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CAUSES OF TAX COMPLEXITY IN BRAZIL

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1. INTRODUCTION

With another bill in the congress intended of reforming Brazilian tax system, complexity is once again target as one of the main problems. Politicians, businesspersons, media and individuals all agree that the Brazilian tax system is a nightmare.

The issue of complexity is not a particularity of Brazilian system. Especially in a period of globalization and increasing competition among countries, a complex tax structure is seen as a comparative disadvantage.

Although always stated as an important goal of tax reforms, tax simplicity or complexity is vaguely defined. If most countries consider their tax systems complex, what distinguishes a complex from a simple system? In order to address this issue, it is necessary to state a clear definition of complexity, explore its causes, ways of measurement, and determine if some level of complexity is desirable or not.

The Doing Business Project carried out annually by the World Bank is useful in defining and measuring complexity. The WB project asses how easy it is for companies to make business among the 178 countries researched. One of the research sections addresses the question of the difficult in paying.¹

The study takes the case of a hypothetical that makes business in the studied countries. For each country an overall index is calculated in order to rank the difficult of paying taxes in the researched countries. This index consists of three indicators: a) number of tax payments, which reflects the number of times a company has to pay taxes; b) tax cost, representing the amount of tax a that company has to pay on its profits; c)

¹ This paper is based on the 2008 Doing Business Research.

time to comply, indicating the number of hours the case company spend to comply with tax laws requirements.²

Brazil occupies the 137^a position in the overall index. What is striking is that Brazil is the country where it requires most time to comply with the tax law. Table 1 shows the average time to comply with tax requirements in Brazil, OECD, Latin America, China, India, Russia and United States.

TABLE 1

COUNTRY/REGION	TIME TO COMPLY (hs/year)	TIME TO COMPLY (Ranking)
Brazil	2,600	177
China	872	167
India	271	105
Russia	448	151
US	325	122
Latin America & Caribbean	393.5	NA
OECD	210.5	NA

Source: Doing Business Project 2008(www.worldbank.org.br)

The World Bank research captured the complexity of Brazilian tax system in a comparative base. More striking than the position of Brazil in the ranking, is the number of hours required to comply with tax laws. It takes 2,600 hours to comply with Brazilian

² The research methodology of the Doing Business Project 2008 is adjusted to take into account differences among studied countries.

tax laws. Not matter if compared with countries of the same geographical region, with developed countries and with the so-called BRICs, it takes much more time in Brazil.³

The main goal of this paper is to explore the causes of complexity in the Brazilian tax system. Its underlining assumption is that Brazilian high tax evasion causes overregulation, and that is so because tax authorities try to increase compliance through the imposition of presumptive tax and withholding schemes that add more complexity to the system.

The paper is structured as follows. Section 2 conceptualizes tax complexity, defines its variables and explores its causes, according to the pertinent literature. Particular attention is given to the effect of the 1988 Brazil's Federal Constitution and the effect of tax evasion on complex tax laws. Section 3 designs a framework to analyze the complexity of different tax laws. Then it uses this framework to find the sources of complexity in both Brazilian and United States Social Security tax laws. Section 4 makes a critical assessment of the two laws. The final section concludes the paper.

³ The BRICS are Brazil, Russia, India, and China.

2. TAX COMPLEXITY LITERATURE

It is well recognized that 1988 Brazilian Constitution has added more complexity to its tax system, but this aspect is usually overstated. It is true that the higher the number of taxes, the more complex a tax structure is. Nevertheless, if one compares any tax in Brazil with its similar in other countries, it takes more time to comply in Brazil.

Thus, the problem is not only the number of taxes, but also something else. For example, according to the 2008 Doing Business Project, it takes 491 hours to comply with the Brazilian Social Security tax, which is more than the time required to comply with all taxes in most countries.

In order to search for sources of complexity that permeate Brazilian tax system, it is necessary to go beyond the Constitution innovations. It is necessary to revise the specialized literature, define the sources of complexity, and identify them in the tax laws.

2.1. Brazilian Constitution and Tax Complexity

The 1988 Federal Constitution unintentionally introduced one of the most important causes of the Brazilian complex tax structure. By the rules of the previous Constitution, the Federal Government concentrated most of the tax revenues, while States and Municipalities were highly dependent on volunteer Federal transfers of revenues. According to Oliveira(1995), the deep dependence of federal transfers created the right conditions for States and Municipalities to lobby for a change of the tax structure during the discussions of the new Constitution.

The goal of this new alliance was to increase its share on tax revenues. Oliveira(1995) points out that while the decentralization of revenues generated more autonomy to the lower levels of Government, it created a new problem, since it was not followed by a decentralization of expenditures. The Federal Government kept the same responsibilities that existed under the old Constitution, but it no longer had the revenues to finance them. It was a matter of time for the Federal Government to increase its taxes.

According to the 1988 Constitution, 47% of the revenues raised by the two main Federal taxes must be automatically transferred to States and Municipalities.⁴ Therefore, on one hand, the Federal Government had to increase its taxes to compensate the revenue losses under the new rules. On the other hand, for each dollar of revenue, only 53% would remain at the Federal level, and the rest would be carried to other levels of government.

The Federal Government created an innovative way to increase its revenues without sharing them with States and Municipalities. Another constitutional provision allowed the Federal level create a particular kind of tax, called Social Tax, which should be used exclusively to finance health, social programs and the social security system. These social taxes should not be shared with other levels of governments.

Right after the approval of the new constitution, the Federal Government started to institute new social taxes. In 1988, just one month after the new Constitution, a new tax over firms' profits was introduced. This tax was very similar to the Corporate Income Tax, which also was levied on companies' profits. However, the Federal Government would collect the same amount of revenue through a new social tax, using half of the tax rate that should be used under the corporate income tax.

⁴ Income tax and the tax over manufactured goods.

In 1991, three years after the Constitution, a new social tax over firms' turnout was created. This tax is cumulative, since it applies to all transactions. A cumulative tax causes large distortions in resource allocations, since each phase a productive process is taxed, and the tax paid in the previous phase is not taken into account. Therefore, services and goods characterized by a long supply chain have much tax burden.

In 2003, more complexity was brought to the system. In order to correct for distortions aroused by the cumulative social tax, a new law introduced a non-cumulative social tax. It means that the same tax had two distinguished assessment methods. Some economics sectors, with long supply chain, faced a cumulative tax with low rates, and sectors with a short chain faced a non-cumulative tax, with higher rates.

These new taxes brought more complexity to the tax system. In the inexistence of legal transfers to States and Municipalities, it would be not necessary to create two more social taxes. These incentives distorted the tax systems, increased the number of taxes and rules, and the compliance costs.

2.2. Causes of Complexity in the Literature

Although tax simplicity is stated as a goal to be pursuit in all tax systems, usually it is vaguely conceptualized. Therefore, it is necessary to define what characterizes a complex tax system, the sources of complexity, and how it can be measured and compared.

Tran-Nam(1999) states that tax simplicity is not an absolute concept, but rather a comparative one. It is not possible to say that tax schedule A is simple, but it is possible to compare tax schedule A with schedule B and say which one is simpler.

The same author differentiates legal simplicity and effective simplicity. Legal simplicity “refers to the ease with which a particular tax law can be read and understood”. This concept has to do with the content of the law and with the capacity of the reader. The author asserts that based on the content a tax law, it is truly difficult to measure the level of complexity.

Effective simplicity is defined as the cost incurred by a firm or individual to comply with the requirements of the tax law. This cost is usually divided into administrative and compliance costs. Administrative costs are those incurred by the government, and represent the effort to collect revenues. The most common administrative costs are hiring personnel, developing computational systems, enforcing the law, expenditures on tax dispute resolution and so on. This concept is similar to the idea of transaction cost to enforce a contract.

On the other side, compliance costs are those supported by the private sector to fulfill the tax law demands. These costs include the time spent learning the tax code, filling forms, going to agencies to gather information, maintaining record keeping, expenditures on computational programs, hiring accountants, lawyers, consultants, and the costs of litigation.

Once the total costs of running a system is measured, it is possible to compare the operating costs of different tax schedules in terms of dollars spent by the public and the private sector. It represents a *proxy* of the complexity of a tax system.

One important point to note is that tax authorities can transfer some administrative costs to the private sector. Since tax authorities are constrained by their budget or it can be very costly acquiring information of economic transactions, they impose some

obligations on taxpayers, which are in principle administrative costs. In some cases, the government imposes the burden of collecting taxes on some taxpayers, but the taxes are due by others. The typical example is the withholding of income tax by firms, where they have to withhold and report the tax due by their employees.

Measuring compliance costs is more complicated than measuring administrative costs. While administrative costs can be seen as the budget of the government bureau responsible for dealing with taxes, there are many problems in measuring the compliance costs. Companies already incur some costs related to its normal functioning, which are not borne because of the existence of taxes. Independently of the existence of taxes, companies have to maintain records, financial statements, as a function of the managerial organization.

Therefore, it is difficult to draw a line between the normal costs of a firm and those that arise because of taxes. Only the costs above the normal costs are regarded as compliance costs.

Several researches tried to measure the costs of taxes. According to Pope (1993) the compliance costs with the individual income tax in Australia makes up 7,9% of the collected revenue. Bertolucci(2005) estimated that compliance costs of large companies in Brazil varies from 0,32% to 1,66%. These authors state that these costs are highly regressive, since they are relatively larger to small firms.

Other important part of the literature on tax complexity deals with its causes. Gale and Holtzblatt(1998) discuss some causes of tax complexity. This authors link some particular provisions in the law with tax complexity. For instance, the existence of graduated taxes gives incentive for taxpayers to shift from high to low rates, while a flat

rate would eliminate it. Individuals and firms try to shift their activities to in order to pay the lower rate, and that ends up with more government regulation.

In the same fashion, in the presence of exemptions, deductions and tax credits toward particular taxpayers, other firms and individuals try to reduce their tax liabilities. In order to restrict this to the intended groups, the government needs detailed regulation to avoid others getting the same benefits. The excess of regulation is then a cause of complexity. The authors suggest that policies toward increasing tax simplicity should combine flat taxes with a limited number of deductions.

Other source of complexity is borne on pursuit of justice in the distribution of the tax burden. If society cares more about the worse off, one way to make them better off is through a different tax treatment. For example, when government reduces taxes to small businesses, create exemptions to lower income individuals, accept deductions of healthy and education expenditures, it is targeting benefiting some groups and creating more equity.

The pursuit of a fairer tax system causes more complexity. On one side, a simple tax system requires flat taxes and universal exemptions and deductions. On the other side, a more equitable system requires more differentiation among taxpayers, and this causes overregulation and more complicated laws.

The use of the tax system to reduce inequality is just one example of the overuse of taxes to delivery public policies, which alters its basic function of raising revenue. According to Pollack(1996), after the World War II, tax laws were progressively seen as a source of making public policies. Since then, it has been used to address a variety of

problems such as social and regional imbalance, lack of competitiveness in countries and states, externalities, pollution, and so on.

In this process, those in society that are more organized are able to get differential tax treatments. The existence of preferential treatment toward particular groups or economic transactions stimulates non-intended individuals and firms to gain the same benefits. Again, it causes excess of regulation and complexity, since it is necessary to restrict benefits to specific beneficiaries.

Some argue that complexity can be a source of tax evasion. The idea is that complexity causes more difficulty to taxpayers to assess their true tax liabilities, which increases the loopholes in the tax legislation and increase compliance costs. Both problems create a higher propensity for tax evasion.

Sheffrin (2002) conducted a survey to investigate this hypothesis, but did not find a significant correlation between complexity and evasion. It is possible that the relation of causality occurs in the opposite way, with evasion affecting complexity. In order to explore this direction of causality, the issue of tax evasion and its consequences on tax complexity should be investigated. Before this, it is necessary to discuss some particularities in the case of Brazil.

2.3. Tax Evasion and Tax Complexity

A straight definition of tax evasion is the difference between the tax liability according to the tax codes and the amount of taxes effectively collected by tax authorities (Klepper and Nagin, 1989). This concept excludes non-intentional errors and tax avoidance.

The first formal model to address the issue of tax evasion was developed by Allingham-Sandmo(1972). This model explains the individuals' decision about evading taxes as a rational choice under risk. This decision depends on the expected payoff, given some parameters. Individuals act as gamblers, and the decision of evading depend on their risk preferences, probability of audit and a penalty.

In the Allingham-Sandmo (A-S) model the true income of the taxpayer, w , is not known by the tax authority, which observes only the income reported by the taxpayer, x . If the taxpayer declares an income inferior to its true value, $x < w$ - assuming that w is the taxable income-, he should pay the tax rate plus an additional penalty, which together are represented by $\tau > \tau$. However, the tax authority figures out the true income only if the taxpayer is audited, and audit happens with probability p . It is assumed that under audit the tax authority figure out the true income, w .

The risk-averse taxpayer report the income x according to the expected utility function:

$$E[u] = (1-p)U(w-\tau x) + pU(w-\tau x-\tau(w-x))$$

Although some studies confirm the effect of probability of audit and severity of penalties in deterring evasion – Friedland *at al*(1978), Webley and Hessian (1992) -, the basic A-S model has some shortcomings. In the basic model, the taxpayer is always inclined to evade, as long as there is a positive payoff. Since only 1% of the tax returns in the United States is audited, and 85% of the estimated taxes are collected, other factors should affect evasion decisions (Alm and McKee, 1998).

Some variations of the basic A-S model incorporates variables as moral, culture, provision of public goods, public perception about government and nature of income. According to Adreoni *at al*(1998), the results of empirical investigations are mixed, but variables as moral, culture and source of income usually have positive correlation with evasion.

Although tax evasion is more complex than in the basic A-S framework, the model seems to reflect reasonably the relation between tax authorities and taxpayers. Tax authorities are not able to increase compliance by changing culture, provision of public goods, perceptions about government, and source of income. The only means they have to increase compliance is changing probability of auditing, which ultimately decreases the pay-off of evasion. Increasing penalties has some social boundaries, since society usually do not accept unlimited penalties for tax evasion.

Tax administrations also try to increase compliance adopting presumptive taxes. According to Thuronyi(2004) , “ presumptive taxation involves the use of indirect means to ascertain tax liability, which differ from the usual rules based on the taxpayer’s accounts”. The term presumptive is used to indicate that there is a legal presumption that that the taxpayer’s income is no less than the amount resulting from the application of the indirect method.

The use of presumptive tax schemes is widespread in developing countries, since they are constrained by financial resources and human skills to deal with evasion. The lack of resources forces tax authorities to choose whether to go after the larger firms already in the tax net, where the potential of tax collection is greater, or to pursue the less profitable taxpayers who are outside the tax net.

Other factor that contributes to the large use of presumptive tax in developing countries is existence of the hard-to-tax(HTT). Alm *at al*(2004) characterizes the HTT is those to which is difficult or very expensive to tax authorities to find out their true transactions and tax liabilities. Musgrave(1981) identifies two larger categories of hard-to-tax:

- a) Firms and individuals, who do not maintain good record keeping, but are potentially taxable. The most common in this group are professionals, farmers and small-medium firms;
- b) Firms and individuals whose activities and incomes are large enough to be in the normal tax system, but who are evaders. Usually they are formally registered, but some transactions and income are not reported.

There are two special regimes of presumptive taxes. The first and more common uses the calculation of the tax liability based on key factors that are presumably associated with income generation, such as sales, turnover, number of employees, firm's size, and taxpayer assets.

The second type of presumption is the withholding of a tax. In this case, the tax that should be paid by a seller of a good or service is withheld by the buyer and collected to the government in the name of the seller. These regimes are inspired on the withheld of the individual income tax, where the employer retains and collects part of the tax imputed on employees.

Some of these schemes are refundable and others not. In a refundable scheme, the taxpayer can demonstrate its real liability and reduce the tax burden. In a non-refundable

regime, there is a complete substitution of the normal tax regime, and the taxpayer is not able to reduce its tax liability.

Bird and Wallace (2004) asserts that the main objectives of presumptions is to increase the level of participation in the formal economy, reduce compliance costs, obtain some revenue, or a combination of these objectives. In the case of a complete substitution of the normal tax by a presumptive tax, with fewer requirements of record keeping, the costs of compliance can be greatly reduced.

On the other hand, if both tax systems, the normal and the presumptive, are applied to the same taxpayers, or if two types of presumption coexist, the level of complexity and the compliance costs can be very high. This is more common when a new presumptive tax is created only to raise more revenues. In order to broad the tax net, these kind presumptive taxes create many rules, exemptions and rates, that usually turn out to be very difficult to comply with.

2.4. A Simple model specification

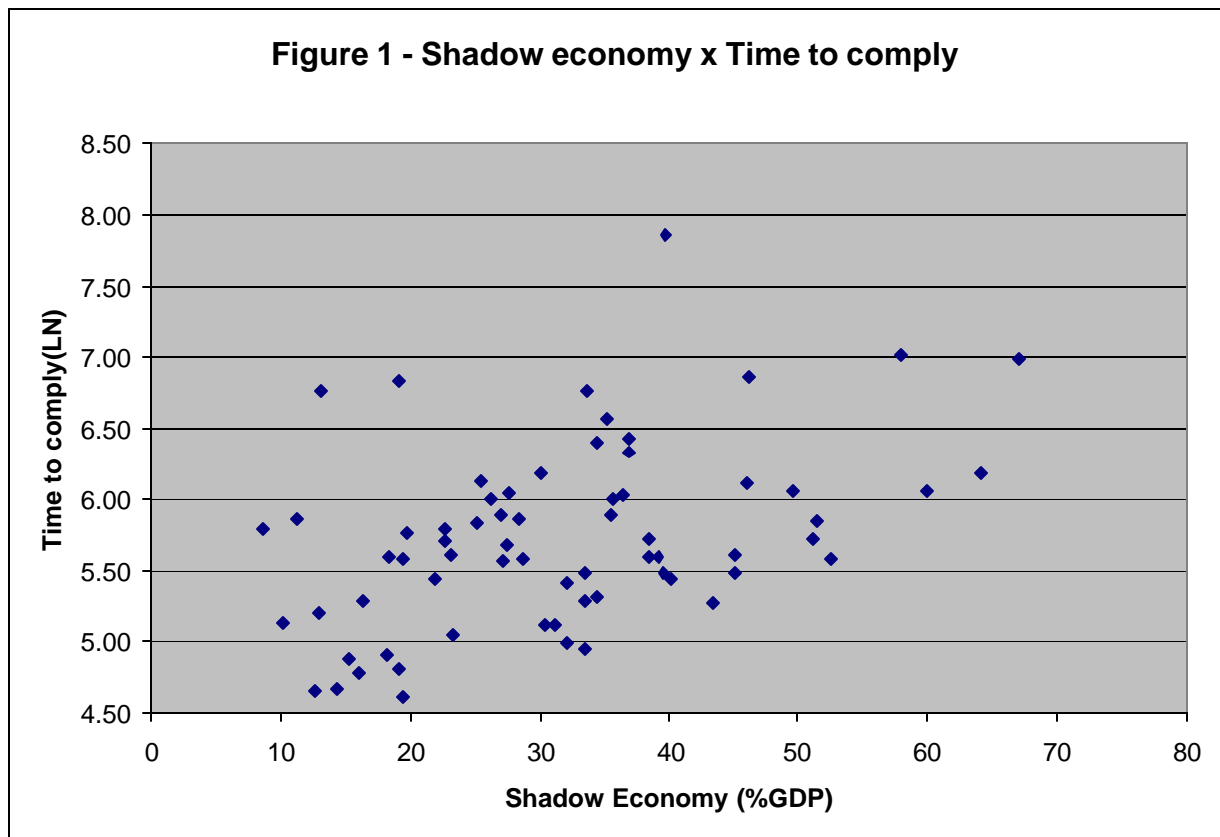
The shadow economy and the tax revenues/GDP ratio can influence the level of complexity of a tax system. According to Alm *et al*(2004) “ the shadow economy includes income underreported to tax authorities that is generated from the production of legal goods and services, often by means of clandestine labor, involving monetary or barter transactions by agents who are not registered or do not pay taxes”.

In the presence of a large shadow economy, tax authorities can increase compliance by changing probability of auditing or by using presumptive taxes. In developing countries, authorities should rely on presumptive taxes to reduce evasion,

since budgetary constraints limit the number and quality of tax audits. This causes overregulation, and consequently more complex tax laws.

As shown in Figure 1, as the size of shadow economy increases, it requires more time to comply with tax laws. The correlation coefficient between these variables is positive and strong ($r = 0,38$).⁵

FIGURE 1



Sources: Doing Business Project 2008 and Alm *et al* (2004).

^a Data of 75 countries.

^b Shadow economy in logarithm.

⁵ The correlation coefficient was calculated to all countries for which there was available data (see Appendix A).

An additional problem in countries with large underground economies is the level of public expenditures. These countries need to increase revenues in order to finance the high level of expenditures, but it is hard to collect taxes, since firms and individuals operate out of the tax net. Therefore, they should rely even more on presumptive taxes, which end up in a more complex tax structure.

Usually OECD countries have a small shadow economy, while African, Asian, and Latin American countries the opposite occurs. Therefore, it is expected the time to comply in non-OECD countries (Appendix A). A regression based on data of 56 countries explores the effects of shadow economy and the ratio tax revenues/GDP on time to comply. The model is described bellow:

$$LN_time = a + \beta_1 Revenues + \beta_2 lnSdwTX + e$$

LN_time: logarithm of time to comply with tax laws

Revenues: tax Revenues/GDP

lnSdwTX: logarithm of (shadow economy * tax revenues), both as a share of GDP

Variable *Revenues* tries to capture the effect of high tax/GDP on time to comply. The variable *lnSdwTX* intends to capture the join effect high tax/GDP ratios in the presence of large shadow economy, on time to comply. Table 2 shows regression results:

TABLE 2 – Regression Results

Source	SS	df	MS			
Model	7.31514877	2	3.65757439	Number of obs =	56	
Residual	17.6843502	53	.333666985	F(2, 53) =	10.96	
				Prob > F	= 0.0001	
				R-squared	= 0.2926	
				Adj R-squared	= 0.2659	
Total	24.999499	55	.454536345	Root MSE	= .57764	

LnSdwTX	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
LnSdwTX	.608134	.1590588	3.82	0.000	.2891024	.9271657
Revenues	-.0354144	.008663	-4.09	0.000	-.0527902	-.0180387
_cons	2.536152	.9524287	2.66	0.010	.6258219	4.446482

Both variables are statistically significant and explain part of the variation in the time to comply ($R^2 = 0,29$). The sign of *Revenues* is negative, which means that the higher the ratio tax/GDP, the lesser the time to comply. One possible explanation for this inverted relation is the concentration of high tax/GDP ratios in developed countries.

The joint effect of tax/GDP ratio and shadow economy on time to comply is positive. It means that in countries where exist large shadow economies, and the governments try to increase tax revenues, it results in more complex tax rules and more time to comply with tax laws.

This joint effect could partially explain why it takes so long to comply with tax laws in Brazil. The shadow economy is approximately 40% GDP, and the ratio taxes/GDP is 36%⁶. Therefore, it is a typical example of a developing country with limited resources to expend on audits, weak judicial system to enforce tax laws, and high level of public expenditures. The tax/GDP in Brazil has increased at odds of a complex tax system.

⁶ Alm (2004) and Secretaria da Receita Federal/MF (2008).

3. BRAZILIAN AND UNITED STATES SOCIAL SECURITY TAX LAWS

3.1. A framework to analyze different tax schedules

The preceding sections discussed the issues that affect complexity of a tax system. It is possible to identify the variables that affect complexity and to develop an objective way to analyze different tax laws. As suggested by Tran-Nam(1999), this research treats tax complexity as a comparative concept, which allows a comparison of different tax laws based on some variables. Table 3 points out the main variables, its description and how they can be used to compare different tax laws.

TABLE 3

VARIABLE	DESCRIPTION	INDICATORS
TAX RATE	The greater the number of tax rates, the more difficult to taxpayers to figure out the true tax liability	1. Number of tax rates
	High tax rates stimulates evasion, which increases the necessity of more regulation.	1. Size of tax rates
PRESUMPTIVE TAXES	The use of presumptive tax add more complexity to the tax system.	1.Number of presumptive taxes; 2.Combinations of presumptive taxes; 3.Number of rules derived from presumptive taxes.
EXEMPTIONS	Differentiations among taxpayers needs detailed regulation, which increases the complexity of the tax system.	1. Number of differentiations; 2. Number of rules derived from differentiations
ADDITIONAL LAW REQUIREMENTS	Additional requirements imposed by tax authorities intended to increase compliance.	1.Additional law requirements; 2. Number of rules derived from the additional law requirements

It is possible to compare the Brazilian and the United States Social Security taxes with the variables described in table 3. The proposed framework could be used to analyze any tax in both countries, but the option of using the Social Security tax is twofold: first, this tax is very similar in both countries, since they are imposed on wages, and they have the same goal of financing social security benefits. Second, time to comply with this tax in both countries is very dissimilar - 491 hours in Brazil, against 55 hours in the United States (Doing Business Project, 2008). The similarities and the time disparity to fulfill the law requirements makes the Social Security tax a good case for comparison.

3.2. Brazilian and the US Social Security taxes

3.2.1. Taxes rates

Both countries Brazil and U.S impose the Social Security tax on wages, and it they are levied on employers and employees.⁷ In the U.S it is used to finance old-age, survivors, disability insurance, and hospital insurance. Tax rate on employees is 6.2% of wages, used to finance old-age, survivors and disability insurance, and 1.45% to finance hospital insurance. As in Brazil, employers face the burden of withholding and collecting the tax due by employees.

Social Security tax in U.S has an upper limit, which means that any dollar earned above a threshold is not subject to tax to either employer or employee. In Brazil, there is no upper boundary to the employers' tax, but there a ceiling to employees, which limits their tax liability.

⁷ This study is based on the main legislatures that deal with Social Security tax in both countries. In Brazil, it is the Decree 3.048/99, and in the United States, it is Title 26, Subtitle "c", chapters 21, 22, 24, and 25.

In Brazil, employees face three different tax rates (8%, 9% and 11%), and they vary according to their wages. This graduation intends to create a more equitable system, with those that earn higher wages facing higher rates. The negative side of the search of a more equitable system is that firms and individuals can engage in activities directed to reduce their tax burden.

The differences on the tax levied on employers in Brazil and in the United States are even greater. In U.S, employers are responsible for paying a 6.2% old-age, survivors and disability insurance tax, and a 1.45% hospital insurance tax. Therefore, the total social security tax on wages faced by employers and employees amounts 15.3%.⁸ Tax rates imposed on Brazilian firms are much higher. The standard employers' rate in Brazil is 20% of wages. In the case of a financial institution, tax rate is 22.5%. Besides this, there is an additional tax over salaries varying from 1% to 3% to finance accidents. These figures vary according to the main economic activities performed by a firm. The higher the risk of accident in an activity, the higher the tax rate.⁹

There is another additional tax of 6%, 9% or 12%. This additional tax is imposed on activities where employees retire at an earlier age. Activities that are very dangerous, reduce workers labor capacity or have high correlation with severe diseases, are classified in this category. Common examples are mining and policing.

Another source of complication exists in the case of early age retirement. Depending on the number of accidents occurred in a firm, compared to its pairs, the rates of 6%, 9% or 12%, can be multiplied by a factor from 0.5 to 2. If a firm has a small number of accidents, its additional tax rate can be cut in half, otherwise it can be doubled.

⁸ In the case of railroad retirement act there is an additional rate up to 4,9% imposed on employees and employers.

The idea behind this multiplier is to incentive firms to invest in safety equipments and training programs toward reducing accidents. This rule represents a clear use of taxes to delivery public policy, which distorts its basic function of collecting revenues. Moreover, higher tax rates increase the pay-off of evasion, which ends up with more strict regulation and complexity.

Summing up the standard rate in Brazil, the tax to finance accidents, the early retirement rate and its multiplier, the marginal tax rate faced by a firm can be 47% of wages. If the highest employee tax rate is added (11%), the overall social security tax rate over salaries can reach 58%.

3.2.2. Tax presumptions

Due to existence of high level of informality in the Brazilian agriculture, presumptive taxes are largely used in this sector. In the case of individuals that explore agricultural activity, the contribution to social security is 2.1% of their gross sells.

If a firm carries this activity, it faces two different tax regimes. If a firm explores agriculture along with a non-agriculture business, it is under the normal tax schedule. On the other hand, if the firm only explores agriculture business, the employer tax liability is 2.1% of gross sells. As in other economic activities, employees face a tax that varies from 9% to 11%.

Labor cooperatives are also out of the standard tax structure. Social Security tax imposed on employers is substituted by a tax on gross receipts. Every time a labor cooperative sells a service, the buyer is responsible for withholding 15% of the

transaction and collecting it to the government, in the name of the cooperative. Once again, employees face the standard rate.

Sport entities that maintain a professional soccer team also face the Social Security tax in a very different fashion. Instead of the normal tax on employees' wages, the sport teams (employers) are taxed in 5% of their revenues. Moreover, 5% receipts received from all other sources should be collected as Social Security tax.

There is another presumptive tax applied in the case of service firms. In some contracts that are related to delivery of services, the buyer (contractor) is responsible for withholding and collecting 11% as Social Security tax. This value is supposed to represent the tax levied on employers and employees.

There are 25 activities under this rule, and it includes services such as training, security, construction, and health. Taxes are collected on behalf of the contracted firm, and both parts should report the transaction to the government.

Once the contractor firm transfers the 11% to the government, the service firm can figure out its true tax liability. If the amount withheld is greater than the true tax liability, the firm should pay the difference. If the true liability is less than the 11%, the firm should compensate with the due tax in the coming months. Alternatively, the firm can ask for refund in a government agency.

This scheme is more complicated if the service is delivered with goods. In this case, the firm should separate the value of goods and service, and the withholding should be applied only over the price of service.

In practice it is complicated to firms identify which services are submitted to the presumptive tax, separate the value of goods and services, report to the government, keep

up dated with many rules, and ask for refund if the true tax liability is smaller. If the contractor fails in withholding and collecting these taxes, it turns itself responsible for it.

Since this presumption does not reduce or increase the burden of the Social Security tax, the goal of seeking a preferential tax treatment or providing particular benefits to companies under this scheme is ruled out. As long as companies are able to prove their true tax liability and ask for a refund of tax collected in excess, it seems that this presumption regime tries to increase compliance.

Since the Brazilian government does not have enough resources to carry out an appropriate number of audits, or it is not able to apply the standard tax law, it relies heavily on presumptive tax.

3.2.3. Exemptions

There are no exemptions in the U.S Social Security tax code. In the case of Brazil, there is one towards to stimulate charity and education. Organizations that fulfill certain requirements do not have to pay the employer tax. Again, in order to prevent non-indentured organizations getting the same benefit, there exist very strict and detailed regulations. Moreover, conditions that grant this benefit should be continuously assessed to ensure the organizations full fill the requirements.

3.3.4. Special requirements

Other special provision of the Social Security tax in Brazil is the existence of a clearance certificate. This certificate serves as a guarantee that the company has been up

to date in its social security payments and should be presented every time the company conducts the following activities:

- a) Contract with the government;
- b) Sells a fixed asset above a threshold price;
- c) Register a new construction in the local government agency;
- d) Get a loan from a government bank.

The clearance certificate expires in two months, and it should be renewed every time the company engages in the same activities. Since companies have to go under tax authorities to prove they are up to date with social security tax, it increases the risk associated with evasion, which can be seen as tax authorities trying to influence compliance by changing the probability of audit.

TABLE 4 – Sources of complexity in the Brazilian and U.S Social Security laws

VARIABLE	UNITED STATES	BRAZIL	SOURCE OF COMPLEXITY
TAX RATE	<ul style="list-style-type: none"> - One tax on employees and another on employers; - Rate of 7,45% for employees and 7,45% for employers. 	<ul style="list-style-type: none"> - Three taxes on employees (8%, 9% and 11%; - 20% on employers, plus 1% to 3% depending on the activity; This tax can be multiplied by 0,5 to 2; - Financial institutions face a employer rate of 22,5%. 	<ul style="list-style-type: none"> - Equity - Raise revenue
PRESUMPTIVE TAXES	None	<ul style="list-style-type: none"> - Agricultural sector - Labor cooperatives - Soccer teams - 25 services have a mix of presumptive taxes with withholding, which can be refundable. 	<ul style="list-style-type: none"> - Reduce evasion - Preferential treatment
EXEMPTIONS	None	Charity and education organizations do not pay employers tax	-Delivery public policy
ADDITIONAL LAW REQUIREMENTS	None	Certificate of clearance for contracting with government, selling assets, getting public loans, and registering constructions	-Reduce evasion

5. CONCLUSIONS

The Doing Business Project showed that the time to comply with tax in Brazil was significantly higher than in most countries. The explanation for this is threefold: first, when lawmakers use taxes to delivery public policies, it creates an excess of rules and regulations that increase complexity; second, countries with limited resources to expend on audits tend to rely heavily on presumptive tax and withholding schemes, which also end up in excessive regulations. Finally, countries high public expenditures financed by high tax/GDP ratios, and high level of shadow economy, tend to create complex rules in order to increase tax collection.

This paper undertook a comparison between the Social Security tax systems in Brazil and the United States in order to identify the sources of complexity in the Brazilian case. Both countries have similar tax burdens, but the underground economy in Brazil is 4 times greater than in the United States. A combination of high underground economy and high public expenditures, along with the existence of many taxes, exemptions, special treatments, law requirements, and high rates explain why it takes 491 hours to comply with tax laws in Brazil, against 55 hours in the United States.

APPENDIX A

Country	Time	Shadow Economy (%GDP)	Revenue, Excluding Grants (% of GDP)
China	872	13.1	9.47
Bangladesh	400	35.6	9.97
Madagascar	238	39.6	12.09
Guatemala	344	51.5	12.12
India	271	23.1	12.22
Pakistan	560	36.8	13.49
Philippines	195	43.4	14.55
Honduras	424	49.6	16.19
Peru	424	59.9	16.48
Nicaragua	240	45.2	17.19
Benin	270	45.2	17.24
United States	325	8.7	17.54
Argentina	453	25.4	18.14
Armenia	958	46.3	18.2
Switzerland	63	8.8	18.22
Indonesia	266	19.4	18.37
Thailand	264	52.6	19.61
Canada	119	16	19.71
Singapore	49	13.1	19.79
Bolivia	1080	67.1	20.24
Chile	316	19.8	22
Colombia	268	39.1	23.51
Albania	240	33.4	23.63
Ghana	304	38.4	23.78
Morocco	358	35.4	23.96
Romania	202	34.4	24.21
Spain	298	22.6	25.68
Jordan	101	19.4	25.8
Uruguay	304	51.1	26.52
Australia	107	14.3	27.27
Lithuania	166	30.3	27.8
South Africa	350	28.4	28.4
Germany	196	16.3	28.65
Tunisia	268	38.4	29.39
Poland	418	27.6	30.72
Ireland	76	15.8	31.5
Czech Republic	930	19.1	31.66
Greece	264	28.6	32.19
Jamaica	414	36.4	35.51
Italy	360	27	35.69
Hungary	340	25.1	35.71
New Zealand	70	12.8	35.98
United Kingdom	105	12.6	36.33
Denmark	135	18.2	36.42
Bulgaria	616	36.9	37.38
Sweden	122	19.1	38.04
Finland	269	18.3	38.5
Netherlands	180	13	39.05
Portugal	328	22.6	39.11
Slovenia	260	27.1	39.39
Israel	230	21.9	39.42
Croatia	196	33.4	40.47
Austria	170	10.2	40.65
Belgium	156	23.2	41.42
France	132	15.3	42.08
Norway	87	19.1	47.67

Source: Doing Business Project(2008), Alm (2004), and World Bank Social Indicators(www.worldbank.org)

^a Revenues, excluding grants(% of GDP):

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