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AN INCENTIVE PROGRAM FOR TAX EDUCATION IN THE BRAZILIAN STATES

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Abstract

In spite of the great efforts that the Brazilian tax authorities have undertaken, Brazil has a high level of tax evasion. Among several causes for tax evasion, one has not had an adequate treatment – the public's lack of information about taxes. On the whole, the general public is fiscally ignorant; they can not see the relationship between tax collection and public expenditures. This paper discuss tax evasion and presents some proposals for a tax education program that could foster a better relationship between government and the citizen, through increasing the citizens' understanding of taxes' social function and that public expenditures will be invested on public welfare. Increasing the citizens' understanding of taxes should result in increased tax revenues.

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1. Introduction

Paying taxes is certainly one of the most commonly hated activities worldwide; nobody likes to pay. Perhaps for that reason people avoid speaking about them. They do not understand how taxes are collected nor do they understand how taxes return to the community in terms of benefits. The following scenario illustrates the classical behavior of Brazilian consumers when dealing with taxes:

A couple goes to a restaurant at night. At the end of the meal, they pay the value of the bill including the obligatory tip of 10%. They don't ask for nor do they receive a receipt. Before they leave they remember to ask the waiter to wrap up the rest of the food, because they intend to give it to a hungry boy who is outside in the streets. The couple recognizes the restaurant’s good service and they recognize that there are people suffering in the streets; therefore they think they have contributed satisfactorily to the welfare of society. However, without noticing they are contributing to the continuity of the impoverishment of the country through income concentration. As the restaurant owner orders his employees not to issue receipts, he improperly appropriates a portion of the revenue that should be transferred to the public coffers as tax, becoming the only beneficiary of that financial resource that could compose the revenue that the government would spend in the community.

There are naturally several different arguments to explain the couple's behavior in the narrated scene, such as:

- It is not the couple's fault. The bad entrepreneur insists on not emitting receipts because he knows that the chances of being reported to the tax authorities are minimal. Nevertheless, if this is the case, the chances of being arrested simply don't exist. That which is lacking is law enforcement in the Brazilian justice system;
- It is not the couple's fault; the taxpayers already pay too much in taxes. The government is guilty of spending the collected taxes poorly. After all, the tax collection is equal to 31% of the Brazilian GDP, too high for the level of offered services.

The mentioned arguments are both valid and controversial, though as a focus for this work we will limit ourselves to discussing what leads the population to neglect paying taxes and to proposing a tax education program which tries to change gradually that behavior. This paper will not propose another program of distribution of shirts and bonnets, nor a couple of cars to be raffled for people who ask for receipts. Such techniques generate a tax revenue increment only during the short term, when the prizes are distributed. However, in the long term there is little improvement because it is not an education program; at the end of the program the concepts will not have been assimilated and people will return to previous behavior.

Three proposals are presented here for an effective tax education program. The main proposal is designed to change the citizens' passive behavior related to taxes through incentive programs that have worked very well with enterprises, schools and institutions and through programs that increase citizens' involvement in public funds administration. The first complementary proposal intend to implement a long-term incentive program for tax education in schools and the last complementary proposal consist of changing the receipt format issued by taxpayers in order to make clearer the tax contained in each purchase.

Before detailing the proposals, it is necessary to understand the Brazilian tax system and the most important state tax – ICMS – Circulation of Goods and Tax Services.

2 - The Brazilian Tax System – Characteristics and Diagnosis

For a better understanding of some terms used in this paper it is appropriate to define the following words:

- Taxpayers are industries, wholesalers, retailers, transport and communication operators. They are responsible for the recording and payment of the tax due to their commercial operations;
- Consumers are the final consumers, who assume the tax burden, once the taxpayers embed the value of the tax in their prices.

The Brazilian tax system is structured in three levels: federal, state and municipal. Extracted data from the Annual Report edited by the Ministry of Finance of Brazil (1998), makes it possible to identify the following distribution of tax collection, in accordance with the three levels: federal – 48.2 %, state – 27.5 %, municipal – 4.3 % and social security - 20.0 %.

Table 1 – Tax Collection by Entity - Federal, State and Municipal

Entity	Tax	Value (R\$ Billion)	Tax Share over Total
Federal	Import Tax	6.5	
	Export Tax	-	
	IPI - Total	16.4	
	Income Tax - Total	46.1	
	Taxes on Financial Operations	2.6	

	Tax on Financial Operations	3.6	
	Rural Territorial Tax	0.2	
	CPMF	5.2	
	Social Contribution on Revenues (cofins+pis+pasep+csll+fundaf)	40.7	
Total of Federal Tax Revenues		118.5	48.2 %
State	ICMS	61.3	
	IPVA	4.5	
	ITBI	0.3	
	Others	1.4	
Total of States Tax Revenues		67.5	27.5 %
Municipal	ISS	6.8	
	IPTU	3.4	
	ITIV	0.4	
Total of Municipal Tax Revenues		10.6	4.3 %
Social Security		49.2	20.0 %
Total National Tax Revenues		245.8	100 %

Source: Receita Federal – Annual Report 1998

The composition of the tax revenues, according to economical categories, indicates that direct taxes constitute about 30% of tax revenues; in other words, approximately 70% are originated from indirect taxes. The tax is direct when the tax burden belongs to the taxpayer (e.g.: income tax or property tax). The tax is indirect when the taxpayer has the responsibility of paying; but passes the cost of the tax, in a legal way, to the consumer (e.g.: IPI – Industrialized Products Tax, ICMS – Circulation of Goods and Services Tax, ISS – Service Tax).

The Brazilian Federal Constitution in its title VI, chapter I, section VI, articles 157 through 159 establishes the tax revenue sharing criteria.

"Article 158. The following shall be assigned to the municipalities :

I – ...

II – fifty per cent of the proceeds from the collection of the federal tax on rural property, concerning property located in the municipalities;

III – fifty per cent of the proceeds from the collection of the state tax on the ownership of automotive vehicles licensed in the municipalities;

IV – twenty-five per cent of the proceeds from the collection of the state tax on the transactions relating to the circulation of goods and the rendering of interstate and intermunicipal transportation services and services of communication;

Sole paragraph – The revenue portions assigned to the municipalities, as mentioned in item IV, shall be credited in accordance with the following criteria:

I – at least three-fourths, in proportion to the value added in the transactions regarding the circulation of goods and the rendering of services carried out in the territory of the municipalities;

II – up to one-quarter, in accordance with the provisions of a state law or, in case of the territories, of a federal law.

Article 159. The Union shall remit:

I – of the proceeds from the collection of taxes on income and earnings of any nature and on industrialized products, forty-seven per cent as follows :

- a. twenty-one and a half per cent to the Revenue Sharing Fund of the States and the Federal District;
- b. twenty-two and a half per cent to the Revenue Sharing Fund of the Municipalities;
- c. ..."

After applying the tax revenue sharing criteria specified in the Brazilian Constitution, the following participation on tax revenues appears :

Table 2 – Tax Revenue Sharing in Brazil - 1998

Entity Level	Tax Collection		Tax Revenues Shared	
	Value (R\$ billion)	Percentage	Value (R\$ billion)	Percentage
Federal	118.5	48.2 %	89.1	36.3 %
States	67.5	27.5 %	65.2	26.5 %
Municipalities	10.6	4.3 %	42.3	17.2 %
Social Security	49.2	20.0 %	49.2	20.0 %
Total	245.8	100.0 %	245.8	100.0 %

Source: Receita Federal – Annual Report 1998

Table 2 demonstrates a rather strong transference of tax revenues from federal level to the municipal level after using the constitutional criteria of tax revenue sharing. The contribution of Brazilian municipalities to the total tax collection is of little significance, only 4.3 % after the sharing process their participation becomes 17.2 %. This fact certainly indicates the fragility of the municipal district in collecting tax - the community's closest government level. At the same time a reasonable comfortable situation is created for the municipalities, they can simply rely on tax revenue remittance from the federal and state government as prescribed in the Constitution. This hinders municipal actions in the autonomous development of tax policies and, in consequence, it provokes a separation between the citizen and the State.

The small participation of the municipal district in the tax collection process, as well as the excessive portion of the indirect tax in the composition of the revenue, can estrange citizens from the tax reality. If the individual does not realize his taxpayer's role and sees government actions as charity rather than as a compensation for citizenship, he doesn't take on fiscally conscientious attitudes toward government agents, nor toward companies as taxpayers.

3 - Understanding ICMS - Circulation of Goods and the rendering of interstate and interurban transportation Services and services of communication.

The main state's tax revenue is a value-added tax. ICMS a tax based on each extra value added in each stage of production to a good or service, until it reaches the final consumer. The typical contribution of ICMS to the overall state's tax revenues is equal to 95 %; it is by far the most important tax for the Brazilian states.

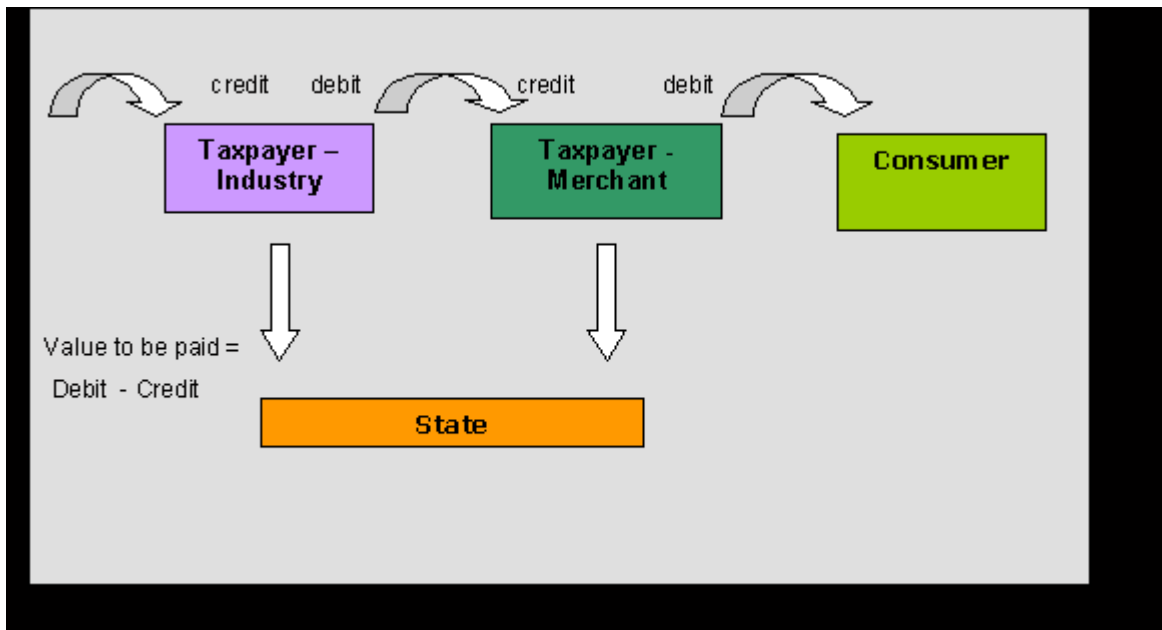
3.1 -Definition - Circulation of Goods and Service Tax - ICMS

The Brazilian Constitution defines ICMS as being tax on transactions relating to the circulation of goods and the rendering of interstate and interurban transportation services and services of communication, even when such transactions and rendering begin abroad. The ICMS is imposed on goods, interurban and interstate transport and public utilities (water, energy and telecommunication).

3.2 - The ICMS' Flow

The flow of ICMS shows its incidence in each stage of the production process, from the supply of raw materials for the industry until the sale of the product or service to the final consumer. The main characteristic of the tax is the collection based on the value added in each stage of the production chain.

Figure 1- Illustrates the ICMS' flow involving industrial taxpayers and merchants. The tax is imposed when an operation of sale and purchase occurs.



The industry has credits when purchasing raw-materials that will be used in its industrial process. When the industry has debits when sells its products to retailers or wholesalers. The value owed as tax will be the result of debit values minus credit values. The same procedure is applied to the last stage of the production chain – the merchant sector .

3.3 – Introducing the Tax Multiplier Effect - Analyzing the Potential of the Market

The flow described in Figure 1 demonstrates the tax incidence in each stage of the production chain. Any procedure alteration that influences the value of the tax to be paid in a given stage will rebound over the others because it will certainly affect the credit values of the subsequent stages or the debit values of the previous stages. The effect over the other stages is called a tax multiplier effect. The increment of R\$ 1 in tax collection due to the issuing of receipts in the retail sector should indicate an increment of x cents of tax collection in the supplying sectors and like this in succession through the production chain. The reason for the mentioned increment is simple: if the retailers who sell directly to consumers are prevented from operating without issuing correctly receipts they will observe that the value of the debits in their checking accounts will increase. Thus in order to reduce losses they will try to increase credits demanding correct receipts from suppliers. To exemplify, consider a cookie factory that that is practicing tax evasion, through underreporting of prices on receipts, when selling its products to bakeries and supermarkets. The sales operations have receipts but for a lower value than

the real value of the transaction. As soon as the bakeries are forced to issue accurate receipts for their consumers they will have to ask a receipt with the real value from the cookie factory.

The relevance of the tax multiplier effect will be seen when analyzing the potential of the measures proposed in this paper upon total tax revenues, starting from an increment of collection in the retail trade sector and eventually reaching its suppliers. The effect of increments on the total tax revenues starting from the increment observed in the retail trade can be determined through use a mathematical expression:

Total Addition on Revenue = Revenue Addition on Retailers + Tax Multiplier Effect, where

$$\text{Tax Multiplier Effect} = \sum_{i=1}^n b^i \times \text{RAR}$$

Where:

RAR = Revenue Addition on Retailers

n = number of taxed stages in the production chain after retail stage

b = average tax evasion rate for the sector

And

$$\text{Total Addition on Revenue} = \sum_{i=0}^n b^i \times \text{RAR}$$

The index b represents the tax evasion rate registered for a given economical sector where collusion exists between two or more participant companies in the production chain, in other words, where propagation of the effect multiplier can exist. Values for b vary between 0 and 1 and may assume different values for different stages of the production chain. For a sector where tax evasion does not exist, b will be equal to 0; contrarily, sectors with maximum tax evasion should have a value close to 1.

The concept can be applied in a hypothetical example - the cookie industry. In this example the average tax evasion rate is 30% on the due tax, and three stages are involved in the production chain - cookie industry, wholesaler and the retailer - therefore n equals 3. Considering also a tax collection increment in the retail sector, due to the tax education program of R\$ 100 million, the tax multiplier effect can be calculated as follows:

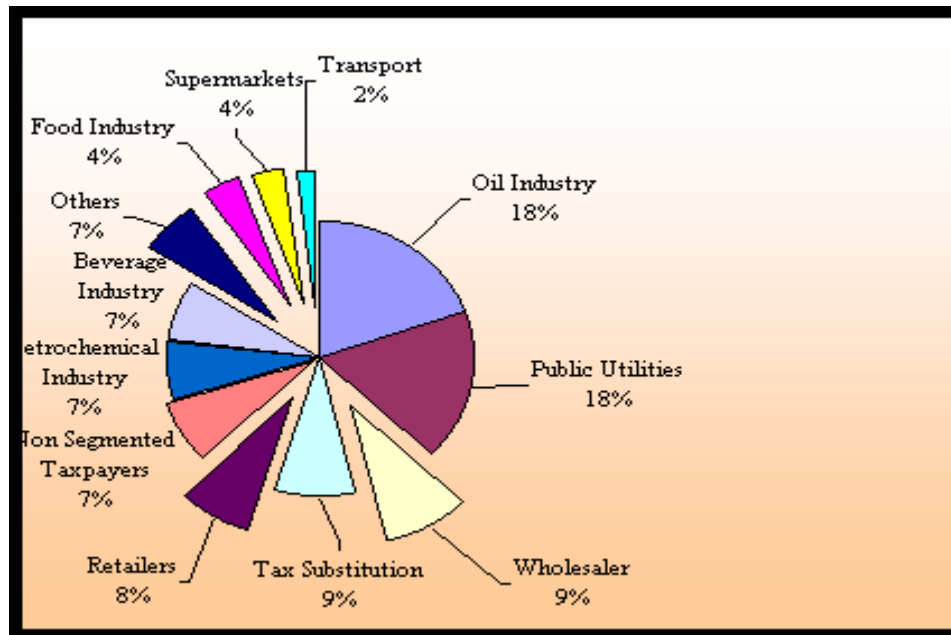
Given n = 3, RAR = 100 and b = 0,3, using the formula:

$$\text{Total Addition on Revenues} = \sum_{i=0}^n 0,3^i \times 100 = 100 + (0,3)^1 \times 100 + (0,3)^2 \times 100 = 139$$

Therefore, for the mentioned example, the total increment in the estimated tax revenue should be R\$ 139 million, R\$ 100 million being generated in retail and the other R\$ 39 million being generated in the previous stages - wholesaler and industrial.

It is possible to estimate the potential market for the tax education program proposed here and its impact on tax revenues with the concepts of the production chain flow and the tax multiplier effect. We might take as example the ICMS revenues in Bahia, in 1998, divided according to economical activities:

Figure 2 – ICMS Revenues in Accordance to Economic Sectors in the State of Bahia - 1998. The Overall ICMS Revenues were equal to R\$ 2.7 billion reais.



Source : Secretaria da Fazenda do Estado da Bahia – Annual Report 1998

Tax Substitution – Is a special regimen, designed to simplify the tax collection process. *Tax Substitution* is applied in specific economic sectors where there are few producers and many retailers, such as: cars, cigarettes, alcoholic drinking, tires and drugs. The tax is charged only once from the producer.

Observing the logic of the production chain where the retailers are included and noting data contained in the graph in Figure 2, it can be deduced that the economic sectors sensitive to the program would be: retailers, wholesalers, supermarkets, provision industries, transports and non-classified sectors. Others sectors such as oil industry, public utilities (water, energy and telecommunications), beverage, petrochemical and *substituição tributária* have a special regimen for ICMS collection, consequently there is not a significant influence on the tax collection originated from those sectors due to an increase of tax collections in the retail sector.

According to the graph in figure 2 there is a universe of taxpayers that can be reached by the effects of an incentive program of receipt-issuing in retail that totals 41% of the state tax revenue. This makes the application of the program potentially an instrument of high return for increasing tax revenues.

3.4 - ICMS Rate

The applied rates used for charging the tax vary in accordance with location of the operation (interstate operations and domestic operations), and nature of the product (food, normal and superfluous goods) and services.

Table 3 – Variation of applied tax rate in accordance to type of transaction

Type of Transaction	Operation Description	Tax Rate
Transactions accomplished among taxpayers	• purchases originating from the southern Brazilian states;	7%
	• for the purchases or internal sales to the state	17 %
	• transactions accomplished among taxpayers from the northeastern, mid-western and northern Brazilian states	12 %
Transactions	• during the purchasing of food and	7 %

accomplished with final consumers	goods that belong to "cesta-básica" ;	
	• for specific goods or services, as: cigarettes, beverages, telecommunication services,	25 %
	• for the other goods	17 %

3.5 - Recording the Transactions for Tax Purposes

The documentation and record of taxable operations should be made in two forms. The first operation documents the purchase and sale of goods and services - receipt issuing. The second operation is the recording of the operation in tax books, such as records of inputs, outputs and stock control (inventory).

3.6 - Fiscal Evasion on ICMS - Main Causes

The final consumer's passive behavior represents an important part of the process of tax evasion because it stimulates the defrauder to perpetuate the deviation of the public resources for their own benefit. Fontanella (1998) mentions the most common techniques used by the defrauders for tax evasion purposes: improper credit increasing and improper debit reduction. Improper credit increases can occur in several different ways, such as:

- When tax credit is hypothetically not allowed by the legislation, for example: entry of goods and services with credit but exit of those same goods without debit of the tax and credit in higher amounts than the value paid in the previous stage;
- Credit of tax from fake receipts, such as those : issued by non existent taxpayers (fake CGC , fake state registration, lacking registration in the commercial committee, not being established at the indicated address) and those issued by taxpayers with records already canceled from the State Taxpayers' file;
- Tax credit being used from fictitious purchases, although accompanied by receipts legally issued by companies enrolled in the tax department authority.

Improper Debit Reduction can occur through several different ways, such as:

- Improper use of status of tax discharge (suspension, postponement, exemption or non incidence of the tax);
- Use of lower rates than that due for the transaction ;
- Underreporting of prices on receipts (the so called "meia-nota"), such as : exhibiting lower values to those practiced in the transaction or exhibiting fictitious discounts or exhibiting "bonus in products", whose payment is made tax-exempt;
- Issuing of receipts exhibiting different values in the respective carbon-copies (the so called "nota-calçada");
- Non issuing of receipts corresponding to the transaction through sales without receipt or through sales with non-authorized receipts (stock request, internal control, estimated budget, ...);
- Cancellation or fictitious refund of accomplished sales.

4 - Psychology of Tax Evasion

The following analyses try to discuss the issue of tax evasion demonstrating the points of view of the different players involved in the tax collecting process: the tax authorities, the taxpayers and the final consumers.

4.1 – Tax Authorities' Approach – Discussing the Effectiveness of the Classical Model

The most common economic models of tax evasion bear a considerable similarity to one another. Taking value-added taxation as the case study, Allingham and Sandmo (1972) examined the amount of purchases and sales declared for tax purposes as their measure of tax evasion; they assumed that taxpayers behave as Von Neumann and Morgenstern (1944) stated about behavior under uncertainty. A rational optimizing taxpayer will declare as little of his income as possible and will be deterred only by the chances of detection by the tax authorities and the fines and punishment imposed. All the aforementioned authors approach the problem largely from the perspective of constraints on behavior rather than antecedent causes.

Tax Authorities have been using the traditional model of reducing tax evasion - increase the constraints on taxpayers, via supervision and fines. The assumption is that the taxpayer's behavior is like the economic man (rational); he will evade a tax if his estimates of the costs or benefits, in terms of probability of detection and the size of fine weighed against financial benefits, are in his favor.

An analysis of the causes of tax evasion may be considered by many to be beyond the bounds of interest of economics. We can use here an analogy with the treatment of the mentally ill. Humanist and depth psychologists might approach treatment by identifying the causes of the behavior by examining the development of difficulties in early childhood, in family and social relationships in later life, with a view to the patient's discovery and analysis of his own problem. On the other hand, psychologists more in tune with the behaviorist approach might look at inappropriately reinforced patterns of behavior and attempt to enact a cure by reinforcing new and more appropriate behavior by desensitizing fears or by using aversion therapy. The proponents of behavior therapy have often been accused of treating symptoms and not causes. The same could be said of tax policies aimed at reducing tax evasion by increasing fines or the likelihood of the detection of evaders. These tax policies are attempts to manipulate behavior without discovering how and why that behavior came about. Not only are they incomplete as explanations, tax policy directed only at curtailing symptoms may be less effective in the long run.

4.2 – Taxpayers' Point of View

Keen and Dean (1980) undertook research about the taxpayers' point of view relating to tax evasion. They present an organized table of individuals' ranking of tax evasion and other criminal activities. In England, evasion of small amounts, although viewed as crime, is considered less unacceptable than a host of other offences. While tax evasion earns disapproval, the following activities listed in ascending order of disapproval, earn even more: not informing a bank of a mistake it has made in one's favor, petty pilfering at work, fiddling social security, shoplifting from a large store, paying for as little as possible when out with a friend, and not paying back a friend who has lent you money. Compared to these behaviors the authors established that tax evasion, although disapproved of, is seen as a relatively trivial crime.

In Brazil, studies on evasion and tax burden are rare and, in general, they point towards a high evasion rate; numbers eventually published, however, tend to be conjectures, due to lack of methodological and scientific consistency. Brazilian and English cultures are similar in many ways, therefore it is reasonable to use data and conclusions from research conducted by Keenan and Dean (1980) in order to discuss the national reality, however we may add some Brazilian specific factors, such as:

- a. For some business sectors, mainly the ones that involve the small and mid size companies, in a highly competitive market, with reduced markups, reduction of tax burden through tax evasion has become a strategy for cost reduction and market survival. The most efficient defrauders, those who escape unscathed tax authorities, acquire a competitive advantage and soon become a benchmark for competitors ;
- b. Due to the recently past high inflation rates and the very high interest rates currently charged in Brazil, it has become a cheaper option for companies to fund their operations by not paying taxes or simply postponing the payment because the government has charged lower interest rates than the ones charged by the bank system.

4.3 - Consumers' Point of View

On the whole, the Brazilian public is fiscally ignorant. They do not realize how the state government gets its money, what the sources of public revenues are, nor how the government intends to spend it. As they do not understand the financing of public expenditures they can not see the connection between tax collection and public expenditures. In Canada (Auld, 1978) it had been found that, among 1294 individuals, there were considerable inaccuracies in taxpayers' perceptions of taxes' mechanism and in their estimates of public expenditure, only 20 percent had even a rough idea of the size of the provincial budget.

Lewis (1979) noted, in a small-scale study of British taxpayers, that taxation was viewed more favorably when its purposes were explained. In short, if you want to show public support for public expenditures, do not mention taxes, but if you want to reduce antipathy to taxation tell people what taxes pays for.

What might justify the passive and even reactive behavior of Brazilians about taxes? The most probable causes are related to the lack of information about taxes and lack of information about the public budget. If one goes deeper in people's mind, one probably would find out that:

- people are ignorant about their tax burdens in general, specially with indirect taxes ;
- people feel alienated from government and feel unable to influence tax policy;
- citizens do not see clearly where tax income is invested or used nor can they see the connection between taxation and public spending;
- taxpayers are annoyed by forms and regulations;

- taxes like ICMS are seen to be too complex and difficult to deal with, even for the well-intentioned taxpayer;
- citizens feel like they are receiving next to nothing for their tax ;
- people do not trust how the government spends tax revenues ;
- citizens think that tax evasion might be viewed as reprehensible at a moral, abstract level but acceptable for a taxpayer going through difficulties, and
- customers do not realize the importance of receipts when purchasing goods or services ;

4.4 – Citizen Participation

Returning to the issue of consumers' omission and passive behavior and also the connection between tax and public expenditure, why should people be aware of this? Economists might point out that the gathering and publishing of this information is both costly and of little use, as there are few opportunities for choice among the public goods and other government's services that people receive. This is a core issue - if the government could make public financing more transparent such as informing people about how the tax system works, the amount of money collected as tax revenues and how the tax revenues are spent, would not people look at taxes differently? Would inviting people to participate more actively in tax collection and the public budgeting process increase people's fiscal knowledge? I believe that the citizen has the willingness to influence the investment of public revenues and that he wants to exercise his citizenship. Therefore, this is the time to launch an effective tax education program that, besides achieving the previous mentioned targets, will improve the State's performance in tax collection.

5 – Main Proposal

Objectives

The main proposal contained in this paper has as its main objective the improvement of the citizen's social conscience through a program of tax education. The government will explain the reasons that determine the existence of the taxes and it will challenge the population in such a way that people can exercise their citizenship rights and cooperate in the tax collecting process. In an innovative way government shall invite the population to decide how to invest part of the public revenues from the public budget's investment account.

The expected consequence of implementing the proposal suggested here is the improvement of the relationship between the State and citizens, citizen awareness of the social function of taxes and the certainty that the public expenses are well managed and invested for the benefits of the community. These improvements should result in a greater tendency for citizens to pay taxes and, consequently, tax revenues shall increase.

The following concepts should be internalized by the community:

- a. taxes are the funding source for public services;
- b. society has a limited capacity of paying tax; therefore, public resources must be spent in a rational way in accordance with the community's needs;
- c. the voluntary payment of taxes is part of good citizenship;
- d. public resources are managed by the people's representatives;
- e. citizens have the role of auditing the results of public expenditures and also taking part in a proactive way in the tax collection process and investment of public money.

5.1 – The Awarded Productivity Model

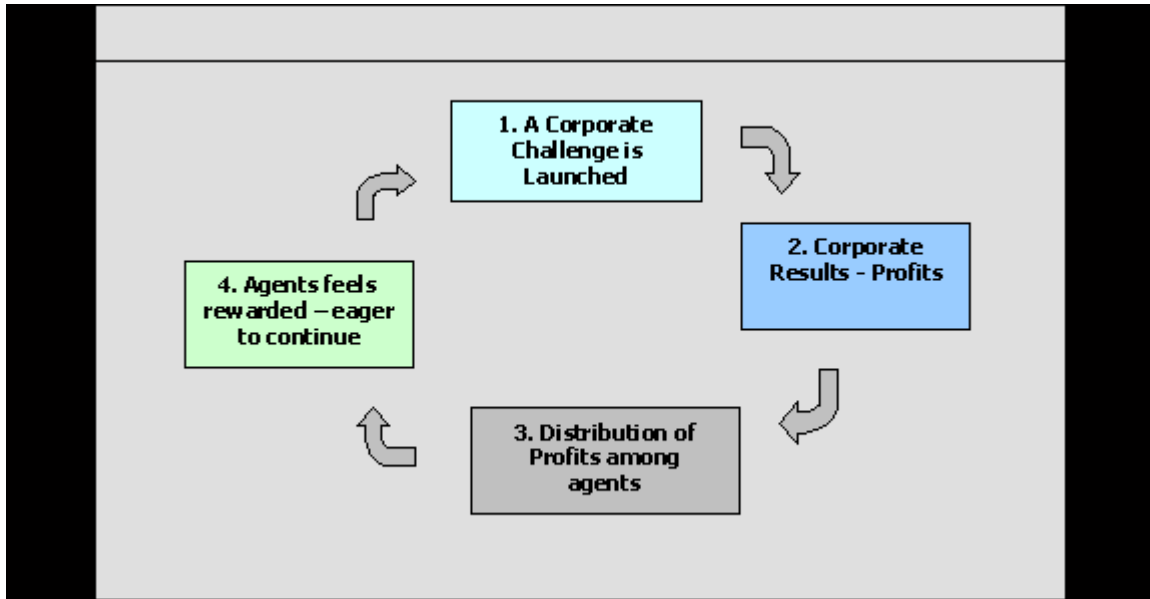
People like to decide the destinies of their lives; they need challenges and they want to be rewarded when they succeed. These are values that belong to Western culture: challenge (target), hard work and reward - these are the fuel of the cycle that repeats indefinitely. A lack of these components induces people to passivity, to a lack of future perspective and to mediocre results in any activity. The application of that model is limitless, it can be illustrated in two examples:

the success of the capitalist model and the bankruptcy of the communism. The capitalism focused on unceasingly positive results (profits). Here, the most competitive triumph, and individual efficiency is rewarded. The communism did not receive individual commitment because all were equally paid; soon history demonstrated that the lack of challenges and rewards for the individuals induced them to a lack of commitment, with national economic results;

the success of variable remuneration over enterprises' outcomes. Research developed by The Gartner Group (1997) showed that among the 500 most profitable companies in the USA, 89% were using the variable remuneration or profit sharing among their employees as an incentive tool and obtaining as a consequence the improvement of corporations' productivity.

Based on the assumptions that the Western culture is moved by challenges, work and rewards, a theoretical model can be composed in order to demonstrate the effects of the challenges and rewards on people's behavior and the consequent improvement of the productivity inside organizations.

Figure 3 - The Rewarded Productivity Model Applied as a Tool for Increasing Productivity in Corporations



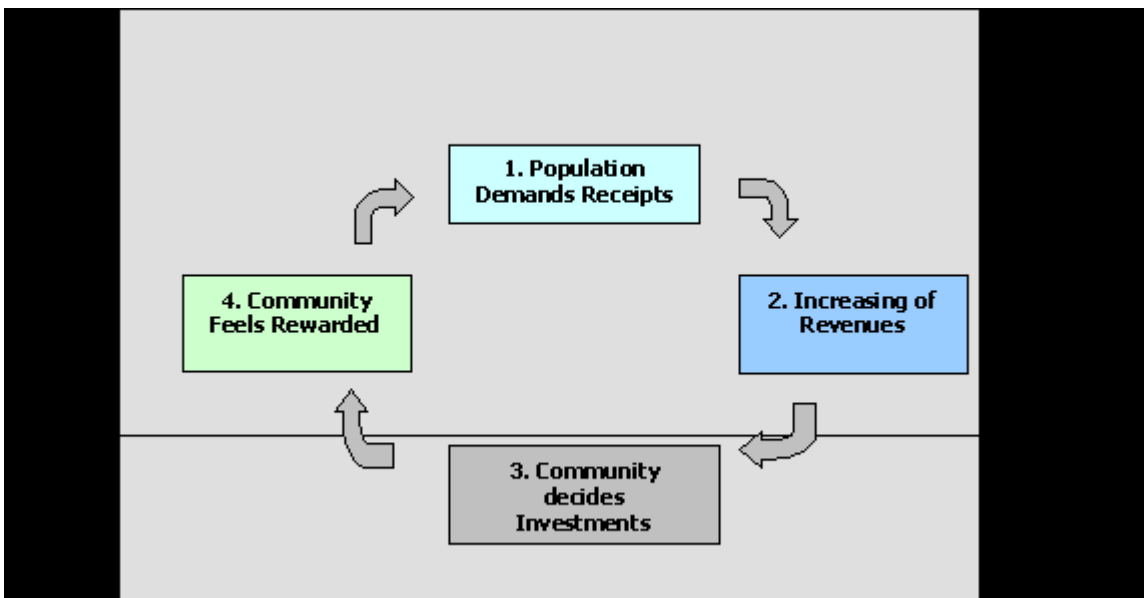
In Figure 3 the model is applied in the corporate framework. The model behaves as a cycle, there are two phases with actions and two with evaluations. The first stage launches a challenge, the leader motivates the team searching for positive results. The second stage evaluates the results of the finished task while the third distributes a part of the profit among the participant agents. The fourth stage is another evaluation, this time of psychological character - people feel rewarded and motivated to continue working toward better results.

The application of the model has a wide range. Thus one can propose a specific model to fulfill the needs of tax matters focusing on the improvement of the relationship between citizen and government. A tax education cycle model might be formulated to encourage the population to change its passiveness about public finances.

5.2 - The Tax Education Cycle Model

A theoretical model for a tax education program can be derived from the model of incentives for productivity. Figure 4 shows the flow of action. The first step is to inform the community on tax and public budget concepts. Upon understanding the basic concepts the government launches the challenge to involve the citizen in the program. A cycle composed of four phases begins. People will ask for receipts during their purchases, the consequence being the increment of the tax revenues. The government then invites the population to decide how to invest a part of the new revenue. Naturally when noticing the importance of their role in deciding on public expenditures, people will feel rewarded; therefore, they will be eager to continue the cycle.

Figure 4 – General Overview of the Tax Education Cycle Model



5.2.1 - Step by Step of the

Tax Education Cycle Model

5.2.1.1 - Population Demands Receipts

Citizens will ask for receipts as they purchase goods or services. This time it will be different because people will know the importance of the tax contained in each receipt. They will know that part of the obtained additional resources will be applied for their own benefit because there will be a commitment between government and citizens; consequently they will feel like participants and probably will change the previous passive behavior - they will be proactive.

5.2.1.2 - Increasing of Revenues

The expected economic consequence of the proposed education program is an increase in the tax collection. In order to measure the results of the program appropriately one might compare the amount of taxes collected in the quarter of the current year with the same quarter of the previous year excluding external factors such as increase of productivity of the tax administration service, climatic seasonal variations and economic packages.

5.2.1.2.1- Propensity for tax evading accordingly to government expenditures

A Survey undertaken by Peters (1979) supports the hypothesis that countries with a larger proportion of tax revenue going to finance government consumption expenditures rather than transfers will experience more tax evasion. Taxpayers and the public in general, will perceive that they receive less in the form of benefits (e.g. public medical or educational services) for a given amount of tax paid ("benefits"). This seems to be the present situation in most states and municipalities in Brazil. Brazilian press has largely published the difficult situation of the highly indebted states and municipalities all around the country. Indeed, the last Brazilian currency crisis partly happened due to declarations from the State of Minas Gerais Government, that they were not able to keep paying their debt services, therefore they asked for a moratorium.

Thus for any effort asking citizens' cooperation in order to increase tax revenues, it is highly recommended to guarantee – via law preferably – that a substantial part of the extra revenues must be invested in direct benefits to citizens. This may create a more positive propensity for cooperation among the population. As an example we shall analyze the annual budget from the state of Bahia (1997).

5.2.1.2.2 - Facing Financial Balance of the State of Bahia

Analyzing data extracted from the Annual Budget for the year of 1997, one can realize that current expenses (personnel, social and debt burdens, and others) represented US\$ 3,861 million or approximately 77.6% of total expenditures. Capital Expenses (financial inversions, investments, amortization of the debt and others), on the other hand, represented 22.4% (approximately US\$ 1,117 million) of an actual total expenditure that reached US\$ 4,977 million. As the budget was in balance, it meant a capacity for investments of nearly 15 % of revenues, where tax revenues constituted 64 % of the overall revenues.

An availability of 15% of the budget revenues for investments leaves the state in a comfortable financial situation. There is already money available for investment, thus this is a privileged condition toward the success of the proposed program. Once the additional resources could be applied to investments and not to finance ordinary expenses, people might be more prone to pay taxes and to cooperate.

5.2.1.3 - Community Decides Investments

Here is the cornerstone of the whole proposal. The government voluntarily renounces a part of its discretionary power on where to apply the available budget resources and delegates it to the community. A public commitment to the application of part of the increment of the tax collection in the municipal district where it was originally collected is created.

5.2.1.3.1 - Evaluating the Renouncing Cost from Government's Discretionary Power

It is possible to simulate how much money the government will be delegating from its decision power to the community. As we have already mentioned we will illustrate using data from the State of Bahia's balance and budget. We may take as a basis the numbers of its balance of 1997 and to have as an hypothesis a tax revenue increment of 10%.

As tax revenues constitute 64% of overall current revenues, this would mean an increase of 6.4% in the current revenues. If we also suppose a rate of 30% as the rate to be delegated to community, based on the increment over tax revenues, the government would be renouncing in 1.92% (0.3×6.4) of the current revenues. Considering that the state has available 15% of its current revenues for investments, the renouncement of the government's discretionary power can be calculated as 1.92% divided by 15%, or 12.8% of the investment being decided by the population.

The political side of the issue is very important - to withdraw part of the rulers' discretionary power over public investments undoubtedly it is a potentially strong impediment for the implementation of the project. However, results might be extremely profitable - a government that would be known in history for having the highest level of openness related to public resources management and the highest efficiency in the tax revenue process.

5.2.1.3.2 - People Inform the Set of Works and Services They Want to Invest

It is proposed here that communities would meet and, through their representatives, send a proposition containing the works and services that they would like to finance. The propositions would become one of the annexes of the annual state public budget, under a specific account and they would have their execution conditioned on the increment of tax revenues.

Some Brazilian city halls have been using for a few years, with great success, a new form in the elaboration of their annual budgets – "*orçamento participativo*" (participative budget). The idea is to invite the population to participate in the elaboration of the municipal budget proposals, specifically for the investment account. The methodology used to develop the participating budget defines as one of the stages of the process – that people meet and inform their representatives in the government about investments that they want. It is naturally a slow and difficult task because it demands a lot of people and meetings for a final version. Probably that is the reason why it has been restricted to municipal districts and not to states, at least until now.

It is not a target of this paper to discuss the benefits or drawbacks of the participative budget. However, it is worth pointing out that it shares aspects with the proposals for the tax education program presented here - it is necessary that the community, in an organized way, present to government proposals for works and services they want. Probably the best form of making possible the survey of the list of investments that the community wants is through the municipal districts, because it is the government level closest to the citizens.

Quarterly, the government should publish the tax revenue results obtained and information about the availability of funding resources for each work or requested service by municipal district, or by neighborhood in the case of larger municipal districts. Tables 3 and 4 give examples on how information might be published.

Table 4 – Table to be Published for the Population Informing Tax Collection Variations and Money Available for Public Decision – General Vision of the State

Municipal District	Verified Collection		Verified Variation on Collection	% for people's opinion	Value in R\$ to be invested during quarter
	Quarter of Current Year	Quarter of Previous Year			
A	10,000,000.00	9,000,000.00	1,000,000.00	30 %	300,000.00
B	8,000,000.00	9,000,000.00	-1,000,000.00	30 %	0.00
N

Focusing the evaluation on the municipal district "A" it is possible to set up table 4. This table links the requested works and services to information about economical viability in accordance with availability of financial resources.

Table 5 – Table to be Published Quarterly for the Population Informing the Works and Services that are possible to be Implemented due to Tax Collection Increase

Municipal	Works and	Estimated Value in	Financial	Economical
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Municipal District	Works and Services	Estimated Value in Reais (R\$)	Financial Availability Reais - R\$ *	Economic Viability for the Quarter
A	Work 1	250,000.00	300,000.00	Yes
	Work 2	620,000.00		No
	... Work n	100,000.00		Yes
	Service 1	150,000.00		Yes
	Service 2	550,000.00		No
	... Service n	1,090,000.00		no

(*) Data extracted from last column in table 3

In the given example the works 1 and " n " and the service 1 would be subject to the process of the community's choice, because their estimated values are lower than the available sum of money.

The publications proposed in tables 3 and 4 should reach the largest possible number of citizens. For an extreme example, for a small town, the mayor can paint on the city hall's wall the results of the program. In that way anyone that goes by the city hall would know about the results of the program; such a mural would work as a scoreboard of the campaign.

5.2.1.3.3 - Deciding the Works or Services to be Accomplished

Reviewing the proposal set forth here: people have already decided previously what were the works and services of their interest; those works and services were estimated and inserted in an annex of the state public budget; the community knows, for a given quarter of the year what is the value of available financial resources for investments. Based on that information a democratic solution among the community's members can be made. The voting can be implemented under different forms and it will depend basically on the technological resources of broadcasting and telecommunication available in the city. Midsize and big cities might use local radio or TV broadcasting, where the population can vote through toll free (0800) phone calls. People are used to that kind of program; Brazilian TV has used it intensively for raffles or even interactive programs - there is a great nationwide success on TV, a program called "Você Decide" or "You Decide ", where this system is largely used. In smaller municipal districts where such resources do not exist, the old and good assembly can be used - a great popular meeting in the town's main public square, coordinated by the local leaders, where people vote and decide.

5.2.1.4 - Community Feels Rewarded

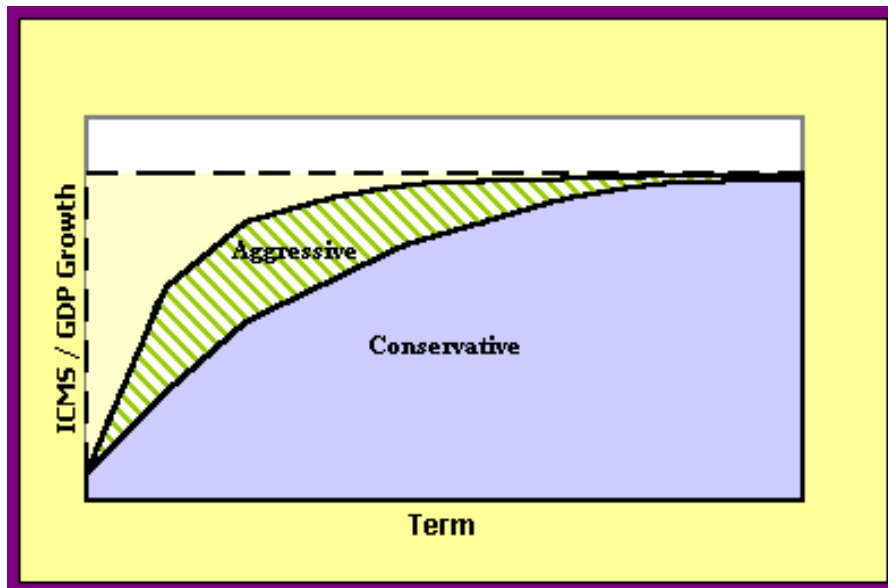
Once citizens have decided about the application of the additional resources and government has executed the work or chosen service, the relationship between citizen and State enters a maturity stage. People will understand the social function of the tax and they have the certainty that public expenses are well managed, therefore resulting in a support for continuing the program. The cycle repeats indefinitely, after each complete turn the concepts of tax education become more consolidated in the citizen's mind.

6 - The Geometry of the Expected Tax Revenue's Growth Curve

By the starting time of the program it is possible to choose between two different strategies for the short-term : a conservative proposition and an aggressive one. The graph in Figure 5 tries to illustrate geometrically the expected growth in tax revenue (growth in relation to GDP) projected as a function of time and with its respective growth tendencies in relation to GDP.

The shapes of the projected growth curves, in Figure 5, reflect the law of diminishing marginal returns, used largely in microeconomics analysis, applied to the projected ICMS growth due to a new tax education program. The law of diminishing marginal returns holds that as the amount of some input is increased in equal increments, while technology and other inputs are held constant, the resulting increments in output will eventually begin to decrease. Put more briefly, the law holds that beyond some point the marginal product of the variable input will decline.

Figure 5 – ICMS Real Growth Prospects According to the Different Implementation Strategies



The diagonal striped area in Figure 5 represents the additional result of tax revenue due to the use of the aggressive proposition for the short-term. The dashed line is a reference line and represents the rate of State GDP's growth. The steeper slope of the curve of the aggressive proposition, plotted for the short-term, is due to larger investments that shall be made in a bonus program and to the intense advertising campaigns that should accompany the proposition. The conservative proposition presents a flatter slope for the short-term and it should reflect the graphic representation of the Tax Education Cycle Model proposed in this paper.

In the long-term both curves assume a flatter slope when approaching the limit of population's contributive capacity; therefore curves tend to reach the parallel line on the graph's plateau that represents GDP's growth. Beyond this point the maturity of the program is reached. Several cycles will be already completed, the community will already have absorbed the desired concepts, the tax revenue growth will be nearly the same as GDP's growth. A steeper slope would be caused only by external factors, such as technological innovations, improvement of productivity of the tax administration inspection or legislation changes.

Beyond the point of maturity it is advisable that the strategy changes. As population will be deciding based on a percentage over the tax revenue's increment, and as tax revenues increase rate will tend towards the same GDP's growth rates, the values to be invested will be smaller. The community can press the government for changes in the calculation methodology. Thus it is advisable that the government, in order to consolidate its position of democratic administration, anticipate the community's desires and modify the methodology that it uses. It should propose that the community starts to decide over a fixed part of the investment account and not anymore based on the tax revenue's increment. Take as an example the State of Bahia : if 15 % of the revenues are available for investments, a part of those resources can be appropriated directly to the popular decision.

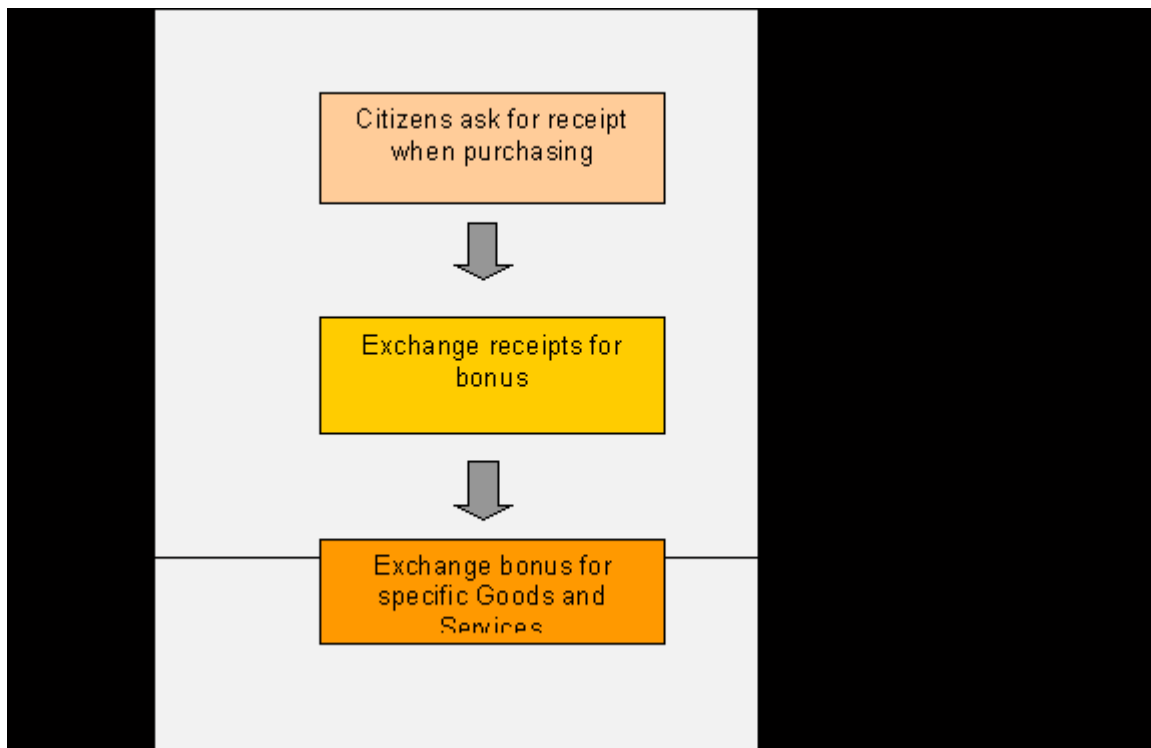
7 - Discussing the Aggressive Strategy for the Short-Term

The aggressive strategy for the short-term consists of a bonus plan in order to motivate the population to a quick adhesion to the program, associated with a performance contract with advertising agencies. It should be planned in a way to maximize the tax collection increment in the short-term; naturally it will have larger operational costs. The final decision about its viability should be made after a more detailed study of costs and an analysis of the projected financial return.

7.1 – Detailing the Bonus Program

The idea of using a bonus program is that citizens can exchange the receipts of their purchases of goods or services for a bonus. Those bonuses will generate payable exchange rights to the bearer in goods or services previously identified by the State.

Figure 6 – Flow of the Bonus Program



7.1.1 - The Collection of Receipts and Bonus Exchange

It is proposed here that the State require the citizens to demand receipts when purchasing good and services. The citizen, after accumulating receipts worth of a certain amount, can go to an exchange office to receive the bonus (certificate). An important detail is that the generated bond is payable to the bearer; it means that anyone might request the exchange, not necessarily the actual consumer. A possible consequence is that poorest won't merely ask for receipts themselves. Rather, they will also ask other richer people to collaborate in asking for receipts in order that the poor can exchange them.

7.1.2 - Proposed Use for the Bonuses

The bonuses can be used in the purchase of goods and services where ICMS is charged or in activities where there is a state interest in stimulating, such as sports or cultural productions. For each region of the state its characteristics and peculiarities should be observed, so as to motivate people to acquire services and goods of their preference. Suggestions for use of the exchange bonuses appears in Table 5:

Table 6 – Analysis of using specific goods and services for the Bonus Program and Viability Comments

Goods or Services	Comments about viability in the State
a. In the purchase of food in supermarkets or grocery stores	Perfectly applicable in any city of the state.
b) In the purchase of medicines in drugstores;	Medicines are expensive items in families' budgets; however seniors are more sensitive because they usually demand more medicines than youths. The seniors would surely demand receipts in their purchases; they would try to convince their friends and relatives to cooperate as well.
c) In the purchase of construction materials	All the social classes would cooperate because one might not build his house but he at least has to maintain it. However, comparing the family income, the poorer families commit more their income to construction material. They don't have access to the official system of financing home; they simply finance it themselves with their own savings. Therefore they would be the most benefited.
d) in the purchase of tickets for soccer matches or other sports of local interest;	Applicable in the places with professionals teams. The populations of the largest cities of the state would probably be the beneficiaries.
e) in the purchase of tickets for theater productions or shows whose creation or production are made by local artists;	Of widespread use once the created show could be exhibited all around the State.

7.1.3 - Criteria for Exchange Receipts for Bonus

The exchange rate must be flexible because it must be compatible with auditing policies adopted by the tax authority in a given moment. The change of receipts for bonus should have as focus the idea that the parity should vary according to the kind of goods and services, and also according to economic sectors.

It can be taken as a hypothetical example three different retail sectors: shoe stores, restaurants and construction material retailers. According to studies developed in the tax department, the first one presents a low evasion rate, the second a medium evasion rate and the third a high evasion rate. Therefore the tax authority might establish different rates for the exchange of receipts to bonus according to the sector. Table 6 illustrates this proposal with hypothetical data:

Table 7 – Hypothetical Exchange Rate Table for Bonus

Sub-Sector from Retailer	Receipt Value - in R\$ -	ICMS Value in Receipt - in R\$ -	Exchange Rate	Bonus Value - points -
Shoe Stores	100.00	17.00	0.2	3.40
Restaurants	100.00	17.00	0.4	6.80
Construction Materials	100.00	17.00	0.6	10.20

When using different exchange rates it is possible to lead or motivate the population towards exchanging more receipts from a specific economical sector. Consequently it will force the issue of receipts and increase the tax collection in the given sector.

7.2 - Using the Rewarded Productivity Model for the Advertising Campaign

The government must develop a continuous marketing program aimed at internalizing tax education concepts in citizens' minds. It is advisable to contract commercial marketing agencies, and in doing so it is recommended that the Awarded Productivity Model be applied. It can be said that those agencies live of the good results that they can generate to their clients and their payment is usually associated with the client's sales increase. The suggestion is to launch a challenge to the agencies - a performance contract, where their profits will come from a percentage of the results generated for the client - the State's Finance Secretariat. As proposed in the Awarded Productivity Model the advertising experts will work hard towards the reward, consequently as a real partnership they will bring good results for the State. If they succeed innovation would result - a supplier would be earning a lot from the State and at the same time benefiting the public - that is new and fair.

8. Complementary Proposals

8.1 - Application of the Rewarded Productivity Model in a Long Term Tax Education Program for Children

In the States of Virginia and Maryland, USA, there are incentive programs addressed to public schools and sponsored by two big supermarket chains - Safeway and Giant. Basically they are marketing program where the supermarkets try to create in the consumers' minds a positive image of their brands. The expected results are the development of the concept of brand fidelity or the consolidation of their brands in the consumers' minds - what the marketing profession calls Positioning.

How the program operates:

- Any purchase conducted in their stores generates credits; those credits can be used by public schools for investment in goods for use in the improvement of teaching quality. Those goods can vary from computers and televisions to blackboards or chairs;
- The operational cycle basically works in the following way:
 - (a) Customers collect receipts when shopping at the supermarkets;
 - (b) customers give the receipts to students who deposit them into a collection box in the classroom;
 - (c) the schools accumulate the receipts while they assess investment needs;
 - (d) schools change the receipts for the needed equipments.

- The exchange rate of receipts for credits varies according to the items. Products that have low level of sales generate larger credits than products with high levels of sales. It is in the supermarket's interest to differentiate among goods because it motivates the sale of products that usually have a low stock rotation;
- The expenses incurred by the supermarkets when donating goods to public schools are deductible for income tax purposes. The supermarkets gain from both sides - they reduce the tax burden and they improve their image with customers;

The grocery receipts for schools program has been a long-term investment for the supermarket chains and it has been running for more than 10 years. It must have been profitable because no private company would maintain a bad marketing strategy for such a long time. Under the focus of economics, the sector of supermarkets is typical of monopolist competition - there are many firms, free entrance and exit of possible competitors - but different from a market with perfect competition there is space for differentiation of products and services. The importance of the use of marketing techniques is to create in consumers' mind the idea of differentiation of brands. Programs of that nature, used by the two supermarket chains are highly important for their survival and their market share in a competitive market. Results come out with increasing sales, improvement in clients' fidelity and brand consolidation.

The American supermarket's case is also an example of application of Awarded Productivity Model, Figure 7 demonstrates the application of the model:

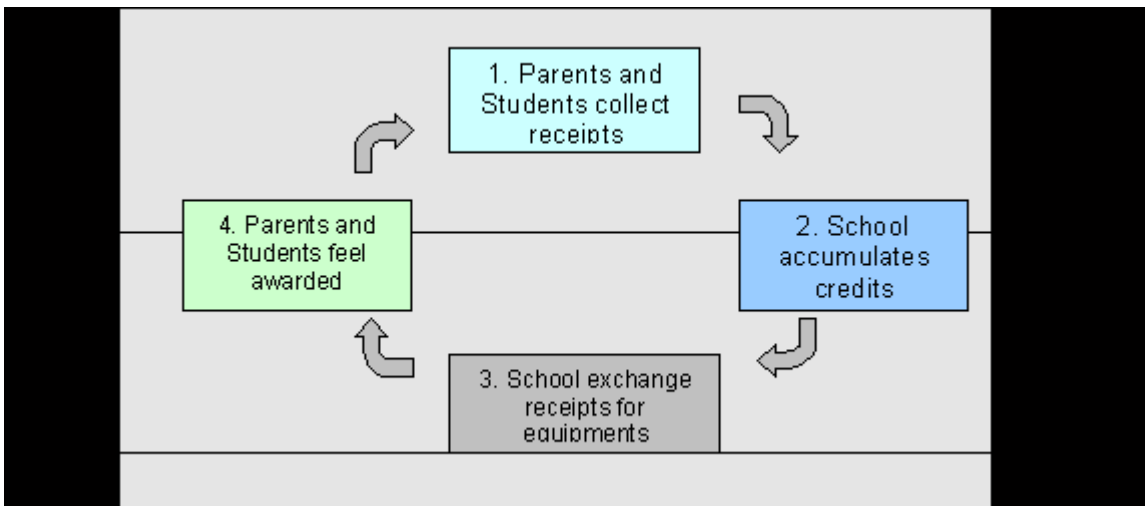


Figure 7 - The Awarded Productivity Model for Supermarket's Case

The idea described during the supermarket's case can be used in a similar way for a continuous long-term tax education program to be applied in the Brazilian schools. The idea is that the State represents the role of the supermarket chains. Parents and students will be motivated to collect receipts for future exchange for goods to be used for the improvement of schools' facilities. Children will learn the concepts of tax education under two forms: normal classes in the classrooms and a practical association between taxes paid and its return in benefits.

Others equally important consequences would be derived from the program such as: the significant improvement in the facilities of the public schools, associated with the improvement in the teaching quality and still an important lesson for the children - there is no reward without hard work. The children's efforts of learning about the social function of the taxes, picking up receipts and their participation in decisions about the necessary investments will have been important for their education because the school won't be receiving one more donation, it will be a reward for reaching desired goals.

8.2- Proposal of Changing Layout of Receipts - Better Transparency

From the tax education principle of informing the citizen about the taxes he pays and the public administration principle of transparency comes a proposition of informing the community, in a simple and direct way, about the value of the tax contained in each purchase. At the same time the government can use a privileged space for publishing institutional messages - the bottom line of the receipt.

Informing the Consumer the Value of the Tax Contained in the Purchase

In the current model of consumer's receipt the value of the tax is not shown. To make things more difficult the ICMS is an "inner" tax. This means that its own value composes the value of the good or service that is being purchased. Thus, the citizen, besides not having the value of the tax shown, is not able to realize easily the value of the tax burden contained in a given purchase.

Figure 8 – Comparison between de Current and t he New Proposed Receipt Layout

Current Receipt		Proposed Receipt
<p style="text-align: center;">Consumer Receipt</p> <p>Company : XYZ Ltd..</p> <p>State Id. Nr : 9999999-9</p> <p>Receipt Number : 99999-9</p> <p style="text-align: right;">Date : 04/30/99</p> <p>-----</p> <p style="text-align: center;">Product Price</p> <p>-----</p> <p style="text-align: center;">Printer X 120.48</p> <p>-----</p> <p style="text-align: center;">Total Value 120.48</p>		<p style="text-align: center;">Consumer Receipt</p> <p>Company : XYZ Ltd.</p> <p>State Id. Nr. : 9999999-9</p> <p>Receipt Number : 99999-9</p> <p style="text-align: right;">Date : 04/30/99</p> <p>-----</p> <p style="text-align: center;">Product Price</p> <p>-----</p> <p style="text-align: center;">-</p> <p style="text-align: center;">Printer X 100.00</p> <p style="text-align: center;">ICMS - 17 %</p> <p style="text-align: center;">= [100.00 / (1-0.17) – 100.00] 20.48</p> <p>-----</p> <p style="text-align: center;">Total Value 120.48</p> <p style="text-align: center;"><i>Institutional Message</i></p>

Figure 8 shows on the first column the current layout of the consumer's receipt, where the value of each item and the total are printed, there is no information about the ICMS' value because it is already included in each price. On the second column it is proposed to detach the value of ICMS; that is the product's value would be printed without taxes. The value of the tax, together with its calculation formula, should be printed separately on the bottom line. With the new layout it becomes clear to the final consumer the value of the tax contained in any purchase.

The Tax Administration Department Gains Space for Publishing Institutional Messages

The receipt, as a media instrument, is a privileged space for informing the consumer. It holds a high reading rate, because anyone that goes shopping, when receiving a receipt wants to know if the paid value is correct and if the printed list of products have correct prices. It is an exclusive space for the tax administration, there are no competitors trying to use the same space to publish different messages. As it is printed by computer, the messages can be easily changed, creating the possibility to set up educational campaigns on that small piece of paper.

It is possible to mention some examples of institutional messages, such as: imagine a new proposed legislation where in case the shopkeeper does not give the receipt to the consumer the purchase automatically becomes free. Therefore, as a mean of informing society about the new legislation all the receipt printing equipment would insert a message to be printed on the bottom of each receipt the following sentence: "*If the shopkeeper does not offer you the receipt the purchase will be free*".

9 - Conclusion

Contrary arguments to the awarded productivity model can say that it creates a deformity. The government is responsible for the efficient administration of the public resources because it was elected for that purpose; therefore, calling the community to decide on what to do with the public revenues, besides being difficult, is not the people's responsibility. The answer to this argument is in the diagnosis presented about the Brazilian tax system, section 2 of this paper: "if the individual does not realize his taxpayer's role and view government actions as charity not as a compensation for citizenship, he doesn't take on fiscally conscious attitudes toward government agents, nor in relation to companies or autonomous"; a passive behavior is generated that contributes to increasing tax evasion and its disastrous consequences to the country. In order to modify this passive behavior it is necessary to invest in an effective

educational program that must be successful in achieving people's commitment. Therefore, incentive and reward programs that I believe are the most effective for the Brazilian people are needed.

The citizen's participation in communities' destinies should be a continuous and growing process; however it is natural that the techniques proposed here could reach their exhaustion points. Beyond this point new techniques should be introduced or simplified in a way to guarantee the continuance of the educational program.

The proposed tax education model also interferes with rulers' discretionary power over public investments, there is no doubt that getting politicians to give up power will be difficult. However, the situation might be seen from a different perspective. The results might be highly profitable - a government that innovates and records its passage in history as being open with public funds administration, as having a strong community's commitment and as having an efficient tax administration.

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