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# Analysis of Ways to Maximize Tax Collections in El Salvador

Tax Gap Estimates for the Value-Added and Income Taxes

Tax Policy & Administration Reform  
**El Salvador TPAR Project**

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The author's views expressed in this publication do not necessarily reflect those of the United States Agency for International Development or the United States Government.



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## PREFACE

The Tax Policy and Administrative Reform Project (TPAR), financed by USAID/El Salvador and administered by Development Alternatives, Inc. (DAI), is supporting El Salvador's Ministry of Finance in the implementation and strengthening of fiscal reform legislation promulgated in 2004. The principal areas receiving the technical assistance provided deal with: strengthening controls to monitor taxpayer compliance with tax laws; modernizing information technology (IT) systems; designing an integrated control and taxpayer audit selection system; strengthening the functional areas linked to the monitoring and enforcement of taxpayer compliance; and restructuring taxpayer service and education programs.

The terms of reference for this particular analysis are to identify ways to maximize tax revenues by estimating the potential tax bases and taxable incomes of the principal taxes on income and expenditures administered by the Ministry of Finance's Dirección General de Impuestos Internos (DGII). Such an analysis involves estimating both the potential number of taxpayers actually subject to these levies and the amount of income potentially subject to taxation. The difference between potential estimates (of the number of taxpayers and of tax base monetary values) and actual figures is referred to as the tax *cum* taxpayer gap. The taxes to be dealt with are the income tax on natural persons and on legal persons (el impuesto sobre la renta de personas naturales y sobre la renta de personas jurídicas) and the value-added tax (officially known as impuesto a la transferencia de bienes muebles y a la prestación de servicios, but is commonly labeled impuesto al valor agregado), the sum of which comprise over 80% of the central government's tax revenues. The identification of the various tax gaps will enable the DGII to develop a tax administration *cum* tax audit strategy that can subsequently generate higher tax revenues. The complete terms of reference are found in Annex 6.

This paper is divided into four sections with accompanying annexes. After offering a brief introduction to the tax gap concept in Section I, Section II delves into estimating the number of taxpayers potentially liable for taxation under the income and value-added taxes. Section III takes up the issue of the methodologies and empirical estimates employed to generate monetary values linked to both overall tax gaps and to those in 44 industries. Using the information and conclusions generated in Sections II and III, Section IV offers a series of recommendations related to tax gap analysis that can be implemented by the DGII to strengthen tax collections. Included among these recommendations are suggestions as to areas in which the DGII's fiscal policy analysis and programming unit (UPET) might work to further develop its tax evasion studies.

It would not have been possible to do this report without the close cooperation and aid of the personnel that constitute the counterpart team assigned to work with TPAR consultants. This team is lead by Lic. Carlos Girón (Coordinator) and comprised of Lic. Luis Alberto Canjura (programming and tax evaluation), Lic. Walter Mejía (IT), Lic. Rafael Pérez (tax auditing), Lic. Edwin Villacorta (tax law), and Licda. Dinora Bonilla (collections). I also benefited from previous papers done by and interchanges with other TPAR consultants

(Luis Alberto Arias and Arturo Jacobs) and the cooperation of TPAR's Chief of Party, Enrique Giraldo. A list of other persons interviewed is found in Annex 4.

This study was initiated and completed in San Salvador between November 1 and 18, 2005. In adherence to the consultant's Terms of Reference (Annex 6), the study is drafted in English. However, a few parts of some sections and some terms are written in Spanish. This is done intentionally, the reason being that it is the DGII professional staff that will have to implement the recommendations and methodologies presented. Translations are not easy, especially when dealing with a myriad of technical terms. Therefore, in the interest of clarity and precision some Spanish terms are intermingled with the English text without an accompanying translation.

## I. INTRODUCTION

In its simplest definition, the tax gap represents the difference between the amount of taxes owed and the amount actually paid. It measures the extent to which taxpayers do not file their tax returns and pay the correct tax liability on time. The tax gap has three basic components: non-filing, underreporting, and underpayment. While part of the gap can be explained by inadvertent taxpayer error and/or misinterpretation of tax laws and regulations, the main source is usually due to deliberate taxpayer non-compliance that involves non-filing and underreporting.

There are two generally accepted ways to empirically measure the gap. The most direct (and desirable) procedure involves the random selection of tax returns and taxpayers for audit review and examination. An alternative and indirect method recurs to independent secondary data sources in an attempt to estimate the potential numbers of taxpayers obligated to pay a given tax and the amount of taxable income available from the tax base. In the case of El Salvador the first method is precluded due to a deficient tax return and tax audit database. Therefore, recurrence must be had to more indirect methods that employ secondary data sources to estimate potential taxpayer numbers and taxable values. It must be emphasized that any secondary sources adopted must have been generated independently of Ministry of Finance tax databases. These sources will be laid out in Sections II and III. Whereas some of the methods and data sources used in Section II to derive estimates for the number of taxpayers obligated to pay income and value-added taxes are new to the DGII's experience, some of those presented in Section III already form part of the DGII's arsenal of analytic tools. There is no need to reinvent the wheel, as the methodology previously in place to estimate taxable income by sector and economic activity for the value added tax is fairly standard and acceptable. A variation on this method is developed in this paper to estimate the taxable income base for the income tax on legal persons.

Estimating tax gaps is not merely an academic exercise. Quite the contrary. It has very practical applications when put to use by a tax administration agency. Its measurement permits both the legislative and executive branches of government to make better tax policy decisions. Best of all, with respect to the tax administration responsibilities of the Ministry of Finance and its internal tax administration directorate (DGII), it facilitates the identification of the types of taxpayers and the economic sectors where tax evasion is potentially most prevalent. By doing so it generates signals as to where to direct greater efforts and resources in order to enhance tax revenue collections and reduce tax evasion.

## **II. TAX GAPS AND THE NUMBER OF POTENTIAL TAXPAYERS**

As will be demonstrated in this section, there appears to be a large gap between the number of active taxpayers actually paying income and value-added (VAT) taxes and the number that are legally obligated to do so. It will become evident that the procedures and methods that might be used to derive the estimates rely on indirect estimates from various databases. This is clearly unavoidable, as direct counting is out of the question. As such, the results that can be generated do not purport to be totally reliable, and must be taken with a grain of salt. They merely provide indicators as to the magnitude and place of the gap.

### **A. The Official (Registered) Numbers**

#### **1. The Value Added Tax**

During 2004, the DGII's VAT database contained an average of 87,936 taxpayers; i.e., those who actually submitted tax returns. A lower number of taxpayers (67,325) remained active in each of the four years between 2001 and 2004. Between 2001 and 2004 the number of active taxpayers in each individual year was quite constant, ranging from a low of 84,669 in 2001 to a high of 89,226 in 2002.

A breakdown by type of taxpayer reveals that in 2004, there were VAT returns filed by 23,101 legal persons (*personas jurídicas*) and 64,835 by individuals (*personas naturales*). In both cases there emerged lower numbers for those who had been active in each of the four years during the 2001-2004 interval: 19,329 legal and 47,996 natural persons respectively. This is suggestive of (but not absolutely solid evidence of) a substantial presence of stop-filers associated with the VAT.

With respect to active VAT taxpayers in 2004, the economic activities in which a large number of legal person taxpayers worked were: comercio (5,308), bienes inmuebles y servicios prestados (4,206), servicios comunales, sociales y personales (2,217), bancos, seguros y otras instituciones financieras (1,432) and construcción (1,194). The major economic activities carried out by individual taxpayers were those of: comercio (20,739), servicios comunales, sociales y personales (9,886), bienes inmuebles y servicios prestados (8,553), transporte y almacenamiento (4,803), and empleados públicos y privados (4,711)

According to information derived from the DGII's Sección de Cuenta Corriente, as of October, 2005 there were a total of 107,829 registered (but not necessarily active) VAT taxpayers. Of this total, 2,591 taxpayers were classified as large, with another 7,075 and 98,163 in the medium and small categories respectively. While it is evident that this total number of VAT taxpayers exceeds the number of active taxpayers in 2004 (107,829 versus 87,936), the most probable explanation for this large differential lies in the fact that the Sección de Cuenta Corriente has only cleaned up its large and medium taxpayer files. This leaves 98,163 small accounts to be cleaned, a process that will undoubtedly reduce this number substantially.

## **2. The Income Taxes**

For all of 2004, the DGII income tax (ISR/PN and ISR/PJ) database contained an average of 351,825 active taxpayers. However, only 184,004 (52%) had been active during all of the four-year period comprising 2001 to 2004. In 2004, 328,931 natural persons (PN) submitted income tax returns, but only 167,076 (51%) were consistently active during the four-year interval. With respect to legal persons (PJ), in 2004 tax returns were submitted by 22,169 entities, and 16,928 were active in each of the four years between 2001 and 2004.

The main areas of economic activity in which active personal income taxpayers were engaged in 2004 were: empleados públicos y privados (253,714), comercio (20,833), bienes inmuebles y servicios prestados (10,659), and servicios comunales, sociales y personales (10,341). The principal areas of economic activity for legal persons were: comercio (4,859), bienes inmuebles y servicios prestados (3,964), servicios comunales, sociales y personales (2,246), and bancos, seguros y otras instituciones financieras (1,444).

The total number of active taxpayers contrasts sharply with the more than three million persons who have a taxpayer registration number (NIT) but are inactive. However, the number of inactive taxpayers is inflated to an unknown extent given that the Unique Taxpayer Registry (RUC: Registro Único Contributivo) has not been cleaned up for years. It is not, therefore, a good point of reference against which to measure the active-inactive taxpayer gap.

However, in part the large discrepancy between active and inactive taxpayers also has to do with the fact that all Salvadorans, upon reaching 18 years of age, are legally obligated to register to obtain a NIT. Many simply are not actively engaged in the labor market, nor will they be in the near future. Others have emigrated. And, given the presence of a large informal sector, low wages in the formal sector, and generally low income levels across all sectors and areas of economic activity, it is not surprising that the active and identifiable income tax rolls fall well short of the number of persons with a NIT. On the other hand, there are undoubtedly many persons and legal entities that simply do not file an income tax return even though they should do so. Estimates of the magnitude of these individual (personas naturales) non-filers and stop-filers under the income tax are the subject of Section II.D. Estimates of the potential number of legal persons subject to income taxes are the subject of Section II.C.

### **B. The Value Added Tax (VAT)**

The VAT law (Article 28) places the threshold for taxpayer registration at an annual gross sales level of \$5714 or asset values at \$2286. However, this exclusion does not apply to legal persons and importers and to a person or business that has more than one place of business in which the sum of sales and asset values exceed the threshold. Given these

relatively low thresholds levels, it might be assumed that the taxpayer base is quite large as a proportion of economically active business establishments.

Table 1 presents some basis data regarding domestic VAT tax returns. The total number of returns filed by both legal and natural persons falls slightly below the numbers previously cited above in Section II.A.1 due to database problems *cum* errors. There is a similar explanation for the fact that the total tax liability under the domestic VAT falls below the registered collections for 2004: \$383.41 million versus \$445.73 million respectively. Despite these discrepancies, it is posited that the data found in Table 1 do offer a fairly valid overall snapshot of VAT liabilities grouped according to gross sales levels.

**TABLE 1**

**THE VAT ON DOMESTIC TRANSACTIONS: BASIC DATA, 2004**

Gross Sales (1,000 dollars)	Legal Persons		Natural Persons	
	Number of Tax Returns Filed (b)	Tax Liability (\$ million)	Number of Tax Returns Filed (b)	Tax Liability (\$ million)
No Registered Sales (a)	9,496		19,037	
Less than 6	4,615	5.76	29,823	17.25
6 – 20	2,726	15.43	4,656	11.21
20.01 – 40	1,365	16.01	1,252	5.58
40.01 – 80	1,032	22.15	665	4.24
80.01 – 120	461	15.40	212	1.85
120.01 – 180	371	16.58	135	1.60
180.01 – 300	356	23.87	90	1.45
300.01 – 500	239	24.37	45	1.15
500.01 – 1,000	210	33.86	15	0.37
1,000.01 – 2,000	117	32.50	2	0.13
2,000.01 – 5,000	81	46.83	1	0.1
More than 5,000	42	85.76	1	0.5
Total	21,111	338.52	55,934	44.89

(a) Box was blank on tax return due either to data entry or taxpayer error.

(b) Approximately 12% of total VAT returns were not incorporated in figures in this table.

Source: Domestic VAT database, DGII, Unidad de Servicios Informáticos.

*A priori*, the best source to gauge the number of establishments potentially lying within the VAT taxpayer base is the recently completed Directorio de Establecimientos that was carried out by the DIGESTYC between April and June of 2005. According to DIGESTYC's Director General, this source contains information on some 182,000 establishments (with a fixed place of business) grouped by municipality and economic activity (rama de actividad); it also includes the number of employees in each entity and the business address. It is

presently in the hands of the Secretaría Técnica de la Presidencia. Needless to say, it would behoove the DGII to obtain and apply data culled from this survey.

Cross tabulations between two databases, the DGII's VAT active taxpayer files and that of the annual Encuesta de Hogares de Propósitos Múltiples (EHPM) carried out by the Dirección General de Estadística y Censos (DIGESTYC), are suggestive of tax base under-registration and bring forth some interesting possibilities that, unfortunately, cannot be statistically validated. The latter is based on a rotating cluster sample of 16,800 households, and generates information relative to the total number of employed persons by sector (rama de actividad), occupational category, and occupational group.

As an example of what can be done, in 2004 there were 5,882 and 23,438 legal person and natural person taxpayers respectively in the DGII's commerce and hotels/restaurants VAT database. In contrast, according to the 2004 EHPM (Table D09), there were a total of 739,510 persons employed in commerce and hotels/restaurants, of which 627,267 displayed certain income levels (112,243 had no salaried income). Moreover, even without taking into account the magnitude of income underreporting typical of this type of survey, 63,276 had incomes above the VAT threshold level. Of course, these figures apply to the salary incomes of individuals, and in the EHPM the direct connection between salaries and legal (or natural) persons is not visible. However, another EHPM table (D05) shows that commerce and hotels/restaurants there were 40,552 employers, 216,392 (permanent) salaried persons, and 347,443 independent workers (cuenta propia). It might be possible to ask the DIGESTYC for special cross-tabulations that would shed further light on issues such as this. All that can be stated for now is that this type of analytical digging might permit more solid conclusions as to the numbers of non-filers potentially includable in the VAT taxpayer base.

Under a plan adopted by the central government in 2004 to improve El Salvador's statistical base, additional pertinent survey data will be finalized and will become available in the near future. During the first half of 2006 the Censo Económico will be available. These survey results will expand on the data already generated by the Directorio de Establecimientos, and will offer information on the gross sales levels of each of the 182,000 establishments; the last Censo Económico was done in 1994, and is clearly not usable for DGII purposes in 2005-06.

Of lesser relevance to the DGII will be surveys that will be initiated in 2007: the Censo de Población and the Censo Agropecuario. The new census data will affect the expansion coefficients in the EHPM, thereby possibly impacting the estimated numbers of employed persons classified by occupational categories and economic sectors. The agricultural census data, depending on what variables are included in the census questionnaire, might constitute a source that will permit the DGII (if it so desires) to better track high-income individuals and businesses in that sector.

### C. The Income Tax on Legal Persons

Data extracted from the DGII's database for legal persons generate the information found in Table 2. One aspect quickly calls the reader's attention. In a country of 6.7 million persons and some 182,000 business establishments, the number of entities filing ISR/PJ tax returns (22,169 in 2004) appears to be quite low. Of course, many (if not a majority) of the establishments are probably not constituted as legal persons. And these numbers do correlate quite well with the number active (legal persons) VAT filers (23,101). Nevertheless, even without having access to the Directorio de Establecimientos at this juncture, and just as in the case of VAT files for legal persons, there arises the gut feeling that there are many non- and stop-filers under the ISR/PJ law.

This is substantiated by information extracted in several forms from the DGII's taxpayer database. First of all, over the 2001-04 interval only 16,928 taxpayers filed ISR/PJ returns in each of the four years. Moreover, out of this low number of filers, in 2004 some 54% operated with financial losses. To state this in alternative fashion, a mere 10,153 legally constituted establishments across El Salvador were able to profitably operate in 2004. Both aspects *cum* findings are difficult to accept.

Secondly, for tax years 2003 and 2004, 20,048 legal persons filed tax returns in both years. However, 2,171 entities did not file returns in 2003, but did so in 2004. Along these same lines, 1,546 filed returns in 2003 but not in 2004, and 2,097 did not file in either year. The sectors displaying the largest numbers of stop-filers and non-filers were commerce, personal services, construction, and bienes inmuebles. It is evident that stop-filing and non-filing rates are substantial, although there may be reasonable (and legal) explanations for a portion of these apparent evasion rates.

**TABLE 2**

**THE INCOME TAX ON LEGAL PERSONS: BASIC DATA, 2004**

Taxable Income Bracket (1,000 dollars)	Number of Tax Returns Filed	Taxable Income (\$ million)	Tax Rate
Less than 0	12,016	-560	
0 – 25	7,239	46	25%
25.01 – 50	1,056	38	25%
50.01 – 100	727	51	25%
100.01 – 200	501	70	25%
200.01 – 400	269	76	25%
400.01 – 600	106	52	25%
600.1 – 1,000	94	73	25%
1,000.01 – 2,000	76	110	25%
More than 2,000	85	685	25%
Total	22,169	641	

Source: ISR database, DGII, Unidad de Servicios Informáticos.

There are several alternative data sources that can be consulted to better approximate the universe of “for-profit” legal persons. These are the same sources that can be used to find “missing taxpayers” under the VAT, and were previously mentioned in Section II.B. In other words, to a large extent the same primary data sources can simultaneously be used by the DGII’s Audit Directorate and the UPET to track down ISR/PJ and VAT under-reporters, non-filers, and stop-filers.

#### D. The Income Tax on Natural Persons

The income tax on natural persons (ISR/PN) covers the income generated by salaried and non-salaried persons (contribuyentes de rentas diversas). All salaried income is subject to withholding, with the exception of salaries that amount to less than \$3800 per annum. Non-salaried persons should submit tax returns whatever their income levels. In 2004, the number of returns filed amounted to 328,931, and were broken down as shown in Table 3.

**TABLE 3**

**THE INCOME TAX ON NATURAL PERSONS: BASIC DATA, 2004**

Taxable Income Bracket (dollars)	Number of Tax Returns Filed	Taxable Income (\$million)	Tax Rate
Less than zero	22,965	-36.4	0
0 – 2,514	105,046	137.5	0
2,514.01 – 9,143	143,235	770.5	10% income above \$2,514
9,143.01 – 22,857	47,066	633.6	20% income above \$9,143
More than 22,857	10,619	444.7	30% income above \$22,857
Total	328,931	1,949.9	

*Source: ISR database, DGII, Unidad de Servicios Informáticos.*

In contrast to the case of the ISR/PJ, the stop-filing and non-filing rates under the ISR/PN appear to be substantially higher. In tax years 2003 and 2004, 250,230 personal income taxpayers filed returns in both years. However, 79,376 taxpayers who did file returns in 2004 did not file in 2003. Moreover, 51,055 who filed in 2003 did not submit returns in 2004, and 66,706 did not submit returns in either year. The bulk (more than 80%) of these non-filers and stop-filers was concentrated in the salaried public and private sectors.

To be determined is whether or not the number of taxpayers filing returns in 2004 represents a reasonable number of persons actually subject to income taxes. If not reasonable, what is the number of persons potentially liable for income taxes. The issue of the ISR/PN gap in terms of values is taken up in Section III.C.

Two independent data sources that can be used to make this determination have been identified: the previously mentioned Encuesta de Hogares de Propósitos Múltiples (EHPM) and the quarterly reports to El Salvador's Superintendencia de Pensiones submitted by the two remaining pension fund administrators. The latter picks up information pertinent to all persons that pay into El Salvador's privatized pension scheme; contributions by all salaried persons are obligatory, whereas for non-salaried individuals they are optional. Even though the 2004 EHPM reveals that only 55% of employed persons were salaried, it is most likely that the large majority of persons that contribute to pensions funds are salaried individuals. This is because a high percentage of non-salaried persons who work independently are found in low-income occupational groups; e.g., domestics, unremunerated family workers, and poorly qualified independent workers.

## **1. National Household Survey (Encuesta de Hogares de Propósitos Múltiples)**

Table 3 above shows that 143,000 persons with annual taxable incomes falling between \$2514 and \$9143 paid income taxes in 2004. Taking into account all the deductions that form a wedge between gross and taxable income, based on DGII tax return data it is found that, on the average, taxable income amounts to some 60% of gross income. This means that the corresponding tax bracket limits for gross income in this case would be \$4190 - \$15,238. The remaining gross income brackets would therefore be \$15,238 - \$38,095 and more than \$38,095.

According to El Salvador's national household survey (Encuesta de Hogares de Propósitos Múltiples, EHPM) for 2004, in El Salvador there are easily 100,000 persons with salary incomes well above the taxable income level of \$2514; i.e., above the zero rate and therefore subject to tax liabilities. Allowing for the underestimations of salaries and incomes typically found in this type of survey (DIGESTYC agrees with this observation but, understandably, cannot define the proportional amounts of underestimation), to this subtotal there can be added approximately 190,000 additional persons who would be subject to taxation under the ISR/PN. Consequently, an estimate of the number of taxpayers potentially subject to the ISR/PN rounds off at 290,000. This contrasts with the 200,000 individuals who actually made payments on the ISR/PN in 2004. Thus, a *grosso modo*, some 90,000 are either in lower taxable income brackets than they should be or are not even caught by the ISR/PN tax net. These data yield a taxpayer evasion rate of 31%, or about one-third.

## **2. The Pensions Database**

While the EHPM can be used as a kind of "macro indicator" of the number of potential individual taxpayers, it lacks the precision required to carry out the DGII's audit plans. A better data source is that generated by the reports filed by pension administrators given that, with a bit of ingenuity, the information in the hands of these administrators (AFPs) can be used to identify individual taxpayers. According to these data, in 2004 a total of 423,000 persons (mostly salaried but also non-salaried) should have been subject to the personal income tax beginning at the lowest marginal tax rate of 10%. Nevertheless, as shown in Table 3, only 328,931 tax returns were filed. But this is only part of the story. From the

DGII's database it is found that out of those who did file natural person income tax returns in 2004, 91,000 declared only non-salary income (rentas diversas). Some 38,000 declared both types of income (from salaries and non-salaries) and another 192,000 declared only salary income.

At least at first glance, there appears to be a great deal of income tax evasion among both salaried and non-salaried individuals. There is a solution. The DGII's taxpayer identification number (NIT) database permits the matching of names provided to the AFPs with individual NITs. Moreover, combining pensions and DGII database information generates a very reasonable estimate of both the number of salaried individuals subject to the income tax and the amount of income potentially subject to income taxation; this latter variable is estimated in Table 7.

The form used by El Salvador's two AFPs (Planilla de Pago de Cotizaciones Previsionales) to inform the Superintendencia de Pensiones how much each individual contributes to the pension system contains: the employer's NIT, two numbers (NUP--número único previsional and DUI—documento único de identificación) identifying the individual employee, the employee's full name (names and surnames), and the amount of the employee's income that represents the base for the contribution. It does *not* contain the employee's NIT. However, the DGII's taxpayer database could be used to match the employee's full in the Planilla with registered names and their corresponding NITs. Naturally, wide discrepancies between reported pension income and that reported to the DGII on the Declaración y Pago del Impuesto sobre la Renta would raise a red flag. Even more interesting would be to find a match between income reported in the pension database and the non-filing of a tax return.

### **III. TAX GAPS AND THE MAGNITUDE OF POTENTIAL TAX BASES**

#### **A. The Value Added Tax (VAT)**

##### **1. The UPET Methodology**

Since 1993 the Unidad de Programación y Evaluación Tributaria (UPET) of the Ministry of Finance's DGII has been using a methodology to estimate the VAT tax gap in 44 industries (ramas de actividad) as derived and aggregated from the Central Bank's Input-Output (I-O) matrix (Matriz de Insumo Producto); see Banco Central de Reserva (1992). This methodology is widely used in other countries and represents a perfectly acceptable approach to tax gap estimation. While the summation of each individual tax gap yields an overall tax gap estimate, the value of this exercise lies in signaling those particular industries where the tax gap (i.e., tax evasion) is greatest. The methodology that is applied is described in Sections II, III, and IV of the UPET's most recent estimates (for 2002) of the VAT gap; see Ministerio de Hacienda, DGII, UPET (Septiembre, 2004). Annex 1 of this paper algebraically lays out the methodology, while Table 4 presents a summary of the sector and industry (rama de actividad) tax gaps covering the years 1996 to 2002.

By using the national accounts as an indirect indicator of the VAT tax gap, it is evident that the reliability of the sectoral estimates depends upon the reliability of the national accounts and the I-O matrix. While it is recognized that the national accounts themselves constitute mere approximations to the values of economic aggregates and sectoral estimates and do come with a lot of baggage (e.g., probable under-valuation of informal sector activities, a base year dating back to 1990, and a decade-long decline in the quality and quantity of the underlying statistical base), they must be taken as given. The UPET recognizes both this limitation and the fact that the methodology itself represents an indirect means of estimating the magnitude of tax evasion. The absolute values of the tax gap estimates for any given year must be interpreted with caution; they are merely indicators of possible tax evasion. However, their trend across time periods can serve as reasonable indicators of those sectors where tax evasion is greatest. As an important corollary, they can also be interpreted as indicators of the efficacy of tax collection activities designed to reduce evasion.

The UPET's application of the VAT gap methodology generates annual tax evasion estimates. These estimates by sector and industrial category (rama de actividad) from 1996 to 2002 are presented in Table 4. With the exception of 1996, it is readily noted that the overall tax gap moved within a rather narrow 30% to 34% range; the higher 1996 gap of 38.9% represents a slightly higher outlier. In other words, subtracting realized VAT collections from potential collections as estimated via the applied methodology generates a tax gap (or tax evasion rate) of at least 30%. Honing in on the most recent VAT gap estimates for 2002, sectoral tax gaps display very large variations, with six sectors alone accounting for 97% of the domestic VAT gap. For example, tax gaps weigh in at 92% in agriculture, 72% for restaurants and hotels, 71% in manufacturing, and 67% in construction. These high evasion levels are counterbalanced by an average tax gap of 9% in most remaining sectors. As can also be noted from the figures found in Table 4, within the components (ramas de actividad) of each of the broad sectors there are large tax gap variations.

The UPET sends the results from the preliminary and final analyses (based on the preliminary and final estimates from the I-O matrix) to the Director General of the DGII. Based on the results, the UPET develops an Annual Audit Plan (Plan Anual de Fiscalización) that is given to the Comité de Calidad. This Committee is comprised of (among others) the DGII's Director General, Sub-Director General, Director of Auditing, and the Head of the Judicial Division. Once the Committee accepts the Audit Plan, the UPET then develops the audit sample and oversees the work of the Audit Directorate. According to the UPET, the work of this Directorate is "satisfactory." In a nutshell, the UPET's VAT gap analysis goes far beyond constituting a mere academic exercise.

In 2003 an independent assessment validated the methodology used by the UPET to estimate the VAT gap; see Bearing Point Barents Group, 2003. The assessment did make one marginal adjustment to UPET's estimate for the year 2000, but otherwise took the overall data and methodology as a given; this adjustment was not incorporated into the UPET's 2002 study.

## TABLE 4

### COMPARACIÓN DE LOS MONTOS DE EVASIÓN, ÍNDICE SECTORIAL 1996-2002 En porcentajes

N°	PRODUCTOS RAMAS	1996	1997	1998	1999	2000	2001	2002
		Tasa Sectorial de Evasión						
	<b>AGROPECUARIO</b>	<b>88.8</b>	<b>79.0</b>	<b>79.9</b>	<b>50.9</b>	<b>90.4</b>	<b>92.0</b>	<b>91.9</b>
1	ALGODON	86.3		104.0	92.9	21.7	85.1	95.4
2	GRANOS BASICOS	97.2	95.9	83.7	78.1	98.0	99.0	98.6
3	CAÑA DE AZUCAR	72.1	60.1	52.4	44.6	37.0	45.8	48.4
4	OTRAS PRODUCCIONES AGRICOLAS	103.2	86.1	97.0	91.0	98.6	97.6	99.1
5	GANADERIA	93.2	82.4	78.3	86.6	95.5	96.3	97.8
6	AVICULTURA	61.0	51.6	56.8	46.8	57.7	47.5	45.1
7	SILVICULTURA	100.0	100.0	100.0	100.0	100.0	100.0	100.0
8	PROD. DE LA CAZA Y LA PESCA	99.0	68.0	88.7	95.5	105.7	87.2	92.3
9	<b>PROD. DE LA MINERIA</b>	<b>99.7</b>	<b>93.6</b>	<b>88.2</b>	<b>85.9</b>	<b>82.5</b>	<b>88.1</b>	<b>88.2</b>
	<b>INDUSTRIA MANUFACTURERA</b>	<b>56.0</b>	<b>38.0</b>	<b>68.4</b>	<b>43.0</b>	<b>58.9</b>	<b>69.8</b>	<b>70.6</b>
10	CARNE Y SUS PRODUCTOS	104.5	73.6	99.9	95.5	95.1	94.9	94.8
11	PRODUCTOS LACTEOS	29.4	66.2	75.0	79.7	70.9	86.1	81.8
12	PROD. ELABORADOS DE LA PESCA	2,416.0		(1,256.8)	(646.0)	(1,485.9)	(1,959.0)	(1,139.1)
13	PROD. DE MOLINERIA Y PANADERIA	87.6	79.2	72.2	65.3	73.0	85.0	84.6
14	AZUCAR	29.7	(350.4)	(89.9)	(698.6)	(12.7)	(143.5)	(57.6)
15	OTROS PROD. ALIM. ELABORADOS	79.6	22.8	93.4	8.8	68.3	77.6	84.6
16	BEBIDAS	3.4	20.1	16.7	5.8	(0.6)	92.6	89.0
17	TABACO ELABORADO	36.0	8.8	13,384.2	160,128.1	18,950.2	25,796.1	37,107.1
18	TEXTILES Y ART. CONFEC. DE MAT. TEXT.	77.0	23.4	97.2	581.5	127.5	110.2	96.1
19	PRENDAS DE VESTIR	71.9		79.7	66.3	94.5	70.3	73.6
20	CUERO Y SUS PRODUCTOS	75.2	80.9	88.8	74.2	82.2	83.6	78.8
21	MADERA Y SUS PRODUCTOS	70.2	73.9	83.0	95.9	98.6	97.5	96.4
22	PAPEL, CARTON Y SUS PRODUCTOS	25.7	73.2	104.6	132.6	72.4	187.9	79.1
23	PROD. DE LA IMPRENTA Y DE IND. CONEX.	(9.1)	(10.6)	2.5	(10.7)	17.0	18.8	27.2
24	QUIMICA DE BASE Y ELABORADOS	187.0	498.0	(966.3)		77.0	(78.6)	40.8
25	PROD. DE LA REFINACION DE PETROLEO	41.9	67.2	88.6	107.2	86.3	80.0	89.9
26	PROD. DE CAUCHO Y PLASTICO	42.6	15.6	14.2	(29.2)	32.3	(10.1)	(293.4)
27	PROD. MINERALES NO METALICOS ELAB.	26.4	42.0	52.1	50.9	30.2	19.4	34.6
28	PROD. METALICOS DE BASE Y ELAB.	(178.1)	(12.1)	(2,259.2)	(4.9)	(154.2)	148.2	(107.9)
29	MAQUINARIA, EQUIPOS Y SUMINISTROS	85.7	73.5	92.5	85.3	76.8	92.6	91.8
30	MATERIAL DE TRANSP. Y MANUF. DIVERSA	63.6	20.9	68.1	46.7	60.8	50.8	48.9
	<b>ELECTRICIDAD, AGUA Y ALCANTARILLADO</b>	<b>0.0</b>	<b>0.0</b>	<b>(10.7)</b>	<b>17.7</b>	<b>17.4</b>	<b>5.5</b>	<b>(10.9)</b>
31	ELECTRICIDAD	0.0	0.0	(10.7)	17.7	17.4	5.5	(10.9)
32	AGUA Y ALCANTARILLADOS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	<b>CONSTRUCCION</b>	<b>82.4</b>	<b>65.4</b>	<b>77.8</b>	<b>59.9</b>	<b>77.3</b>	<b>60.2</b>	<b>67.0</b>
34	<b>COMERCIO</b>	<b>54.4</b>	<b>45.7</b>	<b>51.0</b>	<b>45.7</b>	<b>45.4</b>	<b>39.3</b>	<b>38.2</b>
35	<b>RESTAURANTES Y HOTELES</b>	<b>84.4</b>	<b>84.6</b>	<b>76.0</b>	<b>64.2</b>	<b>75.2</b>	<b>72.2</b>	<b>72.0</b>
	<b>TRANSP. Y ALMACENAMIENTO Y COMUNICACIONES</b>	<b>50.6</b>	<b>80.3</b>	<b>76.4</b>	<b>67.8</b>	<b>42.0</b>	<b>23.5</b>	<b>18.0</b>
36	TRANSP. Y ALMACENAMIENTO	44.0	77.4	70.0	46.8	44.3	40.0	49.9
37	COMUNICACIONES	90.0	94.3	98.1	117.3	37.5	(6.9)	(35.3)
38	<b>BANCOS, SEGUROS, OTRAS INST. FINANC.</b>		<b>(24.5)</b>	<b>(9.7)</b>	<b>(29.8)</b>	<b>10.5</b>	<b>18.2</b>	<b>(21.5)</b>
39	<b>BIENES INMUEBLES Y SERV. PRESTADOS</b>	<b>58.9</b>	<b>58.8</b>	<b>54.5</b>	<b>46.0</b>	<b>29.8</b>	<b>3.5</b>	<b>2.4</b>
40	ALQUILERES DE VIVIENDA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	SERV. COMUNALES, SOCIALES Y PERS.	(23.3)	(57.4)	(56.7)	51.8	41.5	50.0	58.7
42	SERVICIOS DOMESTICOS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	SERVICIOS DEL GOBIERNO	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	SERVICIOS INDUSTRIALES DE MAQUILA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	IMPORTACIONES	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	<b>TOTALES</b>	<b>38.9</b>	<b>30.3</b>	<b>32.3</b>	<b>30.0</b>	<b>33.9</b>	<b>33.8</b>	<b>32.7</b>

Fuente: Elaboración propia con base a información del BCR y la Base de Datos D.G.I.I.

Elaboró: Coordinación de Análisis Tributarios

Septiembre 2004

Source: Ministerio de Hacienda, DGII, UPET (Septiembre, 2004), Anexo 12.

## 2. The Aggregate VAT Gap

An alternative (and quick and dirty) approach to estimating the overall VAT gap is found in Table 5. While this approach, a variant of the output method (Método de la Producción) that is used to estimate the taxable VAT base, does generate a sort of check against the overall VAT gap as derived from I-O analysis, the principal drawback is that yields merely an aggregate number. As such, its usefulness to the tax authorities is quite limited. As can be noted from Table 4, it estimates a tax evasion rate of 40.1% for 2002. This is not too far above the 33.9% generated by the more intricate I-O methodology. Also of note is that was very constant between 2001 and 2004. A similar result (essentially constant aggregate evasion rates) is found under the application of the UPET's I-O methodology over the years 1997 to 2002.

**TABLE 5**  
**ESTIMATES OF THE OVERALL VAT GAP, 2001 - 2004**

	2001	2002	2003	2004
1. PIB	13,813	14,312	14,940	15,824
2. Exportaciones FOB	2864	2995	3128	3295
3. Importaciones CIF 1/	3866	3902	4375	4891
4. Importaciones de BK	900	879	936	990
5. Remuneraciones, Sector Público	1068	1039	1051	1069
6. Exenciones	2417	2505	2615	2769
7. Base Potencial del IVA: (1)-(2)+(3)-(4)-(5)-(6)	10,429	10,796	11,586	12,592
8. Tasa Nominal	13%	13%	13%	13%
9. Recaudación Potencial: (7) x (8)	1356	1403	1506	1637
10. IVA Potencial/PIB: (9)/(1)	9.8%	9.8%	10.1%	10.3%
11. Recaudación Efectiva Bruta del IVA	867	904	960	1026
(a) IVA Doméstico	413	432	437	446
(b) IVA Importaciones	454	472	523	581
12. Devoluciones IVA	60	63	65	59
13. Recaudación Efectiva Neta del IVA	807	841	895	967
14. IVA Bruto/PIB	6.3%	6.3%	6.4%	6.5%
15. IVA Neto/PIB	5.8%	5.9%	6.0%	6.1%
16. Compliance Rate: (13)/(9)	59.5%	59.9%	59.4%	59.1%
17. TAX GAP (tasa de evasión)	40.5%	40.1%	40.6%	40.9%

1/ No incluye maquila.

Source: Adapted from Arias (Septiembre, 2005).

### 3. An Alternative Approach to Estimating the VAT Gap: The Consumption Method

There does exist another method of estimating the VAT gap that, for the moment, cannot be applied in El Salvador. This is the Consumption Method (Método del Consumo) of calculating the aggregate (internal and import) VAT gap, and can be briefly described in the following manner:

(1) Consumo final de hogares de bienes y servicios gravados con IVA =  
+ Total consumo final hogares  
- Consumo final hogares de bienes y servicios exentos del IVA  
- Consumo de salvadoreños en el exterior  
+ Consumo de extranjeros en El Salvador

(2) Consumo intermedio gravado con IVA de los sectores total o parcialmente exentos =  
(Consumo intermedio gravado) x (ventas exentas/total ventas)  
Si el sector de producción está totalmente no gravado, la expresión  
ventas exentas/total ventas = 1. El consumo intermedio es la base del IVA potencial.  
Si el sector de producción vende bienes gravados y no gravados, la expresión  
ventas exentas/total ventas es menor de 1. El consumo intermedio base del IVA  
potencial corresponde a esta proporción.

(3) Inversión en bienes de capital gravados destinados a producir bienes exentos =  
Lo más probable es que tendrán que estimar los coeficientes. En el agregado este  
coeficiente podría caer entre 0.60 y 0.70.

(4) Base Potencial del IVA = Suma (1), (2) y (3)

(5) Recaudación IVA Potencial = (4) x 0.13 =

(6) Recaudación Efectiva =

(7)  $1 - (6)/(5)$  = Tasa de Evasión.

In addition to generating an overall VAT gap estimate, this approach could also be applied to industries and sectors---if there existed a recent Household Income and Consumption survey. But the last one carried out in El Salvador covers the period 1990-91, and is clearly out of date and unusable (even by extrapolation). Such a survey, in conjunction with the I-O matrix, would represent another alternative to the Production Method already used to estimate VAT gaps. By 2007 it might become feasible for the UPET to apply this method. Such feasibility is based on the fact that the Dirección General de Estadística y Censos is currently preparing a household income and consumption survey. Preliminary results may be ready as soon as the fourth quarter of 2006, with final tabulations completed by sometime in 2007. The completion of this survey, together with that of other databases, will also allow the BCR to update the national accounts base from its present base date of 1990. As a corollary, the BCR's I-O matrix will also be updated.

#### 4. The Import VAT Gap

A principal criticism of the UPET methodology is the assumption that the VAT on imports is not impacted by tax evasion. In other words, what the methodology estimates is merely the VAT gap on internal transactions subject to VAT. Given that *net* collections from the import VAT were almost equal to revenues from the VAT on internal transactions in 2001 and 2002, and actually exceeded domestic VAT collections in 2003 and 2004, this assumption is no small matter. That there is no tax gap pertinent to the import VAT is clearly not a reality. Moreover, there do exist methods to estimate both the overall and industry import VAT gap. The overall import VAT gap can be estimated in the following manner:

- (1) Importaciones Bienes CIF 2004 = \$4,891 millones (excluyendo maquila)
- (2) Arancel Promedio = 3.57% (arancel efectivo) x (1) = \$175 millones
- (3) Base Ajustada (1 + 2) = \$5066 millones
- (4) Coeficiente Estimado de Gravabilidad = 0.90
- (5) Base Ajustada Gravada [(3) x (4)] = \$4559 millones
- (6) Base Potencial IVA Importaciones = 0.13 x (5) = \$593 millones
- (7) Base Potencial (\$593 millones) – Recaudación Efectiva (\$580 millones) = monto de la evasión (\$13 millones)
- (8) Import VAT Gap = (7)/(6) = 2.19%

In the above example, the figures that are used for (1), (2), and (3) correspond to actual data [see the caveat to (2) in the following paragraph]. Nevertheless, although the value of (4) is an assumed figure and is used here merely for illustrative purposes, it can be estimated with a certain degree of precision.

Two significant aspects of this estimate must be noted. In part (2) of the above calculation, the effective customs tax rate was used instead of the more preferable average tax rate. A “true” average would be the weighted result of a detailed analysis of imports (codes and chapters) and their corresponding tax rates. More difficult to do is to estimate a taxable coefficient for each import classification. Both are feasible, but time consuming. It is evident that the addition of the aggregate import VAT gap to that of the overall domestic VAT gap, no matter how crudely done, would at least yield a better idea of the total VAT gap.

It is also feasible to use data from the BCR’s I-O matrix to estimate the import VAT gap by applying the aforementioned procedure. For each industry (rama de actividad) the matrix contains imports (at CIF values) and customs duties collected. It also gives values corresponding to the total VAT (on both imports and domestic transactions) collected. The import VAT can be computed in two different ways: by subtracting the estimates taken from the domestic VAT gap analysis and/or by using data generated directly by the Customs Directorate (Dirección General de la Renta de Aduanas) from its SIDUNEA database. After applying the necessary taxable coefficients to each industry category to yield taxable adjusted tax base and multiplying by 0.13 (the VAT rate), the absolute tax gap is estimated by calculating the difference between potential and realized collections.

**There are two difficulties with the above methods. First and foremost, they do not produce a “true” estimate of the import VAT’s potential tax base because they are not generated from an independent data source. Rather, they depend on declared CIF values. Therefore, they are not really an acceptable proxy estimate of the magnitude of under-invoicing, misclassification of imports (intentional or not), and contraband (which escapes the tax net altogether).**

Secondly, even if this method were able to generate a “true” potential base for the import VAT, at this point in time the DGII is not able to link import VAT underpayment to specific taxpayers. This is because importers are not legally obligated to use their taxpayer registration numbers (NIT) to retrieve merchandise from Customs. Although they might use their NIT, other forms of documentation may also be used. Moreover, the NIT used to retrieve Customs merchandise might be that of a customs intermediary and not that of the actual importer. This quandary does have a remedy, but it will require a change in rules and regulations to overcome. If Customs were to require the NIT of only the importer for whom the merchandise is ultimately destined, the DGII’s Dirección de Fiscalización would be able to follow up.

There does exist a more direct way to estimate El Salvador’s tax gap for both the import VAT and customs duties by adopting a methodology applied by Giraldo Botero (July, 2005) to the case of Paraguay. It essentially consists of comparing two sets of trade statistics: exports from Paraguay’s major trading partners to Paraguay and import data taken from registered imports in Paraguay’s National Customs Directorate. The first source consists of figures sent to the International Monetary Fund (IMF) by member countries, and is thus independent of Paraguay’s customs authority. The large discrepancies that cropped up by comparing the two databases signaled the presence of large-scale tax evasion. After identifying those countries with the largest gaps with Paraguay, the discrepancies are detailed by major imported items (or chapters). As a final step, the tax gap for those tariff chapters (capítulos del arancel) most associated with tax evasion is calculated.

This same approach can be adopted by the Ministry of Finance, be it the DGII or the Dirección General de la Renta de Aduanas. Export data to El Salvador from its major trading partners is found in the IMF’s publication titled Direction of Trade Statistics Yearbook. This source, available in hard copy and on-line (subscription price is \$70.00), contains detailed export data (by tariff chapter and subchapter) up to four digits of International Sectoral Industrial Code (ISIC). The 2005 Yearbook has just been published (October 19, 2005); the 2004 Yearbook came out on November 3, 2004. Registered Salvadorian import data are generated by the SIDUNEA software installed in Aduanas. A comparison of the differences in values between the two data sets would reveal the magnitude of the import VAT gap (and customs duties) due to under-invoicing, misclassification (intentional or not), and/or “classic” contraband (that totally escapes the customs authority).

## B. The Income Tax on Legal Persons (Personas Jurídicas)

In contrast to carrying out annual estimates of the VAT gap, the UPET does not estimate the tax gap corresponding to the income tax on legal persons (hereafter labeled ISR/PJ). The only known study that has attempted to estimate the overall and industrial ISR/PJ gaps was done in 2003, and relates to the year 2000; see BearingPoint Barents Group (2003). The analysis found an aggregate ISR/PJ evasion rate of either 55% or 79% depending on the table consulted in the original English language version. This is symptomatic of the lack of consistency in the study itself. For whatever it is worth, many sectoral evasion rates exceeded 100% even though they were “normalized” by an undefined procedure (most likely in “off-the-cuff” but logical fashion). The methodology supporting these estimates made use of the BCR’s I-O matrix for the year 2000 and a special tax return file developed by the Ministerio de Hacienda.

The UPET staff has attempted to replicate the cited methodology, but have not been able to do so. This is somewhat understandable. The original document is rather vague on a number of points; e.g., “estimates were made....using a combination of information available in the ESIO and *other information*.” “Other information” is not defined. Compounding this lack of methodological clarity is that the Spanish translation is (euphemistically) deficient and simply incomprehensible by itself without making constant referral to the English version. Nevertheless, the principal parts of the study, especially the applications of the I-O matrix, appear to be replicable---with a great deal of effort and by injecting a number of assumptions.

To avoid replication difficulties, a simpler (and second best) version of the methodology is estimated below. The calculation of its potential tax base can be described algebraically as follows:

$$BI = EE = VBP - CI - R - D - IN - II$$

donde

BI = Base Potencial Imponible

EE = Excedente de Explotación

VBP = Valor Bruto de la Producción

CI = Consumo Intermedio (Demanda Intermedia)

R = Remuneraciones

D = Depreciación

IN = Intereses Netos Pagados (intereses pagados – intereses recibidos)

II = Impuestos Indirectos excepto el IVA sobre importaciones

The sectoral values for VBP, CI, IN, and II are directly available in the annual I-O matrices. R is only available from the initial 1990 I-O matrix, and extrapolation to 2002 requires a leap of faith. Therefore, the 1990 R structure was applied to a total R generated from the 2002 national accounts. D was estimated from the national accounts and the

TABLE 6

**SECTORAL AND AGGREGATE TAX GAPS: ISR PERSONAS JURÍDICAS, 2002**  
(hundreds of dollars)

	Ramas de Actividad Económica	Base Imponible Potencial	Tasa Jurídicas	Impuesto Potencial	Impuesto Computado	Brecha	Tasa de Evasión
1	CAFE ORO	36,041	0.25	9,010	-81,299	90,310	1002.3%
2	ALGODON	(369)	0.25	-92	-105	13	-14.2%
3	GRANOS BASICOS	110,428	0.25	27,607	-453	28,060	101.6%
4	CAÑA DE AZUCAR	23,514	0.25	5,878	-3,063	8,941	152.1%
5	OTRAS PRODUCCIONES AGRICOLAS	283,994	0.25	70,999	-2,063	73,061	102.9%
6	GANADERIA	106,131	0.25	26,533	-471	27,004	101.8%
7	AVICULTURA	78,931	0.25	19,733	15,202	4,531	23.0%
8	SILVICULTURA	100,041	0.25	25,010	-1,162	26,172	104.6%
9	PROD. DE LA CAZA Y LA PESCA	39,418	0.25	9,855	2,386	7,469	75.8%
10	PROD. DE LA MINERIA	39,158	0.25	9,789	1,302	8,487	86.7%
11	CARNE Y SUS PRODUCTOS	67,073	0.25	16,768	4,520	12,248	73.0%
12	PRODUCTOS LACTEOS	20,977	0.25	5,244	-1,418	6,662	127.0%
13	PROD. ELABORADOS DE LA PESCA	(838)	0.25	-210	7,554	-7,764	3704.0%
14	PROD. DE MOLINERIA Y PANADERIA	94,076	0.25	23,519	15,422	8,097	34.4%
15	AZUCAR	65,695	0.25	16,424	28,186	-11,762	-71.6%
16	OTROS PROD. ALIM. ELABORADOS	184,509	0.25	46,127	111	46,016	99.8%
17	BEBIDAS	108,608	0.25	27,152	1,564	25,588	94.2%
18	TABACO ELABORADO	(776)	0.25	-194	3,952	-4,147	2136.3%
19	TEXTILES Y ART. CONFEC. DE MAT. TEXT.	57,865	0.25	14,466	34,306	-19,840	-137.1%
20	PRENDAS DE VESTIR	(3,295)	0.25	-824	5,813	-6,637	805.7%
21	CUERO Y SUS PRODUCTOS	53,240	0.25	13,310	266	13,044	98.0%
22	MADERA Y SUS PRODUCTOS	16,733	0.25	4,183	9,322	-5,139	-122.8%
23	PAPEL, CARTON Y SUS PRODUCTOS	80,536	0.25	20,134	5,054	15,080	74.9%
24	PROD. DE LA IMPRENTA Y DE IND. CONEX.	90,167	0.25	22,542	26,609	-4,067	-18.0%
25	QUIMICA DE BASE Y ELABORADOS	100,521	0.25	25,130	13,001	12,129	48.3%
26	PROD. DE LA REFINACION DE PETROLEO	140,682	0.25	35,171	5,586	29,585	84.1%
27	PROD. DE CAUCHO Y PLASTICO	19,126	0.25	4,781	44,191	-39,409	-824.2%
28	PROD. MINERALES NO METALICOS ELAB.	80,815	0.25	20,204	3,293	16,911	83.7%
29	PROD. METALICOS DE BASE Y ELAB.	56,335	0.25	14,084	1,432	12,652	89.8%
30	MAQUINARIA, EQUIPOS Y SUMINISTROS	8,624	0.25	2,156	15,997	-13,841	-642.0%
31	MATERIAL DE TRANSP. Y MANUF. DIVERSAS	30,291	0.25	7,573	86,458	-78,885	-1041.7%
32	ELECTRICIDAD	111,149	0.25	27,787	-15,488	43,275	155.7%
32	AGUA Y ALCANTARILLADOS	7,189	0.25	1,797	21,224	-19,427	-1080.9%
34	CONSTRUCCION	187,722	0.25	46,931	221,244	-174,313	-371.4%
35	COMERCIO	1,390,551	0.25	347,638	11,973	335,665	96.6%
36	RESTAURANTES Y HOTELES	422,931	0.25	105,733	25,843	79,890	75.6%
37	TRANSP. Y ALMACENAMIENTO	661,115	0.25	165,279	17,987	147,291	89.1%
38	COMUNICACIONES	212,796	0.25	53,199	1,352	51,847	97.5%
39	BANCOS, SEGUROS, OTRAS INST. FINANC.	(398,893)	0.25	-99,723	28,210	-127,933	128.3%
40	BIENES INMUEBLES Y SERV. PRESTADOS	415,497	0.25	103,874	23,583	80,291	77.3%
41	ALQUILERES DE VIVIENDA	64,632	0.25	16,158	15,372	786	4.9%
42	SERV. COMUNALES, SOCIALES Y PERS.	486,807	0.25	121,702	59	121,643	100.0%
43	SERVICIOS DOMESTICOS	311,497	0.25	77,874	16,516	61,358	78.8%
44	SERVICIOS DEL GOBIERNO	(78,404)	0.25	-19,601	-2,250	-17,352	88.5%
	<b>TOTAL</b>	<b>5,882,837</b>	<b>0.25</b>	<b>1,470,709</b>	<b>607,117</b>	<b>863,593</b>	<b>58.7%</b>

2002 I-O matrix. The “computed tax” (impuesto computado) by sector was generated from the DGII’s ISR database, and corresponds to line 305 of the ISR tax return. A detailed description of the methodology employed is found in Annex 2.

As can be noted from Table 6, the tax gap analysis for the income tax on legal persons generated an aggregate tax gap (or tax evasion rate) of 58.7% in the year 2002. However, the sectoral tax evasion rates show a large degree of variability, and may be somewhat difficult to logically explain. It must be remembered that they are the result of using data from secondary sources that themselves are estimates. The way of interpreting the sectoral tax gap magnitudes is to take them as indicators of tax evasion in a particular sector. **They do not purport to represent absolute values, and should not be interpreted as such.** As indicators, they constitute red flags that should be used by the DGII and tax administrators to further delve into the tax matters of the individual companies that operate in that sector. As a corollary, the negative rates corresponding to some sectors superficially mean that the firms paid more than the amount of taxes they actually owed. Again, this should merely raise a red flag that calls the DGII’s attention to the need to further look into the tax affairs of the companies that constitute the sector.

An overview of the estimated sectoral tax evasion rates found in Table 6 reveals extremely high rates in sectors 1, 13, 18, and 20 (café oro, productos elaborados de la pesca, tabaco elaborado and prendas de vestir respectively). Evasion rates exceeding 100% are found in numerous sectors (3 to 6, 8, 12, 32, and 39). These clearly constitute indicators that tax evasion might be rampant in these particular sectors, implying that DGII audit activities should immediately investigate those firms in each one of these sectors. High tax evasion rates (between 50% and 100%) are also extant in numerous other sectors, indicating that firms in these areas should also be audited via a random selection process and/or via selected indicators of importance (e.g., gross sales, number of employees, reported profits).

### **C. The Income Tax on Natural Persons**

For database and methodological reasons, the tax gap estimate pertinent to the personal income tax (ISR/PN) is limited to that on salaried persons. As such, the estimate excludes income derived from other sources such as capital gains and non-salaried remuneration; under Article 4 (Title I) of the income tax law dividends and interest received by natural persons are not taxable.

The estimation results are presented in Table 7. Taxable income is taken from the annual report for 2004 submitted to the Superintendencia de Pensiones by the two firms that administer El Salvador’s privatized pension system; see Section II.D.2. By law all salaried persons are obligated to contribute to the system, so that this database should register a very high proportion of incomes derived from salaries in El Salvador’s formal sector. Legal personal exemptions and deductions taken from Ministry of Finance data are subtracted from this total to reach a taxable income total. Within this same data file the corresponding marginal tax rates are then applied to generate the potential tax liability. The results

displayed in Table 7 show a 2004 tax gap (or tax evasion rate) on salaries alone of almost 30%.

If taxes on 30% of formal sector salaries are uncollected by the DGII, then one can only imagine what the evasion rates are on non-salaried incomes earned by middle- to upper-income class professionals who work independently. Here is an area to which the DGII should allocate a good deal of effort. On the other hand, given that, on the average, informal sector independent workers do not generate incomes above the income tax threshold, the corresponding tax gap is probably minimal. Therefore, the DGII should not, at least at this time, allocate resources to this sector.

**TABLE 7**  
**THE TAX GAP FOR SALARIED PERSONS:**  
**ISR PERSONAS NATURALES, 2004**

		<b>2004</b>
		<b>Miles de US Dólares</b>
<b>Base: Sistema de Ahorro para Pensiones</b>		
<b>Total Renta Gravable</b>		4,097,600
<b>Exenciones</b>		1,376,551
<b>Deducciones</b>		
	Medicas	133,909
	Colegiaturas	131,833
	de ISSS	41,719
	Bienestar Magistral	10,022
	Donacion	7,374
	de IPSFA	6,939
	de BCR	1,651
	Depreciacion de vehiculos	1,677
	Combustibles	1,483
	Total, Deducciones	336,607
<b>Base Imponible Potencial</b>		<b>2,384,441</b>
<b>Recaudacion</b>	<b>Potencial</b>	<b>184,331</b>
	<b>Tasa Tributaria Efectiva</b>	<b>7.7%</b>
<b>Impuesto Declarado</b>		<b>130,360</b>
<b>Brecha Tributaria</b>		<b>53,971</b>
<b>Tasa de Evasion</b>		<b>29.28%</b>

*Source: See Annex 3.*

With respect to both salaried and independent professionals, data generated from “micro” sources can aid the DGII in ferreting out tax evaders. The DGII has in hand a number of lists from professional associations that in many cases contain the name, address, and NIT of persons who are members of these associations; i.e., most likely medium to high income individuals. Not all the lists received up until this time (mid-November, 2005) has all three items; some lack both the NIT, date of birth, and/or address. Other lists are for firms, not individuals, and also vary with respect to the amount of information contained; e.g., some lack the NIT or the data of establishment. With respect to the number of members, there is a distinct possibility of double-counting; i.e., the same person may belong to two or more organizations. This, of course, can be cleaned up. An inventory of these lists is found in Annex 5.

The administrative *cum* audit value of these lists is evident. Each item (or better yet, each combination of items) gives the DGII check against its natural persons and legal persons income tax filer database. Those lists with names and NITs are most valuable. However, it is possible to link names alone to NITs, since the names are complete (two surnames). This permits the identification of non-filers, stop-filers, and the possibility of those who underreport income. Of course, this requires a case-by-case approach, and cannot be further delved into in this paper. Rather, it requires a great deal of follow up on the part of the DGII.

An initial analysis of these lists that matches the names of individuals and firms with the NITs in the DGII’s RUC generated some interesting results:

- Between 2001 and 2004, 66% of those taxpayers (mostly individuals) for whom there was a match had filed either an income tax or VAT return at least once during the four years; 34% had not done so. While there may be justifiable reasons for not having filed, at least at first glance this appears to present evidence of a substantial rate of non-filing among those who may be relatively middle- to high-income independent professionals. Moreover, having filed a tax return at least once during a four year period does not imply the absence of stop-filing. More analysis using the same data is required to gauge the stop-filing rate.
- For the same time period, a mere 54% of these potential taxpayers had a valid NIT in the DGII’s RUC; 46% did not. Given that every Salvadoran 18 years or older is legally required to register to obtain a NIT, such a result (if it withstands further statistical *cum* informatic scrutiny—there may be RUC database problems) is astounding. Many potential taxpayers are simply not even listed and identifiable. The meaning is clear: how can the DGII collect taxes from individuals and firms that are not even identifiable?

## **IV. CONCLUSIONS AND RECOMMENDATIONS**

### **A. General Conclusions**

As presented in Sections II and III of this paper, the identification of the existing tax gaps in El Salvador's principal taxes is geared towards the derivation and further development of indicators that will provide the DGII with an enhanced set of tools to better focus activities and programs to reduce tax evasion. Increased efforts by the tax administration authorities lower the tax gaps will help meet the IMF-stated goal of raising tax revenues to 14.4% of GDP by 2009 to provide the scope for higher infrastructure investment and social expenditure; see IMF (August, 2005).

Two broad conclusions regarding El Salvador's taxes on income and consumption flow from the aforementioned discussions:

- There exist significant tax gaps both in terms of the number of taxpayers actually paying taxes (*vis-à-vis* those legally obligated to pay) and the amounts of taxes actually paid (*vis-à-vis* the amounts legally subject to taxation). That these gaps (i.e., tax evasion) exist will come as no surprise to anybody.
- There exist methodologies (new and already used) and/or data sources that can be introduced and expanded upon to help the DGII better identify tax evaders. The task then becomes that of expending more resources to develop new methodologies and data sources and translating statistical results into practical strategies to track down and collect from non-filers and stop-filers.

The thrust of the presentation in Section II is merely to indicate that there appear to exist large numbers of taxpayers who have either completely or partially escaped the tax net (stop-filers and under-reporters) or have never been captured in it (non-filers). In the absence of a precise counting procedure (which is a practical impossibility), the matching of secondary data source information against the registered number of taxpayers leads to this conclusion. As pointed out in various parts of Section II, the DGII can do a lot more to better utilize the secondary sources that currently exist and that will soon become available. What is presented here is merely indicative of what possible sources are available. There remains much more work to be done to actually put these sources to practical use.

Although the estimates of tax gap magnitudes are presented with apparent mathematical precision in Section III, the conclusions reached are similar to those that apply to Section II. It is important to realize that they are approximations, not solid figures. It is erroneous to attach specific numbers to the magnitude of tax evasion. Rather, the numbers produced are really estimates that indicate the "midpoint" of an undefined range of possible outcomes. Similar to Section II, there is much work to be done with respect to refining the methodologies presented and the databases that underlie these methodologies. This latter point is especially crucial, and is subsequently retaken in the recommendations.

## **B. Recommendations**

The recommendations made below are implicit in the commentaries previously made in Sections II and III. They essentially involve the adoption of new methods and methodologies fed with data from existing and/or forthcoming data sources that lie outside the purview of the Ministry of Finance. They also involve the continuation and strengthening of methodologies that are already being implemented.

The practical aspect of the identification and quantification of tax gaps is that it can lead to the adoption of tax administration strategies and measures that will reduce tax evasion. This simply means that such quantification must not be viewed in isolation from the myriad elements that together produce such a result. In this vein, although what follows is essentially limited to tax gap issues, the surrounding administrative context is key. Therefore, the recommendations found in the Arias (Septiembre, 2005) and Jacobs (September, 2005) papers must be taken hand-in-hand with the ones that appear below.

### **1. General Recommendations**

Fiscal/tax analysis is only as good as the database, and the DGII's database is poorly organized and clearly does not meet analytic needs. This became all too evident when attempting to generate the data necessary to do tax gap analysis, but it spills over into (many) other fields. One example will suffice: In purely descriptive Tables 2 and 3 this consultant wanted to include the amount of tax actually paid by taxable income bracket for the two income taxes (ISR/PJ and ISR/PN). Three days of work by two counterpart team analysts led to the conclusion that the ISR database in its current structure is unable to produce these basic numbers. In the past the UPET has tried and not succeeded. Worst of all, it is not possible to unequivocally break down **total** realized income tax collections into the two component parts. There are indirect methods of arriving at the overall breakdown, but each one produces different results. Apropos this issue, the tax gap estimates presented in Tables 6 and 7 do not use effective tax collections to estimate the tax gap between potential taxes and actual collections. Rather, what is estimated is the computed tax ("impuesto computado") taken from specific lines of the income tax form. This differs (in unknown magnitude) from the actual tax paid and received.

There are several reasons for this, the most outstanding being the extremely large amount of data entry errors and the design of the tax return form. Regarding the former, these occur either upon reception of the forms or at a later date when complete data entry is done via an outsourcing contract. There is a lack of quality control at all stages of the process. With respect to the latter reason, the form does not include a simple box that would require the taxpayer to check whether or not he/she is submitting the return as a natural or legal person. The assumption seems to be that this can be checked against the taxpayer's NIT in the RUC, but the data generated do not allow this distinction to be directly made by an analyst.

In sum, there is a crying need to produce basic tax statistics, but they cannot be produced (or are produced with difficulty). It is therefore recommended that a consultant be brought in to analyze the data needs and structure them to data generation. This would include interviews with data users to find out both perceived needs and to identify those needs they do not even perceive. Jacobs (September, 2005) also addresses this point (see Sections 6.4 and 6.5.1) from a tax administrator's perspective.

In addition to cleaning up databases and producing rapidly usable statistics, the DGII should take steps to institutionalize data interchanges to avoid dependence on interpersonal relationships. The foregoing commentaries have signaled the need to use external (and independent) data sources to underpin the DGII's analyses. For example, of practical use are those data sources being developed and/or held by DIGESTYC, the BCR, and the Superintendencia de Pensiones.

## **2. Recommendations Directly Pertinent to Maximizing Tax Collections**

Each one of the ensuing recommendations, coupled with the Action Plan presented below in Section IV.C, is intimately linked to the maximization of VAT and income tax collections. Further development of already existing methodologies and databases, together with those to be developed along the lines suggested in this paper, will generate indicators and usable and functional links to specific taxpayers. It is this last step---the actual identification, pursuit, investigation, and auditing of individual taxpayers (persons and firms)---that will require a significant amount of strengthening. This paper suggests many different lines of analysis for identification purposes. The follow-up footwork involves truly getting down to the nitty-gritty of tax administration. Clearly, the DGII's audit staff must be beefed up both in terms of quality and quantity.

- Continue the existing VAT gap analysis (see Section III.A.1). It is methodologically sound, and it will generate better sectoral tax gap estimates once the BCR updates the national accounts and the I-O matrix. As previously pointed out in Section III.A.1, the DGII via the UPET already uses these estimates for both analytical and strategic planning purposes. It should continue to do so.
- Further adjust and refine the sectoral ISR/PJ analysis developed in Section III.B to be used in the same way as the VAT gap analysis results. At this juncture, the only person in the DGII who has a complete understanding of this methodology is Lic. Luis Canjura of TPAR's counterpart team. He should take the lead in further developing this technique.
- When the required databases become available, initiate VAT gap analysis using the Consumption Method; see Section III.A.3.
- Initiate analyses of the import VAT gap as described in Section III.A.4. It is recognized that collection of the VAT on imports is not a responsibility of the DGII. Nevertheless, given the revenue importance of this levy and of the chain of

transactions that imports initiate, it makes sense to estimate this gap. It makes little sense to estimate the domestic VAT gap and assume away the import VAT gap.

- Initiate analysis of the ISR/PN tax gap using as a reference point the information generated by the Superintendencia de Pensiones; see Section III.C. By matching the names of contributors to the national pension system against these same names in the DGII's NIT database, the DGII will be able to identify stop-filers, non-filers, and those who underreport taxable income. Such a matching exercise will especially aid in identifying tax evasion among independent professionals.
- To further strengthen anti-evasion activities by independent professionals, begin exploitation of the membership lists already obtained from professional associations; see Section III.C. The initial evidence generated from these lists reveals that there exists a large number of non-filers among the professional ranks of potential taxpayers.
- Develop and apply a consistent method to break down ISR/PN and ISR/PJ collections.
- Develop formal contacts with the DIGESTYC. Use the annual EHPM survey to make pertinent data variable matches/cross tabulations and seek input into the survey questionnaire to generate usable data on individual incomes and occupations.
- Immediately get access to the Directorio de Establecimientos and extract pertinent information regarding both legal and natural persons; see Section II.B. This will aid in reducing the income tax and VAT gaps.
- Make contacts with the pertinent authorities (DIGESTYC and the Ministerio de Economía) to get access to the Censo Económico that will offer preliminary information in 2006; see Section II.B.

### **C. An Action Plan**

Based on the contents of Sections II and III and the above recommendations, the following steps should be taken to better identify tax gaps and to translate such identification into practical actions.

#### **1. For immediate action (as of end-November, 2005):**

- Obtain the Directorio de Establecimientos and analyze the information available. This source will probably allow the DGII to define the universe of legal person (personas jurídicas) taxpayers under both the VAT and the income tax (ISR/PJ). Since it contains information regarding active persons in the labor force, it can also aid in identifying natural person (personas naturales) taxpayers under both taxes.
- Initiate exploitation of the membership lists of professional associations already in the hands of the DGII and the TPAR Project; see Section III.C and Annex 5.

Matching information from these lists with NIT data from the DGII taxpayer database will permit the identification of non-filers and stop-filers.

- Via already initiated contacts with the two AFPs, obtain the lists of persons paying in to the national pension system and match these names with the DGII's NIT database; see Section II.D.2. This will permit the identification of non-filers and stop-filers.
- Follow up on contacts already established with the DIGESTYC's General Director to obtain detailed data and cross-tabulations from the 2004 EHPM; see Section II.B. Additional information specified by TPAR's counterpart team has been requested in a note from the DGII's General Director to the General Director of DIGESTYC, but as of November 18, 2005, there had been no reply.

## 2. In the first quarter of 2006:

- Continue action on the items in the above-mentioned bullet points.
- As soon as preliminary data from the Censo Económico become available, initiate its exploitation to further identify tax gaps and tax evaders; see Section II.B.
- Begin to exploit preliminary VAT gap information from the UPET's 2003 sectoral analysis in order to further develop audit strategies and plans; see Section III.A.1.
- Initiate work to further refine the recently developed methodology that estimates the ISR/PJ tax gap, and take steps to translate its findings into practical audit strategies; see Section III.B.
- Resolve the database difficulties that block the breakdown distinguishing between ISR/PN and ISR/PJ collections and additional pertinent information; see Section IV.B.1.
- Carry out a data needs and database structure analysis; see Section IV.B.1.

## 3. In the second quarter of 2006:

- Continue action on all above-mentioned items (in both 1 and 2).
- Carry out an import VAT gap analysis; see Section III.A.4.

## 4. After mid-2006:

- Continue pertinent follow-up activities regarding all above-mentioned items.
- Upon data and database availability, initiate, update and/or further develop such activities as the alternative Consumption Method approach to estimating the VAT gap (see Section III.A.3), the use of new information and cross-tabulations from the

2005 EHPM, and the incorporation of updated national accounts statistics in the VAT and ISR/PJ models.

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## ANNEX 1

### THE UPET'S METHODOLOGY FOR ESTIMATING THE DOMESTIC VAT GAP

The DGII's UPET has been annually estimating the overall and sectoral (rama de actividad) domestic VAT gap since the mid-1990s. The broad outlines of this methodology, which relies upon the BCR's Input-Output Matrix, are as follows:

- Total taxable sales are derived by subtracting the net change in inventories, exports, and exempt sales from total sector output (sales).
- Total deductible purchases are derived by subtracting exempt purchases and purchases used to produce exempt items from total purchases.
- Excludible sectoral investment outlays are derived from exogenous estimates of total and non-taxable investment expenditures.
- The potential tax base is estimated by taking taxable sales less the sum of taxable purchases and non-taxable investment spending; it is then compared with actual sectoral taxes paid.

The algebraic derivation/estimation of this methodology is as follows:

VBP	: Valor Bruto de la Producción
X	: Exportaciones
M	: Importaciones
Ex	: Exenciones
@	: Variación de Inventarios
Vg	: Ventas Gravadas
CI	: Consumo Intermedio
CIex	: Consumo Intermedio Exento
CIpex	: Consumo Intermedio para Productos Exentos
CN	: Consumo Neto
I	: Inversión Total
Iex	: Inversión Exenta
Ipex	: Inversión para Productos Exentos
IN	: Inversión Neta
t	: Tasa de Tributación
Deb	: Débitos
Cred	: Créditos
CredM	: Crédito Fiscal por Importaciones
DevX	: Devolución por Exportaciones
ImpIntP	: Impuesto Interno Potencial
ImpTotP	: Impuesto Total Potencial = Impuesto Interno Potencial + Impuesto Aduanal
ImpAd	: Impuesto Aduanal
ImpIntEf	: Impuesto Interno Efectivamente Recaudado, según Cuentas Fiscales

ImpDet : Impuesto Determinado, según Cuentas Fiscales  
 ImpRet : Impuesto Retenido, según Cuentas Fiscales  
 RemCredN : Remanente de Crédito Neto [(Remanente de Crédito Dic.93 – Remanente de Crédito Dic.92) + Certificados para Imputar al pago de Impuesto]

e : Tasa de Evasión

$$Vg = VBP + M - X - Ex - @$$

$$Deb = t (Vg) = t (VBP + M - X - Ex - @)$$

Cred = Crédito por Compras Internas + Crédito por Importaciones - Devolución a Exportaciones

$$Cred = t (CN + IN) + CredM - DebX$$

donde:

$$CN = CI - Ciex - Cipex$$

$$IN = IT - Iex - Ipex$$

$$ImpIntP = Deb - Cred$$

$$ImpIntP = t (VBP + M - X - Ex - @) - [ (CN + IN) + CredM - DevX ]$$

$$ImpIntP = t (VBP + M - X - Ex - @) - t (CN + IN) - CredM + DevX$$

$$ImpTotP = ImpIntP + ImpAd$$

$$ImpTotP = t (VBP + M - X - Ex - @) - t (CN + IN) - CredM + DebX + ImpAd$$

Se supone que no hay evasión en Importaciones, lo que significa que el Impuesto Aduanal es igual al Crédito por Importaciones:  $ImpAd - CreM = t M$

Entonces:

$$ImpTotP = t (VBP + M - X - Ex - @) - t (CN + IN) - CredM + DevX$$

$$ImpTotP = t (VBP - X - Ex - @) - t (CN + IN) + DevX + t M$$

Por consiguiente:

$$ImpIntP = t (VBP - X - Ex - @) - t (CN + IN) + DevX$$

Puesto que  $t M = ImpAd$

$$\text{ImpIntP} = t [ (\text{VBP} - \text{X} - \text{Ex} - @) - (\text{CN} + \text{IN}) ] + \text{DevX}$$

Llamemos a  $(\text{VBP} - \text{X} - \text{Ex} - @) - (\text{CN} + \text{IN})$  la Base Imponible excluyendo

$$\text{DevX} = \text{BiexcDevX}$$

Por el lado de la Recaudación Fiscal:

$$\text{ImpIntEf} = \text{ImpDet} + \text{ImpRet} - \text{RemCredN}$$

$$\text{Evasión} = \text{ImpIntP} - \text{ImpIntEf}$$

$$\text{Evasión} = t [ (\text{VBP} - \text{X} - \text{Ex} - @) - (\text{CN} + \text{IN}) ] + \text{DevX} - (\text{ImpDet} + \text{ImpRet} - \text{RemCredN})$$

$$\text{Evasión} = t [ (\text{VBP} - \text{X} - \text{Ex} - @) - (\text{CN} + \text{IN}) ] - (\text{ImpDet} + \text{ImpRet} - \text{RemCredN} - \text{DevX})$$

$$\text{Evasión} = t ( \text{BiexcDevX} ) - \text{Recaudación Efectiva Neta de DevX}$$

$$\text{Evasión} = t ( \text{BiexcDevX} ) - \text{RecEfNDevX}$$

$$e = \frac{\text{Evasión}}{\text{ImpIntP}}$$

Source: Ministerio de Hacienda, DGII, UPET (Septiembre, 2004), Anexo 2.

## ANNEX 2

### THE METHODOLOGY ADOPTED TO ESTIMATE THE INCOME TAX GAP WITH RESPECT TO LEGAL PERSONS (PERSONAS JURIDICAS)

El método consiste en determinar, para 44 ramas de actividad económica, una base imponible potencial a partir de la información contenida en la Matriz Insumo Producto de El Salvador para el año 2002 y calcular el impuesto potencial aplicando las tasas tributarias legales. Luego, para estimar la brecha tributaria se compara el tributo potencial con la información contenida en las declaraciones anuales del impuesto sobre la renta de las personas jurídicas registradas en la Base de Datos del Ministerio de Hacienda (DGII), denotado en la Tabla 6 como el valor del Impuesto Computado del mismo año.

La fórmula adoptada para determinar la base de ingresos potencial sujeta al impuesto sobre la renta fue presentada en la Sección III.B, de la cual se entiende que el excedente bruto de explotación concentra las operaciones de repartición del ingreso, ligados a la actividad económica sectorial:

$$BI = EE = VBP - CI - R - D - IN - II - RNG$$

En donde:

BI	= Base Imponible Potencial.
EE	= Excedente Bruto de Explotación
VBP	= Valor Bruto de la Producción
CI	= Consumo Intermedio Total
R	= Remuneraciones al Trabajo
D	= Depreciación
IN	= Intereses Netos Pagados
II	= Impuestos Indirectos
RNG	= Rentas No Gravadas

VBP: Se obtiene para cada una de las 44 ramas de actividad económica, directamente de la Matriz Insumo Producto (MIP) 2002, específicamente del cuadrante de la Generación Primaria de Ingresos.

CI: Este valor se obtiene para cada una de las 44 ramas de actividad económica, directamente de la MIP 2002, específicamente del cuadrante de la Generación Primaria de Ingresos.

IN: El valor se obtiene directamente de la MIP 2002, específicamente del Consumo Intermedio del Sector 39, el cual se refiere a los Bancos, Seguros y otras Instituciones Financieras. Cabe aclarar que el valor establecido por el BCR para este sector es el valor neto, resultante de restar a los intereses recibidos, los intereses pagados en el período.

II: Se obtiene directamente del cuadrante de la Oferta Total de la MIP 2002, sumando el valor de la columna de los Derechos Arancelarios más el valor de la columna del IVA Importación. Para obtener el valor de la variable, dicha suma se establece para cada una de las 44 ramas de actividad económica del cuadrante de la Oferta Total.

R: Las remuneraciones al trabajo se establecen de forma indirecta, debido a que desde la publicación de la MIP de 1990, año en que se cambio de base las cuentas nacionales, no se desglosa los componentes del Valor Agregado por rama de actividad económica. Tal situación, obliga a deducir el valor de las remuneraciones al trabajo a partir del Valor Agregado de la MIP 2002, utilizando la estructura porcentual que las mismas presentaron en la MIP 1990.

D: El valor de esta variable se obtiene de forma indirecta a partir de la Formación Bruta de Capital Fijo (Consumo de Capital), tomando de base la información contenida en la Revista Trimestral del BCR, en donde se desglosa la inversión en pública y privada. El valor de la depreciación se calcula a partir de la Formación Bruta de Capital Fijo privada, adoptando la metodología establecida por BearingPoint Barents Group (2003), en donde se establecen los siguientes supuestos:

- Se determina el monto de la inversión privada en maquinaria y edificaciones aplicando a la formación bruta de capital fijo privada (según revista BCR), el 70% para maquinaria y el 30% para edificaciones.
- Se define el consumo total de capital privado del sector 30 de la economía (Maquinaria, Equipos y Suministros) considerando para dicho sector un 90% de inversión y en consumo intermedio de los demás factores (valor bruto de la producción menos el valor del sector 30) el 10%. La suma de ambos porcentajes se constituye en el consumo total de capital privado para cada una de las 44 ramas de actividad económica.
- Se determina el porcentaje a depreciar en maquinaria y edificaciones y se calcula el monto total a depreciar.
- Luego se divide el total a depreciar entre las 44 ramas de actividad económica (total capital privado) para obtener la depreciación por rama de actividad, lo que se constituye en el valor de la depreciación utilizado en el estudio.

RNG: El valor de esta variable se obtiene de la declaración jurada presentada por las personas jurídicas, a través de un proceso informático que ordena por rama de actividad económica el campo de la declaración “RENTAS NO GRAVADAS”. Esta variable se descuenta del valor bruto de la producción, debido a que en las cuentas nacionales se registran todos los ingresos generados en la economía y hay que efectuar este ajuste.

Una vez determinada la Base Imponible Potencial, se procede a calcular el impuesto sobre la renta de las personas jurídicas; es decir, multiplicar el valor de cada una de las 44 ramas de actividad económica y el valor total de la base, por la tasa del impuesto para las personas jurídicas que es del 25%.

El valor del impuesto computado de renta de las personas jurídicas se obtiene de la liquidación anual del impuesto sobre la renta, expresado en las declaraciones juradas presentadas por los contribuyentes para el ejercicio 2002. Esta determinación requiere de un proceso informático que extrae de la casilla “IMPUESTO COMPUTADO DE RENTA” lo determinado por el contribuyente

bajo este concepto y se establece el mismo para cada una de las 44 ramas de actividad económica, clasificadas según el Ministerio de Hacienda, cuya clasificación para efectos del estudio, guarda concordancia con la clasificación económica del BCR.

La determinación del monto global de evasión del impuesto se logra restando al impuesto computado de renta de las cuentas nacionales, el impuesto declarado por los contribuyentes. Se divide el resultado de este paso entre el monto del impuesto potencial esimado de las cuentas nacionales, determinando así la tasa global de evasión. Para cada tasa sectorial de evasión, se ejecutan los dos pasos descritos anteriormente.

Source: Developed and implemented by Luis Alberto Canjura and Arthur Mann.

## ANNEX 3

### THE METHODOLOGY ADOPTED TO ESTIMATE THE INCOME TAX GAP WITH RESPECT TO NATURAL PERSONS (PERSONAS NATURALES)

Se retomó (con modificaciones) el método de estimación de la brecha del impuesto sobre la renta de las personas naturales establecido por BearingPoint Barents Group (2003), el cual consiste en determinar una base imponible potencial a partir de la información publicada por la Superintendencia del Sistema Financiero. Para 2004, se utilizó el informe del trimestre octubre-diciembre de 2004 que contiene la información proporcionada por la Administradoras de Fondos de Pensiones (AFP) referente a los ingresos base para el cálculo del IBC (Ingreso Base de Cotización).

En dicho estudio, se considera que las AFP concentran buena parte de los salarios de las personas naturales del país, por lo que se estima la base potencial a partir de esta información. Se agregó información adicional tomada de la base de datos del Ministerio de Hacienda para la obtención de los valores del impuesto computado de renta, reflejado en las declaraciones juradas que los contribuyentes presentaron en la liquidación y pago del impuesto sobre la renta para el ejercicio 2004.

Se estima la base imponible potencial a partir de la base de datos de la superintendencia de pensiones, en donde se clasifica los ingresos de los afiliados en las AFPs por rangos de ingreso promedios mensuales. En base de dicha información se establece el ingreso promedio mensual ajustado para cada rango de ingreso y se multiplica por doce para obtener la renta gravable anual; luego se multiplica por el número de afiliados en el Sistema de Ahorro para Pensiones para determinar el total de la renta gravable por rango de ingreso de 2004. A dicha renta gravable, se le restan las deducciones de ley para las personas naturales, obtenidas de la información de las declaraciones de renta del ejercicio 2004 y se determina la renta imponible potencial. Para determinar el impuesto computado de renta potencial, se establece la renta imponible por asalariado para cada uno de los rangos de ingresos, dividiendo la renta imponible potencial por rango entre el número de afiliados por rango; luego se determina que rangos de ingresos se incluirán en el cálculo del impuesto, tomando en cuenta los siguientes tramos de renta imponible:

Tramo I de \$ 0.00	a	\$ 2,514
Tramo II de \$ 2,515	a	\$ 9,143
Tramo III de \$ 9,144	a	\$ 22,847
Tramo IV de \$ 22,848	y	más

A la renta imponible por asalariado que se encuentra en los Tramos II, III y IV se les aplicó las tasas impositivas del 10%, 20% y 30% respectivamente. A la renta imponible por asalariado que se encuentra en el tramo I, no se le calcula impuesto dado que se encuentran en el rango de ingresos no gravables.

Una vez determinados los rangos sujetos a cálculo de impuesto, se procede a sumar los resultados obtenidos por aplicación de tasas; luego se multiplica cada suma por el número de afiliados en cada rango de ingresos, obteniendo así el Impuesto Computado de Renta potencial. El valor del impuesto computado de renta de las personas naturales se obtiene de la liquidación anual del impuesto sobre la

renta, expresado en las declaraciones juradas presentadas por los contribuyentes para el ejercicio 2004. La determinación de dicho valor requiere de un proceso informático que extrae de la casilla “IMPUESTO COMPUTADO DE RENTA” lo determinado por el contribuyente bajo este concepto y se establece el mismo para cada uno de los rangos de ingresos clasificados según la Superintendencia de Pensiones.

En cuanto a la determinación de la Tasa Global de Evasión del Impuesto, primero se determina el monto global de evasión del impuesto sobre la renta de las personas naturales, restando al impuesto computado de renta potencial, el impuesto computado declarado por los contribuyentes. Subsecuentemente, se divide el resultado del paso anterior (monto global de evasión) entre el monto del impuesto potencial obtenido según Superintendencia de Pensiones, determinando así la tasa global de evasión.

Source: Developed and implemented by Luis Alberto Canjura and Arthur Mann.

## **ANNEX 4**

### **LIST OF PERSONS INTERVIEWED**

Aguilar, Rony. Jefe, Sección Indicadores Económicos, Departamento Cuentas Macroeconómicas, Banco Central de Reserva de El Salvador.

Corleto, Miguel. Director General, Dirección General de Estadística y Censos, Ministerio de Economía.

Delgado, Rogelio. Jefe, Sección Cuenta Corriente, DGII, Ministerio de Hacienda.

Rivera, Oscar. Jefe, Unidad de Programación y Evaluación Tributaria, DGII, Ministerio de Hacienda.

**ANNEX 5**

**PARTIAL INVENTORY OF LISTS OF PROFESSIONAL  
ASSOCIATIONS RECEIVED BY THE DGII  
(as of November 14, 2005)**

<b>Nombre de la Asociación O Institución</b>	<b>Número de Miembros</b>	<b>Nombres de Miembros</b>	<b>Dirección</b>	<b>NIT</b>	<b>Fecha de Nacimiento o Establecimiento</b>
Asoc. Ingenieros Mecánicos, Eléctricos e Industriales	276	Sí	Sí	Sí	Sí
Abogados Autorizados	12,458	Sí	Sí	No	Sí
Notarios Autorizados	5,244	Sí	Sí	No	Sí
Asoc. de Profesionales en Computación	104	Sí	Sí	Sí	Sí
Asoc. de Medianos y Pequeños Empresarios	81	Sí	Sí	Sí	Sí
Colegio de Profesionales en Ciencias Económicas	453	Sí	Sí	Sí	Sí
Cámara de Comercio	1918	Sí	Sí	Sí	partial
Gremiales ANEP	35	Sí	Sí	Sí	Sí
SIGET	828	Sí	Sí	Sí	Sí
Cámara de la Construcción	122	Sí	Sí	Sí	Sí
Odontólogos	1128	Sí	Sí	No	No
Asoc. Cooperativa Productores Agropecuaria	1441	Sí	Sí	Sí	partial
Reporte de Profesionales Registrados	16,389	Sí	Sí	No	Sí
Junta Vigilancia Farmacéuticos	2065	Sí	Sí	No	No
Consejo Vigilancia Contadores Públicos y Auditores	3319	Sí	No	No	No
Asoc. Ingenieros y Arquitectos	686	Sí	Sí	No	Sí
Asoc. Industriales	345	Sí	Sí	Sí	Sí

## ANNEX 6

### TERMS OF REFERENCE GOVERNING THIS STUDY

El objetivo del trabajo es identificar las formas de maximizar la recaudación tributaria mediante la identificación de la base potencial de los distintos impuestos vigentes a través de identificar entre otras cosas: el número de contribuyentes y el valor monetario de renta, consumo y gasto.

El consultor identificará las diversas fuentes de información que existen y que deben crearse a fin de que la DGII determine, durante la vida del proyecto y después de éste: (a) la evasión a nivel de impuestos; tipo, tamaño, actividad económica, etc. de los contribuyentes y de otro tipo de información que el consultor identifique y, por ende, (b) las formas de reducir la evasión tributaria y maximizar la recaudación.

El propósito del documento será servir de base para que posteriormente se prepare un Plan Estratégico de Fiscalización para la DGII, el cual a su vez servirá para preparar un Plan Operativo de Fiscalización orientado a maximizar la recaudación (reducir la evasión de impuestos).

Para lograr este objetivo, el consultor deberá:

**1ra Actividad: Efectuar una evaluación preliminar:** Se deben recoger los estudios del proyecto TPAR relacionados con el diagnóstico de la estructura administrativa, estructura informática y el estudio de desempeño potencial dada la actual estructura, como punto de partida del estudio.

**2da Actividad: Estudio de base tributaria potencial:** Se debe efectuar un estudio que estime el número de contribuyentes potenciales en la economía salvadoreña y lo ajuste con los contribuyentes registrados y activos, determinando la brecha existente. Esta brecha significará el margen en el cual se debe extender la base tributaria de El Salvador.

**3ra Actividad: Estimación de la renta gravable potencial:** Se debe efectuar un estudio para determinar la renta gravable potencial para la economía salvadoreña. Esta deberá ser estimada como mínimo a 44 actividades de la CIIU.

**4ra: Recomendaciones tendientes a maximizar la recaudación:** El consultor efectuará las recomendaciones pertinentes para que la administración logre ampliar la base tributaria y amplíe el nivel de recaudo.

**5ta Actividad: Informe Final:** Antes de salir del país, el consultor elaborará un informe final recogiendo los resultados de las actividades anteriores.

**Productos:** Un informe escrito en inglés que incluya lo siguiente: estudio de base tributaria potencial y su brecha; estudio de base gravable; y recomendaciones sobre estrategias generales para maximizar la recaudación.

**Duración del Trabajo:** 20 días laborables entre el 31 de octubre y el 25 de noviembre del 2005.