THE INTERNATIONALIZATION PARADOX: UNTANGLING DEPENDENCE IN MULTINATIONAL STATE HYBRIDS

Suzana B. Rodrigues
FUMEC University, Brazil & Rotterdam School of Management, The Netherlands
srodrigues@rsm.nl

and

Marleen Dieleman
NUS Business School, National University of Singapore, Department of Strategy and Policy
marleen@nus.edu.sg

Abstract:
We investigate the internationalization of firms with ownership links to the state from the perspective of resource dependence theory, and argue that internationalization can reduce dependence on the home country government, but, paradoxically, this strategy also creates additional dependences, shifts the power balance, and provides rationales for increasing government control. Utilizing a 'critical' case – Vale from Brazil – we analyze different conditions that enable greater autonomy for and greater government control over multinational state hybrids in the context of internationalization. We contribute to the international business literature by generating a novel framework that considers the effects of market trends (extractive industry) and non-market trends (home country policies) on the internationalization of state hybrids.

Keywords:
Internationalization; resource dependence; extractive industry; state hybrid; SOE; non-market strategy, emerging markets, multinationals, Brazil, mining, Vale.

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INTRODUCTION

The recent global rise of firms from emerging economies with ownership links to the state has drawn attention from international business (IB) scholars (Bruton, Peng, Ahlstrom, Stan & Xu, 2015; Cuervo-Cazurra, Inkpen, Musacchio & Ramaswamy, 2014; Musacchio & Lazzarini, 2014). But, paradoxically, as these firms overcome home country constraints and gain power by accumulating global resources, their success in doing so also makes them a more attractive target for home government interference. This phenomenon can be observed in several high-profile cases of re-nationalization, such as Yukos from Russia (Dixon & Day, 2010), YPF from Argentina (e.g. Peng & Meyer, 2015), and Petronas from Malaysia, whose top management was quoted as saying they regretted being the government's number one "piggy bank" as they would rather invest in continued globalization (Reuters, 2 July 2012). Although this paradox of globalizing state hybrids (i.e. firms with direct ownership links to the government) becoming a target for home country intervention is regularly discussed in the media, and involves influential companies, the IB literature has not yet theorized on it. We draw on resource dependence theory (RDT) and on a critical case (Flyvberg, 2006) of a mining company to untangle this internationalization paradox and suggest a novel theoretical framework that can provide a basis for future advances in IB theory.

Given the significant dependence of state hybrids on the home country government, RDT – originally formulated by Pfeffer & Salancik (1978) – offers a useful lens through which to study their internationalization (Choudhury & Khanna, 2014; Cui & Jiang, 2012; Meyer, Ding, Li & Zhang, 2014; Xia, Ma, Lu & Yiu, 2014). Recent studies apply RDT to argue that internationalization of state hybrids can be a response to offset government dependence (Choudhury & Khanna, 2014; Cuervo-Cazurra et al., 2014). Our argument specifies the

conditions under which this may occur. Although state hybrids typically go abroad in response to market conditions, internationalization can also be instrumental from a non-market perspective. In offering new opportunities to firms and facilitating access to new resources, a global strategy, by reducing dependence on local ties and resources, simultaneously improves the SOE autonomy.

We therefore demonstrate the possibilities, not yet fully explored in the IB literature, of using RDT. From the RDT perspective dependence is one-directional: the firm is dependent on the government, but not vice versa. This is not surprising, given that states are generally more powerful than firms. The other side of the coin – the government being dependent on a multinational state hybrid – has received little attention. Moreover, this stream of research has not yet explicitly considered the possibility that governments may in turn respond to internationalization by increasing control. This is an important omission, as governments in emerging economies typically continue to benefit from and influence state hybrids, even after privatization (Musacchio & Lazzarini, 2014).

We draw on a broader set of RDT insights to suggest that firm–government dependences are mutual (Casciaro & Piskorski, 2005; Emerson, 1962), dynamic (Hickson, Hinings, Lee, Schneck & Pennings, 1971) and intertwined with other contextual external dependences, such as those from industry, competition and capital markets (Pfeffer & Salancik, 1978; Child, Rodrigues & Tse, 2012). We argue that the internationalization of state hybrids should be seen not merely as a unilateral attempt to redress a power imbalance, but simultaneously as a source of new power imbalances, which may trigger a government response. To illustrate this response and explore the conditions under which it can occur, we present a longitudinal case of Vale, a mining company from Brazil. We found that market trends (especially the industry context) and

non-market trends (especially the home country policy environment) shaped the mutual dependence between Vale and Brazil's government. We also found that the balance of power shifted over time: Vale initially achieved greater autonomy through internationalization, but when market trends and non-market trends changed the government responded and gained greater control over Vale.

Our contribution to the IB literature is threefold. First, we advance understanding of multinational state hybrids using RDT. We argue that IB research has hitherto not fully utilized RDT's potential, despite it being especially suited to explaining mutual dependences between actors. Second, we show the importance of incorporating RDT's dynamic view of dependence, and recognize that each attempt to increase autonomy may trigger a response from the government. Third, by paying attention to the industry context, this research reveals the additional dependences a multinational state hybrid experiences and, in particular, how a global strategy generates additional dependences and new vulnerabilities. By taking a long-term perspective, our longitudinal case offers an opportunity to expand the IB literature, which has hitherto mostly focused on the rationale for and benefits of the internationalization of state hybrids. Our study suggests that multinational state hybrids can increase autonomy through internationalization, but the government's responses are contingent on a combination of industry trends and home government policies. We combine our insights into a new framework, thereby taking a first step towards untangling these dependences. In so doing, we hope to stimulate further IB research on the internationalization trajectories of state hybrids.

LITERATURE REVIEW

RDT and State Ownership

RDT, as articulated by Pfeffer & Salancik (1978), argues that dependence is a function of who controls critical resources, suggesting that a firm's behavior is oriented towards increasing the value of the resource pool and its level of control over it. RDT is widely used to explain firms' strategic responses to dependence on critical resources (e.g. Hillman, Withers & Collins, 2009). For example, a firm can escape from a relationship of mutual dependence by crafting power asymmetries through which it becomes less dependent on a given actor by obtaining alternative resources (Hillman et al., 2009).

Government dependence is a particularly relevant theme for firms with ownership links to the government, such as state-owned enterprises. Bruton et al. (2015) point out that many state-owned firms, in particular those that operate globally, are better described as "state hybrids" with mixed ownership resulting in a combination of institutional and private logic, setting them apart from other multinational enterprises. Similarly, Cuervo-Cazurra and colleagues (2014) discuss the emergence of "innovative hybrids of state and private capital" (p. 922). They argue that even after privatization governments often retain various levers of control in state hybrids, including direct ownership, indirect ownership and influence on board appointments, or simply through regulation. Musacchio, Lazzarini & Aguilera (2015) identify different types of SOEs based on these novel developments, with decreasing formal state control: fully state-owned; state as a majority investor; state as a minority investor; and state as a strategic supporter. Although most studies of state-owned enterprises now classify these in terms of the presence of state ownership (e.g. Xia et al., 2014) we prefer to use the term "state hybrids" rather than "state-owned enterprises" when referring to legally independent firms with direct ownership by the state as well as private ownership (cf. Cuervo-Cazurra et al., 2014: 925). This is because state-owned enterprises may be perceived as firms with 100% state ownership, while this paper

takes an interest in firms with mixed ownership. As government objectives are not necessarily aligned with business objectives, a hybrid of these two "logics" introduces a new level of complexity that is not yet well understood and that is the focus of this paper.

Dominant ownership represents greater power over the firm (Pfeffer, 1981), so greater direct government ownership is associated with lower autonomy to pursue business goals. But indirect ownership or state influence through policy-making may also lead to effective state control (Musacchio et al., 2015), and companies with less direct state ownership may even experience more state interference than those with greater direct ownership (Bruton et al., 2015: 93). It is therefore important to move beyond the consideration of state ownership and to explore the importance of both business logic and state logic in multinational state hybrids. We define "state logic" as a firm's objectives linked to government goals (e.g. economic development plans and political interests), and "business logic" as a firm's pursuit of profits, market share or resources and capabilities. We recognize that this combination of state and business logic has an important bearing on a state hybrid's inclination to become a multinational, thus requiring dedicated research that untangles the dependences between the firm and the state (Bruton et al., 2015; Finchelstein, 2017).

Vernon (1979) suggests that although the basis for government influence on state hybrids may be rooted in ownership legitimacy, managers frequently search for strategies to obtain more autonomy from the government. A relatively new insight developed in the IB literature is that internationalization, besides being a response to market opportunities, can provide state hybrids with more autonomy. By globalizing, the firm gains access to and control over critical resources situated outside the government's jurisdiction (Choudhury & Khanna, 2014; Cui & Jiang, 2012). Internationalization to mitigate dependence on the government is sometimes referred to as the

"power escape" argument (Cuervo-Cazurra et al., 2014). We contend that this argument offers an incomplete explanation for the internationalization trajectories of state hybrids, as it does not explicitly consider the government's responses to the firm's attempt to gain autonomy. Neither does it consider industry characteristics and non-market constraints associated with business logic and state logic respectively. We build upon this "power escape" view (Choudhury & Khanna, 2014; Cuervo-Cazurra et al., 2014) using a broader set of RDT insights, to suggest that dependences are: 1) dyadic; 2) dynamic; and 3) influenced by external dependences.

A Dyadic View of Dependence

A dyadic view of dependence focuses attention on dependence relations between two actors – in our case between state hybrids and the government. Early scholarly work noted that state hybrids are usually created and funded by governments, as well as expected to contribute to a wider set of government policies than other market players, and these factors create a legacy of substantial dependence on the government (Aharoni, 1986; Trebat, 1983; Vernon, 1979). Due to this legacy, state hybrids derive a substantial part of their legitimacy – an important firm resource (Bitektine, 2011; Stevens, Xie & Peng, 2015) – from their links to the government. Governments can directly influence state hybrids through ownership and board appointments. Dominant owners can use board composition to institutionalize their power within the firm (Pfeffer & Salancik, 1978). Although government-appointed directors can support the firm by opening up channels of information and access to government resources (Child et al., 2012), they can also reduce autonomy (Lioukas et al., 1993) and expropriate firm resources (Fan, Wong & Li, 2007). If the government appoints directors identifying with the government's political orientation, this may create a direct channel to influence strategy from within.

In its original formulation, RDT drew on concepts of power in dyadic relationships, in which the main idea is that A depends on B because B detains resources which are relevant to A achieving its goals, and vice versa (e.g. Emerson, 1962). Mutual dependence occurs only when actors value the resources possessed by the other. A state hybrid can be valuable to the government because it contributes to tax income and dividends, provides employment, influences the balance of trade, controls critical materials (e.g. food or energy), or is active in industries of national importance (Eden & Molot, 2002).

Casciaro & Piskorski (2005) advance RDT further and separate the constructs of power balance from mutual dependence. They suggest that actors may experience different levels of dependence, even if they have significant power over the other actor. Although the power balance between governments and state hybrids may be unequal, states do experience dependence on associated firms, for instance in the form of contribution to social goals or income (e.g. Li & Xia, 2008). The government may become more dependent on these contributions if the firm controls strategic resources (e.g. a national oil company that operates globally) or if the government has few alternative income streams.

Thus, even if state hybrids increase their autonomy by building a global resource pool, the dyadic perspective suggests that this may not in itself be an effective "escape" from a dyadic relationship, because governments also depend on state hybrids and typically hold lasting levers of control over them.

A Dynamic View of Dependence

We argue that it is important to incorporate RDT's dynamic view of dependence into the analysis of multinational state hybrids and to recognize that each attempt to increase autonomy by one

party may trigger a response from the other party to regain control. Earlier dependence theorists (e.g. French & Raven, 1959) suggest that the types and levels of mutual dependence between actors change as they use tactics to obtain greater independence from each other. In their seminal article, Hickson et al. (1971) draw attention to drivers of dependence shifts, such as an actor's capacity to obtain alternative resources outside a dyadic relationship. It follows that: a) actors' responses to changes in the resource pool are likely to alter the dynamics of dependence between them; b) each attempt to increase autonomy may trigger a response from the other party to regain control; and c) dependence may be more fruitfully studied as a sequence of actions and responses unfolding over time. As Pfeffer & Salancik (1978) point out, concentration of power tends to establish conditions that result in concentrated opposition. Thus, as state hybrids gain autonomy (for instance through internationalization), the government may see this as a loss of control, which may trigger its intervention (Hafsi & Koenig, 1988). We argue that an increase in autonomy through globalization may establish the very conditions that trigger a government response.

External Dependences

RDT acknowledges from the outset that firms also face external dependences and these are frequently interconnected (Pfeffer & Salancik, 1978: 83-90). Firms are typically confronted with several incompatible demands from a variety of market and non-market players (Boddewyn & Brewer, 1994).

External dependences are related to industry characteristics. Firms tend to globalize when they see the opportunity to readily access global resources, for instance if their industry experiences a growth cycle (Wan & Hoskisson, 2003). Access to global markets facilitates the

diversification of resource bases, but will also create alternative dependences, such as on industry growth rates or overseas customers. For example, many state hybrids operate in resource-based industries, which are cyclical in nature and where reserves depend on the home country's geological make-up. While some state hybrids remain locally oriented, some may be motivated by home country resource constraints to internationalize and control additional reserves outside the home country (Bass & Chakrabarthy, 2014; Shapiro, Russell & Pit, 2007), but such a strategy will result in greater exposure to global commodity prices.

Access to international financial markets is a particularly important tactic to reduce government dependence, not only because it presents alternative sources of funding (e.g. Hung, Wong & Zhang, 2012), but also because initial public offerings (IPOs) alter the structural basis of ownership and control and widen the basis of accountability. Moreover, access to international financial markets allows multinational state hybrids to build additional layers of legitimacy at an international level (Kostova & Zaheer, 1999; Meyer et al., 2014) and to increase the political power and visibility of the CEO (Hung, Wong & Zhang, 2012), which can help to create more bargaining power with governments (Stevens et al., 2015). However, the state hybrid then also becomes more dependent on increasing its share price, placating shareholders and obtaining favorable media exposure as it derives more of its resources and legitimacy from access to global capital markets.

External dependences are also related to the non-market environment. Home country policies may affect the internationalization strategies of state hybrids, irrespective of industry characteristics. For instance, some governments incentivize firms to become national champions in the global business scene, as was the case of Brazilian firms from the mid nineties up to the end of 2000's. Emerging market governments can actively support this by bargaining on behalf

of firms (Ramamurti, 2001; Luo et al., 2010), an example being Chinese investments in infrastructure or extractive sectors in Africa and Brazil (Shapiro, Vecino and Li, 2017; Li, Newenham-Kahindi, Shapiro & Chen, 2013). However, as a source of national pride, these state hybrids may also develop additional dependences. Governments have foreign policy priorities and may employ global state hybrids to help achieve their diplomatic goals, thus turning them into foreign policy actors (Holburn & Zelner, 2010; Duanmu, 2014), which may not necessarily be in line with company strategy.

On the other hand, if the home country environment is less conducive to overseas investment, state hybrids may not be able to invest abroad, or may be asked to abandon their overseas investments in favor of local priorities (Frankel, 2010). Thus, non-market factors, such as a new government ideology, a government's need for legitimacy (Eden & Molot, 2002), or a fall-out amongst political leaders may create the conditions to divert state hybrids to serve national or private political purposes.

The dynamics of markets compel multinationals to increase their resource pool by globally diversifying products and markets, and this is equally true for multinational state hybrids (Hitt et al., 2006). At the same time, however, these factors may also leave firms more vulnerable to industry shifts such as price fluctuations (Elg, 2000). As the resource pool increases it affects the power balance and sets in motion forces that may trigger a response by the government. State hybrids may then become a more attractive target, precisely because of their greater resources, prompting the government to ordain more investments in the home country, thus reversing the internationalization process.

In sum, we have argued using RDT that state hybrids are characterized by a long-lasting form of mutual dependence between the firm and the government, and that this dependence

changes over time and is shaped by market and non-market factors which are associated with business logic and state logic respectively. As such, we contend that a state hybrid can increase autonomy through internationalization, but it cannot escape government dependence entirely or indefinitely. In fact, the core of our argument is that its very success in building a global resource pool makes the firm more attractive to the government's particular interests, which may trigger a response in the form of increased government control and thereby reverse the internationalization process (see Figure 1). To date, the conditions that enable the emergence of this paradox are not fully understood. Untangling them is the purpose of our study.

Figure 1 goes about here

METHODS

Research Design

In contrast to most IB research, which typically uses large sample studies, we researched one company over a longer period with particular attention to the context in which it operated. In doing so, we heed calls for more extensive use of qualitative and mixed methods in IB to understand "the complexities of emergent and evolving phenomena" (Birkinshaw, Brannen & Tung, 2011: 573), and we do this through a process study that maps a sequence of events and explores change (Pettigrew, 1990; Van de Ven & Poole, 2005).

We agree with Burgelman (2011) that longitudinal qualitative research on a single company can aid theory development by combining the power of richly documented narratives on the one hand and the rigor of reductionist theories on the other. The ultimate aim was to engage in theoretical generalization (Eisenhardt, 1989; Yin, 2009); that is, we use this case to develop novel theoretical insights on multinational state hybrids.

We follow best practices for case study research that explores the home country contexts of international strategies (Meyer & Thein, 2014; Stevens et al., 2015). The approach used in this study fits what Welch et al. (2011) describe as a contextualized approach. Single case studies that rely on multiple sources and draw upon quantitative and qualitative information allow the tracing of strategic developments in a changing context (George & Bennet, 2005). A multi-method design enables us to identify with greater confidence how and why particular contextual drivers and internationalization developments influence each other.

Industry Selection

We chose the extractive industry as the setting for our research because it allows us to identify the separate and joint effects of home country and industry influence. There are various reasons why this industry is suitable for a study of the changing dependences between a state hybrid and a government. First, it is a relevant context since many of the world's largest state hybrids are found in extractive industries (Cuervo-Cazurra et al., 2014). Second, the industry is made up of firms with full, partial and no state ownership, and local and global players in different combinations. It thus displays various ownership models and strategies, meaning internationalization trajectories cannot be solely explained by either isomorphism or ownership structure, and a more nuanced analysis is called for. Prior studies suggest that mining industry

characteristics may pull firms towards either national convergence or international diversification (Shapiro et al., 2007). Third, mining is a highly cyclical industry, which helps in teasing out dependences and industry effects over time. Booms and busts tend to change mutual dependence relations between government and mining firms (Robinson, Torvik & Verdier, 2006; Shapiro et al., 2007). Fourth, mining firms experience dependence on the home market. They are subject to geological constraints, are typically highly regulated, and, by contributing substantially to the government budget, are prone to government intervention. Studies on the "resource curse" also suggest that a country can become highly dependent on resource companies (Frankel, 2010; Robinson et al., 2006) and that governments may pull the strings back home, if globalization affects their interests at home (Frankel, 2010). Mining companies are also prone to foreign policy influence as they may substantially contribute to outward foreign direct investment (OFDI), particularly in poorer countries. In short, the mining industry can illustrate shifts in dependences and it invites both a market and a non-market perspective.

Case Selection

We chose Vale, the Brazilian mining multinational, as a target firm, where the phenomenon of interest was clearly observable. The various aspects of Vale's internationalization were well documented or accessible, and the company had global impact and was the subject of much debate, including in the media. Vale was relatively new to globalization, having long been a predominantly domestic firm. Once it set upon a path of global expansion, from 2001 onward, it internationalized rapidly in the context of an industry "super-cycle", and it subsequently experienced de-internationalization. The nature of the firm – an enterprise with a mix of private

and government ownership, of considerable size and operating in a highly regulated, global industry – added to the salience of this case.

Data Sources

We used a typical "rich" research design, relying on multiple sources. Our case database includes: face-to-face interviews; Vale's decisions related to international investments; annual reports, data on ownership, and director biographies; articles from Brazilian and global media; and secondary data on a variety of external factors, including the development of the global mining industry (variation in demand, competitors' performance and globalization, and commodity prices). For the purposes of this study we mostly used the data on investments and divestments abroad.

Our 61 face-to-face interviews were with senior, middle and functional managers (e.g. HR, Finance and Strategy) and with professionals (lawyers, controllers and consultants) from headquarters in Brazil and subsidiaries abroad. The interviews lasted between 40 and 120 minutes and covered issues such as the process, motives and strategies of internationalization (acceleration and retraction) and dependence relationships with the home country government. While all the interviews served as background information, for the present paper we drew in particular on 32 interviews with employees who worked in Brazil. These interviews were conducted in two stages, namely 20 interviews between 2008 and 2010 and 12 interviews between 2012 and 2015.

We gathered Vale's annual reports from 2001 to 2013 (Form 20-F) and created spreadsheets with relevant financial data, augmented with data from Bloomberg and other sources on share prices and commodity prices. BHP Billiton and Rio Tinto's annual reports, and

Bloomberg financial data, were used to compare Vale with its global peers. Vale's annual reports also provided detailed information on changes in ownership structure and composition of the board, including biographies of board members. These allowed us to trace board members' experience (e.g. whether they had prior professional experience in the industry, or whether they came from the public sector or were associated with the ruling political party).

We used Factiva to conduct a structured search for media articles about Vale (keywords: Vale, CVRD) for 2001-2013 in selected global media (Reuters, Financial Times, Wall Street Journal, Bloomberg, AFP and AP). We augmented this with a search in the Brazilian business press: *Jornal do Comércio* (2004-2013), *Exame* (2002-2013), *Valor Econômico* (2002-2013), *Veja* (2002-2013), and *Gazeta Mercantil* (2004-2013). Finally, we retrieved a number of industry reports to better understand the case context.

Data Analysis

Interviews were analyzed in detail to enable us to understand the internationalization trajectory. For the current paper we first selected those segments of the transcribed interviews that covered the internationalization process, the market and non-market contexts, the respective responses of the company and the government, the relationship and dependences between these two actors, and board and ownership changes over time. The next step involved a synthesis of these narratives. We did not focus on all interview material due to space restrictions and our chosen focus.

We analyzed the corporate documentation in different iterations. We began by using corporate information (annual reports and internal documentation) and by focusing on: 1) the number of countries where Vale had exploration activities; 2) the proportion of foreign

assets/total assets; 3) the number of foreign exploration units established overseas during the period of analysis; and 4) the proportion of R&D investment to total investment, as R&D expenses related primarily to the exploration of new minerals. We resisted treating "internationalization" as the dependent variable as it became clear that internationalization also had important effects.

Director biographies were coded for the presence of political affiliations, media articles were coded for the joint mention of Vale and the Brazilian government at least five times (illustrating a discussion on Vale–government relations), the internal board documentation was coded for decisions on internationalization and de-internationalization, and so forth.

We combined the information derived from all the different sources and then drafted timelines and explored underlying changes, generating a range of intermediary spreadsheets, charts, figures and flow charts in the process. We used multiple sources (industry, markets, competitors, media analysis, board composition, etc.) to gain a deeper understanding of the internationalization patterns in the context of external dependences. For instance, we looked at Vale's dependence on Chinese demand for commodities by comparing the proportion of Vale's sales to China with those of its competitors, and by analyzing interview transcripts. Our case develops around Table 1, which presents a condensed summary of our multidimensional and multi-level analysis.

CASE NARRATIVE AND INTERPRETATION

We first present a description of the case narrative chronologically in two phases, even though we recognize that reality is perhaps better described as "loops of causation and connectivity" (Pettigrew, 1990: 271). We begin in 2001, when Vale reduced its domestic diversification and

focused on the mining industry under the influence of its new CEO, Roger Agnelli. It then started on a trajectory of internationalization. The second phase (2008-2013) was a time of mixed trends: internationalization was intermittent and then accelerated. This was followed by government attempts to increase control over Vale, culminating in a CEO change and de-internationalization from 2011 onwards. For both phases, we considered the key elements of our conceptual framework: the internationalization trajectory, market and non-market trends, and shifts in mutual dependence between the company and the government. Figure 2 summarizes the key findings. It shows the internationalization trajectory along with dependence relations, industry trends and home country policy factors.

Figure 2 about here

Phase 1: 2001-2007

Internationalization trajectory

Vale (formerly Companhia Vale do Rio Doce, or CVRD) began as a wholly state-owned enterprise but was partially privatized in 1997. During this time, a greater share of private ownership and independent management was thought to boost the efficiency of Brazil's state hybrids. Up to 2001 Vale primarily focused on Brazil and was highly diversified with operations in the mining industry as well as infrastructure, pulp and paper, and electricity plants. In the early 2000s Vale was ready to move away from the diversified domestic model by selling non-core

businesses, such as pulp and paper and electricity plants (Vale, 2012). It subsequently began to go global.

Though Vale had some international experience even before privatization, the company only began intensively entering new countries in different continents after Roger Agnelli took office as CEO in 2001. One respondent said: "Agnelli was an aggressive strategist. He wanted everything done quickly as he understood that we were navigating in short-term super cycle." Another said: "In Agnelli's era there were several projects of international investments competing with each other."

We characterize the first phase as one of continuing and consistent internationalization, which was fueled by a positive industry cycle, government incentives to go global, and a new CEO. Agnelli was widely known as a "market guy" and viewed internationalization as critical to grow Vale into one of the largest mining companies in the world. He aimed to build Vale's reputation based on its domestic iron ore deposits. Iron ore export earnings would then be used to enter new mining segments globally to mitigate dependence on one mineral. As a senior manager told us in an interview: "The logic was that diversification into other mining segments would reduce the 'single commodity trap'." Agnelli's main goal was to become a top-three global mining player, a goal that could only be achieved by discovering large new deposits in new countries, as managers told us.

Organic growth and acquisitions were the preferred entry strategies in the industry (Shapiro et al., 2007). Organic growth was the main component of a resource substitution strategy, but due to the specific industry characteristics its returns only come in the long term. A respondent said: "The main market is Asia now. Today we have around 16 or 17 new companies, whose role is to be the vehicle for development of mineral projects worldwide. This is part of the

program of Vale's strategy of organic growth." But Vale also engaged in acquisitions, notably Inco, as an important step to achieve its multi-commodity diversification strategy. A respondent explained: "In the case of Inco, you buy the minerals you need and get them at once, while with organic growth, realistically, […] the time scale you're looking at is around 20 years."

The scale and scope of Vale's international expansion can be captured by R&D expenses (an indicator of exploration in the mining industry), and by investment in (or divestment of) exploration sites in different countries (items 5, 6, 7 and 11 in Table 1). All indicators suggest a progressive internationalization trajectory, and we note that a far larger percentage of expenses was dedicated to R&D compared to Vale's peers. Vale's acquisition of Inco in 2006 also contributed to an increase in foreign assets and sales.

Up to 2007 Vale's geographic footprint, its overseas assets and the number of investment decisions outside Brazil all increased steadily (Table 1). In addition, Vale was listed on overseas exchanges, including NYSE, thus generating alternative sources of funding and diversifying its sources of legitimacy and accountability beyond Brazil.

Market trends

From 2001-2007, mining industry trends were highly favorable to Vale's international ambitions. Vale, like its largest global competitors, engaged in global diversification. Outward investment by the industry as a whole was growing in this period (World Investment Report, 2016) and Vale was a key actor with its aggressive global expansion in global exploration activities, even in comparison with its global peers. One driver of industry growth was China's growing demand for iron ore, which led to a price increase (from US$ 13 per dry metric ton in 2001 to US$ 34 by

2007). Revenues derived from China increased from 11% in 2003 to around 18% in 2007 (Table 1).

Vale defined this positive industry trend as a super-cycle, and, according to interviews, Agnelli felt that Vale had to take advantage of it very quickly, before it ended. The managers we interviewed told us he referred to it as a “window of opportunities” able to transform Vale into the largest mining company in the world. During this period Vale just had to “surf the super-cycle”, stated one of the interviewees.

Vale also experienced a positive climate when tapping global capital markets. In 2005 Vale was the first Brazilian company to receive an investment grade rating from Moody’s, signaling that the company was a safe investment.

Non-market trends

Agnelli’s tenure started after Vale’s partial privatization and during the government of Fernando Henrique Cardoso, which advocated professional management for state hybrids based on market principles. Agnelli’s nomination was secured by the bank Bradesco (a major shareholder), where he had occupied senior positions. His appointment as CEO coincided with the withdrawal of CSN, a major Brazilian government-affiliated shareholder, which had hitherto pressured Vale to invest in Brazil’s steel industry.

During 2001-2007 the political climate was mostly favorable for internationalization. First, encouragement for national champions to go global was formally incentivized by the national development bank BNDES, one of Vale’s major shareholders. Second, Vale was seen as special because of its CEO’s commitment to transforming Vale into a global mining company.

However, there was a shift in the political climate in 2003, when a more left-wing government was elected. After President Lula and his Workers' Party took office, BNDES started buying more Vale shares. By 2006 government-linked entities controlled over 50% of Vale. The number of "golden shares" held by the government also increased (Table 1). In a retrospective article, media sources attributed changes in ownership to the political desire to protect national interests and "to keep the company in Brazilian hands" (Financial Times, 30 May 2011).

Shifts in dependence relations

The favorable political and industry environment supported Agnelli's actions. Interviewees pointed out that government control during Agnelli's first years as CEO was lenient as Vale's approach was in line with government priorities. This gave additional legitimacy and support to Agnelli's global ambitions for Vale.

The global strategy initially translated into greater autonomy for Vale, not only because it reduced dependence on the government for access to mineral deposits, financing and licenses, but also because Vale became a rich and internationally known company. Towards the end of the first phase (2001-2007) Vale had already established exploration sites in 25 countries in five continents (Table 1). It had also earned an international reputation based on its outstanding performance, as witnessed by its growing coverage in the global media. The following interview extract suggests the level of power held by the company:

> The government viewed the company as a resource pool from which to extract resources to fund its projects. [...] All contracts were huge in Vale and the number of opportunities

> multiplied. Vale became megalomaniac and started to invest billions in riskier countries, such as Guinea, Mozambique and others in Africa.

Along with Vale's increased industry standing it also developed greater dependence on the global mining industry and on global capital markets. Legitimacy in the form of favorable evaluations by rating agencies and the global media became more relevant to Vale. One respondent remarked: "A CEO also has to keep an eye on the financial markets because the market rewards transparency, not government interference."

However, Vale's greater bargaining power was also the reason it became increasingly relevant to the government, in particular to Brazil's balance of payments. Table 1 shows that Vale ramped up its exports, and its revenues and profits increased rapidly. The company ended 2007 with net operating revenues of US$ 32.2 billion (compared with US$ 3.9 billion in 2001). Foreign sales increased from US$ 6.5 billion to US$ 27.8 billion in 2007. Vale's exports alone exceeded many of Brazil's main export products, such as soybean (Vale, 2012: 360). The growing trade surpluses helped Brazil to reduce external debts, allowing it to forego IMF support in 2005.

Interviewees stated that Vale was "very important to the government because of its size" and "the government's golden goose". Managers interviewed suggested that Vale's success attracted government interest as a source of funds and political prestige, or, as one interviewee phrased it: "The government saw Vale's growth as an opportunity to fund its own projects for the country."

Phase 2: 2008-2013

Internationalization trajectory

The second phase (2008-2013) was one of discontinuity in which industry and political trends became less favorable to internationalization. In 2008 it was already clear that the commodity super-cycle was coming to an end, although iron ore prices briefly rallied again in 2010-2011. At Vale, internationalization gained a new impetus, but this acceleration was short-lived.

In 2008-2009 internationalization was hesitant and lacked the consistency that characterized the first phase. Some indicators of internationalization even suggest an acceleration of globalization, such as foreign assets and foreign sales, whereas other indicators point to de-internationalization (see Table 1).

Table 1 here

When we compared Vale with BHP Billiton in terms of growth in foreign assets, we noticed that the latter scaled back international investments earlier than Vale did (Vale annual reports, World Investment Reports). While Vale seemed to believe in a revival of the super-cycle, BHP had already begun scaling back. Vale reduced its exploration activities in a more noticeable manner only in 2011-2012 (see also Table 1, in particular the divestment decisions). Vale's delay in adjusting to market discontinuity in 2008-2009 was attributed to a sudden rise in iron ore prices in 2010-2011. This temporary recovery encouraged the company to maintain and even increase exploration projects, as interviewees explained.

From 2011 onwards the super-cycle for miners clearly ended and the rapid internationalization pattern stopped. Murilo Ferreira, who had occupied several senior positions in Vale, was appointed CEO. He took a cautious approach to risks and emphasized the generation of shareholder value through savings rather than new investments, and focused on exploiting domestic resources rather than seeking new resources internationally, as witnessed in a jump in divestment decisions in 2012. Under Ferreira's leadership Vale's core business was defined as "world-class minerals" – assets that can be continuously explored and offer high returns but require low operational costs, in line with the new industry reality of a down-cycle. In the words of one respondent: "In contrast with the strategy that prevailed in the 2000s, the current one is based on the decline of the Chinese economy rather than on scarcity of the minerals in Brazil."

Market trends

From 2008 onwards, the mining industry environment became unfavorable to Vale's internationalization. Iron ore prices first dropped, then spiked in 2010-2011, followed by another drop in 2012-2013. China's economic growth slowed, and Vale now derived a third of its revenue from exports to China. Brazil's economic growth also revealed fragility and instability. Vale was slow in adjusting to changing uncertainties, because it was caught in a "low cycle" in the interpretation of interviewees. One manager remarked:

> Agnelli's strategy to seek alternative resources beyond iron ore was the correct one. However, there was no time to collect the benefits of several exploration projects, which

were initiated before 2008. As the Chinese demand for iron ore and other minerals decreased, so did the feasibility of such projects.

Vale's stock price was also affected in 2008, although it recovered during the subsequent iron ore price rally. It declined thereafter. Our analysis on the historical spread using normalized share prices of BHP Billiton and Vale showed that Vale outperformed its peer prior to 2011 and underperformed thereafter.

Non-market trends

The non-market trends influenced the company strategy in two major ways. First, the political environment became increasingly unfavorable to further internationalization due to the state's preference to invest in Brazil. Second, government intervention became more noticeable in President Lula's second mandate and even more so with the election of President Dilma Rousseff in 2011.

Our media analysis shows how the government used nationalist rhetoric to convey the desired role of multinational state hybrids, in particular Vale. This, in turn, generated concern, visible in the global media coverage of Vale. When the new CEO publicly announced greater integration and collaboration with the government's goals, the global media questioned Vale's independence from the government. Moreover, the government increasingly used firms over which it held some control, including Vale, for diplomatic policy purposes.

Thus, Vale's global ambitions were increasingly at odds with government priorities. One example is the government's prioritization of investment in Argentina. The subsequent collapse

of Argentina's economy led to project failure, involving the renegotiation of guarantees by both governments, and a large impairment.

Shifts in dependence relations

We identified two major shifts in dependence relations. From 2008 onwards, the government stepped up its indirect attacks on Vale in the media. Table 1 shows an increase in articles that mention both Vale and the government five times, and our reading of the media reports supports the idea of a major struggle between the company and the government over Vale's strategy. One debate in 2008-2009 related to Agnelli's attempts to dismiss Brazilian employees, order ships from Asian rather than Brazilian shipyards, and delay investments in Brazil. In a Reuters article (16 September 2009), the Brazilian Finance Minister Guido Mantega said that President Lula "lashed out" at Vale's decisions to fire 100 workers in Brazil, to postpone investments, and to purchase US$ 2 billion worth of Chinese cargo ships and other capital goods. Moreover, media sources suggest that President Lula insisted Vale should enter the energy and steel industry in Brazil, which Vale's management considered outside its core business. This increase in government pressure coincided with a recession in Brazil (Table 1).

The second round of media speculation occurred in 2010-2011 and focused on government attempts to interfere directly by replacing Vale's CEO. Because Agnelli refused to shape Vale's strategy around national interests, the government permitted open discussion about his replacement. In 2011 the Workers Party (PT) government was once again re-elected and President Dilma Rousseff was installed. It was under her watch that the pressure intensified, as reported, for instance, in the Financial Times (30 May 2011): "Concerns have grown that the state wants to regain management control over Vale […]. If it starts following a new path

because of the government, this could confirm suspicions about state interference and the idea that the government is telling them what to do."

When asked about the government's influence on company strategy, interviewees indicated that disputes between the government and the CEO became rather frequent, especially in pre-election periods. They also drew attention to the possible consequences of resistance to government demands, saying: "We always have to consider the government's interest, even though we don't agree with it", and "the CEO always has to maintain a good relationship with the government, otherwise it may replace the CEO". As for the tactics the government used, one senior manager stated: "One way the government forced its ways through was by enforcing tax regulations."

Eventually, in May 2011, Agnelli was replaced. The media and interviewees attributed this to government interference (iron ore prices were still at record levels): "Ferreira took over this month as Vale's chief executive, replacing Agnelli, who was forced out by the government. Investors are waiting to see if the company's loyalty remains with its shareholders or is shifting to the state" (Financial Times, 20 May 2011).

The interview data as well as media data suggest important differences between Agnelli and Ferreira in the way they viewed the company's role and how they related to the government. *The Business of Mining* (22 June 2011) summarized Ferreira's ten priorities, of which four were related to the government's vested interest – namely, improving government relations, new royalties and taxes by the government, creating the conditions for development of metallurgical coal business in Latin America, and helping to further boost the steel industry in Brazil.

Vale also started paying out record dividend payments after Ferreira took office – another indicator of how much influence the government now had (Table 1). The following interview

extract shows the perceived differences between both CEOs: “One of the main goals [of Ferreira] was to distribute dividends to the principal shareholders, in this case, the Brazilian government as principal shareholder, while Agnelli used surpluses to stimulate Vale into being the largest amongst the three biggest in the industry.”

Untangling Dependences over Time

There seems to be a consensus among the interviewees that Vale was less dependent on the government during the period of the Cardoso government than it was under PT government rule, in particular in later years. Part of this initial autonomy stemmed from Vale’s considerable resource base, built by internationalization during a commodity super-cycle. However, the company also became accountable to global investors, who had different goals and access to the global media, and dependent on Chinese growth.

Respondents also viewed the new source of power and wealth as a concern, since the government perceived Vale as a source of funding. Given the deteriorating economic situation in Brazil, the PT government openly advocated investments in Brazil in line with government priorities, including outside the mining industry, as well as in countries with which it maintained friendly relations. Thus, when commodity markets and share prices collapsed, Vale moved from greater independence due to global market power towards a return to government dependence, eventually followed by de-internationalization. We summarize these changing dependences and illustrate them further with quotes from interviews in Table 2.

Table 2 about here

Our case study clearly shows that state hybrids experience mutual (rather than one-way) dependence, and that this changes over time. Vale did not globalize because it wanted to "escape" from government influence, but our results show that its internationalization did create greater autonomy. Home country constraints were a critical driver (Witt & Lewin, 2007), in this case limited natural resources, to seek new resources and markets (Witt & Lewin, 2007; Bass & Chakrabarthy, 2014; Luo & Tung, 2007), and in doing so it followed the largest global mining industry leaders. While the early internationalization period was one of increased autonomy with the power balance shifting to Vale, this was only temporary, as the government came to rely increasingly on Vale for funds and support for its domestic policies. Figure 3 illustrates these shifting mutual dependences in the form of a U-shape.

Our focus on external dependences helps to tease out the effect of home country policy and mining industry trends on Vale's internationalization trajectory. In the early 2000s government support formed a propitious environment of liberalization that encouraged the CEO to aggressively pursue international diversification and join the ranks of its largest global competitors. Yet, as the PT party gained power it increased its control over state hybrids such as Vale, and made more demands. The party also depended more on their funds to drive policy priorities. The mood then turned to nationalism and interventionism as Brazil's economy slowed.

In terms of industry factors, we noted that globalization in the mining industry was stimulated by strong industry growth and by certain global competitor moves. Even when the industry environment became volatile, Vale kept up its aggressive strategy – keen to become the world's largest mining company. However, when faced with outright industry decline and falling share prices, Vale changed course, divested global investments, and focused more on investing in

and contributing to Brazil. Industry trends and home country policy factors are represented as arrows in Figure 3.

Figure 3 about here

We contend that industry isomorphism alone cannot fully explain Vale's internationalization trajectory. First, even under an exceptional industry super-cycle, many fully state-owned firms or state hybrids active in the mining industry never internationalized (e.g. Antam from Indonesia). Second, we posit that non-market trends also drove Vale's global ambitions; the policy environment in particular stimulated Vale's globalization. Later on, Vale kept up its internationalization strategy even under cooling market conditions, when its global peers had already scaled back, possibly because of Vale's resistance to greater government control. Other Brazilian companies, such as Petrobras, experienced similar pressures and displayed similar strategic behaviors (Almeida, Lima-de-Oliveira & Schneider, 2014).

In short, market trends (the mining industry) and non-market trends (the home country policy environment) both affected Vale's internationalization trajectory, and this altered the power balance between the government and the firm, which paradoxically led to the conditions for state re-capture.

THEORETICAL GENERALIZATION

We generalize our case results by conceptualizing the conditions under which state hybrids may experience an internationalization paradox, outlining major market and non-market conditions for internationalization and government-induced de-internationalization (Figure 4). Our framework outlines two types of external dependences: market trends and non-market trends, which are associated with business logic and state logic respectively. Given that state hybrids experience a mix of influences from both logics, both need to be taken into account when contextualizing their internationalization. Under market trends the industry climate can be one of growth or decline. Under non-market trends the government ideology can be one of increased liberalization or increased nationalism.

Figure 4 about here

In a climate of liberalization and industry decline, state hybrids may grow through domestic diversification rather than internationalization (upper left quadrant). Under a liberal regime firms may experience less interference from the government, and because globalization within the industry is unfeasible in the face of industry decline they are likely to opt for a pragmatic approach and turn their attention to the domestic market. However, in the context of a booming industry and a domestic climate of liberalization, state hybrids may instead choose to build up a global presence and seek to imitate and compete with global players (lower left quadrant). This lends autonomy and power because of the firm's capacity to accumulate assets

independent of and outside the territorial reach of the government. If successful, the state hybrid may redistribute rents to the government, which further contributes to its domestic legitimacy.

However, there are conditions under which the government may be inclined to redress this new power balance – in particular, when the political climate becomes more nationalistic, populist and interventionist. In such a situation, a state hybrid may have the motivation to "escape" by accelerating internationalization within a booming industry to counter attempts to reduce its autonomy (lower right quadrant). But when the industry is in a downward cycle the state hybrid may pursue a hesitant de-internationalization strategy, given populist governments' inclinations to force state hybrids to contribute to domestic priorities, especially when the government has the motivation and power to do so in a more nationalistic political climate (upper right quadrant).

RDT suggests that a firm's autonomy depends on its capacity to control critical resources. Our research shows that as the state hybrid increases its autonomy by successfully accumulating international assets, income streams and legitimacy, this may generate unexpected outcomes: the firm may become dependent on the very sources that facilitate independence from the home market, such as overseas customers. Also, foreign stock market listings provide alternative sources of capital and extend the company's accountability to investors, which raises performance expectations. If results disappoint or industries go into decline, this may tilt the power balance towards the government and drive the multinational state hybrid back into the government's control, especially when the government retains indirect or direct ownership as well as the ability to influence strategy through regulation.

It is worth remembering that each new strategy, including internationalization, creates its own external dependences. When a multinational state hybrid is rich in resources, but becomes

vulnerable because of a global industry downturn, and operates under a nationalist political regime, the internationalization paradox may materialize and lead to de-internationalization. In this respect, multinational state hybrids may experience different internationalization trajectories as compared to private-sector multinationals, which have been the basis of most IB theories.

LIMITATIONS AND FURTHER RESEARCH

As with all research, our study has various limitations. We address three relevant categories: limitations arising from our choice of method, our choice of empirical context and our theoretical lens. These choices have important implications and also lead to various opportunities for further research.

First, we chose to analyze a single case with variation over time, but limited to one industry, a research design that comes with advantages and inherent limitations. Single case studies serve a specific purpose, which is different from most quantitative studies. Welch et al. (2011) argued that contextualized cases offer a better prospect of theory generation, without sacrificing causal explanation. In-depth cases can generate new theoretical directions because of their deep immersion in the case context through a process called "theoretical generalization" (Yin, 2009). We do not claim that all globally operating state hybrids experience the internationalization paradox, but this phenomenon is not unique to Vale, nor unique to the mining industry, and is present in various state hybrids that are highly influential globally.

Many recent theoretical advances on the internationalization of state hybrids are based on the Chinese context (e.g. Buckley, Clegg, Cross, Liu, Voss & Cheng, 2007; Pan, Teng, Supapol, Lu, Huang & Wang, 2014; Xia et al., 2014; Wang, Hong, Kafouros & Wright, 2012), but we note that these firms have not faced changing government regimes since their

internationalization. Providing longitudinal studies from a broader range of contexts may be helpful to elicit important patterns of shifting dependence between multinational state hybrids and the government. We hope our study will stimulate more scholarly work that will test our findings beyond a single case context, with larger sample studies, case studies in different industries with different variations of ownership ties, and in different countries or periods. In this manner, our qualitative work can truly serve as a bridge between pure narrative and reductionist theories (Burgelman, 2011).

Second, as with all case analyses evaluating complex processes, it is possible that our interpretation underplays or overstates certain processes or factors, thus giving rise to alternative explanations. Our reading of the case emphasizes an entanglement of changing state dependences and industry pressures, but alternative explanations may favor one over the other, or suggest altogether different explanations, such as interpersonal conflicts between the CEO and a head of state (Almeida et al., 2013). Moreover, in a more recent period not covered in this study it became evident that political parties depended on private firms and state hybrids to finance election campaigns. Thus, corruption may have played a role in dependence relations, but this was not openly discussed in interviews.

Although we had access to a substantial volume of data from different sources, this data also came with various limitations, such as the time lag between managerial decisions on resource allocation and the financial reports showing these results issued by the company, which may have led to imprecision in the dates of certain company responses.

Third, our study focused on resource dependence as a theoretical lens, and this shaped our findings. Our decision to focus on the "external" dependence of organizations implied less attention to other possible viewpoints and theories. We did not focus on how hybrid

organizations internally cope with conflicting and overlapping expectations, for instance through de-coupling, which is to say professing one thing and doing another (e.g. Bromley & Powell, 2012). We think that further research on multinational state hybrids coping with strong home governments could pursue these interesting lines of research that are complementary to the insights we have presented here.

CONTRIBUTIONS

We contributed to the IB literature by formulating and generating insights on the internationalization paradox for multinational state hybrids using RDT: the more successful a state hybrid is in building a pool of global resources, the more attractive it becomes for subsequent government intervention, which might reverse the internationalization strategy. This study complements existing IB studies on the internationalization of state hybrids (Aharoni, 1986; Musacchio & Lazzarini, 2014) and also extends the findings of prior research that examined internationalization of state-hybrids in other emerging markets, such as China (e.g. Shapiro et al 2017). We demonstrate that that government encouragement of OFDI varies with economic (industry) and political conditions at the home country. In particular, we contextualize and nuance the argument of state hybrid internationalization as an "escape strategy" from the government (Choudhury & Khanna, 2014; Cuervo-Cazurra et al., 2014) by drawing on a broader understanding of RDT. We theorize under what conditions internationalization can increase autonomy, and show the influence of market and non-market trends on multinational state hybrids. As political regimes and market pressures change, state hybrids vary their responses in terms of prioritizing either business or state logic, to match changing dependences. Our findings corroborate previous work (e.g. Aharoni, 1986; Musacchio & Lazzarini, 2014) that shows

government dependences to be mutual and long lasting, so overall, state hybrids remain creatures of government. Thus, multinational state hybrids' capacity to respond to external uncertainties and dependences after the initial internationalization strategy is crucial, as pointed out by RDT scholars (Pfeffer & Salancik, 1978).

Another contribution is to apply RDT more comprehensively in the mining industry context. The IB literature has often drawn on insights from extractive industries to formulate new concepts related to corporate political strategies (e.g. Vernon, 1971). This is not surprising given the size and strategic importance of such firms. State hybrids are common in this industry and several firms have internationalized to seek resources abroad (Bass & Chakrabarthy, 2014; Cuervo-Cazurra, 2014). Our case study of Vale follows the rich tradition of generating theoretical contributions based on research in extractive industries. But we believe our contribution in the form of the framework presented in Figure 4 can apply beyond these industries. It is increasingly recognized that studies of extractive industries highlight critical issues for IB in general (Shapiro et al., 2007; Shapiro et al., 2017) and we agree with Stevens et al. (2015) that the theoretical contributions derived from these industries should be extended into new areas, including other industries.

Our choice of industry was critical in analyzing how market (industry) and non-market (home country policy) trends affect internationalization. It is sometimes assumed that internationalization is merely an isomorphic response to industry pressures, but we show that both industry trends and home country policy trends matter. Our argument that the "escape route" is instrumental to overcome the liability of state ownership in periods of industry growth fits the literature on this industry, which argues that international investments can be a response to conflicts between state logic and market logic (Kobrin, 1985) and that industry

booms tend to create dysfunctional government-firm relations (Robinson et al., 2006), thus stimulating a strategy of greater autonomy. Yet, when industry booms end, and when nationalist policy environments favor the use of state hybrids for political or personal reasons, the firm's autonomy may be undermined (Almeida et al., 2014). Although the non-market stream in the IB literature (e.g. Boddewyn & Brewer, 1994) has already recognized the relevance of a firm's bargaining power in relation to governments, research on state hybrids has barely touched the tip of the iceberg (Bruton et al., 2015), and our model is a first step towards integrating these market and non-market insights in the context of multinational state hybrids.

So far, most research on multinational state hybrids has drawn attention to the advantages of internationalization – through access to new resources, markets, power, and so forth. However, our study suggests that there could be important risks. On the one hand, governments change and ideologies shift, posing a threat of intervention (Li, Peng & Macaulay, 2015). On the other hand, successful internationalization depends on market factors, and may limit government support and protection (Elg, 2000), but because internationalization is subject to global industry hazards, external support for an independent strategy may collapse with market instability and recession, which can take the company back to a position of vulnerability to government influence and dependence.

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Table 1. Vale's internationalization trajectory: Selected sources

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Internationalization													
1) Foreign Assets (US$ billion)	-	-	3,2	4,0	5,5	15,0	18,8	19,6	38,8	49,2	48,0	45,7	-
2) Foreign/Total Assets (%)	-	-	27,6	24,6	24,6	24,6	24,6	24,6	38,0	38,1	37,3	34,8	-
3) Foreign Sales (US$ billion)	-	-	6.5	9.4	11.7	37.1	27.8	30.9	20.3	38.3	49.5	38.3	-
4) Foreign/Total Sales (%)	-	-	93,0	90,5	77,2	79,3	84,1	82,7	84,7	82,5	81,9	80,4	-
5) Exploration (# countries)	-	-	2	5	10	14	25	22	20	23	22	15	11
6) R&D/Operating costs and expenses (%)	1,4	1,9	2,2	3,1	3,8	4,0	3,8	4,8	5,7	3,6	5,6	3,9	2,5
7) Foreign divestment decisions (#)	-	-	-	2	6	9	8	8	25	19	17	51	-
Performance													
8) Net Operating Revenues (US$ billion)	3,9	4,1	5,4	8,1	12,8	19,7	32,2	37,4	23,3	46,4	60,1	46,6	46,8
9) Net profits (US$ billion)	1,3	0,7	1,5	2,6	4,8	6,5	11,8	13,2	5,4	17,5	22,6	5,2	0,4
10) Dividends (US$ billion)	1,1	0,6	0,7	0,8	1,3	1,3	1,9	2,9	2,7	3,0	9,0	6,0	4,5
11) Investments: new projects (US$ billion)	0,6	0,8	0,9	0,9	2,3	3,0	4,7	6,5	5,8	8,2	11,7	11,6	9,7
12) Investments: existing operations (US$ billion)	-	-	-	-	0,8	1,4	0,7	2,7	2,2	3,3	4,6	4,6	4,6
13) NYSE share price (US$)	-	2,3	4,7	7,1	10,0	14,5	31,8	11,8	28,3	33,6	21,5	21,0	15,3
Ownership													
14) Golden shares (#)	1	1	1	3	3	6	12	12	12	12	12	12	12
15) State ownership direct and indirect (%)	28	44	39	50	50	50	50	49	49	49	49	48	-
Context													
16) Vale total exports x Brazil total exports (%)	5,7	5,2	5,8	5,7	5,9	7,3	7,8	8,9	9,0	14,4	13,5	10,5	11,0
17) Vale's revenue derived from China (%)	-	-	10,5	11,7	15,0	18,2	17,7	17,4	37,6	33,1	32,0	37,9	40,5
18) Vale's iron ore exports to China (million tons)	25,3	17,2	23,7	43,8	56,1	77,1	96,2	87,0	144,0	129,3	134,0	148,7	145,9
19) Iron ore price (US$ per dry metric ton)	13,0	12,7	13,8	16,4	28,1	33,5	33,6	61,6	80,0	146,7	167,8	128,5	135,4
20) GDP growth Brazil (%)	1,3	3,1	1,2	5,7	3,1	4,0	6,0	5,0	-0,2	7.6	3,9	1,8	2,7
21) GDP growth China (%)	8,3	9,1	10,0	10,1	11,4	12,7	14,2	9,6	9,2	10,6	9,5	7,8	7,7
22) Vale mentioned 5x, global news	82	44	60	105	115	194	132	335	161	237	297	213	156
23) Vale & government mentioned 5x, global news	2	7	2	4	1	0	8	14	3	5	50	21	20

Table 1 Sources

Items 1-4: World Investment Reports – UNCTAD
Item 5: 2003-2008 Vale departmental reports; 2009 - 2013 Vale Annual Sustainability Report
Items 6, 8-12, 14-15, 17: Vale Annual Reports 20F
Item 7: Vale departmental reports
Item 13: Bloomberg, end of year stock quote, adjusted for stock splits
Item 16: 2001-2010 Vale's book *Nossa História, 2012*; 2011 MDIC/valor.com.br; 2012-2013 MDIC/g1.com.br; www.desenvolvimento.gov.br
Item 18: 2013 - 2002 Vale's quarterly reports; 2001 Vale's book *Vale and China 40 Years of Partnership*
Item 19: www.indexmundi.com
Item 20-21: World Bank
Items 22-23: Factiva (Bloomberg, WSJ, FT, Reuters, AFP, AP)
All blank spaces: missing data due to discontinuity of this information by specified sources

Table 2. Untangling Vale's dependences: Summary of interview extracts

Escaping from home country liabilities (building autonomy, dependence shifting towards the firm)	"In the early 2000s Vale started a movement to consolidate the iron ore industry in Brazil; acquired several other mining companies in Brazil to prepare for internationalization." "Internationalization happened in what we call the 'Roger era'. He was typically a market guy. He was clearly independent from the government and counted with the support of Bradesco Bank, one of Vale major shareholders." "International diversification was essential because Brazil's deposits are insufficient in many minerals." "Roger had autonomy from the government since his early days in the company. His intention was to become the largest in the world in the iron-ore business." "Roger wasn't that type of guy liked by the government. If the government urged Vale to invest in one of its projects, he would refuse by saying: 'This is not in the interests of mining businesses and shareholders. My core business is mining.'"
Multiple dependences (creation of additional external dependences)	"The CEO always knew the company was surfing in a super-cycle and that this was going to end soon. He understood this as a 'window of opportunities'. His option was to re-invest the revenues instead of distributing dividends. The problem was that he failed to implement and get value out of the projects started during that time." "A CEO also has to keep an eye in the financial markets because the market rewards transparency, not government interference." "Today internationalization is riskier in comparison with the 2000s. 5% GDP growth for China means a full recession. When this is combined with the political crisis in Brazil it scares off investors."
Mutual dependence (firm and government remain connected to one another)	"The government viewed the company as a resource pool from which to extract resources to fund its projects." "It was difficult for the government to swallow Vale's autonomy. Government was sometimes excluded from inaugurations and negotiations. Threats of CEO replacement forced collaboration." "In SOEs, no matter how small the state ownership stake, the CEO has still to get on well with the government and do what the government wants." "As a major shareholder, the government is always there. People that make decisions are always in Brazil. These people always focus on the government's needs. There are small cities that are entirely dependent on Vale's income tax contributions. Any reduction of investments in such places causes problems for the company and for politicians." "Whenever the company resists collaborating with the government, the more the government comes up with surprises on these issues."
Dynamic dependence (balance shifting towards government)	"The PT government forced Vale into the energy business." "Murilo is a guy who fits the board's thoughts, the shareholders and those in government. He has a good relationship with the government. We know that he can chat with Dilma and the rest of her government at any time." "Pressures from the government do not seem too relevant nowadays as the CEO enjoys good relationships with the government." "The focus now is to generate dividends for shareholders rather than growth."

Figure 1. Multinational state hybrids: The internationalization paradox

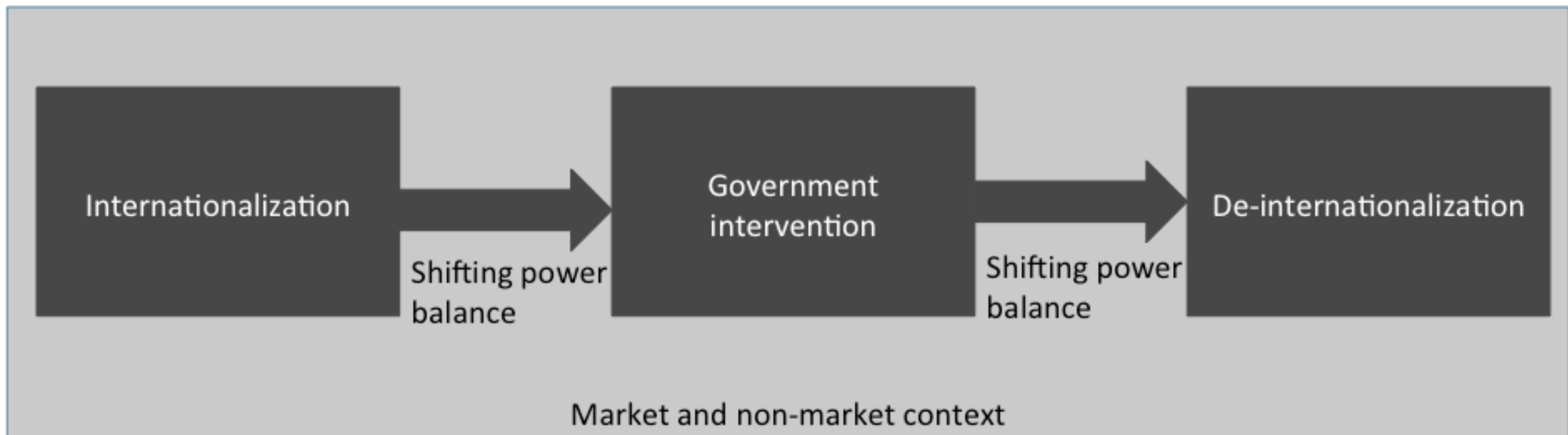


Figure 2. Vale's internationalization trajectory: Explanations

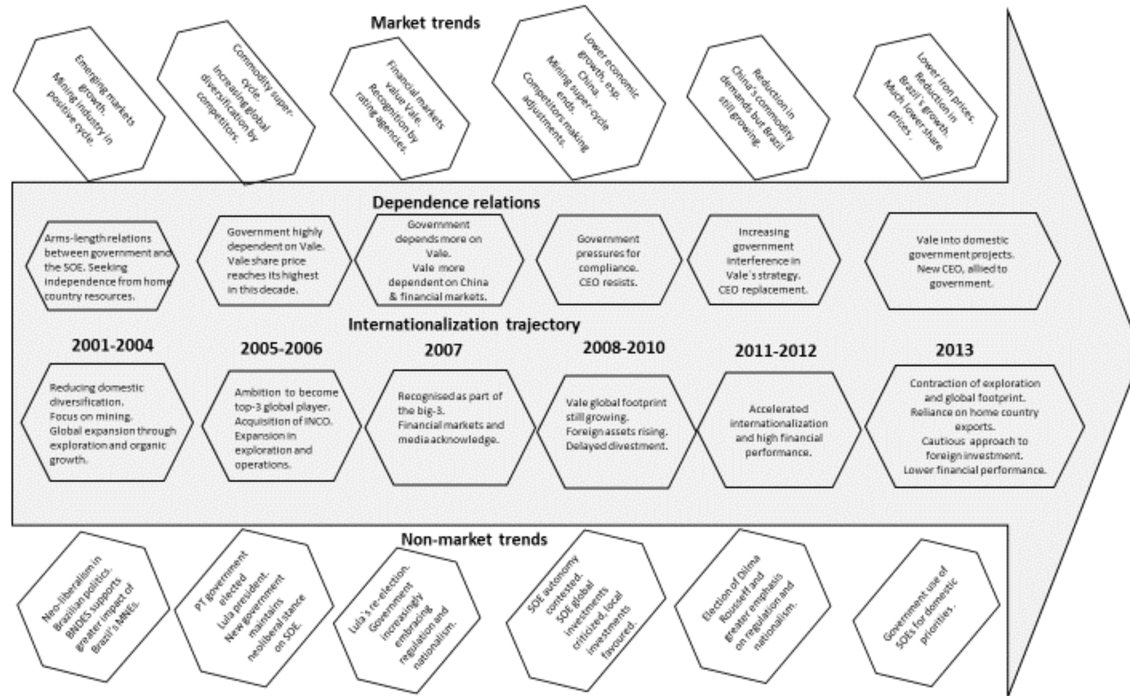


Figure 3. Vale's internationalization paradox: Key elements for theoretical generalization

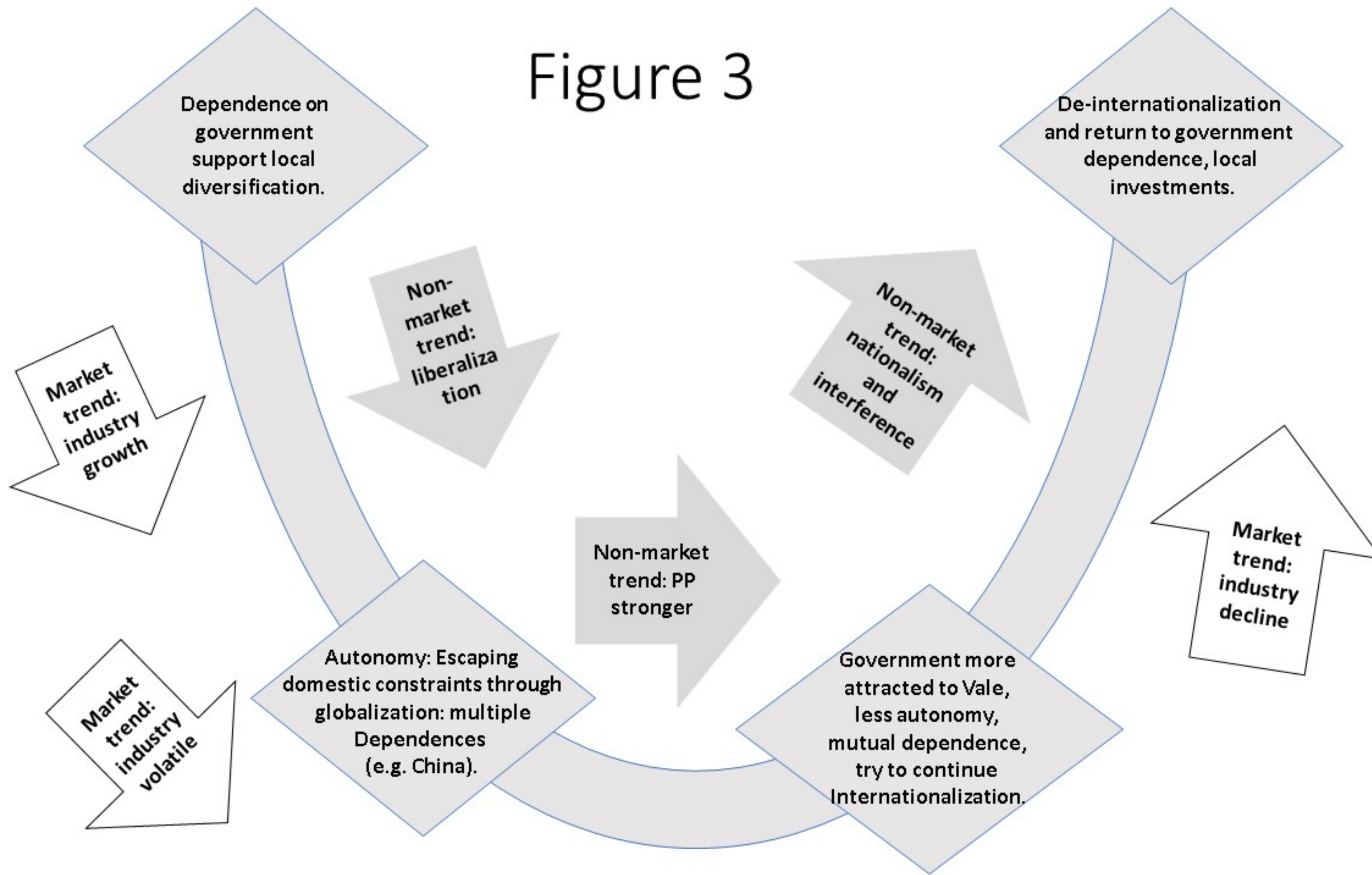
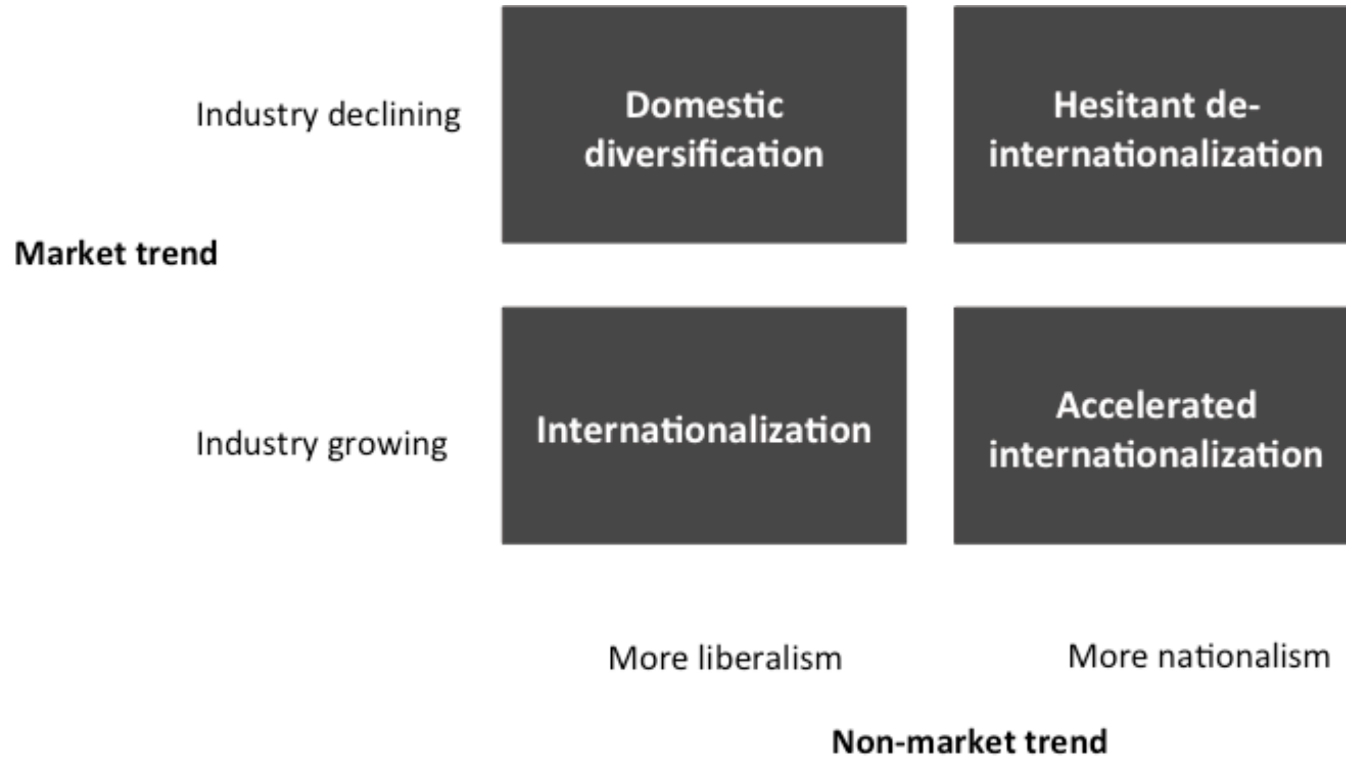


Figure 4. The multinational state hybrid paradox: Theoretical generalization



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