

**BRAZIL: AN APPLICATION OF PORTER'S DIAMOND AND
ATTRACTIVENESS ANALYSIS FOR FRENCH FDI**

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Resumo

A atratividade de um país é medida pelo retorno de custo de capital, que deve ser maior ou igual ao obtido em outro negócio e com um nível aceitável de risco de operação a seus funcionários e acionistas. Para tal avaliação, as oportunidades de mercado e riscos do país são balanceados e comparados a outros países de características similares.

A estagnação da economia europeia tem gerado entre os países europeus a necessidade de expandir seus horizontes à outras partes do globo onde a economia é mais dinâmica e propícia a resultados positivos.

França é o país escolhido como um investigador de novos mercados. Empresas francesas beneficiam-se consideravelmente de investimentos no Brasil, não somente pelo seu crescimento e economia estável, mas também pela poderosa influência em toda a América Latina. O Brasil pode ser a porta de entrada para investimentos franceses nesta região.

Esta dissertação parte da teoria de atratividade e do Diamante de Michael E. Porter para analisar as indústrias e setores em que o Brasil possui vantagem competitiva. Cada atributo do diamante é analisado para evidenciar tal competitividade. Deste modo, algumas qualidades que pareçam fraqueza, podem ser consideradas como oportunidade para investimentos em termos de competitividade mundial.

O estudo feito analisa os dados através de fatos correntes e atual situação econômica do mercado brasileiro, em busca dos pontos economicamente atrativos como país alvo de investimento estrangeiro direto (IED) francês.

Finalmente, os resultados desta pesquisa reveem o uso do Diamante Nacional para a atratividade do país.

Palavras-chave: Diamante de Porter, atratividade de um país, França e Brasil, relação econômica

JEL Classification System: F23 and O54

Abstract

The attractiveness of a country is measured by the return of the cost of capital that has to be equal or higher than those made elsewhere and holding an acceptable operational risk to the investor's employees and shareholders. In order to reach this assessment it is necessary to weigh and compare the markets' opportunities as well as the country risks with other similar countries.

The stagnation of the European economy has generated amongst the European countries the need to expand their horizons to other parts of the globe where the economy is more dynamic and favourable to positive results.

France is the chosen country as a seeker for new markets. French companies benefit largely from investing in Brazil not only because of its growing and steady economy but also by the powerful influence in all Latin America.

This dissertation is based upon the attractiveness theory and of Michael E. Porter's Diamond designed to analyse the industries and sectors in which Brazil has competitive advantage. Each attribute of the diamond is studied to explain such competitiveness. Thus, some qualities that may be seen as a weakness can be considered an opportunity of investment in terms of world-wide competitiveness.

This study analyses data through the lens of current facts and economic situation of Brazilian market revealing its economically attractive points as a target country for French foreign direct investment (FDI).

In conclusion, the findings of the research revise the use of the National Diamond analysis on country's attractiveness for investment.

Keywords: Porter's Diamond, country attractiveness, France and Brazil, economic relation

JEL Classification System: F23 and O54

Executive Summary

Em tempos de crise econômica europeia, mesmo os países mais estáveis e com economia forte buscam meios de sobreviver e manter a economia favorável. Ao mesmo tempo, os países em ascensão aproveitam a oportunidade para impor-se em termos mundiais e conquistar o seu espaço.

Esta dissertação busca através da ferramenta teórica do Diamante de Michael E. Porter, analisar a vantagem competitiva do Brasil e sua atratividade para outros países.

Como alvo de investimento, o Brasil é o país escolhido para este estudo por ser o “B” dos BRIC e pela atual exposição mundial. Muito falado atualmente mas ainda visto com ressalvas, este país tem se mantido entre os maiores em termos de PIB e está em busca de infraestrutura, tecnologia e educação de países desenvolvidos.

Como investidor, o país escolhido é a França. Um importante país europeu que deve buscar parceiros para manter seu desenvolvimento e crescimento positivo.

Os dois países em questão possuem boas relações políticas e econômicas, vários investimentos e parcerias bilaterais, inclusive estratégicas.

Este estudo visa enfatizar, com auxílio da ferramenta teórica escolhida, as características das indústrias e setores brasileiros, bem como possibilidades de investimento pelas empresas francesas, através de exemplos práticos de atividades com capacidade de absorção de novos negócios.

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List of Abbreviations

ANCINE	National Cinema Agency (<i>Agência Nacional do Cinema</i>)
BA	Bahia State
BRIC	Brazil, Russia, India and China
CE	Ceará State
DF	Federal District (<i>Distrito Federal</i>)
EMBRAER	Brazilian Aeronautic Company (<i>Empresa Brasileira de Aeronáutica</i>)
FDI (<i>IED</i>)	Foreign Direct Investments (<i>Investimento Estrangeiro Direto</i>)
GDP (<i>PIB</i>)	Gross Domestic Product (<i>Produto Interno Bruto</i>)
GVA	Gross Value Added
HS	Harmonized System
HDI	Human Development Index
IBGE	Brazilian Institute of Geography and Statistics (<i>Instituto Brasileiro de Geografia e Estatística</i>)
IMF	International Monetary Fund
INSEE	National Institute of Statistics and Economic Studies - France
IPEA	Applied Economic Research Institute (<i>Instituto de Pesquisa Econômica Aplicada</i>)
i.e.	That is (to say); in other words
ITA	Institute of Aeronautic Technology (<i>Instituto Tecnológico de Aeronáutica</i>)
MDIC	Ministry of Development, Industry and Foreign Trade (<i>Ministério do Desenvolvimento, Indústria e Comércio Exterior</i>)
MERCOSUR (MERCOSUL)	Common Market of South (<i>Mercado Comum do Sul</i>)
MG	Minas Gerais State
NCM	MERCOSUR Common Nomenclature (<i>Nomenclatura Comum do Mercosul</i>)
OECD	Organization for Economic Co-operation and Development

PESTEL	Political, Economic, Social, Technological, Environmental and Legal
PPP	Purchasing-Power-Parity
R\$	Brazilian currency: Real
RJ	Rio de Janeiro State
SP	São Paulo State
SWOT	Strengths, Weaknesses, Opportunities and Threats
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization

** Between parenthesis, the translation in Portuguese, if applicable.*

1 Introduction

The main objective of this paper is to provide a study on country's attractiveness, specifically, Brazil, under the theoretical framework of Michael E. Porter's Diamond theory in a French perspective of internationalization strategy.

The analysis of the four determinants of the National Diamond theory helps to perceive which are the industries and clusters in the target country that represents an international competitive advantage. This paper emphasizes the relevance of Brazilian's competitive advantage and attractiveness.

Brazil as a BRIC has a significant participation in the world's economy and the visibility it generates attracts the attention of other countries.

France is the chosen country analysed as a potential investor in Brazil.

In the context of World Trade Organization, these two nations have different characteristics in socio-economic aspects and the bilateral relationship can help them complete the missing points and balance their needs.

The choice of two countries in different continents with many dissimilarity was made to prove a point of observation that a country considered "developing" (World Trade Organization, 2013), and other considered in common practice "developed" (United Nations Statistics, 2003) are striving in the same world economy and in the same level of offers.

The economic connections can be called as "bilateral relationship". Little & Marandi (2003) define the bilateral relationship as "those with a high level of both action and belief components. The relationship is important to both parties economically, and considerable trust and commitment to long-term development of the relationship exists on both sides".

The treaty signed by the presidents of France and Brazil in the meeting that took place in the end of 2012, and its agreements and contracts under way will be analysed.

2 Brazil

This chapter will give a panoramic view of the fundamental characteristics of Brazil such as demography, economy and politics, with special emphasis in the current economic situation of the country.

The history of Brazil started to be written in 1500, when the Portuguese navigators landed on its shores. Because of its immense vastness of resources and the amenity of the climate, people from all over the world migrated to Brazil in search for a better life, contributing thus far to the rich melting pot that is the Brazilian culture.

The official language of Brazil is Portuguese.

The data source for many of the referential information about Brazil is from IBGE and the reports are presented in its local currency: Brazilian Real (R\$).

Most part of referential data in this paper is from the year of 2010. Since the Brazilian Real has currency exchange variations, the U.S. Dollar will be used as common currency to avoid misunderstandings and comparison of different currencies.

The conversion rate was defined as the result of the division of Brazilian's GDP of 2010 (IBGE, 2012, p. 18) in U.S. Dollar by Brazilian's GDP of the same year (The World Bank, 2011) in Brazilian Real:

$$\frac{214303500000}{377008500000} = 0,5684$$

The rate used to exchange Brazilian Real into U.S. Dollar is 0,5684.

2.1 Demography and geography

The population of Brazil according to the census of 2010 (IBGE, Brasil em síntese, 2013) reached the number of 190.755.799 people. The total area of Brazil is 8,515,767.049 km² (IBGE, Sala de Imprensa, 2012).

The country is divided in five macro regions: North, Northeast, Central-West, Southeast and South. Each macro region is composed by states with a governor. Brazil has a total of twenty-six states and the Federal District, where Brasília, the capital of the country is located.

The most populated cities are São Paulo, Rio de Janeiro, Salvador, Brasília, Fortaleza and Belo Horizonte.

<i>City</i>	<i>State</i>	<i>Region</i>	<i>Population</i>
São Paulo	SP	Southeast	11 376 685
Rio de Janeiro	RJ	Southeast	6 390 290
Salvador	BA	Northeast	2 710 968
Brasília	DF	Central-West	2 648 532
Fortaleza	CE	Northeast	2 500 194
Belo Horizonte	MG	Southeast	2 395 785

Table 1: Estimative of population (referring to 2012) for the six most populated cities in Brazil (IBGE, Estimativas de população, 2013)

2.1.1 Region's features

To organize its statistics programme, in 1945, Brazil was divided in five macro regions. The regions were grouped in a historic and geographic perspective. The divisions are relevant to facilitate public policies and decisions regarding the economic location, social and tributary activities, planning, surveys and identification of space structures in urban and rural agglomerations.

The distribution of regions is as follows (Imprensa Nacional Brasileira, 2013, p. 48):

The North region (in Portuguese: *Região Norte*) is composed by seven States: Rondônia, Acre, Amazonas, Roraima, Pará, Amapá and Tocantins.

The Northeast (in Portuguese: *Nordeste*) region is composed by nine States: Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe and Bahia.

The Southeast region (in Portuguese: *Região Sudeste*) is composed by four States: Minas Gerais, Espírito Santo, Rio de Janeiro and São Paulo.

The South region (in Portuguese: *Região Sul*) is composed by three States: Paraná, Santa Catarina and Rio Grande do Sul.

The Central-West region (in Portuguese: *Região Centro-Oeste*) is composed by three States and the Federal District (Brasília): Mato Grosso do Sul, Mato Grosso and Goiás.



Figure 1: Map of Brazil, with division of Regions and States (adapted from IBGE, Mapas)

2.2 Politics

The political structure of a country can greatly influence its business and the role of the Government is essential for the competitive advantage analysis. This section explains the Brazilian structural aspects in politics and the roles of each sphere in the administration system.

Brazil is a Federal Republic formed by the Union, States and Municipalities. It is a Presidential democratic system.

The Union is divided in three independent branches working harmoniously amongst them: the Legislative Power (elaborates the law), the Executive Power (executes programs, laws and provide public services) and the Judicial Power (judges, solves conflicts – it is composed by the courts in different levels: Supreme Federal Court, the Superior Court of Justice and other Superior Courts, the National Justice Council and the Regional Federal Courts) (Portal Brasil, 2009).

The Executive Power for the whole nation is headed by the President. The State level is represented by the Governor and in the Municipality sphere is represented by the Mayor.

The President, Governor and Mayor are elected directly for four years having the possibility of only one re-election in a consecutive term.

The voting system is compulsory for citizens from 18 to 70 years old and it is optional for citizens from 16 to 18 and older than 70 years old (Presidência da República, 1988).

The fundamental objectives of the Union sphere of action are: the construction of a free, fair and solidary society; the guarantee of national development; the eradication of poverty and marginalization, the reduction of social and regional differences and the promotion of the nations' welfare regardless origin, race, sex, colour, age or any other form of discrimination.

The State level of government has the responsibility to provide security, basic sanitation, health, education, culture, tax, and transportation between urban areas.

The Municipality is responsible for education, public transportation and urbanization. Health and local taxes are partial responsibilities of the Municipalities.

The country economy is closely linked to its politics. Each president has a particular style of administration that has an impact on the relationship between private companies and the head government. It means that companies can expect adjustments in each four years, in a normal term of government.

The current Brazilian Government adopts as priority the industrialization, mobility and strategic cooperation in global terms. However, its priorities change according to the needs of the nation.

2.3 Economy

This section will give an overview of Brazilian's economic profile with the main clusters and activities relevant to the country.

Brazil is the largest economy in Latin America (BBC, 2012). It is also a member of the economic block MERCOSUR¹ and one of its founders. Furthermore, Brazil with Russia, India and China form the grouping acronym BRIC, the emerging economies.

According to The World Bank, Brazil represented the 6th country in the GDP ranking of 2011, with a GDP of 2.476.652 million US dollars.

In terms of GDP based on purchasing-power-parity (PPP) per capita, which is "the rate at which the currency of one country would have to be converted into that of another to purchase the same amount of goods and services in each country" (Callen, 2012), Brazil had 11.769,41 US dollars per capita.

The GDP does not indicate the real level of economic development of a country, but it is still a measure to compare how much the countries' economy is moving. The GDP based on PPP per capita helps us to approach the purchasing power considering the same currency for the countries.

¹ MERCOSUR means "Common Market of South" and the countries members are Argentina, Brazil, Paraguay, Uruguay, Venezuela and Bolivia (this last is in process of admission). Source: MERCOSUR, retrieved 03 10, 2013: http://www.mercosur.int/t_generic.jsp?contentid=4002&site=1&channel=secretaria&seccion=3

<i>Country</i>	<i>2 010 GDP* (ranking)</i>	<i>2 011 GDP* (ranking)</i>
United States	14 419 400 (1)	14 991 300 (1)
China	5 930 529 (2)	7 318 499 (2)
Japan	5 495 379 (3)	5 867 154 (3)
Germany	3 284 473 (4)	3 600 833 (4)
France	2 548 315 (5)	2 773 032 (5)
Brazil	2 143 035 (6)	2 476 652 (6)
United Kingdom	2 256 260 (7)	2 445 408 (7)

** (in millions of US dollars)*

Table 2: GDP Ranking of 2010 and 2011 (The World Bank, 2011)

<i>Country</i>	<i>2 010 GDP pc, PPP* (ranking)</i>	<i>2 011 GDP pc, PPP* (ranking)</i>
Luxembourg	84 763,73 (1)	88 780,62 (1)
Qatar	77 868,48 (2)	86 506,64 (2)
Macao SAR, China	65 279,42 (3)	79 480,09 (3)
Singapore	58 061,51 (4)	61 069,58 (4)
Norway	57 451,52 (5)	61 046,19 (5)
France	34 275,76 (24)	35 365,70 (25)
Brazil	11 186,67 (73)	11 634,05 (73)

** (in US dollars)*

Table 3: GDP per capita, PPP of 2010 and 2011 (The World Bank, Search, 2011)

The Brazilian GDP of 2010 showed that it is concentrated in the Southeast region (more than 50%) as well as the population (42%).

<i>Region</i>	<i>GDP *</i>	<i>Population</i>	<i>GDP per capita **</i>
Southeast	1 186 950,18	80 353 724,00	14 771,56
Central-West	199 279,67	14 050 340,00	14 183,26
South	353 691,34	27 384 815,00	12 915,60
North	114 539,37	15 865 678,00	7 219,32
Northeast	288 465,44	53 078 137,00	5 434,73

* (in millions of US dollars)

** (in US dollars)

Table 4: Brazilian GDP global and per capita of 2010, by region (Data Source: IBGE, 2012, p. 18)

The participation of activities in the GDP is measured by the Gross Value Added (GVA) at basic prices. It is the output at basic prices minus intermediate consumption at purchaser prices. The basic price is the amount receivable by the producer from the purchaser for a unit of a product minus any tax on the product plus any subsidy on the product.

	<i>North</i>	<i>Northeast</i>	<i>Southeast</i>	<i>South</i>	<i>Central-West</i>	<i>Total</i>
<i>Agriculture</i>	10,0%	17,1%	29,9%	25,5%	17,4%	100%
<i>Extractives Industry</i>	18,5%	7,4%	71,1%	1,4%	1,6%	100%
<i>Transformation Industry</i>	4,8%	9,3%	60,3%	21,0%	4,7%	100%
<i>Construction</i>	7,1%	17,5%	50,6%	15,3%	9,4%	100%
<i>Production and distribution of facilities ⁽¹⁾</i>	5,1%	20,1%	47,7%	20,0%	7,1%	100%
<i>Commerce</i>	4,8%	15,9%	51,4%	19,5%	8,4%	100%
<i>Transport, storage and mail</i>	4,0%	11,8%	59,4%	18,0%	6,9%	100%
<i>Information Services</i>	2,5%	8,3%	69,9%	12,0%	7,4%	100%
<i>Finances ⁽²⁾</i>	1,9%	8,3%	66,9%	13,9%	9,0%	100%
<i>Real estate activities and rent</i>	5,0%	13,6%	57,1%	15,9%	8,5%	100%
<i>Management, Health, Education and Social Security</i>	7,7%	19,8%	40,1%	13,4%	19,1%	100%
<i>Other services</i>	3,2%	12,6%	62,1%	15,0%	7,1%	100%
<i>Total</i>	5,5%	13,8%	54,4%	16,6%	9,6%	100%

⁽¹⁾ Electricity, gas, water, sewage and public cleaning

⁽²⁾ Financial intermediation, insurance and pension funds and services

Table 5: Percentage of Gross Value Added (GVA) at basic prices, by region in 2010 (IBGE, 2012, pp. 22-23)

The activities that most impacted the GDP of 2010 were the transformation industry and public administration, health, education and social security (each one represents 16,2% of the GVA in the GDP), followed by other services (14,3%) and commerce (12,5%).

		<i>North</i>	<i>Northeast</i>	<i>Southeast</i>	<i>South</i>	<i>Central-West</i>	<i>Total</i>
Activities **	<i>Agriculture</i>	9 718,13	16 686,08	29 110,23	24 811,76	16 971,03	97 297,23
	<i>Extractives Industry</i>	10 074,87	4 058,05	38 739,42	779,90	849,15	54 501,38
	<i>Transformation Industry</i>	14 181,93	27 700,84	179 380,70	62 396,17	13 963,87	297 623,51
	<i>Construction</i>	7 397,50	18 139,10	52 514,03	15 919,06	9 750,47	103 720,16
	<i>Production and distribution of facilities ⁽¹⁾</i>	3 023,57	11 852,53	28 185,20	11 807,92	4 172,13	59 041,34
	<i>Commerce</i>	11 045,34	36 446,62	118 031,57	44 794,35	19 319,79	229 637,67
	<i>Transport, storage and mail</i>	3 673,02	10 836,69	54 668,24	16 540,49	6 326,06	92 044,50
	<i>Information Services</i>	1 486,20	4 907,51	41 290,61	7 067,56	4 348,68	59 100,56
	<i>Finances ⁽²⁾</i>	2 635,38	11 454,42	92 206,86	19 145,32	12 343,83	137 785,82
	<i>Real estate activities and rent</i>	7 141,24	19 580,10	82 014,63	22 804,10	12 164,48	143 704,56
	<i>Management, Health, Education and Social Security</i>	22 939,10	58 710,47	119 029,76	39 739,44	56 727,55	297 146,32
	<i>Other services</i>	8 350,40	33 169,63	163 209,39	39 384,32	18 612,70	262 726,45
<i>Total</i>	101 666,69	253 542,04	998 380,62	305 190,40	175 549,74	1 834 329,49	

* (in millions of US dollars)

⁽¹⁾ Electricity, gas, water, sewage and public cleaning

⁽²⁾ Financial intermediation, insurance and pension funds and services

Table 6: Gross Value Added (GVA) at basic prices, by region in 2010 (Data Source: IBGE, Contas Regionais do Brasil, 2012)

Brazil has a vast diversity of activities and it varies according to the natural resources, geographic position, local needs and tax incentives by the States.

2.3.1 Brazilian Clusters

In this part some important clusters in each region of this country will be explored.

A cluster is a geographic proximate group of interconnected companies, service providers and associated institutions in a particular field (Porter, 2000, p. 15).

In general the clusters are the results of business-government collaboration. The local governments offer tax exemptions, infrastructure (for transportation, electricity, telecommunication) and local support (schools, public services, hospitals). Clusters develop

the cities and surrounding areas, attract qualified workforce, create a mutually support among the group of industries and encourages a pro-competitive behaviour.

Under mentioned is an overview of some important clusters and activities by region:

2.3.1.1 North Region:

Zona Franca de Manaus (Free Zone of Manaus) is a model of economic development, implemented by Brazilian government with the main goal to facilitate an economic basis in the Western Amazonia in order to promote a better productive and social integration in this region. The States belonging to it are Acre, Amazonas, Rondônia and Roraima and the cities Macapá and Santana (from Amapá State). *Zona Franca de Manaus* has three economic clusters: commercial, industrial and agribusiness. The industrial cluster has around 600 high-technology factories and generates more than 500.000 jobs, direct and indirect. The agribusiness' segment has its activities on food production, agriculture, fisheries, tourism, wood processing and others².

Serra dos Carajás has the highest quality iron ore in the world. The Company Vale explores it. It is the biggest metal and mining company in the world. Vale's mines covers 3% of the Carajás National Forest's area. The railroads, airport and hydroelectric power station are part of the business to supply its demand³.

2.3.1.2 Northeast Region:

Porto Digital is a partnership among the private, public sectors and universities. Located in Recife (Pernambuco State), one of the most important cities of Brazil, it was founded in July 2000. This cluster has 200 institutions of information technology and communication, creative technology, specialised services and development agencies. In 2010, these companies achieved a revenue of 568 million US dollars⁴.

² Source: SUFRAMA, retrieved 10 26, 2013: http://www.suframa.gov.br/zfm_principal.cfm

³ Source: VALE, retrieved 10 26, 2013: <http://www.vale.com>

⁴ Source: Porto Digital, retrieved 10 26, 2013: <http://www.portodigital.org>

Camaçari Industrial Complex started its operation in 1978. It was the first planned petrochemical complex in Brazil. Located in Camaçari (Bahia State), is 50 kilometres far from Salvador, the capital of the State. It is composed of over than 90 chemical and petrochemical companies besides the production of cellulose, copper metallurgy, textiles, automobiles, beverages and services. It employs 30.000 people, directly and indirectly. Its total sales are around 15 billion US dollars per year⁵.

2.3.1.3 Southeast Region:

Resende Industrial Park (Rio de Janeiro State) is located in a strategic area bordering São Paulo State. This city is an industrial cluster and the main sectors presents are metal-mechanic and chemical-pharmaceutical (Prefeitura de Resende, 2013). The GDP of Resende in 2010 was of 3,6 billion US dollars (IBGE Cidades, 2010).

Campinas Cluster, in Campinas (São Paulo State) located 100 km from São Paulo city. The cluster has industries in different sectors such as automobile, textile, metallurgic, alimentary, petrochemical, pharmaceutical, telecommunications, electronics, information technology, fine chemicals, furniture, ceramic and others. It has a total of 6.478 industries, 14.027 services companies and 19.974 companies. Fifty of the 500 biggest companies in the world are in this area (Cendotec, 2005, p. 01). Campinas is a very important city in the Brazilian context and its GDP in 2010 was 20,8 billion US dollars (IBGE Cidades, 2010).

Embraer is the Brazilian aeronautic company, created in 1969 as a mixed capital company under government control. In 1994 Embraer was privatized and restructured. This company was founded with the support of Brazilian Government having the purpose to transform science and technology provided by the Institute of Aeronautic Technology (ITA) into engineering and industrial capability⁶. In 2012, its net income was 348 million US dollars.

⁵ Source: Camaçari Industrial Development Committee, retrieved 10 26, 2013: <http://www.coficpolo.com.br/>

⁶ Source: EMBRAER, retrieved 10 27, 2013: <http://www.embraer.com.br/en-us/conhecaembraer/tradicaoistoria/pages/home.aspx>

2.3.1.4 South Region:

Cluster electro-metal-mechanical, in the city of Joinville (Santa Catarina State) concentrates 2.038 industries employing 75.345 people in 2011 (FIESC, 2013, p. 143), in different sectors such as foundry, household appliances, plastic and technology. In 2010, Joinville had a GDP of 10,5 billion US dollars (IBGE Cidades, 2010).

Vale do Rio dos Sinos Footwear cluster, in Rio Grande do Sul State, is the aggregation of firms of 30 municipalities located around Sinos River. This cluster has the industries to supply the footwear chain: tannery and leather. In 2005, the footwear industry represented 23,5% of total employment in Rio Grande do Sul State (Costa, 2010, p. 162). The total of related industries are 1.745 of footwear industry and 675 of diverse industries as rubber, tobacco, leather and fur. The GDP in 2010 of *Vale do Rio dos Sinos'* region was of 21,4 billion US dollars (ACI, 2013).

2.3.1.5 Central-West Region:

Nova Mutum, in Mato Grosso do Sul State, is a municipality whose main activities are in the primary sector of the economy (Prefeitura de Nova Mutum - MT, 2013). Its economic activities are: soya, corn, cotton, aviculture, cattle, swine, familiar agriculture, apiculture, milk production and viniculture. This is the third municipality of Brazil with a better human development index (HDI) and reference in tourism destination because of its sustainable technology in the agribusiness (Agronotícias, 2013).

Anápolis, in Goiás State, is an important agro-industrial cluster with 100 companies and a pharmaceutical cluster with 15 firms of medium and large scale⁷.

⁷ Source: ACIA (Associação Comercial e Industrial de Anápolis) retrieved 10 28, 2013: <http://www.aciaanapolis.com.br/pagina.php?acao=pagina&id=17>

All the Brazilian regions have clusters. Some are focused in the agribusiness, as Centre-Western, others with a mix of industries and activities. In general the cities that are the capital of State have large concentration of people, commerce and industries. The old model of clusters in Brazil was to have the industries around the big centres or its axes as São Paulo, Rio de Janeiro and Belo Horizonte. Nowadays, new clusters tend to be created in cities that do not have many industries. The local government offers incentives to develop new areas.

This decentralization may balance the employment and development of Brazilian regions, as well as the improvement of services that come together such as transportation, construction, telecommunication, education and basic sanitation.

3 Literature review

This section will approach the theory of country attractiveness and the model applied in the perspective of Brazil as a competitive advantage nation.

The attractiveness of a country can be measured in many ways. According to Philippe Lasserre, a country is considered attractive when there are market and industries opportunities and it is acceptable in terms of risks for the employees and shareholders. These are the two generic points to be used as the logic of attractiveness. If the investor gets a return equal or higher than its risk adjusted weighted cost of capital, then, this country is considered attractive (Lasserre, 2003, pp. 156-157).

It is very difficult to do generalizations, however the country is analyzed in its entirety to give a general perception of its opportunities and risks. To refine the evaluation, the country is compared to another with similar features.

The decision to enter the foreign markets is made after a very diversified analysis, which aims to identify the country's attractiveness followed by the implementation of the strategies chosen (entry mode, developing paths and organization control).

In the assessment of the country's attractiveness, many factors have to be considered: size and growth, resources, incentives and risks. In terms of industry, the market and internal competition are important factors for companies interested in FDI.

The market and industry opportunities are measured by the potential demand and how easy it is to compete in the country. Brazil has a high internal demand in growth (also because of the middle-class effect), large availability of raw materials, innovation culture and investments incentives granted by the government.

The risks of a country affect differently the distinct market segments. There are many models and sources of countries' assessment that compare the risks of countries. Below is a list of various rankings, showing the position of Brazil:

<i>Publication/Institution</i>	<i>Type of ranking</i>	<i>Total of countries</i>	<i>Brazilian Ranking</i>
The World Competitiveness Yearbook ⁸	The World Competitiveness Scoreboard 2013	60	51
IESE Insight ⁹	The Venture Capital and Private Equity Country Attractiveness Index	118	36
The World Economic Forum ¹⁰	Global of Competitiveness Index	148	46
	Basic Requirements	148	79
	Efficiency enhancers	148	44
	Innovation and sophistication factors	148	46
EY ¹¹	Renewable energy country attractiveness Index	40	15

Table 7: Model and sources assessment for Brazil in 2013

Looking inside these rankings, the most important risks identified in Brazil are tax regulations and rates, corruption, supply of infrastructure and inefficient government bureaucracy.

Many theories and studies could be used and combined to help the decision of FDI, being the most common used the PESTEL, Porter's five-forces framework, SWOT, Hofstede model, rankings and financial indicators analysis.

The focus of this paper is in the initial part of the decision-making process, i.e.: the analysis of attractiveness.

The theoretical framework chosen to be studied in this paper is the "Determinants of National Advantage"; also known as "National Diamond" or "Diamond of National Advantage".

⁸ Source: The World Competitiveness Center (WCC), retrieved 10 01, 2013: <http://www.imd.org/wcc>

⁹ Alexander Groh, Heinrich Liechtenstein and Karsten Liese. The project was initiated at IESE Business School Barcelona in 2006 with a European pilot study. From the European study we gained experience and the confidence to extend the study globally. Source: retrieved 10 02, 2013, <http://blog.iese.edu/vcpeindex/ranking-2013/>

¹⁰ Source: The Global Competitiveness Report 2013-2014, retrieved 09 28, 2013: <http://www.weforum.org/reports/global-competitiveness-report-2013-2014>

¹¹Source: EY, RECAI August 2013, retrieved 09 28, 2013: [http://www.ey.com/Publication/vwLUAssets/Renewable_energy_country_attractiveness_indices_-_Issue_38/\\$FILE/RECAI%20Issue%2038_August%202013.pdf](http://www.ey.com/Publication/vwLUAssets/Renewable_energy_country_attractiveness_indices_-_Issue_38/$FILE/RECAI%20Issue%2038_August%202013.pdf)

3.1 Diamond of National Advantage

The book "The Competitive Advantage of Nations" published in the 90s by Michael E. Porter opened a new view about the advantages of the countries. All the knowledge of previous studies and publications in the scope of companies has been adapted to the nations context.

"The principal goal of a nation is to produce a high and rising standard of living for its citizens." – Michael E. Porter

Porter has applied his diamond theory in 8 countries (Germany, Italy, Japan, Korea, Sweden, Switzerland, the United Kingdom, and the United States). He also studied Denmark and Singapore that are not detailed in his book. His study was very precise and detailed and the most data collected are from the 70s.

The Diamond of National Advantage consists of four attributes that analysed individually or as a system are determinant to understand the advantage of a nation and identify how each nation establishes the playing field and operations on its industries.

Inside the nation it is important to exist competition amongst the industries. To be competitive and reach better results the industries will invest in researches and development, and as a consequence a high level of services and/or products are ensured giving the nation more advantage to stay competitive.

The attributes of the diamond help to understand the strengths and weakness of the nation in a determined region or industry. The attributes determined by Porter are the following: factor conditions, demand conditions, related and supporting industries and firm strategy. The government's policies and chance are also contributing factors that have an impact in all the determinants of the diamond and they can be decisive for the success or not of the system.

The factors "Government" and "Chance" were considered later on in Porter's analysis. The Government is a relevant factor and will be considered and explored in this paper while the factor chance will not be deeper considered once it is intangible and an unpredictable situation.

The Government plays an essential role of providing the right conditions and encouragement to the industries for the achievement of higher levels of competitive performance. It is

responsible for taking decisions in terms of legislations, internal procedures of commerce, monetary control (adapt the volume of means of payment to the real needs of the National economy, regulates the internal value of currency (Banco Central do Brasil, 1964, pp. 01-02)) and treaties with other countries or economical blocks that can be decisive for the internal industries.

Following is a brief explanation of the four attributes referred by Porter (The Competitive Advantage of Nations, 1990, pp. 73-110):

Factor Conditions are the aspects in terms of production such as infrastructure and specialized human resources. The factor conditions are in general created by the nations and not by the natural environment. The presence of raw material, for example, plays an important role in the competitive advantage of industries in the nation, but Porter defends that the factors conditions goes beyond it. If a nation is not endowed with natural resources, it can be found in other countries. It is not a problem that cannot be overcome.

Demand conditions are the demands of the internal market in terms of products and services. The home's demand shapes the form of how the firms receive, interpret and responds to buyers' needs.

Related and supporting industries refer to the existence or absence of suppliers and related industries internationally competitive.

Firm strategy, structure and rivalry are the national tendencies of how the companies are created, organized and managed in the country and how the intern rivalry is played.

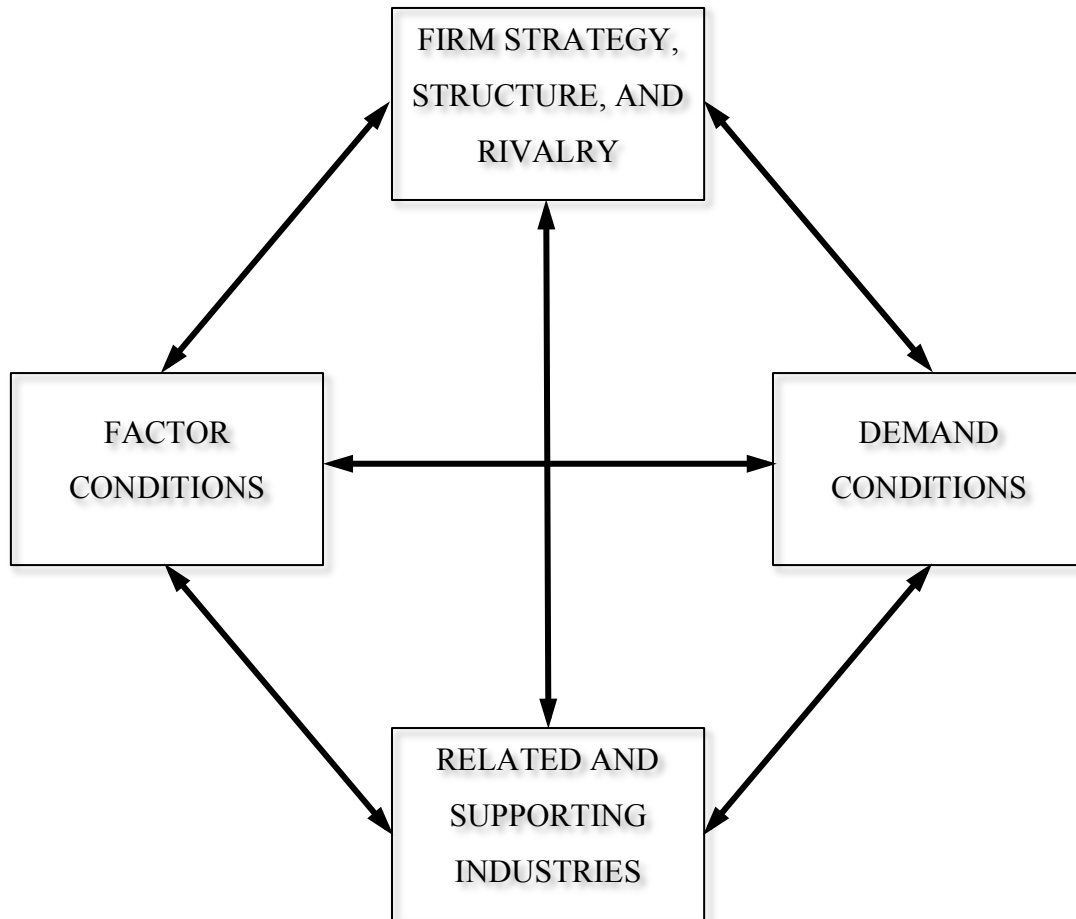


Figure 2: Reproduction of The Determinants of National Advantage (Porter, 1990, p. 72)

In the context of this paper, Brazil is the country to have its attributes reviewed. In this section a diamond's analysis will be described in relation to this nation.

As explained before, Brazil has the characteristic of a country continent because of its dimension, different cultural and natural aspects. For these reasons, it is very difficult to generalize the country. The strengths and weakness of one region or city can be the opposite of others, even among neighbours, but it is still a single country. This study will exemplify by pointing a region or city, in case a need for a better understanding and analysis if necessary.

3.1.1 Industries classification

This section aims to explain the classification of goods and merchandises used in this paper. This classification is important to help the identification of the kind of industries that exports the most in Brazil and later will be classified into the cluster chart.

The industries in Brazil (and MERCOSUR) have a classification known as NCM (MERCOSUR Common Nomenclature). The first six digits presented in the code (each two represents: chapter, heading and subheading, respectively) follow the Harmonized System (HS) defined by the World Customs Organization, and the last two digits (item and sub-item), are created under the definition established between the MERCOSUR countries.

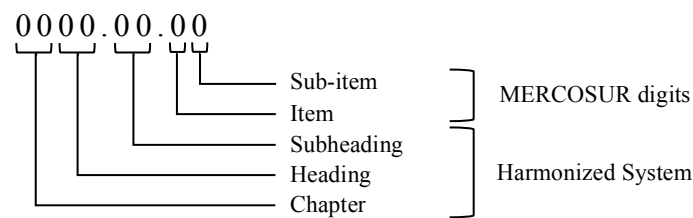


Figure 3: Structure of MERCOSUR Common Nomenclature (adapted from MDIC, 1988)

The classification of goods in NCM is governed by the General Rules for the Interpretation of the Harmonized System (MDIC, 2013). For this paper's purposes, the 4 first digits will be used because they will be enough for further analysis. These digits correspond to the "chapter" and "heading" of the Nomenclature, also identified by "HS4". For this level of detail, that will be designated as "Industry".

3.1.2 The patterns of Brazil competitive advantage

Based on Porter's studies, the top fifty Brazilian industries will be analysed, in terms of share world exports.

To produce this final table, online tables from the International Trade Centre website were generated for the Brazilian's exports and World's imports and exports. The data are from year 2010. To validate the accurate data of those tables for the Brazilian's imports and exports of the studied year, it was compared with data from Brazilian government (MDIC, 2010).

A difference was found between the sources, an export for the NCM HS4 9998 "Consumption on board (fuels and lubricants for ships and aircraft)". The Brazilian government accounted 36.955,77 million US dollars, without imports registered for the same industry/period. In the calculations, this export represented 1,87% of the "Share of Total Brazilian Exports". This item will not be added to the list of top fifty because it is not in the United Nations Statistics and its "chapter" 99 is used for "Commodities not specified according to kind" (UN comtrade, 2007).

Below the top fifty export for the Brazilian industries:

	<i>Industry</i>	<i>Share of Total World Exports</i>	<i>Export Value *</i>	<i>Import Value *</i>	<i>Share of Total Brazilian Exports</i>
1701	Cane or beet sugar and chemically pure sucrose, in solid form	43,06	12 761,41	3,50	6,47
2601	Iron ores and concentrates, including roasted iron pyrites	27,91	28 911,88	138,01	14,65
1201	Soya beans, whether or not broken	27,76	11 043,00	435,59	5,60
0207	Meat and edible offal, of the poultry of heading No 0105, fresh, chilled or frozen	27,59	5 952,03	30,53	3,02
8307	Flexible tubing of base metal, with or without fittings	25,91	649,31	665,84	0,33
2401	Unmanufactured tobacco; tobacco refuse	24,98	2 706,67	679,82	1,37
0202	Meat of bovine animals, frozen	23,13	3 376,28	648,27	1,71
0901	Coffee, whether or not roasted or decaffeinated; coffee husks and skins; coffee substitutes containing coffee in any proportion	21,42	5 203,35	215,18	2,64
2304	Soybean oilcake and other solid residue, wh/not ground	21,16	4 719,37	128,74	2,39
7201	Pig iron and spiegeleisen in pigs, blocks or other primary forms	20,20	971,14	3,52	0,49
8706	Chassis, with engines, for vehicles of positions 87.01 through 87.05	17,82	635,60	177,24	0,32
2207	Undenatured ethyl alcohol of an alcoholic strength by volume of 80 % vol or higher; ethyl alcohol and other spirits, denatured, of any strength	16,86	1 014,29	413,22	0,51
4703	Chemical wood pulp, soda or sulphate, other than dissolving grades	16,33	4 434,24	3 251,04	2,25
2009	Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter	14,43	1 924,69	276,41	0,98
1507	Soya-bean oil and its fractions, whether or not refined, but not chemically modified	13,83	1 347,66	139,37	0,68
4104	Tanned or crust hides and skins of bovine (including buffalo) or equine animals, without hair on, whether or not split, but not further prepared	13,50	736,58	397,14	0,37
2818	Artificial corundum, whether or not	13,04	1 774,39	501,94	0,90

	chemically defined; aluminium oxide; aluminium hydroxide				
1602	Other prepared or preserved meat, meat offal or blood	10,37	1 268,18	33,75	0,64
1005	Maize (corn)	9,50	2 214,96	759,78	1,12
4107	Leather further prepared after tanning or crusting, including parchment-dressed leather, of bovine (including buffalo) or equine animals, without hair on, whether or not split, other than leather of heading 4114	9,06	982,53	70,49	0,50
0102	Live bovine animals	8,79	658,66	45,00	0,33
7207	Semi-finished products of iron or non-alloy steel	8,27	2 434,34	224,63	1,23
7202	Ferro-alloys	7,58	2 038,95	2 513,75	1,03
6802	Worked monumental or building stone (except slate) and articles thereof, other than goods of heading 6801; mosaic cubes and the like, of natural stone (including slate), whether or not on a backing; artificially coloured granules, chippings and powder, of	6,26	633,16	393,22	0,32
5201	Cotton, not carded or combed	5,48	821,55	683,05	0,42
0203	Meat of swine, fresh, chilled or frozen	4,90	1 226,58	0,91	0,62
8802	Other aircraft (for example, helicopters, aeroplanes); spacecraft (including satellites) and suborbital and spacecraft launch vehicles	4,63	3 999,05	10 806,30	2,03
4802	Uncoated paper and paperboard, of a kind used for writing, printing or other graphic purposes, and non-perforated punch-cards and punch tape paper, in rolls or rectangular (including square) sheets, of any size, other than paper of heading No 4801 or 4803	4,14	934,19	2 132,97	0,47
8429	Self-propelled bulldozers, angledozers, graders, levellers, scrapers, mechanical shovels, excavators, shovel loaders, tamping machines and road rollers	3,66	1 349,69	8 411,85	0,68
8701	Tractors (other than tractors of heading 8709)	2,84	1 047,87	1 233,30	0,53
2603	Copper ores and concentrates	2,75	1 237,74	9 654,49	0,63
7601	Unwrought aluminium	2,74	1 280,35	1 322,01	0,65
8409	Parts suitable for use solely or principally with the engines of heading No 8407 or 8408	2,58	1 446,94	12 238,97	0,73
6403	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of leather	2,02	924,30	809,40	0,47
4011	New pneumatic tyres, of rubber	1,91	1 277,12	12 867,16	0,65
3901	Polymers of ethylene, in primary forms	1,82	1 113,05	9 982,20	0,56
8704	Motor vehicles for the transport of goods	1,81	1 686,89	19 775,19	0,85
8407	Spark-ignition reciprocating or rotary internal combustion piston engines	1,81	641,37	4 383,61	0,32
8501	Electric motors and generators (excluding generating sets)	1,79	721,84	5 912,87	0,37
8414	Air or vacuum pumps, air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, whether or not fitted with filters	1,53	932,22	14 070,30	0,47
2709	Crude oil from petroleum and bituminous minerals	1,44	16 293,42	100 974,46	8,26

7208	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, hot-rolled, not clad, plated or coated	1,38	770,17	9 481,39	0,39
7108	Gold (including gold plated with platinum), unwrought or in semi-manufactured forms, or in powder form	1,26	1 801,95	22,52	0,91
8708	Parts and accessories of the motor vehicles of heading 8701 to 8705	1,16	3 381,64	49 285,00	1,71
9403	Other furniture and parts thereof	0,89	582,28	863,43	0,30
8481	Taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, vats or the like, including pressure-reducing valves and thermostatically controlled valves	0,88	576,00	10 577,97	0,29
8703	Motor cars and other motor vehicles principally designed for the transport of persons (other than those of heading 8702), including station wagons and racing cars	0,79	4 416,14	83 049,81	2,24
2710	Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included, containing by weight 70 % or more of petroleum oils or of oils obtained from bituminous minerals, these oils being the basic con	0,45	3 060,74	111 258,56	1,55
8517	Electrical apparatus for line telephony or line telegraphy, including line telephone sets with cordless handsets and telecommunication apparatus for carrier-current line systems or for digital line systems; videophones	0,39	1 277,74	33 594,31	0,65
3004	Medicaments (excluding goods of heading 3002, 3005 or 3006) consisting of mixed or unmixed products for therapeutic or prophylactic uses, put up in measured doses (including those in the form of transdermal administration systems) or in forms or packing	0,29	898,05	31 449,41	0,46
<i>Total</i>		1,31		77,06	

** (in millions of US dollars)*

Table 8: Top Fifty Brazilian's Industries in Terms of World Export Share, 2010 (elaborated by the author, Data Source: International Trade Centre, Products, 2010)

The services also have a considerable impact in the inputs and outputs of the economy. They are classified according to an internationally agreed framework for the compilation and reporting of statistics of international trade in services (International Trade in Services, 2010, p. 14):

<i>Service</i>	<i>Share of Total Service World Exports**</i>	<i>Export Value *</i>	<i>Import Value *</i>	<i>Share of Total Service Brazilian Exports</i>
0268 Other business services	1,63	15 776,50	20 873,50	49,58
0236 Travel	0,62	5 918,85	16 421,70	18,60
0205 Transportation	0,62	4 931,37	11 338,70	15,50
0260 Financial services	0,75	2 072,62	1 678,87	6,51
0291 Government services, n.i.e.	2,29	1 526,90	2 845,75	4,80
0245 Communications services	0,47	435,00	271,16	1,37
0253 Insurance services	0,43	416,03	1 528,76	1,31
0266 Royalties and license fees	0,16	397,21	2 850,25	1,25
0262 Computer and information services	0,10	209,84	3 505,43	0,66
0287 Personal, cultural and recreational services	0,35	108,26	1 271,47	0,34
0249 Construction services	0,03	28,54	6,48	0,09
<i>Total</i>	0,83			100,00

* (in millions of US dollars)

** The World Total Exported services has missing data from some countries

Table 9: Brazilian Services in Terms of World Export Share, 2010 (elaborated by the author, Data Source: International Trade Centre, Services, 2010)

The result found in the top fifty illustrates how important the natural resources are to Brazil, not only one kind of product but in a diversified range as sugar cane, iron, soya beans, tobacco and coffee. All those had more than 20% each in terms of share of total world exports that represents a significant number.

In 2010, according to Center for Advanced Studies for Applied Economics, the agriculture represented 21% of Brazil's GDP. The important exports in the same period for some products reveals the international competitive advantage of this nation in this area.

On a services' perspective, the nation's share of total world exports is very low, what can be explained by the high internal demand, and confirmed by a very high importation of services. Moreover, the exports of all services (31 billion US dollars) represented a high share of total Brazilian's export (228 billion US dollars).

The top fifty reveals the importance of the main products exported and how concentrate it is, since it represents more than 75% of share of total Brazilian exports.

Following Porter's study, in order to summarize the top fifty list, the structure of *broad cluster* will be adapted to the representation of the share of Brazilian's exports. The products in the list were aggregated in the level of the "chapter", defined by the Harmonized System (HS), and organized into the clusters (see Figure 4: The Cluster Chart). For some kind of products as "Live animals", in this paper the classification will be in a different way from Porter's: "Multiple business" instead of "Food/Beverage". The services are aggregated in a cluster with the same name.

The broad cluster will be classified in three levels:

Upstream industries: its primary products are inputs to products in other industries.

Industrial and Supporting Functions: related to particular end uses and transformation industry.

Final Consumption goods: end-user sectors (also has primary products that are inputs in other industries, as example "Foods/Beverages" are the soya beans, that can be at the same time to the final user or can be processed into a derivated product).

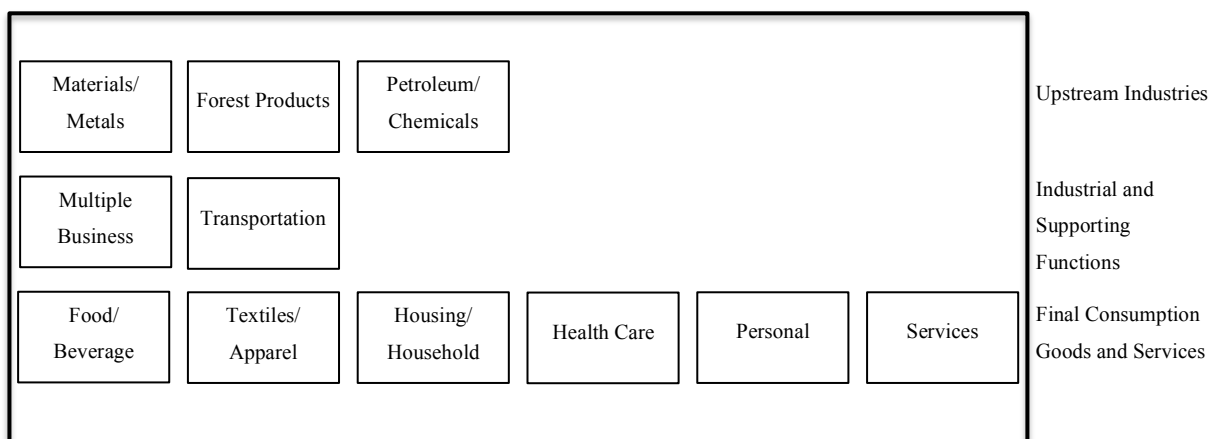


Figure 4: The Cluster Chart (adapted from Porter, 1990, p. 288)

The list of Brazilian exports was classified according to the Cluster Chart and the result is a clear overview of the nation in terms of competitiveness and its competitive sectors.

The clusters chart has the broad clusters and its level. Below in each cluster are identified the total share of Brazilian Exports and the percentage it represents in terms of World Exports.

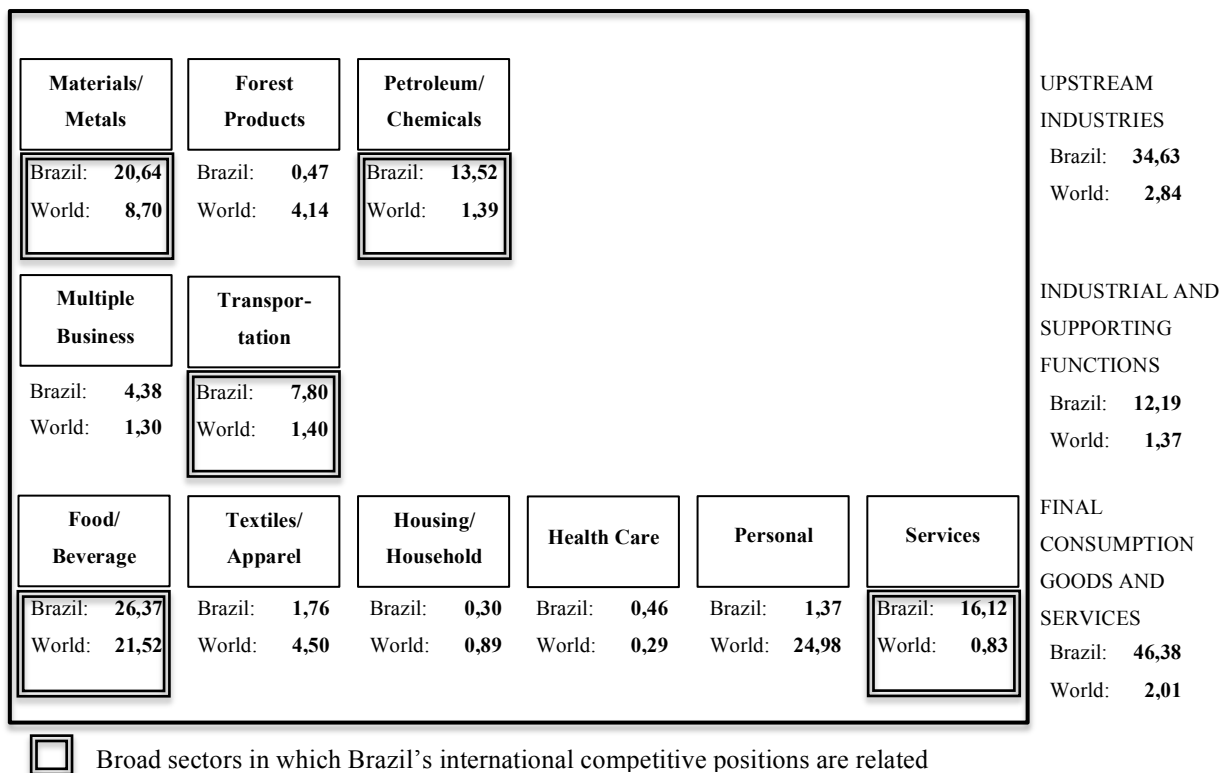


Figure 5: Share of Exports of the World and Brazil by Cluster, in 2010 (elaborated by the author)

The selected clusters identified as board clusters are the international competitive Brazilian industries. They are grouped in five clusters and they are most concentrated in upstream industries and final consumption goods and services. This last represents almost half of total of Brazil's exports, which stands the highly international competitive industries.

The largest industry in terms of Brazil's exports is the food and beverage. It represents more than 26% of total nation's exports. The second cluster is the materials and metals and represents 20% of total nation's exports. The third is the cluster of petroleum and chemicals, which represents more than 13% of total nation's exports. The fourth cluster has all services and it represents 16% of total exports.

The cluster level of industrial and support industry is not so competitive as the others, but still has an important value. At this level, there is the fifth cluster, i.e.: Transportation. Motorcars,

parts and accessories of motor vehicles are very competitive industries in Latin America market and aircraft industry in the world.

The clusters reinforce the results of the top fifty indicating that the natural resources are the international competitive advantage of Brazil, followed by transportation, represented by the automotive and aircrafts sectors. The services' clusters, in a more detailed level, are mostly represented by architectural, engineering and other technical consultancy added by other business and legal, accounting, management and public relations services.

Some clusters have a high participation in the Worlds Export Share but it is not so representative in Brazilian Exports shares, therefore they will not be selected.

The Brazilian clusters illustrate the sectors of Brazil's strength and the areas that the nation is internationally competitive.

3.1.3 Factor Conditions

This part of the study presents, in a general way, the nation's factors input conditions, which are the natural and human resources and infrastructure.

Brazil's international competitive industries gravitate around its natural resources associated to its climate, soil and the magnificence of this country.

Besides the Amazon forest, Brazil has a huge forest range in addition to some areas that are undergoing reforestation. Brazil has one of the most extensive river systems with 8 basins. The hydropower potential of those rivers are 260 GW and only 25% are being used in the energy production (Brazilian Electricity Regulatory Agency, 2003).

The plantation area is largely developed as well the areas for livestock production.

The technology for agriculture is highly developed and receives large investments by the government, private companies and producers operating in this area.

In terms of infrastructure, Brazil has many points to be improved specially the sector of internal transportation. However, in the last years both attention and investments have been rising towards this sector.

The country will host two big international events in the near future, namely: the next Football World Cup, in 2014, and the Olympic games, in Rio de Janeiro, in 2016. These two great events are one of the main reasons for many investments to be encouraged and funded by the Brazilian government.

The education in Brazil has received more attention by the Government in terms of investments. It is still a key factor to be improved in Brazil as the level of education is related to the social-economic conditions. The expected years of education is 16,3 between the ages of 5 and 39, which is close to the average of the OECD. Amongst adults between 25 to 64 years old, only 41% studied up to high school level. The positive point is that in the adult population between 25 to 34 years old, 53% have finished the high school (OECD, 2013).

The higher education receives more attention than elementary school in terms of public investment, but it is not accessible for all. In most cases, students who had a good basic and elementary school education are those who reach public higher education although the social-economic condition is also a strong determinant.

In Brazil the public education is free of charge. The government implemented a program of social and racial quotas. This program aims to reserves a percentage of places in the universities for students coming from public education, low income families and also for those that are self declared black, mixed race and indigenous. The racial quotas percentage varies per State and follows the recent census done by IBGE. This program was created to reduce the disparity of races in the public universities. The last census showed that 52% of the Brazilian population are self declared black, mixed race or indigenous, but nonetheless they represent less than 30% of the university students (Governo Federal do Brasil, 2012).

In terms of world rankings, the Brazilian universities have a lot to improve. In 2012/2013 Times Higher Education ranking, Brazil had only one University in the Top 200 and in 2013/2014 it drops out from the Top 200' list (Times Higher Education, 2013).

Despite the fact that the universities of Brazil are not well rated in the world higher education rankings, it is well rated and highly respected by the Latin America community (Top Universities, 2013). As mentioned earlier in this paper, the technological clusters are closely important to the Universities for its contribution for the improvement of the quality,

investments and visibility it lends to the Universities thus allowing the attraction of more partners, which in turn generates employment to young graduates.

The foreign language proficiency is not a strength point in Brazil. Researches place Brazil in 46th position among 54 countries, with the level "very low" in English proficiency (Exame, 2012). The lack of a foreign language proficiency is a barrier for the Brazilian workers and companies. Generally speaking, the foreigners' workers and companies have to learn Portuguese in order to achieve their goals or they will always depend on the fewer bilinguals' employees. This factor condition should be better explored and could receive more attention from companies and educational entities. It can be overtaken by persistent endeavour and commitment. Since 1998 the teaching of English is mandatory from the fifth year of primary school. It means that all students in Brazil should have English classes and most have it, however it seems not to be enough in terms of quality and/or rigour.

The Portuguese language is a competitive advantage when doing business with other Portuguese speaking countries and administrative region such as Portugal, Angola, Cape Verde, Guinea-Bissau, Mozambique, São Tomé and Príncipe, Macau and East Timor.

The Brazilian working law regulation has come into practice since 1943. A normal working week is of 44 hours/week, from Monday to Saturday, exchangeable to Monday to Friday. The benefits of an employee are approximately 30 days of paid vacation with a bonus of 1/3 of the monthly salary (after a full year of employment), plus a bonus called "13th salary" in the end of the year. There are other benefits for overtimes, weekend works, night workers, and others according to the industry or work conditions. The costs of hiring an employee are high. The charges vary from segment of company, but in general, it represents 66% of the salaries (Deloitte, 2010). The minimum salary referenced in October 2013 is 678 Brazilian Real (313 US dollars).

3.1.4 Demand Conditions

This part presents the customer needs and market demands of the nation.

The internal demand in Brazil is huge thanks to its large demographic situation.

After many social programs to reduce the poverty and income inequality, a new kind of consumer has appeared in this nation. Those who lived close to the poverty line, use the aid provided by the government for basic needs such as food, school supplies, personal hygiene and clothing for the children (The World Bank, 2010).

For other families, before the aid they used their meagre budget to buy items of basic necessities leaving them with no money left till the end of the month. However this has changed. Now they have extra money that gives them purchasing power allowing the purchase of goods that formerly they were not able to. They are called "the new middle-class".

In 1992, the middle-class, also known as "C class", was composed by 34,96% of the population. In 2009, it turned into 50,5% and in 2010 it corresponded to 52% of the population. Nowadays they hold 46,24% of the purchase power (Secretária de Assuntos Estratégicos, 2013) and in the president's election of 2014 they will represent 57% of the electorate (InfoMoney, 2011).

The considered middle-classes are the families having a total income between 486 and 2.097 US dollars, which is considered a medium income.

To contextualize, the "D classes" are the families that the total income is between 350 and 486 US dollars; the "E classes" have a total income below 350 US dollars and the "classes AB" have a total income higher than 2.097 US dollars. These data are used as reference for researches and varies one to another institute (Fundação Getúlio Vargas, 2013).

The improvement of life quality and incomes of the families is not only because of the aid's programs. The considerable changes introduced in the Brazilian economy, the control of inflation and investments in the local market has reflected in prices stabilization. Brazilians are travelling more to other countries, seeing others cultures and habits and they are becoming more demanding and sophisticated in their taste.

The companies' strategies have been changing in Brazil to follow the new market tendencies of these new customers that want to satisfy their personal wills. At this moment, the new consumption wave of the middle-class generates a great opportunity to enter the Brazilian market since the demand and exigencies are growing.

The Brazilian Government has a protective policy for the Brazilian businesses. The imports taxes are quite high for manufactured goods. In one hand it helps the local producers but in the other hand the consumer pays a higher price and sometimes does not have a high quality product comparing to the price paid (because of lack of competition).

The solution of many international industries in Brazil is to produce the merchandise in the country. A common example is the automobile industry. They carry their brand, but many cars have special designs and models for the Brazilian market and even the cars with the same name do not have the same characteristics in terms of parts and quality, except for the similar design in the case of the most popular models.

On Table 9: Brazilian Services in Terms of World Export Share, 2010, is another demand condition that requires additional attention. The report referenced evidences that Brazil imports more services than exports in many segments (except in Financial, Communication and Construction services). In a deeper analysis, the higher gaps are in operational leasing services, personal travel, computer services, air transport (passenger) and sea transport (freight).

For personal travel and air transport the exports could be improved with investments in tourism, as Brazil does not take as much advantage as it should of its immense potential. An important demand condition is the shortage of infrastructure such as hotels, transportation, touristic information and travel guides (in many languages). Other important factor of this demand is the upcoming international events that will take place in Brazil.

3.1.5 Related and Supporting Industries

This part unfolds the capability of local suppliers and the presence of clusters in the nation.

Related and supporting industries are very common in Brazil. This is easily justifiable by the great distances and the cost of transportation. The local governments and administration

usually offers tax exemption and other incentives for industries to develop the region and create employment.

In Camaçari, State of Bahia, the Camaçari Industrial Complex has the assembly factory of Ford since 2001 (the North-American company is present in Brazil since 1919, and was the first assembly factory in the country) and JAC (the Chinese company) schedule to be opening in 2014¹². The Industrial Complex has the support industries of tires (Continental and Bridgestone Firestone), automotive spare parts, polycarbonates and chemical industries for automotive supplies, services firms for industry maintenance, environmental protection, technological and others¹³.

This is one example as Brazil has automotive municipalities in other parts of the country, as ABC Region (Ford, General Motors, Mercedes-Benz and Scania), Piracicaba (Hiundai), Itirapina (Honda) Sorocaba (Toyota), Taubaté (Wolkswagen), all these are in São Paulo State. Anápolis (Hiundai) in Goiás State, São José dos Pinhais (Renault) in Paraná State, Porto Real (Peugeot and Citroen) in Rio de Janeiro State, Betim (Fiat) in Minas Gerais State, Fortaleza (Troller, Group Ford) in Ceará State, Caxias do Sul (Marcopolo) in Rio Grande do Sul State.

The cycles and motorcycle cluster is in the *Zona Franca de Manaus*. The motorcycle producers are Harley Davidson, Duas Rodas, Kasinski, Agrale and the Japanese Kawasaki, Honda, Suzuki and Yamaha. For bicycles production there are Caloi, Monark, Prince and CBB (Sundown Bike). They also have the suppliers and support industries in the cluster¹⁴.

The Institute of Aeronautic Technology (ITA) is a federal government institution dedicated to provide high-level education and research in Science and Technology, areas of interest to the aerospace sector. This institute is one of the best universities in Brazil.

The aeronautic company Embraer located in São José dos Campos, São Paulo State, has the support and suppliers industries near by. This business area is very sensitive in terms of suppliers. Embraer has different relationship and partnership strategies with the support

¹² Source: JAC Motors Brasil, retrieved 10 27 ,2013:<http://www.jacmotorsbrasil.com.br/fabrica>

¹³ Source: Camaçari Industrial Development Committee, retrieved 10 26, 2013: <http://www.coficpolo.com.br/>

¹⁴ Source: SUFRAMA, retrieved 26 10, 2013: http://www.suframa.gov.br/zfm_principal.cfm

industries, according to the product supplied (Ferreira, Salerno, & Lourenção, 2011, pp. 221-236).

ITA provides high-level engineers to work in Embraer as well as in the researching field. Embraer and ITA work closely together to improve the aeronautical sector in Brazil.

There are other segments of the industrial sector working along with its related and supporting industries in Brazil that have not been contemplated in this study.

3.1.6 Firm Strategy, Structure and Rivalry

This part of this study focus on the local context of companies' strategy and tendencies of competition.

A research done with 91 companies amongst the thousand biggest subsidiaries of multinational firms in Brazil used Porter's Diamond as reference for the questions. The result found in the ambit of rivalry is that 86% agree that there is a strong rivalry in the national environment and 35% of those that agreed believe that it benefits business (Oliveira Jr. & Borini, 2003, p. 19).

In 2000, there was approximately 72 thousands companies with more than ten employees in Brazil. This number jumped to more than 619 thousands in 2010. (IBGE Empresas, 2010)

The Applied Economic Research Institute (IPEA) requested a study to determine the corporate environment in Brazil so that the governments' support to the industry, technology and foreign trade policies can be facilitated. Technological innovation is the key-element in the competition among firms because it allows companies to earn additional income from their ability to differentiate products. It was used to design the typology of Brazilian firms and divided them in: firms that innovate and differentiate products competing by products differentiation (companies with higher technology); firms specialized in standard products competing by costs and price (companies up to date in terms of production and logistics, but lagged in research and development, marketing, brand management and so on); and firms that do not differentiate products and have a lower productivity, competing with lower prices (companies that offers inferior quality products but are able to find place in the market).

The study was done in 2000, with 72 thousands Brazilian firms with more than 10 employees. It has concluded that the first group is composed by 1.199 companies, the second by 15.311 and the third group by 55.486 companies. The same study verified that the average salary, years of study and employment period of their personnel follow the typology of the firms: the more innovation and product specialization, the more the salaries, years of study and employment period are higher (De Negri & Salerno, 2005, p. 08).

The Brazilian companies developed a special ability to deal with crises scenarios. They create values even in unfavourable conditions (economic instability and cyclical recessions). The result is a short-term firm strategy. The companies learnt to create value in three ways: first by establishing advantage position in the market (as example, Votorantim¹⁵, in São Paulo State); second by building and improving the resources to have better conditions than its competitors in the international market (as example, Fibria¹⁶, in São Paulo State, with the reforestation conditions); and the third is by taking advantage of opportunities faster than its competitors (as example, Natura,¹⁷ in São Paulo State, with a eco-friendly cosmetic line) (Wood Jr. & Caldas, 2011, p. 75).

3.2 Synthesis of Porter's Diamond Analysis

Brazil is experiencing a very positive period after its recession and high inflation rate period in the 90s. The growing stability of Brazil has enabled the country to go through the 2008 world crisis without much impact in the economy.

Brazilians firms are able to sustain international competitive advantages in a broad range of industries that already found their place in the world business. For the firms still looking for place in the world business, they should keep researching and developing, to reach the high-level qualities in terms of products and human resources.

¹⁵ Votorantim is present in the basic material building business (cement, concrete, aggregates and supplementary products). It is the leader company in its business with 40% of market share.

¹⁶ Fibria is part of Votorantim Group since 2009. Fibria is the result of the incorporation of Aracruz by Votorantim Celulose e Papel. It is the world' leader in hardwood pulp sector. Source: Votorantim, retrieved 10 27, 2013: <http://www.votorantim.com.br/en-us/grupovotorantim/perfil/Pages/perfil.aspx>

¹⁷ Natura is a cosmetic industry, leader in the Brazilian market.

The world expects a lot from this giant as well as its people, that shows good numbers in the economy perspective but still struggle in education, security, internal structure for the population and a symptoms of housing bubble. There is a lot of work to be done to improve the conditions of Brazilian' people, the trust in the government and in the laws are important points to receive more attention.

The analysis of the diamond's attributes shows that Brazil has strong characteristics of competitive advantage, especially in terms of demand conditions, related and supporting industries and rivalry. The companies that want to expand to new markets need to have the confidence to strengthen its brand abroad and improve its basis in the local market with new ideas and experiences that can result from the expansion.

The firms in Brazil are used to difficult scenarios such as changing behaviours of the economy and consequently of its customers, high bureaucracy, complex fiscal and tax system, logistics and incertitude. If the firms succeed in such complex environment, with flexibility and organization, they will be able to achieve the same level of competitiveness as older players in a world level.

4 An overview of France business prospect

This study aims to obtain a country attractiveness profile of Brazil as an international business target for French companies. Therefore, a brief description of the French economy and an analysis of what could be adequate (and readily made) for internationalization towards South America and in particular towards Brazil.

4.1 Demography, geography and politic

France is a constitutional republic and the majority of its population is in Western Europe, although it has other regions and territories (Guadeloupe, Reunion, Mayotte, Guyana and Martinique). Its capital is Paris.

The population estimated in 2011 is of 63.126.000 habitants with an area of 551.500 km² (United Nation, 2013).

4.2 Economy

This section is an overview of France's economic profile and its current situation.

France is a founding member of European Union (1952) and member of Eurozone since 1999 (European Union, 2013).

This country has an advanced industrial economy and an efficient farm sector. The main activities include automobile manufacture, aerospace, information technology, electronics, chemicals and pharmaceuticals and fashion (European Union, France, 2013).

France has a great importance in the economic world scenario and has kept its positions for a long time, despite the current financial situation in Europe. The unemployment rate in Europe for the year of 2011 reached 10.1%. France had 9,6% of unemployment rate. It has a better rate than other countries in the Euro area, like Portugal (12,9%) and Spain (21,7%) but higher if compared to its neighbours Germany (5,9%) or Belgium (7,2%) (European Commision, 2012). The prevision for 2013 is 10,5% (INSEE, 2013).

In spite of the issues in the economy of some countries in the European Union, France reduced the deficit in trade balance of 2012: the total exports were 556.575 million US dollars

and imports of 663.268 million US dollars (trade balance of -106.693 million US dollars, in relation to the period before -119.309 million US dollars) (International Trade Centre, Products, 2010). In terms of growth, since 2008 France has not an impressive rate of development reaching only 1,1% in 2011 (Trading Economics, 2013).

On Table 2: GDP Ranking of 2010 and 2011 , in 2010, France had a GDP of 2.548.315 million of US dollars, corresponding to the 5th position in the World's GDP.

On Table 3: GDP per capita, PPP of 2010 and 2011 ; the GDP and GDP based on PPP per capita of countries France and Brazil are in different stages of economic development, as French people (GDP based on PPP per capita of 34.275,76; 24th position in the world ranking of 2010) has three times more purchasing power than Brazilian (GDP based on PPP per capita of 11.186,67; 73rd position in the world ranking of 2010).

France has a strong presence in foreign markets in different sectors of the economy. The present world crises together with the fast moving trend of the markets have put the nations in the search for strategic connections to strengthen its economy and become less vulnerable to market's fluctuation.

4.3 Foreign direct investments

This section is about the Foreign Direct Investments and its approach to find opportunities in the clusters where Brazil is not very competitive internationally.

“Foreign Direct Investment (FDI) is the process whereby residents of one country (the source country) acquire ownership of assets for the purpose of controlling the production, distribution and other services of a firm in another country (the host country)” (Moosa, 2002, p. 01).

The FDI is an alternative to France to keep growing and investing in a market that still has a place to new companies and investments. At this moment, with the unstable economical situation in Europe to create roots in other markets can be a solution to expand and increase the revenues.

4.3.1 Presence in Brazil

This section analysis the French presence in the Brazilian market.

France has a strong presence in many segments of the Brazilian market. There are 430 French companies in Brazil, summarizing the total of more than 450.000 employees (Ambassade de France au Brésil, 2013).

The Top Ten French companies in Brazil are the following:

	<i>Gross Operating Revenues*</i>	<i>State</i>
Carrefour	8 857,10	São Paulo
Atacadão (Carrefour Group)	7 447,10	São Paulo
Renault	5 128,90	Paraná
Peugeot Citroen	4 600,10	Rio de Janeiro
Louis Dreyfus	3 518,30	São Paulo
GVT	2 408,40	Paraná
Sanofi-Aventis	1 900,00	São Paulo
V&M	1 791,00	Minas Gerais
Medley	1 607,70	São Paulo
Alstom Elec	1 537,10	São Paulo

* (in millions of US dollars)

Table 10: Top ten French companies in Brazil (Exame, 2011)

The exports to Brazil are not very significant however it has been increasing year after year. The most important exports are in the machinery sector, aircrafts, vehicles, tramway and railway, electronic equipment, organic chemicals and pharmaceutical products.

<i>Year</i>	<i>Export Value *</i>	<i>Import Value *</i>	<i>Trade Balance *</i>	<i>Share of Exports to Brazil</i>
2010	511 651,04	599 171,51	-87 520,46	0,92
2011	581 541,87	700 851,65	-119 309,78	0,95
2012	556 575,68	663 268,64	-106 692,96	1,07

* (in millions of US dollars)

Table 11: France Trade balance with exports to Brazil (Data Source: International Trade Centre, 2013)

The relationship between Brazil and France has an important tendency to the strategic co-operation as it can be seen in the last announcements and agreements made by both governments. France is transferring the technology and know-how to Brazil about its first submarine that will be part of the new conventional fleet of Brazil, starting its operation in 2017 (DefesaNet, 2013).

There have been long conversations around the fighters' aircrafts that Brazil wants to buy. The options are around the French Rafaele, the North-American Boeing F18 Super Hornet and the Swedish Saab Gripen. France seems to be the favourite, but no contract has been signed yet and there are many speculations about this huge contract. With the French contract, Brazil will buy 36 fighters aircrafts and in return, France would acquire 15 airplanes for military transport, developed by Embraer. The contract includes the terms that the transfer of know-how will be done in parts: in a first moment, six airplanes will be assembled in France and the others in Brazil. The Swedish contract is not as interesting as the French because their project has many North-American parts what can difficult the negotiations. The US aircrafts are a good option however it would be better to Brazil to find its emancipation from the North-American dependency in the strategic field (Muxagato, 2010, pp. 04-05).

The project to build a Brazilian satellite was recently won by the French Thales Alenia Space. The contract includes the know-how transference to the Brazilian government. This satellite will be used as channel communication by the government and also provide high-speed Internet for municipalities that aren't cover by the existent service provided by Telebrás¹⁸ (Agência Espacial Brasileira, 2013).

In transportation, RATP Dev represented France in the first driverless metro of Latin America. This metro line in São Paulo city is a public-private partnership and RATP Dev is part of the concessionary consortium winner for operation (RATP Dev, 2013). They will have 30-year concession for the operation and maintenance of the line. In the construction, Alstom represented France (ALSTOM, 2010). RATP Dev with their partners also got a new contract to construct and explore a tramway line in Rio de Janeiro, for the Olympic Games of 2016 (Groupe RATP, 2013).

¹⁸ Telebrás (Brazilian Telecommunications) is a semi-public company that uses and maintains the infrastructure and support networks for telecommunications services of the Federal Government.

There is a project of high-speed-rail to be implemented until 2020 to link São Paulo and Rio de Janeiro cities. The bidding was postponed because of lack of competition. There was only one bidder: a consortium of France companies. Spanish and German groups asked for a new deadline and they guaranteed that they will bid. The value estimated for the project is around 16,7 billion US dollars (BBC, 2013).

In the private sector, Dream Yacht Charter, a yacht charter tourism company, wants to start its business with 16 boats in Salvador, Bahia State. The initial investment is around 8,6 million US dollars. The total investment can achieve 43 million dollars. The investor will be benefitted by tax reduction from the Government of Bahia State (BAHIATURSA, 2013).

The French companies already in the Brazilian market keep searching for expansion. They have the knowledge of the local market that helps to identify opportunities.

In 2010, Capgemini, the biggest European company in information technology services, acquired 55% of shares from CPM Braxis, the leading Brazilian information technology services company, for the total sum of 290 million US dollars, adopting the name of CPM Braxis Capgemini. After the acquisition, the company counted with 6.500 team members, of which 5.700 came from CPM Braxis (Capgemini, 2010).

In 2010, Brazil represented 47% of Latin American information technology services, 23 billion US dollars.

In 2012, CPM Braxis Capgemini became the information technology strategic supplier for the Caixa Economica Federal¹⁹, until 2022. In this contract, CaixaPar (filial of Caixa Economica Federal) acquired 22% stake in CPM Braxis Capgemini through the purchase of shares from existing shareholders and the subscription to a capital increase (Capgemini, 2012).

All these projects, contracts and investments emphasize the strong trade link between France and Brazil. France has the know-how and expertise in many sectors and Brazil has a large pool of investment opportunities and needs of a country in development.

¹⁹ Caixa Economica Federal is the 4th largest bank in Brazil and the largest public bank of Latin America.

4.3.2 Investment opportunities in Brazil

This section identifies briefly the possible investment opportunities in which the country has attractiveness points to be explored.

In 2010, there were 325 municipalities in Brazil with 50.001 to 100.000 habitants (total of 51.088.638 people) and 245 with 100.000 to 500.000 inhabitants (total of 22.314.204 people) (IBGE, 2011).

These municipalities have a total of more than 73 million people and in general this municipalities do not have many diversity in terms of shopping, good restaurants and entertainment. If they want to have access to a higher range of options they have to go to the capital or bigger cities.

The middle-class in Brazil is growing and it is pushing the upper class to have different behaviours. Brazilians in a better economic situation are seeking new products and having different habits. They want to differentiate and have access to new products and experiences.

For big and small companies there is enough market and people are waiting for new products. At this moment, people have economic conditions to experience new products and are open to new business. Marketing is a very important factor as Brazilians in general follow the market's trends.

Below is a brief description of some attractive activities in the private sector with opportunities of investments:

Wine market

Brazilian's vineyards are more concentrated in the South of the country and also in São Fransisco Valey (North of the country). The Portuguese, English (grape from U.S.) and Italian introduced the grape in Brazil, in different periods of history. There are more than 1.100 vineyards in the country, most of then of small family-owned properties (Ibravin, 2013). In 2011, Rio Grande do Sul State produced 310 millions of litres (Ibravin, Dados, 2012).

The wine consumption in Brazil is rising because of the new middle-class and the *nouveaux riches* acquired taste. Brazilians are discovering the wine and in the last 10 years Brazil reached 40 million new wine consumers.

Most part of wine imports comes from Chile and Argentina; France is in the 5th position. In 2012, more than 736.530 hectolitres were imported by Brazil, from which, 48.233 hectolitres were from France (UbiFrance, 2013). The exports in the first semester of 2013 reached 20.000 hectolitres (Ibravin, Dados, 2013).

Many fairs and events in the wine sector are taking place in Brazil. The opportunity seems to be there.

Luxury Market

Wealth-X, the Singapore consultancy company expects that the number of billionaires in Brazil will be about 130 in 2022, up from 53 in 2012. Heavy investments are coming from luxury brands from all over the world.

The demand is not only in fashion and beauty products but it is also in yachts, apartments and cars. Despite the weakness of local currency, taxes and duties, Brazil is one of the top five markets for luxury vehicles in the world. (Financial Times, 2013)

Entertainment business

Operating movie theatre in small towns can be a business opportunity.

In Brazil, out of each ten-movie theatre, seven are in South and South-East Regions of Brazil. Industry's professional argues that the movie distribution is very expensive, which complicates the theatre in commercial format. The small cinema theatres are scarce and they could be the best solution for smaller cities.

The government offers tax incentives and has created a program to accelerate this initiative. The aim of the program is to reduce the geographic centralization of movie theatres and to improve the people's quality of life (ANCINE, 2012).

Cinemas are only one example, in general the same cities that have no movie theatre have neither other options for entertainment. The public tax incentives exist for any kind of cultural activity (Ministério da Cultura, 2008).

France is the second country in the world with more indoor cinemas and the third in number of screens (UNESCO, 2011). It is a country that undoubtedly has the experience in the sector. They have movie theatre even in smaller cities.

Definitely, Brazil has many opportunities and options for FDI. In 2012 Brazil was the 4th country that most received FDI (Valor Econômico, 2013).

The examples above are only few of many that can be found in this diverse country. The needs of a city or region can be the same as in others, as example, the entertainment options, local supermarkets with a competitive price in small towns, specialized stores in small sized cities (sporting goods or building/do-it-yourself), insurance, beverage, beauty, automotive, aeronautic sectors.

In the infrastructure sector the options are bigger, since Brazil wants to improve the mobility in the country.

4.3.3 Joint declaration between the governments

This section emphasises the declaration of commitment signed by the president of both countries in an official visit.

In December 2011, on the occasion of a State visit in Paris, the Brazilian president Dilma Rousseff and the French president François Hollande signed a joint declaration. Both presidents accorded to deeply explore the strategic relations and give new directions, for the benefit of both countries and its people (Elysée, 2012).

The agreement envisaged a bilateral relation, in terms of cooperation politics, economic and commercial, military and defence, science, technology, innovation in the industry, energy, education and culture, social and ultimately cross-border. The joint declaration also contemplated multilateral and global subjects, such as United Nations, global economy, climate change and cooperation with the European Union.

There are many projects in progress that were approved before the visit of the President of Brazil to France in addition to other projects that are waiting for the decisions to be implemented. The projects still on the decision table are those on the transportation sector, namely the fighter's aircraft and the high-speed-rail.

State declarations are important for both involved countries and give the confidence for companies thinking about doing business in the other country. This declaration does not mean that the governments assure that business will turn well, however it gives a message that the countries have a good political relationship what can facilitate the international commerce.

5 Conclusion

Brazil is an emergent country that justifies its label. The continuous progress in the economy has allowed the country to direct its efforts to improve the infrastructure, the quality of living and life conditions of people. It is not easy to accomplish such an endeavour in a large country with so many different characteristics, bureaucracy and administration levels.

The diagram of Michael E. Porter's Diamond applied to Brazil reveals in each determinant a country with extremes.

In factor conditions determinant there is a large availability of raw materials and climate conditions. On the other hand, the infrastructure is not adequately developed and high skilled people are not sufficient for the current demand.

For demand conditions determinant, there is a middle class experiencing strong growth and a market not yet ready to respond to their expectations.

The Related and Supporting Industries determinant analysis identified that Brazil creates clusters, planned in advance or not, that have a significant supporting and related industries in the country. However, the existent difficulties in local suppliers can be explained by the geographic distance. Nevertheless, it is easier for companies nowadays to be aware of their needs of suppliers before installing their plants or creating new products.

The last determinant, Firm Strategy, Structure and Rivalry, shows that competition is present in Brazilian market and it helps companies to innovate. Nevertheless, most of the companies present in the country use the strategy of lower prices/lower quality to compete with each other. However, as the consumers are more exigent regarding quality, it is important that companies change their strategies, otherwise they will not survive in the competitive market and the volatile habits of customers.

The broad clusters identified the sectors in which Brazil has competitive advantage and attractiveness in the world context. The clusters of Food and Beverage (represented by sugar and soya), Material and Metal, Petroleum and Chemicals and Transportations (represented by automotive parts and aircraft) are the Brazilian competitive broad clusters.

The factor government at this moment incentives FDI in Brazil and is going through a delicate and important moment for the democracy of the country, wherefore after many cases of corruption in biddings, the government cannot take anymore risks that may hinder its already bedraggled reputation.

Brazil as a country continent could have the National Diamond applied in each State or Region, studying them as different nations since they have their own profile and different international competitive advantages. This was not done because it was considered more important to have a nation-wide notion of the country as a whole.

It could be interesting however, a continuation of this study for the States or Regions, applying the concept to a local and centralized research to clarify where the clusters are present by State or Region. This new view might identify how the country is changing with the current decentralization of clusters and which are the areas that in a near future could draw new investments.

Applying the logic of attractiveness, even with the existent risks in the country, the return of investments can be positive. The numerous international companies and industries doing business in Brazil and expanding its business in this country can be used as measure to the Brazilian attractiveness.

In the current scenario of European crises, France has to search for partners in new markets and countries to help maintain its economy amongst the most developed in the world. As an industrialized country and with knowhow in strategic areas and infrastructure, France is able to expand its operations and investments in the Brazilian market, as many French companies already do.

An important information to retain is that the large quantity of municipalities in Brazil (with a number of inhabitants that goes from 50.001 to 500.000), located far from big centres offers many opportunities for investments that can be extremely profitable even for smaller investors.

The research undertaken has revealed that the Brazilian customers have become increasingly demanding and sophisticated in their expectations coupled with stable, health and growing economy (GDP among the highest in the world).

The Michael E. Porter's Diamond was the theory chosen to test the Brazilian attractiveness to French foreign direct investment. This theory covers important aspects of the country and industries, supported by exports analysis of the nation. It gives a strong background of the country and can call the attention for new opportunities. Meanwhile, applied alone is not sufficient to respond to all questions for the decision of an investor.

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7 Appendix

7.1 Estimative of Brazilian resident population in 01/07/2010 (IBGE, Estimativas de população, 2013)

ESTIMATIVAS DA POPULAÇÃO RESIDENTE NO BRASIL E UNIDADES DA FEDERAÇÃO COM DATA DE REFERÊNCIA EM 1º DE JULHO DE 2012	
BRASIL E UNIDADES DA FEDERAÇÃO	POPULAÇÃO ESTIMADA
Brasil	193 946 886
Região Norte	16 318 163
Rondônia	1 590 011
Acre	758 786
Amazonas	3 590 985
Roraima	469 524
Pará	7 792 561
Amapá	698 602
Tocantins	1 417 694
Região Nordeste	53 907 144
Maranhão	6 714 314
Piauí	3 160 748
Ceará	8 606 005
Rio Grande do Norte	3 228 198
Paraíba	3 815 171
Pernambuco	8 931 028
Alagoas	3 165 472
Sergipe	2 110 867
Bahia	14 175 341
Região Sudeste	81 565 983
Minas Gerais	19 855 332
Espírito Santo	3 578 067
Rio de Janeiro	16 231 365
São Paulo	41 901 219
Região Sul	27 731 644
Paraná	10 577 755
Santa Catarina	6 383 286

Rio Grande do Sul	10 770 603
Região Centro-Oeste	14 423 952
Mato Grosso do Sul	2 505 088
Mato Grosso	3 115 336
Goiás	6 154 996
Distrito Federal	2 648 532

Fonte: IBGE. Diretoria de Pesquisas - DPE - Coordenação de População e Indicadores Sociais - COPIS.

7.2 Cluster of Internationally Competitive Brazil Industries, 2010, elaborated by the author (International Trade Centre, Products, 2010), (International Trade Centre, Services, 2010)

HS4 Code	HS4 Description	Share of Total World Exports	Export Value *	Import Value *	Share of Total Brazilian Exports	World Exports	World Imports	Cluster
202	Meat of bovine animals, frozen	23,13	3 376,28	648,27	1,71	14 593,91	13 169,49	Food and Beverages
203	Meat of swine, fresh, chilled or frozen	4,90	1 226,58	0,91	0,62	25 028,24	24 948,03	Food and Beverages
207	Meat and edible offal, of the poultry of heading No 0105, fresh, chilled or frozen	27,59	5 952,03	30,53	3,02	21 570,95	20 270,12	Food and Beverages
901	Coffee, whether or not roasted or decaffeinated; coffee husks and skins; coffee substitutes containing coffee in any proportion	21,42	5 203,35	215,18	2,64	24 292,89	23 961,84	Food and Beverages
1005	Maize (corn)	9,50	2 214,96	759,78	1,12	23 326,15	25 694,03	Food and Beverages
1201	Soya beans, whether or not broken	27,76	11 043,00	435,59	5,60	39 777,90	44 378,03	Food and Beverages
1507	Soya-bean oil and its fractions, whether or not refined, but not chemically modified	13,83	1 347,66	139,37	0,68	9 748,00	8 924,81	Food and Beverages
1602	Other prepared or preserved meat, meat offal or blood	10,37	1 268,18	33,75	0,64	12 224,70	11 921,96	Food and Beverages
1701	Cane or beet sugar and chemically pure sucrose, in solid form	43,06	12 761,41	3,50	6,47	29 635,40	29 760,45	Food and Beverages
2009	Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter	14,43	1 924,69	276,41	0,98	13 339,53	13 547,72	Food and Beverages
2207	Undenatured ethyl alcohol of an alcoholic strength by volume of 80 % vol or higher; ethyl alcohol and other spirits, denatured, of any strength	16,86	1 014,29	413,22	0,51	6 014,32	5 539,51	Food and Beverages
2304	Soybean oilcake and other	21,16	4 719,37	128,74	2,39	22 302,29	24 184,35	Food and

	solid residue, wh/not ground								Beverages
4802	Uncoated paper and paperboard, of a kind used for writing, printing or other graphic purposes, and non-perforated punch-cards and punch tape paper, in rolls or rectangular (including square) sheets, of any size, other than paper of heading No 4801 or 4803	4,14	934,19	2 132,97	0,47	22 573,41	22 886,59		Forest products
3004	Medicaments (excluding goods of heading 3002, 3005 or 3006) consisting of mixed or unmixed products for therapeutic or prophylactic uses, put up in measured doses (including those in the form of transdermal administration systems) or in forms or packings	0,29	898,05	31 449,41	0,46	314 066,32	320 212,90		Health care
9403	Other furniture and parts thereof	0,89	582,28	863,43	0,30	65 229,07	63 764,24		Housing/Household
2601	Iron ores and concentrates, including roasted iron pyrites	27,91	28 911,88	138,01	14,65	103 582,52	130 619,66		Materials/Metals
2603	Copper ores and concentrates	2,75	1 237,74	9 654,49	0,63	45 046,57	45 502,91		Materials/Metals
6802	Worked monumental or building stone (except slate) and articles thereof, other than goods of heading 6801; mosaic cubes and the like, of natural stone (including slate), whether or not on a backing; artificially coloured granules, chippings and powder, of	6,26	633,16	393,22	0,32	10 107,21	9 293,74		Materials/Metals
7108	Gold (including gold plated with platinum), unwrought or in semi-manufactured forms, or in powder form	1,26	1 801,95	22,52	0,91	143 048,34	115 318,60		Materials/Metals
7201	Pig iron and spiegeleisen in pigs, blocks or other primary forms	20,20	971,14	3,52	0,49	4 807,82	5 641,38		Materials/Metals
7202	Ferro-alloys	7,58	2 038,95	2 513,75	1,03	26 894,89	29 004,46		Materials/Metals
7207	Semi-finished products of iron or non-alloy steel	8,27	2 434,34	224,63	1,23	29 431,51	28 585,95		Materials/Metals
7208	Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, hot-rolled, not clad, plated or coated	1,38	770,17	9 481,39	0,39	55 695,29	57 980,40		Materials/Metals
7601	Unwrought aluminium	2,74	1 280,35	1 322,01	0,65	46 799,07	48 653,52		Materials/Metals
8307	Flexible tubing of base metal, with or without fittings	25,91	649,31	665,84	0,33	2 506,39	1 810,63		Materials/Metals
102	Live bovine animals	8,79	658,66	45,00	0,33	7 492,63	7 845,73		Multiple business
8407	Spark-ignition reciprocating or rotary internal combustion piston engines	1,81	641,37	4 383,61	0,32	35 416,62	38 813,15		Multiple business
8409	Parts suitable for use solely or principally with the engines of heading No 8407 or 8408	2,58	1 446,94	12 238,97	0,73	56 079,88	57 855,99		Multiple business
8414	Air or vacuum pumps, air or other gas compressors and fans; ventilating or recycling hoods incorporating a fan, whether	1,53	932,22	14 070,30	0,47	60 774,47	62 054,85		Multiple business

Brazil: An application of Porter's Diamond and attractiveness analysis for French FDI

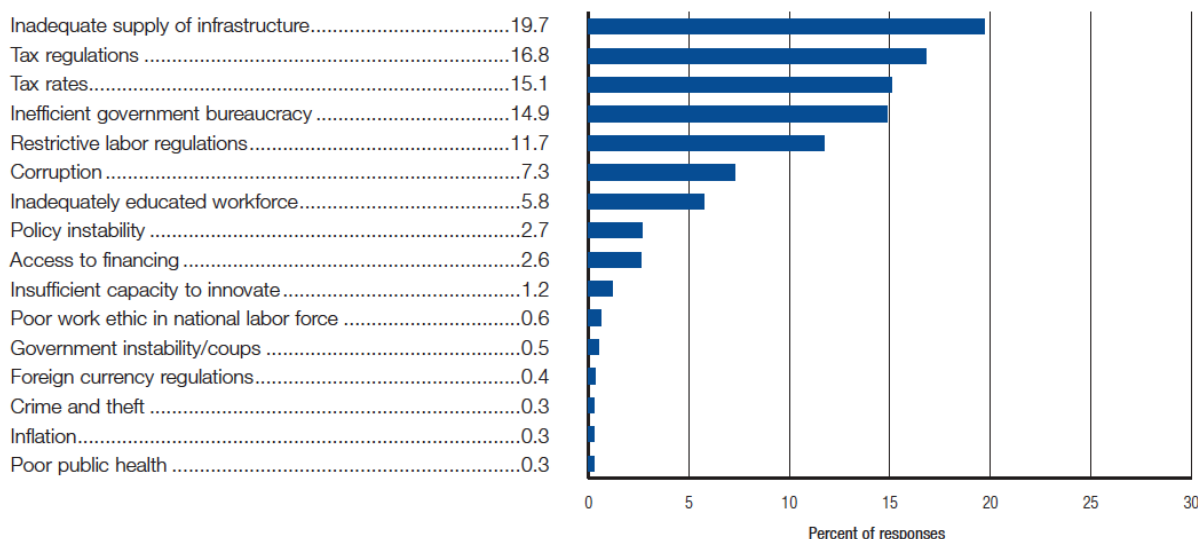
	or not fitted with filters							
8429	Self-propelled bulldozers, angledozers, graders, levellers, scrapers, mechanical shovels, excavators, shovel loaders, tamping machines and road rollers	3,66	1 349,69	8 411,85	0,68	36 853,60	37 692,24	Multiple business
8481	Taps, cocks, valves and similar appliances for pipes, boiler shells, tanks, vats or the like, including pressure-reducing valves and thermostatically controlled valves	0,88	576,00	10 577,97	0,29	65 133,59	68 719,10	Multiple business
8501	Electric motors and generators (excluding generating sets)	1,79	721,84	5 912,87	0,37	40 358,65	41 512,82	Multiple business
8517	Electrical apparatus for line telephony or line telegraphy, including line telephone sets with cordless handsets and telecommunication apparatus for carrier-current line systems or for digital line systems; videophones	0,39	1 277,74	33 594,31	0,65	324 300,34	352 760,09	Multiple business
8701	Tractors (other than tractors of heading 8709)	2,84	1 047,87	1 233,30	0,53	36 883,18	33 030,12	Multiple business
2401	Unmanufactured tobacco; tobacco refuse	24,98	2 706,67	679,82	1,37	10 835,76	11 686,13	Personal
2709	Crude oil from petroleum and bituminous minerals	1,44	16 293,42	100 974,46	8,26	1 130 423,35	1 324 378,60	Petroleum/Chemicals
2710	Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included, containing by weight 70 % or more of petroleum oils or of oils obtained from bituminous minerals, these oils being the basic con	0,45	3 060,74	111 258,56	1,55	684 373,55	645 886,48	Petroleum/Chemicals
2818	Artificial corundum, whether or not chemically defined; aluminium oxide; aluminium hydroxide	13,04	1 774,39	501,94	0,90	13 606,51	12 572,63	Petroleum/Chemicals
3901	Polymers of ethylene, in primary forms	1,82	1 113,05	9 982,20	0,56	60 995,41	64 482,50	Petroleum/Chemicals
4703	Chemical wood pulp, soda or sulphate, other than dissolving grades	16,33	4 434,24	3 251,04	2,25	27 156,89	29 781,37	Petroleum/Chemicals
4104	Tanned or crust hides and skins of bovine (including buffalo) or equine animals, without hair on, whether or not split, but not further prepared	13,50	736,58	397,14	0,37	5 457,26	5 382,71	Textile/Ap parel
4107	Leather further prepared after tanning or crusting, including parchment-dressed leather, of bovine (including buffalo) or equine animals, without hair on, whether or not split, other than leather of heading 4114	9,06	982,53	70,49	0,50	10 843,11	10 039,88	Textile/Ap parel
5201	Cotton, not carded or combed	5,48	821,55	683,05	0,42	14 993,99	15 098,79	Textile/Ap parel
6403	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of leather	2,02	924,30	809,40	0,47	45 764,19	48 662,45	Textile/Ap parel

Brazil: An application of Porter's Diamond and attractiveness analysis for French FDI

4011	New pneumatic tyres, of rubber	1,91	1 277,12	12 867,16	0,65	66 899,03	66 552,33	Transportation
8703	Motor cars and other motor vehicles principally designed for the transport of persons (other than those of heading 8702), including station wagons and racing cars	0,79	4 416,14	83 049,81	2,24	556 013,66	544 542,92	Transportation
8704	Motor vehicles for the transport of goods	1,81	1 686,89	19 775,19	0,85	92 994,59	98 897,49	Transportation
8706	Chassis, with engines, for vehicles of positions 87.01 through 87.05	17,82	635,60	177,24	0,32	3 566,65	3 271,47	Transportation
8708	Parts and accessories of the motor vehicles of heading 8701 to 8705	1,16	3 381,64	49 285,00	1,71	290 821,10	280 104,25	Transportation
8802	Other aircraft (for example, helicopters, aeroplanes); spacecraft (including satellites) and suborbital and spacecraft launch vehicles	4,63	3 999,05	10 806,30	2,03	86 378,58	96 055,42	Transportation
268	Other business services	1,63	15 776,50	20 873,50	49,58	970 186,54	833 328,93	Services
236	Travel	0,62	5 918,85	16 421,70	18,60	947 549,57	856 375,67	Services
205	Transportation	0,62	4 931,37	11 338,70	15,50	800 980,38	976 774,81	Services
260	Financial services	0,75	2 072,62	1 678,87	6,51	277 784,88	118 482,88	Services
291	Government services, n.i.e.	2,29	1 526,90	2 845,75	4,80	66 579,06	118 325,14	Services
245	Communications services	0,47	435,00	271,16	1,37	93 269,22	83 205,03	Services
253	Insurance services	0,43	416,03	1 528,76	1,31	97 146,04	169 097,57	Services
266	Royalties and license fees	0,16	397,21	2 850,25	1,25	254 130,69	266 344,58	Services
262	Computer and information services	0,10	209,84	3 505,43	0,66	211 162,64	106 290,82	Services
287	Personal, cultural and recreational services	0,35	108,26	1 271,47	0,34	31 130,09	37 092,53	Services
249	Construction services	0,03	28,54	6,48	0,09	99 470,20	77 411,23	Services

7.3 The Global Competitiveness Report 2013-2014 (World Economic Forum, 2013)

The most problematic factors for doing business



Note: From the list of factors above, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

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7.4 Country Attractiveness Index 2013 (Groh, Liechtenstein, & Lieser, 2013)

VC/PE Country Attractiveness

	Rank 2009	Rank 2011	Rank 2013	Score 2013	Quartile 2013
VC/PE Index	36	33	36	66.1	Q2
1. Economic Activity [+/-]	4	5	24	89.6	Q1
1.1 Total Economic Size (GDP)	9	7	7	78.9	Q1
1.2 Expected Real GDP Growth	43	21	83	88.8	Q3
1.3 Unemployment	67	33	30	102.7	Q2
2. Depth of Capital Market [+/-]	13	20	22	75.8	Q1
2.1 Size of the Stock Market	14	14	14	77.3	Q1
2.2 Stock Market Liquidity (Trading Volume)	15	14	14	80.1	Q1
2.3 IPOs and Public Issuing Activity	15	15	17	61.6	Q1
2.4 M&A Market Activity	17	11	12	75.6	Q1
2.5 Debt and Credit Market	48	91	95	53.2	Q4
2.6 Bank Non-Performing Loans to Total Gross Loans	52	37	43	106.9	Q2
2.7 Financial Market Sophistication	18	24	25	87.8	Q1
3. Taxation [+/-]	85	90	78	77.6	Q3
3.1 Entrepreneurial Tax Incentives and Administrative Burdens	85	90	78	77.6	Q3
4. Investor Protection and Corporate Governance [+/-]	64	63	68	57.1	Q3
4.1 Quality of Corporate Governance	60	58	76	54.0	Q3
4.2 Security of Property Rights	67	64	63	59.7	Q3
4.3 Quality of Legal Enforcement	77	65	64	57.8	Q3
5. Human and Social Environment [+/-]	51	49	51	58.3	Q2
5.1 Education and Human Capital	72	79	76	49.1	Q3
5.2 Labor Market Rigidities	34	33	38	71.6	Q2
5.3 Bribing and Corruption	61	55	53	56.2	Q2
6. Entrepreneurial Culture and Deal Opportunities [+/-]	61	49	52	51.7	Q2
6.1 Innovation	34	36	38	51.1	Q2
6.2 Scientific and Technical Journal Articles	15	15	15	75.5	Q1
6.3 Ease of Starting and Running a Business	118	113	116	41.1	Q4
6.4 Simplicity of Closing a Business	95	98	98	48.6	Q4
6.5 Corporate R&D	29	27	28	48.0	Q1