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**THE CHOICE OF CONSUMPTION TAXES IN BRAZIL AND THEIR EFFECTS ON
INCOME DISTRIBUTION AND ECONOMIC DEVELOPMENT OF THE COUNTRY**

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1. Introduction

Brazil is a country with some very unique characteristics. It is the world's fifth largest country, on a scale of both geographical area and population. Brazilian economy is the world's eighth largest in terms of nominal GDP (Gross Domestic Product), nearly matching the output of Italy and England. Brazil is a country of continental dimensions which has fertile land and is rich in mineral resources. It is inhabited by a harmonious and peaceful people who live without ethnic, religious or social conflicts. In addition, this country has never been affected by significant natural disasters or major military conflicts throughout its history.

The year 2011 marks the 70th anniversary of the publication of the book "Brazil: Land of the Future", by Stefan Zweig¹. Indeed, for decades, perhaps centuries, Brazil has been looked upon as potentially one of the richest nations in the world. Nevertheless, that day never seemed to come, or else, that vision of Brazil never came to fruition for its people.

The economic and political reasons for a country with such potential to lag behind for so long are beyond the scope of this article. However, it seems that the day for this big country to fulfill its potential is finally arriving. The current generations have seen Brazil as playing a more important role in global affairs. Together with China, India and Russia, Brazil has led the so-called emerging countries. So, what is missing for the next step? How can this country, so singular in its culture and history, effectively become a developed nation?

Kofi Annan, former Secretary General of the United Nations defined that "*a developed country is one that allows all its citizens to enjoy a free and healthy life in a safe environment.*" Even taking that idea as utopian, Brazil seems too far away to provide conditions towards that objective to its people, who must live with a huge social disparity.

One of the most important issues to be reshaped in order to achieve this so-desired national purpose is the Brazilian taxation system. In its current concept, this system is extremely unfair because it is highly inefficient and complex, interfering heavily in economic agents' decisions; it provides a low social return in relation to the tax burden; and, it disregards the principle of equity, operating in practice to worsen the income concentration in a country whose wealth distribution is already one of the worst worldwide.

This research paper aims to contribute to this discussion. A brief overview of the Brazilian tax system shall be presented, criticizing the overburden of consumption taxes in

¹ Original title: *Brasilien. Ein Land der Zukunft*, Bermann-Fischer, Stockholm 1941

the Brazilian taxation structure and their effects on the distribution of income and on the economic growth of the country.

2. Tax Forms and their Characteristics - Theoretical Aspects of Taxation

Before entering into the proposed discussion itself, it is worth presenting a basic framework on some theoretical aspects of taxation. The definitions will be given briefly, seeking to objectively justify the central question to follow.

2.1. An “Optimal” Tax System

In 1776, Adam Smith, in the classic *“Wealth of Nations”*, had already established four general principles that should steer an optimal tax system:

“The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state.”

“The tax which each individual is bound to pay ought to be certain, and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to the contributor, and to every other person.”

“Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it.”

“Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state.”

Those statements are the basis of what was defined by Stiglitz (1999), who lists five desirable characteristics for any tax system to be considered by governments in implementing an optimal tax system. These are: administrative simplicity, flexibility, transparency, economic efficiency and equity.

Administrative simplicity requires the tax system to be easily operated, involving low administrative costs for government and for taxpayers. Government costs are associated with fundraising and oversight activities. Taxpayers’ costs are associated with their effort to perform incidental duties. The more complex the tax laws, the higher the costs incurred by taxpayers and the government.

The tax system must also be flexible in order to be easily adapted to the economic environment. Changes in economic environment must be accompanied by changes in tax

rates. There should not be too large of a gap between fluctuations in the economy and the necessary adjustments in tax structure. However, those adjustments should not be arbitrary, in order to avoid undermining the transparency of the tax system itself. Changes should be announced in advance, so that taxpayers may get the information necessary for decision making.

Regarding economic efficiency, one must ensure that the tax system interferes with the minimum allocation of resources in the economy. Considering that general taxes modify relative prices in the economy, the optimal tax system is one that minimizes the impact of taxation on agents' economic decisions.

The principle of equity determines that the tax burden be equitably distributed among individuals. This principle is divided into horizontal and vertical equity. Horizontal equity consists of similarly treating individuals considered as equal, while vertical equity comprises treating unequal individuals differently. This differential treatment may be based on the benefit principle or on the ability-to-pay principle.

Under the benefit principle, individuals should contribute proportionally to the benefits provided by consuming the public good. By the principle of ability-to-pay, the tax burden should be allocated to individuals according to the payment capacity of each one. The principle of benefit is limited in practice because it is difficult to measure an individual's usage of public goods. Moreover, this principle prevents the creation of a redistributive tax system due to the inability to differentiate taxes to fund public services in general from those destined to specific needs of taxpayer beneficiaries. For these reasons, the differentiation criterion usually applied is the principle of ability-to-pay.

2.1.1. The Trade-Off between Economic Efficiency and Equity

Every tax system is essentially composed of instruments that introduce distortions in the economy, such as income and consumption taxation. These instruments are distortive because of their influence on the behavior of economic agents, i.e., acting on producers' and consumers' decisions on the allocation of resources in the economy.

The adoption by governments of non-distorting – named *lump-sum* – taxes would be ideal. In practice, however, they will not function. For this type of tax, there is nothing individuals can do to change the amount of tax levied over them. In other words, it is a tax, which is a fixed amount, no matter the change in circumstance of the taxed entity. Classical examples would be a poll tax or any tax based on some immutable characteristic of individuals. However, like in these examples, an also classical problem is that non-distorting

taxes that are technically feasible have undesirable distributive characteristics. They are regressive, that is, the lower the income, the higher the tax burden.

Indeed, tax policy bears a fundamental trade-off between economic efficiency and vertical equity. The problem of characterizing the optimal tax design is to identify the best combination of those objectives. Or, in more specific terms, the problem addressed by the optimal taxation theory is to define the tax structure that allows the government to raise settled revenue and reach certain distributional goals at fewer costs in terms of loss of efficiency.

In order to reach an optimal income distribution and preserve economic efficiency, it would be desirable to adopt a *lump-sum* tax based on characteristics associated with individuals' ability to pay. Therefore, individuals with greater ability to pay would be charged more. Nevertheless, as these features are not observable by the government and individuals have no incentive to reveal them, *lump-sum* taxes that would generate an optimal income distribution are not feasible.

This means that a tax must be charged based on evidence that is observable, such as income and consumption, besides indicating the individual's ability to pay. Thereby, it makes it inevitable for tax systems to display distortions.

The most widely adopted variable by governments as an indicator of ability to pay is the income, which enables the implementation of a progressive tax structure, with higher rates for individuals with high incomes and lower rates for low-income individuals.

In short, the theory of optimal taxation concerns the characterization of the best tax structure in a world where *lump-sum* taxes are not achievable. The term "optimal" should therefore be understood as a second best, namely the best possible solution, since distortionary taxes must inevitably be used. Thus, an optimal tax system is usually defined by the tax structure that maximizes social welfare, given a restriction of government revenue, and considers the balance between the goals of efficiency and equity.

2.1.2. The Modern Principle of Competitiveness

The advents of regional trade blocs and free markets, as well as the evolution of economic globalization, have demanded reforms on taxation systems of all countries involved in this process, seeking to adapt them, in order to compete with each other.

Those concerns have prescribed new guidelines on the taxation area. Raised to a higher rule, the competitiveness principle has begun to direct most relevant changes in

such tax structures, aiming to remove or alleviate tax burdens on capital income, even as to relieve production, investment and exports.

In order to avoid adverse effects to the competitiveness of the products made by their companies and to attract international capital flux, countries should reform their taxation structures aiming to adjust them to one another. This would mean reducing the burden of capital transactions, removing bad quality taxes (like cumulative ones, which distort relative prices and increase output costs) and relieving output: broadly speaking, transferring the national revenue to other tax bases.

Regarding this issue, the new competitiveness principle posits that tax systems structures should acquire another configuration, geared to efficiency and competitiveness². It states that the tax burden on financial investments should be adjusted to internationally-accepted standards, considering the volatility of capital, and give up taxes on profits earned by foreign companies (upon its realization or remittance to the country of origin).

Moreover, competitiveness prescribes completely extinguishing the taxes that affect competitiveness in international markets and exempting imports from any tax incidence. This requires the reduction of taxation over investments and the abolition of cumulative taxes (which make exports more expensive for being impracticable to fully compensate them and upsetting the domestic market for more favorable imports).

Instead of that, competitiveness advocates prioritizing the recovery of broad-based value added taxes (VAT), which would not cause distortions in relative prices and ease the tax relief on investment and exports.

Relating to the labor market, guidance for adopting a competitive tax system in a country is exempting social security contributions paid by companies and cutting labor rights. In order to avoid the disincentive towards work and the flight of skilled manpower to other countries with more favorable tax treatment, the suggestion is reducing the number of personal income tax brackets and marginal tax rates.

Obviously, adoption of those policies by countries relegates the principle of equity to a lower significance. Actually, Brazil has only partially followed the prescriptions of competitiveness. Since the 1990's, several new rules and law changes were adopted, seeking to relieve capital flow; however, they were not able to reform the tax system in order to simplify it.

In short, the main changes implemented were:

² See Rezende (2001) and OECD, Tax and Economic Growth.

- higher marginal tax rates decreased:
 - from 43 to 25 percent, for corporate income tax, with an exemption for dividend payments, on the assumption that they had already been taxed at the corporate side (Law # 9.249/95); and
 - from 35 to 27.5 percent, for personal income tax, resulting in just two taxed income brackets and thus reducing progressivity (Law # 9.250/95 combined to Law # 9.532/97, lately altered by Law # 11.945/2009, which reestablished four marginal tax rates);
- establishment of “*juros sobre capital próprio*” or “interest on own capital” (Law # 9.249/95), a Brazilian "creation" which is the ability to reward shareholders and investors with interests equivalent to the application of a benchmark interest rate on the equity of the company, in return for the opportunity cost in terms of resources held by the company. It is a secondary form of dividend distribution to shareholders and investors and, additionally, the amount distributed is deductible;
 - reduction to zero of income tax rates and of the now-extinct CPMF (Temporary Contribution on Financial Operations) for foreign investors’ profits from Brazilian bonds, thus primarily benefiting financial institutions (MP # 281/2006);
 - reduction from 20 to 15 percent on tax rates, in favor of stocks and commodities transactions; and
 - adoption of regressive tax rates for investments in fixed income securities, as a function of investment’s time of implementing (Law # 11.033/2004).

All of these modifications reduced taxation on profits, investments and capital flows. On the other hand, too little, or almost nothing, has been done to simplify the Brazilian tax system, perhaps because, in the case of tax relief for capital, the implementation was more politically agreeable.

Actually, as will be discussed in Chapter Three, most statutory Brazilian tax modifications have become counterproductive, irrational, inefficient and uncompetitive. Brazilian taxpayers are subjected to chaotic tax legislation. In its current form, the system has relieved capital and corporate gains in various ways. Meanwhile, any reform attempts to simplify its confusing structure have been unsuccessful. One can assume that this happened on account of the fact that politicians’ fears of revenue losses were greater than their will to change the system.

2.1.3. Criticism to The Conventional Theory

As previously mentioned, countries concerned about the competitiveness of their economies have adopted several measures seeking to adjust their taxation systems. These nations have modified their tax structures which resulted in a more unfair framework. In the opinion of O'Connor (1973), the real motivation for such theories would be due to the fact that *"ruling classes normally attempt either to conceal or to justify or rationalize tax exploitation ideologically. New taxes are served up with slogans – for example 'tax fairness or equity' or 'improving incentives'."* Thus, tax rules would serve only as a form of deception to justify structures that eventually impose the largest tax burden over the weaker people, always in the name of progress, efficiency and, recently, the competitiveness.

That statement makes perfect sense, considering the fact that the States are organized by the various political forces from which they are composed, and the most influential or powerful ones will always intend to transfer to others the burden for sustaining their expenditures. That might be quite a natural behavior.

Oliveira (2009) goes beyond, asserting that the main conclusion that can be drawn from this discussion is that *"bases of the theory of public finance are insufficient to explain and determine the tax structures. Backed by rules and abstract principles which it considers essential for the construction of "optimal" tax systems in order to keep the system operating efficiently, **the theory ignores the political, economic and social forces that determine their structures** which, contrary to what it advocates, can give it a distinct conformation or not to admit taxes combinations that it suggests"* (not highlighted in the original).

In the author's opinion *"on one hand, **the norm appears troublesome for general application in different economic realities**, as well as inconsistent in its guiding purposes to preserve the efficient functioning of the system and, at the same time, to promote redistribution of the fruits of growth without sacrificing that system to some extent. On the other hand, the historical decontextualisation of principles with which it operates prevents the norm to comprehend why, in general, the reality of tax structures clashes with its lessons, rarely validating it"* (not highlighted in the original).

In the same direction is Myrdal's view (1990). Trying to explain the reasons for the fragility and limitation of the conventional theory, he highlights: *"As any other doctrine of economic policy, the theory of public finance is an attempt to assert unity where there is diversity, by postulating an ideal set of values. These postulates are explicit in the so-called principles of public finance and **implicit in the motivation for most fiscal proposals.**"*

In no other field has the intrusion of metaphysics done so much harm as here.

With a few exceptions, such as studies of the incidence of taxation and, of course, of the legal aspects which fall outside our inquiry, almost the whole theory of public finance is an elaboration of certain guiding principles, such as 'economy' or 'equity'. These speculations pervade even the theory of incidence and of fiscal legislation where they often obstruct the formulation of meaningful questions. This is particularly dangerous in view of the fact that the significant questions, which have been either obscured altogether or begged by pseudo-solutions, have become increasingly important during the last decades.

*The writings on the principles of public finance are legion, and more is still being written. Classification, terminology, and doctrines vary a great deal and have undergone continual change. This is due to the fact that **taxation affects political interests particularly strongly. All normative economic doctrines are largely rationalizations of political attitudes and in the theory of public finance probably even more than elsewhere because stronger political pressures are at work here***" (not highlighted in the original).

Indeed, the influence of political forces on the conformation of tax structures of the countries cannot be underestimated. Neither should the importance of all political forces be neglected by the proponents of tax reforms, when relieving capital gains and high incomes, at the expense of fairness. Otherwise, it would be seeding dissention amongst societies.

2.2. Tax Classifications

2.2.1. Progressive, Regressive and Proportional Taxes

The Theory of Public Finance states that taxes, based on their incidence and behavior in relation to the taxpayers' income may be regressive, progressive and proportional.

A tax is considered regressive when it bears an inverse relationship to taxpayers' income. In this case, the tax share on income level is higher for taxpayers who are in the lower levels, decreasing as you move to higher levels. That aspect is what gives it a regressive nature.

A tax is considered progressive when the opposite situation happens. The tax keeps a positive relationship with the income level, i.e., the participation of the taxpayers increase as their income grows. This means more progressive and fair taxation, imposing a greater tax burden on individuals in more favorable conditions to bear it.

The proportional tax is the one whose enforcement does not promote changes in the structure of income distribution. Its relationship with the income level is therefore proportional. The tax burden, in this case, keeps the same percentage for different levels of income.

The same reasoning may be used to assess the degree of equity in a tax system, considering all the taxes within it. Although it is composed of taxes of progressive, regressive or proportional nature, a tax system is considered progressive, as a whole, after the collection of taxes, if it records improvement in the income distribution. A regressive tax system worsens inequality, and it is proportional if the relationship remains intact. This issue is important for the reason that a system cannot be evaluated by considering each tax separately. Given the tax mix, a tax system always comprises of progressive, regressive and proportional taxes. According to that, it is important to evaluate which ones are prevalent in tax burden to society, for the regressive effect of some taxes may be offset by the progressiveness of others and vice versa.

2.2.2. Direct and Indirect Taxes

In order to understand the progressiveness and regressiveness of a tax system, it is necessary to analyze its incidence bases. Modern tax incidence bases are briefly: income, property, production, circulation and consumption of goods and services. According to these bases, taxes may be divided in two large groups: direct and indirect taxes.

Direct taxes are those which directly levy on income and assets. They are called so because, at least in principle, they are not transferable to other taxpayers. In other words, the taxpayer statutorily responsible to collect it to the public coffers is the same that actually bears its burden.

In order to clarify this matter, it can be said that direct taxes are those in which a taxable event actually materializes at the moment a certain income/profit is gained/earned or when the existence of an accumulated wealth in a certain point in time is reported. In the first case, they are known as income taxes and, in the second, taxes on property. They levy therefore directly on income earned by workers in general, on the interest and financial gains, rents, business profits and capital gains (i.e., on income in several ways) and also on property and wealth. Therefore, they are not transferable to other taxpayers, leastwise theoretically. If this is confirmed, a coincidence occurs between the real and the legal taxpayer, or between the statutory and economic incidence, which is, in fact, what matters from its charge point of view.

Indirect taxes are those which have their burden justified by the spending of a certain amount of income. They are levied on the production and consumption of goods and services and, also, in principle, they are liable for transferring to another taxpayer, that is, the consumer of these goods or services. This means that their economic (or real) impact in the process has indirectly come about. It is mediated by the participation of an intermediary, such as a retail store. In other words, the tax load is transferable to the prices of products purchased by consumers, who bear their ultimate economic burden.

The share that the seller is able to carry over to prices varies among products according to their price elasticity of demand. More essential (and therefore more inelastic) goods and services are more susceptible to a higher tax transfer to the purchaser than the luxury ones. That is an aspect which tends to penalize more low-income taxpayers if there is an overburden on primary necessity goods as in the Brazilian tax system case.

When a tax is imposed, it immediately affects taxpayers' income, regardless of its direct or indirect incidence. Once taxes change relative prices, they also interfere in taxpayers' decisions on consumption, investment, employment, leisure, etc. So, individuals change their options among these possibilities according to what is more advantageous for them in that new situation.

In the conventional theory standpoint, these changes, in turn, and to some extent, affect the production, with effects on the efficiency of the system. However, this influence can occur differently in the case of direct or indirect taxes or different combinations of them. That issue has always brought about much controversy among those involved in studies of the theory of public finance, related to the best composition for a tax system – the tax mix – or which taxes would be preferable to others, from the efficiency point of view, without forgetting that other tax features also influence this debate.

Without discussing the economic impact of direct taxes, theoretically, they are considered more appropriate for the issue of progressiveness and, therefore, for redistributive income policies, since their rates may be established according to these principles. Indirect taxes, in turn, by having consumption as their bases - and not income - are considered regressive. They are transferable to third parties or, in other words, for the prices of products purchased by consumers, according to their price elasticity of demand. These do indeed end up paying for part of the tax, legally mediated by the taxpayer – a business owner, producer or seller. Their harmful effects on the structure of income

distribution may be reduced - but not eliminated - with the setting of selective rates, differentiated in conformity with the essentiality of the product charged.

Well-designed consumption taxes could have progressive features too, exempting or reducing tax rates applied to primary necessity goods, while luxury ones would be set on higher tax rates. Nevertheless, as it will be shown below, that is not the Brazilian case. Many indirect taxes in Brazil still have a cascading effect, i.e., they are cumulative. This aspect undermines the economic production and employment generation in the country. Taxes cumulativeness prevents exports and productive investment exemption, distorts relative prices and encourages vertical integration of companies.

Furthermore, Brazilian low-income householders support a high indirect taxation, since more than half the tax revenue comes from taxes on consumption, causing harmful consequences to the income distribution in a country which is already so unequal.

3. Consumption Taxes and Their Effects over the Brazilian Economy

3.1. Characteristics of Consumption Taxes in the Brazilian Taxation System

Consumption taxes stand for a substantial share of total tax burden in developing countries. As stated before, their incidence occurs indirectly and their charge is justified by the spending of a certain amount of income, levying over a wide range of transactions such as sales of consumer goods, industrial products and services.

The most widely used forms to implement consumption taxes are the cumulative or cascading taxes, and value-added taxes (VAT). The first ones are charged over the turnover on every stage of the productive chain. In other words, it levies over all intermediate stages of production process and/or selling of a particular good, including the proper tax previously paid, from the source to the final consumer, without any deduction for the tax paid at earlier stages. Thereby it influences the composition of the product cost and, consequently, in the fixing of its sale price, and thus it is called "in cascade".

A value-added tax (VAT), also known as 'Goods and Services Tax' (G.S.T), applies a tax rate over every operation that creates value on the productive chain. In each stage, the VAT is collected on the higher price, but only the excess related to the "value added" will be remitted to the government (the price over the cost).

VAT is usually administrated by requiring the company to complete a report, giving details of the amount it has been charged (referred to as input tax) and how much it has

charged to others (referred to as output tax). The difference between output tax and input tax is payable to the public treasury. If input tax is greater than output tax, the company can claim back money from the local tax authority.

Consumption taxes might also be imposed on the sale of specific goods and services, such as fuels, beverages and tobacco, operating as selective taxes, and called in this manner, therefore. In this revenue form, consumption taxes are generally excises. Unlike *ad valorem* ones, excise taxes are not a function of the value of the product being taxed, but on the quantity purchased.

Several authors, Ahmad & Stern (1984) and Sampaio de Sousa (1996) among them, claim that, in the presence of strong income disparities, an appropriate design of indirect taxation may improve welfare levels, helping reduce inequalities. The imposition of progressive rates, combined with an exemption level may cause the tax burden associated with taxation of consumption to take into account the taxpayer's ability to pay. According to these authors, the experience of implementing this progressive structure through the VAT has been successful in many countries.

Unfortunately, Brazilian consumption taxes are too far from a rational framework. Although having been a pioneer in implementing a wide VAT, levied over all stages of production and distribution of goods and services (in 1966, with the *ICM – Imposto sobre Circulação de Mercadorias*, or Tax on the Circulation of Goods), currently Brazilian consumption taxes' arrangement is completely chaotic, comprising four different types of value-added taxes: *IPI* (Tax on Industrialized Products); *ICMS* (Tax on the Circulation of Goods and Services); *COFINS* (Contribution for the Financing of Social Security); and *PIS* (Social Integration Program). Each of them has its whole specific roll of rates, regulations, incidence rules and exemptions.

Excluding the *ICMS*, which is burdened by the states, all the others are charged in the federal level. Incidentally, the *ICMS* represents one of the few examples in the world where VAT collection is done through a subnational level of government. And it is by far the consumption tax that generates the highest revenue, which confers a great importance on it, for being the main financing source of the states (83 percent of participation), but also for giving more weight to the complexity for taxpayers to deal with its 27 legislations.

Furthermore, there is still another cumulative consumption tax, assessed by municipalities, the *ISS* (Tax on Services), with a specific legislation for each of the over 5,500 cities in Brazil!

3.2. Tax Structure in the USA and Selected Countries Compared to the Brazilian Model

3.2.1. Historical Evolution of the Brazilian Tax Structure Related to its Level of Development

In Brazil, tax mix is overly focused on consumption, and this condition has become worse over the last fifteen years or so. This is due to the option by the Federal Government to raise the tax burden by increasing social security contribution rates levied upon turnover, motivated by the fact that such contributions, unlike other taxes, need not, under the Federal Constitution, be distributed to other entities of the federation – states and municipalities.

The causes for that overburden are ancient. However, conditions became worse after the promulgation of Constitution in 1988. The letter promoted an increase in social rights combined with a decentralization process for tax burden transfer to states and municipalities. In order to achieve this aim, and due to the concern about expanding and ensuring stable resources to fund social policies, the Constitutional Assembly pursued to broaden and diversify the financing basis of social security, in order to reduce its dependence on payroll contributions. The Assembly thus attempted to mitigate the vulnerability of social security's revenues vis-a-vis economic cycles.

Moreover, aiming to keep the new receipts exclusive for social security, a proper budget, formally separated from the fiscal budget, was assigned to it. For this reason, among others, new contributions then created had a different treatment, apart from the tax system. Hence, these new contributions got out of scope of many principles and conditions set for the institution of regular taxes.

For instance, these new tax forms should not comply with the annual anteriority and non-cumulativeness principles. Their creation would just be limited to prior period of ninety days. Moreover, and perhaps the main point, no rule of sharing has been defined for contributions, meaning that their income would be entirely appropriated by the Federal Government.

This formal separation between the tax and social security budget, as well as their revenues, has created a veritable **dual tax system** in Brazil, with different principles, forms of incidence and rules for sharing of receipts.

On the other hand, the decentralization of public funds was not accompanied by a corresponding distribution of public policy programs, which remained under the

responsibility of the Federal Government. With the consequent reduction in its resources, the reaction of the Union to offset its losses was to raise the tax burden by creating or increasing social security contributions rates, which did not need to be divided with the other entities of federation.

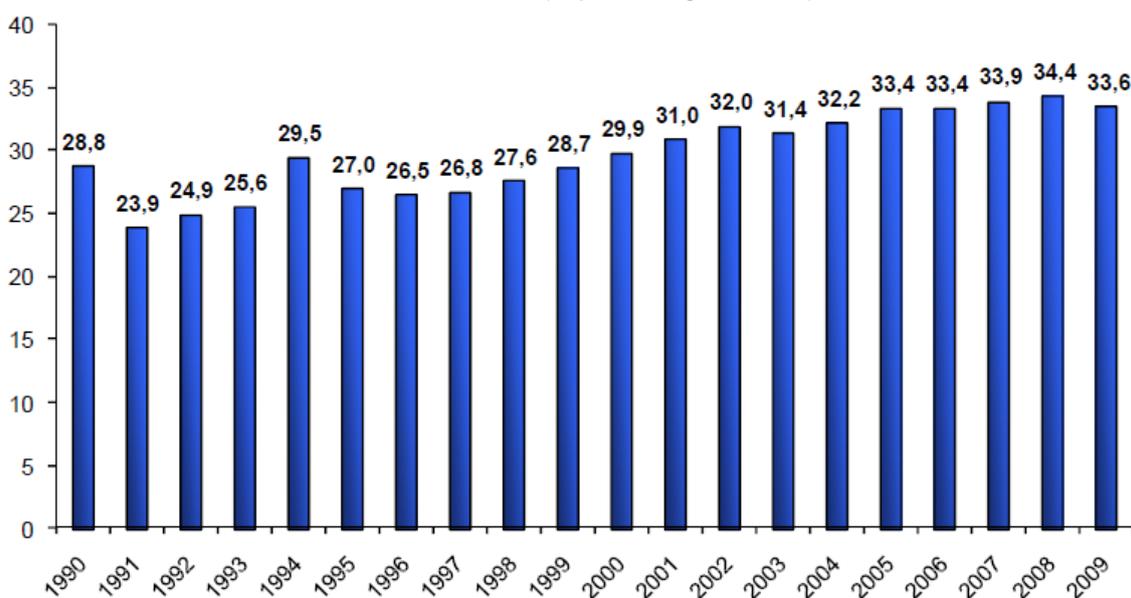
These mentioned benefits and facilities have led the federal government to intensify the exploitation of social security taxes instead of traditional ones after the Constitution of 1988. Initially, in order to recover lost revenues, and later for the purpose of ensuring a budget for the fiscal policy.

Since then, contributions levied upon companies' turnover had come rapid rises in their tax burden composition share. As they do not have to comply with the non-cumulativeness principle, by levying them in cascade, their final rates are higher, thereby fostering distortions in the economy.

Therefore, as shown in Figure 1, the tax burden in Brazil, which gravitated around 24 percent in the 1980's, has expanded in the last two decades from 23.9 percent, in 1991, to 34.4 percent in 2008, during the peak of the international financial crisis.

Figure 1

Total Tax Burden (in percentage of GDP)



Source: *Secretaria da Receita Federal do Brasil (RFB)*

Elaboration: *Ministry of Finance/Secretaria de Política Econômica (MF/SPE)*

This represents a variation of **more than 10 percentage points**. **Cofins contributed with more than six percentage points of this sum**, growing from 5.4 percent to 11.7 percent between 1990 and 2008, according to *RFB's* data. It was an

exclusively cascading, extremely distortive tax until 2003, when a non-cumulative regime was established for it.

Table 1, in turn, shows the participation of each tax and contribution to the total tax burden of the country in 2008. According to this classification, adopted by Maria & Luchezi Jr. (2010), consumption taxes weighted an equivalent to 18.7 percent of the GDP, or **54.3 percent** of the total amount collected, while income taxes corresponded to only 28.4 percent and property taxes summed up to a paltry 3.4 percent of the total burden.

Table 1

Brazilian Tax Revenue Share as a Percentage of GDP and of Tax Burden

Classification	Level of Government	2008		
		R\$ (thousands)	% of GDP	% of Tax Burden
GDP	-	3,004,881	100.00%	-
Total Tax Burden	-	1,035,400	34.46%	100.0%
Consumption Taxes and Contributions	-	561,890	18.70%	54.3%
II (Imports Tax)	F	17,235	0.57%	1.7%
IPI (Tax on Industrialized Products)	F	39,466	1.31%	3.8%
COFINS (Contribution for the Financing of Social Security)	F	120,801	4.02%	11.7%
PIS/PASEP (Social Integration Program)	F	31,598	1.05%	3.1%
CIDE - <i>Combustíveis</i> (Contribution for Intervention in the Economic Domain - Fuels)	F	5,934	0.20%	0.6%
CPMF (Temporary Contribution on Financial Transactions)	F	1,148	0.04%	0.1%
IOF (Tax on financial operations)	F	20,341	0.68%	2.0%
Social Security Contribution from Companies	F	80,121	2.67%	7.7%
ICMS (Tax on the Circulation of Goods and Services)	S	222,589	7.41%	21.5%
ISS (Tax on Services)	M	22,658	0.75%	2.2%
Income Taxes	-	293,894	9.78%	28.4%
Labor	-	165,198	5.50%	16.0%
IRPF (Tax on Personal Income)	F	14,986	0.50%	1.4%
IRRF (Tax on Income - Withheld at Source)	F	92,042	3.06%	8.9%
Social Security Contribution from Workers	F	58,170	1.94%	5.6%
Capital	-	128,696	4.28%	12.4%
IRPJ (Tax on Corporate Income)	F	84,726	2.82%	8.2%
CSLL (Social Contribution on the Net Profit)	F	43,970	1.46%	4.2%
Property	-	35,720	1.19%	3.4%
ITR (Tax on Rural Territorial Ownership)	F	470	0.02%	0.0%
IPVA (Tax on the Ownership of Automotive Vehicles)	S	17,217	0.57%	1.7%
ITCMD (Tax on Inheritances and Donations)	S	1,502	0.05%	0.1%
IPTU (Urban Real Estate Tax)	M	12,718	0.42%	1.2%
ITBI (Property Transfer Tax)	M	3,814	0.13%	0.4%
Others	-	143,895	4.79%	13.9%
FGTS (Employee's Severance Guarantee Fund)	F	48,714	1.62%	4.7%
Other taxes	F	58,718	1.95%	5.7%
State Governments Fees	S	5,312	0.18%	0.5%
State Governments Social Security Contributions	S	16,373	0.54%	1.6%
Other State Government Taxes	S	4,995	0.17%	0.5%
Municipality Fees	M	3,345	0.11%	0.3%
Municipality Social Security Contributions	M	4,060	0.14%	0.4%
Other Municipality Taxes	M	2,379	0.08%	0.2%
TOTAL REVENUE	-	1,035,400	34.46%	100.0%

Note: F = Federal Government; S = States; M = Municipalities
Source: *Secretaria da Receita Federal do Brasil (RFB)*
Own elaboration from Maria & Luchezi Jr. (2010)

Regarding that issue, Hinrichs (1966) conducted an extensive study on the level of tax burden and on changes in tax structures recorded during the development process for several countries. According to the results, he assigns three variables that define the amount and composition of a tax burden:

i. The openness of the economy: due to foreign trade entailing the collection of import and export taxes, broadening taxation bases in countries begins this process, and radiates beneficial effects to other sectors of the economy, increasing the extraction of resources through taxes by the State;

ii. The level of *per capita* income: as an indicator of the country's development stage, it limits the amount of resources to be obtained by the state, via taxation. Countries with low *per capita* income would present low potential for tax recovery, given the high propensity to consume, unlike countries with high *per capita* income, where the lowest propensities to consumption and investment enables an increase in government revenue;

iii. The cultural style, which is understood by Hinrichs as the taxation tradition which was developed in or imposed on a country. This style would be set by cultural and/or political factors, which would define, within certain limits, both the tax burden's - and thus the State's - width and also its composition, i.e. the mix of direct and indirect taxes.

In short, his conclusions demonstrate that, according to the countries' development degree, the determining factors of tax burden size and mix will be distinct. In underdeveloped ones, where the level of *per capita* income is low, economic openness is the key variable to explain the magnitude and structure of government revenue. As the tax base is narrow and not very diversified, since predominantly supported by foreign trade activities, receipts tend to reach lower levels, and are predominantly obtained from indirect taxes.

In developing countries, in which the industrialization process has begun and inner activities intensified, there is a strong correlation between levels of *per capita* income and government revenue, given the expanding and diversification of the tax base, while domestic indirect taxes as a first step, has become more important than those from foreign trade, followed by modern direct taxes at a later stage.

Finally, in the developed economies, with a more assorted tax base and high levels of *per capita* income, the political-cultural preference for direct or indirect taxes and the services the State may provide are the determinants of tax structure size and composition.

The Brazilian tax system evolution process has followed, through last century, this trend described by Hinrichs. From tax load levels around ten percent and a per capita GDP of 560 dollars (calculated in 2009 dollars), in the early 1900's, it reached 34.4 percent in 2008, with a *per capita* GDP of about 8,460 dollars. During this period, a tax mix based on taxes on foreign trade (56 percent of Federal collection, in 1925) was gradually becoming more diversified. Taxation on consumption and income were gaining weight, while import and export taxes were losing significance. Indeed, tax load over consumption was the most relevant Federal collection sector in 1940, already³. Currently, consumption and income taxes are equivalent to more than 80 percent of total tax burden, while tariffs represent an insignificant 1.66 percent of that amount, as seen in the Table 1 above.

That hypothesis from Hinrichs was also confirmed in a study by Musgrave & Musgrave (1980), which provides comparisons of tax structures for samples of countries with different *per capita* income levels. It is evident from the analysis, the lower the *per capita* income, the lower the tax burden of a country tends to be. And, as *per capita* income rises, tax burden also grows up, bringing with it an increased demand for public goods and services, which places the issue of economic and tax fundamentals as a determinant for tax burden dimension.

On the other hand, it is also evident that taxes on foreign trade and on the production and sales of goods and services are predominant in countries with lower *per capita* income level, while the direct tax role in generating State revenue is reduced. However, as *per capita* income rises, participation in the collection of these taxes, especially income tax, tends to increase, as well as the revenue achieved from taxes levied on payroll, targeted to finance, mostly, the benefits provided by social security systems.

In short, the setup of tax systems would have, as its conditioning factors:

- the development stage reached by the economy of a given country;
- the role historically assigned to the State; and
- the political disputes around their composition themselves.

The dominant public finance theories, previously analyzed under topic 2.1, could not justify this behavior. It can be concluded that, given its non-historical and normative character, conventional public finance theory, anchored by two abstract principles of taxation – neutrality (efficiency) and equity – is content to formulate concrete proposals for

³ See Oliveira (2009) and Maria & Luchezi Jr. (2010) for more details

what it considers the optimal tax system, though devoid of any historical context. Therefore, what should be the best arrangement for the Theory is not supported by objective reality.

The conventional theory could not explain the differences between those countries which lie on the same stage of development, but have dissimilarities as to the dimension of the State, tax burden size and its distribution between direct and indirect taxes. It can be concluded that these explanations would have to be sought mainly in the political-social area and their prevailing concepts about the role of taxes for the economy and income distribution.

The best assumption seems to be given by Hinrichs itself, who stated that **there is not one tax system that is best for all countries, or for any one country at all times.**

3.2.2. International Comparisons

It is also interesting to compare the tax mix in Brazil and those observed in other countries. Nevertheless, a remark should be made before: there is a great difficulty in comparing the tax structures from the various countries, due to different methodologies used for collecting statistics among them.

The tax burden is an indicator which expresses how much the governments compulsorily remove from the economy to cope with their various outlays. Simple as it sounds, this is a very broad concept. The very Brazilian tax load estimated by different criteria presents different values when computed by RFB (*Secretaria da Receita Federal do Brasil*, the Brazilian equivalent to the American Internal Revenue Service), IBGE (*Instituto Brasileiro de Geografia e Estatística*, the official Statistics Agency) and by the doctrine. Hence, one can conclude that, if calculation of the tax burden itself may be controversial, its composition may be assessed in many different ways.

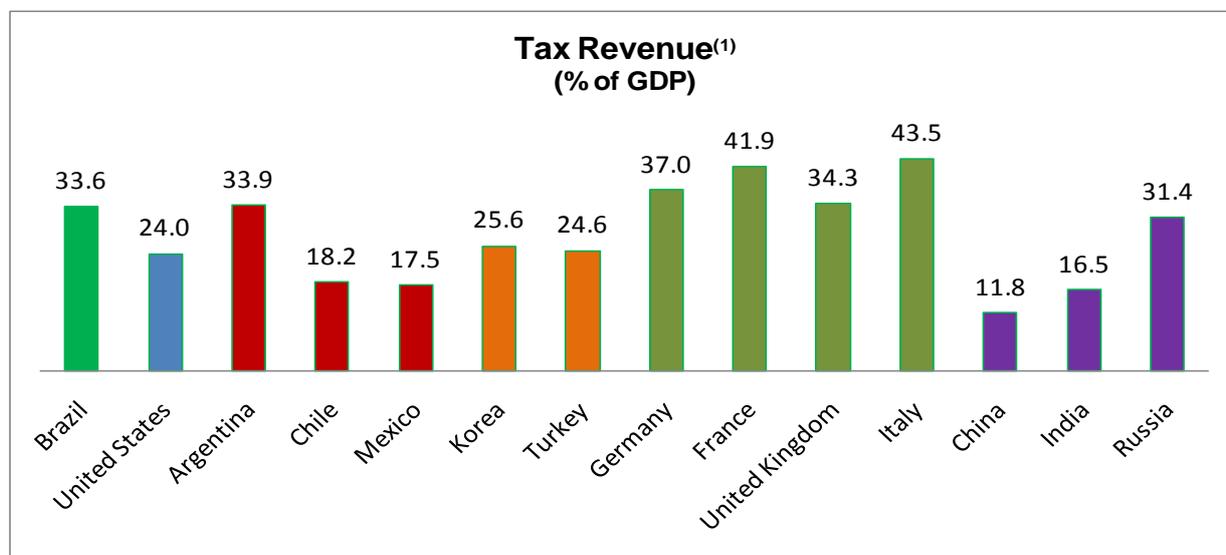
Performing a comprehensive study of the Brazilian tax mix would be beyond the scope of this work. Still, it is possible to achieve its profile, so the magnitude of its components could be compared with the tax mix shape in the various countries worldwide.

Some interesting international comparisons conducted by Afonso & Meirelles (2006) revealed that the charge in Brazil would be equivalent to the average of the richest countries and far above other emerging economies, especially the Latin ones, by the year 2004 already.

Figure 2 below confirms this observation. In it, tax revenue of Brazil, the United States and other selected countries are presented, representing four groups: Latin American and other emerging countries; developed countries; and the other so-called BRIC

countries – China, India and Russia – which, amongst Brazil, are pointed by several international institutions as relevant players in the future world economy.

Figure 2



(1) China, India and Russia, 2006; other countries, 2009.

Source: RFB, OECD Revenue Statistics and IMF-World Economic Outlook Database/Finance Statistics Yearbook 2008.

The first point that stands out is the United States' tax burden, which is almost 10 percentage points lower than the Brazilian one. And this one, though close to the Argentine revenue, is really quite greater than the tax-to-GDP ratio in other selected emerging economies, especially the Latin ones, and nearly as great as in the best-developed European nations.

As for tax revenue from the other BRIC countries, the Chinese and the Indians are in much lower level. However, it is worth mentioning that, by the data from the International Monetary Fund (IMF – Financial Statistics Yearbook 2008), China (35.2 percent), India (14.8 percent) and Russia (20.4 percent) have important participations arising from grants and other revenues not classified as taxes or social contributions in their total revenue.

Furthermore, Afonso & Meirelles (2006) have also sought to estimate and analyze the Brazilian tax mix according to the international standards adopted by the IMF⁴. At its discretion, tax revenue is divided into two categories: taxes (in its most literal sense) and social contributions, limited to those levied on the payroll.

Applying this methodology to the total revenue of 2008, from Table 1 ahead, the following approximate values were reached for each group of taxes, listed in Table 2:

⁴ IMF – Government Finance Statistics Manual 2001 (GFSM 2001)

Table 2

Tax Structure and Revenue in Brazil, 2008

Classification	% of GDP	% of Total Tax Burden	Aggregated
Taxes	25.6%	74.3%	-
Taxes on income, profits, and capital gains	4.8%	13.9%	22.8%
Taxes on payroll and workforce	3.1%	8.9%	
Taxes on property	1.2%	3.4%	3.4%
Taxes on goods and services	15.5%	44.9%	46.5%
Taxes on international trade and transactions	0.6%	1.7%	
Other taxes	0.5%	1.5%	-
Social contributions⁽¹⁾	8.9%	25.7%	25.7%
Social security contributions	5.3%	15.3%	
Other social contributions	3.6%	10.4%	
Total	34.5%	100.0%	-

(1) Social security contributions: from companies, workers, State Governments and Municipalities; other social contributions: FGTS and other taxes (social contributions from public departments and "S" System, among them)
Source: Afonso & Meirelles (2006) and Maria & Luchezi Jr. (2010)

Despite being a more conservative analysis, where a parcel of social contributions was dissociated from taxes on consumption group, its weight remains the most relevant in the tax system in Brazil, with more than 46 percent of total revenue, considering taxes on goods and services added to those levied on foreign trade.

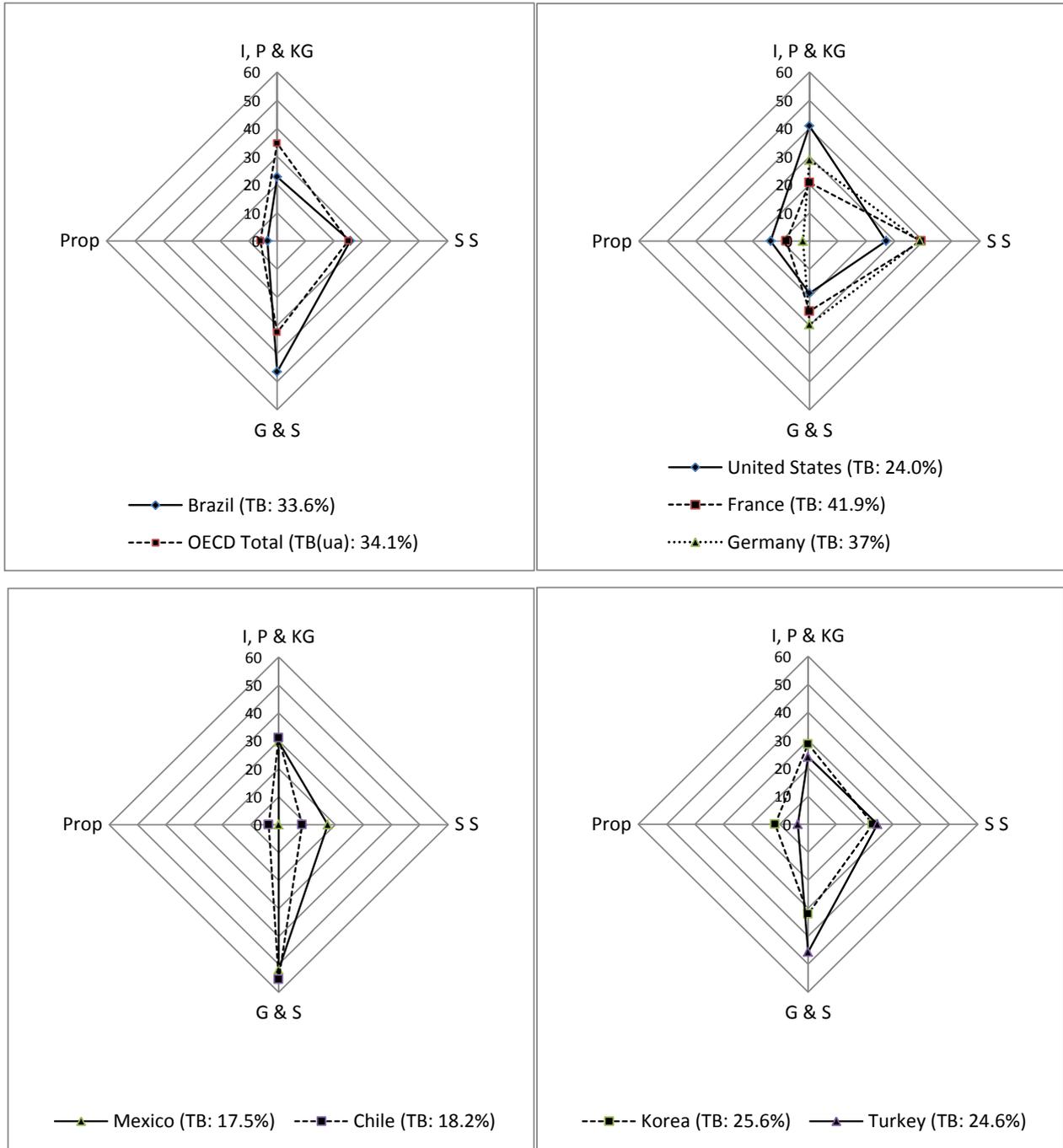
Based on this result, it is now possible to set an interesting comparison between the different tax mix designs in Brazil, the USA and other selected countries, as presented in Figure 3. For Brazil, the data from Table 2 was used, aggregated in four major groups, as listed in the fourth column. Data from the USA and other OECD member countries was obtained from its database⁵.

The chart shapes demonstrate the overburden on consumption taxes in Brazil compared to developed countries, or even to the average of OECD countries. It was also observed that this profile is like those other of developing countries, e.g. Chile, Mexico and Turkey. Nevertheless, the tax-to-GDP ratio of these countries (18.2 percent, 17.5 percent, and 24.6 percent of the GDP, respectively) is much lower than the Brazilian one, currently about 34 percent.

⁵ Taxation: Key tables from OECD

Figure 3

Tax Structures – Selected Countries/OECD, 2009



Notes: I, P & KG = taxes on income, profit and capital gains; Prop = taxes on property; SS = social security contributions; G & S = taxes on goods and services; TB = tax burden; ua = unweighted average

Source: RFB, OECD Revenue Statistics, Afonso & Meirelles (2006) and Maria & Luchezi Jr. (2010)

Polygons also reveal an undeniable predominance of direct taxes in relation to the indirect ones for developed countries. Indeed, the greatest amount of tax revenues in most developed countries come from the recovery of direct taxes, excluding social security contributions, while indirect taxes have a minor contribution to the collection. In the OECD average, total direct taxes (income and assets) accounted for over 40 percent of total

revenues in 2009, while taxes on goods and services represented about 33 percent of the total amount.

Regarding this, the tax mix in the United States should be highlighted: The participation of consumption taxes (18.5 percent) is much lower than the OECD countries' average, which is offset by direct taxes accounting for 54.5 percent of total revenue.

Finally, it is also worth emphasizing the very low taxation on property observed in Brazil, which reveals itself a typical feature of developing countries, such as Mexico, Chile and Turkey, for instance. It is mainly levied on property itself (*IPTU*) and automobiles (*IPVA*). And this tax, in spite of its Constitutional prediction, is not charged on planes, helicopters, yachts, boats and other vehicles related to high purchasing power.

Moreover, the taxation on inheritances and donations, reduced in developed countries (0.21 percent of GDP on average), is insignificant in Brazil (*ITCMD* revenue remains stable at around 0.05 percent of GDP). The tax on great fortunes, included in the 1988 Constitution, is pending approval of a supplementary law and stayed out of all tax reform proposals in Congress.

3.3. Effects of Consumption Taxes on Income Concentration

As shown above, the tax structure in Brazil is highly asymmetrical. Tax burden distribution among families does not respect the principle of equity, which recommends that those with higher levels of income be proportionally taxed more than lower-income taxpayers. This is due to excessive taxation on consumption and its regressive aspect, which is particularly negative, considering the distribution of income in Brazil, one of the worst in the world. So, this is a particularly sensitive aspect in defining the structure of the Brazilian tax system.

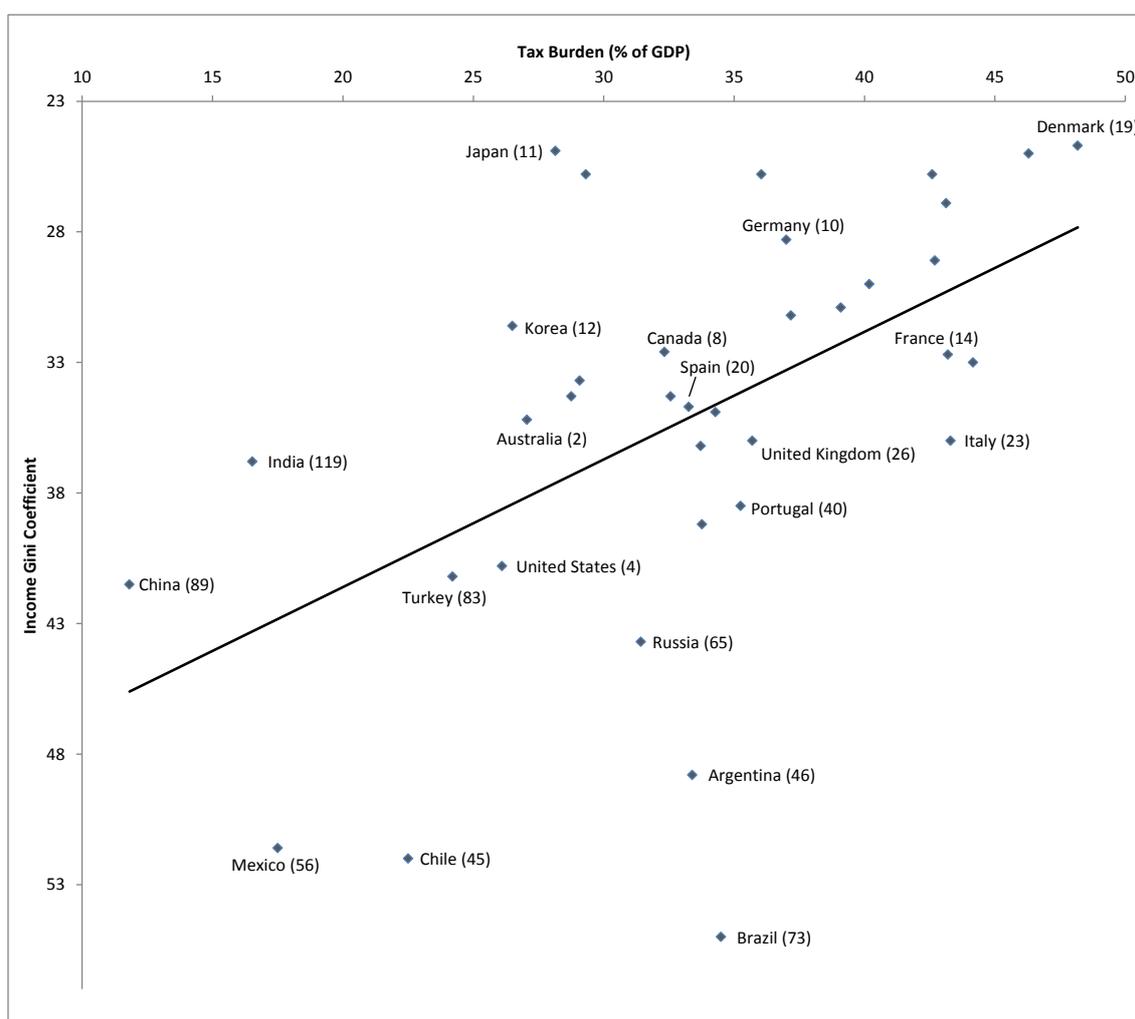
Brazil is among the ten richest economies in the world. However, it has one of the greatest concentrations of income on the planet. Despite slow improvement in the last years, its wealth concentration (assessed by the income Gini coefficient) is still matched only by some countries in Sub-Saharan Africa, one of the most impoverished regions of the world.

Income Gini coefficient measures the deviation of the distribution of income (or consumption) among individuals or households within a country from a perfectly equal distribution. A value of zero represents absolute equality; a value of 100 seems absolute inequality.

Figure 4 below attempts to establish a correlation between this index and the tax revenue of several developing countries, as well as selected OECD members. Data in parentheses represents the Human Development Index rank, from the Human Development Report 2010 - United Nations Development Program. Besides, points not identified in the chart refer to other OECD member countries.

Figure 4

Income Gini Coefficient *versus* Tax Burden – Selected Countries



Source: Human Development Report 2010, RFB, OECD Revenue Statistics and IMF-World Economic Outlook Database/Finance Statistics Yearbook 2008
Own elaboration from Maria & Luchezi Jr. (2010)

The chart depicts how negative the situation of Brazilian income distribution is. Tax revenue in developed countries, equally high, is offset by excellent levels of fairness. Unfortunately, this is not the Brazilian scenario. In fact, its tax burden, overloaded by taxes over consumption including basic staple foodstuffs, contributes to the worsening of that unfairness condition.

This picture also reveals how sensitive progressiveness feature should be, regarding the definition of the Brazilian tax system structure. Indeed, it is far less progressive than that determined by the Federal Constitution or suggested by tax legislation.

Concerning this, a report by the Observatory of Equity from the Economic and Social Development Council, a body within the very Presidency of Republic, stated that there is low social return in Brazil, despite its tax burden being similar to that observed in high-income countries (*Indicadores de Equidade do Sistema Tributário Nacional*, 2009). The document estimated that only 9.5 percent of the 33.8 percent of GDP collected in 2005 returned to society through public investments in education (4.4 percent), health (3.5 percent), public security (1.2 percent) and housing and sewerage (0.4 percent).

Furthermore, in 2005, the three government levels spent 7.25 percent of GDP on debt interest payments, according to the National Accounts System 2004/2005 from IBGE. This amount corresponds to more than one third of net revenue, being very high if compared to international standards: on average, OECD member and the Euro Zone countries destined respectively 1.7 percent and 2.5 percent of GDP to interest payments in that year.

Tax exemptions are also another factor highlighted by the report that contributes to further reduce those resources. *RFB* itself estimates that such spending added up 1.91 percent of GDP in 2005, rising to 2.77 percent in 2008.

It should be highlighted that only these two items together represent about a quarter of total tax burden transferred from the society to corporations and financial institutions, mostly.

The report concludes that although the overall revenue has reached a threshold about 34 percent of the output, social returns in relation to tax burden is considered low, because the available resources are insufficient for the financing of social policies in the country.

A detailed study by Siqueira *et al* (2010) evaluated the effective tax rates levied on goods and services consumed by households in Brazil, in order to estimate the tax burden distribution, as well as the regressiveness (or progressiveness) degree for each tax and for the indirect tax system as a whole.

The authors set out from the assumption that, in an indirect tax system as complex and distorted as the Brazilian one, statutory and actual tax rates tend to substantially differ.

The estimates were computed using a multi-sectorial tax incidence model based on 2005's Brazilian input-output matrix (*MIP*) from IBGE. The method uses the revenue effectively collected by government, discretized by activity sector, and incorporates the multi-sectorial effects of taxes, cumulateness and tax evasion. Moreover, the resulting effective tax rates represent Brazilian averages. Another advantage described by the authors for adopting the matrix is that it reports the total indirect taxes deducting subsidies, which avoids an overestimation of the effective tax burden.

Likewise, tax burden distribution analysis was done by considering the total consumption expenditure as a household welfare (or standard of living) indicator, using the microdata from household expenditure of the Household Budget Survey (*Pesquisa de Orçamentos Familiares - POF*) 2002/2003, from IBGE.

The results indicate that over one third of indirect taxes in Brazil still affects inputs, and that the effective tax rates on household consumption vary greatly amongst products. While the average effective tax rate is 18 percent (calculated on the *MIP*), the products of some activities have effective tax rates above 40 percent, such as electricity and communication (which rates are on par with the rates for tobacco).

Analyzing the average tax rates on households that represent the poorest decile of the population, it was observed a very heavy indirect tax burden on basic-need items like basic staple foodstuffs (with a tax rate of 13.4 percent), other foods (17.8 percent), clothing (13.4 percent), domestic fuel (25.9 percent), transport (18.6 percent), health (23.7 percent), education (19.6 percent) and personal hygiene (22.6 percent). It should be pointed out that these values represent **a very heavy taxation being imposed on a population that, as seen before, for the Brazilian reality, lives in misery.**

When the authors applied to household consumption on the *POF* (via a meticulous compatibility work with the *MIP*), these assessed rates generate a nearly proportional tax load distribution. Nevertheless, this profile is a combination of highly regressive and progressive incidences, which distributional effects ultimately cancel each other in general. Among the most regressive taxes are those on the basic staple foodstuffs, domestic fuel, electricity, clothing and tobacco. The implications are more progressive on automotive fuel, transport, education, recreation and alcoholic beverages.

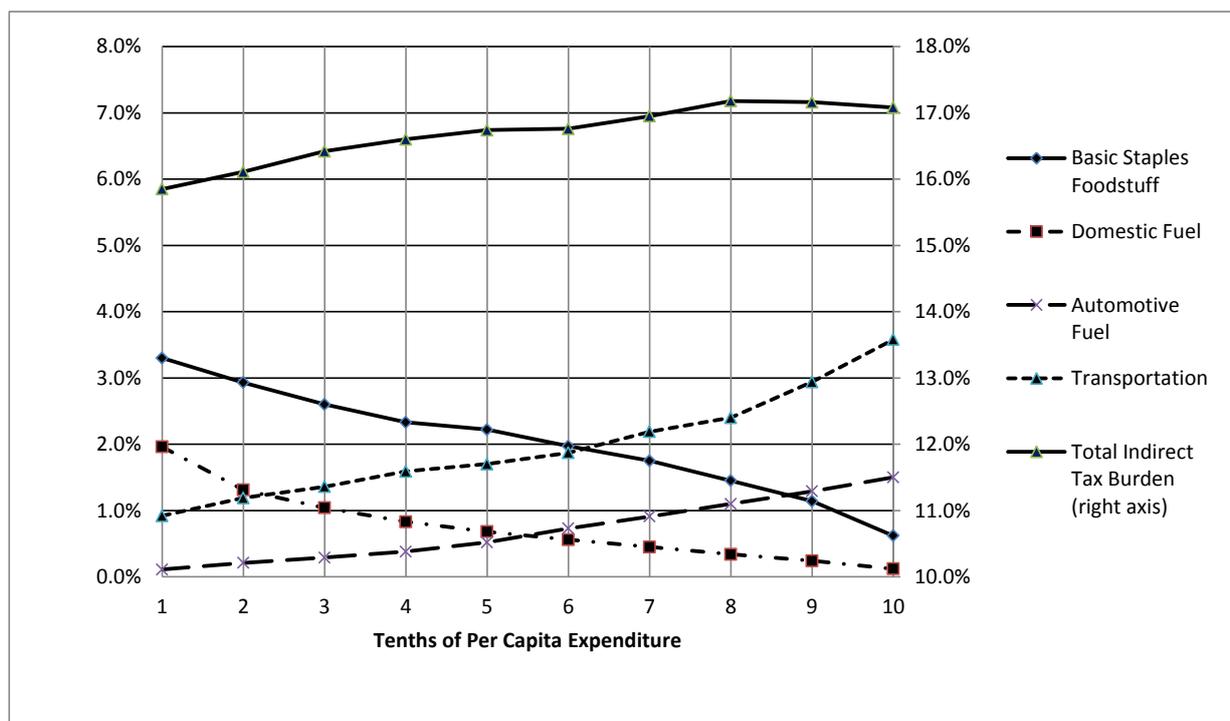
This is related to the share of each product in the average household budget. The importance of basic staple foodstuffs at the lower tenths' budget is enormous: the poorest 10 percent of population allocate 25 percent of their budgets, on average, for the

consumption of the basic staple foodstuffs. Meanwhile, this staples basket represents only 5 percent of the total expenditure of the richest tenth. For other foods, participation in the budget does not vary significantly among tenths of income. Domestic fuel is another item which budget share falls dramatically with the increase of total expenditure. It represents, on average, 7.6 percent of total expenditure of the poorest tenth, and only 0.5 percent of total expenditure of the richest tenth. Still, transportation and automotive fuel have a much greater weight in the budget of the wealthiest.

Consequently, the two main components of the tax burden on the poor are just taxes on basic staple foodstuffs and on domestic fuel, which are also the most regressive and have a major stake in total indirect tax load (with 12.2 percent and 4.5 percent, respectively). However, the strong progressiveness of taxes on automotive fuel and transportation, which weigh heavily on the wealthy, bears an offsetting effect. Thus, the system becomes approximately proportional, as illustrated by Figure 5.

Figure 5

Average Tax Burden by Tenth of *Per Capita* Expenditure



Source: Siqueira *et al* (2010).

The pattern observed in the figure above was then quantified using three measures of progressiveness⁶. Results indicate that the most regressive tax incidences are, by far, on domestic fuel, basic staple foodstuffs and tobacco. The regressiveness of taxation on

⁶ The poorest tenth's tax burden to the richest tenth's one ratio (10-/10+), the ratio between the poorest tenth and the global average tax load (10-/Average) and the Kakwani index.

electricity and clothing also stands out. The share on total indirect tax burden is 28 percent, for these products, except tobacco, taken together. And for the poorest 20 percent of the population, this participation soars to around 45 percent of total indirect tax burden!

The more progressive taxes, in turn, levy on automotive fuel, transportation, education, recreation and alcoholic beverages, which together represent 24 percent of the average indirect tax burden on households. These progressive and regressive effects of the various levies from the Brazilian indirect tax system end up canceling, so the overall result is a nearly proportional system, as plotted (charted) in Figure 5.

Another observation from the study is that, individually analyzing the taxes, *IPI* (Tax on Industrialized Products) is the only one with some progressiveness, although its share in the total indirect burden is too small to revert (throw back) the other indirect taxes' regressiveness.

The authors warn in their conclusions that such results could lead to an erroneous deduction: a recommendation to make the Brazilian indirect tax system more progressive could be reducing the more regressive tax rates and increasing the more progressive ones. Therefore, in the context described by the work, the basic staple foodstuffs should be the main target of exemptions, since this goods category is by far the most regressive and most important for the poorest households. In turn, the main focus to increase tax rates would be automotive fuel and transportation. However, such a policy would be of doubtful effectiveness (not to mention the efficiency), because, by the authors' calculations, 40 percent of the final tax burden on food comes from the taxation on productive inputs, among which stand out transportation and automotive fuel themselves.

Based on the evidence that this complex and chaotic system has a roughly proportional impact on households, a better recommendation would be to replace all its indirect taxes for a single VAT, as simple and uniform as possible, by eliminating exemptions and tax basis reductions, and including services in general at its levy. The authors assume that this reform would generate substantial gains in economic efficiency, competitiveness and transparency. Besides, greater progressiveness could be expected. This is on account of the fact that services have generally a larger share, on the wealthy households' expenses, though they are currently under-taxed in relation to other kinds of products.

As a last remark, authors state that the impact of a tax system as a whole (including direct taxes), or even including benefits received by families, is the most important feature to be evaluated.

As can be inferred from the comparisons between tax mix from the several countries shown in topic 3.2, these effective tax rates estimated in the study are among the greatest in the world, comparable to the highest levels observed in the OECD member countries.

Another even more harmful aspect is the heavy taxation on the consumption of basic staple foodstuffs, which demand tends to be inelastic, enabling the transfer of most of the tax burden to the final consumer, besides the higher marginal propensity to consume among lower income households, which thus suffer a greater lien.

On the other hand, the results of another search, conducted by Payeras (2008), suggest that the **inequality aversion coefficient is increasing in Brazil**, in contrast to data obtained in previous studies. This conclusion could be interpreted as the desire of society for a fairer tax system.

The primary purpose of this paper was to develop a model capable of determining how tax rate changes affect different income classes and what their impacts on government revenues are. The model allowed observing that, when pursuing a more progressive tax system, one needs to combine modifications in direct and indirect taxes.

Another important finding was that **the higher income classes pay fewer taxes, both direct as indirect, than they should, according to the equal sacrifice principle**, that is, the surrender of equal measures of utility by taxpayers.

The author also comments that differences in consumer choices are recorded whether taxes are indicated on prices or not. Research found that the USA's consumers know that there are taxes on products, but they do not take those taxes into account if they are not posted on supermarket shelves. This observation confirms that taxes must be evident in prices for households to consider them in their decisions. This is foreseen in the very Brazilian Federal Constitution (*"The law shall determine measures for consumers to be informed about taxes levied on goods and services."*). However, even this statement is still subject to regulation.

As a consequence, the proper conditions for the pursuit of citizenship on taxation do not arise. As indirect taxes are less visible than those levying on income and property, the belief that low-income people do not pay taxes is widespread in Brazilian society. As a result, public policies aimed at reducing inequalities and poverty rates are seen as

blessings, both by the poorest population as by the wealthiest portion of society. And, therefore, the understanding about the democratic participation process is undermined, hindering the social controls on the State also.

3.4. Effects of Consumption Taxes on Economic Growth

This section focuses on the influence that the design of the different taxes - consumption, property, personal and corporate income taxes - can have on growth rates in Brazil, seeking to present which alternatives would be possible to adopt for a more equitable structure, based on the possible options.

However, it is worth mentioning that, in the bibliography review and on research in Internet search engines, there were no conclusive results on the effects of tax structure on economic growth in Brazil.

A work conducted in the context of the OECD member countries by Johansson, Å. et al. (2008) investigated the design of tax structures to promote economic growth. The conclusions, based on the reviewed evidence and the empirical work, suggest a “tax and growth ranking” with recurrent taxes on immovable property being the least distortive tax instrument in terms of reducing long-run GDP per capita, followed by consumption taxes (and other property taxes), personal income taxes and corporate income taxes. A revenue-neutral growth-oriented tax reform would, therefore, be to shift part of the revenue base from income taxes to less distortive taxes such as recurrent taxes on immovable property or consumption.

About this theme, it is important to take into account that, having been produced in the OECD country context, this paper deals with another reality, in which tax structures are concentrated on income taxes, while taxation on goods and services occurs, generally, as from a wide VAT.

Moreover, one should not forget the lessons of Myrdal and Hinrichs, who state that theory of public finance often posits an ideal set of values pervaded by metaphysics, this actually being a rationalization of political attitudes, for there is no tax system, structure, or particular policy appropriate for all countries at all times.

Still, the paper brings an option to reducing the burden on consumption offset by an increase in taxation on property, which in Brazil is undertaxed in various taxable events, as already mentioned above.

Myles (2000) reviews the theoretical and empirical evidence to assess whether a consensus arises as to how taxation affects the rate of economic growth. In his

conclusions, he states: “A fair summary would say that the theoretical models introduce a range of issues that must be considered, but that they do not provide any convincing or definitive answers.” Likewise, “the conclusions of the empirical evidence are not quite as diverse as those of the theory.”

From this understanding, he seeks to list which principles should guide tax design: “The empirical evidence can be interpreted as supporting the argument that the level of taxes is not that significant (with the obvious and important caveat that **this claim does not extend to levels outside the range observed in the data**) **but the structure of taxation is important. When growth is endogenous, taxation can influence the factors that determine the growth rate.**” (not highlighted in the original).

Bird (2010), in turn, condenses the tax system effects issue in economic growth as follows: “**Although it is not clear that a better tax system will increase economic growth, it does seem clear that a bad tax system may stifle it.** For example, a summary of a report exploring Latin America’s less-than-outstanding growth performance in recent decades concludes that ‘Latin American tax regimes encourage the survival of unproductive firms, obstruct the growth of small and large enterprises alike, and foster a deeply unequal and segmented business universe’ (IDB 2010, p. 5 “Taxes and Productivity.” IDEA: Ideas for Development in the Americas 21 (January–April): 5.). (...)

Perhaps the main practical policy implication of optimal tax theory is that production efficiency matters: in particular, **it is bad to tax intermediate goods used in production because it distorts resource allocation—one reason most economists generally have favored value added taxation. It is unfortunate that this important point has proved hard to market to citizens and to politicians focused much more on the immediate distributional impact of policy changes than on their long-run implications for efficiency, investment, and growth.**” (not highlighted in the original).

The report by the Economic and Social Development Council, mentioned before on topic 3.3, conducts a diagnostic of the issues in national tax system concerning the causes for disincentives in productive activities. Among other shortcomings, that document stresses the many tributes, rates and regulations existing in the country, which makes the system extremely complex and little transparent, resulting in high costs for businesses and heavy bureaucracy. The report informs that tax obligations cost, on average, 0.33 percent of turnover in publicly-held companies and 1.7 percent in companies with annual turnover up to 100 million *reais* (around US\$ 60 million). Resources required for taxpayers to comply

with their financial obligations with tax authorities require an estimated cost of 7.2 billion *reais* (nearly US\$ 4.5 billion) per year and bureaucracy consumes 7 percent of businesses' administrative time, compared to 4.1 percent for companies in Latin America. In Brazil, a standard company spends 2,600 hours per year to collect their taxes on sales, wages and profits, while, according to the World Bank, such a load does not reach 500 hours in most economies against which Brazil competes in the global market.

The presence of cascading incidences is particularly emphasized because, besides preventing the fully relief of exports and investments, these cumulative taxes distort relative prices and stimulate vertical integration of the companies. According to *IBGE*, in 2005, 17.4 percent from total revenue was still generated by cumulative taxes, for instance, the *ISS* and *CIDE*, and part of the *PIS* and *Cofins*.

The report by the Council, also lists the complexity of the rules for recognizing and compensating tax credits, a shortcoming also linked to the structure of the indirect tax system in Brazil. The conclusion is that the mechanisms for relief in force today fail in their purpose. Some taxes are not discharged because of their total or partial cumulative effect on the production chain. Other taxes have complex and lengthy relief mechanisms, creating additional costs to companies.

Data from the Ministry of Finance indicate that there is a stock of non-compensated credits related to *ICMS* and *PIS/Cofins*, in the order of 1.3 percent of GDP. This amount is particularly substantial since it is concentrated for certain taxpayers: those leading exporters and capital goods buyers.

The time periods for credit recovery of taxes paid on capital goods are considered too long, creating an opportunity cost varying from 2.6 percent to 8.2 percent of the final price of the equipment, yet according to estimates from the very Ministry of Finance. As a company takes longer to perform the credit obtained in a transaction, fewer resources are left available for commercial activities.

A phenomenon occurred during the global crisis may provide a parameter of repressed demand in the Brazilian domestic market, due to the consumption tax overburden.

During the year of 2009, one of the measures by the Federal Government to counter the effects of the financial crisis was the exemption of some productive sectors via the temporary reduction of the *IPI*, the Tax on Industrialized Products. The results were

stunning: In the peak of the crisis, sales of automobiles and motorcycles, household white line appliances and construction materials registered vigorous highs.

Analyzing the results, *IBGE* acknowledged in a report (*Pesquisa Mensal de Comércio – Dezembro de 2009*) that government incentives by reducing the IPI for new cars over the year have become the main factor to a growth of 11.1 percent in the activity. And also for the other mentioned sectors, reducing the tax burden was considered a major factor in sustaining the positive result.

Another study by Gfk Retail and Technology confirmed that despite the global crisis, sales of household appliances have increased. Refrigerators, which represent the most important products, had a negative sales forecast before the reduction of the *IPI*. However, because of the tax rate reduction, product sales in 2009's first semester were 7 percent higher than the same period of the year before, with an increase in the participation of more sophisticated products. That is, tax reduction fostered growth records and leveraged the participation of more expensive technologies. Likewise, microwave ovens, washing machines and stoves showed significant sales growth in the first half of the year: 38 percent, 26 percent and 22 percent, respectively.

There is a consensual understanding that this stupendous result in the midst of a recession is due, in largely, to an only partial reduction in the tax burden of those goods. Hence, one can have an inference of how restrained is the Brazilian domestic market.

Tax overburden on the circulation of goods and services is harmful not only in terms of fairness, but also penalizes the national productive sector.

4. Conclusions

In Brazil, there is a significant imbalance between the forms of taxation, with an excessive load acting on consumption of goods and services in a cumulative form and heavily levied on basic-need items in the consumer basket. That factor, in view of the high income concentration profile, worsens wealth distribution in the country even more.

Moreover, that overburden on the production sector, added to the complexity and inefficiency of the tax system, are elements which effectively discourage productive activities and employment.

Direct taxes are considered more progressive and, therefore, more appropriate for redistributive income policies, since their rates may be established according to these

principles. Indirect taxes, in turn, by having consumption as their bases - and not income - are considered regressive.

In the presence of strong income disparities, as is the case of Brazil, an appropriate indirect taxation design could improve welfare levels and reduce inequalities by the imposition of progressive rates, combined with an exemption level. Unfortunately, the Brazilian indirect tax system arrangement is currently completely chaotic, comprising cumulative, selective and four different types of value-added taxes (*IPI*, *ICMS*, *Cofins* and *PIS*), each of which with its whole specific roll of rates, regulations, incidence rules and exemptions. The *ICMS*, burdened by the states, and by far the consumption tax which generates the highest revenue, represents one of the few examples in the world where VAT collection is done through a subnational level of government.

Tax mix is overly focused on consumption in Brazil due to the option by the Federal Government to raise the tax burden, over the last fifteen years or so, by increasing social security contribution rates levied upon companies' turnover, motivated by the fact that such contributions, unlike other taxes, need not, under the Federal Constitution, be distributed to states and municipalities. Hence, contributions not complied with the non-cumulativeness principle had come rapid rises in their tax burden composition quota, fostering distortions in the economy.

The Brazilian tax system evolution process has followed, through last century, a trend described by Hinrichs (1966) and later confirmed by Musgrave & Musgrave (1980). These studies concluded that, according to countries' development degree, the determining factors of tax burden size and mix will be discrete. Until the 1940's, Brazil's receipts were predominantly obtained from indirect taxes over foreign trade, a pattern of underdeveloped countries.

The current national configuration is that of developing countries, with a strong correlation between levels of *per capita* income and government revenue, while domestic indirect taxes have become more important than those from foreign trade.

In the developed economies, with a more assorted tax base and high levels of *per capita* income, the political-cultural preference for direct or indirect taxes and the services the State may provide are the determining factors of tax structure size and composition.

Given its non-historical and normative character, the conventional public finance theory could not explain the differences between those countries which lie on the same stage of development, but have dissimilarities as to the dimension of the State, tax burden

size and its distribution between direct and indirect taxes. These explanations would have to be sought mainly in the political-social area. Or, as stated by Hinrichs (1966) itself, there is not one tax system that is best for all countries, or for any one country at all times.

A comparison amongst the tax burden in Brazil and those observed in other countries, showed that the former is greater than in other selected emerging economies, especially the Latin ones, as well that of the USA, and nearly as great as in the best-developed European nations. As for tax revenue from the other BRIC countries, the Chinese and the Indians are at a much lower level, also.

Setting an evaluation between the different tax mix designs in the USA and other selected countries, the overburden on consumption taxes in Brazil was demonstrated. It was also observed that this profile is like that of other developing countries, but they feature a much lower tax-to-GDP ratio than the Brazilian pattern, in general.

This aspect is especially harmful, due to the fact that Brazil is among the ten richest economies in the world, but it has one of the greatest concentrations of income. Furthermore, there is low social return in Brazil, despite its tax burden being similar to that observed in high-income countries. These observations reveal how sensitive progressiveness feature should be, regarding the definition of the Brazilian tax system structure.

Over one third of indirect taxes in Brazil still affect inputs, and the effective tax rates on household consumption vary greatly amongst products. While the average effective tax rate is 18 percent, it can reach 40 percent for some products. The poorest decile of the population faces a very heavy indirect tax burden on basic-need items.

One may ascertain that the Brazilian indirect tax system has a nearly proportional tax load distribution. Nevertheless, this profile is a combination of highly regressive and progressive incidences, the distributional effects of which ultimately cancel each other in general. The most regressive tax incidences are, by far, on products which represent an important share on the poorest households' total indirect tax burden.

On the other hand, evidences suggest that the inequality aversion coefficient is increasing in Brazil, which could be interpreted as the desire of society for a fairer tax system.

Along the search, no conclusive results were found on the effects of tax structure on economic growth in Brazil. However, there is a consensus that a bad tax structure can influence the factors that determine the growth rate, stifling it. Moreover, it is bad to tax

intermediate goods used in production because this distorts resource allocation. And the many tributes, rates and regulations existing in Brazil make the system extremely complex and not very transparent, resulting in high costs for businesses and heavy bureaucracy.

Clearly, a comprehensive reform in the Brazilian tax system has to be promoted. In its current concept, this structure is harmful in terms of equity and damaging for national industry. It stimulates fiscal wars among the states and is troublesome for taxpayers and tax authorities, facilitating tax evasion, and also obstructing economic growth.

Considering the issues raised, a reasonable proposal to redefine the model is to replace all indirect taxes, except regulatory and selective ones, for a single broad-based VAT. Exemptions and tax basis reductions should be eliminated, and services in general – under-taxed in Brazil – should be included at the VAT levy.

These amendments could produce extensive gains in economic efficiency, competitiveness and transparency. If one also adopts a relief on basic-need items and a progressive rate configuration, based on the essentiality of goods and services, a great increment in progressiveness, and, consequently, fairness, could be expected.

Likewise, any revenue losses could be offset by a reduction in debt interest payments and tax exemption participations in the total expenditure, as well as by an increase in taxation on property, thus promoting a tax burden shift from indirect to direct taxes.

All sectors of society would gain from a reduction in the tax burden on indirect taxes, which strongly interfere in economic efficiency, and its replacement by taxes levied on the stock of wealth. The low and middle income households would obtain an improvement in their purchasing power. And the wealthiest portion of society would profit from the economic and social development, which generates new opportunities for investments, job expansion and, ultimately, economic and financial gains, thus offsetting the higher charge on fortunes. Moreover, economic growth widens public revenue, providing more resources for investments in social policies and infrastructure and creating greater attractiveness for companies' ventures.

Pochmann (2004) asserts that the developed countries could dramatically reduce their poverty rates after the post-World War II scenario through redistributing income policy, by levying progressive taxation on the wealthy and transferring resources to the poorest via public funds.

Brazil ought to follow this example. In order to realize its growth potential, as expected by the global market, as well as by its own people, the country has to make its taxation structure more rational. On the other hand, this expected growth, along with the increase in *per capita* income, is not enough to guarantee the attainment of better income distribution. In order to achieve this purpose, greater tax fairness is essential as one of its drivers. And a new tax system design shall be the instrument toward this goal.

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