions are market-oriented (ibid). As its mission is to “[o]perate in energy markets in a full, profitable and sustainable way” (Eletrobrás 2010) it can work jointly with companies demanding electricity in the market.

Table 4 Driving forces of the stimulated expansion scenario and their basic elements

Driving forces	Basic elements
Sustained Expansion in the Economic, Technological, Commercial and Financial Context	<ul style="list-style-type: none"> • High and sustained Brazilian economic growth, ranking above the worldwide average • Low cost and abundant capital availability • High national demand for electric energy , growth rate greater than GDP • Accelerated technological changes, with gradual absorption by the electric sector
Political-Institutional Environment Favorable to Entrepreneurship	<ul style="list-style-type: none"> • Governmental policies conducive allowing the leverage of the Electrobras System, with minimal intervention • Stable regulation and clear rules, market driven • Strong decrease of institutional ties to the Electrobras System • Manageable impact of climatic changes • Agile environmental licensing, with stable environmental requirements.
Main opportunities for international	<ul style="list-style-type: none"> • The regional market's openness for invest-

¹⁶ Odebrecht S.A. reports projects in Canada, Angola, Mozambique, Ghana, Portugal and the Arab Emirates (Odebrecht 2013).

¹⁷ Electrobras is a mixed economy and open capital stock corporation (Electrobras 2010)

electric-energy integration	ments in generation and transmission of electric energy
	• Expansion and diversification of the energy interconnection with the Brazilian border countries

Source: Electrobrás 2010b;

The international expansion of Eletrobrás, especially in countries in Latin America, is identified as part of its main strategy. By doing so, partnerships with both private and public companies are part of major institutional changes to be promoted (Eletrobrás 2010b: 17).

The 'inwards' growth doctrine

When he came to power, President Lula said his government would prioritize import-substituting policies. ISI was a doctrine born in Latin-America in the early 1950s, focused on the intervention by the State to promote the expansion of both the internal industrial production and market. As Hirschman (1968) explained:

It has been undertaken in many countries as a matter of deliberate development policy, carried out no longer just by means of protective duties, but through a wide array of credit and fiscal policy devices, through pressures on foreign importing firms to set up manufacturing operations as well as through direct action: the establishment of State-owned industries or, increasingly, of development corporations or banks which are then entrusted with the promotion of specific ventures (Hirschman 1968: 5).

Through ISI, Brazil's had a period of rapid industrialization in the decade of 1950s and was followed by a second period in the 1970s. Hirschman emphasizes that the industrialization process in that time were not only as a response for the scarcity of imports (due to the effects of the II World War), but “as a result of the gradual expansion of an economy that grows along the export-propelled path” (ibid: 4). Evidently, as is shown in the next section, industry on Brazil started already a century before the ISI. Furthermore, the intervention of the State to expand the Brazilian domestic industry already happened by that time. In summary, despite the later periods of promotion of foreign capital investments, it is remarkable to see a continuous strong emphasis by the Brazilian State to promote domestic industry. This pattern is now followed by the Partido dos Trabalhadores as the chosen path to expand its economy during the Lula and Rousseff governments.

State-building Class analysis of the 'developmentalist' Brazilian State

In 1980 the Partido dos Trabalhadores (PT, the Workers Party) was founded and Lula da Silva was elected as leader. The Party's Manifesto stressed that it “...is born out of the decision of the exploited to fight against an economic and political system that cannot resolve their problems, because it only exists to benefit a privileged minority” (Burbach 2013: 115). How it happened that, the once main trade union leader, became the president of today's 6th largest

economy and promoter of the ambitious hydroelectric expansion? It is a complex question that is not going to be fully answered here but this section aims to provide a vision on the formation of the Brazilian State for a better understanding of the current politics.

Brazil's process of autonomous industrialization started early, after becoming in a constitutional monarchy (1825). In 1844 it established a protectionist rate for the import of basic products and stimulated a rapid rise of industries (Prieto and Guerra 1991). The extraordinary in flux of capital due to the coffee exports of a wealthy oligarchy (62% of total exports in 1885) facilitated the expansion of the Brazilian bourgeoisie, making possible for them to overcome - once again - the pressure of British capital (Prieto and Guerra 1991). The continuous process of industrialization in the following decades also saw continuous labor struggles emerging for better working conditions, pushing for political changes and the formation of the *Estado Novo* (the New State) in 1937, with Getulio Vargas at its head. Vargas established a strong national '*ideology of developmentalism*' operationalized by institutions such the National Bank of Economic Development (BNDE), the Superior Institute of Brazilian Studies (ISEB) (Mallorquin 2007) and the Superior War School (ESG) (Child 1979).

Kenneth Erickson (1977) refers to this period of Brazil as the establishment of the *corporative State*. In essence this model of State, Erickson says, follows a "hierarchical" view of the society providing privileged positions to the sectors which are more important for the function of the society (Ibid: 2). Vargas, in order to "harmonize the interests of labor and capital" (Ibid: 2) opened the State to an important contact with the working class through the formalization of three State institutions: the *sindicatos* (trade unions), the labor courts, and the social security system.

In 1946 a civil-military coup promoted a new Constitution which maintained the model of the State with important principles of social control (Ibid). The decade of 1950s was the peak of the achievements pursued by the implementation of ISI. The industry rapidly expanded and the *sindicatos* became a powerful and influential sector. They got to exercise an effective pressure on the government of Joao Goulart. To prevent the '*capture*' of the State by the working class in 1964, a civil-military coalition seized power by force, and would remain in power for 25 years to come. The regime persecuted the radical leaders but they did not refute the importance of the trade unions, on the contrary they reinforced them with strict control (Ibid). By doing so, says Erickson, they expected the State to have a stronger social cohesion that would allow to capital to improve the nations' wealth.

Military projects were focused in the economic growth poles, especially in Sao Paolo, and were facilitated by an alliance with foreign private sector (Khali 2004). The initial focus on ISI started to decline due to the influence of the US government doctrine to open its economy. In the 1970s a generation of pro-business *sindicato* leaders was trained by the Brazilian State and US organizations¹⁸ in order to assure the support to their national interests (Giannotti 2007).

¹⁸ Giannotti (2007) refers to the training of *business unionism* financed by the American Institute of Free Labor AFL and US companies.

Erickson (1977: 178) distinguishes between the mass of workers, “who desired economic benefits” and the radical labor leaders “who sought fundamental changes in the political system”. This difference of interests amongst the workers, resulted in the conformation of two *sindicatos*: the “Union Sindical” which looked for an alliance with the bourgeoisie; on the other the “Autenticos” which was seeking changes through prolonged strikes (Giannotti 2007: 238). The former was represented by Antonio Medeiros at the head of the metallurgy section of São Paulo, and the latter by Lula Da Silva who was the representative of the metallurgy section of São Bernardo. Massive strikes of workers and a decline in the economy after the two oil crises led to a withdrawal of the military. A new constitution was approved in 1988 recognizing the need to have greater social participation (Ibid).

In 1989 takes place the first elections after 35 years and the PT was defeated by the conservative party at the head of Collor de Melho. It was the beginning of a neoliberal period and the State recognizes Medeiros and the, by then, sindicato Força Sindical as the true representation of the working class in order to facilitate the implementation and the policies and privatizations (Ibid). This process was followed by the new government of Fernando Cardoso who started fundamental changes in the labor laws to finish with the “Era Vargas” (Ibid: 300). By 2001 most of the State companies were privatized including the mining¹⁹ and hydroelectric companies. It is precisely that year when the most serious energy crisis took place and Brazil was obliged to rationalize. Because of the general discontent around massive unemployment large protests emerged in the streets, complaining about the shortage of electricity (or “Apagão”) (Ibid: 300). Lula just before the following elections made a public announcement that Brazil was going to change but it was going to respect its financial compromises. The IMF declares after his speech, that there was ‘nothing to be afraid of’ (Ibid: 300). The PT candidate was finally elected as President of Brazil in 2002.

3.3 The open arms of Peru

President Alan García – and its party Alianza Popular Revolucionaria Americana (APRA, American Popular Revolutionary Alliance) – was elected in 2006 and governed until 2011. Two decades before he had already been President. A radical change happened while in the second mandate put more efforts to engage the country with foreign capital while in the first period he strongly opposed to conditioned foreign investments (Graham 1993). Civil opposition to mining projects in the Amazon motivated him to write a public letter titled as ‘*El Síndrome del Perro del Hortelano*’ (The Dog in the manger Syndrome):

There are millions of hectares of idle land for timber, other millions of hectares that communities and associations did not cultivate neither they are going to cultivate; besides, hundreds of mineral reservoirs that are not possible to exploit and millions of hectares on the sea to which never enters the mariculture neither the production... Furthermore, Peru has a greatly rich Cordillera because of the rain

¹⁹ CVRD it was a State company founded in the 1960s and privatized in 1997.

that falls there. It is estimated that 800 000 millions of cubic meters travel down annually through the rivers towards the Pacific and Atlantic... [we have to] think its use and its selling in continental terms... but that has to be done by the big private or international investors that require safe conditions of very large term to invest thousands of millions and to recover their investments. *[Own translation]* (García 2007)

This statement clearly shows that there was a high predisposition to attract foreign investments and providing safe conditions for private capital in order to capitalize the vast volume of natural resources which were seen as *idle*. As shown at the beginning of this chapter, the Bi-Centenary Plan would become the instrument to follow such vision as State, and the hydroelectric projects with Brazil were a way to materialize it. Nevertheless, while there are yet unexploited resources, others have been extracted throughout Peruvian history and the politics around these constitute the character of the State.

State, mining and the hydroelectric sector

At the 31st Mining Convention the current President of Peru, Ollanta Humala agreed to unblock mining projects and expedite the administrative processes. He expressed that “[r]esponsible mining is going to push our development, with the hand of the private investment to transform into reality the perspective of development and industrialization” (El Comercio 2013). He ensured in his speech ‘a solid package of guarantees and incentives’ to foreign private investors, while asking in return a responsible social and environmental management (*ibid*). Indeed, the most recent available data reflect that mining exports have remained as the most important product along all its history. In 2010, six of the ten leading exports are minerals (i.e. gold, copper, zinc, iron and lead ores) and represent 54.9% of the total exports.

Table 5 Shares of the 10 most important exports from Peru in 2010, in (%)

Exports	Share in total exports	Cumulative share
Gold	21,2	21,2
Gold content	16,9	38,1
Refined copper and copper alloys	7,1	45,2
Petroleum oils, refined	6,3	51,4
Flour or meal for animal feed	4,8	56,2
Zinc ores	4,1	60,3
Lead ores	3,5	63,8
Coffee, not roasted	2,5	66,3
Petroleum gases	2,1	68,5
Iron ores and concentrates	1,4	69,9
Others	21,2	100,0

Source: The Observatory of Economic Complexity 2013

Incentives to attract foreign investments began several decades before. Cotler (1978) highlights that in 1950 the mining code was established following the US model; it established a reduction in tariffs for both the import of the required equipment and for the export of minerals. Furthermore, in 1955 it

provided fixed benefits for investments in the electric sector. With the favorable environment the US participation in total exports reached around 47%, similarly to 1920s (as Hunt 1966 in Cotler 1978). Foreign participation had 100% in oil and iron, in copper 88%, 67% in zinc, 50% in lead and silver, (Cotler 1978: 275).

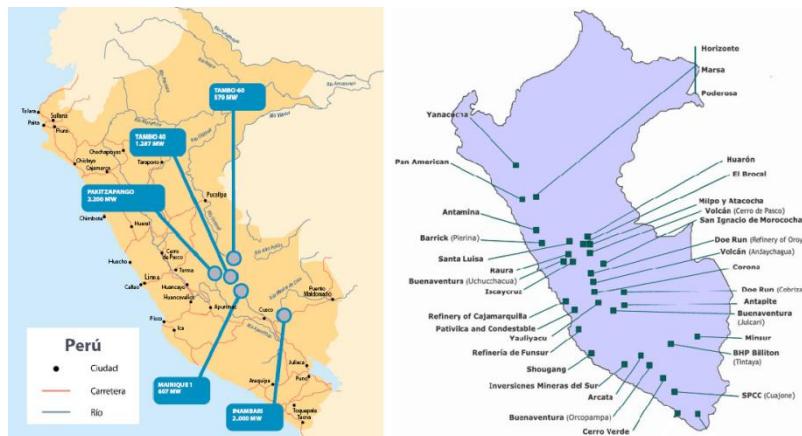


Figure 2 Localization of hydroelectric dams (left). Localization of mining projects in Peru (right).

Source: www.vigilaamazoniablog.com

Mines were already dependent on hydroelectric power generation. By 1970, a study undertaken by the German Cooperation for the Ministerio de Energía y Minas (MEM, Ministry of Energy and Mines 1970: 2.4) declared that 55.9% of the installed capacity came from hydroelectricity. Part of the electric system in the Southern part was administrated by the Southern Peru Copper Corporation which provided electricity to two mines and one foundry (Ministerio de Energía y Minas 1973: 2.7). In addition, among the independent generation of electricity the mining company CENTROMIN Peru operated the two hydroelectric power centrals. In the present, energy production in Peru is yet dependent hydraulic and foreign firms are the main investors in mining²⁰. Although Canadian and U.S. companies lead the mining investments, Brazilian companies have a strong presence in construction, energy and mining. Mining expansion in Peru, has increased substantially in the last decades with goes in hand with the increase on de electric demand.

Table 6 Brazilian investors and investments in Peru in 2010

Investors	Sector	Investment USD
Votorantim Metais Ltda.	Mining	690.741.970,0
Gerdau S.A.	Industry	201.225.364,5
Constructora Norberto Odebrecht. S.A.	Construction and mining	31.906.612,8

²⁰ The mining company MINSUR is one of the few exceptions of Peruvian precedence and leads the tin production in Latin America.

Petrobras Energía S.A.	Oil	30.000.980,0
Vale de Río Doce	Mining	16.091.796,8
Construcoes e Comercio Camargo Co- rrea S.A.	Construction	2.370.700,0
Constructora Andrade Gutierrez S.A.	Construction	880.700,0
Constructora Queiroz Galvao S.A	Construction	870.000,0
Constructora OAS Ltda.	Construction, Energy	823.808,2
OAS Engenharia e Participaões LTDA.	Construction	750.000,0
Electrobras Furnas	Energy	573.808,2
Odebrecht Engenharia de Minas LTDA.	Construction	5.253,0

Source: Proinversion 2010 in DAR 2010

DAR (2011) stresses that the installed capacity in Peru is 7.158 MW and the maximum domestic demand for electricity is 4.322 MW. Hence, “with the construction of the 5 hydroelectric power centrals prioritized in the Amazonas (6.673 MW), we would be almost doubling our power installed capacity” (ibid: 30). Humala’s discourse at the Mining Convention (see beginning of section) follows the path initiated by former President Alan García. Nonetheless, as is going to be addressed, it seems to be more a continuation of a larger State formation process dependent on three recurrent patterns: i) primary exports, ii) dependency in foreign investment, and iii) extended benefits and concessions to the foreign private capital.

The ‘outward’ growth doctrine

Peru’s national economy has been largely dependent of primary exports, as in most of the countries in the Latin American region, where the “export-propelled growth” dominated for almost a century (Hirschman 1968: 3). The thesis of ‘*export-propelled growth*’ tried to explain the exportation economic performance of countries. The model argued that increases in manufactured exports would lead to a decrease in labor wages, which in its turn, reduces the total costs increasing the competitiveness for more exports (as Beckerman 1962 in Balassa 1963). Concerns about this doctrine stresses that “smaller gains” are given to countries with primary resources exports (Balassa 1963: 920). Moreover “an initial price disparity will tend to be further accentuated and to be accompanied by a growing disparity in growth rates” (as Beckerman 1962: 920 in Balasa, 163: 781). Evidently, the model does not include other extra-economic factors that led such disparity. Peru followed this model since its independence. Its main exports of guano, saltpeter, fishmeal and minerals were directed with priority to Great Britain, and later to the U.S. markets. The underdeveloped industry of Peru made it vulnerable to British exports and the economic effects of the war with Chile in 1879 made it dependent on the foreign investments, while leaving the country with a large foreign debt. Furthermore, foreign capital was always conditioned to considerable concessions of Peruvian territory and control over natural resources.

These were important conditions that ended taking the ISI model towards a completely different path in comparison to the more successful one of Brazil. The ‘*export-propelled growth*’ seems to have been changed towards a form of institutionalized dependency on foreign investment. Nonetheless, there are other considerations in the formation of the Peruvian State that helps to understand these differences which seems to remain until nowadays.

A Class analysis of the Peruvian State

Most of the Peruvian history has been characterized by structural divisions in the society and in consequence political instability that continued until the 1990s with tragic incidents. The encountered differences are already founded since the XIX century. After Peru's independency, a fluid relation began between the oligarchy and the caudillos²¹ that characterized the political-social structure of the State (Cotler 1978). There was a clear division among the dominant classes, with on the one hand a more nationalist (and anti-capitalist) with the *terratenientes*²² class while on the other hand, the bourgeoisie class of Lima, more attached to its Western-European ties aiming its integration to the international capital (Ibid).

The exports of guano and saltpeter (75% of the national income in 1870) to England gave an extraordinary and sporadic economic growth, albeit strengthened the social division since it benefited the coastal zone to the detriment of the economic power of the *terratenientes* (Ibid). In 1879 the war with Chile destabilized the national economy and Peru lost part of the coastal zone. Cotler (1978) emphasizes that the war showed another lasting important social division: the ethnicity. Most of the population was indigenous and with no sense of belonging to the State since the conditions and institutions of exploitation and social regulation continued despite the independency.

In the early 1900s Peru was unable to pay the debts incurred with England before the war. In order to solve that they accepted the terms of the “Contrato Grace” in which Peru conceded sovereign rights over 2 million hectares of territory and the rail system infrastructure to the British (Ibid: 125), comparable with contemporary global land grabs. After the First World War with the declining of the British Empire, the U.S. started repeating the imperialist patron of seeking for cheaper resources and investing capital abroad. The U.S. paid special attention on Peruvian mines. Mining and agricultural systems owned by foreign investors acquired a high degree of autonomy, “[i]n this sense the concentration [of land for mining and agriculture] resulted to be political enclaves, in which the national sovereignty had been conceded to a particular owner, which besides it was foreign.” (Ibid: 138)

President Leguía, in the decade of 1920s re-structured the country into the ‘Patria Nueva’ following the “pattern of growth towards outside” (ibid: 183). In 1925 the exporting mining sector became the most important and 49% of the exports corresponded to a monopoly of foreign firms (see Throp-Betram 1974 in Cotler 1978). Similarly, the International Petroleum Company was owned by U.S. capital and the State provided taxes exemptions that lasted for half century to both mining and oil (Ibid). Due to the flight of capital the State acquired more foreign debt from the U.S. which represented 40% of the public budget and were conditioned to having administrative rights over the financial apparatus (customs administration), military and even the educational system (ibid). Moreover, later with the attempt to expropriate the oil company, the US government stopped the official aid and restricted loans of multilateral organizations such as the IMF. (Ibid: 368)

²¹ Leaders with political and military power

²² Landowner

Meanwhile the domestic industrial capital emerged subordinated to the “marginal benefits” left by the foreign firms; “[i]n this way, the dominant classes of the Peruvian society got organized in client-relationships dependent on the state and the foreign companies” (Cotler 1973: 158). On the other hand, as natural process of the development of Capital, the proletariat class arose. With these, new political actors appeared. Haya de la Torre from a middle and *señorial* class, resulted to be one of the main responsible in organizing the agricultural and industrial working class engaging them with the rising radical intellectual middle class.

Haya founded in 1924 the political party APRA. His argument was that once the State would have the popular support of all the classes, there would be better conditions to negotiate with the imperialist forces (Ibid). In other words he believed in the importance of foreign capital but he reject the conditions of exploitation to the whole nation were the middle class – aspirant to become bourgeois – should play a key role. He wanted to change the Peruvian political system to have power over the welcomed foreign capital.

Another political actor was José Carlos Mariátegui with a classical socialist formation. He disagreed with Haya understanding that the middle class was not a solid bourgeoisie capable to lead the revolution and destroy the feudal structure (Ibid). Mariátegui affirmed that the reduced bourgeoisie class became an intermediary instrument of the foreign capital which owned the mining, commerce and transport sector; likewise, he says, they co-existed with the *terrateniente* class that accumulated wealth through the appropriation of land and with the free labor of peasants (Ibid: 218-219).

In the coming decades during the ISI doctrine’s spread in the region, foreign capital control would be reduced partially as the industrialization process still dependent on foreign capital and technology (Ibid). In 1980s the political legacy of both Mareátegui and Haya de la Torre would be followed by Abimael Guzman and Alan García respectively. The former, Guzman founded in 1980 the communist group ‘*Sendero Luminoso*’ initiating an armed uprising against the State and the dominant class. This bloody conflict lasted almost two decades and has been the most starkly prove of Peru’s social division in contemporary times. Alan García started its political career in 1980s becoming president twice. Its first mandate (1985-1990) had to deal a large economic inflation, while the second period (2006 – 2011) provided an important priority to foreign investment.

In 2007, García he publicly addressed the great yet unexploited economic potential (mining, forestry, agriculture and hydrologic) that was impeded for development by ideological reasons. An aggressive assignment of private property, he stated, would open the space for investments and therefore an efficient use of the resources (García 2007).

Social resistance and the ‘molecular processes’ of Capital

The decisions were taken at a highly centralized level not only about the terms of the agreement but also the selection of where locate the projects. When the negotiation became of public knowledge a strong civil campaign arose in Peru. On the one hand, environmentalist NGOs succeeded in stopping the ratification of the agreement in the Congress. On the other, indigenous and local communities threatened by the projects resisted the companies.

The Sociedad Peruana de Derecho Ambiental (SPDA, Peruvian Society of Environmental Rights) and Derecho Ambiente y Recursos Naturales (DAR, Rights Environment and Natural Resources) relied in the Peruvian Constitution to impede the ratification of the agreement by the Executive power. Constitutionally, the Congress has the power to modify and ratify the agreement after it is signed by the Executive power in Peru. The legal basis of their argument was that the agreement (i.e. article 4) would necessitate the modification of internal norms in order to legalize the concession of the infrastructure to the firms. Carmen Heck (2013 personal interview) of SPDA affirms that due to bureaucratic procedures due to the change of government in 2011 the agreement has not been ratified until the present.

The companies obtained temporal concessions (for 2 years) to develop the economic, social and environmental studies. Heck (20013 personal interview) comments that the communities rejected the processes of consultation necessary to proceed with the projects and did not make further attempts to negotiate with the people. As procedures mandates, MEM has archived the temporal concessions.

Neither the Brazilian State nor the companies have insisted in the accomplishment of the agreement. Heck notes that reason is based on the Law of Electric Concessions²³ which stresses that “the final concession and authorization is going to be granted for unlimited time to electric projects” (OSINERGMIN 1992: 8). Taking into account that in Peru foreign firms have same rights and duties as domestic firms, Brazilian companies started pursuing new projects independently (Heck 2013 personal interview).

For instance, Heck (2013 personal interview) accounts at least 20 projects in the Marañon Basin and at least 3 are already approved by MEM. These new projects are from smaller scale (between 100 and 150 MW) than the before planned, hence it has been easy for them to negotiate with the communities succeeding, so far, with their consent. These ‘molecular processes of capital accumulation’ (Harvey 2003: 93) open the arena for further research.

²³ Law No 25844, approved in 1992 during the government of Alberto Fujimori.

Chapter 4 The expansion of Capital in the Amazons: Challenging the State's autonomy

In this paper I make the case that electricity and the hydroelectric dams serve two purposes that are complementary to two elementary functions of the State: the accumulation of capital and maintaining political legitimacy (O'Connor 1973 cited in Fox 1993). Electric energy contributes to the accumulation of capital in two ways. First, it can be used as a means of production to transform material into capital. Secondly, it can be used as a commodity to be exchanged for monetary capital. The provision of electricity can also increase political legitimacy, because the population might expect that, besides industry and commerce, the State also assumes responsibility for the provision of electricity for both social economic reasons and basic social needs. Finally, the hydroelectric dams do not only generate electricity, but also represent profitable, large-scale investment opportunities. Thereby they help to mobilize the existing capital surplus and, as such, further facilitate the process of accumulation (Harvey 2003).

It should be stressed however that it is not just the State that benefits from the construction of the dams and form the electricity they generate. In both countries private capital in the form of mining companies and, in the case of Brazil, also construction companies stands to gain. When one considers the role of electricity in the accumulation of capital, the close co-operation between the Brazilian State and (the oligopolies of) construction and mining companies in the construction of the hydroelectric dams makes sense. In the case of Peru, hydroelectricity is the main source of energy whereas mining -a highly energy intensive industry- has been the main economic activity in the last decades. Although Peru currently has an electricity surplus, it is expected that there will be an increase in the demand for electricity, due to the expansion of the mining sector.

Nevertheless, the process of capital accumulation – accomplished through the construction of large-scale hydroelectric dams – can result in different outcomes in terms of political legitimacy. On the one hand, a positive response results from those who are benefited with electricity, but on the other hand, a negative response occurs, resulting from the high social cost due the (forced) displacement of people and the complex set of environmental distortions upstream and downstream the rivers.

In order to analyze the complex relations between the State(s), Capital and the different societal actors, I will use the multilevel interactive framework based on the State-society (Fox 1993) and the State-State (Destradi 2010) approach developed in chapter 2. The State-society approach helps to understand the internal relations of each State with private capital and with society. The State-State approach covers the analysis between the two States at the central power level. In the next two sections, I will carry out the analysis of autonomy and capacity, while taking the different aims of the two States into consideration. The first section looks at the role of Brazil, which aims to expand its electric system, and the second one at the role of Peru, which accepts to facilitate this process.

4.1 Autonomy and capacity of Brazil

In line with the argument made above, Brazil, in essence, uses hydroelectric projects i) as a form of long-term investment, and ii) to provide electricity to industry and households. Electrobrás (2010b) – the major Brazilian electric power holding company – identifies both political and economic driving forces for its own expansion: 1) abundant accumulated capital and low costs of production, 2) high domestic demand for electricity, 3) favorable State policies with limited intervention, and 4) openness of other South American countries to foreign investments in the electricity sector (see table 4). The first three points give insight into why Brazil invests in electric projects while the final point explains why it chooses to develop these projects in neighboring countries.

The first point goes hand in hand with one of Harvey's core theorems; an abundant accumulation of capital leads to the necessity to displace capital by investing it in profitable projects. In this case, there is a co-participation of public and private investment. The Brazilian hydropower projects involves joint investments from BNDES and construction companies²⁴. With the second point, Electrobrás generalizes across the entire Brazilian society and, in doing so, ignores the clear differences in demand for electricity among the different sectors in society. Until 2010, the State had to provide electricity to 190,7 million people (98,6% of the total population) (OLADE 2012), which represented less than one third of total electricity consumption in Brazil. Industry on the other hand had the largest share in total electricity consumption (40,2% in 2012) (EPE 2013) and within the industrial sector, the '*electro-intensive*' (i.e. mining, metallurgy, chemical) industry alone was responsible for one third of the electricity consumed (Leroy and Malerba 2010).

Traditionally, Brazil had a more diversified economy. Mining started to become more relevant for Brazil since the discovery of rich mineral deposits in the 1960's. Moreover – due to the increasing international demand for minerals in the last decade – mining has become the most important export sector (see chapter 1). The influence of this sector is demonstrated by the planned construction of the new hydroelectric power centrals in Brazil: all of them (eleven) are going to be placed in the Amazon region of Brazil, which is becoming the most important region for mining (see figure 1 and table 3). Hence, the co-operation between the mining companies and the State that was already mentioned in the previous section, resulted not only in joint support for the construction of new dams, but also for the locations in which these dams are going to be placed.

This combination of factors – the investment opportunities in large-scale projects and the rich mineral deposits in the Amazons – helps to explain why it is advantageous for both the Brazilian State and Capital to build hydroelectric dams in the Southern part of Peru. In order to realize those goals, an

²⁴ Currently a hydroelectric dam in Nicaragua is financed by BNDES (31%), Odebrecht S.A. (47%) and BCIE (21%) (EFE 2013). In Ecuador BNDES extended a loan for USD 242 million, the construction company was Odebrecht S.A. (Reuters 2008) There is no available data from Peru.

agreement has been negotiated that clearly favors Brazil's interests and brings Peru economic gains but also socio-environmental conflicts.

I will now review the negotiation process between Brazil and Peru, evaluating the degrees of autonomy and capacity in the interaction. Given the uneven relation of power, the three sources of power from the Hegemonic State Theory proposed by Destradi (2010): i) political, ii) economic, and iii) technological sources, are being used in this analysis.

First, regarding political power, the conditions established in the agreement demonstrate the bargaining power that Brazil has as State. In fact, Brazil has participated in almost all the international agreements and treaties related to bordering rivers (Conca 2006). Moreover, the negotiation process was characterized by an unbalanced number of actors. Heck (2011) highlights that at the bilateral meetings Brazil was represented by a team consisting of numerous negotiators, including representatives with a lot of decision making power²⁵.

Economically, Brazil agreed on covering the costs associated to all the phases of the project. This would be done by establishing a joint venture with the participation of BNDES and the various Brazilian private investors.

Technologically, Brazil has a history of around 50 years in the construction of hydroelectric dams. Therefore – with their specialized knowledge – Electrobrás in association and the oligopoly of construction firms²⁶ managed to win the tender for the construction and operation of the hydropower centrals. According to the agreement they own this right for 30 years.

Finally, Electrobrás implicitly recognizes the existence of conditions in neighbouring countries which facilitate the international expansion of the Brazilian electric system (see the beginning of this section). A very important element for these favorable conditions is the cost of the electricity; in Peru the price of electric energy is around 22% lower than in Brazil (RPP 2013). This difference is fully passed on to Brazil, as Peru has officially offered to charge Brazil the same costs as it does the rest of its hydroelectric power centrals (Ministerio de Energía y Minas 2009). Moreover, the agreement signals that as soon as prices are established they will be kept constant for the duration of the agreement (30 years).

4.2 Autonomy and capacity of Peru

The bilateral agreement allowed both the Brazilian State and Brazilian private capital to obtain much more benefits than Peru, which moreover has to deal with the undetermined social and environmental consequences. In response to this fact, social resistance emerged and successfully stopped the projects. This section aims to understand why Peru has agreed on the terms of the agreement

²⁵ In 2008 both countries had delegations with members of their Ministries of Mines and Energy, to which Brazil included the Advisor of the Presidency, the Superintendent of Overseas operations, the Minister counselor of the Brazilian Embassy, the President and the Director of Electrobrás.

²⁶ The main constructing companies from Brazil are Odebrecht S.A., Queiroz Galvão, Andrade Gutierrez, and Camargo Correa

and the consequences this has had so far. To this end, the State-State relationship with Brazil will be discussed, followed by the internal relation of the Peruvian State and its society. First however, the meaning of electricity and the role of the hydroelectric dams for Peru needs further attention.

For Peru, the generation of electric energy is a means to accumulate capital; not so much as a means of production but mainly as a commodity to be exported, given their current electricity surplus. In order to build the infrastructure required, Peru accepts the economic and technological capacities of both the Brazilian State (through BNDES) and Brazilian capital (through the consortiums). This influx of capital comes in the form of Foreign Direct Investment. The executive arm of the State, through the person of Alan García, has prioritized foreign investment since its last period of government – more specifically Brazilian capital – in order to foster economic growth opportunities for Peru (CEPLAN 2011). At the same time, he (García) has recognized the potential to exploit hydroelectric power in the rivers of the Amazons and the possibilities to establish energy infrastructural integration with border countries (García 2007). In his view, this can be accomplished by providing legal entitlements to land and by facilitating other conditions to attract foreign capital (*Ibid*). In line with these priorities, the State of Peru considered the hydroelectric dams financed by Brazil to be beneficial, despite the established conditions, because it gains profits from the export of electricity, but also because they send a positive signal to international capital markets and hence help to attract more FDI (Heck 2011). In this sense, the process and terms established in the bilateral agreement are the result of autonomous power of decision rather than the acceptance of imposed conditions from Brazil.

However, while the State managed to preserve its autonomy of action vis-a-vis external institutions, its capacity to carry the process forward was hampered by internal resistance. The Executive power of the State was challenged by the civil society through the Legislative power. A coalition of environmentalist NGOs (which included DAR and SPDA among others) started a legal campaign demanding that Congress be consulted (see chapter 3). Finally the agreement resulted to be achieved in the Foreign Affairs Commission of the Congress until the present.

The very concession of rights to construct and manage the infrastructure to private foreign agents caused the State -in the form of the executive power- to lose its capacity to validate the agreement. For Peru it is a State policy to promote private investment and FDI (Ministerio de Economía y Finanzas 2011) and the concession of rights is the means to “maintain or create the conditions for profitable capital accumulation” (Fox 1993: 15). However, the large-scale hydropower dams transform the territory to a great extent. The dams hold back the natural flux of the rivers and flood extensive areas of land. Given this great transformation of the territory, the concession of rights over the hydropower infrastructure cannot be detached from the space that is transformed; space that often, not to say always, has inhabitants.

The transformation of the territory implies the displacement of its inhabitants. Moreover, it modifies the entire ecosystem (sediments and fishes are retained among other distortions), resulting in changes for the self-sufficient lifestyles. At this point, the question what those transformations and displacements mean for the inhabitants enters the discussion. Although it would require an in depth analysis of its own to properly address this question,

suffice to say here that the notion of territory for indigenous and some non-indigenous communities constitutes the basis for their culture and identity (Escobar 2008). In this sense, land is more than a mere means of production for livelihoods. Therefore, the transformation of – and the displacement from – the inherent natural conditions of territory, implies changes in the identity and local culture of its inhabitants. Consequently, if the State and the local communities give different values to the territory, the State can fall into the trap of contradicting one of its core functions in its pursuit of another. If the accumulation of capital becomes the State's priority and it facilitates the concession of territory to accomplish it, the State runs the risk of losing its political legitimacy. The drastic transformation of territory threatens the “conditions of social peace and political stability” (Fox 1993: 15). This is what has happened in the regions where the dams were planned to be built.

The location of the projects was chosen based on a previous study about hydro-power opportunities by the German Cooperation Agency (GTZ) in the 1970s. In November 2007, MEM - Peru offered 15 hydroelectric dams and in the process of negotiation, five were selected (DAR 2011). As can be seen, the decisions were taken at a highly centralized level, not only by the Peruvian State but also by the foreign State. This implies that there was neither a process of prior consultation, nor did the people who live in the selected territories give their approval. For instance, the Pakitzapango project was chosen to be placed in the territory of the Asháninkas, an indigenous community settled in the banks of the Tambo River. Moreover, Heck (2011) stresses that because of the risk of displacement, the State should have conducted a process prior consultation, as agreed in the ILO Convention No 169. Although MEM provided temporal concessions (for two years) the companies did not succeed with the process of consultation due to the total rejection of the local communities (see chapter 3).

Nevertheless, the constructing companies have started new strategies. The Peruvian Law for Electric Concessions, provides concessions for ‘*unlimited*’ time to firms to both domestic and foreign firms for equal. The agreement of 2010 it does not represent anymore the *instrument* for the expansion of Brazilian private capital. Capital in Peru apparently has another kind of degrees of autonomy and capacity.

4.3 A look back to the past

So far, it was shown how both States interact with each other, and how each of them interacts with its own internal actors (i.e. private capital and society) to pursue its aims. What remains unexplained however, is why the two States have such different roles. Actually, there are deeply rooted reasons related to the way in which the two States have been formed historically that help to explain these differences.

In chapter 3 a review of the historical process of the formation of both States has been provided. It follows from this review that there are clear differences between the two countries in the way in which the relation between the State and private capital, the relation between the social classes, and the relation of society as a whole with other States and foreign capital have developed.

On the one hand there is Brazil, where the emergence of a wealthy bourgeoisie was not constrained by the landowner oligarchy. On the contrary; their peaceful coexistence has motivated the State to facilitate the process of fast industrialization during several different periods since the second half of the 19th century. By that time, the State already pursued protectionist policies to encourage its own industry, thereby challenging the dominance of British foreign capital. In order to maintain political and economic stability with the increasing working class, the State took a form of corporative State in the 1930s which opened institutional channels for a more direct interaction between the State and society. One decade later, the State once again clearly intervened in favor of its domestic industry with a set of incentives known as ISI. These policies were continued by the military regime in the 1970s, although the greater degree of openness under this regime increased the country's dependency on foreign capital. The disastrous results of the neoliberal period weakened the apparatus of the State in the 1990s and the PT – founded by the largest working class in South America – came into power with a new wave of State-support for its domestic capital.

Peru on the other hand, has had an unstable society from independence until the 1990s. Unlike in Brazil, the *terrateniente* class and constant political instability impeded the emergence of a local bourgeoisie. Due the effects of the war with Chile in 1879 the State started to depend on both foreign capital and imports to a great extent. The recurring loans came with conditions that had Peru concede sovereign rights over its territory and resources to foreign companies, first from Britain and later from the U.S. The reduced local industry was totally dependent on the foreign firms and played the role of a lobbyist extracting economic advantages from the State. This became a vicious circle as the State tried to attract more foreign capital. These factors further strengthened the tendency to export primary resources, thereby reinforcing the '*extrapolled*' economic model. Finally, the former president Alan García and his populist party APRA elected in the 2000s continued to encourage the importance of foreign capital as a way to integrate the State with the international market.

To summarize, both countries show recurrent political and economic patterns, but in two different ways: one with a more consolidated State that supports and interacts with its domestic capital; the other with a more fragile State dependent on foreign investments. Therefore, history helps us to understand why there has been a close relationship between the Brazilian State and Capital throughout the project and why that has found favorable conditions to invest in Peru, a State that constantly seeks to attract foreign capital.

Chapter 5 Conclusions

This study has attempted to demonstrate the ongoing process of the geographical expansion of capital into the Amazons under the current global economic shifts. The problem illustrates how the distinct logics of interaction between State(s), Capital and civil society depend on the different purposes given to the use of energy, in this case in its form of electric energy obtained from large-scale hydropower centrals. The guiding question to address the problem has been *how and to what extent does the need of electric energy, as a key source of economic growth, influence the expansion of capital into non-capitalist systems in a context of State-Capital interaction between Brazil, as a regional power, and Peru?*

In order to respond to this question, this research paper defines the geographical expansion of as it represents a transformation away from non-capitalist systems. It goes on to describe the two dimensions of the State, namely its functions and degree of autonomy and capacity to act.

Hydropower dams and the functions of State and Capital

Energy in the form of electricity is an essential resource for both State and private capital. For the State it helps to accomplish two elementary functions stressed by Fox (1993), namely to accumulate capital and to maintain its political legitimacy. For the private capital electricity is used primarily for accumulation. It is due to this common dependency on electricity that the State and private capital can interact with each other and foreign States and Capital. Since a large part of society uses electricity, the State uses this resource to ensure social and economic harmony, hence protecting its legitimacy. In this research the interaction among State(s) and Capital is based on three uses of electricity, i) as means of production, ii) as service for societal needs, iii) as commodity for export.

Hydroelectric dams are profitable long-term investments that provide cheap and renewable electricity in the long-term, and, due to the great investment that is required, mobilizes surplus capital. This constitutes a solution to the depreciation of excessive accumulated capital within an economic system (Harvey, 2003). Therefore obtaining electricity through hydropower has a double benefit for accumulation.

However, while the State can gain benefits from hydroelectric dams, this can challenge its legitimacy from the perspective of civil society and local communities. The process of obtaining electric energy through large-scale hydroelectric dam is at the expense of transforming the natural environment to a great extent. Downstream it changes the natural dynamics of the rivers while upstream waters levels rising can result in dispossession of land and displacement of local people. Large-scale hydroelectric dams are, without doubt, one of the forms of “contemporary land grabbing” as is understood by Borras *et al* (2012).

Locating autonomy and capacity

Large-scale hydroelectric dams affect local social stability. Similar to extractive industry this is likely to be the “point source” of “distributive tensions” (Bebbington 2012: 29) that questions the legitimacy of the State. The State has taken autonomous decisions in order to pursue its function of capital accumulation through commodity export. The social protests in Peru against this hydropower projects demonstrates that the legitimacy of the Peruvian State is being challenged.

At an external level, this case illustrates the interaction between State and State-Capital relations, namely the Peruvian State with both Brazilian State and Capital. Hypothetically, the autonomy and capacity of one State can be limited by the overlapping of interests of other State. This happened with Peru when the Brazilian State used its means of power (political, economic, and technological²⁷) to gain the benefits through the hydropower projects. Peru took the decision and had the capability to attract Brazilian Capital, but during the negotiation, inequality of power tended to limit the autonomy of Peru in the long term.

With regard to the roles of Capital, this paper has been focused on the influence of Brazilian private capital for financing of constructing and mining. The interests of these two industries differ in terms of hydroelectricity. Mining requires the largest share of electricity for its industrial processes while construction companies first invest in the infrastructure and later sell the electricity produced to the market.

These days mining exports are the main export product for Brazil. The data collected in this paper suggests that mining has a powerful influence on the Brazilian State’s decisions. Through this research it cannot be confirmed whether the Brazilian mining sector has influence on the expansion of hydropower across other Latin American countries (e.g. Ecuador and Nicaragua). It is more likely that they are influential in the expansion of hydropower in the South of Peru since the demand for electricity is increasing in the Brazilian Amazons due to increased mining. On the other hand, the Brazilian construction sector has a direct relation with the Brazilian State and hence has more influence. This sector participates in the investments with BNDES and in some cases they have founded common subsidiary companies with Eletrobrás and Furnas²⁸.

This analysis of autonomy and capacity has been centered on the State’s actions. What is lacking is a similar analysis of the autonomy and capacity of the private sector. The Brazilian construction sector was interested in acquiring concessions to operate for 30 years in Peru but the agreement did not come to fruition. Initially they were dependent on the agreement negotiated by the Brazilian State but later by using existent Peruvian Law they obtained concessions for an unlimited time period. Moreover, by reducing the size of the projects they were more socially accepted. In other words, this increased their

²⁷ In other contexts can be used military power

²⁸ Furnas is a subsidiary company from Eletrobrás in Brazil

degree of autonomy and capacity to achieve their initial goal of selling electricity through hydropower.

Final inputs on South – South relations

In this research paper, I have sought to connect current global economic transitions and their influence over *new* logics of interaction between State(s) and Capital in South America. Furthermore, I have attempted to illustrate how contradictory visions of the use of these resources have resulted in resistances from local communities. There is an increasing and “aggressive expansion” of capital in the Amazons through different forms (Bebbington 2012: 13). The large-scale hydropower dam is one such example. This paper has attempted to problematize the large scale infrastructure of hydropower dams; and taking into consideration the motivations, and the social and environmental impacts. In Brazil only around one million of people has been displaced due to dams constructions (International Rivers 2008). The reason for taking Peru as a case study is to learn from this experience a similar phenomenon can happen in Bolivia, my home country.

The very beginning of this research started with a bias centered on the increasing political, economic and material expansion of Brazilian State and Brazilian capital and the potential impacts this could have in the rest of South America. During the process I have come to realize that is equally important to fully understand the logics behind the reasons made by other State(s) in the region. Understanding Peru and Brazil in light of their respective historical process sheds lights on the more recent events that have been highlighted in this paper. The Peruvian State has to date illustrated a dependence on foreign capital to facilitate the process of capital expansion. In this particular case, both countries have signed an agreement under the discourse of “*energy integration*” providing a vague sense that it is for the general benefit of both countries. However, it has been highlighted that the main benefactors are a concrete group of (trans)national companies based in Brazil. The resistance of Peruvian society to the intended large-scale projects has put them on hold. Nevertheless, there are other legal incentives that have allowed companies to start new projects. While I do believe that the current process of integration among societies in South America can be achieved, there are new interactions and tensions between State, Capital and society that are still to be defined, changed and improved.

Appendices

Appendix 1 Electric consumption of Brazil 2000 - 2012

(Based on Indexmundi 2013)

Year	Electric consumption Billion kWh
2000	336.24
2001	353.67
2002	360.64
2003	335.9
2004	335.9
2005	351.9
2006	415.9
2007	402.2
2008	402.2
2009	402.2
2010	404.3
2011	404.3
2012	455.7

Appendix 2 Share of main five country destinations of Brazilian exports (%) in 2000 and 2010

(Based on The Observatory of Economic Complexity 2013b)

	2000	Cumulative share	2010	Cumulative share
USA	25,0	25,0	10,0	10,0
China	2,1	27,1	16,0	26,0
Argentina	11,0	38,1	9,1	35,1
Germany	5,4	43,5	4,6	39,7
The Netherlands	4,9	48,4	4,6	44,3
Others	51,6	100,0	55,7	100,0

Appendix 3 Share of main exports of Brazil to China (%) in 2000 and 2010

(Based on The Observatory of Economic Complexity 2013b)

Exports	2000	Cumulative share	Exports	2010	Cumulative share
Soya beans	29,4	29,4	Iron ores and concentrates	43,3	43,3
Iron ores and concentrates	23,6	53,0	Soy beans	23,1	66,4
Chemical wood-pulp, soda or sulfate	7,7	60,7	Petroleum Oil crude	13,1	79,5
Tobacco, raw	3,3	64,0	Chemical wood-pulp, soda or sulfate	3,0	82,5
Aircraft, space-craft & launch vehicles	3,2	67,2	Soy bean oil, crude	2,6	85,1
Others	32,8	100,0	Others	14,9	100,0

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