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THE POLICIES OF TAX, LABOR AND EXCHANGE RATE: A
COMPARATIVE STUDY BETWEEN BRAZILIAN AND CHINESE
POLICY

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1. INTRODUCTION

Foreign direct investment (FDI) is an integral part of an open and effective international economic system and a major catalyst to development. Yet, the benefits of FDI do not accrue automatically and evenly across countries, sectors and local communities. National policies and the international investment architecture matter for attracting FDI to a larger number of developing countries and for reaping the full benefits of FDI for development.

China has become a powerful magnet for FDI, which has contributed substantially to its rapid growth and development. FDI that has flooded into China during the past decade has been facilitated by Chinese reforms that opened the economy to outside investment, and by its affiliation to the World Trade Organization (WTO).

FDI brought many benefits to Brazil in the 1990s. Inflows helped transform the region by modernizing industries, services, and infrastructure. Among the many examples is the improved telecommunication system. FDI, however, was shaken by the emergence of other investment opportunities elsewhere. China's emergence seems to have particularly affected some countries and sectors. In this sense, this paper looks at the trade off between Brazilian and Chinese investment incentives for the location of foreign direct investment (FDI).

Given the strategic relevance of the Chinese market within the global context and the general benefits of attracting foreign direct investment (FDI) as a tool for Brazilian economic development, the proposal of these studies is traced a comparative vision of tax, labor and exchange rate policies relating to both countries in order to examine the effects of attraction on investment decisions.

1.1 Overview of Foreign Direct Investment in Brazil

Brazil is among the most important recipient of foreign direct investment (FDI) among developing countries. Not only Brazil, but also other developing countries and several OECD member countries are engaged in how to best achieve a balanced regional development. Regional success and decline seem to result from physical, social and human capital to facilitate local investment as well as FDI. Although retaining and attracting sufficient FDI (not only in quantity but also in "quality") and its efficient utilization remains clearly on top of the agendas of most countries and is an important element of the comprehensive regional development strategy, the key to successful development will ultimately be sound domestic macroeconomic and structural policies, adequate and efficient domestic savings and investment, and human capital accumulation, supported by strong domestic institutions. FDI is not a substitute for getting domestic policies "right". Appropriate domestic policies will help attract FDI and maximize its benefit while at the same time removing obstacles to the dynamism and creativity of local entrepreneurship. The relatively easy task is to advocate that FDI is beneficial to, and indeed a strong driver of, economic development in host countries. It is widely recognized that FDI increases economy-wide efficiency through the transfer of management know-how, technology, business practice, access to foreign markets, increased employment opportunities, and enhanced social and environmental standards. It also boosts competitiveness globally.

Brazil has made considerable progress in facing the problems of its past legacy. Macroeconomic stabilization has been reinforced since the devaluation of the Real in 1999 and, for the first time in a decade, the economy has been able to benefit from an export-led recovery. Nonetheless, the dependence on foreign sources of finance and thus the vulnerability to external shocks remain significant. Progress in economic stabilization, a sweeping privatization program and generally improved business environments based on market reforms and outward orientation substantially increased the participation of foreign enterprises and banks in the economy in the 1990s. From 1996 to 2002, Brazil received nearly \$170 billion in FDI. Not surprisingly, most of the FDI inflows are located in the south-east region, which receives 87.5 percent of all assets of companies with foreign participation, while 0.6 percent of these assets are in the mid-west, 3 percent in the north region, 4.2 percent

in the north-east, and 4.7 percent in the south region. Although the south and north-east regions have different levels of economic development, the difference in the concentration of enterprises with foreign participation is not very significant. This occurs because the north-east has some comparative advantages in relation to the other regions, in particular, the low cost of labor and generous fiscal incentives. (1)

1.2. Overview of Foreign Direct Investment in China

FDI flows to China have grown remarkably since the 1990s. Reforms have opened the economy to foreign direct investment and secured access to abundant and disciplined low-cost labor, as well as a huge domestic market. China's performance has also been influenced by profound changes in its trade policy regime. Until recently China was only loosely integrated into the global economy, with high tariffs and a host of nontariff barriers shielding critical sectors of the domestic economy. In terms of traditional trade liberalization, China has opened up its external sector dramatically by dismantling tariffs, reducing its unweighted average tariff from over 50 percent in the early 1980s to 10.4 percent in January 2004. Accession to the World Trade Organization - WTO has been a major tool in opening the economy, and there has been movement more recently to pursue free trade areas. China has also used a wide array of instruments and institutions for export promotion, including exchange rate policies, duty drawback for exporters, sectoral policies, tax rebates and exemptions, and free trade zones. While China is receptive to foreign investors and providing competitive incentives for location in the country, initial investments were largely confined to export processing. Foreign investment, moreover, contributed substantially to the rapid growth of China's exports and to the increasing value added in industrial production. Foreign-invested export processing as a share of total export processing rose from "marginal" in 1985 to 55 percent in 2003. Meanwhile, foreign access to the domestic market remained limited and steeped in negotiation with the state. Wholly owned subsidiaries were generally allowed only for export processing. Beginning in 1992, restrictions on foreign direct investment in the domestic market were substantially reduced, and the limitations on wholly owned subsidiaries were relaxed. Foreign firms have thus obtained broader access to the huge domestic market. (2)

1.3. Brazilian and Chinese Position in Terms of FDI In flows

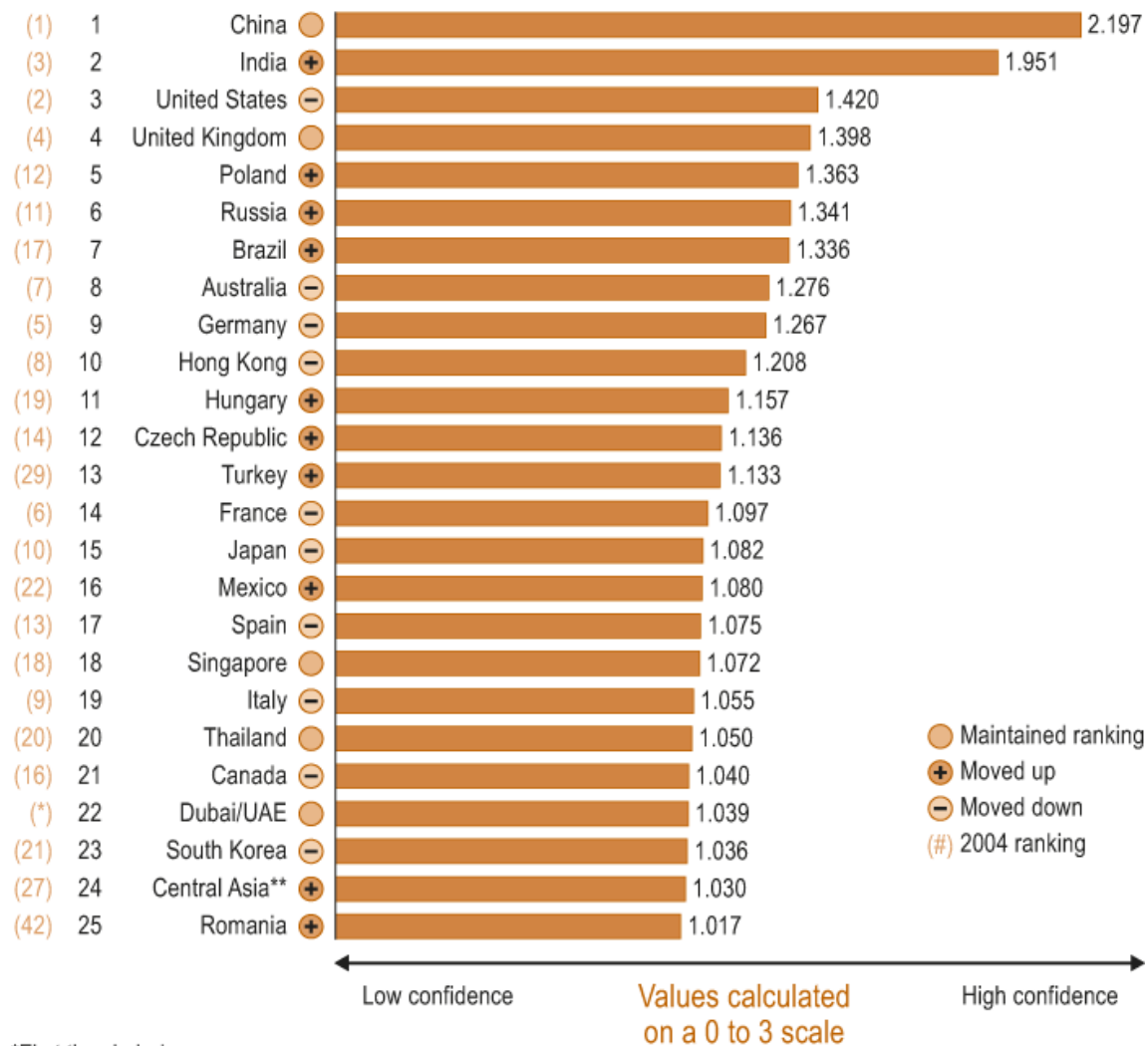
Brazil was among the 10 most attractive markets, taking 7th place in 2005 (up from 17th a year earlier). The country's economic recovery and rising income levels have fueled interest from wholesale and retail investors. Investors who are eager to meet global demand for a wide range of commodities are more confident in the Brazilian market. Their industries include chemicals, fabricated metal, industrial machinery, computer equipment, mining and raw material manufacturing.

Not surprisingly, China has held the top spot since 2002. This is partly because China attracts more capital-intensive manufacturing and logistics functions. China's manufacturing base has developed over the years in large part by foreign multinational companies; two-thirds of China's manufacturing exports are from foreign companies. Moreover, it is expected that this trend will continue over the next years as more functions are sent overseas.

Figure 1 demonstrates the FDI Confidence Index in 2005, the top 25 most attractive FDI destinations of global FDI inflows. The FDI Confidence Index® was constructed using primary data from a proprietary survey administered to senior executives of the world's 1,000 largest corporations. The companies were selected from the Global 1,000 as determined by 2004 revenues and represent 47 countries and 24 different industries (as categorized by SIC codes). Participating companies are responsible for about 70 percent of global FDI flows and generate \$27 trillion in annual sales. These companies closely resemble the country and sector coverage of the Global 1,000 population, generate \$6.2 trillion in annual sales, and hold \$30.5 trillion total global assets. Participating executives include CEOs, CFOs, board members, and senior-level corporate strategists from 42 countries and 22 industries. The Index was calculated as a weighted average of the number of high, medium, low and "no interest" responses to a question about the likelihood of direct investment in a market over the next one to three years. Index values are based on non-source country responses about various markets. For example, the Index ranking for the United States reflects all non-U.S. company responses about the U.S. market. All Index values have been calculated on a scale of zero to three, with three representing highly attractive and zero not attractive. (3)

FIGURE 1
FDI Confidence Index®

Top 25, December 2005



*First time in Index

**Central Asia includes Azerbaijan, Belarus, Kazakhstan and Turkmenistan


Source: A.T. Kearney


2. CRITERIA IN THE PROCESS OF DECIDING WHERE TO INVEST

Competition for FDI has become fierce among developing countries in the last couple of decades. In order to be more competitive in this race, countries started to re-structure their political and economic policies while Board Members of companies considered various criteria in deciding where to invest. The companies compare countries on the basis of their respective pocket list for investment, which includes various factors such as labor cost, tax policies, effective exchange rate and so on. In this work, the analysis will focus on the comparable difference between Brazil and China relating to labor, tax and exchange rate policies in such way that these factors impact the business environment and competitiveness, influencing decision of investors so that they will be able to meet their objectives of profit maximization.

The “Doing Business” (World Bank) database measures quantitative indicators on business regulations and their enforcement across countries. The ten indicators are: starting a business, dealing with licenses, hiring and firing, registering property, getting credit, protecting investors, trading across borders, paying taxes, enforcing contracts, and closing a business. The indicators are used to analyze economic and social outcomes, such as informality, corruption, unemployment, and poverty. The annual published report gives policymakers the ability to measure regulatory performance in comparison to other countries, learn from best practices globally, and prioritize reforms. The indicators presented and analyzed in Doing Business not only highlight the extent of obstacles to doing business but also help identify their source, supporting policymakers in designing reform.

As measured by the Doing Business indicators (2006), Brazil’s rank is 121 while China’s rank is 93 on the ease of doing business among 175 countries. A high ranking on the ease of doing business does mean that the government has created a regulatory environment conducive to the operation of business (see the Brazilian and Chinese indicators in the next pages).

Brazil Region: Latin America & Caribbean Income category: Lower middle income Population: 186,404,913 GNI per capita (US\$): 3,460.00			
Ease of...	2006 rank	2005 rank	Change in rank
<i>Doing Business</i>	<i>121</i>	<i>122</i>	<i>+1</i>
Starting a Business	115	106	-9
Dealing with Licenses	139	136	-3
Employing Workers	99	101	+2
Registering Property	124	121	-3
Getting Credit	83	76	-7
Protecting Investors	60	58	-2
Paying Taxes	151	149	-2
Trading Across Borders	53	50	-3
Enforcing Contracts	120	117	-3
Closing a Business	135	149	+14

China Region: East Asia & Pacific Income category: Lower middle income Population: 1,304,500,000 GNI per capita (US\$): 1,740.00			
Ease of...	2006 rank	2005 rank	Change in rank
<i>Doing Business</i>	<i>93</i>	<i>108</i>	<i>+15</i>
Starting a Business	128	141	+13
Dealing with Licenses	153	151	-2
Employing Workers	78	77	-1
Registering Property	21	21	0
Getting Credit	101	117	+16
Protecting Investors	83	114	+31
Paying Taxes	168	169	+1
Trading Across Borders	38	35	-3
Enforcing Contracts	63	59	-4
Closing a Business	75	69	-6

The indicators relating to the flexibility of employment regulation and the tax burden on businesses will be used to analyze the difference of labor and tax issues between Brazil and China in this work.

2.1. Labor

Every economy has established a complex system of laws and institutions to protect the interests of workers and to guarantee a minimum standard of living for its population. This system encompasses four bodies of law: employment laws, industrial relations laws, occupational health and safety laws, and social security laws. Employment laws govern the individual employment contract. Collective or industrial relations laws regulate the bargaining, adoption, and enforcement of collective agreements, the organization of trade unions, and the industrial action by workers and employers. Social security laws govern the social response to needs and conditions that have a significant impact on the quality of life, such as old age, disability, death, sickness, and unemployment.

2.1.1. Employment Regulation

Employment regulations have been interpreted as potentially changing the terms of employment agreements with workers. This would then alter the labor utilization decisions made by a firm, and thereby affect its choice of investment, since employment regulations can increase the cost the firm faces when expanding or reducing its productive capacity, considering that firm's decisions is determined by its objective of profit-maximization.

By assuming that employment protection impacts not only on labor costs but also on investment adjustment costs, we find that it has a negative and significant impact on investment. Firms facing negative shocks see their financial constraints worsening in countries with greater labor market rigidities.

Examining government regulation in the area of employment and social security laws, Doing Business presented three measures: a rigidity of employment index, a cost of hiring measure and a cost of firing measure. The rigidity of employment index is an average of three sub-indices: difficulty of hiring, rigidity of hours, and difficulty of firing. Each index takes values between 0 and 100, with higher values implying more rigid regulation. Difficulty of hiring measures flexibility of contracts and the ratio of minimum wage to the value-added per worker. Rigidity of hours covers restrictions on weekend and night work, working time and workweek requirements, and mandated days of annual leave with pay. Difficulty of firing covers workers' legal protections against dismissal, including the grounds for dismissal, and procedures for dismissal (individual and collective). Cost of hiring covers all social security payments and payroll taxes associated with hiring a new employee, expressed as a percentage of the worker's salary. A cost of firing indicator measures the cost of advance notice requirements, severance payments and penalties due when firing a worker, expressed in terms of weekly wages. The indicators on employment regulations are based upon a detailed study of employment laws. Data are also gathered on the specific constitutional provisions governing these two areas. Both the actual laws and a secondary source were used to ensure accuracy. Finally, all data are verified and completed by local law firms through a detailed survey on employment regulations. To make the data comparable across countries, a range of assumptions about the worker and the company are applied. Assumptions on the worker include that he is a non-executive full-time male employee who has worked in the same company for 20 years, has a wife and two children, and is not a member of the labor union (unless membership is mandatory). It is assumed that the company is a limited liability manufacturing corporation that operates in the country's most populous city. It is 100% domestically-owned, and has 201 employees.

Employment regulation measures the flexibility of labor regulations. It examines the difficulty of hiring a new worker, rigidity of rules on expanding or contracting working hours, the non-salary costs of hiring a worker, and the difficulties and costs involved in dismissing a redundant worker. The first three indices measure how difficult it is to hire a new worker, how rigid the regulations are on working hours, and how difficult it is to dismiss a redundant worker. Each index assigns values between 0 and 100, with higher values representing more

rigid regulations. The overall Rigidity of Employment Index is an average of the three indices.

The following tables show the main indicators:

? difficulty of hiring a new worker (Difficulty of Hiring Index),

? restrictions on expanding or contracting the number of working hours (Rigidity of Hours Index),

? difficulty and expense of dismissing a redundant worker (Difficulty of Firing),

? an average of the three indices (Rigidity of Employment Index).

2.1.2. Employing Workers in Brazil and in China

Employing Workers Indicators (2006)	Brazil	China
Difficulty of Hiring Index		
Can term contracts be used only for term tasks?	Yes	No
What is the maximum duration of term contracts? (in months)	24	No Limit
What is the ratio of mandated minimum wage to the average value added per worker?	0.24	0.41
Rigidity of Hours Index		
Can the workweek extend to 50 hours (including overtime) for 2 months per year?	Yes	Yes
What is the maximum number of working days per week?	6	6
Are there restrictions on night work?	Yes	No
Are there restrictions on "weekly holiday" work?	Yes	Yes
What is the paid annual vacation (in working days) for an employee with 20 years of service?	30	0
Difficulty of Firing Index		
Is the termination of workers due to redundancy legally authorized?	Yes	Yes
Must the employer notify a third party before terminating one redundant worker?	No	Yes
Does the employer need the approval of a third party to terminate one redundant worker?	No	No
Must the employer notify a third party before terminating a group of redundant workers?	No	Yes
Does the employer need the approval of a third party to terminate a group of redundant workers?	No	No
Must the employer consider reassignment or retraining options before redundancy termination?	No	Yes
Are there priority rules applying to redundancies?	No	No
Are there priority rules applying to re-employment?	No	Yes
Rigidity of Employment Index		
Hiring and firing costs (2006)		
Nonwage labor cost (% of salary)		
What is the notice period for redundancy dismissal after 20 years of continuous employment? (weeks of salary)	4.3	4.3
What is severance pay for redundancy dismissal after 20 years of employment? (months of salary)	6.0	20.0
What is legally mandated penalty for redundancy dismissal? (weeks of salary)	6.5	0.0
Firing costs (weeks of wages)		

2.1.3. Difference between Brazil and China's Labor Policy

	Brazil	China
Difficulty of Hiring Index(0 less difficult)	67	11
Rigidity of Hours Index (0 less rigid)	60	20
Difficulty of Firing Index(0 less difficult)	0	40
Rigidity of Employment Index (0 less rigid)	42	24
Nonwage labor cost (% of salary)	37.3	44.5
Firing costs (weeks of wages)	36.8	91.0

Source: Doing Business Database

A comparison of Brazil and China in terms of the difficulty of hiring a worker shows that it is much easier to hire an employee in China than in Brazil. Brazilian index exceeds five times Chinese index, representing the huge rigid regulations combined with a higher value of minimum wage in Brazil with respect to correspondent Chinese numbers. In Brazil, the term contracts are allowed only for temporary tasks and they can be used for a maximum of two years while the fixed term contracts can be entered in China for any reason and there is no maximum duration provided by the law. Furthermore, the ratio of the mandated minimum wage to the value added per worker is 0.24 in Brazil while it is 0.41 in China. It is important to explain that countries with higher mandated minimum wages relative to average value added per worker are given lower ratings. “The formula used to calculate the zero-to-10 ratings for this component was: $(V_{max} - V_i) / (V_{max} - V_{min})$ multiplied by 10. V_i represents the minimum wage to average value added per worker ratio. The values for V_{max} and V_{min} were set at 79% (1.5 standard deviations above average) and 0, respectively. Countries where the minimum wage was more than 79% of the average value added per worker were given a rating of zero. Countries with no minimum wage were given a rating of 10. This component was based on two survey responses obtained from the World Economic Forum’s Global Competitiveness Report issues. The first question asked about the overall “impact of the minimum wage.” The second question asked about the strength of enforcement of the minimum wage law. Countries received higher ratings if the survey respondents indicated the minimum wage had a small impact and/or was not strongly enforced. Countries received lower ratings if the impact was deemed to be great and/or if the law was strongly enforced”(4). Thus, considering that Brazil (0.24) received a significant lower rating than China (0.41), it is realized that the mandated minimum wages relative to average value added per worker has a significant smaller impact in China than in Brazil.

Another relevant difference is that Brazilian Labor Law regulates working times and leaves, remuneration, and working conditions, matters that in China are normally regulated by collective or individual employment contract. In this sense, there are 30 days of paid annual leave as annual vacation in Brazil and there is no annual vacation in China, as well as there are restrictions on night work or additional night work payment only in Brazil. About the






















difficulty of firing, Chinese index exceeds four times Brazilian Index. The difficulty and the expense of firing workers is reflected as an index where the higher the value the more rigid the regulations. Therefore it is more difficult to make employees redundant in China than in Brazil, mainly because, differently from Brazil, the procedures for dismissal often require previous third party notification. The firing cost indicator also measures the cost of severance payments and penalties due when terminating a redundant worker, expressed in weekly wages. One month is recorded as 4 and 1/3 weeks. In Brazil, for example, an employer is required to give 30 days' notice before a redundancy termination, and the severance pay for workers with 20 years of service equals 6 months of wages while it equals 20 months in China. Nevertheless, no penalty is levied in China while it equals 6.5 weeks in Brazil. Altogether, the employer pays the equivalent of 91 weeks of salary to dismiss the worker in China and an equivalent of 36.8 weeks of salary to dismiss the worker in Brazil.

Also, the nonwage labor cost is expressed as a percentage of the worker's salary. It is important to highlight that the nonwage labor cost indicator measures all social security payments (including retirement fund; sickness, maternity and health insurance; workplace injury; family allowance; and other obligatory contributions) and payroll taxes associated with hiring an employee in a fiscal year. So, how it can be seen, that index is smaller in Brazil (37.30%) than in China (44.50%), although the total cost is higher in Brazil than in China, considering that the wage is significantly higher in Brazil.

The following figures show that the wage cost of industrial worker in Brazil equals 2.47 of the wage cost of industrial worker in China. The indicators included in the Scoreboard permit intercountry comparisons, regarding both the potential and the performance of emerging economies as locations for global production activities. It was ranked 21 emerging economies. The first rank measures the lowest wage and the last rank measures the highest wage. As a result, China ranks 7th and Brazil 18th.

Labour cost

Measures wage cost of industrial workers in major agglomerations (December 2006)

Rank		Labour cost (USD per hour)	
		0.00	10.00
			20.00
1	Philippines		1.37
2	Indonesia		1.89
3	Mexico		2.07
4	Thailand		2.32
5	India		2.90
6	Romania		3.16
7	China		3.40
8	Russia		3.53
9	Hungary		4.63
10	Poland		4.85
11	Argentina		5.21
12	Hong Kong		5.38
13	Malaysia		5.39
14	Slovakia		5.74
15	Turkey		6.62
16	Czech Rep		7.17
17	Singapore		7.59
18	Brazil		8.41
19	Slovenia		8.94
20	Taiwan		9.29
21	South Korea		16.88

Source: Global-production.com, Inc.

Brazil Potential

Rank Labour cost (USD per hour; 0.00 – 20.00)		
18	Labour cost	8.41
Rank Business environment (score value; 0.000 – 1.000)		
16	Skill base	0.347
14	R+D capacity	0.021
21	Infrastructure	0.091
21	Government	0.104

China Potential

Rank Labour cost (USD per hour; 0.00 – 20.00)		
7	Labour cost	3.40
Rank Business environment (score value; 0.000 – 1.000)		
19	Skill base	0.255
11	R+D capacity	0.030
13	Infrastructure	0.248
13	Government	0.262

Source: Global-production.com, Inc.

2.2. Tax

Taxes are essential. Without them, there would be no money to fund schools, hospitals, courts, roads, water, waste collection and other public services that help businesses to be more productive. Corporate tax rates are also used actively as a policy tool to attract the location of investments. Companies examine the effects of tax rates on location decisions of investing abroad, since FDI is negatively affected by the level of profit taxation. The present analysis considers the effect of profit taxation as a measure of investment incentives. The focus on the tax rate leaves aside specific incentives that may be offered by Brazil and China. This is due to data availability. Under the assumption that these are complements of tax breaks, i.e., are positively correlated, this should not cause a problem in the empirical estimation.

2.2.1. Tax Payable and Compliance

The Doing Business tax survey records the effective tax that a medium size company must pay or withhold.

The indicators are measured as follows:

- ? The tax payable indicator measures the total amount of taxes payable by the company within the second year of operation. The total amount of taxes is the sum of all the different taxes payable after accounting for various deductions and exemptions. The total amount of taxes payable is presented as proportional to gross profits (sales less material and labor costs).
- ? The total number of tax payments, which takes into account the method of payment/withholding, frequency of payment/withholding, and the number of agencies involved for the standardized case study.
- ? The time indicator measures the total hours per year necessary to prepare, file and pay corporate income, VAT, and labor taxes.

The tables below show the main indicators. They include:

- ? total number of tax payments per year
- ? time it takes to prepare, file and pay (or withhold) the corporate income tax, the value added tax and social security contributions (in hours per year)
- ? amount of taxes on profits paid by the business as a percentage of commercial profits
- ? amount of taxes and mandatory contributions on labor paid by the business as a percentage of commercial profits. This amount include mandatory social security contributions paid by the employer both to public and private entities, as well as other taxes or contributions related to employing workers.
- ? amount of taxes and mandatory contributions paid by the business that are not already included in the previous 2 categories
- ? total amount of taxes and mandatory contributions payable by the business

It was considered:

- ? Name of taxes have been standardized. For instance income tax, profit tax, tax on company's income are all named corporate income tax in this table
- ? When there is more than one statutory tax rate, the one applicable to TaxpayerCo is reported
- ? The hours for VAT include all the VAT and sales taxes applicable
- ? The hours for Social Security include all the hours for labor taxes and mandatory contributions in general

Also, it takes the following notes:

- a) data not collected
- b) VAT is not included in the total tax rate because it is a tax levied on consumers
- c) very small amount
- d) included in other taxes
- e) Withheld tax
- f) electronic filling available
- g) paid jointly with another tax

2.2.2. Paying Taxes in Brazil

Tax	Payments (number)		Time (hours)		Statutory tax rate	Tax base	Total tax rate (% profit)	
ICMS (similar to VAT)	1	f)	1,374		18%	value added (including other consumption taxes)	93.9	b)
IPI (similar to VAT)	1	f)	-	a)	20%	value added (including other consumption taxes)	87.0	b)
PIS/COFINS (similar to VAT)	1	f)	-	a)	9.25%	value added	40.2	b)
Social security contributions (INSS)	1	f)	491		20%	gross salaries	23.2	
Corporate income tax (IRPJ)	1	f)	736		15%+10% (surcharge applies on annual taxable income exceeding R\$ 240 thousand)	taxable income	16.5	
Payroll tax	1	f)	-	a)	8.8%	gross salaries	9.6	
Severance contribution (FGTS)	0	g)	-	a)	8.5%	gross salaries	9.3	
Social security contributions (CSLL)	1	f)	-	a)	9%	taxable income	5.9	
Property tax	1		-	a)	2.5%	property market value	3.7	
Financial transactions tax (CPMF)	1		-	a)	0.38%	bank transactions	2.9	
Interest tax	12		-	a)	20%	interest income	0.5	
Vehicle tax	1		-	a)	1.5%	market value of vehicle	0.1	
Municipal services tax	1		-	a)	5%	price of service		c)
Totals:	23		2600				71.7	

2.2.3. Paying Taxes in China

Tax	Payments (number)	Time (hours)	Statutory tax rate	Tax base	Total tax rate (% profit)	
Value added tax (VAT)	12	384	17%	value added	54.4	b)
Social security/ housing fund contributions	12	288	44%	gross salaries	51.0	
Corporate income tax	5	200	33%	taxable income	17.2	
Urban maintenance tax	0	g) -	a) 7%	value added tax	3.6	
Education tax	13	-	a) 3%	value added tax	1.6	
Stamp duty	2	-	a) 0.03%	transaction value	1.0	
Property tax	1	-	a) 1.2%	80% of building value	0.9	
Land tax (use)	1	-	a) CNY 0.5 to 7.5 per square meter	land area	0.6	
Levies for construction and maintenance of river projects	1	-	a) 1%	value added tax and business tax	0.5	
Business tax	1	-	a) 5%	capital gains from property sale	0.5	
Totals:	48	872			77.1	

Source: Doing Business Database

2.2.4. Difference between Brazil and China's Tax Policy

Economy/Paying Taxes	Brazil	China
Payments (number)	23	48
Time (hours)	2,600	872
Total tax rate (% profit)	71.7	77.4

According to the survey, companies in Brazil have 14 business taxes (ICM, IPI, PIS, COFINS, INSS, IRPJ, Payroll Tax, FGTS, CSLL, Property Tax, CPMF, Interest Tax, Vehicle Tax and Municipal Services Tax), and 10 in China (VAT, Social security/housing fund contributions, Corporate income tax, Urban maintenance tax, Education tax, Stamp duty, Property tax, Land tax, Levies for construction and maintenance of river projects, Business tax). The Brazilian tax system is among the most complex in the world. Companies have to face many changes in tax rules a day, so to keep up to date on tax law isn't easy. It takes 2,600 hours for a firm to comply with all tax requirements in Brazil, while it takes 872 hour to do so in China. In this respect, it has a huge impact for business regarding the relation to administrative and compliance cost, and, consequently to the company's prices. About the total tax rate index, businesses in Brazil pay tax correspondent to 71.70% of gross profit. This indicator is lightly higher in China – 77.10% of gross profit.

2.3. Exchange Rate

The importance of exchange rates in determining FDI has been emphasized in the literature (e.g.; Froot and Stain 1991; Klein and Rosenger 1994; Blonigen 1997). Basically, a depreciation in the currency of the recipient country reduces production costs, measured in foreign currency, and increases the relative wealth of foreign investors, leading to an increase in FDI inflows. Thus, currency devaluation can change the relative competitiveness of FDI recipient country, and divert investments to the country that has devalued its currency. A relative real appreciation in the currency of a recipient country will reduce its FDI inflows and divert investment for its rival country.

2.3.1. The Effective Exchange Rate in Brazil

Brazil's external current account has improved markedly since the floating of the exchange rate in 1999. The elements such as the acceleration of global economic activity and significant gains in export prices contributed to explain the emergence of record trade and current account surpluses amidst a sharp appreciation of the Brazilian Real during 2003–05, suggesting that most of this appreciation was an equilibrium response to improved economic conditions at home and abroad. Most of the appreciation of the Brazilian Real BRL observed during 2003–05 was indeed driven by fundamentals, notably the strengthening of the net foreign assets position and more favorable terms of trade. Moreover, the relative fiscal discipline also contributed to the equilibrium strengthening of the currency through a reduction in the risk associated with investing in Brazilian assets. In fact, the reduction in risk seems to have played a bigger role in the currency appreciation than the real interest rate differential per se: Brazilian assets attracted more investments not only because real interest rate differentials increased with the decline of inflation but mainly because the same return was associated with a lower risk. (5)

2.3.2. The Effective Exchange Rate in China

Between 1994 - 2005, China's currency kept at a constant nominal level to the US dollar despite China's rapid economic growth, rising productivity, vibrant exports and massive foreign direct investment inflows – all factors that normally cause a currency to appreciate. In August 2005, its exchange rate regime was reformed to include the use of a currency basket and a moderate degree of flexibility. An initial 2 percent appreciation was introduced, with variation (plus or minus) of 0.3 percent permitted each day.

Moreover, the resulting build-up of central bank foreign reserves in itself is sufficient to justify Renminbi appreciation, which is generally known as China's currency, although the unit of measurement is the Yuan. Many observers have interpreted the rapid pace of China's reserve accumulation over the last years, which has reflected a rapid expansion of China's exports as well as large inflows of foreign direct investment (FDI), as clear evidence of undervaluation of the Renminbi. Therefore it is assumed that China has achieved exuberant growth by selling deliberately undervalued exports in a way that the response of politicians in America and elsewhere to this perceived threat has been to lobby for a change in China's exchange rate regime and an end to Chinese currency manipulation. Considering that China's export growth is widely regarded as playing an important role in catalyzing overall economic and employment growth, a key concern about allowing more flexibility is that an appreciation of the renminbi could hurt China's external competitiveness, thereby reducing export growth and weakening prospects for continued FDI inflows. (6)

2.3.3. Difference between Brazil and China's Exchange Rate Policy

Brazil has a flexible exchange rate regime and its currency has appreciated, while it is assumed that Chinese currency has been undervalued, even though its exchange rate regime was reformed in August 2005 to include the use of a currency basket and a moderate degree of flexibility. An initial 2 percent appreciation was introduced, with variation (plus or minus) of 0.3 percent permitted each day. (7)

In this sense, it can be realized that a relative appreciation in Brazilian currency reduces its FDI inflows and diverts investment for its rival country, in this case of study, for China. Also, it can be realized that the lack of appreciation in Chinese currency reduces their production costs, measured in foreign currency, and increases the relative wealth of foreign investors, leading to an increase in FDI inflows. Thus, comparable to Brazil, there are two factors in terms of exchange rate that benefit Chinese inflows.

Moreover, China seems prepared to handle any negative pressures on the economy. It has an abundance of foreign reserves to service any foreign debt and has the capability to protect the Renminbi from any speculative selling. It is also the reason of how China escaped a speculative currency attack caused by Asian currency crisis in 1997 when China already had sufficient foreign exchange reserves if needing to buy back its currency.

3. CONCLUSION

The proposed comparisons in this work show Brazilian fragility in the competition with Chinese. Comparable to China, Brazil suffers from more rigid regulations and heavier bureaucracy. China scores better on labor cost and the flexibility to hire staff, issues associated with labor costs. The low cost of labor is, by far, China's main competitive advantage over Brazil. China does better than Brazil in taxation too. The huge cost difference arises because of high complexity tax system in Brazil. Furthermore The Brazilian Real's exchange rate has not been favorable to exports while the Chinese Renminbi's exchange rate has been very favorable to exports and consequently to attract FDI. Of course, several other dimensions affect firms' decisions about where to invest, but these three elements have great importance in decisions about where to invest abroad so that it can be concluded that Brazil does not appear to be a strong candidate for FDI diversion to China in the medium term. To prepare for the longer-term challenge Brazil will need to focus on policy reforms to hone the competitiveness. If the Brazilian government engages in these policies, enhancing the tax base and labor regulation are clearly two options that can not be avoided.

In sum, under the current scenario of timid reforms, the prospect of Brazil attracting Foreign Direct Investments in the next years is highly unlikely. So, if it wants to take advantage of its growth potential, it must be driven by more ambitious reforms. Most crucially, the country must lead a fiscal revolution in the form of reducing and simplifying its burdensome tax system as well as a labor reform in order to flex its regulation.

On the other hand, these could be the factors encouraging Brazilian companies to invest in China. In recent years, Brazilian companies are looking for business opportunities in China. Some large Brazilian companies have already rushed to China, such as Embraer, a Brazilian aircraft-maker, Marcopolo, another Brazilian company which makes bus chassis, and Embraco, a Brazilian company that produces hermetic compressors.

The emblematic case showing the new possibilities for Brazilian investment in China has been the case of Embraer, the successful Brazilian producer of commercial regional jets, which entered into a joint venture with Harbin Aircraft Industry and Hafei Aviation Industry both controlled by China Aviation Industry Corporation II to produce the Embraer RJ145 regional jet for 50 passengers in Harbin, Heilongjiang province, in Northern China.(8)

In this context, with regards to the tendency to increased FDI outflows from Brazil to countries throughout the world, the Brazilian challenge seems to avoid the repatriation of profits by attracting enough new foreign investment, or export enough products in order to earn enough foreign exchange.

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