

The Politics of Petroleum Governance in Brazil

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ABSTRACT:

This paper examines the political economy of oil in Brazil in light of the challenges presented by the discovery of the new oil reserves. Its main argument is that economic governance in strategic resource sectors has been determined largely by political continuities with the country's statist developmentalist past. I offer a more nuanced argument regarding the role of political legacies, historical conflicts and institutional complexities as mediating factors in the governance of natural resources. In other words, we should understand the current reforms in the oil industry in terms of national development strategies in pragmatically responding to the changing external environment. This growth strategy coheres around the idea of neo-developmentalism, which combines market incentives and state control over the oil industry by securing greater state share of oil rents as well as directly participating in the economy through state enterprises. The puzzle really is not so much why greater state involvement in the economy returned in the policy agenda, but why it has become sustainable as an alternative to free market orthodoxy. In this paper, the explanation rests on how favourable structural conditions – self-sufficiency in oil, a marked period of growth, and discovery of pre-salt – have given the Left government the ideological and material resources for the articulation of a new developmental discourse.

KEYWORDS:

Developmental States; Neoliberalism; Petroleum; New institutionalism; Brazil; Petrobras

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Introduction

This paper examines the political economy of oil in Brazil in light of the challenges presented by the discovery of the new oil reserves. Its main argument is that economic governance in strategic resource sectors has been determined largely by political continuities with the country's statist developmentalist past. I offer a more nuanced argument regarding the role of political legacies, historical conflicts and institutional complexities as mediating factors in the governance of natural resources. In other words, we should understand the current reforms in the oil industry in terms of national development strategies in pragmatically responding to the changing external environment. This growth strategy coheres around the idea of neo-developmentalism, which combines market incentives and state control over the oil industry by securing greater state share of oil rents as well as directly participating in the economy through state enterprises. The puzzle really is not so much why greater state involvement in the economy returned in the policy agenda, but why it has become sustainable as an alternative to free market orthodoxy. In this paper, the explanation rests on how favourable structural conditions – self-sufficiency in oil, a marked period of growth, and discovery of pre-salt – have given the Left government the ideological and material resources for the articulation of a new developmental discourse.

In the Brazilian oil industry, it was not neoliberalism per se but rather the discovery of pre-salt oil reserves, which serves as critical juncture for shifts in institutional arrangements. Firstly, it opens up a new phase of development in the Brazilian petroleum industry, which has developed historically by refining and processing crude oil. The newfound oil wealth has altered the political mentality of actors, in which the old model of relying on foreign investments for economic dynamism in the oil sector was deemed obsolete. This is reflected in the change in petroleum governance, underpinned by the new regulatory framework introduced since 2010. Secondly, and in contrast to expectations of radical change, the Workers' Party (PT), now in its third term in office, has combined policies geared towards selective protectionism and autonomy for state-controlled enterprises as a development strategy. Equally, its emphasis on the role of oil wealth in social redistribution is novel compared to previous governments in power. Overall, the prevailing development strategy in Brazil signifies a hybrid strategy of growth with a stronger role for the state in guiding the economy without necessarily disregarding the role of competitiveness and market incentives as a way of generating profitability. In the next section, I examine the rationale behind market opening reforms and its impacts in the oil industry by focussing on the introduction of foreign participation and creations of new regulatory agencies. This is followed by an analysis of the role of state and state enterprises under favourable external conditions. The final section provides some concluding thoughts regarding the economic and environmental challenges of oil extraction in Brazil.

Reforming the Regulatory Framework in the Oil Industry

The nationalisation of petroleum, steel and mining was fundamental to the developmental model in Brazil, in which a strong state directly participated in the national economy as a

consequence of an incapable, unwilling private sector. The oil industry was considered vital for industrialisation. PETROBRAS emerged as a technocratic-political solution to balance the need for foreign investment and national protectionism of resources. Refining imported crude oil was the only way to secure Brazil's growing energy consumption and to eventually finance investments in the Exploration & Production (E&P) sector. However, PETROBRAS faced multiple challenges in achieving this goal: the expanding energy requirements of producing heavy capital goods, the need to integrate transport, shipping and railroad systems to policy of energy consumption, and the development of petrochemicals sector that can both support productive industries and develop the oil industry through crude oil production (Randall 1993). Whilst such tasks were complex and indeed technical, PETROBRAS' role in Brazilian political economy is intrinsically political. As a state enterprise necessary for industrial development, PETROBRAS was given greater political autonomy from the state. As existing onshore reserves declined, PETROBRAS intensified its exploration activities in offshore continental shelf leading to the discovery of Guaricema field in 1968, the Northeast fields, and then Campos Basin in 1974. Whilst the government sought to secure Brazil's energy needs as a result of high oil prices and balance of payments problems caused by the 1973 oil crisis, international oil companies were focussed at developing research in onshore activities leaving PETROBRAS with no choice but to invest on deep water drilling technology during the late 1970s and early 1980s (Dantas & Bell 2009; Furtado 1995). PETROBRAS' expansion thus came together with Brazil's state-led model of development, which meant that the exhaustion of this economic strategy also affected the performance of the state enterprise.

Unlike Mexico or Venezuela, Brazil had no oil reserves for exports during the twentieth century, therefore, the volatility of oil prices had a different effect for its economy as a rapidly growing oil consumer. With no prospective oil reserves inland, PETROBRAS was forced to compete internationally by tapping foreign oil reserves through BRASPETRO and refining imported crude oil. This policy worked quite effectively in meeting domestic consumption but was not sufficient to achieve its long-term goal of securing domestic oil reserves within the Brazilian territory. PETROBRAS sought to expand market control in energy-related sectors by way of operating as a highly specialised, vertically integrated energy firm with activities spanning oil, natural gas, and energy sectors in Brazil and overseas. Within the petroleum industry, PETROBRAS sought to diversify its operations from refining and processing imported crude oil towards exploration and production, which was underpinned by an aggressive investment policy in the E&P sector.¹ Market opening reforms in the 1990s were thus geared towards attracting foreign capital in upstream activities.

Cardoso's market opening policy seemed unstoppable despite the relatively good performance of state enterprises and the outright challenge posed by the Workers' Party in Congress (Hunter 2010).² These neoliberal reforms occurred in two phases. At the onset, Congress initially ratified Constitutional Amendment No. 5, which broke the monopoly of PETROBRAS across the hydrocarbon commodity chain. This was then followed by the 1997 Petroleum Law (Lei 9.478) approved in 6 August 1997, which established the concessions

¹ The petroleum commodity chain involves three major areas: oil exploration, development, and production, also known as *upstream*; in refining, transportation, and marketing, also known as *mid-stream*; and in petrochemical, oil product distribution, and natural gas, energy, and biofuels segments, also known as *downstream*.

² For a balanced critique on privatisation and the strategic direction of the PND during 1990s, see the following newspaper articles: Damasceno 1995; Folha de Sao Paulo 2003; Landau 1995.

regime to allow private firms to compete freely with PETROBRAS. The privatisation of mining was highly contested, including a legal battle regarding the sales of CVRD, which have generated mixed reactions from the public. Another wave of reforms targeting PETROBRAS would have been received less positively. However, an alternative explanation lies on the differences between mining and petroleum industries in Brazil. Whilst PETROBRAS developed the necessary technological advancement in offshore drilling to move up in the global value chains as a competitive player, CVRD was not able to develop the same competitive advantage in the mining industry. As such, from the government's viewpoint, CVRD had less capacity to develop internationally through state support than PETROBRAS.³ Although PETROBRAS remained under state control, the industry was opened to private competition, specifically to foreign participation. There were two key reforms in the oil industry: (a) the expansion of private participation through the concessions grant model; and (b) the creation of new regulatory institutions to find a new balance between public and private modes of oil extraction.

Changing the market structure of the Brazilian oil industry

The Petroleum Law, Cardoso's most important piece of legislation with regard to petroleum governance, had two important effects in the oil industry. Firstly, it radically changed the structure of *risk sharing* between private capital and the Brazilian state. As Table 1.1 shows, there are different forms upon which states can regulate the oil industry, specifically the very lucrative yet highly risky exploration and production (E&P) sector. The various models of risk sharing reflect partially the willingness of the host state to allow foreign capital to invest (and be rewarded) in the oil sector, and partially the choice of contract model determines the range of incentives and risks available for the state. Cardoso sought for lower risks in oil exploration and development but the cost of which was very limited reward for the state. Whilst the high sunk costs of exploration are shouldered by private capital, they equally reap greater benefits in situations where oil reserves are to be found. This model offers very minimal rent for the state – mainly through corporate taxes and royalty fees – but it reduces the risk for the state to invest in situations of *high uncertainty*. From the Cardoso government's perspective, the high risks (and costs) involved in oil exploration at a time of austerity, stagnant growth, and high levels of fiscal constraints required a more active private sector. Like in Chile, there was an astoundingly strong belief on the productive nature of private capital, particularly foreign oil firms, in generating economic dynamism in the petroleum sector. The view on the growth-inducing effects of foreign capital challenges the historically strong role of the state in directing the oil sector and the industrialisation programme more generally. And despite decades of resistance against foreign ownership, Cardoso successfully gained significant support in Congress to continue with his pursuit of introducing greater space for oil firms to operate in Brazil. This was of course a general trend in Brazilian political economy. Privatisation thus changed the market structure by introducing competition in a market characterised by high degrees of protection and the exercise of market power of state-owned enterprises (Goldstein 1999: 694).

³ Author interview with Deputy Secretary Nogueira da Costa Jr., Secretariat of Geology, Mining and Mineral Processing, Ministry of Mines and Energy, September 2011. It was conducted by Eliza Massi in the context of the co-authored piece (Nem Singh & Massi forthcoming).

Table Error! No text of specified style in document..1 Risks and rewards in different E&P models

Contract Type	Oil Company	State	Description
Concession	All risk and high reward	No risk and low reward	Oil company holds exclusive rights to explore, develop, sell and export oil and minerals extracted from a specified area within a fixed period of time. The successful bidder takes all the risks of exploring and developing oil fields. Ownership of natural resources rests on the state but permits foreign corporations to manage and operate the development of oil fields. Foreign capital takes the risks of developing oil fields and the model typically works when a national state-owned and/or private company join the consortium as interest holders. Often the state has the cost of its initial contribution carried by the other companies, which would be repaid from the state's future profits. Intense negotiations between the sharing of costs and capital exist here. Contracts play a critical role here because the legal system is the only guarantee that the state will not renounce its previous commitment. It is also in this system that the state is at its most conflictual role because it acts both as profit maximiser and as enforcer of the rule of law.
Production-sharing	All risk and low reward	No risk and high reward	Under this contractual arrangement, the oil company is engaged by the regulatory authority or state owned company as state representative to conduct petroleum exploration for a fee or a share of production. It can either be pure service contract or risk service contract. The oil company neither has any exploration or production title nor ownership of petroleum produced at any stage of the commodity chain.
Pure Service Contract	No risk and low reward	All risk and high reward	

Joint Venture	Share in risk and reward	Share in risk and reward	By definition, it refers to an arrangement where two or more parties wish to pursue a joint undertaking of oil exploration and development. However, there is a long list of issues that need to be resolved before any joint venture can be negotiated, especially as regards risk, costs, potential liabilities (e.g. in cases of accidents or environmental damage). The state is directly responsible in resource extraction.
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Sources: Lima 2009a, 2009b; Radon 2005 (Adapted).

Secondly, the Petroleum Law confronts the conventional view among policy elites in Brazil regarding the competitiveness of PETROBRAS, and state enterprises *en toto*, in sustaining a growth model based on state-led development. In congressional debates, PT as opposition vehemently challenged the Cardoso government regarding the privatisation of state enterprises between 1995 and 1997 (Hunter 2010). The initial restructuring of the PETROBRAS system (1990-1994) painted a very different image of state enterprises – one that seemingly showed SOEs as inefficient and uncompetitive after years of state protectionism. The post-ISI fatigue and the rise of neoliberalism provided the structural context upon which the discourse of no alternative to privatisation was embedded. The *Programa Nacional de Desestatização* (PND) approved under Collor de Melo and subsequently intensified during the Franco government was aimed at redefining the role of the federal government, reducing the scope of public sector, and strengthening the market for local capitalists. The BNDES which had oversight over the privatisation process completely restructured the petrochemical sector by selling off 27 state enterprises at a total value of US\$ 3.7 billion including transfer dividends of US\$ 1 billion between 1992 and 1996 (Montenegro 2003).⁴ As Table 1.2 details, privatisation of state assets as a way of securing fiscal stability had the net effect of generating short term income for the Cardoso government but at the expense of damaging the prospect of long term industrial strategies to recover from the crisis.

Table Error! No text of specified style in document..2 Sales from privatisation in petrochemical sector, 1992-1996

Year	Amount (in US\$ million)
1992	1,330.3
1993-1994	551.8
1995	604.04
1996	212.9
TOTAL	2,699.04
Source: BNDES data (adapted) from Montenegro 2003.	

Nevertheless the financial and economic performance of state enterprises, particularly of PETROBRAS and CVRD, were far from how they were depicted (Nem Singh & Massi forthcoming). In these circumstances, Cardoso's law has changed the terms of bargaining between the state, state enterprise, and private capital, although in a rather limited way, or at least not to the extent that initial optimists of reforms had envisaged. For instance, the Brazilian state had retained subsoil rights in order to maintain permanent control over its natural resources regardless of the availability of oil reserves and this was tied to the long held principle of oil as key to industrialisation.⁵ Equally, the extent private capitalists were willing and capable of generating economic dynamism in the oil industry remained questionable especially after 1997. Beyond the market risks common across sectors, there are specific risks in the petroleum industry which do not guarantee private investments. In economic terms, the exploration risks resulting from the possible absence of economically viable resources despite massive capital inflows in research and exploration make the

⁴ The petrochemical sector is part of the downstream activities of the PETROBRAS system. No reforms were introduced in this sector except the company reorganisation and the sector was not directly affected by the Petroleum Law, which focused on generating more investment in the upstream activities.

⁵ For a detailed discussion of subsoil rights – or the ownership of the state of its resources – as a fundamental indicator of state capacity to obstruct the ability of capital, both foreign and domestic, to access the subsoil in the Venezuela in comparative context, see Hellinger 2012, 2008, 2006.

Brazilian market far less attractive compared to countries with proven oil reserves (Postali 2002a: 226). Since long-term investments do not materialise quickly enough for private capital to profit, the investment risk in Brazil was very high as a result of fears that any changes in government or policy can endanger the oil contracts with previous governments. Finally, the law may have had limited impact to PETROBRAS and the goal of weakening the state enterprise to attract foreign investments was unachievable.

Re-forming the developmental state

The breakdown of state monopoly necessarily involved two inter-related policy changes with respect to the recalibrated role of the state. Firstly, the state had to project credibility in its reform and it did so by way of establishing an independent regulatory agency. Secondly, the Brazilian state wanted to maintain some form of control over the industry, which was reflected in its attempt to create a council of ministers in charge of linking petroleum and other related sectors – mining, steel and renewable resources – to coordinate ‘energy matrix’ as a way of asserting some form of direction in energy governance.

As part of the privatisation programme, the Petroleum Law established the *Agência Nacional do Petróleo* (National Petroleum Agency or ANP), which was created as an independent agency to regulate the bidding process of contracts for oil exploration, implement environmental rules and social licenses, and raise labour practices on health and safety at international standards. It was, in short, a technocratic agency aimed at facilitating the entry of foreign capital in oil production (rather than as financial investors) whilst providing domestic capitalists equal opportunities to invest in the E&P sector. However, the task is rather complex, and equally very political, as it requires weakening market control in the oil industry and influence of PETROBRAS over state planning – both of which were central to PETROBRAS’ powers as a state enterprise thanks to state monopoly in the domestic market (Randall 1993; Trebat 1983).⁶ For big business, ANP was initially conceived as guarantor for private sector on the commitment of the fledging Brazilian government to deliver substantive reforms to make the investment environment attractive for Brazilian and foreign oil firms.⁷ In this context, the emerging consensus between the government and private sector was that the state should retreat from directly intervening in the market by way of reducing drastically the influence of PETROBRAS in political decision-making. One concrete way of curbing its excessive powers was to create an oil regulatory agency that would manage the transition from single firm monopoly towards a highly competitive market.

Technocratic governance was envisaged by the Cardoso government through an impartial agency capable of overseeing the auction and licensing processes, in which PETROBRAS would not be given special treatment. One widely recognised fact was that PETROBRAS commanded political support within the state apparatus as a result of its strong role in human capital formation. Practically, everyone working in the petroleum sector was trained by PETROBRAS. ANP then sought to develop its own technical team in order to reduce the loyalty of PETROBRAS-trained staff to the company and create a new culture of independent regulation by educating them through the ANP system. Through agreements with 36 universities, ANP successfully contributed in training labour – geologists, engineers,

⁶ Author interview with a Former Senior Officer, ANP, August 2010.

⁷ Author interviews with Three Senior Officers, Instituto Brasileiro de Petróleo, Gás, e Biocombustíveis (IBP), August 2010.

lawyers, and economists – to conduct research in the oil, gas, and biofuel sectors. Between 2006 and 2008, the *concurso* trained 800 technocrats to become regulators whilst around 4,000 students benefited from the research funding directed at universities (ANP Annual Report 2011). The regulatory body grafted its own postgraduate training schemes, systems of public procurement and regulations in energy sector – all aimed at consolidating technical capacity as a way to assert its organisational autonomy from the state and from PETROBRAS.⁸

The Petroleum Law was then conceived as a critical juncture that would weaken PETROBRAS' power in the market and in the state apparatus. In many ways, the ANP was not just a technocratic agency but a highly politicised institution created to slowly erode the developmentalist ideology pervasive among the Brazilian elites. This is consistent with the literature on technocratic politics (Burnham 1999; Domingues 1994; Silva 2009), in which new regulatory institutions have been established to manage resistance to market reforms by way of deploying technocratic credentials, professionalisation of knowledge, and depoliticisation of decision-making by shifting powers towards unelected institutions. However, political legacies and structural constraints shape political outcomes by rendering certain choices more viable than others. Cardoso's justification for his privatisation programme was the inability of the Brazilian government to financially support the industrialisation programme due to fiscal constraints and changing global context. SOEs were then expected to perform better by being exposed to private firms (via market opening), and if things should fail, state divestiture was a necessary solution in redressing the state's fiscal accounts. These reforms were justified (and accepted) at a time of austerity and lack of growth.

In line with Thomas Trebat's (1983) distinction between the regulatory and entrepreneurial functions of the state, the Brazilian state has in fact retained its economic role in the oil industry by maintaining its relationship at arms-length with state enterprises. However, the fundamental change is that its role shifted from being *owner of productive capital* towards *provider of finance capital*. This was achieved chiefly by owning voting capital stocks in previously state-run enterprises, most emblematically in PETROBRAS, CVRD and CSN. In PETROBRAS, the Brazilian state simply retained the already existing majority shareholder ownership in the company. However, in steel and mining after full-fledged privatisation, the state retained control through golden shares.⁹ On the one hand, Vale is controlled by government pension funds whose chief executive officers are appointed by the government and sit at the company's board of directors, giving the state the capacity to exert indirect influence in the company's affairs (Nem Singh & Massi forthcoming). On the other hand, CSN underwent a complex and messy process of privatisation, in which domestic business groups were given privileged in acquiring assets of this state enterprise leading to concentrated ownership or 'block holding' among state-controlled investors and *grupos econômicos* (Amman et. al. 2004; Doring & Santos forthcoming; Montero 1998).¹⁰ This

⁸ Author interviews with Victor Martin Souza, Executive Director, ANP, August 2010; Former Senior Officer, ANP, August 2010.

⁹ As of March 31, 2011, the Valepar consortium held 52.7% of Vale's common shares (Vale Annual Report 2010). However, the government pension fund Previ of Banco do Brasil and FUNCEF of the Caixa Economica Federal (both state-owned financial institutions) hold the majority of the shares of Valepar ("Get to Know Vale," 22 Sep. 2011).

¹⁰ Until 1993, CSN was controlled by Siderurgia Brasileira SA – a state-owned holding company dissolved in 1990 – and the Federal Treasury (90,8%), and by Caixa Beneficiente dos Empregados da CSN (CBS) (9,2%),

illustrates not just how access by foreign capital was barred by the Brazilian state's gate keeping in extractive markets, it also demonstrates concentration of wealth either in the hands of the state or domestic business.

To conclude, Cardoso progressed quite successfully in his state divestiture programme by breaking the monopoly of PETROBRAS in the E&P sector and created a new institution to regulate the bidding, licensing, and general oversight of the petroleum, natural gas, and bio-combustible sectors. Whilst there was an attempt to put in place a high-level coordinating agency directly tied to the Presidential Office, CNPE served a limited purpose after the market reforms. Most crucially, the Brazilian government has kept arms-length relationship with domestic capital by way of policing foreign access to markets and asserting its role as provider of finance capital. The next section deals with a preliminary evaluation of the Petroleum Law prior to the change of the institutional framework in December 2010.

The Challenge of the Pre-salt

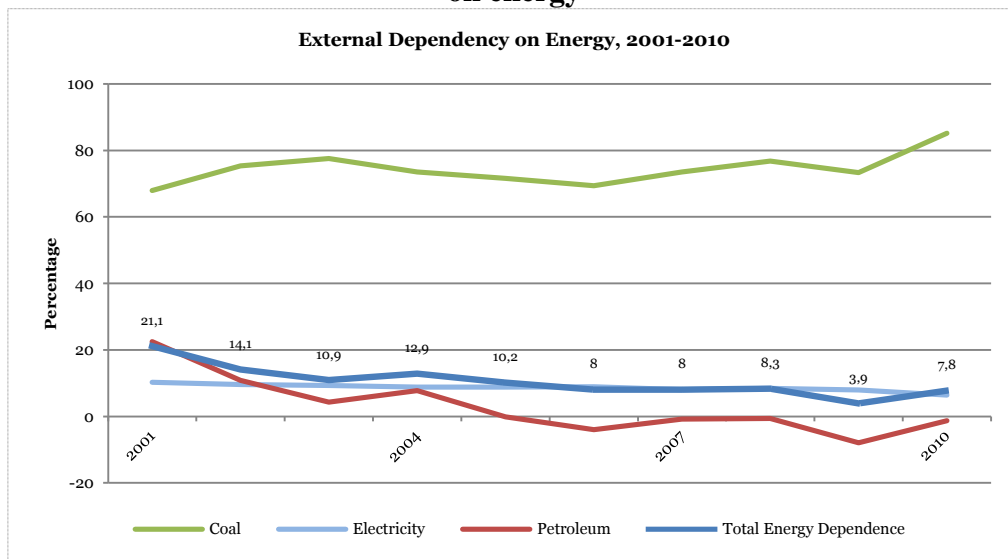
Through the changing external conditions of Brazil, Lula's government was able to reshape the policy agenda after 2007. Firstly, thanks to PETROBRAS, Brazil achieved self-sufficiency in oil, which signifies it is no longer in a position of dependency to acquire petroleum resources externally for domestic consumption. In this 'age of resource scarcity' (Barbier 2011) and escalating requirements in securing energy for development, Brazil has managed to eliminate its external dependence in oil prior to the discovery of pre-salt reserves. Figure 1.2 shows quite clearly the success of PETROBRAS' strategy in reducing oil dependency from external sources.¹¹ Brazil reduced its rate of external dependence from 22.5 percent in 2001 (397 boe/day) down to -0.1 percent (-1 boe/day) in 2005. Net exports were observed from 2006 to 2010. This also corresponds to the reduction of overall external dependence, wherein its total external dependence shrank from 21.1 percent in 2001 down to 3.9 percent in 2009 then climbing back up to 7.8 percent in 2010.¹²

the pension fund of the company's employees. A companies' consortium, led by CVRD, through Navegação Vale do Rio Doce SA (9,4%), and Vicunha Group (9,2%), but also comprising Banco Bamerindus SA¹⁰ (9,1%) and Banco Bradesco SA (7,7%), among others, was successful in acquiring CSN for US\$ 1,495.3 billion. The company acquired US\$ 532.9 billion in debts, raising the total cost up to US\$ 2,028.2 billion. CBS raised its participation up to 9,8% (Pereira, 2007: 14). However, the complex web of ownership structure is far from simple. For example, the newly privatised CSN became a shareholder in CVRD when it was de-nationalised in 1997. In addition, BNDES, the national development bank, was central in the process through the preparation of the bid documents as well as the provision of loans to interested national groups, given the capital mobilisation requirements. BNDES also joined as a partner in some of these business initiatives shortly after privatisation, through its subsidiary BNDESPar (Doring & Santos forthcoming).

¹¹ External dependence on energy is calculated as the difference between domestic energy demand (including losses in transformation, distribution and storage) and domestic production (EPE 2011: 30).

¹² Whilst generally this is observable in electricity, Brazil remains dependent on coal from external sources.

Figure 1 Brazil's rate of external dependence on energy



Source: EPE 2011, Table 1.8 (Adapted), 30.

Most crucially, the institutional framework was gradually altered to respond to the availability of commercially viable oil reserves beneath the salt layer near the coastline. In early 2002, PETROBRAS decided to drill oil beneath the salt layer knowing the technological challenges in reaching the reservoirs. The salt layer is about 2,000 metres thick and wells penetrate over 7,000 meters below sea level, in ultra-deep waters.¹³ In 2005, the Tupi bloc showed indications of oil in the pre-salt layer and in late 2006 PETROBRAS estimated between 5 and 8 billion barrels of commercially viable oil. From early 2007 until 2011, scientific research on the wells drilled in the Campos and Espiritu Santo basins also showed oil contents. At present, the pre-salt oil reservoir is approximately 800 kilometres long by 200 kilometres wide, which runs along the southern and south-eastern coasts of Brazil from Santa Catarina to all the way to Espiritu Santo (see Figure 7.3). In this context, national elites have not given up its goal of securing energy needs as a way of achieving industrialization, and this is far more entrenched in the PT government's ideological predisposition. Not to labour the point further, political agency could be exercised as a result of the changing external context for Brazil. A new political discourse emerged as soon as PETROBRAS confirmed the presence of light hydrocarbons in the pre-salt reservoir.¹⁴

¹³ Using its years of geological information including data on the nature of rocks in the salt layer, PETROBRAS sought for a new version of Basin Simulator to accurately map the site of oil extraction – a task deemed difficult due to the distortions created by the salt. Equally, a new process had been developed to deal with the greater corrosiveness and instability of the salt (PETROBRAS Annual Report 2007: 4-5).

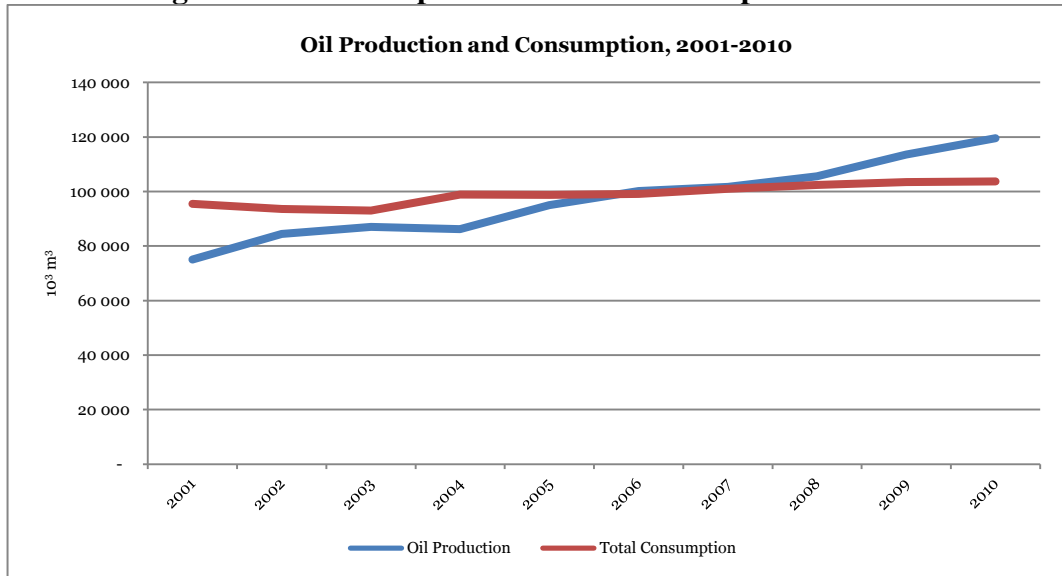
¹⁴ Technically, light hydrocarbons refer to 30° API oil, natural gas and condensate.

Figure.2 Map of oil concessions in Brazil



Source: ANP website (www.anp.gov.br).

Figure.3 Petroleum production and consumption in Brazil



Source: EPE 2011, Table 2.2 (Adapted), 40.

Three Fundamental Changes in Petroleum Governance

Whilst Lula embraced the rules of the game promoting macroeconomic management and foreign capital participation, he has introduced new rules in light of the discovery of pre-salt reserves. In particular, there were three key changes sought by Lula da Silva and his successor Dilma Rouseff: (a) change in the regulatory framework to increase the stake of the Brazilian state; (b) to redefine the relationships between state agencies and state enterprises by creating PETROSAL and strengthening CNPE; and (c) to explicitly link fiscal and oil regulations through the national social fund.

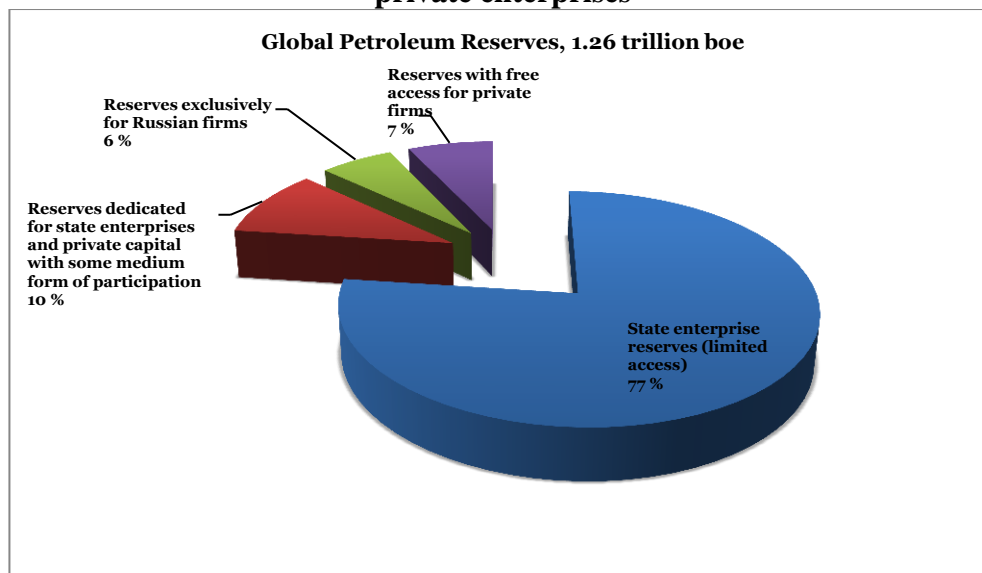
A. Institutional layering in regulatory frameworks

The pre-salt reservoir is transforming Brazil as a leading energy producer, and this condition allowed Lula's government to introduce a change in state-market relations in the oil industry. In the concessions grant model, high uncertainty and risks prevent the state from investing in oil exploration activities. It also means lower rewards for the state by way of taxation. However, the *perceived* low risks and uncertainty in exploration activities as a result of the pre-salt reserves have changed the government position regarding public investment in the oil sector. Under the production-sharing arrangement (see Table 7.1 again), the state asserts its ownership of natural resources by retaining subsoil rights whilst permitting foreign corporations to operate in the development of oil fields as service contractors. The state maintains high rewards by establishing minimum participation share of national state-owned enterprises whilst allowing private capital to work together with PETROBRAS through consortium and joint ventures. In contrast to the concession grants model, participants in the consortium do not own mineral rights and only provide services to operate on behalf of the

state (Lima 2009a, 2009b; Radon 2005). The contractor and not the Federal Government take the costs and risks of exploration activities.¹⁵

Whilst the technocratic explanation of risks and rewards is a strong economic justification, the underpinning logic is more political. As Figure 1.5 demonstrates, in contrast to other industries including mining, petroleum is a highly restrictive sector, in which the state historically played a decisively interventionist role. Out of 1.26 trillion barrels of oil (boe) global petroleum reserves, 77 percent have very limited access and are held in reserve for state-run oil enterprises, 10 percent of reserves are accessible to state enterprises and private capital with medium access, 6 percent are exclusively kept for Russian state enterprises, and only 7 percent have free access for private capital. The private sector, which consists of the biggest international oil companies from traditionally oil-seeking countries, has had limited access to world oil reserves.

Figure Error! No text of specified style in document.4 Access of state-controlled and private enterprises



Source: PFC Energy 2009 in MME 2010 (Adapted).

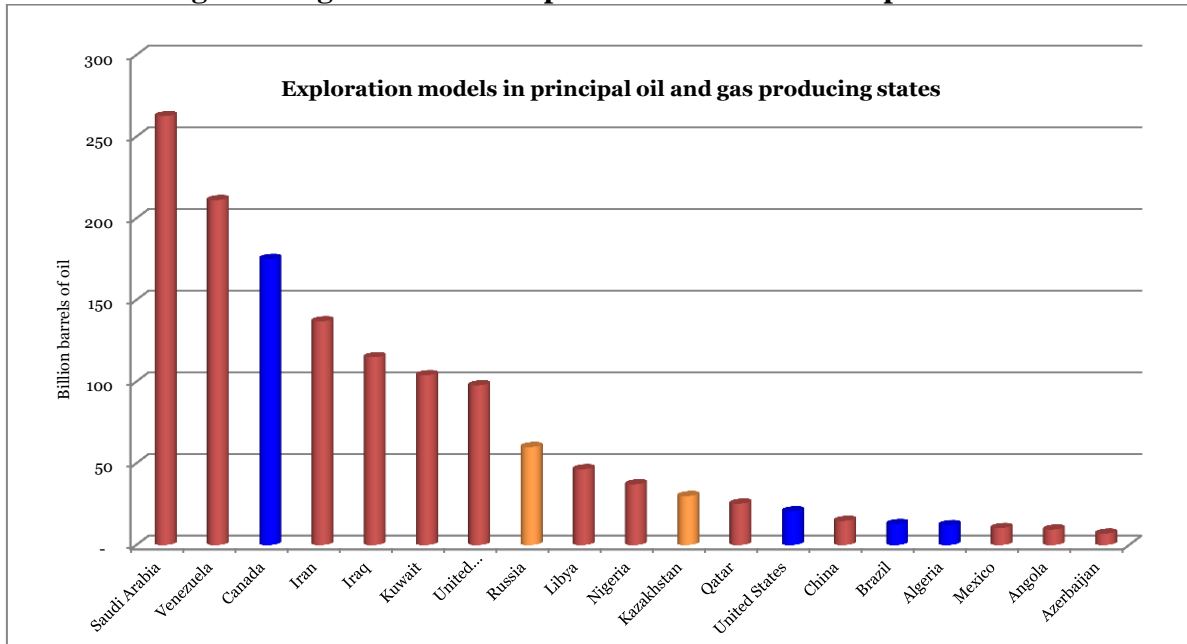
The structure of the global oil industry is inherently favourable to direct state participation, which is reflected in the dominance of production-sharing arrangement, as shown in Figure 1.6, among oil-rich states. The major oil-producing economies – Saudi Arabia, Iran, Iraq, Kuwait, Venezuela, UAE, Libya, Nigeria and Qatar – have adopted either production-sharing or service contracts. The remaining two key oil exporters – Russia and Kazakhstan – have adopted pure production-sharing contracts. From the 24 major oil producing countries, 16 have production-sharing and service contracts, six have mixed regimes, and only six have concessions grant model (MME 2010: 17).¹⁶ The choice of ownership structures in the oil industry has broader consequences for state enterprise competitiveness and the degree of state control over private capital participation in the economy (Hertog 2010a, 2010b; Jones Luong & Weinthal 2010). In Brazil, the production-sharing arrangement allows for private

¹⁵ The national government can, upon discretion, participate in putting investments in exploration activities, evaluation, development and production in pre-salt reservoir, in which its financing can be covered by the Special Fund established through 1997 Petroleum Law.

¹⁶ In this survey, Brazil had a concessions grant model.

participation in the economy without necessarily handing the state excessive control over the oil industry since private companies are not discriminated. State power is exercised through the ability of the Ministry of Mines and Energy (MME), directly or indirectly via ANP, to decide which blocs are considered ‘strategic’, and is therefore restricted from private explorations as opposed to ‘non-strategic’ blocs where the concessions grant model remains applicable.

Figure 5 A global view of exploration models and oil production



Source: MME 2010 (Adapted).

Notes: Red: Production-sharing arrangement or service contracts
 Yellow: Pure production-sharing arrangement only
 Blue: Concessions grant model

The state is increasing its stake by moving beyond taxation as a means of acquiring oil rents. Instead, the new law makes clear its preference for PETROBRAS as service contractor by giving the company what is called *onerous assignment*, in which the state controlled enterprise receives minimum participation share of 30 percent across exploration, development, and production activities in the upstream sector. Whilst the production-sharing arrangement invariably heightens risks and costs for the state, it likewise strengthens its ability to reap more rewards by directly participating in oil activities via PETROBRAS. It stands in contrast to other Latin American states where state intervention has mostly taken place through renegotiation of contracts and re-taxation of the minerals sector (Hogenboom 2012; Kaup 2010). More recently, Cristina Kirchner’s efforts to re-nationalise the natural gas sector in Argentina by taking 51 percent ownership of previously privatised YPF from Spanish Repsol were highly contentious to the extent that threats of capital outflow were astutely declared to challenge the governmental policy shift. Even after the new entry of China, there are persistent doubts about the capacity of Latin American state to reduce their dependency in natural resources. What is evident is the greater difficulty in crowding out the private sector in the sector even in situations where there are relatively effective public enterprises although the state can still exercise a certain degree of control. The change towards production-sharing arrangement in Brazil is one example of this strategy.

B. Reorganising states and markets

Under the new law, there are two important changes in terms of the reorganisation of state and market actors. Firstly, the state created a new 100 percent state enterprise, PETROSAL SA, to represent state interests in negotiations of consortium and joint ventures. PETROBRAS is only 51 percent state-owned, which means it cannot represent the Brazilian state during negotiations with private sector to decide the percentage of participation share of different firms. Whilst ANP is a regulatory agency independent of the state, CNPE is responsible for maintaining the strategic direction of energy policy. Whilst labour unions have supported the possibility of a traditional re-nationalisation of PETROBRAS (100 percent ownership), the state enterprise has exercised leverage on the basis of profitability. PETROBRAS was – and remains – a state-controlled rather than state-owned enterprise for this reason. Therefore, a new state enterprise was established with a specific role of representing the state in negotiations with foreign and domestic capital, and naturally was not duplicating the role of PETROBRAS as a service provider. PETROSAL is expected to ensure the profitability of oil fields and blocks where government participation shares exist. To clarify misconceptions, the ANP will still exist and will continue to take a *state* rather than a *government* view. PETROSAL then takes a view of the government in power today with the goal of maximising profitability in the fields and blocks.

Secondly, the state has begun to strengthen the CNPE in order to enhance the strategic interests of the state in the oil industry. In contrast to its past role of managing privatisation of the power sector, CNPE is conceived to play a far more central role in managing energy policy, which extends beyond the oil and gas sectors. Its direct connection with the president gives the political organisation stronger voice in policy making. Because it is composed of ministers, CNPE is an inherently political entity and its policy proposals draw from other agencies, such as EPE and ANP. Its mandate is to coordinate the different sectors associated with energy, taking a long term goal of securing self-sufficiency in Brazil's energy. The council thus aims for a balanced energy policy in oil and natural gas, electricity, hydropower, and biofuels and other renewable energy. In this context, CNPE needs to take a *state* view in planning for Brazil's future energy needs. However, the new law creates some potential contradictions between the roles of ANP and Ministry of Mines and Energy. In the 1997 Petroleum Law, the power to allocate concessions grants is bestowed to ANP as a regulatory agency. Under the new law, the ministry is formally taking the responsibility of delegating contracts but has the discretion to divest this task to the ANP. There are also questions about the veto power of PETROSAL (and by extension CNPE) during negotiations of consortia, which does pose a genuine question about the freedom of companies to negotiate contracts. Whilst these are still being debated in Congress, the fact is that state interference in economic transactions have been concerns of private competitors and ANP officials alike.¹⁷

Although Lula had successfully campaigned in favour of regulatory changes, private competitors have contested their arguments in two ways. Firstly, government perception regarding the low levels of geological risks and uncertainties in finding oil has been challenged by IBP. These changes are motivated by political factors to increase the rewards and profits for the state rather than economic imperatives of competitiveness. Moreover, the taxation regime in Brazil is sufficiently flexible to take into account boom and bust cycles of primary commodities. Fiscal regimes can be readjusted in response to external conditions

¹⁷ Author interviews with Felipe Dias, IBP, August 2010; Former senior official of ANP, August 2010.

rather than altering the nature of contracts between states and private capital. From the IBP perspective, the state can maintain high levels of taxes during boom periods and reduce tax rates at price downturns. For investors, there is perhaps nothing more important than stability in taxation and sanctity of private property rights. Secondly, as Brazil is transforming its institutional framework, there are concerns regarding the transparency of the new model. It is still unclear how negotiations to acquire social licenses can be guaranteed in a transparent manner. In comparison, the bidding rounds were open and transparent, in which private lobbying or direct negotiations between firms and government have been avoided all throughout.¹⁸ Nevertheless, these issues are more speculative than firmly grounded. The petroleum law was passed in Congress and is expected to take effect under Dilma Rousseff.

C. Linking oil wealth and social policy

One core contention in the resource curse literature is the direct subsidisation of social and anti-poverty policies through mineral rents during commodity booms. Whilst redistributive pressures generate higher expectations of export earnings, conventional academic and policy-making bodies have warned against ‘populist’ tendencies of governments in power.¹⁹ This literature argues for fiscal prudence due to uncertainty of future financing of mega-development projects and difficulty of longer term planning. Lula da Silva departed from this trend only in 2010 when the law passed specific clauses to link social spending and oil wealth policy through the creation of the so-called national social fund. Whilst there exists fierce resistance especially from Rio de Janeiro to redistribute oil wealth more evenly to non-oil producing regions, Lula’s new policy heralds a potentially creative way of addressing growth and social inequality via neo-developmentalism.

To contextualise this, the fiscal regime under Cardoso and Lula until 2010 levies four kinds of taxes: signature bonus, royalty, special participation, and fees for the occupation or retention of the area (Law 9478/1997, Article 45).²⁰ As Figure 1.7 shows, rents from oil wealth have steadily increased from 939,600 BRL in 1999 to 10,936,909 BRL in 2008. Although this can be interpreted as success, the share of the Federal government only expanded in absolute terms, signifying the stark inequality of oil rents between producing and non-oil producing regions. Whilst oil producers concentrated in Rio de Janeiro have benefited at staggering rates, evaluations regarding the effects of oil rents to growth at the municipal level have been negative or neutral (Postali 2009, 2002b). In contexts of failing growth despite steady inflows of rents, the national social fund was approved as a way of leveraging the distribution of resources across the country.

Lula envisaged the social fund to take a central role in achieving *growth* and *equity* by subsidising projects aimed at inducing economic diversification, sustaining competitiveness in the oil industry, and paying for social programmes. It does so in two significant ways. On one hand, it retains the restrictive guidelines set in Cardoso’s 1997 Petroleum Law regarding the use of royalty fees and special fund, for example, by specifically allocating resources for

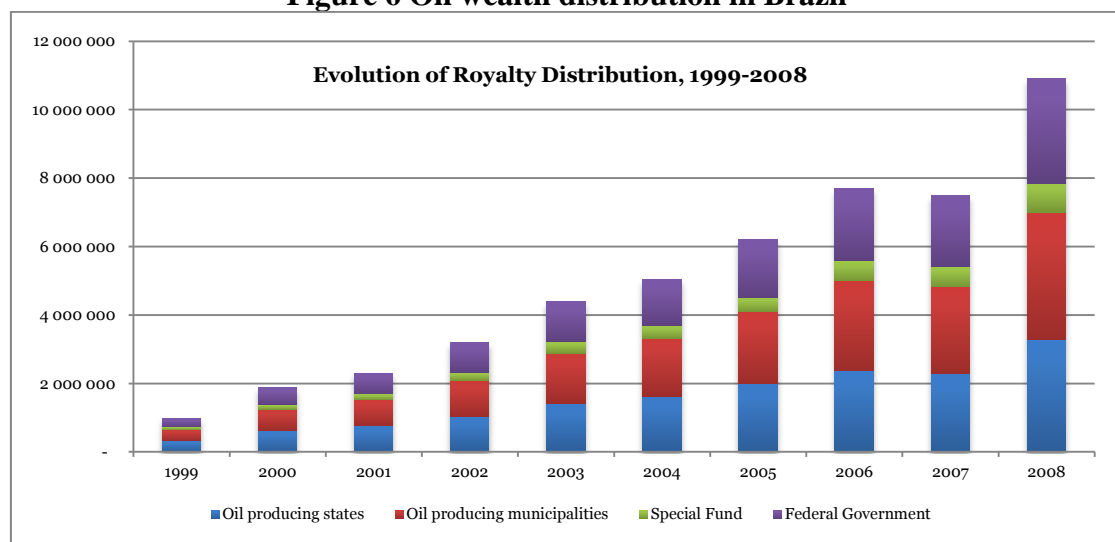
¹⁸ Author interview with Felipe Dias, IBP, August 2010.

¹⁹ Mineral rents are unreliable sources of income for three main reasons: the fluctuating value of produced resources, the variation of income over time in rates of extraction, and the variability in the timing of payments of royalties (Humphreys et. al. 2007). In other words, export earnings are volatile because they are exposed to cycles of boom and bust, international shocks, and commodity futures speculation.

²⁰ See Appendix 5 for details of the regulatory framework in oil revenue management.

infrastructure building, technological innovation, and research and development aimed at mapping geological risks and planning complex energy systems. Its governance structure also follows a highly technocratic approach by creating a special committee in charge of monitoring and regulating oil funds.²¹ On the other, the balance of interests between regions is reconfigured by the explicit use of the Federal government's share for national projects. There is a political logic in debating the structure of rent distribution. It is incontestable that oil-producing regions bear the environmental and social costs of extraction (Bebbington 2012; Sawyer 2004). But equally, mineral rents are disproportionately concentrated in very few regions, which warrant the financing of social and anti-poverty policies. This policy acts as a corrective to historical asymmetries in Brazil, during which cycles of extraction and capital accumulation by the centralised state successively hollowed out resource-rich regions leading to intermittent moments of social revolts (Bunker 1985; Bunker & Ciccantell 2005; Foweraker 1981). Put somewhat differently, by transferring resource rents from the periphery to core regions of Brazil, the state replicated and institutionalised wealth inequality and power discrepancy.²²

Figure 6 Oil wealth distribution in Brazil



Source: ANP Annual Report 2009, Table 2.15 (Adapted), 78.

Notwithstanding the on-going debate over the distribution of royalty between the Federal and state governments that is yet to be resolved in Congress, Chapters V, VI, & VII in Lula's new oil policy (Law 12.351/2010) establishes the *Fundo Social* (Social Fund or FS). The FS is linked directly to the Office of the President to allow the executive direct control over the necessary resources for regional and social development. The financing of SF comes from the following: (a) share of the value of signature bonus from production-sharing contracts; (b) portion of the royalties from the Union as stipulated under the rules and coming from production-sharing contracts; (c) revenues arising from the sales of oil, natural gas and other hydrocarbon fluids; and (d) the royalties and the special participation of areas located in the

²¹ These are drawn from 'successful' cases, which refer to the Norwegian model of managing the oil industry ranging from revenue management, key institutional oversight, and distribution of market power between public and private competitors, to which Brazil is not an exception (Thurber et. al. 2011; Thurber & Istad 2011; Victor et. al. 2011).

²² Brazil has been historically ruled by regional elites alternating from Sao Paulo, Rio de Janeiro, Minas Gerais and Rio Grande do Sul. Quite understandably, some interpret the claims to retain high percentages of oil wealth in Rio de Janeiro as the exercise of power by economically and politically affluent states over other regions.

pre-salt contracted under the concession scheme as administered by the Union, among others. The prospective projects to be financed include education, culture, sports, public health, science and technology, environment, and mitigation and adaptation to climate change.

To sum up very briefly, the three main elements of the new oil policy in Brazil attempt to restructure the relations of power between states and markets. What is striking is the renewed emphasis on the vital role of state enterprises in managing the economy. Whilst these reforms are certainly nascent, we can anticipate far reaching consequences not simply in terms of oil extraction but also in sustaining a more active role for the state. As I have hopefully shown in the chapter, the return of state capitalism in oil governance should not be seen as a critical juncture from neoliberalism. Instead, we should think of institutional evolution as phases of a longer history of state capitalism in Brazil, during which market restructuring is shaped predominantly by changing external circumstances in politics and economy.

Conclusions

The main argument of the paper is that market reforms in the oil sector have been incomplete and partial as a result of the vibrant role of the state in managing the industry. The strength of state enterprises and the long-standing commitment to secure oil reserves for industrialisation were key factors in explaining the responses of the state to the discovery of the presalt reserves. Both governments responded by combining market incentives and state capitalism to introduce dynamism and efficiency into economic sectors. The changing domestic and international environments characterised by the commodities boom, macroeconomic stability and stable growth, and the fact that oil and minerals are still considered strategic resources opened new opportunities for policy change during the 2000s, in which the Brazilian state is once again reasserting its role and capacity to influence national development strategies. The state continues to exert significant influence over the economy as reflected in the return of state capitalism. Put simply, the adoption of a hybrid strategy in the resources sector is achieved by melding market incentives and state capitalism.