New developmentalism in Brazil? The need for sectoral analysis

Abstract:

This article provides an analysis of the uneven practices and outcomes of new developmentalism in Brazil. New developmentalism has been described as a hybrid approach to development. It combines liberal practices of privatization and export orientation with state intervention to achieve social inclusion and economic development. Academic and policy literatures have repeatedly debated the conditions under which development takes place and have particularly focused on the role of the state. So far, discussions have predominantly concentrated on economic developments. We focus on the trajectories of new developmentalism in three strategic sectors in the Brazilian economy: oil, mining and steel, with particular emphasis on the steel industry. We contribute to the debate by paying equal attention to economic and social outcomes in these three sectors. We conclude that new developmentalism is sectorally specific. In the extractive sectors, export competitiveness translates into high wages. In steel, in contrast, new developmentalism brings economic benefits to some but social benefits to few. Thus it is a paradigm of development but it is not wholly developmental.

Key words

Developmental state; Latin America; steel industry; globalization; national champions

1. Introduction

Interest in the relationship between business and the state in the post-Washington Consensus era has been increasing recently (Mazzucato 2014; Wood and Wright 2015). There have been calls for bringing business as an actor more prominently into discussions of political economy (Schneider 2014), bringing the state into discussions of global production networks and global value chains (Neilson, Pritchard and Yeung 2014) and a 'recoupling of political and economic spheres' (Roberts 2014: 18). The question remains: under which paradigm of business - state relations does development take place? The debate has been applied to both developed and emerging economies. This article contributes to these discussions by focusing on business-state relations in Brazil. Recent accounts of emerging economies have described the interplay between state and market as a 'hybrid' between market-oriented and state-oriented economic approaches (Ban 2013). In this article, we regard the policy paradigm of new developmentalism in Brazil as one example of such hybrid approaches (Ban 2013) and examine its potentially uneven effects for different actors in one strategic sector, the steel industry.

In the hybrid paradigm, political actors combine continued strong state intervention in strategic sectors with a focus on liberalisation of markets, internationalisation of 'national champions' (especially in sectors extracting natural resources) and an increasing integration of emerging economies (such as Brazil) into global production and finance networks. Recent political and economic developments - turmoil in Chinese financial markets or the change in government in Brazil - have increased interest in the outcomes of these hybrid approaches. Despite their stated goals of social inclusion, there have been voices warning of the extractivist nature of such policies (see for example Roberts 2014, Faletti 2014; Milanez and Santos 2015). This calls into question the potential of new developmentalism for economic as well as social development.

Development in the Latin American context has been dominant as discourse, as well as in practice and theory (Hochstetler and Montero 2013; Luna, Morrilo and Schrank 2014). In all of these respects, the role of the state is both prominent and contested. Previously, the dominant historical narrative with regard to emerging economies was one of diminishing state intervention and increasing convergence with the free market policies of Western liberal democracies (Luna, Morillo and Schrank

2014). The Brazilian state could be regarded as representative of such shifts – from economic nationalism and developmentalism in the 1930s to projects of neoliberalism at the end of the 20th century. In the last five years, however, this discourse of convergence has been overcome by a growing emphasis on diversity and varieties of capitalism (Schneider 2013, Ban and Blyth 2013). The Brazilian government's seemingly interventionist attitude since 2002 has been seen as indicative of the decline of the Washington Consensus orthodoxy of liberalization and privatization (Galantucci 2014, Arbix and Martin 2010, Kröger 2012, Nölke et al. 2014). In Brazil, there has not only been widespread criticism of the neoliberal model, there has also been increased effort to establish 'New Developmentalism' (Bresser Pereira 2006, 2016, Erber 2008, 2010, 2011, Arbix and Martin 2010) as a policy discourse as well as practice.

The term New Developmentalism is contested. It is closely associated with the Brazilian governments led by the Partido dos Trabalhadores (PT) under Luis Inazio Lula da Silva (Lula, 2002 – 2010) and Dilma Rousseff (2010 – 2016). Here, it is a direct translation from the Portuguese 'Novo Desenvolvimentismo'. This follows the use by L.C. Bresser-Pereira (2006, 2016), and F.S. Erber (2008, 2010, 2011).[1] In its main characteristics, it accepts the need for state intervention to achieve modernization through internationalization. Development is achieved through state support of selected industries focusing on the competitiveness of their exports and entrance into global production networks. This is complemented by "an equitable distribution of the resulting rent, making the growth socially inclusive" (Ebenau and Liberatore 2013: 107) or a "new social contract" in which economic development leads to social development (Ricz 2015, see also Ban 2013, Nölke et al. 2014, Milanez and Santos 2015).

Previous accounts in the literature on Brazil have emphasised the persistence of state involvement and the resulting strength of selected strategic, particularly export-oriented, sectors: e.g. extractive industries (Nem Singh 2014, Massi and Nem Singh 2016, Milanez and Santos 2015), paper and pulp (Kröger 2012) and aircraft manufacturing (Monteiro 2011). In contrast, there have been no detailed analyses of the

[1] Erber, in particular, points out the differences between neo-developmentalismand new developmentalism. Neo-developmentalism is considered to be a repetition of the developmentalism of the 1950s to 1970s. New developmentalism shares some characteristics but is distinct in others as the discussion below will demonstrate. Other labels suggested in the academic literature have been neo-structuralism (Leiva 2008) and neo-Mercantilism (Kröger 2012). Arbix and Martin (2010) favour 'inclusionary state activism' to encourage aattention to both social and economic state roles. .

shape and effect of new developmentalist policies in the Brazilian steel industry despite its strategic importance (Almeida 2009). We argue that a detailed sectoral analysis can make the uneven implementation and effect of state involvement visible. With Brazil in its worst recession in recent history (FT, 1 June 2016) and a global steel crisis, it seems an opportune moment to assess Brazil's new developmentalist approach in this sector.

These observations lead to the questions that frame the present paper: How is the Brazilian hybrid economic policy approach articulated in strategic sectors? How can we evaluate the new developmentalist paradigm in the Brazilian steel industry? Steel has always been considered a strategic industry and while "the era of 'big steel' in Western Europe is over" (FT 21 May 2011), it has been an integral driver of growth in the economies of Brazil, Russia, India, China and South Korea. However, different locations within the steel production network are facing different challenges: the transition to steel-making as a knowledge-intensive and high-tech industry in the old steel regions of the US and Europe as compared to the expansion of steel production to meet demands in the emerging steel producing countries such as China, Brazil and India. This restructuring of the world steel industry could also lock emerging countries into existing uneven patterns of development (Instituto Brasileiro de Siderurgia 2007). Therefore, steel needs to be considered at the centre of both the processes of value creation, enhancement and capture, and the politics and policies of development. As 'industrial policies are irreducibly political and context-specific' (Saad-Filho 2010: 3), attention also needs to be directed to the global regimes of steel production. Brazilian industrial policies are then both internally and externally determined (Ebenau and Liberatore 2013).

The following section will provide a brief history of development paradigms and a review of discussions of new developmentalism at a national level. We provide an overview of new developmentalist approaches in the extractive industries as these have been the focus of previous accounts. Then our discussion of steel provides a complementary narrative of new developmentalism and extends the previously economically oriented analyses by adding the social dimension. Finally, we conclude that new developmentalism is sectorally specific. In each sector, there are winners and losers. In the extractive industries, export competitiveness of Brazilian national champions has been translated into wage rises. In steel, in contrast, new developmentalism brings economic benefits to some but social benefits to few. Thus it is a paradigm of development but it is not wholly developmental.

2. New developmentalism in Brazil

This section provides an insight into what is new about new developmentalism and how we can operationalise it to evaluate its practices and outcomes in the steel sector. It is important to locate recent economic policies in their historical context, identifying continuities as well as ruptures. This follows the notion of the double movement suggested by Polanyi (1944) that periods of state intervention are followed by periods of market dominance and vice versa. The latest measures cannot be a simple revival of previous policies but "each epoch of state or market dominance is essentially different from its historical precursors" (Wood and Wright 2015: 272).

Developmentalism and the developmental state have received significant attention and a number of common characteristics across states have been identified (Ban 2013). These comprise the importance of economic nationalism in a world in which nation states are in competition with each other through domestic firms. Economic nationalism is manifested in policy measures such as protectionism (e.g. tariffs), a focus on import substitution through state provision of physical, economic and social capital as well as the prominence of state ownership in selected sectors (Ban 2013, Evans 1995). In Latin America, developmentalism was dominant from the 1930s until the 1970s with two distinct phases of, first, pragmatic import substitution industrialisation following the global economic crisis of 1929-31 and, second, a phase of ideological developmentalism from the 1950s onwards (Haber 2006). State regulation was not only seen as a business necessity but its intervention in industrial transformation became a political and military objective. While there were clear variations across sectors (Baer 1972), Import Substitution Industrialisation (ISI) favoured a particular form of inter-firm and intra-firm relationships. In addition to state-owned enterprises in oil, mining, steel and chemicals, large, vertically integrated transnational corporations benefited from ISI policies and became key players in most international industries (Gereffi 2013).

These years of developmentalism were followed by several liberalizing projects across Latin America, driven forward by the debt crises of the 1980s and the accompanying demands of international financial institutions as well as democratization trends across the continent. Free market capitalism as imagined in the Washington Consensus was to be achieved by a reshaping of state action away from active intervention towards facilitating liberalization of trade, privatization, the removal of entry barriers for outside investors and competitors as well as the deregulation of financial and labour markets (Ban 2013).

From the mid-1980s onwards, the Brazilian state seemed to follow these prescriptions as figure 1 below demonstrates.

FIGURE 1: Brazil's Reforms about here

While the rise of neoliberalism brought with it a narrative of the state withdrawing from markets, increasingly, authors have pointed not only to the necessity for an active state role in development or so-called free-market capitalism but also to its empirical reality (Wood and Wright 2015, Gereffi 2013, Mazzucato 2013). We examine ownership structures in the oil, mining and steel sector to discuss this below. In particular, the new forms of statism have been seen not to be less interventionist but rather increasingly interventionist in the service of selected, private interests (Wood and Wright 2015). The interdependence between policy paradigms and corporate strategies comes to the fore here. Changes in the role and practices of the state appear alongside changes in the organization of production by transnational companies. "Openness to trade and foreign investment" (Gereffi 2013: 8) determines countries' positions in global value chains and therefore their opportunities for social and economic upgrading (or development). The increased fragmentation of production in a globalized world "offers a new logic of value creation" via production stage specialization (Breznitz and Zysman 2013: 37).The rise of global production networks and shifts in the nature of global value chains then raises the question of how state actors

> integrate in value chains in a way that allows for incorporation of a growing number of the workforce and increasing levels of productivity and outcomes. This calls for a balanced approach which takes both competitiveness and equity issues into account. (Altenburg 2007: 4)

We examine the ways in which the Brazilian state managed its insertion into global production networks by looking into different modes of internationalization across the sectors. In particular, we refer to different waves of industrial policy in Brazil between 2002 and 2014. We also question to what extent the state succeeded in harnessing the resulting capital flows for national development rather than a servicing of domestic and foreign capital interests. We include this in our analysis by examining income data as well as linkages to civil society as equity has so far been neglected in discussions of new developmentalism in oil and mining.

In a world which is characterised by international competition and global production networks, the state's industrial policies need to adjust; so far, so well rehearsed (see Devlin and Moguillansky 2012). In addition, new roles of the state in its relation with business have been presented as not only a manifestation of neo-liberalism (Wood and Wright 2015) but also as evidence for post-neoliberal ideological and policy projects or what has been seen as a distinctly Latin American response to neoliberal pressures (Yates and Bakker 2014, Brenner et al. 2010). Similarly, China has attracted attention for its approach to development alongside capitalism, rather than an all-out adoption of capitalist practices. While all of these practices can be summarised under the umbrella of new statism, they differ in their understanding of inclusion and participation. This is particularly important in the Latin American context. Neo-liberalism accepts the exclusion of large parts of society from decision-making and the benefits of 'growth'. In contrast, post-neoliberal projects focus on reviving citizenship via a new politics of participation to achieve a solidarity economy (Devlin and Moguillansky 2012, Ebenau and Liberatore 2013, Yates and Bakker 2014, Ricz 2015).

In Brazil's new developmentalism this means that the state's role goes beyond industrial policy to produce social cohesion through an increased emphasis on redistribution, poverty alleviation and participation of citizens in decision-making. Critical voices have highlighted that the ambitious aims of global competitiveness coupled with social inclusion have, however, led to increased inequality in access to politics, capital goods, and means of production, in particular land (Kröger 2012).

The following table (table 1) locates Brazilian New Developmentalism in its historical context to demonstrate continuities and breaks with past developmental paradigms.

TABLE 1: Paradigms of Development in Brazil about here

Industrial and economic policies implemented in the varying approaches to development have one thing in common: they have sectorally specific outcomes (Saad-Filho 2010). Although the rise of fragmented production has called into doubt the importance of sectors (Huberty 2013), we illustrate the interaction between different approaches to development via state action and the internal structure of an industry in the following sections.

3. New developmentalism as resource nationalism: oil and mining

The following is the story of mining and oil as it has been told, in parts, before (Nem Singh 2014, Nem Singh and Massi 2016, Almeida et al. 2014, Paz 2015, Milanez and Santos 2015). The similarities and differences between these sectors are instructive. This section of the article therefore focuses on comparing instruments and outcomes of new developmentalism in Brazil, with regard to ownership, internationalization, employment and social participation. In contrast to the steel sector, both oil and mining were dominated by one central, state-owned company until the mid-1990s, Petrobras and Companhia Vale do Rio Doce (CVRD, now Vale), respectively. In both cases, the natural resources have been considered of strategic importance to the country's development. The trajectory of reforms and subsequent regulation, however, have taken divergent routes while facilitating a strong continued influence of the state.

Under state ownership, CVRD was the dominant symbol of national development. Large scale export of iron ore produced the foreign currency necessary for the viability of Brazilian steel production, dependent as it was on imported coke and on US loans. After privatisation in 1997, CVRD (renamed Vale) became one of the most important players in the formation of a global market for iron ore. The privatization of Vale was controversial with the Workers' Party (PT), questioning the need for privatization given the efficient and successful performance of the company (Nem Singh and Massi 2016). Privatization went ahead, however, with the government retaining a golden share and therefore veto powers in the strategic decisions of the company. At the same time, the market was opened up for foreign capital. The regulatory framework has allowed foreign companies to develop and exploit mineral resources in Brazil, and foreign investment into the sector has been at a high level with over 500 transnational operations establishing themselves between 1990 and 2008 (Nem Singh and Massi 2016). Nevertheless, Vale continues to dominate iron ore production in Brazil, producing 79.8% of the total and having minority stakes in two of the three companies producing the remaining 20.2 % (CSN and Samarco) (Gurmendi 2010: 4.2). Between 2001 and 2015, Vale continuously ranked in the top three export companies in Brazil. In terms of export quantity and export value, Vale's performance between 2001 and 2014 has been one of continuous improvement (see also table 2 below). In 2014 it accounted for 9.1% of Brazil's exports despite a 22.7% drop in exports compared to the previous year (Ministerio do Desenvolvimento, Industria e Comercio Exterior 2015).

In the oil sector, Petrobras remained state owned and regulation and oversight over oil production remain the prerogative of the Brazilian government. Until 1997, Petrobras retained monopoly rights over oil production. These regulations were loosened and allowed foreign capital to enter the market, so by 2010 around 50% of the companies operating in the oil market were foreign-owned (Nem Singh 2013). Similar to the mining sector, however, the arrival of foreign capital has been encouraged under tight parameters which ultimately continue to favour the domestic giants. Petrobras continues to dominate activities along the oil value chain and, until 2014, has remained a sought after partner by international oil companies. Despite state ownership, the company enjoyed a reputation of efficient management and performance (Almeida et al. 2014). Until news of the corruption scandal broke in 2014-5, it had also been seen as autonomous from the state and seemed to be exemplary of Evans' (1995) notion of 'embedded autonomy' (Almeida et al. 2014). Similar to Vale, Petrobras has been central to Brazil's trade balance, performing as one of the top export companies during 2001 – 2015. Similar to Vale, export performance in terms of quantity and value has seen steady increases over the period. In 2014, it still contributed 5.79% of Brazil's exports to the trade balance (MDIC 2015) even though this marked a significant decline from an average of mining and oil together contributing 20% of exports in the period 1994 – 2008 (Nem Singh and Massi 2016). Table 2 below provides the comparison of these economic indicators on a company level between oil, mining and steel.

Consecutive industrial policies (Policy of industrial technology and foreign trade (PITCE, 2003-07), Policy of Productive Development (PDP, 2008-10) and Plan Greater Brazil (PBM, 2011 – 14)) have shaped corporate strategies in the oil and mining sectors in two ways: (1) prioritizing internationalisation at at the same time (2) domestic companies' responsibility to the nation. Both, Vale and Petrobras, have been actively following internationalization strategies through global investment and joint ventures with foreign partners (Souza 2011). For instance, in 2005, Vale established a joint venture with the German Thyssen Krupp AG to build a steel mill able to produce 5 million tons of slab per year, Companhia Siderúrgica do Atlântico (TKCSA) in the industrial district of Santa Cruz, Rio de Janeiro state. The semi-finished steel produced in this coastal location is shipped to either the TK plant in Calvert, Alabama (60%) or the finishing plants in Duisburg and Bochum, Germany (40%). The management of this dispersed network of production is based in Rotterdam, Netherlands and the whole organisation is described as 'virtual integrated steel plant' (Matthews, 2010). TKCSA, thus, constituted a key component in the strategies of transnationalisation for both Vale and TK. In this way, ThyssenKrupp was able to operate the labour and resource-intensive stages of production in an environment characterised by low labour and transport costs. Vale succeeded in integrating itself into the global steel production network (via a secure market for its iron ore) but also in establishing and stabilising the position of Brazil in the global economic system. The project, however, was hampered by spiralling costs, criticism by activist shareholder groups and the onset of the financial crisis so that Vale divested itself of its stake by May 2016.

This strategy of internationalisation has been facilitated through support by the Brazilian development bank (BNDES) which has proved a central actor of the state in new developmentalism. It offered financial backing for internationalization projects but also loans to prop up domestic operations and developments for Vale and Petrobras (Almeida 2009, Hochstetler and Montero 2013). This enabled the channeling of company funds into the acquisition of foreign assets and expansion in Brazil's regions rather than day-to-day operations. BNDES, in these cases, acted as a development agency rather than as a bank. In particular, through its provision of funds for industrial projects in the economically disadvantaged North and Northeast of Brazil, it helped transform both Petrobras and Vale into instruments of regional policy for the Lula government, particularly since Lula's second term in office (2007-2010). Here, the state exerted pressure to achieve a socially inclusive distribution of economic opportunities and benefits to address long-standing patterns of regional inequality in Brazil. According to the right-wing Brazilian press, Roger Agnelli (CEO of Vale 2001 – 2011) and his executive team "turned Vale into a moneymaking machine – only to realize that the company remains under the yoke of government" (Souza, 2011). Vale's involvement in a range of steel developments since the beginning of the 2000s is an illustration of these pressures.

The Aços Laminados do Pará (ALPA) development is one such example of a project of decidedly political character. ALPA's location was planned for the Industrial District of Marabá, in Pará in the Eastern Amazon, at a significant distance from major transport and distribution links (Durão 2013). The company was expected to generate about 4,000 direct and another 16,000 indirect jobs (Souza, 2011). Based on limited process technology and being majorly export-oriented, projects like ALPA are predominantly designed for coastal regions. Despite its unsuitable location, both the Federal and the State of Pará governments exerted overwhelming pressure on Vale's former CEO, Roger Agnelli to invest in the area. ALPA thus recalls earlier projects of industrialisation in strategically inconvenient but politically expedient places for the development of the nation.

In a similar vein, Petrobras has been used to contribute to the development of the capital goods and shipbuilding industry in Brazil. From 2003 onwards, the government made it clear that profit was not to be Petrobras' overriding motive (Almeida et al. 2014). Lula suggested that Petrobras should not focus on the savings that procuring oil rigs abroad would bring but on the benefits to the local and national economy via employment, wages and taxes (Almeida et al 2014, Safatle et al 2009). It has invested into a number of refinery projects in the Northeast of the country. In addition, its procurement policies aimed to maximise local content in equipment through the Program of the Mobilization of the Oil and Gas Industry (Programa de Mobilização da Indústria de Petróleo e Gás Natural, PROMINP) . PROMINP operates as a forum for Petrobras, employers' organisations in the sector and the government to discuss and develop activities in the areas of industrial policy, training and performance monitoring. This forum has been considered effective in exchanging information on future demand as well as needs in capacity building (Almeida et al. 2014). These examples demonstrate how in both oil and mining, the state exerts its control over the business actors through both direct and indirect means. The state thus remains in its 'traditional' role through complex patterns of ownership but employs discourses of private responsibility in the interests of the nation.

In terms of employment and wages, the extractive sector has been impressive in its performance. Nominal as well as real wages have steadily risen and at a higher rate than in any other sector (see table 2 and figure 3 below). In contrast to the steel sector, the wage profile has not substantially changed with proportions of low, middle and high income earners remaining almost constant between 1995 and 2015. Despite attempts to use Vale and Petrobras to achieve a more even regional economic development, the South East outperformed the other regions in its higher proportion of high income earners. In that sense, investment in mining and oil in the Northeast and the North may have contributed to increased employment but not necessarily to a change in the spatial patterns of the income distribution. In addition to the increase in income for workers in the industry, government policies have explicitly aimed to facilitate capacity building and in this sense economic and social upgrading in the sector (Almeida et al. 2014). In contrast to the positive performance of investment and wages, both the oil and mining industries continue to have an accountability problem. The dominant position of Petrobras and Vale have made them prominent targets for NGOs demanding an increase in transparency. Vale, in particular, has been subject to a range of campaigns. Strategies addressing public actors (Office of the Public Prosecutor), private actors (critical shareholder groups) and civil society actors (publicity campaigns) have been used to highlight and question Vale's corporate strategies and their socio-environmental impacts. National and international networks of protest have evolved to address the potentially negative effects of extractive industries. Examples here are Coalition on Mining and Steelmaking Working Group of the Brazilian Network for Environmental Justice, The International Network of People Affected by Vale and the National Committee for the Defense of Territories against Mining. Vale has been subject to disruption of its operational activities, the publication of 'Unsustainability Reports' and contestation by critical shareholder groups (Santos and Milanez, 2015). Petrobras has similarly been at the centre of public attention. Recent corruption scandals, such as the 'lava jato' investigation, have highlighted the dangers of very close personal relations between government ministers, party officials and the business elite. In this sense, a politicization of both sectors has been noticed in the literature (Nem Singh and Massi 2016, Almeida et al. 2014). These developments show that the state continues to be involved in activities which seriously undermine its claims of an equitable and inclusive development aiming to redistribute wealth and foster participation by all. This section has demonstrated that new developmentalist objectives of combined economic and social upgrading in the strategic sectors of oil and mining have been in tension with market pressures. At the same time, the international competitiveness of the dominant domestic companies (Vale and Petrobras) have presented differentiated opportunities to drive forward a developmentalist agenda. It is important to point out, however, that the high point of their developmental activities occurred in the context of political stability (under Lula and Dilma's first administration) and high commodity prices. The next section provides a comparative account for the steel sector.

4. Steel as a national champion in the era of new developmentalism in Brazil?

In line with the literature on other sectors (Paz 2015, Nem Singh 2012, 2014, Kröger 2012, Ban 2013), this article highlights continuities of state involvement – albeit by different means – through the period of neoliberalisation (Amann et al., 2006). New developmental practice in the steel sector were thus shaped by path dependencies. It is therefore necessary to give a short introduction to the structure of the Brazilian industry, in itself and in relation to the global industry to make visible the windows of opportunity (or their absence) for particular industrial policies and state projects.

The privatisation of the Brazilian steel industry took place in the context of a wave of privatisation in the global steel industry. From the 1980s to the end of the 1990s, the proportion of steel world production by state owned enterprises fell from 70% to 20%. In Brazil, the process began in 1988 with the sale of small specialised steel producers. What followed was the wholesale transfer of the iron and steel industry to the private sector by 1993 as part of a wider programme of the privatization of public assets (Baumann 2001). The process was characterised by the dominance of Brazilian banks which saw it as lucrative investment (Amann et al. 2006)[2], limited foreign capital involvement (40% ceiling on purchases of voting stock) and a continued presence of the state as provider of capital through the National Development Bank (BNDES) (Amann, 2004). Not only did it favour national business groups (*grupos*) but the traditional structure of Brazilian business, characterised by concentrated ownership (blockholding), diversification, and family ownership, advantaged large domestic firms in the 1990s. In particular, *grupos* benefited from a preferential access to information as result of complex webs of social relations and policies designed to support domestic

[2] The profits generated by a number of banks once they divested their shares in the following rounds of mergers and acquisitions in the industry support this, e.g. Bamerindus realised a 181% profit selling its stake in CSN (Amann et al. 2006).

capital and the "national bourgeoisie" (Schneider, 2008). The result was a concentration of assets (through complex cross-holdings between Brazilian companies) rather than promoting the exoneration of unprofitable firms by the state, or in other words, an increase in concentration rather than competition (Amann and Baer, 2006). Between 1991 and 1995, the industry as a whole shed 26.6% of employees (Andrade et al. 1997). Despite increases in productivity as result of this significant reduction in manpower, the industry remained struggling to increase its production and exports (Andrade et al. 1997).

Privatisation in the Brazilian steel sector, at a time when the industry globally was characterised by regionalism, did not facilitate a similarly profitable integration of domestic Brazilian companies into the world economy as in oil and mining (Paz 2015, Nem Singh 2012, 2014). The structural conditions in the sector – globally, i.e. regional networks, and locally, i.e. complex ownership patterns, were not conducive to creating internationally competitive firms out of existing previously state-owned companies. In addition, Brazilian steel was hampered by "the elimination of non-tariff barriers and the reduction of taxes on imports [which] stimulated a high import growth in Brazil" and exerted strong competitive pressure (Guarana et al. 2013: 6). The power of local private elites in this process, as demonstrated by the persistence of *grupos* and concentration of assets, must not be underestimated. Neoliberalising policies were the result of the intersection of the interests of local and global economic and political elites (Evans, 2008).

The phase of privatisation in the global steel industry was followed by another phase of reorganisation from 2000 onwards which sets the scene for Lula's new developmentalist policies. This era was characterised by the opening of new markets, in particular China, and by decentralised networks of production and trade through the rise of transnational steel companies. Increasingly, the hot and cold processes involved in steel production became geographically separated. Typically, the hot stages of production (low value added) would be located in areas of low production costs, i.e. emerging economies (Crossetti and Fernandes 2005). The geographical dispersion of production went hand in hand with growing financial integration and a consolidation of the industrial structure. A wave of mergers and acquisitions (M&A) led to both, consolidation and greater financial integration in the sector. While significant changes in the organisation of the sector had been predicted, the rise of steel makers from outside of Europe almost came as a surprise. Mittal Steel is a fitting illustration of global M&A

activity. Mittal's dynamic strategy of acquisitions across the world and the merger with Arcelor created the first global steel company. The EU steel industry was no longer driving the change but being subject to it (and subject to a bidding war) (Slusarczyk et al., 2013, Bouquet and Ousey, 2008). The entrance of China into the global steel trade also meant shifting power balances, as it turned from importer to exporter increasing supply of semi-finished steels.

Brazil has been increasingly integrated into these circuits of capital and commodities. Since the buying spree of the 1990s, the market structure of the Brazilian steel industry has been significantly modified. Not only has there been a concentration of ownership but the liberalisation policies of the 1990s also encouraged greater international involvement. Foreign capital has particularly flown towards acquisition of and investment in coastal developments similar to the industrial projects of the 1970s. The formerly 43 public and private companies (1990) have been restructured so that in 2006 10 companies were responsible for 90% of output (Gomes et al. 2006). The domestic re-organisation through mergers and acquisitions mirrored the M&A activity in the global steel sector.

By 2015, the aforementioned group of 10 companies had reduced to three domestically led groups: Companhia Siderurgica Nacional (CSN), Usiminas, and Gerdau Açominas. The arrival of foreign capital, in particular the success of ArcelorMittal in entering the Brazilian market, and the increasingly important position of the mining company Vale as stakeholder in a number of steel ventures (e.g. Samarco, Thyssen Krupp Companhia Siderúrgica do Atlântico TKCSA, CSN, Usiminas) have characterised the reconfiguration of the steel sector since 2005. This development occurred with strong state support through BNDES loans. Almeida (2009) highlights how Luciano Coutinho, BNDES President, defended his (and BNDES') strategy of supporting the concentration in the steel sector through the policy of supporting national champions[3]. Despite a rhetoric of support for national champions, however, between 2005 and 2011, the steel industry (excluding Vale) never climbed into the top three of sectoral recipients of BNDES loans (Hochstetler and Montero, 2013). At the same time, ArcelorMittal has become the biggest steel producer in Brazil, accounting for 30.7%

[3] Since 1995, with the exception of 2013, more than 90% of investments in the metal and steel sector by BNDES were received by the big steel companies according to BNDES data.

of production in 2010. Overall, foreign capital had a stake in more than 50% of steel production in 2010 (Lopes 2011, see also table 2 below).

The policy of fostering ‘national champions’ also included continuing efforts to keep a national Brazilian steel industry ‘safe’ from foreign takeovers. Corus’ failed takeover of CSN in 2002 illustrated the policy in practice. The suggested merger meant that Corus and its shareholders would retain 62.4% of the merged company and CSN and its shareholders would retain 37.6% of the new company. The merged company would have included both upstream (mining in BRA) and downstream (distribution by Corus) activities. It seemed to present a solution to the structural pressures of the steel sector: internationalisation and consolidation were necessary to deal with the problems of overcapacity and global competition. The merger, however, failed in the wake of the arrival of PT, Lula and new developmentalism in Brazilian politics. National control of the sector as an important political and economic asset became a key element of state industrial strategies: denationalisation via internationalisation was not to be allowed. As investor and provider of capital, the Brazilian state has facilitated the integration of Brazilian productive capital into the flows of foreign financial capital but within the limits of the national interest.

Similar to the oil and mining sectors, strategies by Brazilian companies in the sector have been shaped by the aims of consecutive industrial policies. Both PDP and PBM focused on strengthening existing large companies in sectors seen to be competitive. In the steel sector this meant a focus on exporting semi-finished (low value added) steels for value enhancement in partner or subsidiary companies abroad (See Santos 2015 on CSN). At the same time, finished steels produced in Brazil would be destined for the domestic market, with expectations of rising domestic demand as a result of both upcoming mega events (World Cup and Olympics) and continued domestic redistributive policies. The risks associated with this strategy were identified as overcapacity in the global market, protectionist policies by other countried reducing access, environmental costs and the lack of ability to profit from margins from higher value added production (Crossetti and Fernandes 2005). Nevertheless, these risks were seen to be offset by the perceived positive interaction between an expanding domestic market and Brazil steel’s competitiveness in the global market.

In reality, the risks anticipated above (Crossetti and Fernandes 2005) materialised, particularly following the global financial crisis of 2008. This left the Brazilian steel sector vulnerable to global volatility in demand and cheaper competitors abroad.

Consequently, global competitiveness of domestic companies has seen a continuous decline since 2005. Between 2002 and 2013 the proportion of revenues generated from exports fell from 32.6% to 16% (Ganaka, Santos and Souza 2015). Export quantity of low value added steel products has decreased between 2005 and 2014, even if changing prices have cushioned the blow (see table 2 below). Interestingly, companies with foreign investors (ArcelorMittal and TKCSA) and subsidiaries abroad which focus on the fnishing stages of steel production (CSN) have continued to keep exports up (see table 2). In the early years after privatisation, Brazilian production of steel increased and with it indirect steel exports (World Steel Association 2013). This was not only the result of improved production techniques but, primarily, of a depreciation in currency. This highlights the vulnerability of the sector to currency volatility. Similarly, increases in productivity were primarily achieved through significant reduction in manpower (CNM, 2012). The same industrial policies which had encouraged export orientation of competitive domestic companies (PDP, PBM) also targeted economic development at home which meant rising demand for steel within Brazil. . At the same time, the income effects of the commodity boom also increased domestic demand for steel and by 2009, Brazil had experienced a significant rise in the imports of finishedsteels which exacerbated concerns over the competitiveness of domestic industry (World Steel Association 2013, see figure 2) and thus developmentalist aspirations.

FIGURE 2: Indirect Steel Trade about here

New developmentalism did not only promise economic change, it also promised social change with an increase in employment, income and participation in decision making for disadvantaged groups (Ricz 2015, Ebenau and Liberatore 2013). Employment in the steel sector, however, has remained volatile. Following an initial shedding of labour after privatisation, the sector saw an increase in employment during the Lula administration. Employment figures rose by 50% to approximately 700,000 employees in the metal sector (Ganaka et al. 2015). The effects of the financial crisis led to steady decline in the metal sector from 2010 onwards. 2013 alone saw a reduction by 30,000 jobs in the metals sector (Ganaka et al. 2015). Similarly, wages in the steel sector[4] have not kept up with the rise in wages in other strategic sectors (see figure 3 below) and the wage profile has deteriorated since privatisation (see table 2 below).

FIGURE 3: Nominal wage comparison in three strategic sectors about here

Between 2001 and 2014, the rise in wages in steel production has been 34.5 % compared to 187.6 % in the extractive industries (IBGE, 2015). Since 1995, the proportion of those in steel production on low wages (measured in relation to the minimum wage, i.e. up to twice the minimum wage) has steadily increased while the proportion of those on high wages in the sector (five times the minimum wage and higher) has steadily decreased. Between 2001 and 2014, there was a 11.9% increase in those paid in the lowest category (see table 2 below). Average wages for workers in steel production are the lowest in the metal manufacturing industry (CNM 2012). In comparison, workers in steel earned 36% of the wage of workers in aircraft manufacturing in 2010 (CNM 2012). It is important to highlight that production is concentrated in few business groups, and especially the business groups most likely to be supported by BNDES investments and loans, whereas workers in the manufacturing of steel products are dispersed across a high number of small and medium-sized enterprises (CNM, 2012). The data also shows continued regional inequalities with the proportion of workers with the lowest income concentrated in the Northeast compared to a higher proportion of high income employees in the South East, Brazil's economically most advanced region. Employment and wage data would therefore question the socially developmental effects of new developmentalist policies in steel. In addition, worker representatives in the sector have highlighted the need for national action to guarantee minimum workers' rights, a stronger emphasis on the development and training of steel workers and attention to the risks of insecure employment relations (CNM, 2012).

Similarly, despite attempts to use national champions as instruments of regional policy, the installation of new steel plants and the promise of employment brought their own problems of local community resistance. It is important to note that none of the

[4] The steel sector here comprises 'basic metals' (steel production) and metal products. The wider metal manufacturing industry also includes the sectors of manufacturing of means of transport (aircraft, automotive and shipbuilding), electric and electronic manufacturing, machine manufacturing.

previously state-owned steel companies has been positioned in a similar way to the previously state-owned national champions in the mining and the oil sector. Vale (mining) and Petrobras (oil) have both, at different times, been turned into quasi-regional development agencies. New steel projects have been either led by Vale or included Vale as a minority shareholder rather than the established steel companies (such as the previously state-owned CSN or privately owned Gerdau). These development projects, however, have been marred by claims of a lack of accountability in their planning and implementation. Continuing conflicts over the exclusion of residents in the deliberation and support for new industrial projects have highlighted issues over the balancing of private, public and state interests in new developmentalist practices. While greenfield steel projects might bring industrial employment, they have been located in the coastal areas of Rio de Janeiro and Espirito Santo and threaten local marine habitats and traditional forms of work. At the same time, these conflicts have mobilized social groups previously considered disempowered (cf. Santos and Milanez, 2015, Doering et al., 2015). This process of political empowerment has led to a number of strategies used by advocacy groups addressing public, private and civil society actors. In the first instance, this is expressed in the use of the Public Prosecutor Office questioning environmental performance and environmental licensing processes. TKCSA's steel mill in the south of Rio de Janeiro, for example, attracted sustained criticism over the violation of environmental rights of residents prompting the denial of a licence to operate without significant improvement to environmental monitoring and protection measures (PACS 2012, Doering et al., 2015). Similarly, other steel companies are recurrent parties in front of public inquiries (e.g. ArcelorMittal in Espirito Santo for air pollution). In terms of private actors, critical shareholder groups have been used to question corporate strategies. Here again, TKCSA is the foremost example.

The following table summarises the comparison between the steel, oil and mining sectors as presented above along the lines of central new developmentalist objectives (strong role of the state, internationalisation, export competitiveness and socially inclusive distribution of rent). Data was presented on an organizational level to illustrate the operation of new developmentalist strategies and policies. We examined the role of the state in strategic sectors and the resulting forms of ownership in each industry. This highlighted the varying degrees of foreign capital entering each sector.

In addition the discussion of internationalization of dominant companies highlighted the successful strategies of companies in all sectors as demonstrated by the ranking of multinational companies by foreign assets. The table then presents data on a sectoral level. Here export competitiveness is compared across the sectors, in terms of quantity, value and contribution to exports in the Brazilian trade balance. Employment data was only available at the level of the extractive industry as a whole (combining oil and mining) which is compared with steel production.

TABLE 2: Socioeconomic Trends in three strategic sectors under New Developmentalism about here

The empirical insights outlined in the present article point to the different characteristics of new developmentalist policies and highlight that while policies of industrial restructuring were successful in inserting steel into global flows of steel production, social upgrading effects have been lagging behind. The international division of steel production seems to reproduce a familiar hierarchy of economic powers. The developed nations predominantly concentrate on the finishing and high-value added stages of the production process and the developing and emerging economies focus on the production of low-value added raw and semi-finished steel (Andrade et al., 2007). This context hampers steel workers' aspirations for higher income and higher skill-levels, as well as encouraging the exploitation of local environmental resources. The following section will discuss the empirical data presented above for our understanding of notions of embedded autonomy (Evans 1995, Almeida et al. 2014) as outcome of new developmentalism.

5. Discussion: new developmentalism as an effective developmental paradigm?

New developmentalism had sectorally specific outcomes. In terms of ownership structures, oil and mining are domestically dominated by Petrobras as a state-owned company and Vale as a company with the state as minority shareholder. In steel, the state has mainly functioned as financier even though complex crossholdings in the sector have enabled its involvement as minority shareholder. In addition, foreign capital is strong in its presence through ArcelorMittal as the biggest steel producer and foreign stakes in Usiminas. The presence of MNCs in steel has implications for public-private alliances in the sector, particularly in the context of technological upgrading (Schneider 2013, Doner and Schneider 2016, see also table 3 below). While all sectors had been identified for state support, coalitions for upgrading were easier to foster in the domestically dominated sectors of oil and mining. Domestic steel companies did not benefit from specially targeted policies (Ganaka et al. 2015) but competed with foreign owned companies for funds (Almeida et al. 2014, BNDES data).

In addition, new developmentalist policies achieved the internationalization of the steel, oil and mining sectors, albeit in different ways. In oil and mining, dominant national companies with strong state involvement have benefited from state regulation to insert themselves into global production networks. They took up positions as exporters of low value goods, invested into access to resources abroad and became partners for foreign capital to respond to government objectives of technology transfer into Brazil (Almeida et al. 2014). In steel, national companies also focused on export of low value added goods but acquired interests for value enhancement abroad. At the same time, foreign capital entered Brazil in a resource seeking strategy. This has exposed the Brazilian steel industry to risks as a result of overcapacity of low value added steel in the global market. At the same time, all of these sectors remain vulnerable to global demand cycles and commodity prices. In this sense, new developmentalist policies have fostered embedded vulnerabilities of domestic champions to developments in global production networks rather than embedded autonomy.

Workers in the extractive sectors have, through rising wages, been able to benefit from the commodity boom. Therefore, cleavages between foreign and domestic capital, and business and labour, which have been identified as inhibiting the emergence of upgrading coalitions (cf. Doner and Schneider, 2016) have been less pronounced. The fragmentation of the steel sector between foreign and domestic capital, however, potentially has a negative effect on upgrading institutions. According to Schneider (2013) MNCs are less involved in domestic projects of upgrading as their interests in profit maximisation can be achieved in other locations of their operations. In addition, workers have not been able to benefit from the insertion of the steel industry into global production networks. In contrast, they have experienced a very slow rise in real wages and decrease in employment as a result of the crisis of overcapacity in the steel market. This has been particularly pronounced since 2014 and can be seen as a result of an industrial policy which focused on export competitiveness. As a result, export orientation – as manifestation of new developmental attempts at internationalisation – is highly contentious and contradictory in its outcomes (Nem Singh 2010, Milanez and Santos, 2015). As Almeida et al. (2014: 32) highlight: "It is not clear whether and how much the policy of promoting national champions in existing sectors has greater social than private benefits […]." The benefits are unevenly distributed between the 'national champion' companies, multinational companies, their shareholders and labour. While national champion companies are winning in oil and mining and multinational companies and their shareholders profit in steel, labour gain in extractive industries but less so in steel.

We have argued that social and environmental impacts of new developmentalism need to be taken into account. One of the central tenets of new developmentalism has been its inclusion of previously disadvantaged and disempowered groups in a new social contract (Ricz 2015). The discussion above has shown how socio-environmental conflicts continue in all sectors. A mapping exercise in 2010 identified that 12% of the 343 recorded socio-environmental conflicts in Brazil were linked to the steel and extractive industries (Fiocruz 2010). In this sense, the focus on participation and re-democratization has made exclusion of different social groups from decision-making processes visible and faciltiated resistance to extractivist corporate strategies. The growing importance of NGOs as political actors demanding accountability and transparency needs to be considered a central element to the new developmental paradigm – if not as outcome, then as mediating element (cf. Almeida et al., 2014, Devlin and Moguillansky 2012). Similarly, the increased appropriation of corporate practices for activist means on an international level, e.g. the growing importance of critical shareholder groups and the publication of 'unsustainability' reports mimicking company sustainability reports (Santos and Milanez, 2015), need to be seen as positive outcomes of the internationalization of Brazilian companies. This has facilitated the internationalization of the resistance movements against them. At the same time, such alternative organisation(s) invite attention and co-optation efforts by the affected companies. The oil sector is also characterised by mobilization of civil society. In this case, however, focus has been less on the socio-environmental effects of its operations but their political nature. The driving forces here have not been disempowered groups but the state in its role as prosecutor. While close political links in the sector facilitated an upgrading coalition, close links between industrial elites and politicians here created an environment conducive to corruption. Overall, these developments and the recent protests against and ultimate end of the Rousseff administration have highlighted the fragile nature of the new social contract.

Overall, new developmentalist strategies and policies in steel, oil and mining have achieved the embedding of Brazilian companies and Brazilian labour and civil society into global production networks. They have left each of these sectors, however, vulnerable to either the global or domestic 'requirements' of production. The particular articulation of power relations between foreign and domestic capital, industrial and political elites and business and civil society actors have contributed in each sector to a situation of 'embedded vulnerability', rather than the aim of embedded autonomy as a characteristic of development (Evans 1995). The following table (table 3) summarises our arguments.

TABLE 3: Characteristics of New Developmentalism in three strategic sectors about here

6. Conclusions

New developmentalism is defined as a developmental paradigm characterised by export-orientation and a drive for internationalization but with a strong role for the state, and striving for socio-environmental inclusion and equality. We set out to examine the sectorally specific trajectories of new developmentalism in the Brazilian context. In this respect, the article makes an empirical contribution by detailing developments in the Brazilian steel sector, redressing the relative neglect of this sector in favour of the otherwise dominant discussions of oil and mining (Nem Singh and Massi, 2016, Nem Singh, 2013, Paz, 2015, Milanez and Santos, 2013, Milanez and Santos, 2015, Almeida et al., 2014). The article has consciously included the socio-environmental dimension as an addition to previously economically focused discussions of new developmentalism (Ebenau and Liberatore, 2013 are an exception here).

Global economic and political forces have as much an influence on the dominance of developmental paradigms as do changes internal to the state and the nation. Industrial policies and developmental paradigms such as new developmentalism are shaped by increased global interdependencies as much as new demands of accountability by domestic social groups, in particular in emerging and medium-income countries (Bresser-Pereira 2006, Erber 2010, 2011, Ricz 2015). This illustrates how economic and political changes go hand in hand and the ways in which neoliberal and even post-neoliberal projects “used the tools provided by generic globalization (…) to construct a global system of domination” (Evans, 2008: 275) (cf. Ebenau and Liberatore 2013, Kröger 2012, Yates and Bakker 2014).

In this article we have identified the potentially contradictory outcomes of a developmental paradigm which rhetorically supports social inclusion and participation via redistributive measures but in practice facilitates the integration of local productive capital into low technology structural positions in global networks via state and local economic policies. Social policies in Brazil, such as cash transfers through *Bolsa Familia*, have contributed to a decrease in inequality (the Gini coefficient fell from 60 to 54.7 in between 1990 and 2009) and in poverty. This, however, has been achieved in parallel with (if not inspite of) economic policies which have been characterised by “the displacement of the social and ecological costs that the quest for competitivess produces” (Ebenau and Liberatore 2013: 108) onto the most vulnerable in society. At the same time, they pose a danger for a social and political consensus as recent developments of political instability in Brazil have shown.

The contribution of the article lies in its sectoral analysis and the demonstration of sectorally specific new developmentalist strategies of the Brazilian state. As Schneider (2015: 4) has argued:

> Political leadership or will cannot help much without taking into consideration existing constellations of institutions and organisations. Moreover, given the privileged position of big business in most political systems, their structures, preferences and capabilities merit special attention in any macro-political analysis.

The article has paid particular attention to the interaction between business and the state while also giving space to civil society actors. In this sense, it provides a more nuanced reading of state-business relations in emerging economies than has been afforded by national-level discussions of Varieties of Capitalism approaches which highlight similarities across sectors characterised by commodity and low value added goods production.

The article also highlights the insertion of the Brazilian state as an economic actor into a particular global economic order whose strategies are thus also influenced by external forces. The state therefore needs to be seen in relation to other states and national strategic alliances and as element of a particular (economically) strategic alliance which is not necessarily nationally embedded. This is where the tensions between the state's social and political embeddedness and its economic disembedding strategies arise. This also prepares the ground for an analysis of the spatially diverse effects of new developmental strategies and makes an argument for pursuing a geographical political economy (Gereffi 2013) to uncover the continuing territorial inequalities in patterns of development.

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	1988 or earlier	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Trade reform	•	•	•	•	•	•	•	•	•			•	•
Opening up to external financial capital					•			•	•				•
Privatization	•		•				•	•		•		•	•
Regulation of financial sector								•	•	•	•	•	•
Reform of social security									•	•	•	•	•
Administrative Reform											•	•	
Reform of social programmes:													
Education								•	•	•	•	•	•
Health								•	•	•	•	•	•

Figure 1: Brazil's reforms (source: Baumann, 2001: Figure 1, 153)

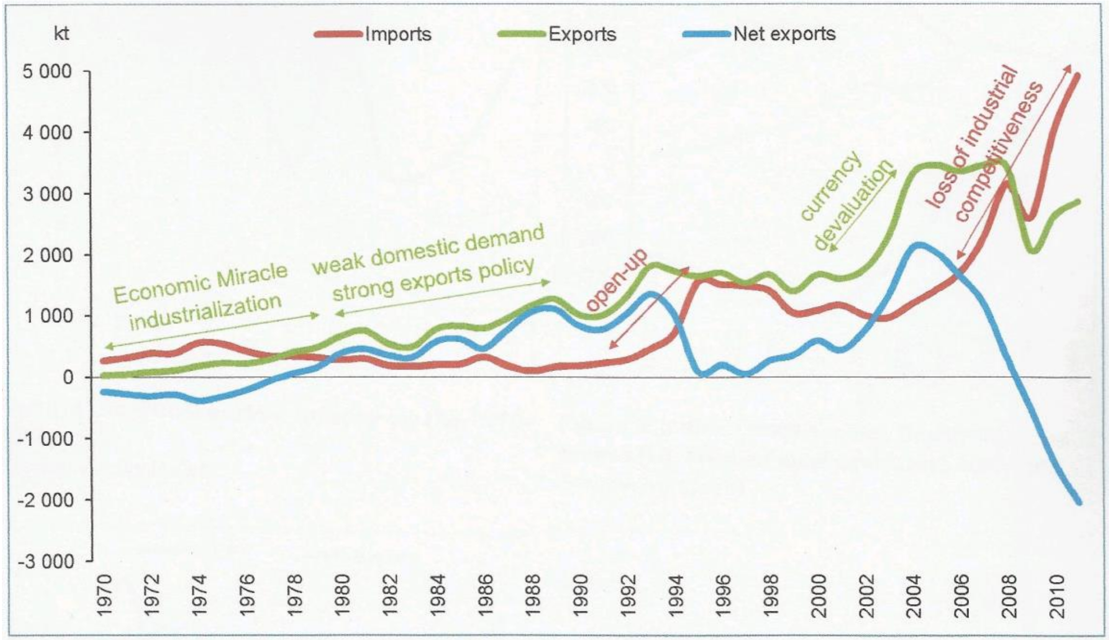
Table 1: Paradigms of Development in Brazil

Paradigm	Developmentalism 1950 - 1970	Neoliberalism (1973 – present)	New Developmentalism (2002 – present)
Motto	Structural Change	Structural adjustment	Productive Transformation with social equity
Purpose	Modernization via Industrialisation	Modernization via privatization	Modernization via internationalization
View of development	Requires explicit political will and state intervention rationalized through planning process Development *against* capitalism: modern industrial society but not capitalist	Spontaneous outcome of market forces and free operation of prices as allocative mechanism Development *of* capitalism	Deliberate process in which social and political energies are focused in support of export drive and achieving dynamic entry into world economic flows Development *alongside* capitalism: liberal capitalism plus achieving basic social and environmental goals
Role of the State	Structural reforms Steer capital accumulation Develop key industrial sectors (demiurge/ midwife) Protect economy from external fluctuations Importance of centralized state structures	Provide minimum conditions for the market to function (custodian): private property, enforce contracts, maintain order, collect data, provide limited safety net	Generate social and political consensus Increase competitiveness of exports (clusters, public-private partnerships) (midwife/ husband) Facilitate adaptability and upgrading of labour force Produce social cohesion – importance of decentralised structures

Instruments of 'insertion' into world economy	Import substitution	Export orientation – extractionism (comparative advantages)	Export orientation – develop capacity to export medium value manufactured goods and high value added primary goods Selective outward orientation/ internationalization New regional political economy: regional integration and autonomy from International Financial Institutions
Outcome – position of state in global production networks	Position of power through internal orientation Embedded via state ownership of productive capital Value creation via employment and import substitution	Position of power as regulator of market openness Disembedding processes: privatisation, deregulation Value creation via market forces – competitiveness	Position of power negotiating market openness and national developmental agendas via (decentralised) industrial policy Embedded via provision of capital – golden shares Value creation via upskilling, industrial upgrading and redistribution
Role of economy vs politics	Economy is subordinate to politics	Politics is subordinate to economy	Political and cultural space is shaped by requirements of globalization

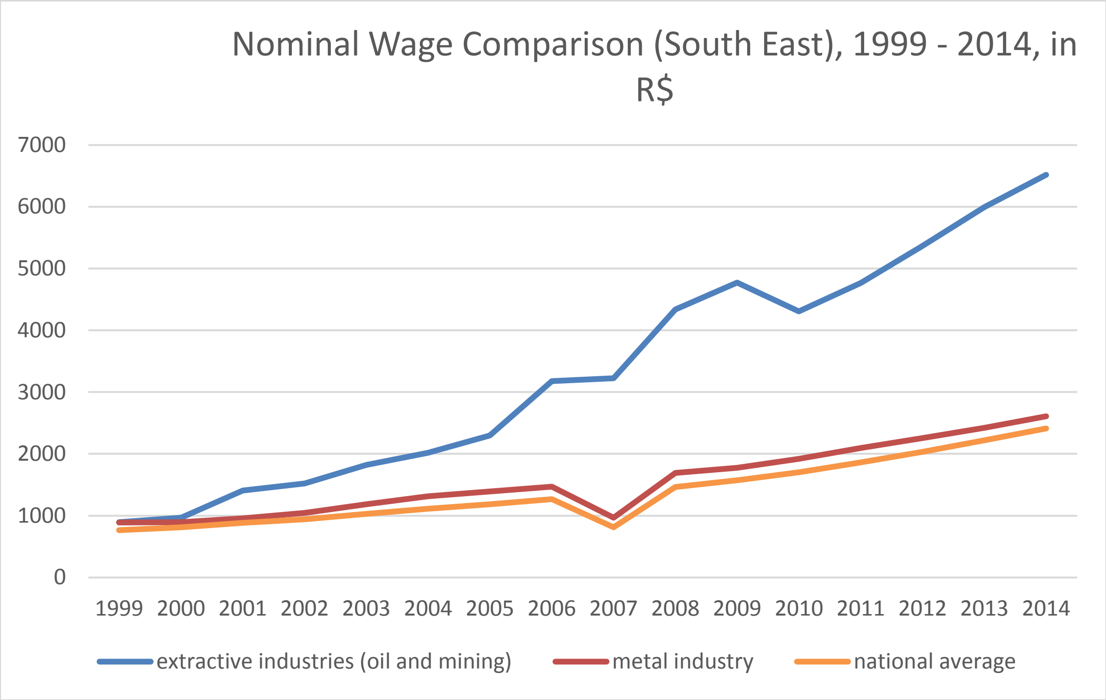
Adapted and summarised from Leiva (2008), Erber (2010, 2011), Evans (1995), Bresser-Pereira (2006), Thomas (2000), Ban (2013), Nölke et al. (2014), Yates and Bakker (2014)

Figure 2: Indirect trade in steel, thousand tonnes, finished steel equivalent, 1970 - 2011



Source: World Steel Association, (2013: 4)

FIGURE 3: Nominal Wage Comparison in three strategic sectors



Source: RAIS 1999 - 2014

TABLE 2: Socioeconomic Trends in three strategic sectors under New Developmentalism

	Steel	**Oil**	**Mining**
Role of the state and ownership			
Dominant domestically owned companies	Gerdau, CSN	Petrobras (60.51% state ownership)	Vale (33.06% state ownership)
Foreign capital participation	Usiminas, TKCSA		Samarco (Vale (50%), BHP Billiton (50%))
Dominant wholly foreign owned companies	ArcelorMittal (AM)		
Internationalization			
Market share of production (2010)	AM 30.7%, Gerdau 24.8%, Usiminas 22%, CSN, 14.9%, TKCSA 1%	Petrobras 92%	Vale 79.8%, Vale minority stakeholder in companies producing 20.2%
Ranking in Transnationality Index based on foreign assets	Gerdau: 2	Petrobras: 3	Vale: 1
Export Competitiveness			
Trend in Export Quantity (Jan 2005 – Jan 2014)	-27.7%	+51.4%	+62.7%
Trend in Export Value	+211%	+2176%	+815%

(Jan 2005 – Jan 2014)		
Contribution to Brazil trade balance (exports) (2014)	AM 0.69% CSN 0.76% TKCSA 0.89%	Petrobras 5.79% Vale 9.1%
Socially inclusive distribution of rent		Extractive industries
Trend in employment (2001 – 2014)	+37.4%	+39%
Trend in real wages (2001 – 2014)	+34.46%	+187.62%
Trend in wage structure (2001 – 2014)		
- **Up to twice minimum wage**	+11.9%	-3.9%
- **2 -5 times minimum wage**	+1.5%	+3.6%
- **More than 5 times minimum wage**	-15.5%	-0.9%

Sources: own elaboration from: company information, Gurmendi (2010), Ministerio do Desenvolvimento, Indústria e Comercio Exterior, Dom Cabral's Brazilian Multinationals Ranking 2014, IBGE (Relatorio Anual de Informações Sociais), export data was not available prior to January 2005

TABLE 3: Characteristics of New Developmentalism in three strategic sectors

Outcomes of New Developmentalism	Steel	Oil	Mining
Role of the State	Financier, minority shareholder	Owner, Financier, Regulator	Regulator, Financier, minority shareholder
Business Actors	Internationalized domestic business groups and dominant MNCs	Dominant state-owned company, local suppliers, foreign partners for state-owned company	Internationalized, dominant domestic business group with state as minority shareholder
Civil Society Actors	Localised networks of resistance with ad hoc international partners	National networks for transparency	International networks of resistance
Capacity for developmental coalitions	Constrained by MNC interests	Supported by state through local content rules	To be supported by state (ongoing discussions)
Vulnerabilities	Arising out of low value added focus in global production networks	Arising out of embeddedness in domestic politics	Arising out of commodity cycles and embeddedness in domestic politics

Source: own elaboration