The Top 20 Brazilian Multinationals:

Divestment under Crises

Report dated March 21, 2017

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The Center of International Financial Management Studies (IFM) of the São Paulo School of Business Administration (EAESP) of Fundação Getulio Vargas (FGV), Brazil, and the Columbia Center on Sustainable Investment (CCSI), a joint center of Columbia Law School and The Earth Institute at Columbia University in New York, are releasing today the results of their research report profiling the top 20 Brazilian multinational enterprises (MNEs),[1] ranked in terms of foreign assets. The report is part of the Emerging Market Global Players (EMGP) Project, a long-term study of the rapid global expansion of MNEs from emerging markets. The present report, conducted in 2016, covers the 2015 annual year.[2]

The EMGP methodology relies heavily on data received directly from relevant multinational firms. However, gathering the required information for Brazilian MNEs involved significant challenges. In particular, firms to which we reached out did not respond to requests to participate in a survey and the financial information that we were soliciting via the survey was not always readily available through other public sources. We received 12 fully or partially filled questionnaires. This report therefore identifies and analyzes only companies that are listed on the São Paulo Stock Exchange (BM&FBovespa) and that have publicly reported either primary or secondary data on foreign assets, foreign sales and foreign employees for the year of 2015.

As a result of this methodology, we do not have in our sample large MNEs in the construction industry, which, in terms of their representativeness and overseas operations should be included in any ranking of top Brazilian multinationals. Moreover, the fact that some of these particular enterprises are also being investigated in relation to alleged corruption and involvement in overpriced contracts with state-owned organizations exacerbated difficulties in gathering data from them.

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[1] The report was prepared under the direction of Hsia Hua Sheng, Professor of Finance at FGV-EAESP with assistance of José Marcos Carrera Junior, Ph.D. student at EAESP/FGV. The authors would like to thank Larissa Ribeiro, bachelor in Accounting at Federal University of São Paulo (UNIFESP) for sharing efforts during the data collection process.

[2] The authors would like to thank the Applied Network Research and Knowledge of Fundação Getulio Vargas (FGV) for financial support.

It is our hope and expectation to be able to provide enhanced reports on Brazilian MNEs over time as companies communicate more information about their international activities to researchers and to publicly accessible sources.

Highlights

In 2015, the top 20 Brazilian MNEs had combined foreign assets of approximately US$ 96 billion, foreign revenue (including exports) of more than US$ 97 billion and 174,448 foreign employees (excluding outsourced, temporary and seasonal employees).[3] On average, the foreign assets of the top 20 firms constituted 42% of those firms' total assets in 2015; foreign sales accounted for 55% of the firms' total net sales; and foreign employees accounted for 18% of their total employees, resulting in an average Transnationality Index (TNI) of 38% (Annex Table 1).

Of the top 20 Brazilian MNEs, the Mining, Oil and Gas Extraction, the Primary Metal Manufacturing, Food Manufacturing, and the Paper and Allied products industries comprised more than 84% of the foreign assets (eleven companies). The top four companies (Vale, JBS, Gerdau and Petrobras) accounted for more than 60% of the total foreign assets of the top 20 Brazilian MNEs in 2015.

The top foreign investment destinations of the ranked Brazilian MNEs were: (1) United States – 17 out of the 20 firms; (2) Argentina – 14 out of the top 20 firms; (3) China – 11 out of the top 20 firms. Primary activities in these destinations included production and manufacturing units, and foreign sales and distribution centers (Annex Table 2; Annex Figure 2).

The main reasons for going abroad, according to the firms surveyed, were to have access to new markets and to be closer to clients (rated as the most important reason by participating firms) followed by cost reduction and access to natural resources. Some MNEs may have been driven by economic and political instability as well as high taxes in Brazil to seek alternatives and opportunities in other markets. Institutional voids in Brazil, such as corruption, poor transportation system, and an unqualified labor force were also rated by the surveyed firms as a factor in their decision to invest abroad.

In the context of the overall economic and political crises in Brazil since 2014, divestment became a strategic topic on the agenda of many Brazilian firms during 2015. Petrobras, for instance announced a massive divestment plan. According to its annual report, the company plans to divest US$ 19.5 billion in 2017-2018 and US$ 15.1 billion in 2015-2016 (in 2015 Petrobras divested US$ 0.7 billion).

Notably, the top 20 Brazilian MNEs in 2015 were different from the top 20 MNEs in 2014 (Table 1).[4] Specifically, seven firms that did not appear on the 2014 list of the top 20 were included in the 2015 ranking. Four of those firms ranked in the top ten in the current

[3] Financial firms and franchises are also excluded from the ranking as per the methodology of the Emerging Market Global Players project.
[4] Available at: http://ccsi.columbia.edu/files/2013/10/EMGP-Brazil-Report-2015-Jan-27-final.pdf

survey. Despite this fluctuation, the year-on-year comparison is useful as a way to analyze trends.

All respondent firms ranked relationships with clients as a very important attribute of success in foreign markets, and also highlighted the importance of competitive pricing, responses which demonstrate the market-oriented internationalization strategies of the firms surveyed (Figure 1 and Figure 2).

Table 1 – Brazil: The top 20 non-financial multinationals, by foreign assets, 2015 (USD Million[5])

Rank 2015	Rank 2014	Company	Core Industry	Status (% of state ownership)*	Foreign Assets 2015	% of Total Assets	
1	1	**Vale**	Mining (except Oil and Gas)	Listed (38.7)	21,116	23.9	A
2	4	**JBS**	Food Manufacturing	Listed (27.3)	13,901	44.6	B
3	2	**Gerdau**	Primary Metal Manufacturing	Listed (Nil)	12,114	67.3	C
4	3	**Petrobras**	Oil and Gas Extraction	Listed (63.8)	11,182	4.8	A
5	-	**CSN – Sid. Nacional**	Primary Metal Manufacturing	Listed (Nil)	6,953	55.8	A
6	-	**Fibria**	Paper and Allied Products	Listed (29.1)	6,450	85.6	A
7	-	**Braskem**	Chemical Manufacturing	Listed (30)	5,595	36.4	A
8	9	**Embraer**	Transportation Equipment Manufacturing	Listed (5.4)	3,876	33.2	A
9	-	**Suzano Papel**	Paper and Allied Products	Listed (Nil)	3,063	42.3	A
10	5	**BRF**	Food Manufacturing	Listed (22.1)	2,694	26.0	A
11	7	**Minerva**	Food Manufacturing	Listed (2.7)	2,021	94.9	A
12	-	**Gol**	Transportation by Air	Listed (Nil)	1,506	56.7	D
13	10	**Tupy**	Transportation Equipment Manufacturing	Listed (61.2)	1,017	69.0	B
14	11	**Iochpe-Maxion**	Transportation Equipment Manufacturing	Listed (6.8)	997	48.7	B
15	-	**Invepar**	Support Activities for Transportation	Listed (75)	956	12.8	A
16	-	**Klabin**	Paper and Allied Products	Listed (2.3)	769	11.4	B
17	15	**Marcopolo**	Transportation Equipment Manufacturing	Listed (15.2)	638	49.4	D
18	14	**Natura**	Merchant Wholesalers, Nondurable Goods	Listed (Nil)	402	16.7	C
19	16	**Alpargatas**	Leather and Allied Product Manufacturing	Listed (Nil)	335	34.8	C
20	8	**Magnesita**	Mining (except Oil and Gas)	Listed (Nil)	317	19.0	A
		TOTAL			**95,901**	**41.7**	

* We have considered both direct and indirect state ownership through Brazilian National Development Bank (BNDES – *Banco Nacional de Desenvolvimento Econômico e Social*), pension funds of state-owned enterprises, state-owned banks, state-owned enterprises, state-owned funds, governmental agencies, and National Treasury.
A. Source: Estimated based on the companies' annual financial reports (DFP *Demonstrações Financeiras Padronizadas* - Standardized Financial Repots). Notes on investments in other enterprises.
B. Source: EMGP's Questionnaire.
C. Source: Bloomberg database.
D. Source: Ranking of Fundação Dom Cabral (FDC) 2016.

The estimation based on the companies' annual reports does not show the precise value of the foreign assets of the top 20 Brazilian MNEs, but it gives an approximation of the magnitude of such investments. In Brazil, firms are not required to disclose their Foreign Assets. Therefore, this report estimates the foreign assets of the ranked firms using information contained in the Investments in Subsidiaries section of their respective annual reports.

[5] We used the year-end official Brazilian exchange rate (Ptax) published by Brazilian Central Bank (R$ 3.904 for each USD in the end of 2015).

Profile of the Top 20

Head Office Location

The head office (the place where strategic decisions affecting the enterprise *group* as a whole are taken) of each of the top 20 Brazilian MNEs was located in the South or in the Southeast of Brazil (Annex Figure 3). These are the most developed regions of the country.

The head offices of 13 of the top 20 Brazilian MNEs were located in São Paulo, the most populous and developed Brazilian state. The state of São Paulo has the best transportation infrastructure in the country. In addition, some of the best Brazilian universities are located in the state of São Paulo. Furthermore, São Paulo is the financial center of Brazil, which eases firms' access to financial and capital markets.

Following São Paulo, three firms were headquartered in Rio de Janeiro (Vale, Petrobras and Invepar), two firms were headquartered in Rio Grande do Sul (Gerdau and Marcopolo), and one firm was headquartered in each of Minas Gerais (Magnesita), and Santa Catarina (Tupy).

State Ownership

The Brazilian government both directly and indirectly owned more than five percent of the voting shares in ten out of the top 20 Brazilian MNEs (Table 1). The Brazilian government was the controlling shareholder of Petrobras (63.8%), Tupy (61.2%), and Embraer (5.4%). In Embraer's case, the Brazilian government exerted influence and control through its "golden share". The golden share is entitled to the same voting rights as the holders of common shares. However, the golden share entitles the Brazilian government to veto rights over some corporate actions including: change of corporate purpose, creation and/or alteration of military programs (whether or not involving Brazil), development of third party skills in technology for military programs, discontinuance of the supply of spare parts and replacement parts for military aircraft and transfer of control.

This result is consistent with the study of Hennart, Sheng and Carrera (2016),[6] in which they show a positive correlation between the state ownership and the degree of internationalization of the Brazilian MNEs.

Only seven of the top 20 companies exhibit no direct or indirect state ownership.

In addition to the direct investments in the ranked Brazilian companies, the government also invests in Brazilian companies indirectly through pension funds of state-owned enterprises, the Brazilian National Development Bank (BNDES – *Banco Nacional de Desenvolvimento Econômico e Social*) and its investing subsidiary BNDESPAR (*BNDES Participações S.A.*), and through other public firms, banks and funds.

[6] Hennart, J. F., Sheng, H. H., & Carrera, J. M. (September 2016). Openness, international champions, and the internationalization of Multilatinas. Journal of World Business.

Stock Exchange Listings

As described above, the methodology of this report means that all of the ranked firms are public, and in each case are listed on the São Paulo Stock Exchange (BM&FBovespa – *Bolsa de Valores, Mercadorias e Futuros de São Paulo*).

In addition to their BM&FBovespa listing, 15 of the top 20 Brazilian MNEs (not including Tupy, Invepar, Natura, Marcopolo and Alpargatas) were also listed on the New York Stock Exchange (NYSE) via American Depositary Receipt (ADR) (Annex Table 3). Vale, Gerdau, Petrobras and Braskem each had a third listing on the *Bolsas y Mercados Españoles* (BME - Labitex) in Spain.

Official Language

The official language of each of the top 20 Brazilian multinational firms was Portuguese.

CEO and Board of Directors

The average number of titular board members for each of the top 20 was 8.7. Gol had the fewest with five, while Klabin had the most with 13.

- **Gender representation**

Women remained under-represented on boards. Only six out of the top 20 Brazilian MNEs had at least one female board member, and none had more than two (only Natura, which had nine members of the board, included two women) (Annex Table 4).

The lack of gender representation on boards may be reflective of broader firm policies and the nation's cultures and traditions relating to board and executive promotion, as most of the ranked enterprises do not have any kind of publicly available policy on promoting female executives or increasing the number of female board members.

This result is consistent with a study conducted in 2011 that examined the gender composition of 410 companies listed on BM&FBovespa (Lazzaretti & Godoi, 2012).[7] According to the research, 7.3% of the board seats were held by women. This study indicated that most of these women were college graduates, had diverse professional backgrounds and that many had previous experience as board directors in other companies. The study also showed that the most common reason for female nominations to a seat on the board was not solely or necessarily based on their investments in human capital, but on family ties with company owners, which was the case 40% of the time.

[7] Lazzaretti, K. and Godoi, C.K. (2012), "A participação feminina nos conselhos de Administração das empresas brasileiras: uma análise das características de formação e experiência profissional à luz da teoria do capital humano", Master's thesis, Universidade do Vale do Itajaí, September.

Other research (Lazzaretti et al., 2013)[8] focused on the gender composition of the 99 most liquid Brazilian companies listed on BM&FBovespa in 2011. This study found that that only 5.4% of the board positions were occupied by women, indicating gender inequality in all the 99 companies surveyed. Firms that had been listed for longer in the stock market and had more seats in their boards were more likely to have women on their boards.

This result can be observed in other Latin American countries as well. Nearly half (47) of Latin America's top 100 companies do not have a single woman on their board, according to Global Summit of Women released in 2015 by Corporate Women Directors International (CWDI), a Washington-based research group. According to the survey, women represent only 6.4% of the directors of the 100 largest companies in the region, placing Latin America well behind of North America (19.2%), Europe (20%) and the Asia Pacific (9.4%) in this regard.

The inclusion of quotas for women in the board of directors, which would require 40% board representation (similar to Norway) is currently being debated in Brazil.

- **Representation of Foreign Nationals**

Six of the top 20 Brazilian multinational enterprises had foreign nationals on their board of directors, with the highest number being three (out of ten) at Minerva (Annex Table 4). Vale had one Japanese member on account of the fact that the Japanese group Mitsui is a shareholder in the company; JBS had had one Egyptian member, an executive with vast experience in multinational enterprises, such as Procter & Gamble, that seek to consolidate the company's brands abroad; Marfrig had one French-Argentinian member and one American member, which may be explained by the fact that Argentina and the United States are important markets for the company; Minerva had three Saudi Arabian members (the Middle East is an important market for the company, and a Saudi Arabian group is also one of the company's shareholders); Magnesita had one Italian-American member, the chairman and co-founder of private equity firm Rhône Group, one of the company's shareholders; Tupy had one Turkish (independent director) member; and Alpargatas and JBS each had one Spanish (the Hispanic market is very important for Alpargatas, which also had control of the Spanish group Tavex until 2015) and one Egyptian member.

All CEOs of the top 20 Brazilian MNEs were male Brazilian nationals and each of them obtained a university-level degree in Brazil (Annex Table 4). However, according to the firms' annual reports, ten of the 20 reported holding either a graduate degree or some sort of professional training from an institution outside of Brazil, typically from the United States, France or Switzerland.

These findings indicate that the top management of the top 20 Brazilian MNEs is primarily rooted in local cultural and educational backgrounds.

[8] Lazzaretti, K., Kleinübing Godoi, C., Parodi Oliveira Camilo, S., & Marcon, R. (2013). Gender diversity in the boards of directors of Brazilian businesses. Gender in Management: An International Journal, 28(2), 94-110.

Industries

The top 20 Brazilian MNEs are primarily concentrated in the extractive and commodities sectors (Table 1; Annex Figure 1). Of the total foreign assets of all of the ranked firms, the Mining (Vale and Magnesita (22.3%) (with Vale alone accounting for 22%)), Primary Metal Manufacturing (Gerdau and CSN – Companhia Siderúrgica Nacional (19.9%)), Food Manufacturing (JBS, BRF and Minerva (19.4%)), Oil and Gas Extraction (Petrobras (11.7%)), and Paper and Allied Products Manufacturing (Fibria, Suzano Papel and Klabin (10.7%) comprise 84%. One explanation for concentrations of Brazilian firms in extractives and commodities is that Brazil is rich in natural resources and has large areas suitable for agriculture and livestock.

The remaining 16% of foreign assets of the ranked firms were distributed among companies in six different industries including four firms in the Transportation Equipment Manufacturing industry (Embraer, Tupy, Iochpe-Maxion, and Marcopolo), and one firm in each of the Chemical Manufacturing (Braskem), Transportation by Air (Gol), Support Activities for Transportation (Invepar), Merchant Wholesalers, Nondurable Goods (Natura), and Leather and Allied Product Manufacturing (Alpargatas) industries.

Foreign Countries Where Firms Have Operations

On average, the top 20 Brazilian MNEs each have operations in more than 10 countries outside of Brazil (Annex Table 2).[9] Magnesita and Vale are at the top end of the spectrum, operating in 27 and 25 other countries respectively. At the other end, Invepar's only foreign operation is in Peru.

The foreign countries in which the greatest number of the top 20 Brazilian MNEs had operations were: (1) United States – 17 out of the top 20 firms; (2) Argentina – 14 out of the top 20 firms; (3) China – 11 out of the top 20 firms; (4) Chile, Mexico, and United Kingdom – 9 out of the top 20 firms.

The main markets for Brazilian exports were the United States and China. The large presence of Brazilian multinational firms in these countries may reflect strategies to achieve proximity to their main customers.

There was also a significant presence of ranked Brazilian MNEs in Latin American countries, including Argentina, Mexico, Chile, Uruguay, Colombia, Paraguay and Peru. Brazilian MNE presence in these countries may be explained by the geographical, institutional and cultural proximity to that of Brazil found in these neighboring countries. This may particularly be the case for neighboring Argentina, a significant market for Brazilian manufactured goods. Almost all of the companies (17 out of the top 20 firms) have operations in at least one Latin American country outside of Brazil (Embraer, Fibria and CSN – Companhia Siderúrgica Nacional are the exceptions).

[9] For purposes of this report, we have considered a firm having a plant, a commercial subsidiary, a business office, a distribution center, or a research center as constituting operations in other countries.

Some of Brazilian firms are also establishing their operations in Paraguay due to its proximity to Brazil, its lower labor cost and more favorable taxation policies.

Also notable is the fact that meat processing firms and slaughterhouses had significant assets in the United Arab Emirates to serve the important Middle East market, a large consumer of poultry.

Foreign Assets

In 2015, the top 20 Brazilian MNEs held approximately US$ 96 billion (3.904 Brazilian reais per US dollar) in aggregate foreign assets, which represented a decrease of 20.5% compared to the approximately US$ 121 billion held by the top 20 in 2014 (2.5265 Brazilian reais per US dollar). When considering foreign assets calculated in Brazilian reais instead of US dollars, an overall increase of 22.8% in comparison to 2014 is observed.[10]

In 2015 the aggregate foreign assets of the ranked firms accounted for 42% of the ranked firms' total assets. Minerva had the highest proportion of overseas assets with a 95% foreign-to-total asset ratio, while Vale had the highest absolute value of foreign assets (US$ 21.1 billion).

Foreign Sales

In 2015, the top 20 Brazilian MNEs reported an aggregate decrease of more than US$ 97 billion (3.904 Brazilian reais per US dollar) in foreign sales (including exports), which represented a decrease of 14.5% compared to the nearly US$ 114 billion in foreign sales observed in 2014 (2.5265 Brazilian reais per US dollar). When the figures are calculated in Brazilian reais as opposed to US dollars, an increase of 32.1% in foreign sales is observed (54.5% of exchange rate variation in comparison to the exchange rate used in the 2014 report).

Even more pronounced than the top 20 MNE's decrease in foreign sales was the decrease of 43% in domestic sales. Excluding the effect of exchange rate variation by calculating the figures in Brazilian reais, the decrease on domestic sales was 12% in 2015. This result is likely attributable to the overall domestic economic contraction resulting from the broader political and economic crises that began in earnest in Brazil in 2014 (see "The Big Picture" section below).

In 2015 the foreign sales (including exports) of the ranked firms represented on average 55% of total net sales. JBS had the highest foreign-to-total sales (88%) and also the highest absolute value of foreign sales (US$ 36.5 billion).

While foreign sales experienced a year-on-year increase (when calculated in Brazilian reais), the same pattern was not observed with respect to domestic sales, which decreased by 12% in comparison to 2014 (based on a calculation in Brazilian reais).

[10] Compared to the exchange rate used in the 2014 report, there was a 54.5% variation.

Foreign Employees

In 2015, the top 20 Brazilian MNEs had a combined total of 174,448 employees (excluding outsourced, temporary and seasonal employees) abroad, which represented a decrease of 13% compared to the 201,343 employees outside of Brazil in 2014.

For the 20 ranked firms, foreign employees represented an overall average of 18% of the total number of employees. Iochope-Maxion had the highest proportion of overseas workers (55%), while JBS had the greatest absolute number of foreign employees (100,290).

In comparison with 2014, Brazilian firms have reduced the number of employees, both domestic and foreign, as a result of the broader economic and political crises plaguing Brazil (Table 4). According to the Brazilian Institute of Geography and Statistics (IBGE – *Instituto Brasileiro de Geografia e Estatística*), the Brazilian domestic unemployment rate in 2015 was 8.5%, compared with 6.8% in 2014. Moreover, IBGE estimates that the number of unemployed workers in 2015 was 8.6 million, representing an increase of 27% over 2014, when 6.7 million workers were unemployed. The unemployment rates are particularly salient in the manufacturing sector, and thus the southeastern region of Brazil where the manufacturing sector is concentrated.

Table 2 - Top 20 Brazilian MNEs Employment in 2015

Rank by Foreign Assets – 2015	Company	Core Industry	Status (% of state ownership) *	Employment Growth (%)	Domestic Employment Growth (%)	Foreign Employment Growth (%)
1	Vale	Mining (except Oil and Gas)	Listed (38.7)	-3.2	-3.2	-3.1
2	JBS	Food Manufacturing	Listed (27.3)	9.0	8.6	9.4
3	Gerdau	Primary Metal Manufacturing	Listed (Nil)	-12.3	-18.2	-6.2
4	Petrobras	Oil and Gas Extraction	Listed (63.8)	-3.0	-3.1	-2.0
5	CSN – Sid. Nacional	Primary Metal Manufacturing	Listed (Nil)	4.1	4.1	3.9
6	Fibria	Paper and Allied Products	Listed (29.1)	-1.9	-2.1	17.1
7	Braskem	Chemical Manufacturing	Listed (30)	-1.6	-4.0	9.5
8	Embraer	Transportation Equipment Manufacturing	Listed (5.4)	1.1	-0.5	14.1
9	Suzano Papel	Paper and Allied Products	Listed (Nil)	5.7	8.2	-40.1
10	BRF	Food Manufacturing	Listed (22.1)	-8.1	-9.6	29.4
11	Minerva	Food Manufacturing	Listed (2.7)	-8.6	-5.0	-26.4
12	Gol	Transportation by Air	Listed (Nil)	-1.6	-1.3	-13.0
13	Tupy	Transportation Equipment Manufacturing	Listed (61.2)	-5.5	-11.4	12.0
14	Iochpe-Maxion	Transportation Equipment Manufacturing	Listed (6.8)	-9.1	-19.5	1.6
15	Invepar	Support Activities for Transportation	Listed (75)	7.8	8.9	-4.5
16	Klabin	Paper and Allied Products	Listed (2.3)	12.0	12.1	6.6
17	Marcopolo	Transportation Equipment Manufacturing	Listed (15.2)	-32.6	-35.0	-11.8
18	Natura	Merchant Wholesalers, Nondurable Goods	Listed (Nil)	0.1	-1.4	6.0
19	Alpargatas	Leather and Allied Product Manufacturing	Listed (Nil)	12.5	16.0	0.2
20	Magnesita	Mining (except Oil and Gas)	Listed (Nil)	-4.7	-2.0	-14.2
	TOTAL			-0.5	-2.1	4.6

* We have considered both direct and indirect state ownership through Brazilian National Development Bank (BNDES – Banco Nacional de Desenvolvimento Econômico e Social), pension funds of state-owned enterprises, state-owned banks, state-owned enterprises, state-owned funds, governmental agencies, and National Treasury.
** This calculation does not include investments and redemptions on financial assets and securities, nor dividends received from subsidiaries and affiliates.

Twelve of the ranked companies reduced the number of direct employees (excluding temporary and outsourced employees) (Table 2). Moreover, while the number of domestic employees decreased 2% in total (14 out of the top 20 Brazilian MNEs reduced the number of domestic employees), the number of foreign employees increased 5% in total (even though 9 out of the top-20 Brazilian MNEs reduced the number of foreign employees).

Transnationality Index (TNI)

The average 2015 Transnationality Index (TNI) – the average of the ratios of foreign assets to total assets, foreign employment to total employment, and foreign sales to total sales – of the top 20 Brazilian MNEs was 38% (Table 3). Gerdau had the highest TNI at 63%.

Table 3 – Brazil: Transnationality Index (TNI) of the top 20 non-financial multinationals, 2015

Rank by Foreign Assets – 2015	Company	Industry	FA/TA	FS/TS	FE/TE	TNI
1	Vale	Mining (except Oil and Gas)	23.9%	84.7%	21.9%	43.5%
2	JBS	Food Manufacturing	44.6%	87.5%	44.1%	58.7%
3	Gerdau	Primary Metal Manufacturing	67.3%	69.0%	53.1%	63.1%
4	Petrobras	Oil and Gas Extraction	4.8%	9.0%	8.7%	7.5%
5	CSN – Sid. Nacional	Primary Metal Manufacturing	55.8%	49.4%	1.9%	35.7%
6	Fibria	Paper and Allied Products	85.6%	91.0%	1.2%	59.2%
7	Braskem	Chemical Manufacturing	36.4%	48.1%	19.9%	34.8%
8	Embraer	Transportation Equipment Manufacturing	33.2%	88.4%	12.2%	44.6%
9	Suzano Papel	Paper and Allied Products	42.3%	69.4%	3.0%	38.2%
10	BRF	Food Manufacturing	26.0%	50.2%	5.4%	27.2%
11	Minerva	Food Manufacturing	94.9%	73.4%	13.3%	60.5%
12	Gol	Transportation by Air	56.7%	11.3%	2.0%	23.3%
13	Tupy	Transportation Equipment Manufacturing	69.0%	81.9%	30.0%	60.3%
14	Iochpe-Maxion	Transportation Equipment Manufacturing	48.7%	80.3%	54.9%	61.3%
15	Invepar	Support Activities for Transportation	12.8%	5.0%	7.2%	8.3%
16	Klabin	Paper and Allied Products	11.4%	32.5%	1.0%	15.0%
17	Marcopolo	Transportation Equipment Manufacturing	49.4%	26.6%	13.4%	29.8%
18	Natura	Merchant Wholesalers, Nondurable Goods	16.7%	29.0%	21.8%	22.5%
19	Alpargatas	Leather and Allied Product Manufacturing	34.8%	41.0%	19.7%	31.8%
20	Magnesita	Mining (except Oil and Gas)	19.0%	69.0%	20.3%	36.1%
	AVERAGE		41.7%	54.8%	17.8%	38.1%

Source: Bloomberg and Economatica database, firms' annual reports (*Formulários de Referência* and DFPs *Demonstrações Financeiras Padronizadas* – Standardized Financial Reports), Fundação Dom Cabral's Brazilian Multinationals Ranking 2016[11], and primary data through EMGP's questionnaires.

Main Internationalization Drivers

Among the Brazilian top 20, the primary reasons reported by the firms for investing abroad were: to have access to new markets, proximity to clients, cost reduction, and access to natural resources (Figure 1). High Brazilian taxes along with institutional voids in Brazil, such as corruption, poor transportation system, and an unqualified labor force, were also rated as important factors in deciding to invest abroad. While firms cited additional driving factors, including proximity to suppliers, access to new technologies, and access to qualified labor, the importance of these factors as a motivation for internationalization was much less when compared to the abovementioned drivers.

[11] Available at: https://www.fdc.org.br/professoresepesquisa/nucleos/Documents/negocios_internacionais/2016/Ranking_FDC_Multinacionais_Brasileiras_2016.pdf

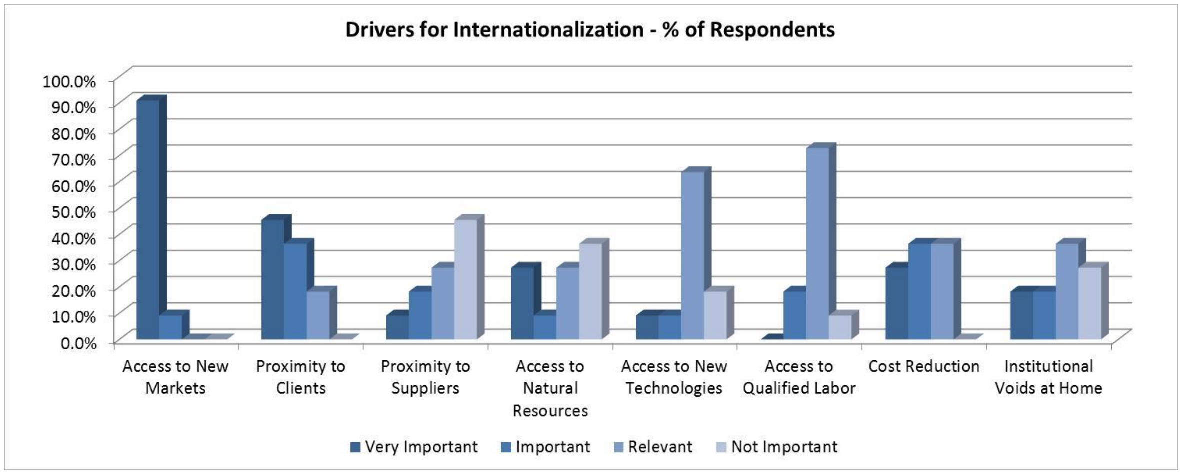

Figure 1 – Main Motivations for Internationalization
Source: Authors (11 respondents)

Attributes of Success in the Main Foreign Market

When asked about perceived attributes of success in foreign markets, the Brazilian top 20 responding to the survey cited: (1) relationships with clients (all 11 respondents rated this as very important); (2) competitive prices (80% of the respondents rated this as very important); and (3) cost management (70% of the respondents rated this as very important). These attributes of success reflect the market-oriented internationalization strategies of many of the ranked firms (Figure 2).

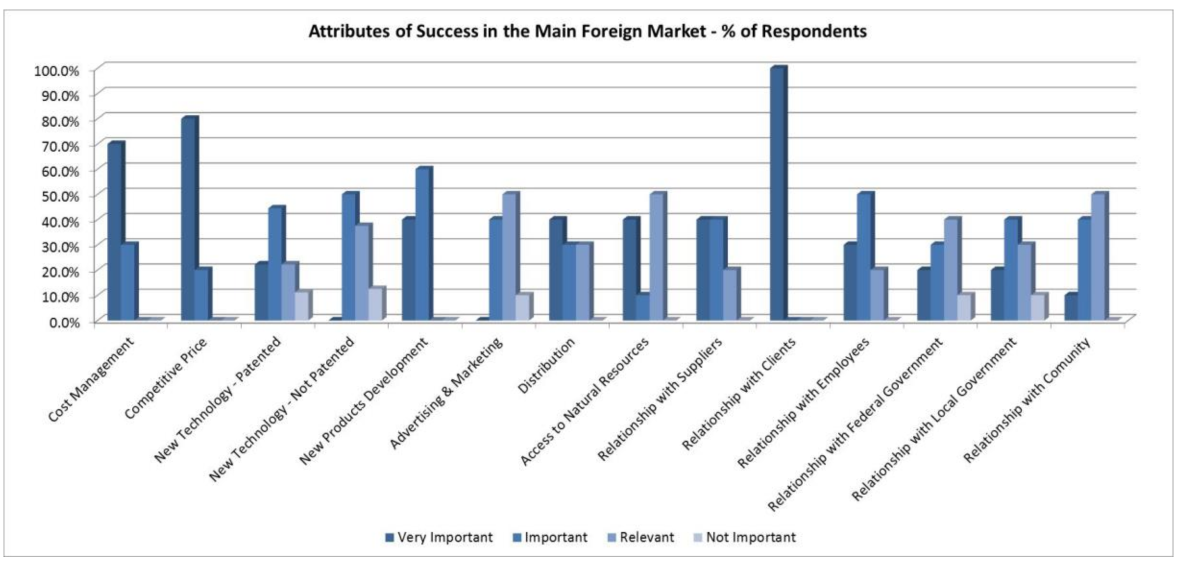

Figure 2 - Attributes of Success in the Main Foreign Market
Source: Authors (11 respondents)

R&D Activities

Most of the R&D activities of the top 20 Brazilian MNEs were concentrated in Brazil.

Brazilian firms concentrated the primary location of their foreign R&D activities in a small number of countries, mainly in the United States and Europe. Braskem, for instance, has a research center in the United States (Pittsburgh, Pennsylvania). Embraer has an engineering & technology center in Delaware; Marfrig has a subsidiary that does R&D in the United States; and JBS conducts research in the United Kingdom.

In January 2015, Fibria finalized the process of setting up a new subsidiary in Vancouver, Canada, at which R&D of bio-products from biomass will take place.

FuturaGene, a wholly owned Suzano's subsidiary, is a one of the leaders in bio-genetic R&D for global markets in forestry, bioenergy and biofuels. With research centers in Brazil, China and Israel, the subsidiary develops sustainable technology to meet the demand for fiber, fuel and energy producing crops.

Minerva, through its partnership with the Irish firm Dawn Farms Food Limited, also has R&D activities abroad.

Klabin has partnerships with research centers abroad.

One of the Natura's subsidiaries, Natura Innovation et Technologie de Produits, based in France, is focused on research in the areas of "in vitro" tests, an alternative to animal testing, with respect to studies related to skin treatment and new packaging materials.

Magnesita, has an R&D center in Brazil, and additionally has one in the United States, and another in Germany.

Brazilian companies, in search of stronger intellectual property protection abroad, often registered their trademarks and patents outside of Brazil, primarily in three major regions including the United States, some of the European Union member states, such as Germany and Netherlands, and other Latin American countries (e.g. Chile and Argentina).

Economic and Political Risks

The main strategy to address political risks reported by the ranked firms in our survey was to engage in constant monitoring and assessment of the political scenario in host countries. Some firms, regardless of their size or industry, also had internal guidelines that discouraged investment in countries exhibiting high political or economic instability. Other strategies commonly used by the top 20 to mitigate economic and political risks of foreign investment were to join associations of business groups in the host country, and to diversify their foreign investments among different host-countries.

Compliance

Most of the top 20 Brazilian MNEs have made changes in their company's policies and ethical and compliance codes to ensure that they comply with the highest international standards of responsible business conduct, including compliance with host-country's laws and regulations and also with the home- and host-country's ethical codes.

The measures that were most frequently mentioned by the top 20 MNEs relating to compliance with laws, regulations and ethical codes were: the implementation of new internal ethical and compliance codes, the establishment of international ethics and compliance committees, making trainings available in various languages in all host countries and ensuring that these trainings were mandatory for employees, ensuring that legal advice was sought when conducting business internationally, and creating key performance indicators (KPIs) on sustainability.

Further, the São Paulo Stock Exchange (BM&FBOVESPA) facilitates a Corporate Sustainability Index [12] (ISE – *Índice de Sustentabilidade Empresarial*) that aims to encourage corporations to be socially responsible. The ISE can be used to analyze the performance of the listed firms, based on economic efficiency, environmental equilibrium, social justice and corporate governance.

The ISE's methodology was designed by the Sustainability Research Center (GVCes) of São Paulo School of Business Administration (EAESP) of Fundação Getulio Vargas (FGV) in order to comparatively evaluate the performance of the 200 most liquid companies listed on BM&FBOVESPA from the standpoint of corporate sustainability, based on economic efficiency, environmental equilibrium, social justice and corporate governance.

GVCes developed a methodology based on a questionnaire that considers the company's performance in different dimensions. In general, practices such as the company's commitment to sustainable development and global agreements were evaluated; as well as its transparency, and preparation of a sustainability report. Regarding the nature of the product, there were questions related to risks to consumers and third parties' health. There was also an entire evaluation of each firm`s corporate governance. Recently, the questionnaire started analyzing the theme of climate change, seeking to examine the commitment, strategies, opportunities and risks arising from climate change.

With the answers, the companies are required to provide documentation to support their responses. Quantitative scoring is based on the questionnaire, while qualitative performance is based on the documentation. Both factors result in a matrix of results that results in the 40 companies selected for the index.

Of the top 20 Brazilian MNEs, Braskem, BRF, Embraer, Fibria, Klabin and Natura are listed on the ISE.

Table 4 - Brazil: Snapshot of the top 20 multinationals, 2013-2015 (USD million[13] and number of employees[14])

Variables* - USD Million	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Assets					
Foreign Assets	**95,901**	**120,672**	**134,365**	**-20.5%**	**-10.2%**
Domestic Assets	365,822	442,033	470,415	-17.2%	-6.0%
Total Assets	461,724	562,706	604,780	-17.9%	-7.0%
Share of Foreign in Total (%)	**20.8%**	**21.4%**	**22.2%**	**-0.67 p.p**	**-0.77 p.p**

[12] Description available at: http://www.bmfbovespa.com.br/en_us/products/indices/sustainability-indices/corporate-sustainability-index-ise.htm

[13] We used the year-end official Brazilian exchange rate (Ptax) published by Brazilian Central Bank (R$ 3.904 for each USD in the end of 2015).

[14] Excluding outsourced or temporary (seasonal) employees.

Sales					
Foreign Sales (including exports)	**97,375**	**113,927**	**118,964**	**-14.5%**	**-4.2%**
Domestic Sales	109,616	192,449	206,376	-43.0%	-6.7%
Total Net Sales	206,991	306,376	325,339	-32.4%	-5.8%
Share of Foreign in Total (%)	**47.0%**	**37.2%**	**36.6%**	**9.86 p.p**	**0.62 p.p**
Employment					
Foreign Employees	**174,448**	**201,343**	**195,566**	**-13.4%**	**3.0%**
Local Employees	522,628	550,199	548,652	-5.0%	0.3%
Total Employees	697,076	751,542	744,218	-7.2%	1.0%
Share of Foreign in Total (%)	**25.0%**	**26.8%**	**26.3%**	**-1.76 p.p**	**0.51 p.p**
Exchange Rate (Price in R$ for each USD)	3.904	2.5265	2.1915	54.5%	15.3%

* The top 20 Brazilian MNEs of 2014 and 2013 are the same, but they differ from the 2015's sample

Source: Bloomberg and Economatica database, firms' annual reports (*Formulários de Referência* and DFPs *Demonstrações Financeiras Padronizadas* – Standardized Financial Reports), Fundação Dom Cabral's Brazilian Multinationals Ranking 2016,[15] and primary data through EMGP's questionnaire.
Note: p.p. denotes percentage points.

Table 5 - Brazil: Snapshot of the top 20 multinationals, 2013-2015 (BRL million and number of employees[16])

Variables* - BRL Million	2015	2014	2013	2015 vs. 2014	2014 vs. 2013
Assets					
Foreign Assets	**374,399**	**304,879**	**294,461**	**22.8%**	**3.5%**
Domestic Assets	1,428,169	1,116,797	1,030,915	27.9%	8.3%
Total Assets	1,802,569	1,421,676	1,325,376	26.8%	7.3%
Share of Foreign in Total (%)	**20.8%**	**21.4%**	**22.2%**	**-0.67 p.p**	**-0.77 p.p**
Sales					
Foreign Sales (including exports)	**380,151**	**287,836**	**260,709**	**32.1%**	**10.4%**
Domestic Sales	427,941	486,222	452,272	-12.0%	7.5%
Total Net Sales	808,092	774,058	712,981	4.4%	8.6%
Share of Foreign in Total (%)	**47.0%**	**37.2%**	**36.6%**	**9.86 p.p**	**0.62 p.p**
Employment					
Foreign Employees	**174,448**	**201,343**	**195,566**	**-13.4%**	**3.0%**
Local Employees	522,628	550,199	548,652	-5.0%	0.3%
Total Employees	697,076	751,542	744,218	-7.2%	1.0%
Share of Foreign in Total (%)	**25.0%**	**26.8%**	**26.3%**	**-1.76 p.p**	**0.51 p.p**

* The top 20 Brazilian MNEs of 2014 and 2013 are the same, but they differ from the 2015's sample

Source: Bloomberg and Economatica database, firms' annual reports (*Formulários de Referência* and DFPs *Demonstrações Financeiras Padronizadas* – Standardized Financial Reports), Fundação Dom Cabral's Brazilian Multinationals Ranking 2016,[17] and primary data through EMGP's questionnaire.
Note: p.p. denotes percentage points.

[15] Available at: https://www.fdc.org.br/professoresepesquisa/nucleos/Documents/negocios_internacionais/2016/Ranking_FDC_Multinacionais_Brasileiras_2016.pdf
[16] Excludes outsourced or temporary (seasonal) employees.
[17] Available at: https://www.fdc.org.br/professoresepesquisa/nucleos/Documents/negocios_internacionais/2016/Ranking_FDC_Multinacionais_Brasileiras_2016.pdf

The Big Picture

In 2015, the Brazilian economic and political crises that began in earnest in 2014 continued to worsen. With a 3.9% decrease in real Gross Domestic Product (GDP), the Brazilian economy fell to the levels not seen since first quarter of 2011, according to the Brazilian Institute of Geography and Statistics (IBGE – *Instituto Brasileiro de Geografia e Estatística*). By percentage, this was the worst decline since 1990, when the Brazilian economy shrank by 4.3%.

International Scenario

A global factor that had a particular impact on Brazilian MNEs was the continued slowdown in Chinese economic growth (6.9% GDP growth in 2015 versus 7.3% in 2014 and 7.7% in 2013). According to the Brazilian Ministry of Development, Industry and Foreign Trade, 18% of all Brazilian exports go to China, and in 2015 the exports to China decreased by 12%. In particular, China is the largest market for Brazilian commodities and basic products, and Brazilian firms in those industries were particularly impacted. For example, as Chinese demand for iron decreased, the global iron price plummeted to its lowest level in 10 years and the volume of Brazilian iron exports to China was simultaneously cut nearly in half. Under this adverse scenario, Vale's share price decreased by more than 40%.

In addition, the American Federal Reserve's (FED) decided to start increasing the benchmark interest rate of the American economy in the end of 2015 (for the first time since 2006). This increased rate resulted in increased capital flows to the United States, and reduced the dollar flow to Brazil. This shift contributed to increase the instability of the Brazilian real because there were fewer dollars available in the country.

Accordingly, there was a significant devaluation and fluctuation of the Brazilian real over the course of 2015. The Real/Dollar rate started the year at $ 2.69 BRL/USD, ended the year coted as $ 3.90 BRL/USD (45% depreciation), and reached a peak of $ 4.24 BRL/USD during September, the month in which Brazil lost its investment grade.

Domestic Demand Contraction

At the same time as external factors negatively impacted Brazil's GDP growth, the recession from 2014 to 2015 was caused primarily by domestic factors.

The devaluation of the Brazilian real also put downward pressure on prices of, in particular, Brazilian commodities and raw materials. On one hand, this price impact harmed importers as it increased their costs. On the other hand, exporters benefitted because products manufactured in Brazil were cheaper on the global market. However, this price advantage could not offset the overall decrease in both domestic and international demand.

Over the year, Brazilian domestic prices experienced high levels of inflation. As a result, Brazilian firms faced substantial increases in the prices of key-inputs, such as gasoline, electricity and transportation, and consumers faced resulting higher prices for a variety of consumer goods. In 2014 the government first intervened to control inflation by regulating the prices of certain items. This intervention repressed but did not reverse or mitigate overall inflationary tendencies. In 2015 the government was forced to suspend these interventions as the fiscal situation deteriorated further, and inflation resumed in a dramatic fashion, with an official rate (IPCA – *Índice de Preço ao Consumidor Amplo*) measured by IBGE of 10.7% in 2015, the highest since 2002 and much above the target of 4.5% established by the Brazilian Central Bank. This high rate of inflation impacted consumers and business alike. Electricity, for example, was on average 51% more expensive in 2015 than in 2014. The gas price (primarily set by Petrobras, an MNE that is controlled by the Brazilian government) rose by 20% in September 2015.

Recognizing the damage being done by high inflation, and aiming to control it, the government decided to increase the reference interest rate of the Brazilian economy (Selic), which started 2015 at 11.7% (nominal) and ended the year at 14.3% (also nominal), which was the highest level since 2006. Consequently, the higher cost of capital made credit available for consumption and investment less attractive to both firms and families. As a result, the default rate increased, which made public and private banks even more selective and rigid in their credit policy.

As the economy deteriorated Brazilian firms became less competitive and were forced to lay off workers. The official unemployment rate at the end of 2015 hit 8.5% (compared to 6.9% in 2014), which represents approximately 8.6 million people. This is 27.4% more than the estimated 6.7 million unemployed seen at the end of 2014. The manufacturing industry in the south and southeast part of Brazil bore the brunt of this impact.

From the perspective of domestic demand, household income and consumption decreased by 4% in 2015 as a result of increased unemployment and higher interest and inflation rates. This was the most severe decrease in Brazilian household income and consumption observed in nearly 20 years (since 1996).

From the perspective of domestic supply, the output of the manufacturing sector decreased by 6.2% in 2015, making it the fifth year in a row that the manufacturing sector lost representativeness in the Brazilian economy. Manufacturing firms, primarily those engaged in the food, automotive, machinery, and equipment manufacturing sectors, were most affected by this negative economic impact. Out of all the major sectors of the economy, only the agricultural sector experienced growth, albeit small, in 2015.

The domestic market, which, as discussed, was overall not attractive to business development in 2015, saw a decreased rate of investment, particularly in production activities. In 2015 investments in manufacturing and production activities accounted for 18.2% of GDP, the lowest level since 2007. The gross fixed capital formation, an indicator the volume of productive investments, fell 14.1% in comparison to 2014, the largest decrease since 1996 when IBGE started recording this indicator.

This adverse domestic scenario is reflected in the Brazilian MNEs' strategy. Based on an analysis of the cash flows from investment activities (excluding investments and redemptions on financial assets and securities, and dividends received from subsidiaries and affiliates), the total volume of investment of the top 20 increased by 10.8% in 2015 (Table 7). Notably, however, eight of the 20 (six of which have a direct or indirect government equity stake) reduced the amount spent on investment.

Table 6 – Cash Flow from Investment Activities Growth 2015

Rank by Foreign Assets – 2015	Company	Core Industry	Status (% of state ownership)*	Cash Flow of Investments Growth (%)**
1	Vale	Mining (except Oil and Gas)	Listed (38.7)	-5.0
2	JBS	Food Manufacturing	Listed (27.3)	382.8
3	Gerdau	Primary Metal Manufacturing	Listed (Nil)	80.6
4	Petrobras	Oil and Gas Extraction	Listed (63.8)	-5.8
5	CSN – Sid. Nacional	Primary Metal Manufacturing	Listed (Nil)	84.2
6	Fibria	Paper and Allied Products	Listed (29.1)	35.2
7	Braskem	Chemical Manufacturing	Listed (30)	-18.6
8	Embraer	Transportation Equipment Manufacturing	Listed (5.4)	47.2
9	Suzano Papel	Paper and Allied Products	Listed (Nil)	1.6
10	BRF	Food Manufacturing	Listed (22.1)	-104.6
11	Minerva	Food Manufacturing	Listed (2.7)	2.5
12	Gol	Transportation by Air	Listed (Nil)	210.4
13	Tupy	Transportation Equipment Manufacturing	Listed (61.2)	-24.5
14	Iochpe-Maxion	Transportation Equipment Manufacturing	Listed (6.8)	12.0
15	Invepar	Support Activities for Transportation	Listed (75)	-37.8
16	Klabin	Paper and Allied Products	Listed (2.3)	57.5
17	Marcopolo	Transportation Equipment Manufacturing	Listed (15.2)	14.6
18	Natura	Merchant Wholesalers, Nondurable Goods	Listed (Nil)	-39.7
19	Alpargatas	Leather and Allied Product Manufacturing	Listed (Nil)	-66.7
20	Magnesita	Mining (except Oil and Gas)	Listed (Nil)	41.9
	TOTAL			**10.8**

* We have considered both direct and indirect state ownership through Brazilian National Development Bank (BNDES – Banco Nacional de Desenvolvimento Econômico e Social), pension funds of state-owned enterprises, state-owned banks, state-owned enterprises, state-owned funds, governmental agencies, and National Treasury.
** This calculation does not include investments and redemptions on financial assets and securities, nor dividends received from subsidiaries and affiliates.

Fiscal Problem and Government Austerity

According to the Brazilian Treasury, the 2014 and 2015 recession led to a fall from 21.1% in 2014 to 20.8% in 2015 in government gross primary revenue as a percentage of GDP.

Simultaneously, the Brazilian government significantly increased its primary expenditures both in absolute and in relative figures. According to the Brazilian Treasury, total Brazilian government primary expenditures represented 19.6% of GDP in 2015 versus 18.3% in

2014. The most representative expenses related to: (1) Private-sector social security – 7.4% of GDP in 2015; (2) Other mandatory expenditures – 5% of GDP in 2015; (3) Discretionary expenditures – 4.3% of GDP in 2015; and (4) personnel and charges – 4% of GDP in 2015. Among all expenditures only 10% were not indexed, meaning that all else remaining constant, the increase in public expenses reflected the inflation rate.

In order to control the fiscal imbalance, the government introduced various austerity measures including monetary tightening and fiscal adjustment that were aimed at controlling public expenses, but also ended up playing a role in economic instability. For example, public spending cuts did not initially prove to be sufficient for the government to reach its primary surplus target. Consequently, spending targets were revised for 2015 and the government introduced further cuts. The government's fiscal adjustments and its handling of the recession were widely criticized. For some economists, adjustments were not as quick and as blunt as they should have been. Others perceived the adjustments to be too blunt.

With less revenue and more expenses, the Brazilian primary deficit reached 1.9% of GDP in 2015. In 2014, the deficit was 0.6% of GDP. Two consecutive years of primary deficit represented an unprecedented event in the Brazilian Central Bank's records, which it began keeping in 2001. As a result, the Brazilian gross public debt jumped to 66% of GDP in 2015, the highest value since the Brazilian Central Bank began to compute gross public debt in 2006.

In an International Monetary Fund (IMF) sample of 68 countries, Brazil is expected to post the second-highest average nominal deficit from 2015 to 2018, behind Venezuela.

These increasingly restrictive fiscal and monetary policies indicate that substantial acceleration in investments will be less likely.

Brazil's domestic economy suffered in 2015, reflected in a downgrade by both Standard & Poor's and Fitch to below Investment Grade (BBB- to BB+).

Political Crisis

In the midst of the Brazilian economic crisis, a political crisis erupted. The Datafolha survey released in August 2015 reflected low approval ratings for President Dilma Rousseff.[18] Large anti-government demonstrations occurred throughout Brazil in March and August of 2015.

[18] Available in Portuguese at: http://g1.globo.com/politica/noticia/2015/08/71-reprovam-governo-dilma-diz-datafolha.html. While outside the temporal scope of this report, on August 31, 2016 Brazil's senate voted 61-20 to oust President Rousseff in an impeachment trial over allegations she committed fiscal crimes while handling the federal budget https://www.wsj.com/articles/dilma-rousseff-ousted-in-historic-brazil-impeachment-vote-1472661491.

Throughout 2015, at the height of the crisis, the President lost the support of congress and was unable to gain further approval for economic measures and reforms. Parliamentary opposition to the governing party's various proposals was embodied in the so-called bomb-agenda ("*pautas-bomba*"),[19] which pushed back against proposed fiscal reforms with bills that would allow new public spending in the form of salary adjustments or blocking new forms of revenue, and made the government's ability to reach its fiscal targets more difficult.

Moreover, during 2015, the *Lava Jato* operation -- the investigation of alleged relations between influential politicians and Petrobras regarding illicit support for campaigns and corruption -- intensified.[20]

The corruption scandal significantly contributed to the overall economic and political crisis and negative overall political sentiment in Brazil. An atmosphere of economic and political uncertainty and a resulting decline in confidence in Brazil's economic prospects remained pervasive.

Divestment Activity

In the context of the overall economic and political crises facing Brazil and, by extension, Brazilian MNEs including the top 20, divestment became a strategic topic on the agenda of many Brazilian firms during 2015. According to a survey conducted by Ernest & Young (EY) with top managers of Brazilian firms representing several different industries, 54% of them expected that the number of strategic asset sales would increase in 2015.[21] According to EY's survey, divestment would be important for corporate capital budgeting strategies in order to respond to shareholder pressure to increase returns.

In the Brazilian market, both multinational and domestic enterprises effected divestments as a way to refocus their core business activities and to increase liquidity. According to EY's report, 74% of respondents used proceeds of these asset sales to promote the growth of the operation, and 34% reinvested the funds in the core activities. Further, the EY report found that 17% of companies used the divestment proceeds on other acquisitions. Viktor Andrade, partner of EY's Mergers & Acquisition (M&A) team in Brazil, said that "divestment will

[19] Available in Portuguese at: http://www1.folha.uol.com.br/mercado/2015/08/1664711-saiba-o-que-sao-as-pautas-bomba-nas-maos-do-congresso-contra-o-governo.shtml

[20] The *Lava Jato* operation has been the biggest anti-corruption investigation conducted in Brazil to date. It began on March 17, 2014 with the Brazilian federal police investigation of individuals who bought and sold dollars on the unofficial market. The investigation has since uncovered the existence of a vast corruption scheme at Petrobras, involving politicians from various parties as well as the largest construction firms in Brazil. The operation was named *Lava Jato* (or "Car Wash") because of the use of a chain of car washes and gas stations to move and book illicit cash flows (more information and details are available in Portuguese at: http://arte.folha.uol.com.br/poder/operacao-lava-jato/.

[21] Main results available at: http://www.ey.com/br/pt/newsroom/news-releases/release_venda_de_ativos_nao_estrategicos_e_tatica_das_empresas_para_garantir_bom_desempenho_em_2015

continue to gain momentum, not only due to the shareholders' demand, but also due to the companies' preference for revision and constant improvement of the portfolios," which means pursuing higher profitability with lower risk by (re)focusing investments on core activities and efficiency.

Brazilian assets in 2015 were cheaper in comparison to previous years due to the economic crisis and to the devaluation of the Brazilian real. Moreover, there was significant international liquidity according to Fabio Silveira, research director at GO Associados.[22]

Of the top 20, Petrobras announced a massive divestment plan involving both foreign and local assets that would continue through 2018. In 2014 Petrobras had significant losses primarily due to the Brazilian government's decision to maintain domestic oil prices at a rate below the prevailing international rate to attempt to alleviate the already high inflation rate. In addition, the corruption scandal involving the *Lava Jato* operation drained a large amount of dollars in cash from the company. To further worsen Petrobras' financial situation, the downward trend in oil prices continued throughout 2015. With its value chain shaken, Petrobras found itself heavily leveraged and without enough liquidity to make new investments. Facing a fiscal crisis, the Brazilian government could not provide financial support to the company. According to the firm's annual report, the company plans to divest US$ 19.5 billion in 2017-2018 and US$ 15.1 billion in 2015-2016 (in 2015 Petrobras divested US$ 0.7 billion). The main objectives of this divestment plan are increased liquidity and reduced leverage.

Similarly, Vale announced a divestment plan in the face of a decrease in demand for iron ore. In 2015 its major divestments included: (i) an approximately US$ 1.2 billion sale of twelve VLOCs (very large ore carriers) to a consortium led by ICBC Financial Leasing, a subsidiary of the Industrial and Commercial Bank of China Limited; (ii) an approximately US$ 1 billion sale of 36.4% of the voting shares of MBR (one of its subsidiaries); (iii) an agreement with Silver Wheaton, a Canadian company, worth approximately US$ 717 million to sell an additional 25% of the gold produced as a byproduct of the Salobo copper mine during the lifetime of the mine; and (iv) sales of approximately US$ 78 million of other non-core assets. The primary purpose of these transactions was to increase Vale's liquidity.

Both Petrobras and Vale, faced with the declining price of iron ore and oil on international markets as well as the depreciation of the Brazilian Real, had problems financing their projects and operations. Their divestment activities were part of a broader strategy to mitigate the impacts of these developments.

[22] Available at: http://jcrs.uol.com.br/_conteudo/2015/10/cadernos/jc_logistica/461038-crise-economica-leva-a-desinvestimento-generalizado.html

Gerdau (Primary Metal Manufacturing) adopted a divestment policy in 2014 that targeted asset sales related to non-core business activities. In 2014 Gerdau effected various divestments and cash flows from investment activities (excluding investment on financial assets and securities) decreased by 50%. Gerdau did not announce significant divestments in 2015.

CSN – Companhia Siderúrgica Nacional also developed a formal divestment plan to decrease the firm's financial leverage. CSN announced plans to raise approximately US$ 256 million in the short term through the sale of a container terminal (Tecon), the largest in Rio de Janeiro state and one of the largest in Brazil, which has a capacity to handle 400 thousand containers per year.

Several of the other ranked firms have also opted to strategically divest certain assets to focus on their core businesses. For example, BRF, one of the world's largest producers of fresh and frozen meat, sold a dairy operation that included nationally recognized brands for approximately US$ 538 million.

In February 2015 Alpargatas' Board of Directors approved the sale to Camargo Correa of all of its interest in in the Tavex Group, a Spanish company with plants in Argentina, for approximately US$ 4 million. Tavex Group is a manufacturer of denim, cotton fabric and workwear textiles. Alpargatas become an equity holder in Tavex in 2006 following a merger. According to analysts, Tavex proved to be a poor investment and negatively impacted Alpargatas' financial results over the course of several years.

In October 2015, Magnesita closed one of its plants in Chizhou, China. The plant produced dolomitic refractories primarily for the Chinese market.

The *Fusões e Aquisições Blogspot* mapped 193 M&A divestment transactions of 43 firms worth an estimated US$ 52 billion announced for 2015-16. Of these 193 announced transactions, 80 of them, with an aggregate value of approximately US$ 14.3 billion, occurred in 2015 (Figure 4).

Among the 43 firms, we highlight Petrobras, Vale, Eletrobras (Electricity industry) and other construction firms as the most representative regarding divestment. The oil and gas extraction industries (Petrobras mainly) dominate the announced transactions, followed by electricity and construction (Figure 3).

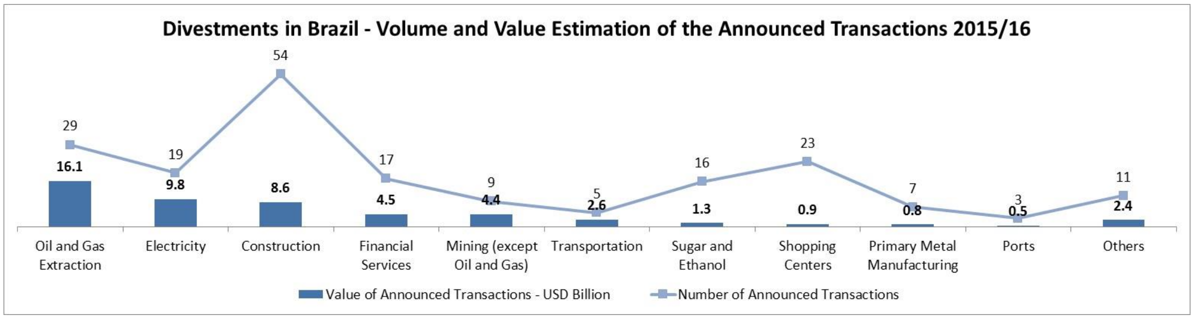

Figure 3 – Divestments in Brazil - Volume and Value Estimation of the Announced Transactions 2015/16 in USD Billion*

Source: Fusões e Aquisições Blogspot. Available at:
http://fusoesaquisicoes.blogspot.com/2016/01/desinvestimento-em-2015-193-operacoes.html

***Note:** The exchange rate used was the official Brazilian exchange rate (Ptax) published by Brazilian Central Bank on the last working day of 2015 (BRL 3.904 for each USD in 2015).

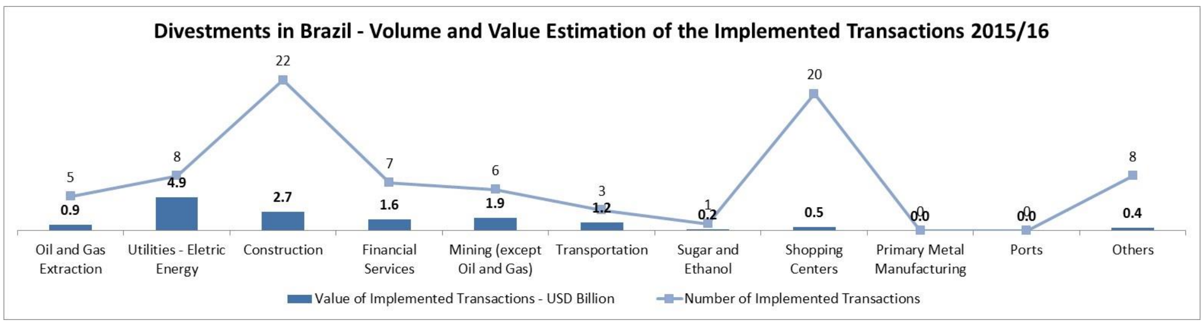

Figure 4 – Divestments in Brazil - Volume and Value Estimation of the Announced Implemented Transactions 2015/16 in USD Billion*

Source: Fusões e Aquisições Blogspot. Available at:
http://fusoesaquisicoes.blogspot.com/2016/01/desinvestimento-em-2015-193-operacoes.html

***Note:** The exchange rate used was the official Brazilian exchange rate (Ptax) published by Brazilian Central Bank on the last working day of 2015 (BRL 3.904 for each USD in 2015).

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Emerging Markets Global Players Project

This report on Brazilian multinationals was prepared under the framework of the Emerging Market Global Players (EMGP) Project, a collaborative effort led by the Columbia Center on Sustainable Investment (CCSI). It brings together researchers on FDI from leading institutions in emerging markets to generate annual reports on the top multinationals in each participating country. Since 2007, reports on 16 economies have been published (some with multiple reports). For further information, visit: http://www.ccsi.columbia.edu/content/emerging-market-global-players.

Center of International Financial Management Studies (IFM) of Fundação Getulio Vargas

The Center of International Financial Management Studies (IFM) of Fundação Getulio Vargas is a venue for study of interdisciplinary topics related to corporate finance and international business. Its focus is financial management of domestic and multinational corporations in the main emerging markets. Its main areas of interest are: strategies and innovations for local and international financing, analysis of investment projects and valuation, corporate governance and ownership structure of multinationals, international mergers, acquisitions and restructuring, management of risks related to international financial exposure, treasury management, and international investment funds. For further information, visit: http://eaesp.fgvsp.br/en/teaching-knowledge/finance-institute

Columbia Center on Sustainable Investment

The Columbia Center on Sustainable Investment (CCSI), a joint center of Columbia Law School and the Earth Institute at Columbia University, is a leading applied research center and forum dedicated to the study, practice and discussion of sustainable international investment. The mission of the Center is to develop and disseminate practical approaches and solutions, as well as to analyze topical policy-oriented issues, in order to maximize the impact of international investment for sustainable development. The Center undertakes its mission through interdisciplinary research, advisory projects, multi-stakeholder dialogue, educational programs, and the development of resources and tools. For more information, visit http://www.ccsi.columbia.edu/.

Annex Table 1. Brazil: The top 20 multinationals: Key variables, 2015 (US$ million[23] and number of employees[24])

Rank by Foreign Assets – 2015	Company	Foreign Assets	Total Assets	FA/TA	Foreign Sales	Total Sales	FS/TS	Foreign Employees	Total Employees	FE/TE	TNI	No. of Host Countries
1	Vale	21,116	88,512	24%	18,550	21,900	85%	16,248	74,098	22%	43%	25
2	JBS	13,901	31,187	45%	36,522	41,730	88%	100,290	227,168	44%	59%	17
3	Gerdau	12,114	17,986	67%	7,701	11,163	69%	18,650	35,145	53%	63%	14
4	Petrobras	11,182	230,567	5%	7,389	82,387	9%	6,856	78,470	9%	8%	18
5	CSN – Sid. Nacional	6,953	12,462	56%	1,942	3,927	49%	455	23,736	2%	36%	3
6	Fibria	6,450	7,539	86%	2,349	2,582	91%	48	3,929	1%	59%	6
7	Braskem	5,595	15,359	36%	5,820	12,111	48%	1,594	7,995	20%	35%	10
8	Embraer	3,876	11,672	33%	4,598	5,200	88%	2,366	19,373	12%	45%	9
9	Suzano Papel	3,063	7,239	42%	1,817	2,619	69%	224	7,590	3%	38%	6
10	BRF	2,694	10,345	26%	4,139	8,247	50%	5,245	96,279	5%	27%	8
11	Minerva	2,021	2,129	95%	1,790	2,440	73%	1,722	12,993	13%	61%	10
12	Gol	1,506	2,656	57%	283	2,505	11%	329	16,472	2%	23%	8
13	Tupy	1,017	1,473	69%	719	878	82%	3,502	11,690	30%	60%	3
14	Iochpe-Maxion	997	2,047	49%	1,408	1,754	80%	7,448	13,556	55%	61%	16
15	Invepar	956	7,493	13%	72	1,443	5%	617	8,585	7%	8%	1
16	Klabin	769	6,729	11%	473	1,457	32%	130	12,671	1%	15%	2
17	Marcopolo	638	1,291	49%	187	702	27%	1,666	12,471	13%	30%	11
18	Natura	402	2,407	17%	587	2,023	29%	1,440	6,591	22%	23%	8
19	Alpargatas	335	964	35%	433	1,057	41%	4,218	21,380	20%	32%	8
20	Magnesita	317	1,668	19%	598	866	69%	1,400	6,884	20%	36%	27
	TOTAL/AVERAGE	95,901	461,724	42%	97,375	206,991	55%	174,448	697,076	18%	38%	11

Source: Bloomberg and Economatica database, firms' annual reports (*Formulários de Referência* and DFPs *Demonstrações Financeiras Padronizadas* – Standardized Financial Reports), Fundação Dom Cabral's Brazilian Multinationals Ranking 2016[25], and primary data through EMGP's questionnaire.

[23] We used the year-end official Brazilian exchange rate (Ptax) published by Brazilian Central Bank (R$ 3.904 for each USD in the end of 2015).
[24] We did not consider neither outsourced nor seasonal employees.
[25] Available at:
https://www.fdc.org.br/professoresepesquisa/nucleos/Documents/negocios_internacionais/2016/Ranking_FDC_Multinacionais_Brasileiras_2016.pdf

Annex Table 2. Brazil: The top 20 multinationals: Number of host countries, 2015

Rank by Foreign Assets - 2015	Company	Industry	TOTAL	Developed Asia-Pacific	East Asia & The Pacific	Eastern Europe & Central Asia	Latin America & the Caribbean	Middle East & North Africa	North America	Other Europe	South Asia	Sub-Saharan Africa
1	Vale	Mining (except Oil and Gas)	25	2	4	0	4	2	2	3	5	3
2	JBS	Food Manufacturing	17	1	1	0	5	0	2	6	1	1
3	Gerdau	Primary Metal Manufacturing	14	0	0	0	10	0	2	1	1	0
4	Petrobras	Oil and Gas Extraction	18	1	1	0	8	0	1	2	1	4
5	CSN - Sid. Nacional	Primary Metal Manufacturing	3	0	0	0	0	0	1	2	0	0
6	Fibria	Paper and Allied Products	6	0	1	0	0	0	1	3	1	0
7	Braskem	Chemical Manufacturing	10	0	0	0	6	0	1	2	1	0
8	Embraer	Transportation Equipment Manufacturing	9	0	1	0	0	1	1	5	1	0
9	Suzano Papel	Paper and Allied Products	6	0	1	0	1	1	1	2	0	0
10	BRF	Food Manufacturing	8	0	1	0	4	1	0	2	0	0
11	Minerva	Food Manufacturing	10	0	1	1	4	3	1	0	0	0
12	Gol	Transportation by Air	8	0	0	0	7	0	1	0	0	0
13	Tupy	Transportation Equipment Manufacturing	3	0	0	0	1	0	1	1	0	0
14	Iochpe-Maxion	Transportation Equipment Manufacturing	16	1	2	2	3	0	1	4	2	1
15	Invepar	Support Activities for Transportation	1	0	0	0	1	0	0	0	0	0
16	Klabin	Paper and Allied Products	2	0	0	0	1	0	1	0	0	0
17	Marcopolo	Transportation Equipment Manufacturing	11	1	1	1	3	1	2	0	1	1
18	Natura	Merchant Wholesalers, Nondurable Goods	8	0	0	0	7	0	0	1	0	0
19	Alpargatas	Leather and Allied Product Manufacturing	8	0	0	0	1	0	1	6	0	0
20	Magnesita	Mining (except Oil and Gas)	27	2	3	0	8	2	2	7	2	1
	Average		10.5	0.4	0.9	0.2	3.7	0.6	1.1	2.4	0.8	0.6

Source: Firms' Annual Reports (*Formulários de Referência* and DFPs *Demonstrações Financeiras Padronizadas* – Standardized Financial Reports) and website. East Asia & The Pacific has excluded developed Asia-Pacific countries such as Japan, Australia, and New Zealand.

Annex Table 3. Brazil: The top 20 multinationals: Stock exchange listing, 2015

Rank by Foreign Assets - 2015	Company	Domestic (Brazil)	Foreign
1	**Vale**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 2000 Bolsas y Mercados Españoles (BME - Labitex) - Since 2000 Hong Kong Stock Exchange - Since 2010
2	**JBS**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 2000
3	**Gerdau**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 1999 Bolsas y Mercados Españoles (BME - Labitex) - Since 2002
4	**Petrobras**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 2000 Bolsas y Mercados Españoles (BME - Labitex) - Since 2002 Buenos Aires Stock Exchange (BCBA) - Since 2006
5	**CSN – Sid. Nacional**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 1997
6	**Fibria**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 2000
7	**Braskem**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 1998 Bolsas y Mercados Españoles (BME - Labitex) - Since 2003
8	**Embraer**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 2000
9	**Suzano Papel**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 1993
10	**BRF**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 1996
11	**Minerva**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 2011
12	**Gol**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 2004
13	**Tupy**	São Paulo Stock Exchange (BM&FBOVESPA)	None
14	**Iochpe-Maxion**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 1994
15	**Invepar**	São Paulo Stock Exchange (BM&FBOVESPA)	None
16	**Klabin**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 1994
17	**Marcopolo**	São Paulo Stock Exchange (BM&FBOVESPA)	None
18	**Natura**	São Paulo Stock Exchange (BM&FBOVESPA)	None
19	**Alpargatas**	São Paulo Stock Exchange (BM&FBOVESPA)	None
20	**Magnesita**	São Paulo Stock Exchange (BM&FBOVESPA)	New York Stock Exchange (NYSE) - Since 2010

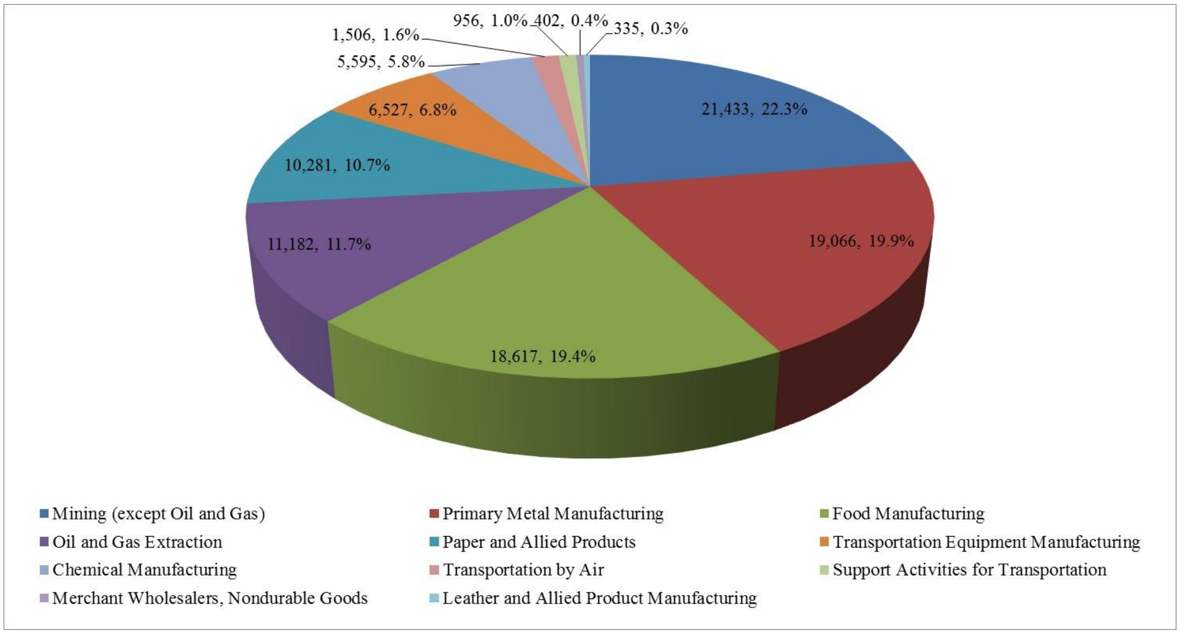
Source: Firms' Annual Reports (*Formulários de Referência*)

Annex Table 4. Brazil: The top 20 multinationals: CEO and Board of Directors' composition, 2015

Rank by Foreign Assets – 2015	Firms	CEO – 2015	CEO Gender	CEO Nationality	Titular Board Members	Men	Women	% Men	% Women	Brazilians	Foreigners	% Brazilians	% Foreigners	Foreigners Nationality
1	Vale	Murilo Pinto de Oliveira Ferreira	Man	Brazilian	11	11	0	100.0%	0.0%	10	1	90.9%	9.1%	Japanese
2	JBS	Wesley Mendonca Batista	Man	Brazilian	8	8	0	100.0%	0.0%	7	1	87.5%	12.5%	Egyptian
3	Gerdau	André Bier Gerdau Johannpeter	Man	Brazilian	6	6	0	100.0%	0.0%	6	0	100.0%	0.0%	
4	Petrobras	Aldemir Bendine	Man	Brazilian	9	8	1	88.9%	11.1%	9	0	100.0%	0.0%	
5	CSN - Sid. Nacional	Benjamin Steinbruch	Man	Brazilian	6	6	0	100.0%	0.0%	6	0	100.0%	0.0%	
6	Fibria	Marcelo Strufaldi Castelli	Man	Brazilian	9	9	0	100.0%	0.0%	9	0	100.0%	0.0%	
7	Braskem	Fernando Musa	Man	Brazilian	11	11	0	100.0%	0.0%	11	0	100.0%	0.0%	
8	Embraer	Paulo Cesar de Souza e Silva	Man	Brazilian	10	9	1	90.0%	10.0%	10	0	100.0%	0.0%	
9	Suzano Papel	Walter Schalka	Man	Brazilian	9	8	1	88.9%	11.1%	9	0	100.0%	0.0%	
10	BRF	Pedro de Andrade Faria	Man	Brazilian	8	8	0	100.0%	0.0%	8	0	100.0%	0.0%	
11	Minerva	Fernando Galletti de Queiroz	Man	Brazilian	10	10	0	100.0%	0.0%	7	3	70.0%	30.0%	Saudi-Arabian
12	Gol	Paulo Sergio Kakinoff	Man	Brazilian	5	5	0	100.0%	0.0%	5	0	100.0%	0.0%	
13	Tupy	Luiz Tarquinio Sardinha Ferro	Man	Brazilian	9	9	0	100.0%	0.0%	8	1	88.9%	11.1%	Turkish
14	Iochpe-Maxion	Marcos Sergio de Oliveira	Man	Brazilian	9	9	0	100.0%	0.0%	9	0	100.0%	0.0%	
15	Invepar	Erik da Costa Breyer	Man	Brazilian	8	8	0	100.0%	0.0%	8	0	100.0%	0.0%	
16	Klabin	Fabio Schvartsman	Man	Brazilian	13	12	1	92.3%	7.7%	13	0	100.0%	0.0%	
17	Marcopolo	Francisco Gomes Neto	Man	Brazilian	8	7	1	87.5%	12.5%	8	0	100.0%	0.0%	
18	Natura	Roberto Oliveira de Lima	Man	Brazilian	9	7	2	77.8%	22.2%	9	0	100.0%	0.0%	
19	Alpargatas	Márcio Luiz Simões Utsch	Man	Brazilian	6	6	0	100.0%	0.0%	4	2	66.7%	33.3%	Spanish and Egyptian
20	Magnesita	Octavio Cortes Pereira Lopes	Man	Brazilian	9	9	0	100.0%	0.0%	8	1	88.9%	11.1%	Italian/American
				Average	8.7	8.3	0.4	96.3%	3.7%	8.2	0.45	94.6%	5.4%	

Source: Firms' Annual Reports (*Formulários de Referência* and DFPs *Demonstrações Financeiras Padronizadas* – Standardized Finzncial Reports) and website.

Annex Figure 1. Breakdown of the foreign assets of the top 20 multinationals, by main industries, 2015



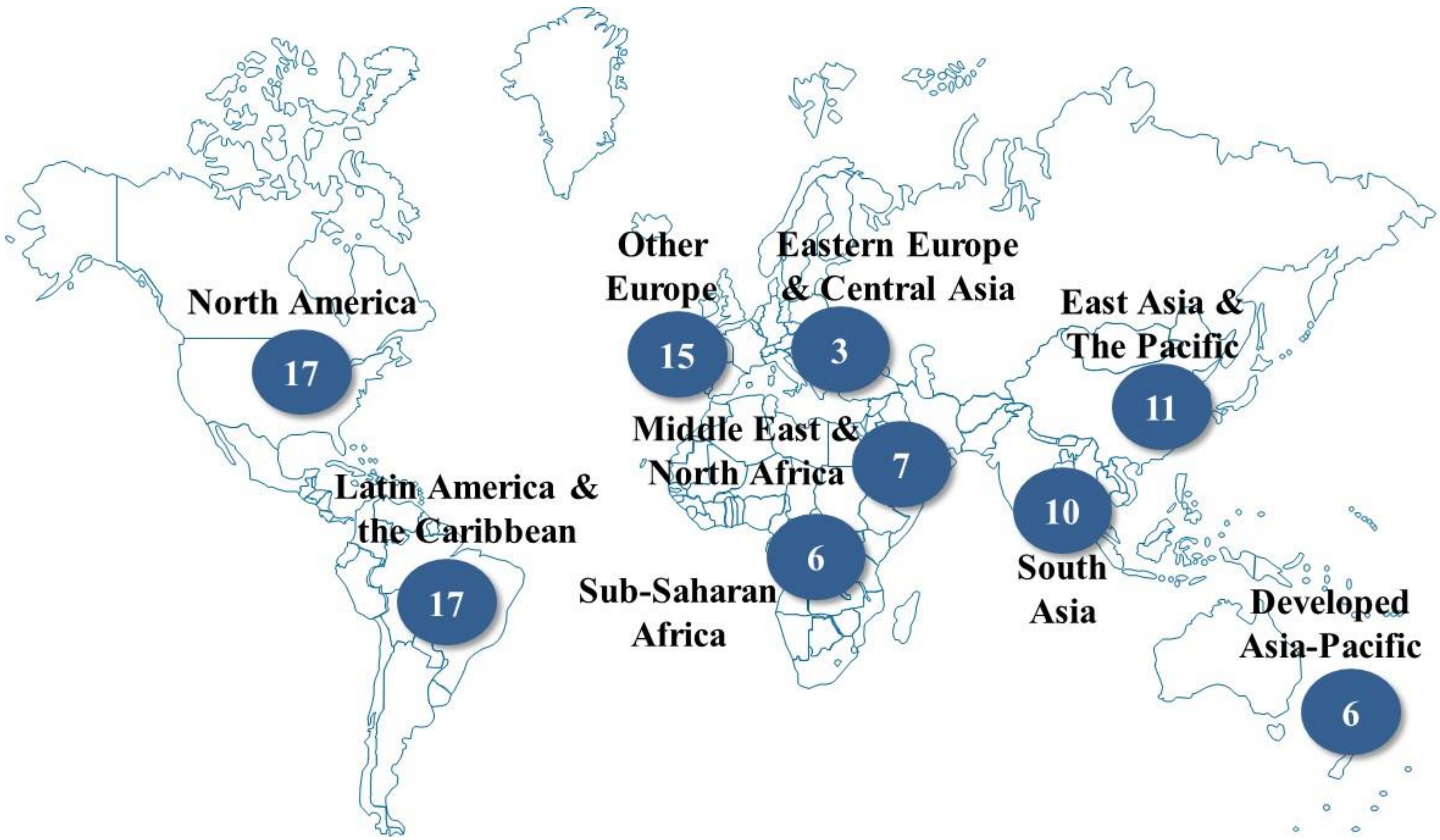
TOTAL FOREIGN ASSETS - 2015 - USD Million*	N. of firms	Foreign Assets 2015	% of Total
Mining (except Oil and Gas)	2	21,433	22.3%
Primary Metal Manufacturing	2	19,066	19.9%
Food Manufacturing	3	18,617	19.4%
Oil and Gas Extraction	1	11,182	11.7%
Paper and Allied Products	3	10,281	10.7%
Transportation Equipment Manufacturing	4	6,527	6.8%
Chemical Manufacturing	1	5,595	5.8%
Transportation by Air	1	1,506	1.6%
Support Activities for Transportation	1	956	1.0%
Merchant Wholesalers, Nondurable Goods	1	402	0.4%
Leather and Allied Product Manufacturing	1	335	0.3%
TOTAL	**20**	**95,901**	**100.0%**

* The exchange rate used was the official Brazilian exchange rate (Ptax) published by Brazilian Central Bank on the last working day of 2015 (BRL 3.904 for each USD in 2015).

Source: Bloomberg and Economatica database, firms' annual reports (*Formulários de Referência* and DFPs *Demonstrações Financeiras Padronizadas* – Standardized Financial Reports), Fundação Dom Cabral's Brazilian Multinationals Ranking 2016[26], and primary data through EMGP's questionnaire.

[26] Available at: https://www.fdc.org.br/professoresepesquisa/nucleos/Documents/negocios_internacionais/2016/Ranking_FDC_Multinacionais_Brasileiras_2016.pdf

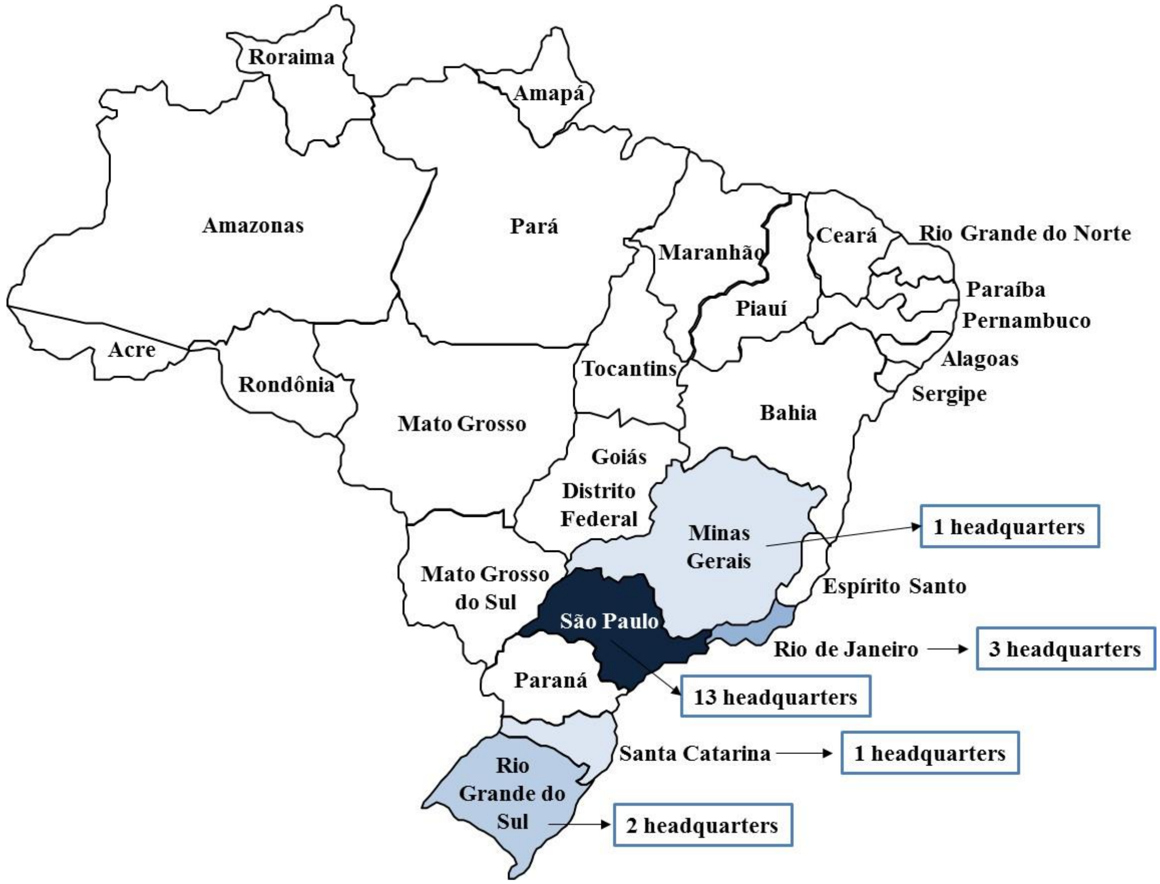
Annex Figure 2. Brazil: Number of firms with operations[27] in each region, 2015



Source: Firms' Annual Reports (*Formulários de Referência* and DFPs *Demonstrações Financeiras Padronizadas* – Standardized Financial Reports) and website.

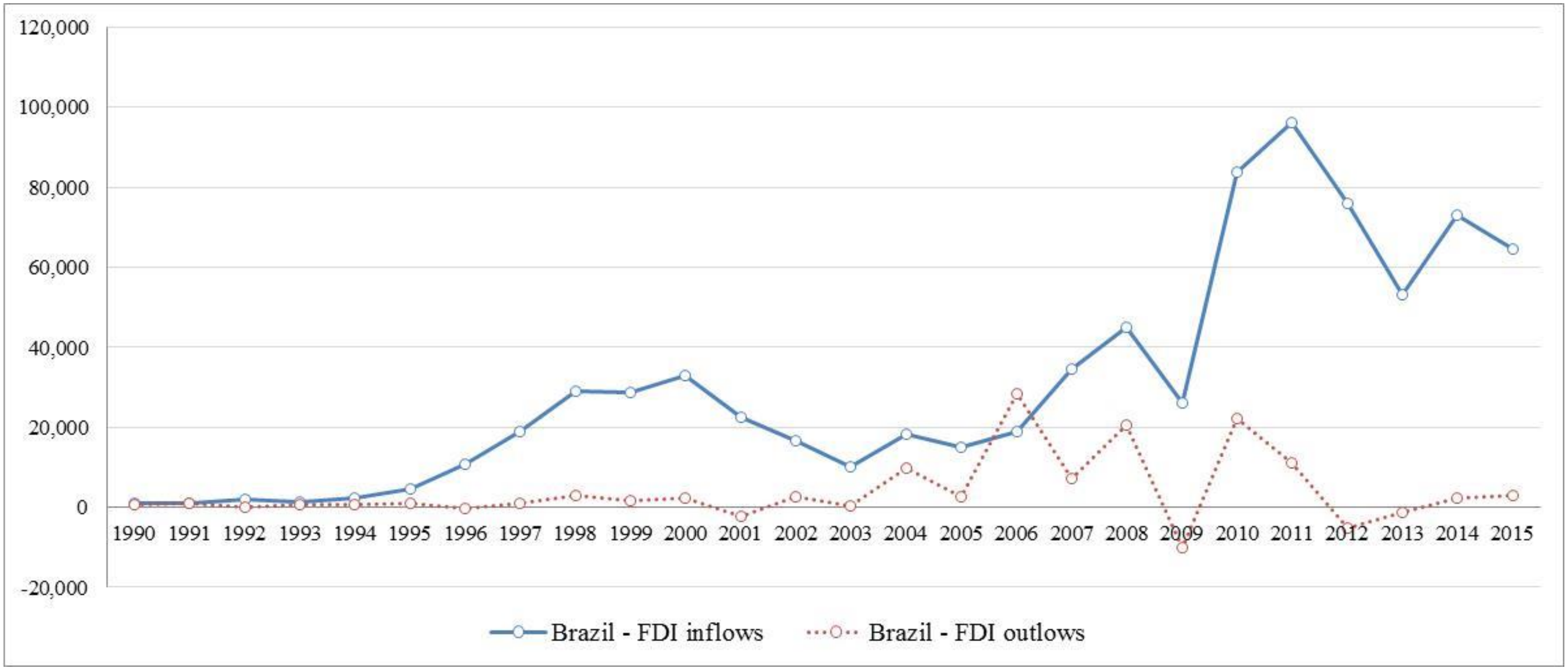
[27] We have considered either a plant, or a commercial subsidiary, or a business office, or a distribution center.

Annex Figure 3. Brazil: Head office locations of the top 20 multinationals 2015



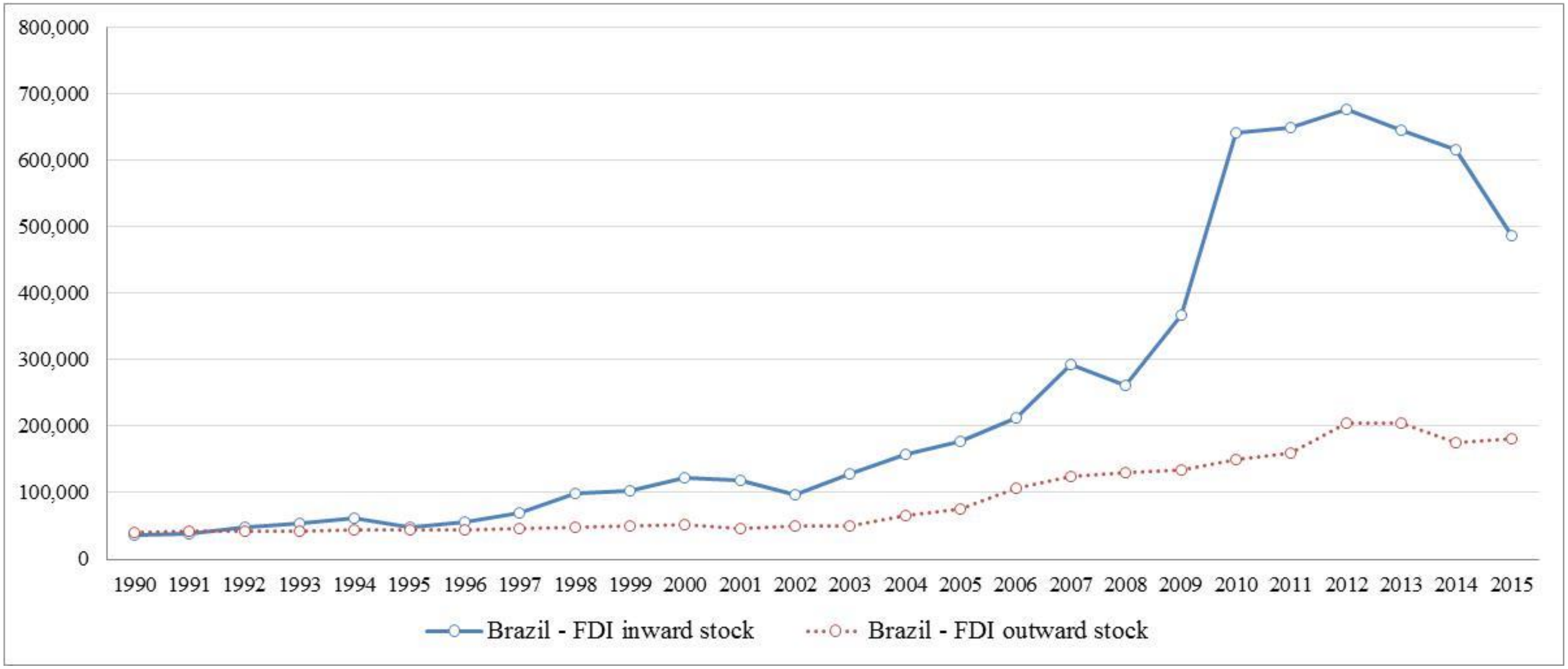
Source: Registering Forms (*Formulários Cadastrais*) and companies' websites

Annex Figure 4. Brazil: Inward and Outward FDI flows, 1990-2015 (USD million)



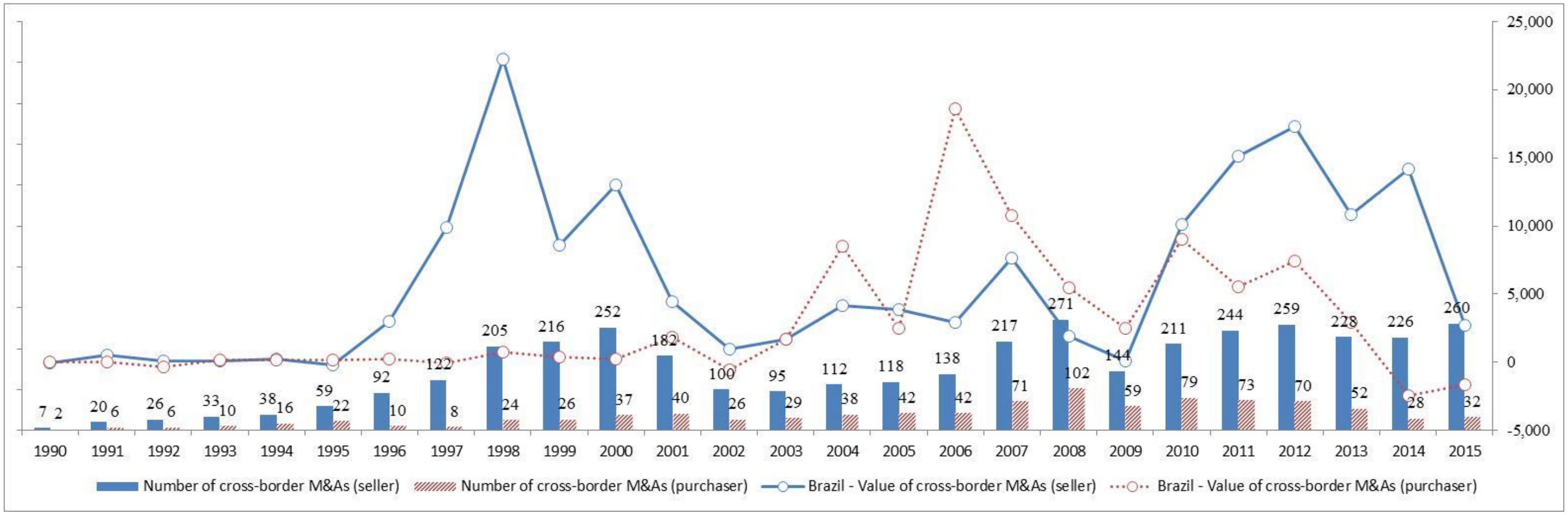
Source: United Nations Conference on Trade and Development (UNCTAD), FDI STAT On-line database, (Geneva: United Nations Conference on Trade and Development). Available at: http://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx

Annex Figure 5. Brazil: Inward and Outward FDI stock, 1990-2015 (USD million)



Source: United Nations Conference on Trade and Development (UNCTAD), FDI STAT On-line database, (Geneva: United Nations Conference on Trade and Development). Available at: http://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx

Annex Figure 6. Brazil: Cross-border M&A, 1990-2015 (USD million)



Source: United Nations Conference on Trade and Development (UNCTAD), FDI STAT On-line database, (Geneva: United Nations Conference on Trade and Development). Available at: http://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx

Annex II: Brief Profiles of the Top 20 Multinationals[28]

No. 1. Vale
http://www.vale.com/brasil/EN/Pages/default.aspx

Vale is one of the largest metals and mining firms and one of the largest companies in the world. Vale is the world's largest producer of iron ore and iron ore pellets, key raw materials for steelmaking, and the world's largest producer of nickel, which is used to produce stainless steel and metal alloys employed in the production of aircraft, autos, mining and energy equipment, mobile phones, batteries, special batteries for hybrid electric vehicles and several other products. Vale also produces manganese ore, ferroalloys, metallurgical and thermal coal, copper, platinum group metals, gold, silver, cobalt, potash, phosphates and other fertilizer nutrients, important raw materials for the global industrial and food production industries.

No. 2. JBS
http://www.jbs.com.br/en

With over 60 years' experience, JBS is currently the world's largest producer of proteins. The company processes beef, lamb, pork and chicken as well as leather. The company also markets hygiene and cleaning products, collagen, metal packaging, biodiesel and other items. The group's extensive portfolio includes world-renowned brands such as Swift, Friboi, Maturatta, Cabana Las Lilas, Pilgrim's, Gold Kist Farms, Pierce and 1855. This wide range of products and the company's operations in 24 countries on five continents (including production platforms and offices) serve customers in over 150 countries. The company went public in 2007 and its stock is currently traded on the BM&FBovespa.

No. 3. Gerdau
http://www.gerdau.com/br/en/home

Gerdau's history dates back to 1901, when it started as a nail factory in Porto Alegre, Brazil. Today, Gerdau has hundreds of locations in 14 countries around the world and its products are present in the daily lives of millions of people. Annually, millions of tons of scrap are recycled and turned into quality steel, which serves the construction, industrial, agricultural and automotive sectors. Gerdau is the leading producer of long steel in the Americas, Europe and Asia, and one of the largest suppliers of special long steel in the world. Additionally, Gerdau is the largest supplier to the automotive industry worldwide. In Brazil, Gerdau also produces flat steel and iron ore, which expands its product mix and improves the competitiveness of its operations.

No. 4. Petrobras
http://www.petrobras.com.br/en/

Petróleo Brasileiro S.A., or Petrobras, is a semi-public Brazilian multinational Energy Corporation headquartered in Rio de Janeiro, Brazil. Petrobras operates on an integrated basis and specialized in the oil, natural gas and energy industry. The company is present in

[28] All the information provided in this section was taken from the firms' websites and reports.

the exploration and production, refining, marketing, transportation, petrochemicals, oil product distribution, natural gas, electricity, chemical-gas and biofuel segments. It is one of the largest companies in the Southern Hemisphere by capitalization and one of the largest in Latin America measured by revenue.

No. 5. CSN – Companiha Siderúrgica Nacional
http://www.csn.com.br/default_eni.asp?idioma=1&conta=46

Founded in April of 1941, CSN is one of the most efficient integrated steel-producing complexes in the world. The company operates in five strategic sectors of the economy: steel, mining, logistics, cement and energy. Currently, among its assets, the company has an integrated steel mill; five plants, three of which are abroad; iron ore, limestone, dolomite and tin mines; a strong distributor of flat steel; port terminals; interest in railways; and interest in two hydroelectric plants. CSN was the first integrated flat steel producer in Brazil - a landmark in the country's industrialization process. In 2001, CSN began its internationalization process with the acquisition of the assets of Heartland Steel.

No. 6. Fibria
http://www.fibria.com.br/en/

Fibria is a Brazilian company with a strong presence in the global forest products market. The firm invests in the cultivation of forests as a renewable and sustainable source of life, generating wealth and economic growth, promoting human social development and ensuring the conservation of the environment. Fibria is the global largest producer of eucalyptus pulp. In partnership with Cenibra, it operates Portocel, in Aracruz, the only Brazilian port specialized in pulp shipments. In October 2012, the company entered into a strategic alliance with the Canadian company Ensyn to invest in renewable fuels derived from wood and biomass.

No. 7. Braskem
http://www.braskem.com.br/home-en

Created in August 2002 by the integration of six companies from Odebrecht Group and the Mariani Group, Braskem is currently the largest producer of thermoplastic resins in the Americas, the world leader in the production of biopolymer and the largest producer of polypropylene in the United States. Its production focuses on polyethylene, polypropylene and polyvinylchloride (PVC) resins, in addition to basic chemical inputs such as ethylene, propylene, butadiene, benzene, toluene, chlorine, soda, and solvents, among others. Together, they make up one of the most comprehensive portfolios in the industry by also including the green polyethylene produced from the sugarcane ethanol, from 100% renewable sources.

No. 8. Embraer
http://www.embraer.com/en-us/Pages/Home.aspx

Embraer has become one of the largest aircraft manufacturers in the world. With headquarters in São José dos Campos, Brazil, and offices, subsidiaries and customer service bases in China, France, Portugal, Singapore and the United States, Embraer is a customeroriented company with decades of experience in designing, manufacturing, selling and supporting aircraft for the global airline, defense and business aviation markets. Founded in 1969 as a state-owned company, Embraer was privatized in 1994. Embraer also provides a product package, with comprehensive aircraft and after-sales support for parts, services, and technical assistance.

No. 9. Suzano Papel e Celulose
http://www.suzano.com.br/portal/suzano-pulp-and-paper.htm

Suzano Pulp and Paper, is a centenary forestry based publicly held company that is present in two segments: market pulp (paper grade and fluff), paper (coated and uncoated printing and writing paper) and paperboard. The company is the second largest producer of eucalyptus pulp in the world and leader in the paper market in Latin America. Suzano also operates in the biotechnology industry through FuturaGene, the first company in the world to obtain approval for the commercial use of genetically modified eucalyptus, that focuses on the genetic development of forestry and biofuel crops, with research laboratories in Israel and China.

No. 10. BRF
http://www.brf-global.com/brasil/en/

BRF is a Brazilian food company created in 2009 from the merger of Perdigão and Sadia. The company is one of the largest producers of fresh and frozen protein foods in the world. BRF is responsible for 14% of the world trade in poultry. BRF owns 47 plants in all regions of Brazil and 42 distribution centers, 27 of which are in the domestic market and 15 of which are in its export markets. In the international market, BRF has a leading brand, Sadia, in various categories in Middle Eastern countries.

No. 11. Minerva Foods
http://portal.minervafoods.com/en

Minerva Foods produces and sells beef, leather, exports live cattle and meat products, and processes beef, pork and poultry. One of the leading companies in the industry in South America, Minerva Foods has a privileged position in the international market, exporting to more than 100 countries in five continents.

No. 12. Gol
https://www.voegol.com.br/en

Gol is a Brazilian airline started its operations in 2001. The company was a first to sell low-cost tickets in the country and is the airline that transports the most passengers in Brazil nowadays.

No. 13. Tupy
http://www.tupy.com.br/ingles/home/index.php

Founded in 1938, Tupy has an annual production capacity of 848 thousand tons of cast iron parts in four industrial plants: two in Brazil, and two units in Mexico. Tupy employs 11,000 people, and exports over 80% of its annual production to more than 40 countries. Besides Brazil, for the commercialization and customer service, Tupy counts on offices located in United States and Germany. A large share of Tupy's production consists of components developed under request for the automotive sector, which includes trucks, buses, agriculture and road construction machinery, passenger vehicles, industrial and marine engines, etc. The parts include engine blocks and heads and parts for brake, transmission, steering, axle and suspension systems. Tupy also manufactures and commercializes malleable cast iron pipe fittings, steel shots and grits and continuous casting, which are supplied to several industrial sectors.

No. 14. Iochpe-Maxion
http://www.iochpe.com.br/Default.aspx?linguagem=en#

Founded in 1918, Iochope-Maxion is a leading global company in the segments in which it operates, particularly in the production of wheels and structural components for light and commercial vehicles. The firm is also a leader in the segment of railway equipment in Brazil. Iochpe-Maxion has industrial units located in different countries. In the automotive segment, the company operates through the divisions: wheels and structural components. Its structural components division produces side bars, crossbars and complete chassis for commercial vehicles, and structural stamped items for light vehicles. In the railway segment, Iochpe-Maxion produces freight cars, wheels as well as railway and industrial castings through its joint venture AmstedMaxion.

No. 15. Invepar
http://www.invepar.com.br/Default.aspx?linguagem=en#

Invepar is a Brazilian group which operates in the transportation infrastructure segment in Brazil and abroad, focusing on the management and operation of toll roads, urban mobility systems, and airports. Currently, the Invepar Group comprises public-service concessionaires in the toll road, urban mobility and airport segments. Invepar has become a sector benchmark and one of the largest private infrastructure operators in Brazil.

No. 16. Klabin
https://www.klabin.com.br/en/home/

Founded in 1899, Klabin, Brazil's largest paper producer and exporter, is the leading manufacturer of paper and board for packaging, corrugated board packaging, industrial bags and timber in logs. It is also the only one in the country to simultaneously supply to the market, hardwood pulp (eucalyptus), softwood pulp (pine) and fluff pulp.

No. 17. Marcopolo
http://www.marcopolo.com.br/marcopolo_sa/en/

Marcopolo is a Brazilian bus and coach manufacturer founded in 1949, in the southern Brazilian city of Caxias do Sul, state of Rio Grande do Sul. The company manufactures the bodies for a whole range of coaches, e.g. microbus, intercity and touring coaches. Marcopolo produces over half of the bus bodies made in Brazil and exports its coaches to more than 60 countries. Currently Marcopolo has four plants in Brazil and plants in Argentina, Australia, Colombia, India, Mexico, South Africa, and China. Recently it announced a joint-venture with Tata Motors to enter the Indian market.

No. 18. Natura
http://www.natura.com.br/

Natura is a Brazilian manufacturer and marketer of beauty products, and personal care, skin care, solar filters, cosmetics, perfume and hair care products. The company was founded in 1969 and became a public company in 2004. Currently the company is the second largest Brazilian cosmetics company by revenue. In 1974, Natura adopted direct sales as its sales model. It has "consultants" (resellers) spread throughout countries including Argentina, Brazil, Chile, Colombia, France, Mexico, and Peru.

No. 19. Alpargatas
http://www.alpargatas.com.br/#/conheca-empresa

Alpargatas is the leader and the largest footwear manufacturing company in Latin America. Together, Havaianas and Dupé lead the domestic sandal market. It also has licenses for the Mizuno and Timberland brands. Havaianas is the most recognized Brazilian consumer goods brand internationally. Topper is the leader of the Brazilian soccer market and the first athletic footwear brand in Argentina. Mizuno is the leading brand in high performance running, and Timberland, in premium outdoor footwear. The portfolio is completed by Rainha, Brazil's most traditional brand of sporting goods and Sete Léguas working boots. The company operates four factories in Brazil and eight in Argentina. It has operations in the United States and Europe and exports Havaianas to more than 100 countries. Alpargatas has more than 600 stores worldwide, most of which commercializing the Havaianas brand.

No. 20. Magnesita
http://www.magnesita.com.br/en/home

Magnesita is a Brazilian company devoted to mining, production and marketing of a broad range of refractory materials. The products are mainly used by steel, cement and glass manufacturers. The company has the benefit of one of the largest and best magnesite, dolomite and talcum reserves in the world. Furthermore, it prospects other mineral deposits all over the world. Currently, the company operates 28 industrial and mining units, 16 of them in Brazil, three in Germany, three in China, two in France, one in the United States, one in Belgium, one in Taiwan and one in Argentina. Magnesita is the third largest producer of refractory products in the world and a leader in integrated solutions with refractory products.