THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF BUSINESS
CENTER FOR LATIN AMERICAN ISSUES
MINERVA PROGRAM – FALL 2009.

MEASURING THE BRAZILIAN REGULATORY COMPLIANCE COSTS TO START A BUSINESS

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ABSTRACT

We assume that the regulatory compliance costs to start a business in Brazil are a barrier to formalization and competition, and thus carries a negative impact on productivity and growth. In order to facilitate the designing of policies to mitigate this problem it is necessary to measure it. This paper then provides two different measures of those costs: the first consists of an analysis of the "Doing Business Report", a ranking created by the World Bank, and the second is an algebraic calculation using the so called "Standard Cost Model". The results show that the regulatory compliance costs in Brazil, incurred in the process of opening a small business, are still high. Although in the last two years there has been substantial improvements in this area, it remains necessary to go further in the process of simplifying the procedures to business start-ups.

1. INTRODUCTION

Brazil has considerable strategic advantages compared to other large developing countries, including the potential for renewable energy production and the large and growing domestic market served by a diversified industrial park. However, due to lower levels of social capital and institutional efficiency, the Brazilian economy presents many obstacles to investment (be it foreign or domestic). If those were eliminated, the Country would face a substantial increase in its growth prospects.

For the last 30 years, the most important constraint to investment in Brazil has been the lack of enough savings. Although in the past 5 years the country's fiscal achievements have relaxed this constraint to some extent, it is still needed to handle the imbalance between domestic savings and demand for investment demonstrated by the very high interest rates in the Brazilian economy. Hausmann, Rodrik and Velasco (2008) argues that the high cost of financing domestic investment in Brazil was the main binding constraint to growth in the last decades. This was a signal that savings were scarce. We argue that this was true until 2003, but afterwards the macroeconomic situation changed significantly: the interest rates, the external debt and the country risk classification all improved systematically. As pointed by Hausmann (2008, p. 28): "Clearly, a higher rate of private investment would create a more rapid increase in potential supply and allow the Brazilian Central Bank -BCB a more rapid expansion of demand without fearing inflation". Differently from consumption, productive investment generates supply. Hence, although it is not the binding constraint to growth in Brazil[1], the high regulatory compliance costs to start a small business are generating less investment, less supply, less competition and more informality. As a result there is less tax collection, less innovation and higher prices. If these costs were tamed, the economy would benefit from a higher supply of goods[2].

In other words, although the data still supports the argument that there is inadequate domestic saving, we argue that the private return to domestic investment has become an increasingly important binding constraint for Brazil[3]. And this can be due to the low social returns (mainly caused by bad infrastructure) and to low appropriability (mainly caused by government failures). The last explanation contains what Hausmann, Rodrik and Velasco (2008) called "micro risks", and can include corruption, high taxes, regulatory compliance costs etc.

Most of the problems are regularly appointed by competitiveness indicators that compare the legal/regulatory framework for business in many economies around the world and consistently positions Brazil far behind its competitors. According to the OECD (2007), in an attempt to simplify the regulatory environment, many countries measure the compliance costs imposed on

[1] According to Hausmann (2008), the high levels of government consumption, pensions payments and interests on the Public Debt are the causes of the low domestic saving in Brazil.

[2] But this increase in investment should come with a similar increase in domestic savings in order not to generate inflationary pressures in the short run. We argue that in this particular case this is likely to happen, as small business rely mainly on family savings to finance its initial operations.

[3] Although the detailed analysis of each potential constraint to growth is beyond the scope of this paper, it is useful to cite the general properties that, according to Hausmann, Klinger and Wagner (2008), a constraint should exhibit for it be potentially binding: "1) The (shadow) price of the constraint should be high; 2) Movements in the constraint should produce significant movements in the objective function; 3) Agents in the economy should be attempting to overcome or bypass the constraint; 4) Agents less intensive in that constraint should be more likely to survive and thrive, and vice versa".

businesses and citizens. Moreover, there are rankings prepared by international organizations and NGOs comparing the institutional environment to businesses in various countries. Some important examples are: “Product Market Regulation Indicator”, from the OECD; the report “Ease of Doing Business”, from the IFC/World Bank; the “Global Competitiveness Index”, from the World Economic Forum; and the “Index of Economic Freedom”, published by the Heritage Foundation.

The basic assumption of the present study is that, while some regulatory procedures are necessary to ensure the welfare of society, there are unnecessary requirements that could be eliminated and regulatory burdens that could be simplified, also for the well-being of society. This study presents two alternative ways of measuring the costs of regulatory compliance that are present in the process of opening a business in Brazil.

The first method presented is ranking the regulatory/bureaucratic environment. It is a relative measure, ie, the performance of a country is analyzed vis-à-vis the performance of other countries. We chose the Report “Ease of Doing Business” as an example of the method, but we also draw some observations over their data in order to provide a clearer picture of the Brazilian situation.

The second method used is the Standard Cost Model. This methodology is being used quite successfully in most European countries to quantify the cost of their regulatory requirements in general. In this case we have an absolute measure of the cost of compliance.

This study will be limited to regulatory compliance costs imposed on business start-ups that are under the two main legal types in Brazil: "limited companies" and "individual firms", therefore, this paper will not consider the costs imposed on Initial Public Offerings – IPOs and other types of business. Furthermore, we will not deal with other components of business legal environment, such as taxation, labor costs, infrastructure, corruption, and so on. We will address the procedures required under federal, state and municipal levels, taking into account the time required to meet the demands and the cost involved. It is important to note that we will not make distinctions between regulation that facilitates the process and "pure bureaucratic" red tape costs. In other words, we will consider all together. Finally, we will not calculate the administrative costs incurred by the three spheres of government to implement the regulation.

This paper is divided as follows: Chapter 1 is this introduction. Chapter 2 presents the theoretical background/analytical framework. In chapter 3 we present a snapshot of the recent reforms to tackle the related red tape costs in Brazil. Chapter 4 illustrates the method of rankings using data from the “Doing Business Report” for Brazil and building on it. Chapter 5 presents the “Standard Cost Model” and its potential application to the Brazilian case. Finally, Chapter 6 provides conclusions and policy recommendations.

2. ANALYTICAL FRAMEWORK AND THEORETICAL BACKGROUND

The variables that determine economic growth are many, but can be divided into two groups: the direct determinants and the indirect determinants. The first group comprises the factors presented in the production function, i.e.; physical capital (machines, installations and equipment), human capital (labor force), and total factor productivity (technology). Countries that accumulate more of

these factors are, therefore, richer countries[4]. The indirect factors are those factors that influence the accumulation of the production factors cited. Examples of indirect determinants: the availability of natural resources, geography, the degree of trade openness, the flow of Foreign Direct Investment - FDI and, especially, the quality of institutions. Good institutions can promote investment in areas that have a positive effect on growth and economic development, rather than wasting resources on activities that have little benefit to society in general. As "institutions" we can group a set of features such as the rule of Law, the efficiency of the Public Sector and the regulatory environment, among others.

Hausmann, Rodrik and Velasco (2008) developed a framework for analyzing the binding constraints on growth on a case by case basis. The goal is to identify the potentially most effective policies to achieve higher growth rates. They also point to the fact that because of second-best interactions a policy reform can do harm if it promotes collateral distortions in the economy. The only way to achieve a higher economic growth without uncertainty is by eliminating all constraints at once, but this would be politically challenging. In this case, the suggested approach is to "focus on the reforms where the direct effects can be reasonably guessed to be large" (…) "focus on the bottlenecks directly" (Hausmann, Rodrik and Velasco, 2008, p. 7).

Apart from the new methodology of "Growth Diagnostics", Hausmann, Klinger and Wagner (2008) points to three main tools traditionally used to identify possible constraints to growth: the use of cross-country panel growth regressions; the use of growth accounting; and the use of international benchmarking (rankings). We use the last to provide an empirical basis for the argument that Brazil needs to reduce its micro risks: we show that in comparison to other countries, Brazil remains far behind in terms of business environment. More specifically, we analyze the ranking of the easiness to start a business. In another chapter we use a simple algebraic calculation to quantify the regulatory compliance costs involved in the process of starting a business in Brazil. Both methodologies aim to provide a better understanding of this binding constraint.

Therefore, based on the analytical framework of "Growth Diagnosis", we assume that the regulatory compliance costs to start a business in Brazil are a binding constraint to growth. Moreover, in order to design policies to mitigate this constraint we need to quantify it. In this paper, we do this by analyzing a ranking and calculating the costs algebraically.

A standard definition says that regulation is a control with well-defined focus exercised by a public authority on services consumed by the society. The technical justification for this process is essentially the same justifications for government interventions in general: the existence of natural monopolies, externalities, public goods, problems of asymmetric information etc. Regulation can then also be defined as a set of rules imposed on business in general, including laws and other legal acts. Examples of regulatory activities are: the requirements to register a new company; the environmental standards that must be respected by an infrastructure project, documents that must be prepared in order to export goods; phone calls price regulations; anti-dumping measures etc.

[4] The "AK" type endogenous growth models say that increases in the investment rate/human capital lead to permanent increases in the growth rates. But the Solow model (exogenous) and the Romer model (endogenous with decreasing returns) advocates that increases in the investment rate/human capital are due to increase the growth rate just until the economy reaches its stationary state. After that, growth rates would be driven by the technological progress. These last two models are better supported by empirical evidence than the "AK" model.

However, there is no consensus in the literature whether regulation *per se* is good or bad. Regulatory burdens, defined as the cost of complying with the regulation, must be understood in a theoretical framework that defines regulation in its broadest sense. The literature then presents two basic models: the Public Interest Theory and the Public Choice Theory.

On one hand The public interest theory argues that regulation is needed to correct market failures and that doing so it would provide gains in welfare to society. On the other hand, the public choice theory argues that regulation is socially inefficient.

As described by Djankov et al (2002, p. 2), "Pigou's [1938] public interest theory of regulation holds that unregulated markets exhibit frequent failures, ranging from monopoly power to externalities. The government that pursues social efficiency counts these failures and protects the public through regulation. (...) As applied to entry, this view holds that the government screens new entrants to make sure that consumers buy high quality products from "desirable" sellers. (...) The public interest theory predicts that stricter regulation of entry, as measured by a higher number of procedures in particular, should be associated with socially superior outcomes." Regulation would then be important to reduce market failures such as pollution. It would also guarantee that society would receive goods and services above a minimum standard, based on the assumption that consumers would not be able to make their judgments themselves.

Going on the opposite direction, the public choice theory (Tullock 1967, Stigler 1971 and Peltzman 1976, apud Djankov et al., 2002) believes that regulation brings more costs than benefits to society. According to Stigler, the regulated industry captures the regulator and uses barriers of entry to prevent competition and thereby increase their prices and profits. Another strand of the same theory imputes to politicians and bureaucrats the only benefits of regulation, because through it they may require fees or votes. "More extensive regulation should be associated with socially inferior outcomes, particularly corruption" (Djankov et al., 2002, p. 3).

In this paper we assume that a better regulatory environment is the one that does not prevent competition, i.e., we see the reduction of regulatory compliance costs as beneficial to society. The importance of an efficient regulation is great not only in developed countries but also in developing economies, in need of investment. "(...) Radical market liberalization in the absence of an appropriate regulatory structure to promote and safeguard effective competition has led to failures and the consequent recognition of the need to address the regulatory environment as part of the shift to market-led growth (...) In this context, the ability to assess expected regulatory impacts on the business environment, and to consult with affected parties before the regulation is adopted, is essential "(Ladegaard, 2005, p. 2).

3. THE BRAZILIAN CASE

The quest for greater regulatory quality is increasingly present in the initiatives of the most advanced countries in the World and, although still in its beginning, also in Brazil. According to Radaelli and Francesco (2004, p. 4), "the measure of quality of regulatory tools is the extent to which impact assessment, consultation, simplification, and access are embedded in the wider regulatory policy process". Simplification is, therefore, part of the process of reduction of compliance costs and improvement of the business environment.

Brazil is consistently rated poorly on several indicators of competitiveness, such as the report "Doing Business", from the World Bank, and the "Global Competitiveness Report", from the World Economic Forum. The use of these indicators to assess the country's competitiveness is based on the assumption that the competitiveness of firms is the determining factor in enhancing the competitiveness of the country as a whole.

The Global Competitiveness Report 2009/2010, for example, uses indicators to assess the competitiveness of 134 countries, placing Brazil in the position 56, a good improvement over the previous position 64 showed in the previous year, but still a bad result. The United States, for example, occupies the 2nd place, after Switzerland. Among the items that make up this particular indicator, the worst relative performance of Brazil is at the macroeconomic stability.

Zockun et al (2007) point out that both the production and transaction costs influence the rate of productivity of the economy. These costs influence investment decisions and, consequently, have an effect on the rate of economic growth. The authors cite, for example, indicators of The Heritage Foundation and The Fraser Institute to support the claim that Brazil fails to attract investment because of the complexity of their tax systems and labor law and excessive bureaucracy. A research made by Zockun et al (2007) showed that entrepreneurs would raise their planned investment by 10% to 20% if a series of reforms simplifying and reducing transaction costs were implemented in Brazil.

According to Zockun et al (2007), Brazil's position in relation to the indicators of the Investment Climate Survey (2004) is very bad and not consistent with its position in the global economy. Among the factors cited, the deficiencies in infrastructure are seen as the least of the problems, i.e. among the surveyed entrepreneurs the issues related to the regulatory business environment, corruption and bureaucracy are more important, along with the expansion of demand and greater economic growth, mentioned by entrepreneurs as the main reasons for the decision to expand investment. In other words, GDP growth is essential for attracting investment, but the business environment is also a factor.

The report "Doing Business" - 2010 edition – from the IFC/ World Bank ranks Brazil in position 129 in terms of its business environment. This affects a number of indexes that are used as proxies to measure the competitiveness of economies and, consequently, negatively affect international perceptions of the growth potential of the country. Among the sub-indexes that compose the report the best result is at "protection of investors" (73rd among the countries surveyed) and the worst rating is at "payment of taxes" (position 150 among the countries analyzed). Among the worst sub-indexes we also see the process of closing a business (resolution of bankruptcy), payment of taxes[5] and obtaining licenses. The sub-item related to business start-ups is also quite bad, and the causes for such performance are the need for a large number of procedures and the great time (especially at the municipal level) that takes to comply.

It is well known that the paperwork for opening, conducting and closing a business in Brazil is in general large and costly. However, figures released by the major international institutions that deal

[5] The main problems in this particular sub index are the time spent to pay all the taxes and the tax burden levied upon the payroll (significantly higher than the Latin America average, for example).

with the issue can be distorted and exaggerated. Although the need for further reforms and improvements is obvious, the situation is improving greatly due to the approval of the General Law of Micro and Small Enterprises (Complementary Law No. 123 of 14/12/2006[6]) and Law no. 11,598/2007, which established the National Network for the simplification of registration and legalization of Business – the so-called "REDESIM"[7]. In addition, we have the gradual implementation of the Synchronized Database, which, although an initiative prior to the "REDESIM", have the same goals and can be considered as part of the same framework. These measures simplify the processes of opening and closing businesses, facilitate payment and reduce taxes, streamline procedures, rationalize the flow of data and information, eliminate the need for a set of previous inspections and so on. It can be said that those initiatives are contributing to the significant improvement of the business regulatory environment, especially regarding small and medium enterprises.

The "REDESIM" specifically establishes a set of guidelines and procedures that must be followed to facilitate the registration of companies in Brazil: previous research will contain information on possible business location, your risk rating and the availability of the use of the name desired for the firm; health, environmental and fire brigade requirements will be simplified and standardized; regulatory inspections will occur after the business is opened (and not previously as before), the permit to operate will be granted immediately after the signing of a declaration, and the State will be responsible to challenge the permit in case of the violation of any law, it is forbidden to ask for documents of the property being used by the firm and also prohibits the requirement of a certificate of nonexistence of criminal conviction and regularity with unions. The Law also determines a deadline (December 2009) to the deployment of a single system of classification of economic activities across the country, it institutionalizes the concept of One-stop-shop (Central Fácil[8]), which put under one roof several agencies and services necessaries to start-up a business.

At the Synchronized Database (CadSinc) from the Brazilian Internal Revenue Department, the citizen, after completing the act of incorporation of the company, requests its fiscal identification number -CNPJ[9] – through the internet and get registered at both the state and the municipal levels if both are "synchronized". If the Board of Trade is also "synchronized", then the record of the constitution is done simultaneously - in a single procedure with the CNPJ. It is also possible to use an electronic signature to make changes to registration, which saves time in registers. We could say that the core of CadSinc is the use of the CNPJ number as a unique identifier number for the company in all the steps of its constitution.

With the implementation of CadSinc the entrepreneur will only have to follow three steps to start a business: 1 - make a prior consultation of the name and address through an internet-based system; 2

[6] Law n. 123, from 12/14/2006 which created the so-called "Simples Nacional", intends to motivate the formalization of firms turning simpler and less expensive to pay taxes. It is designed for firms with annual sales smaller than 2,4 million Reais (approximately USD 1,2 million dollars).

[7] The Law states that the agencies involved must share information automatically (online) in order to simplify the procedures faced by entrepreneurs and that the entrepreneur must be able to follow the whole process on the internet.

[8] In January 1998 it was initiated the implementation of "one -stop shops" designed to simplify the start -up and the closing of firms. Those places were called "Central Fácil" and normally allow the entrepreneur to carry out many procedures in a single location, thus saving time. Nowadays there are "one-stop shops" of this type in 20 out of 27 Brazilian states.

[9] "Cadastro Nacional de Pessoa Juridica": It is the number given to each firm enrolled in the Internal Revenue Database.

– fill a single document to obtain registration of the company and the CNPJ number at state and local levels, and 3 - provide the tax books.

According to the SRFB (2008a), in Salvador, for example, one of the cities where the Synchronized Database is in place, the time it takes to start a business is 4 days. Basically we have the possibility of a single entry of data and reduction of bureaucratic requirements. The data of the same Ministry indicate that the national average is 23 days. The process was greatly simplified, but still depends on the agreement of states and municipalities, because they are shared procedures, not unified ones.

TABLE 1

Synchronized Database Implementation - July 2010

Present Situation	State Tax Authority	Municipal Tax Authority	Commercial Board
Implemented	Alagoas, Bahia, Maranhão, Minas Gerais, Pará, Rio Grande do Norte e São Paulo.	Belém, Belo Horizonte, Curitiba, Natal, Salvador, São Luís e Vitória.	
Agreement signed, with implementation schedule under discussion – (Phase III - 1º semester 2009)	Acre, Amazonas, Ceará, Distrito Federal, Mato Grosso, Mato Grosso do Sul, Paraíba, Pernambuco, Piauí, Paraná, Roraima, Santa Catarina, Sergipe e Tocantis.	Aracaju, Barra Mansa, Boa Vista, Campo Grande, Montes Claros, Petrópolis, Pinhais, Recife, São Paulo, Rio de Janeiro, Santarém/PA e Sorocaba/SP.	JC MG, JC SC
Agreement signed.	Amapá, Espirito Santo, Rio Grande do Sul, Goias, Rio de Janeiro e Rondônia.	Bragança/PA, Camaçari/BA, Contagem/MG, Maceió/AL, Manaus, Palmas, Piraju/SP, Ribeirão Preto/SP, Santos e Sete Lagoas/MG.	

Sorce: Brazilian Internal Revenue Department: https://www16.receita.fazenda.gov.br/CadSinc/sobre-o-projeto/cronograma/

We can see that the synchronized register has been implemented in 7 states, is under implementation in 14 states and there is an agreement signed that the remaining 6 states will have it implemented in the next months.

The General Law of micro and small enterprises (Complementary Law 123 of 14/12/2006) established the simplified tax system for micro and small enterprises - the so-called “Simples Nacional”. It also provides for the issuance of a provisional license for micro and small businesses that work with low-risk activities, allowing its operation soon after its constitution. However, this type of grant depends on the membership of each State. Furthermore, there are actions by some municipalities (such as Sao Paulo, for example) in order to go beyond the requirements of the General Law and to abolish the need to obtain a permit for low-risk activities.

The Synchronized Database and the “REDESIM” still depend on the accession of some states and major municipalities. The “REDESIM” had its Executive Committee installed on the 1st of July of 2009 and the system for the "individual micro-entrepreneur" (maximum revenue of 36 thousand reais per year) is already deployed (Entrepreneur’s Portal). Despite still being implemented, the regulatory improvements obtained under all those measures have allowed the reduction of days required for starting a business. The table below, based on data from the Ministry of Trade but using the same rules applied by the World Bank to calculate the number of procedures, shows that on average, it took 24.5 days to start a business in Sao Paulo in 2007, a number quite lower than the

152 days appointed by the World Bank report that year. It is expected that data from 2008 and 2009 show a further significant advance.

TABLE 2

Time and Cost of Business Start-ups at Registry Offices - 2007

State Commercial Registry Office (State)	Firms oppened in 2007	Time (days)			Total number of days	Cost		Total cost
		At the Commercial Registry	At the Firebrigade	At other offices		At the Commercial Registry	At other offices	
JCDF (DF)	10.097	1	15	11	27	R$ 22,45	R$ 235,00	R$ 257,45
JUCESP (SP)	161.409	4	12,5	8	24,5	R$ 68,06	R$ 105,00	R$ 173,06

Obs: We calculated the simple average of the the first and second semesters. Given the lack of data, in the case of the *other offices*' costs at the DF state we assume that the second semester had the same values as the first semester.
Source: DNRC/SCS/MDIC: http://www.desenvolvimento.gov.br/portalmdic/arquivos/dwnl_1196771520.pdf

4. A RELATIVE MEASURE: RANKING

Data from the Report "Doing Business", from the World Bank, contains a standardization effort in order to enable a comparison of statistics among countries. Its strong points are the vast number of countries covered and the fact that it takes into account all the steps that a company can come to pass. On the other hand, standardization has its shortcomings, because the data in the report were obtained through a case study and a set of interviews. There is no real company being analyzed. In general terms, it is a case study based on the following company:
-Limited Partnership;
-Operating in Sao Paulo;
-With five partners;
-Initial capital of 10 times the per capita annual income of the country;
-Do not qualify to receive any incentive or special benefit;
-It has between 10 and 50 employees, and
-Revenue of 100 times the per capita annual income of the country.

The report includes 10 indicators (Starting a Business, Dealing with Construction Permits, Employing Workers, Registering Property, Getting Credit, Protecting Investor; Paying Taxes, Trading across Borders, Enforcing Contracts, Closing a Business). Specifically, the indicator for starting a business is divided into four subgroups, each representing 25% of the final score of the indicator, as noted in the following table:

TABLE 3

World Bank "Doing Business Report" - Subindicators of the "Starting a business" Ranking

Variable	Weight at the Ranking
Time to register a firm	25%
Cost as % of income per capita	25%
Procedures needed	25%
Paid-in minimum capital (% of income)	25%

Source: Doing Business 2010 – Brazil. The World Bank.

The results of the indicator "Doing Business" in 2010 for Brazil, in the "Starting a business" index, indicate that the country improved 1 position, from 127th in 2009 to 126th in the 2010 Report. The results are as follows:

TABLE 4

Starting a Business in Brazil - Results from the 2010 "Doing Business" Report.

Number of procedures needed	16
Time needed (in days)	120
Cost as a % of income per capita	6,9
Minimum capital as % of income per capita	0,0

Source: Doing Business 2010. The World Bank.

According to the World Bank, the index is calculated as the ranking on the simple average of its percentile rankings on each one of the sub-indexes and the ranking on each sub-index is the simple average of the percentile rankings on its component topics. All sub-indexes (topics) are weighed equally.

The requirements in terms of time and resources to open a business in Brazil, according to the World Bank, are summarized in Table 5 below:

TABLE 5

Opening a business in Brazil ("Doing Business" Report - Requirements Summary) - 2010

Procedure	Description	Time needed	Cost paid
1	Check company name with State Commercial Registry Office	1 day	R$ 9,00
2	Pay registration fees	1 day	see following procedures
3	Register with the commercial board of the state where the main office is located and obtain identification number (NIRE)	1 day	R$59.06 registration plus R$ 50,00 (expediting fee)
4	Register for federal and state tax (SRF/MF), obtain the CNPJ number, which also registers employees with the National Institute of Social Security (INSS)	About 22 days (including inspection visit)	no charge
*5	Confirm Taxpayer Enrollment	1 day (simultaneous with previous procedure)	no charge
*6	Receive state tax inspection	1 day (simultaneous with previous procedure)	no charge
7	Get the authorization to print receipts/invoices from the Secretaria da Fazenda Estadual	1 day	no charge
*8	Register with the Municipal Taxpayers' Registry of the City of São Paulo	5 days (simultaneous with procedure 5)	no charge
*9	Pay TFE to the Municipal Taxpayers' Registry	1 day (simultaneous with procedure 5)	R$ 300 (for retailing business) vary in accordance with the sector
10	Get the authorization to print receipts/invoices from the Secretaria Municipal de Finanças	1 day	no charge
11	Order receipts/invoices with CNPJ numbers from authorized printing companies	3 days	R$ 600 (R$0.6 per page, if printing 1000).
*12	Apply to the municipality for an operations permit	90 days	no charge
*13	Register the employees in the social integration program (PIS)	1 day (simultaneous with Procedure 12)	no charge
*14	Open a special fund for unemployment (FGTS) account in bank	1 day (simultaneous with Procedure 12)	no charge
*15	Notify the Ministry of Labor (CAGED)	1 day (simultaneous with Procedure 12)	no charge
*16	Registration with the Patronal Union and with the Employees Union	5 days (simultaneous with Procedure 12)	Annual fee depending on the Union.

*Takes place simultaneously with another procedure. Source: Doing Business 2010. The World Bank.

Source: Doing Business 2010. The World Bank.

Analyzing in detail the World Bank data and taking into account the latest legal and regulatory improvements in Brazil we can suppose that some procedures are no longer needed or are simpler and faster:

Procedure 1: We believe that the time spent searching for a company name in the State of Sao Paulo is already reduced to 1 hour, because the procedure can be done online.

Procedure 2: Just one hour is needed to pay the registration fees, because it can be paid electronically through the Internet or an ATM machine. In accordance with the methodology used by the World Bank we can consider that procedures 1 and 2 represent 1 day of time spent in total.

Procedure 4: It is not necessary to present to the INSS the company's Articles of Association registered before the Register of Commerce of the State of Sao Paulo and the CNPJ Certificate. The process is done by the synchronized registration process -CadSinc. Moreover, the Municipality of São Paulo is also implementing the CadSinc. All procedures can be done on the Internet. The process consists of filling out the FCPJ, electronically sending it to the Federal Revenue Service, printing the receipt and bringing it to the Register of Commerce. The Register of Commerce will then approve the requirement and the CNPJ will be available on the internet.

Procedure 8: Not needed anymore. After the adoption of the synchronized registration process (CadSinc) by the Municipality of Sao Paulo, this process will already be done with procedure 4.

Procedures 12, 13 and 14: Under Law 11598/2007, the operations permit (licensure) shall be given immediately after registration. Sanitation and fire brigade inspections will be done later and in a simplified and standardized way. Moreover, activities classified as "low risk" would be exempt from such inspections (but this requires the consent of the municipality).Therefore, procedures 13 and 14 will no longer be necessary and the time to complete procedure 12 would just be the time needed for filling out the proper forms that describe the firm's activities and location (1 day).

Procedure 16: According to Law 11598/2007 this procedure is no longer necessary in order to open a business.

If this progress could be verified we would reduce the number of necessary procedures to 11 and the time required to 16 days. Such numbers would place Brazil around position 65th in the Starting a Business sub-index, a result that would change just a few positions in the general ranking. According to the World Bank, a reform implemented until June 2010 will have its impact reflected only in the Doing Business Report of 2011. But an eventual upgrading for Brazil in the next year will also depend on the relative improvement of other countries as well. What remains as a fact is that even with such upgrade Brazil has still a very bad position; worst than the Latin America average and very far from the OECD average.

5. AN ABSOLUTE MEASURE: THE STANDARD COST MODEL

Another way to assess the regulatory burden is using the methodology of the "Standard Cost Model" -SCM. This model, in short, measures the cost of compliance through an equation that

multiplies the cost of administrative procedures (for businesses and citizens) by the amount of administrative procedures required.

The SCM was originally designed in the Netherlands to measure the costs that businesses face in meeting the regulatory requirements. As the OECD points out, the method is not based on a traditional statistical methodology, but on the assessment of the regulatory burden that can be checked and compared in various industries. To obtain such measurements the model can rely on interviews with entrepreneurs or analyze data from any survey or census. Caution is always necessary to define what would be a reasonable average time to fulfill the obligations imposed by legislation. In other words, it is important to exclude from the calculation the extremely inefficient firms in the administration of regulatory requirements, as well as the extremely efficient ones.

The Dutch regulatory reform program is a paradigm with regard to the reduction of business costs in complying with the bureaucratic and regulatory requirements. The program began in 1994 and was substantially expanded in 2003. According to the World Bank (2007), since 2003 the program has eliminated about 4 billion Euros in administrative costs imposed on the private sector in the Netherlands, a reduction of 25% of pre-existing levels. To reach this number, the Dutch government adopted 196 simplifying measures.

It is important to note, however, that the cost model will measure only the costs imposed by regulation for the management of companies. Therefore, it does not constitute a tool to measure all the regulatory costs of an economy. The model does not calculate benefits either. Ironically, this latter limitation is also singled out as one of the advantages, because this way the model avoids the methodological flaws existing in any attempt to calculate benefits. "International cooperation is making progress in the area of measuring administrative burdens. Denmark, the Netherlands, Sweden, and, outside the EU, Norway intend to apply the same methodology -the Standard Cost Model (SCM). It would be a mistake, however, to build programs and measures of regulatory quality exclusively around administrative burdens. They are only one -often limited -part of regulatory costs "(Radaelli and Francesco, 2004, p. 4).

But nothing prevents the administrative costs to be contained in a regulatory impact analysis[10]. In fact, according to the World Bank (2007, p. 3) "(...) a revised and strengthened system for Regulatory Impact Assessment (RIA) can become the backbone for integrated assessments of new regulations, with administrative burdens being just one impact of several categories. (...) "A well-calibrated RIA system, in which administrative burdens is just one of several factors of concern, would be the appropriate framework in which to consolidate the coordination of future policy impact assessments" (p. 4).

A cost-benefit analysis is more complete and complex than the Standard Cost Model. However, to get an idea of the greater acceptance of the latter, Germany does not do cost benefit analysis of its regulatory activities, but only measurements using the Standard Cost Model. The form used to measure the compliance costs incurred in starting a business varies from country to country. According to the World Bank (2007), the U.S. Office of Information and Regulatory Affairs (OIRA), part of the Office of Management and Budget (OMB) is the agency responsible for

[10] The Regulatory Impact Analysis is a process of evaluation of the effects of Government regulation on the economy, society or environment.

estimating the costs and benefits of regulations in the U.S. Canada already uses the multiplier approach, developed by Weindenbaum and DeFina (1978), based on the rule of thumb that for each dollar that the public sector spends to administer its regulatory apparatus , the private sector spends 20 monetary unit to meet its obligations. Applying this approach , it is estimated that Canada imposes a cost of 103 billion dollars in compliance to their private sector in 1997/1998. Finally, the United Kingdom is one of the leaders in the implementation of RIA.

Many countries, notably from the OECD, have implemented programs to reduce administrative costs by using the Standard Cost Model[11]. The goal is usually to reduce the bureaucratic costs in some preset percentage. This methodology is both simple to use and more resistant to methodological criticisms, as it does not involve the measurement - often full of value judgments – of the benefits of the policy. When you add up the costs for all companies, the result is too large due to the large number of firms in the economy. However, the impact of actions to reduce administrative costs is relatively small for firms when considered individually. The reason for this lies in the fact that after a reform a firm will spend fewer hours in filling forms and a smaller amount in terms of fees. For medium or large businesses that already face other costs this economy can mean just a few minutes less work for the accounting or legal departments. For smaller firms however, this reduction of costs tends to be more important.

And there are also the "annoyance costs": costs that, despite being financially low, represent a major psychological burden for those who are just trying to start a business.

The "annoyance costs" are costs that can have a very small quantitative impact but cause great irritation in the business community. It is important to consider this possible "sub assessment" during the implementation of a SCM. One way to alleviate this problem would be to conduct surveys of entrepreneurs to identify what regulatory requirements are more "annoying". Another type of costs are the "business-as-usual-costs", i.e. the costs that companies would incur be it required or not by the Government. The World Bank (2007) estimates that 1 / 3 of the costs eliminated in the Dutch reform were costs of this type. A breakthrough in the SCM would then be, not to take into account the "business-as-usual costs"[12] when doing the calculations.

The dynamic effects resulting from changes in the behavior of firms and competition are not taken into account in the SCM. It is expected that such effects leverage the benefits brought by regulatory simplification. Moreover, according to the World Bank (2007), the costs saved by the elimination of a particular regulation may be less than the costs impinged when it was necessary to comply with the same regulation. This is due to the fact that there are often sunk costs caused by the need to adapt brought upon the implementation of the former regulation.

According to the World Bank (2007, p. 9) to obtain the best results you need to focus on direct costs: "Focus on the quantification of direct compliance costs (capital costs, operating costs, paperwork costs, and time costs incurred in complying with regulations). While useful for the

[11] According to the World Bank (2007, p. 5), "The awareness of EU politicians and bureaucrats about the benefits of reform has increased significantly. Earlier this year, the EU started using the standard cost model methodology in measuring its initiatives. (…) The EU has just recently announced a 25% administrative burden reduction target very similar to the Dutch approach."

[12] As stated by the World Bank (2007) the United Kingdom, for example, is excluding the "business-as-usual-costs" from their cost reduction program.

political debate, the quantification of risks and benefits should only be used on a select basis, where the debate is heated and/or where data is more readily available".

FIGURE 1

The Standard Cost Model

Each demanded information linked to each regulation is proprly identified. The regulatory compliance cost in monetary terms is then estimated using the following formulae:

N x W x T

N = the number of firms directly affected by the regulation;

W = the hour cost of people involved in providing the mandatory information and the fees charged;

T = the number of hours necessary to comply to the regulation in one year.

Multiplying the time needed to comply with the regulation by the cost of the time and by the number of firms facing that regulation it is possible to estimate the aggregate cost faced by firms to comply with the regulation.

For example, 1.000 farmers (N) can spend an average of five hours per year (T) informing the Sanitary Office about diseases demanding mandatory notification. If the average cost of the farmer's time was US$50 per hour, the regulatory compliance cost for this obligation would be US$250.000 per year.

Source: Better Regulation Task Force (2005). With adaptations.

We can interpret the compliance costs arising from government regulation as costs of information transfer. Thus, the total cost would be the result of an equation that multiplies the number of information needed by the cost of such information. The cost to provide each information, in turn, is given by the resources in terms of time and capital spent to generate the required information.

There are some steps to implement the model: First we must define the procedures that will be measured, then we have to collect the data and finally, build a matrix to calculate the total cost. In the specific case of the process of starting a business, to calculate the total cost it is necessary to determine how many companies fall into each representative group containing similarities in terms of regulatory requirements. A simplified alternative is to use measurements based on the statistically most representative type of company.

The use of a “Limited Partnership” or “Individual Firm” as representative legal types find support in the fact that these are the most commonly used legal types in Brazil, as can be seen in the following table showing the number of companies that were established in Brazil in 2005 divided according to their legal type:

TABLE 6

Number of Firms Start-ups by Legal Types

Sole Proprietorhips	Limited Liability	Public Companies	Others	Total
240.306	246.722	1.800	1.710	490.538

Source: DNRC/SCS/MDIC: http://www.dnrc.gov.br/. With adaptations.

This study includes the costs associated with the start-up of both “individual firms” and “limited partnerships” types, which correspond to a total of 99.3% of the companies constituted in Brazil. Obviously, this does not mean 99.3% of the total capital invested in new firms, as we are not taking

into account the "Limited Companies", which can be publicly traded and has normally a much higher initial capital requirement.

We assume that the cost of time spent by the entrepreneur , or his agent , to meet regulatory requirements necessary for starting a business is a function of the income per capita of the Country. Given the annual Brazilian per capita income of USD 7,350[13], and the legal working load of 44 hours per week and 11 months of work per year , we come to an hourly rate of about USD 3.80.

This methodology allows us to consider the theoretical value of the average time from the entrepreneurs and the employees involved in the process. The alternative of considering a lower value, such as minimum wage or the cost of an accountant, for example, would have the serious limitation of delegating to others all the necessary dealings (executive and decision-making) to start a business.

To be methodologically correct we will not consider the business-as-usual costs. On the other hand, while we consider that the annoying costs caused by regulatory requirements affect negatively the intention to invest, these costs will not be considered in this study because they are impossible to quantify.

We use data from the Ministry of Development, Industry and Foreign Trade of Brazil, who has surveyed the costs and time required for opening a business in each State in Brazil. We then make two different calculations: The first will be a weighed average using as weights the number of firms in each state. This will be done for illustrative purposes. The second will be done by calculating the total amount spent on compliance in Brazil and will be the result of our small SCM.

The following table shows the start-up statistics by State. In the same table we can see that in 2008 there were 594,440 firms constituted in the Boards of Trade in Brazil. It is important to remember that the number of start-ups is in reality even higher, because some types of companies do not require to be enrolled in the Boards of Trade to start their operations.

[13] GNI per capita, current dollars. Source: The World Bank.

TABLE 7

Number of Start-ups, Amendments and Closures of Firms at the Commercial Registry Offices - 2008

Start-ups			Amendments			Closures			Total		
Commercial Registry	Quantity	%	Commercial Registry	Quantity	%	Commercial Registry	Quantity	%	Commercial Registry	Quantity	%
São Paulo	185.055	31.13	São Paulo	554.778	44.79	São Paulo	66.688	32.41	São Paulo	806.521	39.56
Minas Gerais	53.022	8.92	Minas Gerais	145.120	11.72	Rio Grande do Sul	27.053	13.15	Minas Gerais	217.260	10.66
Rio Grande do Sul	49.932	8.4	Paraná	71.664	5.78	Minas Gerais	19.118	9.29	Rio Grande do Sul	140.664	6.9
Paraná	46.049	7.75	Rio de Janeiro	65.145	5.26	Paraná	18.915	9.19	Paraná	136.608	6.7
Rio de Janeiro	33.331	5.61	Rio Grande do Sul	63.679	5.14	Santa Catarina	11.790	5.73	Rio de Janeiro	107.793	5.29
Bahia	31.023	5.22	Alagoas	53.943	4.36	Rio de Janeiro	9.317	4.53	Santa Catarina	85.831	4.21
Santa Catarina	29.409	4.95	Santa Catarina	44.632	3.6	Ceará	8.645	4.2	Bahia	72.465	3.55
Goiás	23.220	3.91	Bahia	34.583	2.79	Goiás	7.273	3.53	Alagoas	60.377	2.96
Ceará	17.745	2.99	Goiás	26.233	2.12	Bahia	6.859	3.33	Goiás	56.726	2.78
Pernambuco	17.235	2.9	Ceará	23.395	1.89	Pernambuco	4.657	2.26	Ceará	49.785	2.44
Distrito Federal	13.108	2.21	Distrito Federal	22.246	1.8	Distrito Federal	4.070	1.98	Pernambuco	40.835	2
Mato Grosso	12.354	2.08	Pernambuco	18.943	1.53	Espírito Santo	3.845	1.87	Distrito Federal	39.424	1.93
Espírito Santo	11.898	2	Espírito Santo	18.495	1.49	Mato Grosso	2.312	1.12	Espírito Santo	34.238	1.68
Pará	10.593	1.78	Mato Grosso	14.280	1.15	Maranhão	1.826	0.89	Mato Grosso	28.946	1.42
Maranhão	8.206	1.38	Pará	11.951	0.96	Mato Grosso do Sul	1.625	0.79	Pará	23.885	1.17
Mato Grosso do Sul	7.526	1.27	Amazonas	9.855	0.8	Piauí	1.620	0.79	Mato Grosso do Sul	18.255	0.9
Rio Grande do Norte	7.221	1.21	Mato Grosso do Sul	9.104	0.74	Rio Grande do Norte	1.437	0.7	Maranhão	17.707	0.87
Amazonas	6.191	1.04	Paraíba	8.992	0.73	Pará	1.341	0.65	Amazonas	17.321	0.85
Paraíba	5.998	1.01	Rio Grande do Norte	8.109	0.65	Alagoas	1.281	0.62	Rio Grande do Norte	16.767	0.82
Alagoas	5.153	0.87	Maranhão	7.675	0.62	Amazonas	1.275	0.62	Paraíba	16.144	0.79
Rondônia	4.274	0.72	Rondônia	6.501	0.52	Rondônia	1.256	0.61	Rondônia	12.031	0.59
Piauí	4.260	0.72	Sergipe	4.970	0.4	Paraíba	1.154	0.56	Piauí	10.061	0.49
Tocantins	3.741	0.63	Tocantins	4.366	0.35	Sergipe	809	0.39	Sergipe	9.337	0.46
Sergipe	3.558	0.6	Piauí	4.181	0.34	Tocantins	588	0.29	Tocantins	8.695	0.43
Amapá	1.908	0.32	Amapá	2.003	0.16	Roraima	475	0.23	Amapá	4.173	0.2
Acre	1.494	0.25	Roraima	1.935	0.16	Acre	295	0.14	Acre	3.614	0.18
Roraima	936	0.16	Acre	1.825	0.15	Amapá	262	0.13	Roraima	3.346	0.16
Total	594.440	100	Total	1.238.583	100	Total	205.786	100	Total	2.038.809	100

Source: DNRC/SCS/MDIC: http://www.dnrc.gov.br/

Table 8 presents the results of the survey conducted by the Ministry of Trade and Industry:

TABLE 8

Time and Cost to Open a Business in Brazil - 2007

JUNTA COMERCIAL (STATE)	START-UPS	AVERAGE TIME NEEDED (DAYS)	AVERAGE FEE COSTS (R$)
ACRE	1.591	30,5	228,40
ALAGOAS	4.267	5,5	278,45
AMAZONAS	5.213	25,5	407,12
AMAPA	1.617	30,0	317,95
BAHIA	31.304	14,5	301,56
CEARA	16.087	15,5	166,00
DISTRITO FEDERAL	10.097	27,0	257,45
ESPIRITO SANTO	10.812	11,5	391,48
GOIAS	18.920	16,5	263,82
MARANHAO	8.433	30,0	386,76
MATO GROSSO	9.317	27,0	574,53
MATO GROSSO DO SUL	6.543	14,0	478,60
MINAS GERAIS	50.236	19,5	490,67
PARA	9.091	22,0	276,56
PARAIBA	5.699	17,5	621,20
PARANA	39.456	29,0	276,56
PERNANBUCO	17.597	20,5	492,67
PIAUI	3.288	30,0	584,48
RIO DE JANEIRO	29.264	13,5	284,51
RIO GRANDE DO NORTE	5.507	22,0	321,00
RIO GRANDE DO SUL	45.417	31,5	131,54
RONDONIA	3.319	11,0	561,06
RORAIMA	885	9,0	441,70
SANTA CATARINA	27.365	38,0	327,56
SAO PAULO	161.409	24,5	173,06
SERGIPE	3.212	7,5	159,97
TOCANTINS	3.473	17,0	184,95
TOTAL	529.419		
SIMPLE AVERAGE		20,7	347,39

Source: Ministry of Industry and Trade: http://www.mdic.gov.br. With adaptations.

Table 9 shows the calculations made using the SCM approach. Our cost per hour, previously calculated as US$ 3.80 was converted to Reais using the exchange rate observed at the end of 2007, which was 1.77 Reais to a Dollar. Given that we have a cost per hour of R$ 6.73 and a cost per working day (8 hours) of R$ 53.81.

TABLE 9

SCM Results (Using 2007 Data)

JUNTA COMERCIAL (STATE)	TOTAL COST OF TIME[1]	TOTAL COST OF FEES	TOTAL COST PER STATE
ACRE	2.611.060,10	363.384,40	2.974.444,50
ALAGOAS	1.262.793,05	1.188.146,15	2.450.939,20
AMAZONAS	7.152.778,15	2.122.316,56	9.275.094,71
AMAPA	2.610.226,08	514.125,15	3.124.351,23
BAHIA	24.423.881,66	9.439.877,72	33.863.759,38
CEARA	13.416.944,09	2.670.442,00	16.087.386,09
DISTRITO FEDERAL	14.669.083,15	2.599.472,65	17.268.555,80
ESPIRITO SANTO	6.690.379,10	4.232.627,70	10.923.006,80
GOIAS	16.797.781,44	4.991.474,40	21.789.255,84
MARANHAO	13.612.885,92	3.261.547,08	16.874.433,00
MATO GROSSO	13.535.886,67	5.352.896,01	18.888.782,68
MATO GROSSO DO SUL	4.928.920,42	3.131.479,80	8.060.400,22
MINAS GERAIS	52.710.424,42	24.649.298,12	77.359.722,54
PARA	10.761.707,62	2.514.161,51	13.275.869,12
PARAIBA	5.366.406,36	3.540.218,80	8.906.625,16
PARANA	61.568.404,99	10.911.951,36	72.480.356,35
PERNANBUCO	19.410.617,21	8.669.513,99	28.080.131,20
PIAUI	5.307.621,12	1.921.770,24	7.229.391,36
RIO DE JANEIRO	21.257.603,71	8.325.754,32	29.583.358,03
RIO GRANDE DO NORTE	6.519.054,43	1.767.747,00	8.286.801,43
RIO GRANDE DO SUL	76.979.634,98	5.973.925,10	82.953.560,08
RONDONIA	1.964.476,27	1.862.158,14	3.826.634,41
RORAIMA	428.580,72	390.904,50	819.485,22
SANTA CATARINA	55.953.324,96	8.963.679,40	64.917.004,36
SAO PAULO	212.784.839,06	27.933.441,54	240.718.280,60
SERGIPE	1.296.234,72	513.823,64	1.810.058,36
TOCANTINS	3.176.878,13	642.331,35	3.819.209,48
TOTAL	657.198.428,54	148.448.468,62	805.646.897,16

[1](Number of start-ups * average time needed * cost per day).

Taking into account the Government data and the numbers generated by the present paper we then reach the total regulatory compliance costs to open a business in Brazil in 2007: R$ 805,646, 897.16 or US$ 455,167,738.51.

It is important to notice that this number is related to start-ups and is only a very small fraction of the total sum for compliance costs faced by the private sector. These costs do not include administrative costs nor the cost of political activity related to regulation. It focuses on micro and small firms, therefore does not include Public Companies or other legal types not named. Finally, and more important, it does not include the annoyance costs involved.

6. CONCLUDING REMARKS

To reduce unnecessary bureaucracy in favor of a better business environment is a goal increasingly present in public policies of most countries in the world. To keep unjustified barriers to investment may cause lack of competitiveness vis-à-vis the rest of the world. Specifically, the difficulty for opening a business may raise the degree of informality in the economy as well as potentially reduce competition. Both results can lead to a worse environment for innovation and productivity gains and

consequently to slower growth. In other words, the facilitation of firm entry leads to competition, which in turn leads to a search for knowledge and innovation – a very straightforward way to economic growth.

What is proposed in this study is not the absence of regulation, but that regulatory requirements must be proportionate to the real need of information by the State and to the ability of entrepreneurs to provide them at a cost that does not discourage investment. The government should remove unnecessary red tape requirements to reduce the cost of transactions and its own operating costs. One should not underestimate the importance of bureaucracy as a binding constraint to growth.

When the private sector is not able to comply with regulatory requirements there is a clear need for simplification of such regulations. This paper claims that the regulatory compliance costs are a problem in Brazil and that to tackle it becomes necessary first to measure it. We illustrated two different methods of doing this: the use of international benchmarking (rankings) and the calculation of the total costs generated by the regulation.

Although according to our research the cost of compliance in starting a business in Brazil is decreasing, there is still much to be improved to make Brazil better evaluated in the international rankings and thus to send a message that its regulatory environment is no longer an inhibitor to entrepreneurship. Taking into account all the recent reforms cited in this study, we could forecast a reduction of the number of procedures and the time taken to open a business that would improve Brazils' position to 65th in the Starting a Business sub index (a component of the World Bank's Doing Business Report). But even with such upgrade Brazil would still rank a very bad position: worst than the Latin America average and very far from the OECD average. If we use the Standard Cost Model methodology the results are that the direct regulatory compliance costs just to open a business in Brazil in 2007 reached 455 million dollars. It is important to notice that this number is related to micro and small firms' start-ups and is only a fraction of the total compliance costs faced by the private sector. Moreover, these costs do not include administrative costs nor the annoyance costs involved.

Among the measures taken to reduce the regulatory burden that are already being implemented in Brazil, the most important ones are: a) the use of information technology to simplify procedures; b) the promotion of information exchange between governmental bodies and entities; and c) the reduction of the number of licenses required. But it is necessary to go further in the simplification measures related to the regulatory process of opening a business in Brazil.

As noted, the local instances are the more problematic. Moreover, much of the discussed simplifying measures depend on agreements made with the municipalities for their effective implementation. We therefore understand that the federal government must make efforts to convince the municipalities to join the Synchronized Database of SRFB and to adopt laws by eliminating the requirement of permits for low-risk activity.

We also recommend that the government implement a program to calculate the regulatory compliance costs to start a business, using the methodology of the SCM as well as reduction targets similar to those designed by the Dutch government.

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