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Tax Reform in Costa Rica

Sonia Cavallo

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Tax Reform in Costa Rica

Sonia Cavallo

Abstract

In 1998, Costa Rica was about to undergo a new tax reform that would simplify the tax structure and raise additional revenue to repay debt and finance future capital formation. This paper analyzes, in light of the prevailing tax structure, a tax reform proposal that included the elimination of 1500 excise taxes. After exploring some general aspects of fiscal policy and the prevailing tax structure, it describes some specifics of the Costa Rican tax structure and tax administration reforms. Finally, it provides an assessment of the revenue impact that the proposed tax structure reform may have on public finances.

Keywords: Costa Rica, tax structure, tax reform

JEL codes: H200, H220, H240, H250, H260

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Tax Reform in Costa Rica

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I. INTRODUCTION

Over the last two decades, Costa Rica has achieved substantial income growth, but the associated increased tax revenues have not been enough to balance the budget. During these years, Costa Rica's internal debt grew beyond sustainable levels. The Central Government's domestic debt represented 15 percent of GDP in 1990 and reached 26 percent of GDP in 1997.¹ The search for alternative sources of revenue created an overly distortionary tax structure. In recent years, whenever the political scenario allowed it, short-term increases in tax rates were instituted. At the same time, lobbying from different industries made room for exemptions and widespread differential rates.

In order to achieve sustained economic growth, Costa Rica needs to promote productivity and investment, and reduce the volatility of its fiscal accounts. If Costa Rica succeeds in simplifying its current taxation policies, then it may make the rules more predictable, thus reducing the multiple distortions and loopholes that hinder productive investment.

In 1998, the incoming administration proposed a tax reform in Costa Rica. Any attempt to reform Costa Rica's cumbersome tax structure has to take into account the likely impact on tax revenues. This is particularly important since access to foreign loans and internal debt is limited and increasingly expensive,² and also because there are limits to Central Bank financing of fiscal deficits.

It is extremely important to quantify the revenue effects of an in-depth tax reform. In this work we provide an initial quantification of the likely impact of the proposed tax reform on fiscal revenues. To the extent that the budgeted levels of revenue are achieved, more distortive taxes can be eliminated. Unfortunately, the administration's reform

¹ IMF (1998).

proposal, which is rightfully oriented toward simplifying the current tax structure, will likely fail to increase tax revenues and will most likely reduce revenues from excise and VAT taxes. The initial government proposal did not address the need to compensate for resources that would be lost in the simplification of the tax structure. Consequently, the reform of the tax system along the lines of the proposal may exacerbate the fiscal problems.

This paper summarizes some general aspects of the prevailing fiscal policy and the tax structure in Costa Rica. It explores particular aspects of the tax structure and tax administration reforms. Finally, it analyzes the recent reform proposal and includes an assessment of the impact that the tax structure reform (mainly the elimination of many of the multiple excise taxes) may have on the public finances.

II. THE PROBLEM

A. FISCAL NEEDS

As countries develop and their per capita income rises, they face a host of new challenges and new needs, such as the provision of certain public goods. Economic development generates pressures to increase government expenditures and transfer payments, which in turn creates a need to increase tax revenues.³ This is why the tax burden is almost 60 percent higher in developed countries as compared to less developed countries.⁴

In the past 15 years, several Latin American economies have undergone important fiscal reforms that have improved their budgetary imbalances. In Costa Rica, however, fiscal imbalances remain, and the mechanisms traditionally used to finance deficits,

² Domestic debt interest payments increased from 2.8 to 5.4 % of GDP between 1992 and 1996 (IMF, 1998).

³ Lewis, (1984)

⁴ IMF statistics show that tax revenue in the OECD countries averaged 30.4% of GDP in the 1982-92 period, while it accounted for only 16.5% in Latin America, and 15.6% in Costa Rica.

including debt, are no longer available. Additionally, Costa Rica has neglected investment in economic and social infrastructure for at least a decade (Saiz, 1999).

Table 1 shows that total tax burden (tax revenue as a proportion of GDP) in Costa Rica increased from 15.9 percent in 1983 to 16.9 percent of GDP in 1997. The change is small for a 15-year period, particularly if we consider that there have been repeated efforts to increase tax proceeds. A likely explanation is that most tax reforms of the past decade addressed only immediate fiscal needs. Tax rate increases by themselves provide, at most, temporary relief in public finances. However, an increase of tax revenues as a share of GDP will not occur unless a structural reform that broadens the tax base is enacted.

Table 1: Tax Burden by Type of Tax

| | (% of GDP) | | | | | | | | | | | | | | |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 1983 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 |
| TOTAL TAX REVENUE (1+2) | 16.1 | 15.3 | 15.0 | 13.7 | 14.5 | 14.4 | 14.4 | 14.0 | 14.4 | 15.1 | 15.4 | 14.7 | 16.0 | 16.5 | 16.9 |
| DIRECT TAXES (1) | 4.0 | 3.3 | 2.8 | 2.7 | 2.5 | 2.7 | 2.7 | 2.7 | 2.5 | 2.6 | 3.2 | 3.4 | 3.6 | 3.7 | 3.8 |
| Income taxes | 3.6 | 2.9 | 2.5 | 2.3 | 2.2 | 2.3 | 2.3 | 2.3 | 2.1 | 2.1 | 2.5 | 2.7 | 2.9 | 2.9 | 3.0 |
| Property taxes | 0.4 | 0.4 | 0.3 | 0.4 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 |
| INDIRECT TAXES (2) | 12.1 | 11.9 | 12.2 | 11.0 | 12.0 | 11.7 | 11.8 | 11.3 | 11.9 | 12.5 | 12.2 | 11.4 | 12.4 | 12.8 | 13.1 |
| On Goods & Services | 6.1 | 6.8 | 6.7 | 5.9 | 6.9 | 7.5 | 7.3 | 7.4 | 7.5 | 8.7 | 8.6 | 8.1 | 8.6 | 10.7 | 10.7 |
| On Foreign Trade | 6.1 | 5.1 | 5.4 | 5.2 | 5.1 | 4.3 | 4.5 | 3.9 | 4.3 | 3.8 | 3.6 | 3.3 | 3.8 | 2.2 | 2.4 |

Source: *Ministerio de Hacienda*

B. TAX STRUCTURE CONCERNS

Several authors have expressed their concerns about different aspects of the tax structure in Costa Rica. For example, Cornick (1998) points out that tax breaks have positively contributed to growth in the most dynamic sectors of the economy, but he also notes that the government has not been able benefit from such growth because of these tax policies. In other words, fiscal incentives have eroded the tax base since the prosperous sectors have basically remained untaxed.

Other studies share similar criticisms of the Costa Rican tax structure. Tanzi et al. (1990) stresses the complex nature of the system: there is a multiplicity of taxes, laws, regulations, fiscal incentives and exemptions that erode the tax base and/or hinder the efficient administration of taxes. Also, a report prepared by fiscal experts for the government (GET, 1998) points out some other shortcomings of the tax structure, such as its small income tax base, the multiplicity of excise taxes, and an indiscriminate use of fiscal incentives.

Vargas (1997) states that the Value Added Tax (VAT) base omits basic consumption goods as well as inputs to agriculture and fishing, educational goods, drugs, many food products and veterinary supplies. He criticizes the indiscriminate use of the excise taxes that hinder efficient investment and induce smuggling and tax evasion. Finally, Vargas stresses that the executive has enormous discretionary power to include or exclude goods and services from excise taxation.

Brenes (1997) identifies efficiency and equity as the main problems. He blames the complexity of the tax structure and its high compliance and administrative costs on an incoherent tax policy enacted during the previous ten years. Brenes considers that the current tax structure is inefficient for three main reasons. First, because it treats sources of capital differently and hence affects saving patterns while favoring debt financing. Second, because import tariffs, although reduced during the past years, still favor import substitution production *vis-a-vis* export production. Third, because there is a wide variability of tax rates, especially among excise taxes. On the other hand, this author considers that the current tax structure also violates horizontal and vertical equity principles⁵ because (i) gives differential tax treatments to different income generating activities, and (ii) exempts several industries like tourism and forestry.

⁵ Horizontal equity refers to equal tax treatment for firms or people at the same income level. Vertical equity refers to the correspondence between ability to pay taxes (usually measured by income or wealth)

III. TAX STRUCTURE IN COSTA RICA: GENERAL ASPECTS

OVERVIEW OF THE TAX STRUCTURE IN COSTA RICA

In Costa Rica, approximately 80 percent of total tax revenue come from indirect taxes, of which those on foreign trade have been declining and those on domestic goods and services have been expanding. The remaining 20 percent of tax revenue comes from direct taxes (mainly income tax) that have not changed significantly during the last 15 years.

The following table illustrates the composition of the Costa Rican tax structure:

Table 2: Tax Structure

| REVENUES as % of TOTAL TAX REVENUES | | | | | | | | | | | | | | | |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
| TOTAL TAX REVENUE (1+2) | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| DIRECT TAXES (1) | 24.7 | 21.7 | 18.9 | 19.4 | 17.1 | 18.6 | 18.4 | 18.9 | 17.2 | 17.1 | 20.6 | 22.7 | 22.7 | 22.1 | 22.3 |
| Income taxes | 24.0 | 21.1 | 18.4 | 18.9 | 16.5 | 17.7 | 17.3 | 17.9 | 16.4 | 16.1 | 19.5 | 21.8 | 21.9 | 21.3 | 21.6 |
| Property taxes | 0.7 | 0.6 | 0.4 | 0.6 | 0.6 | 0.8 | 1.0 | 1.0 | 0.8 | 1.1 | 1.2 | 1.0 | 0.9 | 0.8 | 0.7 |
| INDIRECT TAXES (2) | 75.3 | 78.1 | 80.7 | 79.8 | 82.2 | 80.7 | 81.2 | 80.7 | 82.5 | 82.4 | 79.1 | 77.0 | 77.1 | 77.7 | 77.6 |
| Taxes on Goods and Services | 37.5 | 44.4 | 44.6 | 42.5 | 47.2 | 51.3 | 50.2 | 52.6 | 52.4 | 57.4 | 55.8 | 54.7 | 53.4 | 64.7 | 63.5 |
| Taxes on Foreign Trade | 37.8 | 33.7 | 36.1 | 37.3 | 35.0 | 29.4 | 31.0 | 28.1 | 30.1 | 25.0 | 23.3 | 22.3 | 23.7 | 13.0 | 14.1 |

Source: Ministerio de Hacienda

Direct taxes, in particular income taxes, are one of the main sources of revenue for many countries. Their relative importance as a source of revenue varies with the level of economic development of the country. Some of the advantages of this tax are the following: (a) tax proceeds increase in line with economic growth; (b) it allows for progressive tax brackets and differential tax rates; and (c) it introduces transparency.

Direct taxes in Costa Rica, namely taxes on income and property, amount to 3.8 percent of GDP. This is much lower than the 10 percent of GDP raised by developed

and the actual distribution of tax burdens. There is a long lasting debate as to whether such correspondence should be proportional or progressive (tax rate rising with income).

countries with this type of tax.⁶ Costa Rica's direct tax revenues fall well below OECD countries and also below Latin American levels. Table 3 indicates how Costa Rica's tax structure compares to other tax structures.⁷ Costa Rica falls below for several reasons. The base of the income tax in Costa Rica remains low because of fiscal incentives that exempt certain activities. Property taxes, that elsewhere can raise 4% of direct tax revenues, represent in Costa Rica only 1% for a similar period despite the fact that there are four different property taxes.

Table 3: Comparative Tax Structure, Tax Revenues as a % of Total Tax Revenue

| | Sample | Tax Revenue | Taxes on Income and Property | | | Domestic Taxes on Goods and Services | | | | International Trade Taxes | | |
|---|---------|-------------|------------------------------|--------|----------|--------------------------------------|--------------|----------------------------|-------|---------------------------|---------------|---------------|
| | | | Of which: | | | Of which | | | | Of which: | | |
| | | | Total | Income | Property | Total | VAT (Ventas) | Excise (Selectivo Consumo) | Other | Total | Import Duties | Export Duties |
| OECD Countries (unweighted averages) | 1986-92 | 100 | 51 | 49 | 4 | 42 | 26 | 12 | | 4 | 4 | 0 |
| Latinamerican Countries (unweighted averages) | 1986-92 | 100 | 28 | 24 | 4 | 40 | 20 | 16 | | 30 | 27 | 4 |
| Costa Rica | 1983-98 | 100 | 20 | 19 | 1 | 55 | 34 | 17 | 5 | 25 | 19 | 6 |

Source: Tax Policy Handbook, IMF, *Ministerio de Hacienda de Costa Rica*

In developing countries, domestic indirect taxes are generally an important source of revenues, and Costa Rica follows this pattern. Domestic indirect taxes are popular because they generally have low administrative costs and can generate a quick increase in revenues. In 1997, indirect taxation on goods and services raised 10.7% of GDP.

Costa Rica relies more heavily on domestic indirect taxes as opposed to taxes on foreign trade, to compensate for its shortage of direct tax revenues. Indirect taxes on foreign trade represent 2.4% of GDP. Although foreign trade tax revenues as proportion of GDP have been steadily falling (as a result of trade liberalization attempts), this amount is still relatively high. OECD countries raise less than 1% of their GDP from

⁶ Lewis (1984) identifies four reasons that explain why income taxes tend to be relatively unimportant revenue raisers in developing countries: 1) problems in the definition of taxable income, 2) difficulty of measuring income in countries where there is a large subsistence sector; 3) large administrative costs relative to income tax revenue; 4) lower income tax elasticity.

import duties and have removed all export duties without exception, whereas Costa Rica still raises almost 1% of GDP through export taxes.

IV. TAXATION SCHEMES AND TAX POLICY IN COSTA RICA: PARTICULAR ASPECTS

A. RECENT TAX POLICY

During the 1980s, the base of those taxes that should have been the backbone of Costa Rica's revenue structure, were increasingly eroded. Total tax revenue, as a proportion of GDP, dropped from 15.9 percent in 1983 to 14 percent in 1990.

Since 1991, recurrent and even contradictory reforms have characterized Costa Rica's tax structure. Value Added Tax (VAT) rates have changed almost annually, excise taxes have fluctuated, and there have also been frequent changes in tariffs and export taxes. Repeated temporary rises in the VAT tax rate also helped to offset recurrent reductions in the tax base of the most important taxes.

In 1991,⁸ the VAT rate was raised from 10 to 13 percent, and its base was expanded. A new tax was created on the sales at the free zone *Depósito Libre de Golfito*, and the export tax on banana crops was raised from \$0.22 to \$0.50 per box. An additional tax on imports, in line with the government's willingness to balance its current account, raised tax revenues from these tariffs but hurt the revenues from excise taxes paid on imported goods.

1992's GDP growth rate (7.3%) had an impact on total tax revenues. During that year, some legal reforms on indirect taxes, mainly the VAT, were introduced in order to improve tax administration and to reduce legal lag time in tax collection. Fines and penalties became more severe for tax evasion or delay of payment and tax collection was

⁷ The reader should be aware that social security and payroll tax revenues were excluded to highlight this comparison.

decentralized. On the other hand, important exemptions, such as electricity consumption, construction materials and fuels were eliminated and the VAT tax rate was lowered from 13 to 12 percent. The most important source of tax revenue was increased foreign trade (in 1992 imports grew 30 percent).

In 1993 total tax revenues did not grow proportionately to GDP. Rather, tax elasticity and total tax burden fell compared to 1992. This decrease can be attributed to new trade policies (the elimination of some tariffs on foreign trade) and to legal and administrative issues that arose following the 1992 reform on tax administration procedures.

In 1994, tariffs on raw materials, capital goods and some final goods were reduced in an attempt to deepen trade liberalization. Excise tax rates and the VAT rates were also reduced, the latter having been reduced by 1 percent per year for the last three years.

1995 was a key year for the Costa Rican tax system. A law, called *Tax Adjustment Law (Ley de Ajuste Tributario)*, was passed in September. It raised the VAT rate to 15 percent for the next 18 months. This rate increase, together with inflation and temporary increases in import duties, brought about a short-term rise in tax revenues. In 1996, tax revenues stagnated due to the reduction and elimination of export taxes on coffee and banana crops and an economy-wide recession.

B. CURRENT TAX STRUCTURE

Direct Taxes

There are three types of direct taxes in Costa Rica: an income tax, a capital gains tax on dividends and interest from securities, and a property tax.

The **Income tax** in Costa Rica applies to all monetary and in-kind income, earnings or profits from Costa Rican sources, whether of a steady or occasional nature, earned or

⁸ The information in this section comes mainly from the Contraloría General de la República, Memoria, several years.

accrued by individuals or corporations engaged in profitable activities and domiciled in Costa Rica. It also taxes personal income of employees, retirees, or any other revenue or profit generated in Costa Rica by residents and non-residents.

For legal entities or individuals engaged in gainful activities, the corporate income tax rates are 10, 20 and 25 percent depending on gross receipt levels. For individuals that are gainfully employed tax rates are 10, 15, 20 and 25 percent depending on yearly net income minus a deduction per child and for marriage. The rate for dependent labor revenues is 0, 10, or 15 percent depending on total monthly income. Finally, tax rates for outward remittances range from 6.5 to 50 percent depending on the service.

Income tax revenues represented 17.7 percent of total tax revenues in Costa Rica and 2.8 percent of GDP in 1997.⁹ This is not as high as in developed countries, but it is acceptable at the prevailing marginal tax rates. Higher marginal rates instead of raising revenues would probably divert investment into other Central American economies.

Among the exempt sectors are the government, religious institutions, cooperatives, associations, non profit public-interest organizations, capital gains earned from activities that are not the taxpayer's customary occupation, lottery prizes and commissions earned in which no costs are incurred, legacies, and bequests.

The **tax on dividends and interest from securities** applies to all dividend payments, equity stakes, interest paid or accrued from notes, bills of exchange or any other type of securities. The tax rate is 15 percent for both dividends and interest and, in 1997, it raised 0.32 and 1.9 percent of GDP and total tax revenues, respectively.

There are several types of **property taxes** in Costa Rica. They can be divided as follows: (a) Taxes on real estate (a land tax and a tax on luxurious construction). (b) Taxes on net worth (a tax on education and culture, a tax on vehicle property, and a 1

⁹ For more detail on total income tax revenues on current prices, as a percentage of total tax receipts and GDP, see the Appendix.

percent tax on firms' assets). (c) Taxes on properties' transfer (a tax on transfer of real state and a tax on the transfer of exempted vehicles).

All property taxes represented 0.72 and 0.12 percent of tax revenues and GDP in 1997, respectively. On 1996, the territorial tax was decentralized to a municipal government tax within the 0.3 and 1 percent range of taxable value. Among the taxes on net worth, the one levied on vehicle property is the one that raises the most revenue (Brenes, 1998).

A study prepared for the government (GET, 1998) points out the following shortcomings in income taxation:

- i) The tax base is too small. Only 10 percent of registered workers pay income taxes as a result of the relatively high level of exemption.¹⁰
- ii) Differential tax treatment violates horizontal and vertical equity. Since rates vary with the type of activity, the source of income (wages, interest and dividends), financing of investment (capitalization or debt), and the legal status (legal entity or individual), the tax burden is different for activities that generate the same gross revenues. This situation has worsened because deductions, fiscal credits and exemptions also vary across cases.
- iii) Income tax discriminates in favor of debt financing because nominal interest paid can be deducted from taxable income.
- iv) The tax base is dependent on income generated on the national territory by residents instead of taxing all citizens independent of where income is generated.

The report mentioned above concludes that there is no reason to maintain the tax on dividends as a separate tax. In addition it recommends a unification of the tax rates for personal income tax and a reduction of the tax range for legal entities.

Another study (Vargas, 1998) questions the fact that deductions to income encompass all expenditures incurred for profitable activities, including interest and other financial expenses paid. In Costa Rica, with inflation averaging 16 percent for the last

six years, interest payments are inflated, and thus the tax base has been reduced. Vargas proposes that only the real portion of interest paid should be deducted, so that, taxable income will rise. He also suggests that tax brackets should be indexed to maintain a progressive tax system.

Indirect Taxes

In Costa Rica goods and services are domestically taxed through three different taxes: (a) the VAT or value added tax, (b) excise taxes (*Impuestos selectivos al consumo*), and (c) other specific taxes on goods and services (cement, vehicles, coffee, etc.). Goods exempted from the VAT are not taxed by excises. In 1997, aggregated domestic indirect taxes amounted to 63.5 percent of total tax revenues and 10.7 percent of GDP.

The Value Added Tax

The **Value Added Tax** is the preferred indirect tax in Costa Rica for several reasons: (i) It taxes consumption instead of production, thus avoiding resource allocation distortions, and it does not discriminate based on the origin of the goods (domestic or foreign production). (ii) It is preferred to a sales tax because it only taxes the “value added” in each stage of production, and it is designed to encourage tax compliance along the stages of production. (iii) It taxes most goods (except those expressly exempted) at the same rate (currently 13 percent) and at their consumption stage, thus facilitating tax administration and lowering tax enforcement costs.

One of the most significant shortcomings of the VAT in Costa Rica is that it is not as universal as it should be. Its tax base has been successively undermined over the years. It not only exempts goods considered part of the basic food bundle, but also other food products, the purchases of local governments and governmental agencies, agricultural

¹⁰ This is three times the per capita GDP level.. It contrasts against the levels of exemption in South America (similar to the per capita GDP level) and the rest of Central America (1.8 times the per capita

products and inputs, pharmaceuticals, cultural goods, and exports.¹¹ Regarding services, only a few are taxed: entertainment (except sports), publicity, cable TV, electricity, telephone, customs services and real state services, but it excludes many services like private health care, schooling, house rentals, beauty services, car washing, medical care and professional services in general.

This exemption list entails some important implications:¹²

- i) Since the base is undermined, revenues can be increased only by raising the tax rate. Very high tax rates, in turn, induce tax avoidance and evasion.
- ii) It undermines one of the main advantages of the VAT, its auto-enforcement design. This is the case because several inputs of non-exempted activities are exempted and therefore can not be used as fiscal credits towards VAT liabilities.
- iii) The exempted food bundle not only includes goods consumed by lower income families but also goods that are typically consumed by higher income individuals.
- iv) The list of exempted goods can artificially protect domestic production *vis-à-vis* imported goods that pay tariffs. Such is the case of agricultural products.
- v) The executive can alter the content of the exempted list, thus creating an opportunity for lobbying for exemption.
- vi) Some exemptions are used as subsidies. This is the case of energy consumption below 250 kWh.

A VAT with a broader base and an efficient tax administration would raise tax revenues without the need of tax rate hikes. Furthermore, the fewer the exemptions, the less chance for fraud and the lower the costs for tax collection and administration.

The Excise Taxes

In most countries, **excise taxes** or *Selective Consumption Tax (SCT)* are limited to a few goods and services with inelastic demands or which are associated with negative externalities. In Costa Rica, however, the excise tax base is extremely large. There are approximately 1500 goods and services taxed. This tax has been subject to numerous

GDP). See Shome (1995).

¹¹ Note that exports are exempted but in practice they are taxed at a 0% rate because they receive the fiscal credit for value added when sold.

changes in its tax base and tax rates but, despite many reforms, its proceeds have remained quite stable.

The use of excise taxes within the Costa Rican tax structure is often criticized under several arguments (Vargas, 1998):

- i) It distorts resource allocation through its heterogeneous tax rates (tax rates range from 15% to 200%).
- ii) It induces smuggling, underinvoicing and tax evasion thus producing disloyal competition among producers. A clear example is the case of the free trade zone called *Deposito Libre de Golfito*, where goods are exempted of these taxes.
- iii) Because its base is so big, administration costs are too high.
- iv) The executive can arbitrarily, although within certain limits, alter the tax rates and tax new goods and services.

In theory, the excise tax or *Selective Consumption Tax* is one with differential rates. In practice, however, it is like many different taxes on the consumption of goods and services. Cornick (1997) says that these taxes are “a second, and very badly designed, sales taxes.” He claims that such complexity has no fiscal or economic justification and it adversely affects tax administration. The following table highlights the fact that only a subset of goods raises the bulk of this tax’s total revenues.

Table 4: Excise Tax Revenues

| Goods taxed with excises(SCT) | Tax rate in 1996 | 1996 Revenue (millions of colones) | % of excise tax revenues | Accumulated % |
|-------------------------------|------------------|------------------------------------|--------------------------|---------------|
| Hydrocarbons | 15-35 | 26,000 | 39.4 | 39.4 |
| Vehicles | 25-40 | 9,848 | 14.9 | 54.3 |
| Cigarettes | 70 | 3,625 | 5.5 | 59.8 |
| Beer | 45 | 2,956 | 4.5 | 64.3 |
| Sodas | 30 | 1,661 | 2.5 | 66.8 |
| Detergents | 15 | 1,588 | 2.4 | 69.2 |
| Clothing | 15 | 1,383 | 2.1 | 71.3 |
| Subtotal | | 47,161 | | 71.3 |
| All other goods taxed | Range(5-60) | 18,845 | 28.7 | 100.0 |

Source: Departamento de Política Fiscal, Ministerio de Hacienda

Other taxes such as the tax on pork, taxes on lottery prizes, and permits or licenses, are insignificant as a share of revenue and certainly not cost-effective. On the other hand, they contribute to the creation of an unnecessarily complex and distorted tax structure.

These taxes include, among other, the following:

i) Taxes on sales

- Gross Sales Tax for TAMA S.A
- Casinos
- Sales Tax on Free Trade Depot Golfito

ii) Taxes on production and consumption of goods

- Regular Liquors
- Sugar consumption
- Foreign alcoholic beverages
- Subsidized coffee
- Used cars
- Cement (10% Cartago Development)
- Cement consumption
- Beer consumption
- Matches and cigarettes
- Fuel
- 12% tax on fuel sales
- Gasoil and other oil derivatives
- Fuel (c 0.5 per liter)
- Domestic liquors and alcoholic drinks
- IFAM's contribution
- Sodas
- Pork

iii) Taxes on services:

- Radio and TV advertisements
- Rail tickets
- Hospital and Maternity stays
- Movies shown in theatres and on TV
- National Lottery Prizes

C. TAXES ON FOREIGN TRADE

Costa Rica, in the last two decades has attempted to reduce tariffs on foreign trade and exports, especially on traditional exports. However, the import tariffs (*Derechos*

Aduaneros de Importacion or DAI) were an important source of revenue (5.4% of GDP in 1985, 3.9% in 1990 and 2.4% in 1997), and thus, difficult to modify. Nevertheless, in line with the Central American Common Market agreements, the average tariff has fallen from 22.3 to 9.6 percent from 1986 to 1996. It is scheduled to fall further in 1998 to 0% for raw materials, 1% for capital goods, 7% and 12% for intermediate goods, and 17% for consumption goods.

Most export taxes were eliminated in December 1994 except the following: 1) Banana crops (0.18 colones per box exported, 1% of the FOB price and 1.5 cents per box). 2) Coffee crops (1% of FOB if value is above \$92 colones). 3) Meat (1% of FOB), and 4) Cattle (6% and 1% of FOB value).¹³

Fiscal Incentives

Beginning in the 1990s Costa Rica began to use fiscal incentives widely to promote the development of the export, tourist, industrial, agricultural and forestry sectors.¹⁴ Fiscal incentives include the exemption of indirect or direct taxes for a specified number of years, fiscal credit towards investment, the creation of free trade zones and the enactment of more convenient asset depreciation schemes. In the case of non-traditional exports, Costa Ricans can temporarily import without paying import tariffs and receive a tax credit of up to 25 percent of their exports. These tax certificates are called *Certificados de AbonoTributario* (CAT) and their fiscal cost is estimated to be about 5% of tax revenues (Vargas, 1998).

In brief, this marked protection of certain industries not only has a high short-term fiscal cost, but it also affects relative prices and resource allocation. To make matters worse, it produces a wedge between income growth and the evolution of total tax revenues.

¹³ Grupo Especial de Trabajo, op. Cit.

¹⁴ For a full description of each fiscal incentive scheme, see Brenes, (1997) and Cornick (1998)

D. TAX ADMINISTRATION REFORMS

Tax administration is an extremely important issue in less developed countries. Given the difficulties facing these economies, simpler taxes with broader bases are more effective than regimes with differential tax rates, incentive schemes, and exemptions even though these may, in theory, be useful towards achieving progressiveness and redistribution goals. Lately, the main priority in local tax policy has been to modernize the tax system and its administration.

In September 1995, a new tax code was introduced. It included:

- The elimination of several minor taxes.
- A reduction in the corporate income tax bias in favor of debt financing.
- The introduction of cross-checking between tax returns and other sources of information on income and business activities.
- The creation of a new gross asset tax.
- The strengthening of the legal framework for tax collection, administrative procedures, and punishment for tax evasion.
- The phasing-out of exemptions and tax incentives for the tourist, manufacturing and non-traditional export sectors.

More recently, in 1997 there was an 80 percent increase in the number of large taxpayers subject to scrutiny. Large taxpayers represent around 60 percent of total income tax collections. Regarding the modernization of the system's administration, a new information system and other institutional improvements, both in the Internal Revenue Agency and in the Customs Agency were recently introduced.¹⁵

V. TAX REFORM IN COSTA RICA

A. DESIRABILITY OF A TAX REFORM

Beginning in the 1980s most industrialized and developing economies underwent changes in their taxation structures. Most reforms sought to increase horizontal and

¹⁵ IMF, (1998).

vertical equity, encourage savings and efficient investment, improve tax administration, and reduce tax evasion. Some of the general principles pursued were:

- The reduction of high marginal tax rates and tax exemptions in order to avoid distortions in resource allocation.
- The adequacy of capital taxation to the increased capital mobility in world markets, so as to avoid capital flight.
- A tendency towards deregulation, free markets and increased participation of the private sector in economic activity.

However, most countries that have undergone reform in the name of these objectives, have at the same time experienced a perceptible increase in their tax revenue to GDP ratios because their tax structures were improved. Costa Rica would benefit from both, a more equitable tax structure and a more efficient set of taxes. For many years the priority has been set on the latter, and equity concerns were neglected. In the past, horizontal equity in Costa Rica's tax structure had been severely affected thus hindering efficient investment and making tax administration more difficult.

Reform in Costa Rica has been thoroughly discussed among local economists and there is consensus on the main shortcomings of the current structure and the priorities of any structural tax reform.

The following is a summary of the main recommendations for structural reform in the Costa Rican tax system:¹⁶

- i) **VAT should be a general tax.** The bundle of goods exempted from VAT should be reduced to a few basic consumption goods (goods that represent a high percentage of lower income families' consumption). This reform would not only facilitate tax administration but also allow tax revenue increases without further increases in the tax rate. The list of VAT exempted goods should not be used for protecting certain activities from foreign competition.

- ii) **Excise taxes should be selective.** Goods subject to excise tax should be limited to those with high income-elasticities and/or low price-elasticities. A cost-benefit analysis suggests that only those taxes that provide the bulk of these tax revenues should be maintained.
- iii) **The Executive's power to alter the tax base and/or tax rates has to be eliminated.** It is preferable that this power be limited to the Assembly. This would eliminate wasteful use of resources in rent-seeking and provide stable rules for the future.
- iv) **Tariffs on imports and taxes on exports should be further reduced and unified.**
- v) **Marginal income tax rates should be kept at competitive levels and be equal across sources of income.** Dividends and interest earned should be taxed at the same rate than other sources in order to eliminate horizontal inequities. Tax deductions ought to be expressed in real terms and the bias towards debt financing should be eliminated.
- vi) **Eliminate minor (distortionary) taxes.** Strict cost-benefit analysis shows that the cost of administrating minor taxes exceeds their proceeds (not to mention the distortions they introduce).
- vii) **Avoid using fiscal incentives to promote activities or compensate distortions.** Existing fiscal incentives should be phased out. Distortions should be eliminated instead of compensated and the most dynamic sectors should contribute to tax revenues in proportion to their growth.
- viii) **Establish a general revenue clause in the Constitution.** One of the reasons why the Costa Rican tax system is so overloaded with minor and inefficient taxes is because they are often created and earmarked to finance specific expenditures. Cornick (1997) suggests that eliminating future earmarked taxes, or in other words, establishing a general revenue clause in the constitution would discourage

¹⁶ See GET (1996), Vargas (1997) and Cornick (1998).

the creation of new taxes while inducing improvements in the structure of the current tax system or in tax administration.

- ix) **Continue tax administration reform and modernization efforts.** A deepening of 1994's tax administration reform would require human resources training, investment in information systems and the creation of autonomous collection agencies throughout the country.

B. THE GOVERNMENT'S PROPOSAL¹⁷

Income Tax

The government is planning to enlarge the income tax base by eliminating a variety of fiscal incentives and exemptions). It is also considering:

- Unifying tax rates and a lowering of the marginal tax rate to 28%
- Reducing the number of tax brackets for individuals
- Eliminating the asset tax
- Maintaining the 8% tax on interest earnings, and
- Eliminating the tax on dividends.

Most of these modifications follow the recommendations contained in the diagnosis prepared for the Ministry in 1996 (GET, 1998).

VAT

The administration would like to modify the current structure of the VAT by eliminating the power of the Federal Government to change the list of goods and services exempted from the tax. This policy seeks to reduce the distortions created by exemptions such as those on professional services and eliminate the exemption on government

¹⁷ This proposal was presented to Congress in mid-1998. Since then, it has been changed several times and the final version differs from the one analyzed here. Nevertheless, we believe that the numerical results discussed in the next section, are useful in understanding the nature and magnitude of the likely effects of similar tax reforms in Costa Rica.

transactions. Simultaneously, this policy seeks to enlarge the tax base, for example, by reducing the list of goods exempted from the VAT up to a maximum of 40 products.

Excise taxes (Impuestos Selectivos al Consumo)

The proposed tax reform includes important changes in the nature of most of the excise taxes. Some proposals include limiting the excise tax to the following groups of goods:

- Vehicles (standardize the valuation and tax rates for new and used vehicles)
- Hydrocarbons: does not specify.
- Cigarettes: keeping the 70% tax rate.
- Drinks (beer, liquors and sodas): apply new rates and redefine goods.
- Cosmetics and perfumes: keep the tax rates at 30%.
- Electrical appliances: reduce the current tax rate.

Table 5 provides information about the relative importance of different goods, according to their status in the proposal.

Table 5: Reform in Excise Taxes

| Goods that: | % of Excise Tax Revenues | % of Total Tax Revenues | Tax Revenues/GDP | % of consumption |
|------------------------------|--------------------------|-------------------------|------------------|------------------|
| Continue to Pay Excise Taxes | 71.3 | 14.9 | 2.5 | 12.2 |
| Become Exempt | 28.7 | 6.0 | 1.0 | 15.0 |
| Continue to be Exempt | 0 | 0 | 0 | 72.5 |

VI. REVENUE IMPACT OF THE GOVERNMENT’S PROPOSED REFORM

Eliminating the government’s power to arbitrarily change the tax base, by exempting new goods and services from the VAT, would be most useful in Costa Rica. The stability of tax rules has institutional importance, and although such stability would limit the fiscal tools available, it would have no impact on tax revenues.

On the other hand, eliminating the VAT exemption for professional services might have some positive revenue impact, but only if truly enforced. Eliminating the exemption for government transactions will have no fiscal impact since tax revenues will rise at the same rate as government expenditures.

Some of the shortcomings in the VAT structure that are not addressed in the administration's reform agenda include:

- **A permanent increase in the rate of the VAT.** The economic authorities have expressed their willingness to keep the VAT rate at 13%. However, since all the other reforms will most likely result in a lower tax burden, a compensatory increase in the VAT might be useful. In the past, temporary increases with gradual reductions were easily introduced; however, a permanent change would solve not only short term concerns but allow further improvements in the tax structure without fiscal constraints.

- **Improvements in the tax administration of the VAT.** This problem is indirectly affected by the elimination of exemptions, which creates loopholes in the structure and facilitates tax evasion. Other countries in the region have attempted to strengthen their VAT administration by requiring authorized receipts, tax credits of VAT paid towards other tax liabilities, lotteries, etc.

A. MODEL OF PROJECTED REVENUE LOSS

The government will, among other things, reduce the base of the excise taxes by limiting it to those few goods that raise the bulk of revenues. They also plan to accelerate the tariff reduction process and to modify the income tax structure.

Any attempt to reform Costa Rica's cumbersome tax structure has to take into account its impact on tax revenues. The impact of reduction in the excise tax is, on the other hand, quantifiable and the methodology used is explained below.

Tax reforms are usually judged in terms of their results, which are often measured in terms of tax revenue impacts. Theory predicts that the elimination of distortive taxes will have in the long term a beneficial impact on resource allocation, productivity, investment and GDP growth. Since tax revenues are pro-cyclical and Costa Rica's tax system already shows elasticities greater than one, higher growth will eventually show in higher tax revenues. However, this is a long-term impact.

In the short-term, the elimination of some 1500 excise taxes –which represent 15% of total household consumption-- will have an immediate negative effect on tax revenues. This effect can be broken down into a negative direct effect (resources that are being given up), and an indirect effect caused by a generalized rise in income (income effect) and a change in relative prices that will alter consumption patterns (substitution effect). The income effect will have an offsetting effect in tax revenues since prices of many goods will fall and individuals, feeling richer, will consume more. On the other hand, Costa Ricans may divert consumption to the newly tax-exempt goods away from the taxed goods (substitution effect). The final impact of the elimination of exemptions is thus ambiguous since it depends on which of these two effects prevails. Further impacts (not quantified in this section) include those that would come from efficiency gains in tax collection once the system is simplified.

The extent of the loss on total tax revenue depends on (a) the relative importance of consumption in the newly exempted goods, (b) the magnitude of the income effect and (c) the magnitude and composition of the substitution effect.

For the purpose of simplicity we divided goods in four categories in Table 6. After the reform there will be a much shorter list of goods that pay both excise and VAT. Those are referred to as goods type 1. Then, there is a group of goods that no longer pay excises (the newly exempted goods, as many as 1500) but still pay VAT. We will refer to these as goods type 2. Third, there is goods type 3, which are goods that never paid,

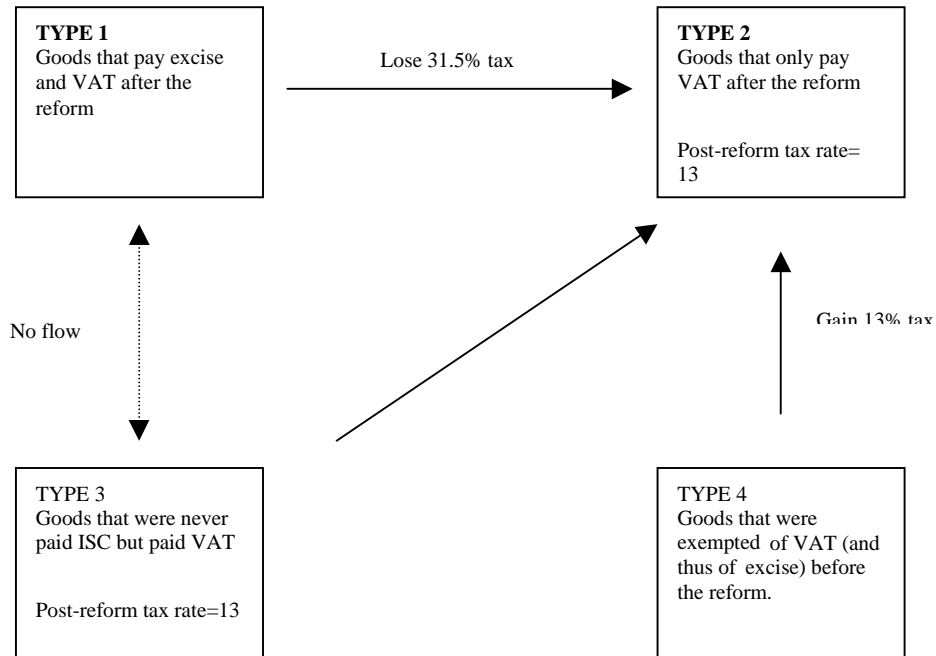
nor will pay SCT but pay VAT. Finally there are goods that were and are exempted from VAT and thus also from SCT.

Table 6: Taxation on Various Goods after Tax Reform

| After the Reform | VAT | Excises |
|-------------------------------|------------|----------------|
| Goods type 1 (eg. Vehicles) | ✓ | ✓ |
| Goods type 2 (newly exempted) | ✓ | No |
| Goods type 3 | ✓ | No |
| Goods type 4 (VAT exempt) | No | No |

Figure 1 illustrates the expected flows in consumption due to the substitution effect generated by the elimination of excise taxes on a large number of goods (type 2). The price of goods type 2 will fall relative to the rest of the goods traded in this economy. To the extent that there is a decrease in consumption of goods that continue to pay excises (type 1) revenues from excise tax on these goods will be lost. The average marginal tax rate on these goods is approximately 31.5%. On the other hand, if increased consumption of goods type 2 comes from goods type 4 (VAT exempted goods), then there will be an increase in total revenues arising from the 13% VAT rate. Flows from goods type 3 to goods type 2 are expected but will have no impact on tax revenues, since they already paid VAT.

Figure 1: Expected Flows in Consumption



B. DATA DESCRIPTION

Desegregated or time series data were not available. The only data we found was a table, which showed tax revenues by type of goods and the excise tax rates in 1996. This information allowed us to calculate the tax base by type of goods. Also, since we knew that during 1996 the VAT tax rate was 15%, we were able to estimate the VAT tax revenues for each category.¹⁸

According to the reform proposal, type 1 goods are hydrocarbons, vehicles (cars, motorcycles, boats, planes, etc), cigarettes, drinks (beers, sodas, liquors, fruit juices), electric appliances and cosmetics. A list of goods type 2 is included in the Appendix and was drawn from the 1996 table mentioned above. Goods of type 4 are those included in

¹⁸ Note that since the VAT is applied to prices that include ISC the VAT tax revenue is equal to base* (1+Ts)*Tv where Ts is the ISC rate before the proposed reform and Tv is the VAT tax rate (15%).

the VAT exemption list since these goods can not be taxed with any other tax. The rest of the goods traded in the economy are type 3.

For the purpose of the analysis, consumption patterns were approximated by linking types of goods and services within each category to the weight that different goods have in the Consumer Price Index calculations. The Consumer Price Index for 1989 was used instead of that of 1995 because the categories match was clearer. We based our calculation on the inference that goods type 1 represent approximately 12% of household consumption, goods type 2 represent 15% and the goods exempted from VAT (and thus from excises account for approximately 73% of total household expenditure.

C. METHODOLOGY AND RESULTS

Estimation of the Direct Effect

1. This effect originates in the reduction from 16.4 to 0 percent on the effective average tax rate for type 2 goods. The estimation of the upfront loss in tax revenues requires a measure of the tax base of the goods whose tax is being modified. We used the 1996 data to express the base as a percentage of GDP. The tax base for this set of goods constituted 6.2% of GDP in 1996 and raised revenues equivalent to 1.01% of GDP.¹⁹ Under the assumption that neither the excise tax base, nor the average excise tax rate changed, and because of data unavailability, we conclude that 1.01 % is a good approximation to the total tax revenues lost as a direct result of the excise exemption.

¹⁹ In 1998, these percentages may be slightly higher given that there were some tax rate increases in the last two years. Unfortunately, there is no desegregated data for this year, which makes it impossible to distinguish between types of goods.

Table 7: Tax Revenue Loses

| | Excise tax | Excise tax | Tax base as % of GDP (1996) | Effective excise tax rate before reforms (Ts) | Estimated VAT | | SCT revenue lost | VAT revenues lost (cascade effect) |
|--------------|--------------------|--------------------------------------|--------------------------------------|---|---------------|---------|------------------------|--|
| | revenues (1996) | revenues as % of GDP (1996) | | | before * | after** | | |
| Goods Type 1 | 47061 | 2.51 | 9.12 | 0.28 | 1.52 | 0.04 | 0 | 0 |
| Goods Type 2 | 18944.2 | 1.01 | 0.93 | 0.80 | 0.22 | 0.10 | -1.01 | -0.13 |
| Goods Type 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Goods Type 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

2. The cascade effect on VAT revenues was calculated by using the tax base for 1996, and a VAT rate of 13% (as in 1998) before and after the reduction in excise taxes. For the 1996 tax base, VAT revenues were calculated and the estimated cascade effect amounts to approximately 0.13% of GDP.

In sum, the elimination of these taxes would, per se, reduce total tax revenues by 1.14% of GDP.

Estimation of Indirect Effects

1. The Income effect compensation on lost tax revenues was calculated with income elasticities ranging for 1 (the most likely) to 3 (least likely) and showed an offsetting effect ranging from 0.1 (elasticity=1) to 0.29 (elasticity=3).
2. Substitution effects were not as easy to quantify. Since all type 2 goods pay different excise tax rates, relative prices will change throughout the economy, consumption patterns will be adjusted and so will be total tax revenues (remaining excises and VAT revenues). However the available data allowed us to approximate the magnitude of the impact under different scenarios by building a spreadsheet containing a partial equilibrium model based on the following utility function:

$$U(x) = \left(\sum_{i=1}^n \alpha_i x_i^p \right)^{1/p}. \text{ This function assumes constant price elasticity across goods,}$$

which is convenient for the calculus but implies that we ignore the possibility that price elasticities may be different for, say, type 1 goods (vehicles, drinks, hydrocarbons, etc.) and type 4 goods. Price elasticity is equal to $1/(\rho-1)$.²⁰ In a second stage of our analysis, we consider relative price elasticities among types of goods. The individual in the model maximizes subject to his budget constraint

$(\sum_{i=1}^n p_i x_i (1 + \tau_i) = Q)$. In equilibrium:

$$x_1 = \frac{Q}{1 + \sum_{i=2}^n (1 + \tau_i) \left(\frac{(1 + \tau_i)}{\alpha_i} \right)^{1/\rho-1}} \quad \text{and} \quad x_k = \frac{Q \left(\frac{(1 + \tau_k)}{\alpha_k} \right)^{1/\rho-1}}{1 + \sum_{i=2}^n (1 + \tau_i) \left(\frac{(1 + \tau_i)}{\alpha_i} \right)^{1/\rho-1}} \quad \text{for } k \neq 1.$$

After computing all the α_i 's we could calculate the actual consumption pattern (x_1, \dots, x_n)

and total tax revenues $T = \sum_{i=1}^n x_i \tau_i$ by type of good.²¹

Repeating these calculations for the post reform tax rates produced new α_i 's, new consumption patterns and different tax revenues.

Finally, we replicated the quantification for different values of ρ to represent different scenarios ranging from one in which goods in the economy are perfect substitutes to one in which they are perfect complements. The results are displayed in the following table:

²⁰ If $\rho=0$ the utility function is Cobb-Douglas, if $\rho=1$ goods are perfect substitutes, and if $\rho=-\infty$ it is a Leontief.

²¹ This methodology suited the available data but is limited in that:

1. It does not capture the effect that an asymmetrical change in tax rates has on goods that are close substitutes or complements.
2. It is a partial equilibrium analysis and thus just captures the effect of τ on x , but not the indirect effect of τ on p and of p on x .
3. Not all of the goods affected by this reform are consumption goods.

Table 8: Differences in Tax Revenues (in percent)

| Model with 4 goods | | | | | | | | | | | | | |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| rho | 0.8 | 0.5 | 0.25 | 0 | -0.1 | -0.5 | -1 | -2 | -4 | -8 | -15 | -50 | -100 |
| in goods type1 | -0.26 | -0.05 | -0.02 | 0.00 | 0.00 | 0.02 | 0.02 | 0.03 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 |
| in goods type 2 | -0.34 | -0.87 | -0.97 | -1.01 | -1.02 | -1.05 | -1.07 | -1.09 | -1.11 | -1.12 | -1.13 | -1.13 | -1.13 |
| in goods type 3 | -0.24 | -0.05 | -0.02 | 0.00 | 0.00 | 0.02 | 0.02 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| in goods type 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total revenue impact | -0.83 | -0.97 | -1.00 | -1.01 | -1.01 | -1.02 | -1.03 | -1.03 | -1.04 | -1.04 | -1.04 | -1.04 | -1.04 |

The numbers in this table and the tables to follow represent percentage changes. In this case, it would be percentage change in total tax revenues under the new consumption patterns. The results summarized in Table 8 showed that if ρ is positive (goods are substitutes), there would be tax revenue losses in all categories of goods, because the substitution effect will produce consumption shifts in all directions. When ρ is zero, all revenue loss comes from the goods being exempted from the excise tax, and it is purely an income effect. To the extent that goods are more complementary to each other (negative ρ 's), there is a loss in revenue from goods exempted but there is also a gain in revenue from increased consumption in goods type 1 (still paying excise and VAT) and type 3 (paying VAT).

When we look at differences in consumption patterns we observe similar trends. Under a positive ρ consumers buy more of goods 2 and less of goods 1 and 3, when ρ is zero there is only increased consumption in those goods whose relative prices have fallen and, as ρ becomes negative, there is more consumption of other types of goods as well.

We also calculated tax revenues based on the pre-reform expenditure patterns and the post-reform tax rates. This gave us an idea of the impact on revenues had there not been changes in consumption patterns. By comparing these numbers to the tax revenues observed with the new expenditure patterns, we could get a rough estimate of what the revenue impact directly attributable to the substitution effect would be. Results are shown in the following table:

Table 9: Differences in Tax Revenues under old and new consumption patterns valued at t1 (Substitution effect)

| Model with 4 goods | | | | | | | | | | | | | |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| rho | 0.8 | 0.5 | 0.25 | 0 | -0.1 | -0.5 | -1 | -2 | -4 | -8 | -15 | -50 | -100 |
| in goods type1 | -0.256 | -0.053 | -0.017 | 0.000 | 0.004 | 0.016 | 0.024 | 0.032 | 0.038 | 0.042 | 0.044 | 0.046 | 0.046 |
| in goods type 2 | 0.803 | 0.270 | 0.176 | 0.132 | 0.120 | 0.089 | 0.068 | 0.048 | 0.032 | 0.022 | 0.016 | 0.012 | 0.010 |
| in goods type 3 | -0.238 | -0.049 | -0.016 | 0.000 | 0.004 | 0.015 | 0.022 | 0.030 | 0.035 | 0.039 | 0.041 | 0.043 | 0.043 |
| in goods type 4 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Total revenue impact | 0.309 | 0.168 | 0.143 | 0.132 | 0.128 | 0.120 | 0.115 | 0.109 | 0.105 | 0.103 | 0.101 | 0.100 | 0.099 |

A final set of exercises consisted in finding, (a) which VAT rate would leave tax revenues unchanged, and (b) alternatively, at the current VAT rate what would be the VAT base that would avoid a fall in revenues²².

The VAT rate that would leave tax revenues unchanged after the excise tax reform ranged between 13.7% (if goods were nearly perfect substitutes) to 15.4% (when they were highly complementary). This finding is most interesting, from a public policy perspective. **The fiscal cost of the elimination of these distortive taxes is equivalent to the fiscal benefit of raising the VAT tax by at least 1%.** In other words, to avoid a fall in total tax revenues, the VAT would need to be raised at the same time that excise taxes are eliminated.

Table 10: Offsetting changes in VAT rate or base

| rho | 0.8 | 0.5 | 0.25 | 0 | -0.1 | -0.5 | -1 | -2 | -4 | -8 | -15 | -50 | -100 |
|-------------------------|--------|--------|--------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Loss in revenues | -0.834 | -0.975 | -1.000 | -1.012 | -1.015 | -1.023 | -1.028 | -1.034 | -1.038 | -1.041 | -1.042 | -1.044 | -1.044 |
| Current tax revenues | 6.190 | 6.190 | 6.190 | 6.190 | 6.190 | 6.190 | 6.190 | 6.190 | 6.190 | 6.190 | 6.190 | 6.190 | 6.190 |
| Offsetting VAT tax rate | 0.148 | 0.150 | 0.151 | 0.151 | 0.151 | 0.151 | 0.152 | 0.152 | 0.152 | 0.152 | 0.152 | 0.152 | 0.152 |
| Offsetting VAT tax base | 6.415 | 7.500 | 7.692 | 7.783 | 7.807 | 7.869 | 7.911 | 7.952 | 7.984 | 8.005 | 8.017 | 8.027 | 8.029 |
| Required % change | 0.135 | 0.158 | 0.162 | 0.163 | 0.164 | 0.165 | 0.166 | 0.167 | 0.168 | 0.168 | 0.168 | 0.169 | 0.169 |

²² This analysis assumes that the relative prices of type 1 and type 3 goods are changing proportionately. That is why the model predicts no flows between goods type 1 and goods type 3.

Finally, we calculated VAT tax base that would leave total tax revenues unchanged only to find that it would take a 16.3% increase in the current tax base to compensate for the revenue lost if the tax rate remains at 13%. Changing the VAT tax base would imply reducing the list of type 4 goods –which has proved politically unfeasible- and has recently been discarded from the reform proposal.

VII. SUMMARY AND CONCLUSIONS

Recurrent and even contradictory reforms have characterized the Costa Rican tax structure. VAT rates have changed annually during the nineties, excise taxes have proliferated, and there have been frequent changes in tariffs and export taxes. Reforms often led to the erosion of the tax base, and consequently the total tax burden increased only slightly in the past 15 years.

In the second half of 1998, the Costa Rican government was about to undertake a new tax reform. The current administration was planning to enlarge the income tax base through the elimination of several fiscal incentives and exemptions, the unification of tax rates, the lowering of marginal tax rates, the reduction in the number of tax brackets, and the elimination of the asset tax and the tax on dividends. They were also trying to enlarge the base of the VAT by reducing the list of goods and services exempted and rescind the executive's power to change the list of exempted goods. Finally, they were considering to limit the excise taxes to those goods that raise the bulk of this tax's revenues.

Enlarging the income tax base would allow Costa Rica to reach the levels of revenue raised by other Latin American countries. Reducing exemptions to the VAT would enlarge the tax base and reduce opportunity for tax evasion. Eliminating excise taxes (the SCT) except for a few types of goods, meets the goal of making excises a “selective” tax, reduces the system's complexity, and eliminates the opportunities and incentives for

smuggling, under-invoicing or tax evading. In addition, as the system becomes increasingly simple, administrative costs will fall.

While beneficial in the long term, the third part of the reform proposal, the elimination of some excise taxes will entail important short-term costs. Tax revenues will fall as an immediate consequence of the elimination of the SCT on all but a few types of goods. In the last section of this paper, we analyzed the revenue impact of this proposal. This impact on revenue is comprised of two effects, a direct and an indirect one. The direct effect is merely the resources lost from the goods that will be exempted. It is the lost SCT revenues plus the cascading effect on VAT paid on those goods since the VAT was paid on SCT-inclusive prices. **According to our estimations, the direct loss of revenue would amount to 1.14 percent of GDP.**

The indirect effect is related to the substitution patterns in household consumption. The magnitude of the substitution effect is tied to the changes in consumption patterns after the reform. In the last section of this paper, we tried to assess the reform's overall revenue impact. Using 1996 data on SCT revenues we were able to estimate consumption patterns and tax revenues before the reform. Then, we built a simple model that allowed us to derive the likely consumption patterns in the post-reform scenario.

We assumed that the level and composition of revenue losses would depend on the degree of substitution among types of goods. **The analysis showed that to the extent that goods are substitutes to each other, there is more consumption of the newly exempted goods and VAT revenue on substituted goods is lost. The impact is minimized when goods tend to be more complementary to each other, because the lost SCT revenue is compensated by an increase in consumption of goods taxed with VAT.**

Policy makers can not alter the degree of substitutability among good types. However, the analysis in that it shows what the expected revenue loss would be in the

worst case scenario. On the other hand, the analysis uncovered the required permanent raise in the VAT rate (or expansion of the VAT base) that could offset the projected loss in tax revenue. **We were able to conclude that the fiscal cost of the elimination of these distortive taxes, once substitution effects are considered, would be fully compensated for by a rise of at least 1% in the VAT rate.**

To the author's knowledge, the administration's reform proposal, although it includes the elimination of some VAT exemptions, does not specifically address the need to compensate for the resources that will be lost. **The administration ought to seriously consider enlarging the VAT base and/or increasing the VAT rate simultaneously to the elimination of several excise taxes and fiscal incentives.**

VIII. APPENDIX I: TAX REVENUES

| Income and profit taxes | | | | | | | | | | |
|---|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Tax | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997* | 1998** |
| million colones | | | | | | | | | | |
| Income Tax | 7,097 | 8,847 | 10,482 | 14,036 | 21,831 | 26,703 | 37,735 | 42,348 | 55,000 | 64,000 |
| Tax on dividends and interest of bonds | 2,402 | 2,973 | 4,062 | 4,977 | 5,108 | 7,835 | 10,685 | 9,741 | 7,000 | 8,500 |
| Other taxes on profits | 60 | 75 | 110 | 71 | 71 | 45 | 71 | 137 | 1 | 1 |
| TOTAL | 9,559 | 11,896 | 14,654 | 19,085 | 27,011 | 34,582 | 48,491 | 52,226 | 62,001 | 72,501 |
| % tax revenues | | | | | | | | | | |
| Income Tax | 12.2 | 12.8 | 11.0 | 10.6 | 14.1 | 14.4 | 15.5 | 14.5 | 14.7 | 14.1 |
| Tax on dividends and interest of bonds | 4.1 | 4.3 | 4.3 | 3.8 | 3.3 | 4.2 | 4.4 | 3.3 | 1.9 | 1.9 |
| Other taxes on profits | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | 16.4 | 17.3 | 15.4 | 14.4 | 17.5 | 18.6 | 20.0 | 17.9 | 16.6 | 15.9 |
| % GDP | | | | | | | | | | |
| Income Tax | 1.67 | 1.69 | 1.52 | 1.55 | 2.04 | 2.04 | 2.33 | 2.26 | 2.48 | |
| Tax on dividends and interest of bonds | 0.56 | 0.57 | 0.59 | 0.55 | 0.48 | 0.60 | 0.66 | 0.52 | 0.32 | |
| Other taxes on profits | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | + | 0.01 | 0.01 | 0.00 | |
| TOTAL | 2.24 | 2.27 | 2.13 | 2.11 | 2.53 | 2.64 | 3.00 | 2.79 | 2.80 | |
| * updated estimates for 1997 tax revenues | | | | | | | | | | |
| ** revenues estimates | | | | | | | | | | |
| + insignificantly low number | | | | | | | | | | |

Source: Contraloria General de la Republica.

| Property Taxes | | | | | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|
| Impuesto | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997* | 1998** |
| million colones | | | | | | | | | | |
| Additional tax on education and culture | 60 | 75 | 110 | 71 | 71 | 45 | 71 | 137 | 260 | 300 |
| Tax on vehicle property | 1,047 | 1,425 | 1,904 | 1,999 | 2,315 | 3,361 | 6,994 | 5,495 | 7,000 | 8,100 |
| 1% tax on firms' assets | | | | | | | | 748 | 3,500 | 4,000 |
| Tax on transfer of real state | 311 | 366 | 504 | 1,059 | 1,389 | 1,342 | 1,561 | 2,098 | 2,500 | 3,000 |
| Tax on transfer of exempted vehicles | 2 | 0 | 0 | 22 | 31 | 50 | 73 | 121 | 150 | 200 |
| TOTAL | 1,420 | 1,866 | 2,518 | 3,152 | 3,806 | 4,797 | 8,699 | 8,599 | 13,410 | 15,600 |
| % tax revenue | | | | | | | | | | |
| Additional tax on education and culture | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| Tax on vehicle property | 1.8 | 2.1 | 2.0 | 1.5 | 1.5 | 1.8 | 2.9 | 1.9 | 1.9 | 1.8 |
| 1% tax on firms' assets | | | | | | | | 0.3 | 0.9 | 0.9 |
| Tax on transfer of real state | 0.5 | 0.5 | 0.5 | 0.8 | 0.9 | 0.7 | 0.6 | 0.7 | 0.7 | 0.7 |
| Tax on transfer of exempted vehicles | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | 2.4 | 2.7 | 2.6 | 2.4 | 2.5 | 2.6 | 3.6 | 2.9 | 3.6 | 3.4 |
| % GDP | | | | | | | | | | |
| Additional tax on education and culture | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | + | 0.01 | 0.01 | 0.01 | |
| Tax on vehicle property | 0.56 | 0.57 | 0.59 | 0.55 | 0.48 | 0.60 | 0.66 | 0.52 | 0.32 | |
| 1% tax on firms' assets | | | | | | | | 0.04 | 0.16 | |
| Tax on transfer of real state | 0.07 | 0.07 | 0.07 | 0.12 | 0.13 | 0.10 | 0.10 | 0.11 | 0.11 | |
| Tax on transfer of exempted vehicles | + | + | + | + | + | + | + | 0.01 | 0.01 | |
| TOTAL | 0.64 | 0.65 | 0.67 | 0.68 | 0.62 | 0.70 | 0.77 | 0.69 | 0.61 | |
| * updated estimates for 1997 tax revenues | | | | | | | | | | |
| ** revenues estimates | | | | | | | | | | |
| + insignificantly low number | | | | | | | | | | |

Source: Contraloria General de la Republica.

| Taxes on Goods and Services | | | | | | | | | | |
|---|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|
| Tax | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997* | 1998** |
| million colones | | | | | | | | | | |
| Excise Tax | 9,535 | 11,096 | 11,119 | 22,840 | 25,444 | 30,378 | 35,205 | 46,559 | 61,000 | 69,000 |
| Value Added Tax | 16,772 | 21,326 | 35,081 | 50,816 | 56,497 | 65,645 | 84,979 | 131,196 | 110,320 | 176,000 |
| Tax on Casinos | 49 | 82 | 90 | 71 | 42 | 39 | 187 | 120 | 145 | 170 |
| Sales Tax on Free Trade Depot Golfito | | 75 | 575 | 600 | 950 | 883 | 1,176 | 1,531 | 1,800 | 2,000 |
| Tax on transfer of used cars | 345 | 497 | 612 | 849 | 1,493 | 1,613 | 2,092 | 2,462 | 3,200 | 3,600 |
| Tax on cement consumption | 8 | 9 | 12 | 17 | 19 | 21 | 19 | 27 | 34 | 44 |
| 3% Forestry Tax | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Pork tax | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tax on National Lottery Prizes | 337 | 325 | 323 | 357 | 523 | 463 | 514 | 512 | 722 | 739 |
| Tax on Liquors | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 |
| Special tax on the use of public roads | | | | | 104 | 42 | 70 | 83 | 110 | 140 |
| Wild Fauna contribution | | | | | | 6 | 3 | 15 | 12 | 12 |
| Licence for hunting and fishing | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 1 | 3 | 3 |
| Licence for hunting and fishing-MIRENEN | | | | | 0 | 6 | 2 | 6 | 7 | 7 |
| TOTAL | 27,047 | 33,412 | 47,814 | 75,551 | 85,074 | 99,094 | 124,248 | 182,506 | 177,346 | 251,708 |
| % of tax revenues | | | | | | | | | | |
| Excise Tax | 16.4 | 16.1 | 11.7 | 17.3 | 16.5 | 16.4 | 14.5 | 16.0 | 16.3 | 15.2 |
| Value Added Tax | 28.8 | 30.9 | 36.8 | 38.5 | 36.6 | 35.4 | 35.0 | 44.9 | 29.5 | 38.7 |
| Tax on Casinos | 0.1 | 0.1 | 0.1 | 0.1 | + | + | 0.1 | + | 0.0 | 0.0 |
| Sales Tax on Free Trade Depot Golfito | | 0.1 | 0.6 | 0.5 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 |
| Tax on transfer of used cars | 0.6 | 0.7 | 0.6 | 0.6 | 1.0 | 0.9 | 0.9 | 0.8 | 0.9 | 0.8 |
| Tax on cement consumption | + | + | + | + | + | + | + | + | 0.0 | 0.0 |
| 3% Forestry Tax | | | | | | | | | | |
| Pork tax | | | | | | | | | | |
| Tax on National Lottery Prizes | 0.6 | 0.5 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Tax on Liquors | + | + | + | + | + | + | + | + | + | 0.0 |
| Special tax on the use of public roads | + | + | + | + | 0.1 | + | + | + | + | 0.0 |
| Wild Fauna contribution | + | + | + | + | + | + | + | + | + | 0.0 |
| Licence for hunting and fishing | + | + | + | + | + | + | + | + | + | 0.0 |
| Licence for hunting and fishing-MIRENEN | | | | | + | + | + | + | + | 0.0 |
| TOTAL | 46.40 | 48.45 | 50.17 | 57.18 | 55.10 | 53.32 | 51.10 | 62.44 | 47.41 | 55.32 |
| % of GDP | | | | | | | | | | |
| Excise Tax | 2.24 | 2.12 | 1.61 | 2.52 | 2.38 | 2.33 | 2.17 | 2.49 | 2.75 | |
| Value Added Tax | 3.94 | 4.08 | 5.08 | 5.61 | 5.28 | 5.03 | 5.24 | 7.01 | 4.98 | |
| Tax on Casinos | 1.00 | 2.00 | 1.00 | 1.00 | + | + | 1.00 | 1.00 | 0.01 | |
| Sales Tax on Free Trade Depot Golfito | | 0.01 | 0.08 | 0.07 | 0.09 | 0.07 | 0.07 | 0.08 | 0.08 | |
| Tax on transfer of used cars | 0.08 | 0.10 | 0.09 | 0.09 | 0.01 | 0.12 | 0.13 | 0.13 | 0.14 | |
| Tax on cement consumption | + | + | + | + | + | + | + | + | 0.00 | |
| 3% Forestry Tax | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Pork tax | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Tax on National Lottery Prizes | 0.08 | 0.06 | 0.05 | 0.04 | 0.05 | 0.04 | 0.03 | 0.03 | 0.03 | |
| Tax on Liquors | + | + | + | + | + | + | + | + | + | |
| Special tax on the use of public roads | | | | | 0.01 | + | + | + | + | |
| Wild Fauna contribution | | | | | | + | + | + | + | |
| Licence for hunting and fishing | + | + | + | + | + | + | + | + | + | |
| Licence for hunting and fishing-MIRENEN | | | | | + | + | + | + | + | |
| TOTAL | 7.34 | 8.37 | 7.91 | 9.33 | 7.82 | 7.59 | 8.64 | 10.74 | 8.00 | |
| * updated estimates for 1997 tax revenues | | | | | | | | | | |
| ** revenues estimates | | | | | | | | | | |
| + insignificantly low number | | | | | | | | | | |
| ND no data | | | | | | | | | | |

Source: Contraloria General de la Republica.

| Taxes on Foreign Trade | | | | | | | | | | |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Tax | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997* | 1998** |
| million colones | | | | | | | | | | |
| Import Tariffs | 9,496 | 13,977 | 13,797 | 21,937 | 28,036 | 34,108 | 44,640 | 33,900 | 38,000 | 45,200 |
| 1% tax on CIF import values | 1,679 | 1,100 | 1,390 | 2,266 | 2,721 | 3,170 | 3,514 | 4,085 | 5,100 | 6,000 |
| Permit for import of animals | | | | | 0 | 0 | 1 | 0 | 0 | 0 |
| Consular permits | 202 | 261 | 383 | 477 | 573 | 735 | 728 | 1,023 | 1,150 | 1,265 |
| Export tax (LEY N0. 133) | 90 | 112 | 77 | 364 | 242 | 48 | 25 | 7 | 407 | 10 |
| Ad Valorem Export Tax (LEY 5519) | 2,592 | 726 | 1,191 | 927 | 843 | 1,514 | 6,545 | 2,008 | 2,270 | 2,634 |
| Banano Export tax | 892 | 1,387 | 4,140 | 4,266 | 3,230 | 4,278 | 2,415 | 3,585 | 2,300 | 2,200 |
| Flora and fauna export permits | | | | | 1 | 6 | 1 | 4 | 6 | 6 |
| 1.50 colones per banano | | | | | | | | 258 | 180 | 160 |
| National airport stamp | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 3 | 4 | 4 |
| Frontier and port stamp | 178 | 280 | 400 | 782 | 817 | 1,106 | 1,217 | 1,207 | 1,500 | 1,700 |
| 1.00 colon tax per ton of freight / Caldera | | | | | | | | | | |
| Port | 4 | 4 | 7 | 4 | 1 | 11 | 50 | 10 | 7 | 10 |
| TOTAL | 15,135 | 17,851 | 21,387 | 31,025 | 36,469 | 44,980 | 59,141 | 46,090 | 50,924 | 59,189 |
| % tax revenue | | | | | | | | | | |
| Import Tariffs | 16.3 | 20.3 | 14.5 | 16.6 | 18.2 | 18.4 | 18.4 | 11.6 | 10.2 | 9.9 |
| 1% tax on CIF import values | 2.9 | 1.6 | 1.5 | 1.7 | 1.8 | 1.7 | 1.4 | 1.4 | 1.4 | 1.3 |
| Permit for import of animals | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Consular permits | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 | 0.3 | 0.3 |
| Export tax (LEY N0. 133) | 0.2 | 0.2 | 0.1 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Ad Valorem Export Tax (LEY 5519) | 4.4 | 1.1 | 1.3 | 0.7 | 0.5 | 0.8 | 2.7 | 0.7 | 0.6 | 0.6 |
| Banano Export tax | 1.5 | 2.0 | 4.3 | 3.2 | 2.1 | 2.3 | 1.0 | 1.2 | 0.6 | 0.5 |
| Flora and fauna export permits | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.50 colones per banano | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| National airport stamp | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Frontier and port stamp | 0.3 | 0.4 | 0.4 | 0.6 | 0.5 | 0.6 | 0.5 | 0.4 | 0.4 | 0.4 |
| 1.00 colon tax per ton of freight / Caldera | | | | | | | | | | |
| Port | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | 25.97 | 25.89 | 22.45 | 23.49 | 23.64 | 24.23 | 24.34 | 15.79 | 13.62 | 13.01 |
| %GDP | | | | | | | | | | |
| Import Tariffs | 2.23 | 2.67 | 2.00 | 2.42 | 2.62 | 2.61 | 2.75 | 1.81 | 1.72 | |
| 1% tax on CIF import values | 0.39 | 0.21 | 0.20 | 0.25 | 0.25 | 0.24 | 0.22 | 0.22 | 0.23 | |
| Permit for import of animals | | | | | | + | + | + | + | |
| Consular permits | 0.05 | 0.05 | 0.06 | 0.05 | 0.05 | 0.06 | 0.04 | 0.05 | 0.05 | |
| Export tax (LEY N0. 133) | 0.02 | 0.02 | 0.01 | 0.04 | 0.02 | + | + | + | 0.02 | |
| Ad Valorem Export Tax (LEY 5519) | 0.59 | 0.14 | 0.17 | 0.10 | 0.08 | 0.12 | 0.40 | 0.11 | 0.10 | |
| Banano Export tax | 0.21 | 0.27 | 0.60 | 0.47 | 0.30 | 0.33 | 0.15 | 0.19 | 0.10 | |
| Flora and fauna export permits | | | | | + | + | + | + | + | |
| 1.50 colones per banano | | | | | | | | 0.01 | 0.01 | |
| National airport stamp | + | + | + | + | + | + | + | + | + | |
| Frontier and port stamp | 0.04 | 0.05 | 0.06 | 0.09 | 0.08 | 0.08 | 0.08 | 0.06 | 0.07 | |
| 1.00 colon tax per ton of freight / Caldera | | | | | | | | | | |
| Port | | | | | | | | | | + |
| TOTAL | 3.53 | 3.41 | 3.10 | 3.42 | 3.40 | 3.44 | 3.64 | 2.45 | 2.30 | |
| * updated estimates for 1997 tax revenues | | | | | | | | | | |
| ** revenues estimates | | | | | | | | | | |
| + insignificantly low number | | | | | | | | | | |
| ND no data | | | | | | | | | | |

Source: Contraloria General de la Republica.

IX. APPENDIX II: LIST OF GOODS

| Goods Type 2 (newly exempted from excises (ISC)) | S C T | | |
|--|----------|--|--|
| | Tax Rate | Revenues | |
| | | in 1996 $\xi_i \cdot \pi_i \cdot t_i = R_i$ | Consumption $\xi_i \cdot \pi_i = R_i / t_i$ |
| Tejidos | 0.14 | 1087.0 | 7764.0 |
| Fieltro, telas sin tejer | 0.15 | 18.6 | 124 |
| Demas articulos textiles confeccionados | 0.35 | 88.6 | 253 |
| Manufacturas de cuero | 0.20 | 200.6 | 1003 |
| Prendas de Vestir | 0.15 | 1383.1 | 9220 |
| Cierres de cremallera y sus partes | 0.10 | 14.6 | 146 |
| Bisuteria (joyeria de imitacion) | 0.20 | 24.6 | 123 |
| Pipas, boquillas, peinetas, peines | 0.15 | 17.4 | 116 |
| Articulos de joyeria y sus partes | 0.33 | 10.0 | 30 |
| Gafas de sol | 0.15 | 8.4 | 56 |
| Pelucas, plumas, plumones y flores artificiales | 0.20 | 22.6 | 113 |
| Juegos de motor o mecanismo y carruseles | 0.20 | 27.4 | 137 |
| Llantas | 0.25 | 1099.0 | 4396 |
| Arrancadores de motores | 0.25 | 190.2 | 760 |
| Tubulares neumaticos | 0.25 | 81.2 | 324 |
| Partes de motocicletas | 0.15 | 43.0 | 286 |
| Chasis de vehiculos y carrocerias | 0.35 | 3.6 | 10 |
| Baterias para carro | 0.25 | 240.6 | 962 |
| Bombillos, faros | 0.13 | 77.8 | 622 |
| Partes y Accesorios de Vehiculos | 0.25 | 1035.1 | 4140 |
| Detergentes | 0.15 | 1588.3 | 10588 |
| Jabon de tocador, platos y de lavar | 0.15 | 160.0 | 1066 |
| Insecticidas | 0.10 | 30.6 | 306 |
| Baldosas de ceramica | 0.20 | 717.0 | 3585 |
| Receptores de Television | 0.15 | 470.0 | 3133 |
| Aparatos electricos de alumbrado | 0.15 | 90.4 | 602 |
| Tableros de madera y maderas | 0.15 | 231.6 | 1544 |
| Acondicionadores de aire | 0.35 | 30.8 | 88 |
| Articulos de griferia y sus partes | 0.15 | 52.8 | 352 |
| Interruptores, disyuntores, enchufes, etc | 0.15 | 37.2 | 248 |
| Candados, cerraduras, etc | 0.15 | 126.6 | 844 |
| Alfombras y tapices | 0.35 | 133.8 | 382 |
| Somieres, articulos de cama y similares | 0.10 | 14.2 | 142 |
| Manufacturas de caucho, revestimientos p/suelo y alfombras | 0.25 | 11.2 | 45 |
| Vidrio y manufacturas | 0.15 | 422.8 | 2818 |
| Manufacturas de aluminio | 0.15 | 52.2 | 348 |
| Manufacturas de niquel | 0.15 | 1.8 | 12 |
| Demas manufacturas de hierro o acero | 0.18 | 60.0 | 342 |
| Lamparas electricas portatiles | 0.15 | 28.8 | 192 |
| Estatuillas y adornos | 0.20 | 1.0 | 5 |
| Toldos, tiendas y velas p/embarcaciones | 0.11 | 0.8 | 6 |
| Puertas, ventanas, estufas, cocinas, etc. | 0.15 | 111.1 | 740 |
| Aparatos de alumbrado y sus partes | 0.08 | 47.4 | 632 |
| Manufacturas de zinc | 0.15 | 4.0 | 26 |
| Fregaderos, inodoros, baneros | 0.13 | 74.2 | 593 |
| Pinturas, barnices, cementos, tintas | 0.20 | 880.6 | 4403 |
| Películas sensibilizadas | 0.35 | 286.2 | 817 |
| Preparaciones capilares | 0.27 | 442.8 | 1670 |
| Desodorantes, prep. P/afeitar | 0.27 | 215.4 | 812 |
| Preparaciones para higiene bucal excepto dentrificos | 0.30 | 7.6 | 25 |
| Maquinas de afeitar, cortar pelo, etc | 0.15 | 5.2 | 34 |
| Otros articulos de higiene y tocador | 0.15 | 4.4 | 29 |
| Confites y Chocolates | 0.15 | 558.0 | 3720 |
| Gomas de mascar | 0.20 | 353.3 | 1766 |
| Preparaciones homogenizadas (mermeladas y jaleas) | 0.05 | 32.2 | 644 |
| Cereales y snacks | 0.05 | 335.8 | 6716 |
| Salsas y Condimentos | 0.15 | 290.1 | 1934 |
| Galletas | 0.05 | 268.6 | 5372 |
| Sopas | 0.15 | 85.8 | 572 |
| Armas y municiones | 0.75 | 206.6 | 275 |
| Fotocopiadoras | 0.15 | 127.4 | 849 |
| Maquinas de escribir, cajas refistradoras, etc. | 0.22 | 124.0 | 551 |
| Partes de maquinas de escribir calculadoras, etc | 0.20 | 7.6 | 38 |
| Pilas | 0.15 | 114.8 | 765 |
| Betunes | 0.15 | 98.4 | 656 |
| Partes destinadas para emisores de radiotelefonoia | 0.15 | 67.4 | 449 |
| Preparaciones quimicas para uso fotografico | 0.10 | 67.4 | 674 |
| Navajas, maquinas de afeitar y partes | 0.15 | 67.0 | 446 |
| Discos, cintas y demas soportes para grabar sonido | 0.05 | 56.8 | 1136 |

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