

FINAL

Tax Simplification for Jobs and Growth

Prepared by Mark Gallagher and Ante Babic for USAID ESP Project in Croatia

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ACRONYMS

CIT	Corporate Income Tax or Company Income Tax, also Profit Tax
EIZ	Economic Institute Zagreb
ESP	Project “Poduzetna Hrvatska”
EU	European Union
EUR	Euro, currency unit of the European Economic and Monetary Union
GDP	Gross Domestic Product
HUP	Croatian Employers Union
IKK	Ivanova, Keen, and Klemm
IMF	International Monetary Fund
IPF	Institute for Public Finance
NCC	National Competitiveness Council
OECD	Organization for Economic Cooperation and Development
PIT	Personal Income Tax or Income Tax
R&D	Research and Development
USAID	United States Agency for International Development
VAT	Value Added Tax
WTO	World Trade Organization

Executive Summary

After the war, Croatia embarked on a comprehensive program to develop a market-oriented economic system. This program included the implementation of modern concepts of taxation. Among these reforms was the personal income tax (PIT) to replace a variety of citizen taxes that treated taxpayers differently depending on their source of income rather than their ability to pay. A comprehensive corporate income tax was also introduced to tax the current earnings of companies, while encouraging reinvestment and good market-oriented decision-making. The VAT was also introduced, which is not only a basic requirement for joining the EU but also one of the best ways for a government to collect tax revenues while causing the fewest economic distortions.

When all of the country's taxes, including the various social contributions paid from wages, are combined, Croatia must be categorized as a high tax country. With high tax rates, special interest groups began to eat away at the considerable progress achieved in the 1990s, demanding special breaks and special treatment of taxpayers based on a variety of criteria.¹ These interest-benefiting special treatments arose without a comprehensive concept of taxation. As these special treatments gained presence, the need to raise tax rates simply to maintain the government's revenues resulted in a tax system that is very burdensome for some and complicated for all.

As we look around the world, there are comprehensive tax reform programs in progress, especially in neighboring countries, such as Serbia and Slovakia. These countries are becoming ever more competitive, while Croatia lags. Croatia needs to simplify and rationalize its tax system, remove distortions that discourage productive investment and are biased against job creation, and facilitate taxpayer compliance while reducing the burden on the tax administration. Such a tax system would not only encourage economic growth and job creation; it would also lead to fewer opportunities for fraud and corruption.

HUP's objective is a comprehensive reform package to roll back many of the distortions that have been introduced, by the fiscal termites, in recent years and provide a system that will raise Croatia's international competitiveness, while ensuring that the fiscal balances are not disturbed. These reforms will lead to increased growth and job creation, but we wave no magic, economic wand that just assumes that tax reductions alone can lead to enough growth as to fund themselves.

HUP envisions a tax system that contributes to national competitiveness, leads to rapid economic growth with jobs, has low tax rates, high compliance, fair and equal treatment of all citizens and companies, encourages domestic and international investment, and provides adequate revenues for the appropriately sized public sector. The tax system shall be in full compliance with all European Union (EU) directives and be World Trade Organization (WTO) compliant. It will provide the appropriate incentives and market signals that encourage the full and appropriate use of the country's capital, labor, land, natural resources, and ingenuity.

To develop these proposals, the HUP Working Group reviewed the entire tax system, built a microsimulation model for personal income taxation to run scenarios, and made other

¹ This is the inevitable "fiscal termites" gnawing away at the foundation of the tax system. See Tanzi (2001).

estimates of the financial gains and losses of the proposed reforms. This reform package will lead to considerable simplification while maintaining government revenues. The report does not deal with the “elephant in the parlor” issue that tax revenues are simply too great compared to the overall economy. That we leave to future studies.

The HUP Working Group’s major findings include:

- The top personal income tax rate is higher than in most other countries of the world.
- The personal income tax system has very many complexities, making compliance costly and open to fraud.
- The complicated personal income tax yields relatively little revenue for the treasury.
- The personal income tax applicable to entrepreneurs is complicated, full of loopholes, and results in very little compliance and generates almost no revenue.
- Social contribution rates are high, but not outrageous compared to other transition countries.
- The tax rate on corporate income is very competitive from an international perspective.
- The corporate income tax has numerous deductions and special treatments that are of questionable benefit to society and business and that reduce revenues for the treasury.
- The direct tax system discriminates against labor, encouraging growth based on capital-intensive (or labor-saving) investment rather than labor-using investment.
- Croatia’s VAT rate is one of the highest in the world.
- The VAT system has many exemptions that complicate compliance and administration and cost the treasury in lost revenues.

Based on these findings, along with our review of tax reforms in other countries, and applying the microsimulation model, we have developed a package of reforms. **Cherry picking of these reforms will lead to losses in government revenues leading to fiscal imbalances and macroeconomic instability.**

This reform package includes the following major points:

- Simplify the personal income tax rate structure by imposing only a rate of 15% on intermediate income earners (say, one half the average formal sector wage), and a marginal rate of 25% on the top income earners (those earning about one and a half times the average formal sector wage.)
- Increase the personal deduction to Kn 51,840.
- Eliminate all special and family deductions from personal income tax.
- Include income from capital and property in the personal income tax base, including short and long-term capital gains. Only half of the long-term capital gain should be subject to taxation.
- Allow for a simplified personal income tax for entrepreneurs and other independent income earners.
- Tax income from agriculture and tourism the same way that small entrepreneurs and independent income earners would be taxed.

- Reduce the overall social contributions rate on wages from 37.2% to about 30% while raising the maximum income base from an annual salary of KN 458,000 to KN 600,000.
- Eliminate all special incentives for corporate taxpayers that are now included in the investment incentives law and that had been article 27 in the corporate income tax law.
- Eliminate incentives for areas of special concern and for employment creation.
- Eliminate the tax-exempt status for companies operating in free zones.
- Reduce the VAT rate from 22% to 20%, and abolish all intermediate rates.
- Eliminate the zero-rate VAT treatment, except for exports.
- Include more companies in the VAT system.
- Abolish VAT exemption for free zones.
- Increase excises on petroleum derivatives and tobacco products.

The HUP Executive Council and the broader HUP membership agree on this reform package, yet there remains the need for further analysis and discussion. The most problematic issues relate to the double deduction for Research and Development expenditures for companies, as well as the total tax exemption for companies that only work in the production of R&D. R&D special treatment is common in many other countries' tax systems, but the concern in Croatia is to what extent such special treatment would be retained in the simplified tax reform package. There is a need for more research and discussion to ascertain the real costs and benefits of the R&D treatment and the directions for further reform.

Another issue is the treatment of taxing capital income, especially capital gains and interest earnings. It is quite common around the world to tax both of these, although the tax base for long-term capital gains is often only a portion of the actual gain. Some analysts say that interest earnings should not be taxed since this represents a tax on savings -- this view is actually wrong, it is a tax on the earnings from savings. Most tax systems around the world do include savings in the taxable base. In addition, since interest payments are deductible as a legitimate cost of doing business, it would be inconsistent and distortionary to continue to exclude interest earnings from the tax base.

The reduction of social contributions is an absolute necessity to get the burden of taxation off the back of Croatia's most important resource, its workers. But, further study is needed to see how reforms of the health system and the pension and disability system can support this urgent reform requirement.

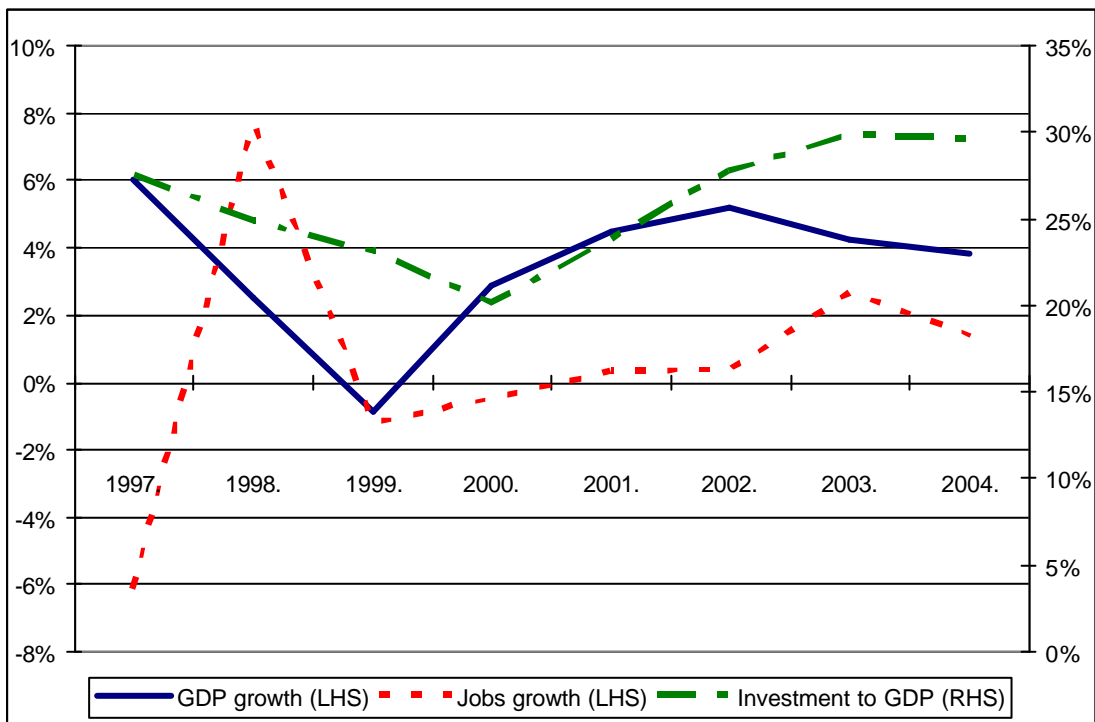
The proposal has been discussed with major stakeholders (unions, Government, academia and international institutions) and comments and HUP has taken their comments and suggestions into consideration in finalizing this proposal. All of these stakeholders have expressed broad agreement with the HUP initiative. They consider this proposal as a beginning for serious public discussion on how to begin the tax simplification for jobs and growth. HUP is confident that this reform package must be implemented in a rational way over the next two or three years. The next steps are to begin discussions of how to implement this reform package.

1. Introduction

The Republic of Croatia imposes a very high tax burden on its economy. (Ott et al., 2000; IMF, 2004b; World Bank, 2003). Total government spending in Croatia comes to 60% of GDP, which is higher than in most developed EU countries. The extremely large government budget must be financed by high tax rates, a large number of taxes, and high rates for social contributions. This fiscal stance creates a very heavy burden on the private sector, hinders national competitiveness, and discourages employers from creating jobs. Furthermore, the structure of the tax system is biased against labor and, by its complexity, it raises costs of compliance and administration.

Over the past several years, as Figure 1 demonstrates, Croatia has experienced moderate economic growth with almost no job creation. Due to war and the collapse of the Yugoslav system, Croatia suffered from a deep transition depression. By the mid-1990s, Croatia was experiencing large budget deficits, which continued well into the recent past. During that period, Croatia also had high balance of payments deficits and foreign debt.²

Figure 1: GDP growth, jobs growth, and investment



Source: Croatian bureau of Statistics; GDP growth (Left-hand-scale) is real GDP growth, Jobs growth (Left-hand-scale) is growth of number of employed persons; and Investment to GDP (Right-hand-scale) is ratio of real investments to real GDP.

Croatia's cumbersome and burdensome tax system hurts the country's competitiveness (as World Bank, IMF, Croatian National Competitiveness Council point out). In 2005, Croatia fell from 61st to 62nd place in the World Economic Forum's Global Competitiveness Index, while Slovakia, Czech Republic, Slovenia and other Central-European countries ranked more favorably.³ Meanwhile, Croatia ranked 118th in 2004 according to the World Bank's "Doing Business" survey, due also to high tax compliance costs.⁴

² By 2003 the overall public sector deficit had reached 7% of GDP, and public debt 55% of GDP. The current account deficit also reached 7% of GDP, and foreign debt 81% of GDP.

³ www.weforum.org/site/homepublic.nsf/Content/Growth+Competitiveness

This paper proposes a package of reforms that aim to reduce the anti-competitive, high-cost, and distortionary tax policies that are holding back growth and job creation in Croatia. The paper does not explicitly address the issues of the size of government and the overall tax burden; rather, it examines the structure and substance of the tax system and tax policies, and then provides recommendations for their reform.

The objective of an efficient tax system is to alter as little as possible the economic decisions of individuals and firms while generating adequate government revenues. In practice, a high degree of tax efficiency can be achieved by:

- Expanding the tax base by eliminating tax exemptions and tax incentives for specific taxpayers,
- Reducing the number of tax rates,
- Lowering the level of tax rates.

Generally, it is preferable to use the tax system to generate revenues for government while using expenditure programs and policies to address social issues. That is not to say that social issues are irrelevant. The tax system must be seen as relatively fair, as one that does not single out sectors or persons for special treatment, and as one that does not burden the poor beyond their means. However, extreme attention to issues of income distribution and directed assistance are better left to more appropriate instruments, such as social welfare and assistance programs.

Howell Zee (2004) demonstrates that consumption taxation (VAT, excise taxes) is the more equitable, transparent, simple, and efficient segment of the tax system, and that double taxation (corporate income tax and tax on dividends) should be avoided to the extent possible. This guidance is particularly pertinent in the era of e-commerce and on-line transactions: corporations and individuals can change their origin based on tax incentives offered by various countries, but consumption transactions will be made in the place of the delivery of good or service. Croatia must bear this in mind as it considers its tax reform options. In addition, for a small country with geographic rent potential, Croatia should consider property taxation (a combination of local taxes, taxes on unused property, and communal fees) as a second pillar of its future tax system. Since a tax system that is based on the “economic strength” of the taxpayer is considered more equitable, an effective, market value-based property tax should add equity to the Croatian tax system.

This is an opportune time for a serious technical study of the options for simplifying the Croatian tax system. In particular, recent discussions and analyses have floated the idea that introducing a “flat tax” in Croatia would be good for business, good for economic growth, and good for job creation, and that this could all come about without harming the delicate fiscal balance of the country. Our concern, of course, is whether lowering all tax rates will generate a sufficient economic expansion to fund those tax cuts. This hints of a perpetual motion machine.

Croatia’s Institute for Public Finance has conducted several technical investigations into the costs of taxpayer compliance—that is, how much it cost taxpayers to pay their tax bills in terms of paperwork, record keeping, forms filing, legal and other advice, bank charges and other costs. The National Competitiveness Council’s (NCC) (2005) report presented survey results showing the complexity of tax regulations as the third most serious impediment to doing business in Croatia, and high tax rates as the fifth most problematic factor. The NCC’s

+Index+rankings+2005+and+2004+comparisons
⁴ www.doingbusiness.org

survey results also showed that the situation for both of these factors improved somewhat from 2003 to 2004.

The scope of this report is to build upon the existing body of work to investigate how the tax system in Croatia might be “flattened.” First, we review the tax system in detail. Then we review international trends in tax simplification and reform. This is immediately followed by a review of two recent country cases where the flat tax has been implemented, namely Russia and Slovakia. Then, we explore connections between taxation, competitiveness, growth and the underground economy. Then a number of scenarios for tax simplification and rate flattening are developed and discussed. To assist with this final step, we have built a microsimulation model of the Croatian personal income tax system. Finally, we provide a package of recommendations and implementation guidelines for tax system simplification and flattening.

2. The Croatian Tax System

Since the early 1990s, the Croatian Government has been carrying out a wide-ranging reform program to shift from a socialist to a modern tax system. Under the socialist system, social contributions were the major instrument of taxation, and only entrepreneurs (crafts and SMEs) paid income tax. That was changed in 1991/92 to a broad-based sales tax (20% for retail sale, 10% for wholesale), with a special war tax during the 1992-1994 war period. Meanwhile, steps were taken to prepare for corporate and personal income taxation, which were then introduced in 1994, each at a flat 25% rate.

With these income tax reforms, the first glimpse of a modern tax system was in sight, while the sales tax provided the necessary fiscal revenue to meet the Government’s needs. After the anti-inflationary program of 1993 succeeded, a new currency was introduced in 1994, and major war operations ended in 1995, a new wave of tax reforms was launched to align the country’s tax legislation and practice with EU standards. A major part of this process was the replacement of sales tax with a value-added tax (VAT) in January 1998. Croatian tax system reform thus produced a consistent system that was welcomed even by the IMF and EU. However, from 2000 on, the coalition Government began to direct tax reforms toward increasing social welfare, introducing exemptions for personal income taxpayers and new marginal tax rates for higher income earners (35% and 45%). These changes were followed by a reduction of the wage base for social contribution payments that were now divided between employer and employee (thus the net salary at roughly the same level). The Government also lowered the corporate income tax (CIT) rate to 20% and introduced deductions for R&D and employee education. To the VAT, it introduced a zero tax rate on items varying from bread and milk to scientific magazines to organized tourism. The system became complicated and imposed costs on tax administration, as well on tax compliance, especially the costs of compliance for employers through the changes to the personal income tax. By the end of 2004, Croatia had about 2.6 million taxpayers (1.4 million taxpayers on labor income alone), and during that year the tax administration received 886,000 tax declarations. In 2001, before the changes to the PIT, the tax administration received 650,000 declarations. In 2004, a new government prepared a “mini” tax reform that increased the personal deduction on personal income from Kn 1,500 to Kn 1,600, put a ceiling on total PIT deductions at Kn 12,000 (whether from insurance, building society savings, or other), modified the PIT brackets and abolished the tax on dividends (effective from 1st January 2005).

In the period 1997-2004, taxes alone provided around 60%, and together with contributions around 90%, of total government revenue. The share of taxes in GDP was around 30% for most of this period, dropping to 27% toward the end after Croatia joined WTO and lowered its custom duties. The share of taxes and contributions started at close to 50% of GDP, but

ended at around 40% after the coalition Government reduced the contributions base (the share of social contributions dropped to around 14% of GDP from 18% at the beginning of the period).

In Figure 2, an international comparison of tax-to-GDP ratios in EU and OECD countries shows that Croatia is below the average. The major burden in Croatia comes from social contributions, shifting Croatia to the subset of countries that have a higher combined tax and contributions burden.

A primary reason for the high tax burden in the beginning of the 1990s was the war. Later, high welfare spending and spending on special interest concerns has continued to fuel the need for ever-increasing tax revenues. One particular pressure on the fiscal system has been the heavy burden of pensions, which was exacerbated by an *ad hoc* policy of sending surplus labor to early retirement in the beginning of the 1990s.

Table 1 presents a list of CIT, PIT and VAT tax rates around the world, clearly demonstrating that Croatia's PIT and VAT rates are considerably above those in most other countries.

Table 1: Tax rates on corporate income, personal income, and value added taxes

Taxes	CIT	PIT	VAT
Albania	30%	-	20%
Argentina	35%	6-35%	21%
Australia	30%	17-47%	10%GST
Austria	25%	21%-50%	20%
Belgium	33.99%	25-50%	21%
Brasil	34%	15-27.5%	25%
Bulgaria	19,5%	10%-24%	20%
Canada	38%	16-29%	7%
China	33%	5-45%	17%
Cyprus	10-15%	20-30%	15%
Czech Republic	26%	15-32%	19,5%
Danemark	30%	38-59%	25%
Estonia	24%	24%	18%
Finland	26%	10.5 -33.5%	22%
France	35.43%	10-48.09%	19.6%
Germany	26,38%	0-45%	16%
Greece	32%	0-40%	18%
Hungary	16%	18-38%	25%
Iceland	18%	24,75%	24,5%
Ireland	12.5%	20-42%	21%
Italy	33%	23-43%	20%
Japan	30%	10-37%	5%GST
Latvia	15%	25%	18%
Lithuania	15%	10-35%	18%
Luxemburg	20-26%	6-38.95%	15%
Malta	35%	15-35%	18%
Monaco	35%	0-33%	18%
Netherlands	27-30,5	0-52%	19%
New Zealand	33%	0-39%	12.5%GST
Norway	28%	28-55.5%	25%
Poland	19%	19-50%	22%
Portugal	25%	15-40%	19%
Romania	16%	16%	19%
Russia	24%	13%	18%
Slovakia	19%	19%	19%
Slovenia	25%	17%-50%	20%
Spain	35%	15-45%	16%
Sweden	28%	-	25%
Switzerland	8,5%	3-11,5%	7,6%
Turkey	30%	15-40%	18%
Ukraine	25%	13%	20%
United Kingdom	30%	0-40	17.5%
U.S.A.	15-39%	0-35%	4-9%GST
Croatia	20%	0-45%	22%

Source: www.worldwide-tax.com; Tax Consultants International; GST means that country still has a general sales tax.

The next table shows how these tax rates add up to overall tax burden on these societies.

Table 2: Tax ratios in the world

Unit	Tax as % of GDP	Number of countries in sample
OECD /1	38%	23
Transition countries /1	30%	24
Developing countries /1	17%	67
Croatia /2	41%	1
Comparator countries /3	33%	11
Euro zone countries /2	42%	Na

1. Data are from the 1990s, and are drawn from the IMF's Government Finance Statistics annual book, 2001. The compilation was done by Mark Rider of Georgia State University.

2. Taxes and contributions. Data from Ministry of Finance for 2004.

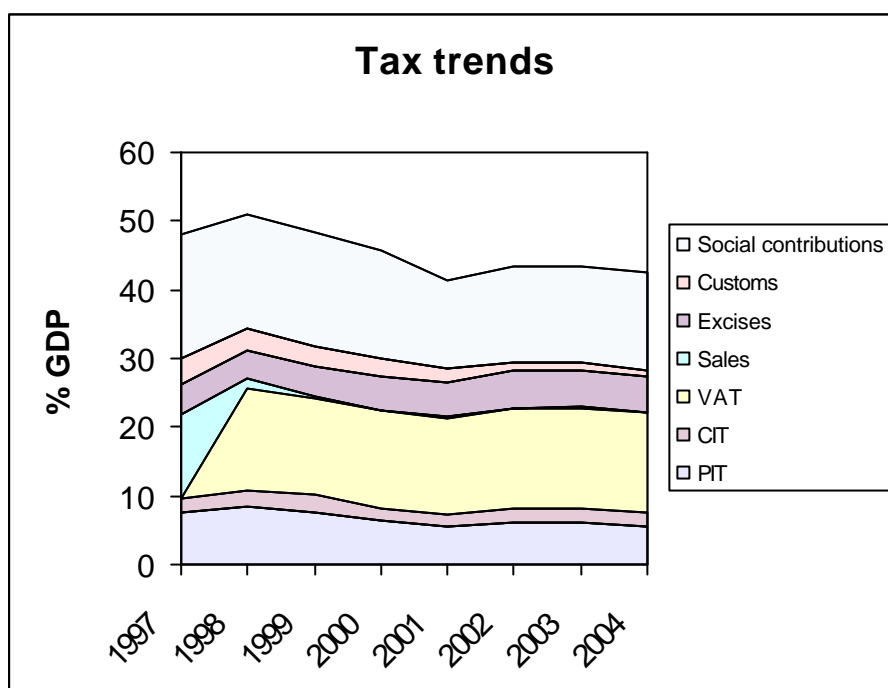
3. Compiled from IMF (2004) includes: Hungary, Czech Republic, Poland, Slovak Republic, Slovenia, Latvia, Estonia, Macedonia FYR, Bulgaria, Romania, and Lithuania.

As in most EU countries, the Croatian tax system relies heavily on social contributions, taxes on consumption, and environmentally-related taxes, while other OECD countries (e.g., USA and Japan) rely more on personal and corporate income taxes.

Figure 3 demonstrates clearly the decline in the overall ratio of taxes to GDP between 1997 and 2004, but other than substituting the VAT for the sales tax, there has actually be only a slight change in the overall structure of taxes. The most important aspects of tax trends in Croatia are:

- the overall revenue to GDP ratio has declined from about 50% in 1999 to about 43% today;
- contributions have declined from about 18% of GDP in 1997 to about 14% in 2004;
- VAT has completely substituted for sales tax and actually surpassed sales tax collection rate; and,
- import duties have almost disappeared as a source of government revenue.

Figure 2: Tax trends from 1997 to 2004



The Value-added tax (VAT) is now the largest source of indirect tax revenue and the most buoyant. VAT revenues came to about 14% of GDP in 2004. Social contributions are second and they were almost equal to the VAT, also amounting to 14% of GDP in 2004. Next are excise taxes at 5% of GDP in 2004, of which excises on petroleum (3% of GDP) and tobacco (1.2% of GDP) stand out. These are followed by income tax (3.5% of GDP in 2004), and profit tax (2.1% of GDP in 2004). Customs duties were close to 1% of GDP in 2004, but other taxes were far less significant.

2.1. Value added tax (VAT)

The value-added tax (VAT) took effect in Croatia on January 1, 1998. Croatia's VAT is in line with the Sixth Directive of the EU and follows the destination principle. During the calculation of the tax liability, the credit method is used, enabling the deduction of tax prepaid. The basis for the tax is added value—the difference between the value of the sale of goods and services (outputs) and the value of the purchased inputs through which these goods and services are produced.

When VAT was introduced, it imposed a single rate of 22%. About two years later, a zero rate was introduced with application as follows:

- from November 1999, on bread and milk, books with a technical, professional, artistic or cultural nature, and certain drugs and orthopedic aids;
- from September 2000, on books published on CD ROM, video and audio cassettes, and scientific journals;
- from November 2000, on the public showing of films; and,

- from January 2001, on certain tourist services for foreign guests staying on package tours paid for by bank transfers from abroad (On January 1, 2006, this was replaced by an intermediary rate of 10%).

Still, the 22% rate applies to most goods and services. Table 2, which compares Croatia's standard VAT rate with that in the rest of the world, shows that Croatia's rate is above the world average and median, and very close to the maximum rate.

Table 3 compares Croatia's standard VAT rate with that in the rest of the world.

Table 3: VAT rates in the world

	VAT rate
Croatia	22.0
	<i>World</i>
Average	16
Maximum	25
Minimum	4
Median	17
Standard Deviation	5.011
Observations	108

Source: Data from www.fiscalreform.net; VAT rate: This is the standard VAT rate that is charged on most consumer purchases of good and services.

While the rate is high compared to the international norm, the Croatian VAT is very generous with exemptions, including for: ⁵

- the renting of housing (this is subject to income tax);
- services of banks, savings institution and savings and loan organizations, insurance and reinsurance companies;
- the organization of special games of chance in casinos and slot machine clubs, and betting (subject to a different form of taxation);
- services performed by doctors, dentists, nurses, physical therapists, and privately practicing biochemical laboratories;
- medical services performed in health care institutions, social care institutions, institutions for child and adolescent care, nursery schools, primary and secondary schools, universities, student boarding institutions, religious communities and institutions, and public cultural institutions, as well as services performed by freelance artists and artistic organizations;
- standard exempted imports (e.g. importing for re-export);
- goods and services delivered to diplomatic persons and other personnel of international organizations;
- most exports of goods and services; and,
- goods and services delivered to free zones.

⁵ A linguistic quirk of the VAT is that "exemption" actually means that the "exempt" trader has to pay VAT on his inputs without being able to claim any credit for this tax paid on his inputs. 'Zero rating' means that a trader is fully compensated for any VAT that he pays on inputs and, therefore, genuinely is exempt from VAT. (Tait, 1988)

Often countries introduce exemptions to the VAT with the explicit intent of reducing the burden on poorer segments of society. The efficacy of this is in question. For instance, Kesner-Škreb (1999) argues that studies in developed countries show that wealthier persons have higher outlays for food (although a smaller percentage of total outlays), so that introducing lower alternative VAT rates benefit wealthier persons more so than they do persons with lower levels of income. In other cases where governments introduced a second or a third VAT rate, it did not produce the targeted social effect, but instead unnecessarily complicated tax administration and compliance. Indeed, studies show that introduction of a second rate multiplies costs of compliance five times, and a third rate by 10 times.⁶ Kesner-Škreb (1999) and Ott et al. (2000) argue that the VAT rate should be unitary and with as few exceptions as possible – which are tendencies in the EU.

By an Opinion of the EU (EC, 2004), Croatia will have to eliminate the zero rate (except for exports) because it is not in line with EU standards; adjust existing exemptions to come in line with EU norms; and, make VAT applicable in free zones.

2.2. Excise taxes

Croatia has another form of taxation of consumption based on specific taxes - concerned with penalizing specific consumption behavior. There are:

In addition to the VAT, Croatia also taxes consumption based on specific items, among these excise taxes are:

- *Environmental taxes* (aimed at lowering pollution and emissions of toxic substances): excise on petroleum derivatives, excises on motor vehicles, boats and airplanes;
- *Luxury taxes* (aiming to burden more luxurious or unnecessary purchases): excise on luxury goods, and excise on auto insurance;
- *“Sin” taxes* (aiming to discourage “bad” habits): excise on alcohol, excise on beer, excise on tobacco, and excise on coffee; and,
- Other excises, mainly imposed because they are easy to collect, such as the excise on soft drinks.

Most of these are levied on quantity (except the excise on luxury goods and excise on auto insurance, which are *ad valorem*), and all are paid by producers and importers. The advantage of excise taxes compared to other taxes is the simplicity with which they can be collected and the small number of persons liable to pay the tax. The first excise tax, on coffee, was introduced in July 1993. A year later excise taxes on petroleum products, tobacco products, alcohol, beer, non-alcoholic beverages and imported cars were introduced. The excise tax on airplanes was introduced in 1998. The most recent excise tax, on luxury goods, was introduced in October 1999. Excises are collected by the Customs Department, which is the case in most EU countries.

Although countries in the EU levy excise taxes on a number of items, specific EU Directives exist only for alcohol and beer, tobacco, mineral oil and energy products. In those directives, the EU only proposes the minimum tax level, which serve as guidance for countries preparing for accession.

Table 4 presents a schedule of excise taxes, the EU-directed minimum tax levels, the actual tax levels in EU countries, and the levels in place in Croatia. The table shows, among other

⁶ For an excellent essay on the benefits of the single VAT rate, see Kesner-Škreb (1999).

things, that Croatia generally has lower excises on tobacco and energy products than the EU minimum and norm. Croatia's system of excise taxes is partially in line with EU directives. By opinion of the EU (EC, 2004), Croatia will have to clarify the definitions of some taxed categories and modify them to comply with EU norms, redefine exemptions (especially in the case of alcohol and beer production), introduce an excise on heating oil and differentiate according to use, and raise the excise tax rates on tobacco and natural gas.

Table 4: Excise taxes

Excise tax	EC minimum	EU countries	Croatia
<i>Tobacco</i>			
cigarettes	57% of RP and between 60 and 95 EUR per 1000 pcs.	41,1% - 63,4%	45,7% - 55,9%
tobacco (raw)	25 EUR per kg	14 EUR per kg - 165,7 EUR per kg	5 EUR per kg
cigars	0,01 EUR per piece	0,01 EUR per piece - 0,21 EUR per piece	0,15 EUR per piece
cigarillos	5% of RP	1,4% - 27,57% of RP	0,03 EUR per piece
<i>Alcohol</i>			
	550 or 1000 EUR per hl	645 - 5046 per hl	816 EUR per hl
<i>Beer</i>			
	0,748 or 1,87 EUR per hl	0,79 - 68,4 EUR per hl	26 EUR per hl
non-alcoholic	0,374 or 0,935 EUR per hl	0 to 2,96 EUR per hl	8 EUR per hl
<i>Energy products</i>			
Motor fuel	421 EUR per 1000 l	337 to 813,4 EUR per 1000 l	324,3 EUR per 1000 l
Motor fuel, unleaded	359 EUR per 1000 l	287,5 to 726,4 EUR per 1000 l	256,8 EUR per 1000 l
Diesel fuel	302 EUR per 1000 l	245 to 771 EUR per 1000 l	135 EUR per 1000 l
for heating, industrial use	21 EUR per 1000 l	21 to 405,09 EUR per 1000 l	41 EUR per 1000 l
Kerosene	302 EUR per 1000 l	245,2 to 771 EUR per 1000 l	
for heating	21 EUR per 1000 l	21 to 654,5 EUR per 1000 l	
for industrial use	0 EUR per 1000 l	0 to 654,5 EUR per 1000 l	
Gas, liquid	125 EUR per 1000 l	0 to 467 per 1000 l	13,5 EUR per 1000 l
for heating	0 EUR per 1000 l	0 to 356 per 1000 l	
for industrial use	41 EUR per 1000 l	0 to 467 per 1000 l	
Petroleum	15 EUR per 1000kg (heating)	15 to 389,9 EUR per 1000kg (heating)	189,2 EUR per 1000 l (cca 170 EUR per 1000kg)

Source: Kuliš (2005); europa.eu.int/comm/taxation_customs/taxation/excise_duties/tobacco_products/rates/index_en.htm; RP: retail price; pcs.: pieces; hl: hectolitre; l: litre

2.3. Social contributions

Compulsory social security contributions are a kind of direct tax that is used to finance the social security system, and accordingly in a broader sense forms a part of the tax system. The difference between contributions and taxes is the apparent transparency in the use of the contributions: collected contributions are transferred to a specific fund that is intended to finance a specific social expense.⁷ Contributions are the primary revenue used to finance expenditures for retirement (including disability and survivor), as well as health and employment insurance.⁸ Contributions are collected from the employee and from the employer, and are the revenues of the following extra-budgetary funds:

- The Croatian Pension Fund - contributions for 1st pillar pension insurance⁹
- The Croatian Health Fund - contributions for health insurance
- The Croatian Employment Fund – contributions for accident insurance and professional illness.

Croatia launched its pension reform in 2002. This changed the pension system from a simple Pay-as-you-Go system to a three-pillar system like that in Chile.¹⁰ The first pillar is a remnant of the Pay-as-you-Go system for older workers that are going to be beneficiaries along with the already retired. Under this pillar, contributions withheld each month from gross salaries of workers are transferred to the pensions of the retired. The second pillar is an obligatory (fully funded) pension fund for younger workers that still have many years before retirement. This pillar involves a system of individual accounts managed by Obligatory Pension Funds and will provide individuals with retirement savings augmented through investment in the capital markets. The third pillar is a voluntary additional pension fund that is similar to life insurance. The first two pillars are supported by “contributions” (payroll tax): For the first pillar 16.5% of gross salary, and for the second pillar 5% of gross salary, is withheld from payments of salary income. In the design of the pension reform (which was prepared with the assistance of experts from the World Bank), the second pillar was intended to strengthen, and the first pillar to wither away. However, this strategy was put on hold after the 2004 elections when the Pensioner’s party, which supported the new government, persuaded the ruling party to commit to repaying the “debt”¹¹ owed to pensioners and to increasing welfare for pensioners.

Croatia devotes about 10% of its GDP to health care, which is higher than in most developed countries. World Bank has been proposing a health care reform that would increase and broaden cost participation from individuals and introduce a more rational and efficient health

⁷ Since the overall balance of those funds has been declining for years and is (for various reasons, including aging of the population) in deficit, the central government budget has to subsidize the social security system. Contributions to the pension fund currently exceed the payments made by the fund to pensioners, but contributions to the health system are matched by a similar contribution from the general government budget.

⁸ Until 2002, there was a contribution for child support, but this was abolished in favor of direct budgetary financing.

⁹ Croatia started a pension reform in 2001 that changed pension system from intergeneration solidarity Pay-as-you-go system to a three-pillar system like in Chile. The 1st pillar is a remainder of Pay-as-you-go system for older workers that are going to be beneficiaries alongside with the already retired. The 2nd pillar is obligatory pension fund for younger workers that still have years until retirement. The 3rd pillar is voluntary additional pension fund.

¹⁰ Although the Law on Pension Insurance was passed in 1998, it was postponed until 2002.

¹¹ The supposed “debt” emerged when one of Croatia’s Governments suspended the cost-of-living-adjustment for pensions in 1994.

system. The reform envisions a shift from contributions-financed health care to individual patient participation and additional health insurance similar to life insurance.

social contributions in Croatia have been paid in part by employers and in part by employees. Employers pay 10.75% of gross salary, and employees 8.75% of their net salary to the Retirement insurance fund. Employers pay 9% of gross salary, and employees 7% of their net salary to the Health insurance fund. Employers pay 0.85% of gross salary, and employees 0.85% of their net salary to the Employment insurance fund. Altogether, employers must contribute 17.2% of workers' gross salaries, and employees an additional 20% through withholding, to fund the social security system.

Contributions are a direct cost of labor for employers and significantly influence the competitiveness of an economy. Among Central European countries, Croatia has the widest gap between gross and net salary, and comparatively the largest tax burden on labor. That makes Croatian exports less competitive, employers less willing to create new jobs, and businesses more likely to operate in the "gray" economy. Probably the biggest gains in competitiveness can be found in reducing various social contributions, based on the opinion of the Croatian Competitiveness Council (2003). The NCC's Report on National Competitiveness 2004 estimates that personal and payroll taxes come to about 40% of wages, which is much higher than most of the countries that have recently joined the EU.

Table 5 presents payroll or contribution taxes rates on gross wages in a variety of transition countries, including Croatia.

Table 5: Social contribution rates in a variety of transition countries

	Social contributions tax		
	Employer	Employee	Combined
Albania	11.2%	30.7%	41.9%
Azerbaijan	22.0%	3.0%	25.0%
BiH: RS	--	34.3%	34.3%
BiH: Fed.	11.5%	32.0%	43.5%
Bulgaria	29.9%	12.8%	42.8%
Croatia	17.2%	20.0%	37.2%
Czech Rep	35.0%	12.5%	47.5%
Estonia	33.5%	1.0%	34.5%
Hungary	33.5%	13.5%	47.0%
Kazakhstan	20.0%	3.0%	23.0%
Latvia	24.1%	9.0%	33.1%
Lithuania	28.0%	3.0%	31.0%
Macedonia	--	32.5%	32.5%
Moldova	27.0%	2.0%	29.0%
Montenegro	16.1%	20.0%	36.1%
Poland	20.7%	18.7%	39.4%
Romania	46.8%	17.0%	63.8%
Russia	34.5%	--	34.5%
Serbia	17.9%	17.9%	35.8%
Slovenia	31.0%	31.6%	62.6%
Ukraine	37.7%	3.0%	40.7%
Uzbekistan	31.0%	2.5%	33.5%
Average	26.4%	15.4%	38.7%

Source: Data from PriceWaterhouseCoopers (2005).

Croatia's social contribution tax rate is not higher than the average for this group of transition countries, but that is not to say it is competitive. Indeed, most of these countries should be considered as still not competitive. When Croatia's social contributions tax rate is compared to the United States, for instance, where social security tax only comes to slightly less than 16%, it becomes apparent that there is room for improving Croatia's competitive position. Ott et al. (2000) argue that most of the developed countries have about 30% of contributions, which should be also the target for Croatia if it wishes to level its' labor costs and competitiveness with those countries – total contributions average for EU were 27.7%, and for OECD 24,3 in 2002.

2.4. Profit tax

The present profit tax system is based on the Profit Tax Act passed on January 1, 2001. The profit tax taxes profit (the difference between receipts and costs) determined by standard accounting regulations, reduced by deductible items such as R&D and allowed write-offs. Non-deductible items under the Profit Tax Act include 70% of business meal costs and amortization in excess of prescribed levels.

The profit tax applies a single 20% rate to profits. There is a withholding tax of 15% for foreign persons when there is no bilateral agreement on tax avoidance between Croatia and that person's country of residence.

There are several exemptions to the profit tax. Areas of special state concern (parts of Croatia damaged by war) enjoy a lower tax rate (between 5 and 15%, depending on the classification of the particular area), as do can islands, mountain areas, and the town of Vukovar. These tax policy measures are aimed at helping the development of the concerned areas. Meanwhile, free zones apply half of the standard rate. There are other exemptions applied as incentives for investment (above a certain invested amount, the profit tax rate can be zero for the first 10 years after the investment is made), employment incentives (for newly employed persons), and incentives for research and development.

All such exemptions are questionable in their efficiency, and, as Ott et al. (2000) argue, they can even lead to increases in tax evasion. There has been a strong debate in the literature concerning the effectiveness of tax incentives in spurring the development of underdeveloped or war-damaged areas. Judging by the Croatian experience, there is practically no evidence of firms moving their operations or headquarters into underdeveloped areas granted those tax breaks. The same can be said about investment incentives and employment incentives, and research and development activities are marginal in Croatian firms. Meanwhile, free zones will have to transform into business zones with no special tax or customs treatment during the transition to EU membership, so the current incentives applied there will disappear anyway.¹²

Table 6 presents a comparison of Croatia's profit tax rate to that prevailing in the rest of the world.

¹² There are 15 operating free zones in Croatia according to Ministry of Economy, Labor and Entrepreneurship. These include 257 traders with about 5,500 employees. By agreement with the EU, Croatia has agreed not to open any more free zones. The Ministry is already helping local governments instead create business zones as ready-to-use sites for production.

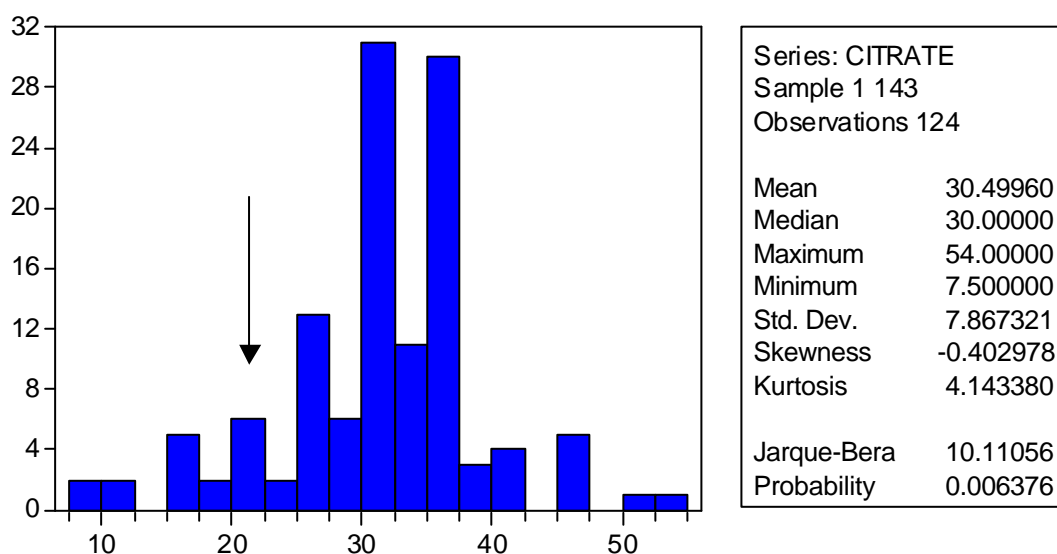
Table 6: Profit tax rates in the world

	Profit tax rate
Croatia	20.0
Average	30.3
Maximum	54.0
Minimum	7.5
Median	30.0
Standard Deviation	7.771
Observations	122

Source: Data from www.fiscalreform.net; Profit tax rate: This is the general tax rate charged corporations for their profit tax. In most countries of the world, only one rate is charged.

Croatia's profit tax rate is lower than the world average or median and is comparable with rates in the region. Ott et al. (2000) suggest that the profit tax rate is comparable with the region and need not be lowered, and recommends only that the exemptions be abolished. Indeed, of the 124 countries in the sample, only 11 have lower profit tax rates than Croatia. The following figure shows the distribution of the profit (enterprise) tax rate among these 124 countries, with Croatia near the extreme low end.¹³

Figure 3: Profit tax rates around the world



There are several special exemptions that are available to Croatian businesses, but perhaps one of the more problematic ones is the double (200%) deduction on R&D allowed by Croatian profit tax law. There is an economic justification for such a high deduction, but in practice, there are many problems, namely:¹⁴

¹³ Where useful, an arrow in the Figure indicates Croatia's position.

¹⁴ The economic justification is that R&D has a very long and unknowable gestation period, yet it also has important "spillover" effects that benefit the general economy.

- tax administrations cannot adequately determine what is real R&D;
- taxpayers have incentive to call too many things R&D; and,
- even when it achieves the desired effect of serving as an R&D subsidy, the exemption may be simply too expensive from a cost-benefit point of view.

Most OECD countries offer special tax treatment for R&D expenditures, such as immediate write-off of current R&D expenditures (all countries) and various types of tax relief such as tax credits (11 countries in 2001) or allowances against taxable income (six countries in 2001). Of note:

- UK offers a 150% deduction on qualified R&D expenses;
- Canada offers a tax credit of 20% to 35%, less the larger the expenditure;
- Australia offers 125% and 175% for “incremental” R&D expenses;
- Sweden has proposed a tax credit for SMEs for part of their R&D expense;
- The US tax credit is temporary and limited;
- Spain, Portugal and Australia provide the highest subsidies for large firms;
- Italy, Spain and the Netherlands are the most generous to small firms.

A study performed in Canada showed that the R&D tax break did encourage R&D but made no impact on profitability, domestic or international market share, or even on “keeping up with competitors.”¹⁵

2.5. Income tax

The income tax is the most complicated part of the Croatian tax regime. It follows the principle of individual as opposed to family taxation. In Croatia, individual income taxation was introduced on January 1, 1994 when Income Tax Act entered into force. On January 2001, a new Income Tax Act entered into force, but in the beginning of 2005 was replaced by yet another Act. Under the current Act, income is considered the difference between receipts and qualified expenditures incurred during the tax period, which are determined on the cash basis, i.e., after payments have been received and deductions made. The Act provides for various categories of taxable income:

- income from employment,
- income from self-employed work,
- income from property and property rights,
- income from capital,
- income from insurance and
- other income.

Income tax is collected at four rates: 15, 25, 35, and 45%. The rates are applied to different levels of income at multiples of the basic personal allowance. Since the monthly basic personal allowance is Kn 1,600, the tax brackets are set as follows:

- 15% for taxable income up to Kn 3,200 per month.

¹⁵ This study is discussed in a paper on Tax Incentives by Dale Chua in Shome (1995).

- 25% for taxable income between Kn 3,200 and Kn 8,000 per month.
- 35% for taxable income between Kn 8,000 and Kn 22,400 per month.
- 45% for taxable income over Kn 22,400 per month.

Income tax calculated using these rates is also subject to a surtax in those cities and communes that have prescribed the obligation to pay surtax.

Personal allowances are the amounts of income that are not taxed, i.e., which reduce the taxable base. These personal allowances are “allowed” to the taxpayer and to his or her spouse and children if they are considered dependents. Urban (2005) establishes that because of the personal allowance, half of the active income taxpayers did not have to pay any tax at all in 2003.

There is tax relief for:

- disabled veterans of the Homeland War
- taxpayers and their dependents residing in areas of special national concern, hill and mountain areas, on islands and in the town of Vukovar
- taxpayers have also been given certain kinds of tax relief for the purpose of providing incentives to employment and self-employment

There are deductions for medical expenses, education, insurance, real estate, and other family and child related expenditures.

Personal tax is also burdened with surcharges imposed by local governments. Local governments are authorized by republic-level legislation to impose surcharges up to certain percentages on top of the tax imposed by the Republic. For instance, the City of Zagreb has the authority to impose a surcharge of 30% on the income tax paid by individuals to the Republic. For those persons in the top income tax bracket of 45%, a surcharge of 30% results in an overall marginal tax rate of about 59%.

Urban (2005) argues that the introduction of various exemptions and deductions under the personal income tax after 2000 (20 of them as opposed to only the personal deduction at the outset) introduced horizontal inequality into the tax system. For instance, two persons with the same income will pay different amounts of tax because of their consumption/saving decisions. In addition, it introduced vertical inequality in to the system. Since deductions cannot be higher than income (according to general tax law), while higher income earners can purchase all the goods and services that provide the tax deductions that they want, lower income earners can barely cover their basic needs. Besides the inequality their introduction engendered, deductions created distortions in relative prices and gave rise to lobbying and rent-seeking interest groups (for those who provide the deductible goods and services).

The income tax is nearly global in that almost all forms of personal income are included in overall taxable income. Certain items are treated on a schedular basis, however. For instance, interest earnings are taxed at a flat 15% while company dividends are not subject to taxation, at all, nor are capital gains.

Table 7 compares the top personal income tax rate charged at the national level in Croatia with that prevailing in the world.

Table 7: Personal income tax rates in the world

	Income tax rate
Croatia	45.0
	<i>World</i>
Average	33
Maximum	65
Minimum	2
Median	35
Standard Deviation	12
Observations	114

Source: Data from www.fiscalreform.net; Income tax rate: This is the top marginal personal income tax rate. It does not include local surcharges or “piggybacks” nor does it incorporate other payroll taxes.

It is obvious that Croatia’s top marginal personal income tax rate is higher than the world average or median.

Ott et al. (2000) argue that increasing the non-taxed deduction can increase the progressivity in the system. Kesner-Škreb and Madžarevic (2003) established that in 2001, that most working Croations paid some income tax. More than half of the taxpayers are employees, 42% retirees, and only 4% entrepreneurs. Employees paid 87% of all income tax, entrepreneurs 9%, and retirees only 4%. The average tax rate on income in 2001 was 7.5%, entrepreneurs had relatively the highest burden, followed by employees, and retirees had the lowest burden.¹⁶ There is progressivity in the system with persons earning Kn 20,000 per month and more (all 3,049 of them) paying the highest effective tax rate of 28.9% (including local surtax). The changes in the personal income tax in 2001 lowered the relative tax burden for the lowest incomes (up to Kn 2000 per month). Total tax elasticity in the 2001 system was 2.16 meaning that it was progressive, more progressive than before (earlier it was slightly below 2 percent) and among the most progressive tax systems.

¹⁶ The relative low income tax burden of retirees is the result of various exemptions from tax obligation for retirees and their rising political influence (connected to ageing of population and non-revocable voting rights).

Text box 1: Labor, capital, and consumption

If for the time being we ignore the impact of local surcharges and contributions, we can make a straightforward, simple comparison of the tax level that would be paid by a salaried, professional employee versus that which would be paid by someone who lives entirely from corporate profits that he receives in terms of dividends. For instance, a professional working for a Croatian company and earning an annual salary of Kn 300,000 (equivalent to about US\$50,000) would pay Kn 90,300 in taxes, or fully 30% of his income in tax. Compare this to a taxpayer who received a similar income from company dividends and, since dividends are not taxable income, pays no income tax. Of course, the company that earned the profit, out of which the dividend is paid, is subject to a corporate tax rate of 20%. The disparities are obvious.

Discussions with some Croatian interlocutors lead us to believe that companies will often try to reward their higher paid, most productive employees with benefits and other remunerations that can be paid outside of the tax net. This is both to be expected, given the inequitable tax treatment of incomes, and confirmed in these conversations. The result is that the progressivity that some Croats had been hoping to achieve has not been achieved.

Urban (2005) analyzes the latest “mini” tax reform proposal. Although the Government announced a tax reduction, eliminated the highest (45%) tax rate and various tax deductions, equalized tax on labor and capital, and eased the tax burden for lower income earners. Urban still argues that many of the reforms announced were not actually delivered, and that the effects of the reform were minimal and contrary to the intended effects. In effect, the “mini” tax reform increased the personal (non-taxed) deduction, increased the deduction for family members, increased the income tax brackets, exempted dividend and other income on capital, and capped the level for various exemptions at Kn 1,000 per month. The quantitative results underscored the problems with the reform. In 2003, the average effective tax rate was 8.6% (1.1% higher than before) and the progressivity, based on the distribution of the tax burden divided into deciles, increased only slightly for the highest income levels, stayed the same for the lowest income levels, and diminished for the middle income-levels.

2.6. Decentralization of taxes

In 2000, Croatia started to decentralize and transfer parts of obligations from the central government to local governments. That required also a transfer of the financing, or revenues from collected taxes, to those units of local government. The taxes that are divided between the central government and the units of local government are as follows:

- income tax (the division of the income tax depends on whether the communes and cities finance local health care, welfare and education);
- profit tax (20% goes to the commune or city, 10% to the county and 70% to the central government); and,
- real-estate transactions tax (the share of the commune or city is 60%, of the central government 40%).

Communes and cities may introduce a surtax (levied on income tax) up to 15% (30% for Zagreb).

2.7. Tax collection productivity and efficiency

Keeping in mind that the overriding purpose of taxes is to collect revenues to fund the public budget, it is important to compare how well Croatia does in this regard compared to other countries. The next Table provides three tax collection productivity indicators for Croatia and a number of other countries.¹⁷

Table 8: Tax collection productivity

	VAT	Profit tax	Income tax	Tax administration cost to collections
Albania	0.35	0.07	0.04	3.04
Croatia	0.64	0.11	0.74	0.84
Czech Republic	0.24	0.15	0.17	2.08
Estonia	0.52	0.05	0.28	
Hungary	0.36	0.13	0.14	1.35
Latvia	0.41	0.10	0.25	
Lithuania	0.45	0.04	0.16	
Poland		0.08		0.95
Russia	0.39	0.18	0.27	
Slovak Rep.		0.11		1.46
Ukraine	0.25	0.15	0.53	
Group Average	0.40	0.10	0.28	
World Average	0.31	0.10	1.12	1.35

Source: Data from www.fiscalreform.net;

Tax collection is the responsibility of the tax and customs administrations. Since 2002, customs authorities have been collecting excise taxes along with custom duties. Direct tax and domestic VAT transaction supervision and investigation are the responsibility of the tax administrations.

IPF conducted a study in 2001 that measured the compliance costs¹⁸ in the Croatian tax system. Through this study, total compliance costs were estimated at 2.66% of GDP. Costs related to customs compliance in 2001 were estimated (Bronic, 2005) to be roughly 0.6% of GDP, or 31% of total customs revenue. The compliance costs for businesses (Batic, 2005c) related to all the taxes they pay (VAT, corporate income tax, social contributions, etc.) were 1.2% of GDP in 2001. VAT is the most expensive tax regardless of the size of the firm, followed by taxes on income, social contributions, and CIT. The compliance costs for entrepreneurs (Batic, 2005b) were

¹⁷ These indicators are explained in Gallagher (2005) and most of the observations are available from USAID's Fiscal Reform website:

<http://www.fiscalreform.net/research/benchmarking.htm>.

¹⁸ The costs of filing and paying taxes for every taxpayer measured in the cost of his/her time, material costs of compliance, costs of taxpayer education, psychological "costs", etc.

0.8% of GDP in 2001. For entrepreneurs, it is the personal income tax that is the most expensive, followed by VAT, social contributions and other taxes. Taxation of entrepreneurs is among the most inefficient forms of taxation, in that compliance costs come to 98% of the tax revenue raised from entrepreneurs – i.e. every Kuna of entrepreneurial tax obligation is almost matched by the efforts to comply. Bratic (2005b) recommends introduction of a lump-sum tax and an increase of the VAT threshold for entrepreneurs. The compliance costs for individuals (Bratic, 2005a) were relatively low – 0.03% of GDP in 2001. Most of the cost for the individuals consisted of their time. The compliance costs for excise taxes (Kuliš, 2004) were estimated at 0.01% of GDP or 0.31% of total excise taxes paid, of which the excises on coffee, non-alcoholic beverages and luxury products had the highest compliance costs (2.93%, 1.63% and 3.50%, respectively, of the total excise taxes paid).¹⁹

2.8. The relationship between personal and corporate income tax rates

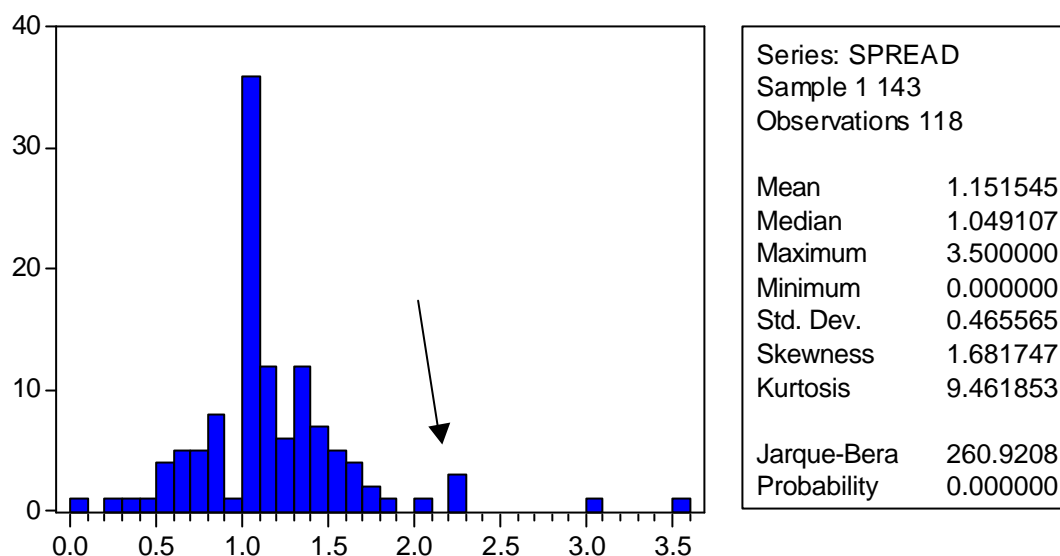
In many of the tax reforms that have taken place around the world over the recent past, one change has been key, the reduction in the disparity between the personal and company income tax rates. The reasons for this are clear. When the top personal income tax rate is much higher than the corporate tax rate people may avoid taxation by providing compensation to top-level earners via company dividends. In addition, where the personal income tax is more onerous than the corporate income tax, companies are encouraged to avoid using labor as much as possible and instead hire individuals on contract basis.

Where the black and white letter of the law is adhered to, and this often affects multinational companies the most, there is incentive for investors to favor capital-intensive investment and production means over more labor-intensive investment, hence giving rise to economic growth without the accompanying increases in jobs.

Figure 5 shows the tendency for countries to equalize their top personal income tax rates with their corporate tax rates. Here SPREAD is the ratio of the income to corporate tax rate.

¹⁹ Recommendations for the reform of tax and customs administrations focus on: establishing key taxpayers' services, educating employees, linking salary to efficiency/performance, pushing for more taxpayer-oriented services, and employee specialization.

Figure 4: Ratio of personal to corporate income tax rates around the world



It is obvious from this sample of 118 countries from around the world that the norm is to have a high degree of parity between the personal and corporate income tax rates. In this sample, only two countries have a higher ratio of personal to corporate income tax rates: Ireland and Chile, and they both have much lower social contribution rates.²⁰

The next Figure graphs the revenue productivity measure of the personal income tax against this spread ratio between the top personal income tax rate and the corporate income tax rate.

²⁰ See Table 10.

Figure 5: PIT revenue productivity and the spread of tax rates

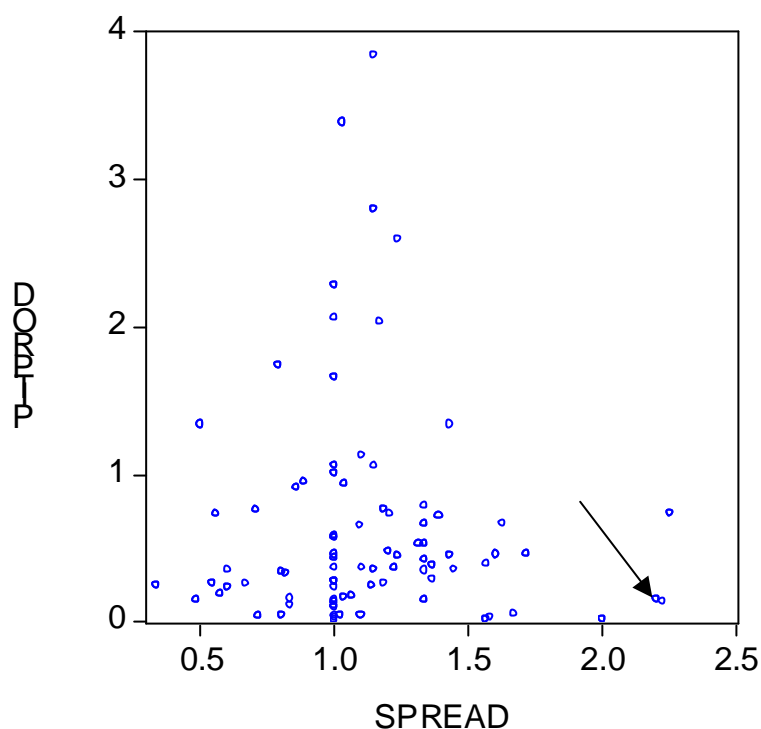


Figure 5 demonstrates that there is a tendency for the highest personal income tax revenue productivity to be centered around the cases where the spread is about 1.0, that is to say, the personal income tax, *cet. par.*, will tend to be most productive, from a revenue point of view, when the personal and corporate income tax rates are equalized.

It is important to understand what is meant by revenue productivity and what low and high numbers mean. The complete treatment of the term is in Gallagher (2005). Low revenue productivity means that given the structure of the tax, it yields relatively little revenue. This can come about due to two factors: numerous revenue debilitating loopholes, exemptions and special treatment for favored persons or groups, and a low degree of compliance. From Figure 5, it is clear that Croatia's personal income tax yields a relatively low level of revenues.

3. International experience in tax reform

3.1. Worldwide trends

Tax reform is a constant process, taking place in country after country around the world. Generally, governments undertake tax reform for two reasons: one, to improve revenue collections, and two, to improve the environment facing economic agents. Tax reform often includes tax policy changes, tax administration modernization, and introduction of new taxes, especially the VAT.

Another very important reason for tax reform is to recoup the revenues that are foregone when countries liberalize their international trading system—in particular, when they cut

import duties. Because import duties in developing countries have historically generated 25% or more of central government revenues, trade liberalization clearly has revenue implications.

Tax reforms aimed at improving the economic environment usually include steps to simplify the tax system, both by eliminating numerous taxes that tend to yield little revenue, but cost taxpayers in terms of compliance, and by eliminating unproductive complexities in the various taxes that remain.

Around the world, tax reform has focused on:

- Increased reliance on VAT;
- Increased pressure to reduce trade taxes;
- Increased tax competition for foreign direct and portfolio investment;
- Reduction of top tax rates for the personal income tax; and,
- Reduction of top tax rates for the business profits tax.

The lessons learned from successful tax reforms around the world include, in their essence:

- Tax bases should be as broad as possible ;
- Rates should be as low as possible ;
- Tax on labor and capital should be similar;
- Tax incentives mostly do not work, and when they work they are usually not worth the cost;
- Tax compliance must be made simple and cheap; and,
- Tax administration and enforcement usually require modernization, too.

3.2. Tax reform in the Balkans

In the Balkans, tax reform has included building tax administrations that can operate in a market economy. For instance, the elimination of payment bureaus in Bosnia and Herzegovina and later in Serbia has forced the governments there to build tax administrations that no longer have direct access to taxpayers' accounts, but must instead rely upon information bases, audit processes, and authority and capability to undertake enforced collections. The move to the VAT in each of these countries has also created the requirement that tax administrations be established that can both integrate with customs operations and deal with taxpayers as free market businesses.

In the Balkans, the specific challenges have also included:

- Introduction of the VAT, especially as part of the process to join the EU;
- Elimination of "citizen taxes" and schedular treatment of incomes;
- Simplification of tax laws;
- Elimination of wasteful and unproductive tax incentives and tax holidays;
- Harmonization of tax regulations to international accounting standards; and,
- Tax administration modernization.

3.3. The flat tax

After a conference run by the Adriatic Institute in Zagreb in November 2004, Daniel J. Mitchell, the Heritage Foundation's chief expert on tax system and economy, argued that a flat tax would attract more businesses to invest and set up operations in Croatia. Mitchell pointed out that the American States that have flat income taxes instead of progressive income tax systems have tended to have higher growth and greater investment. Further, Mitchell is credited with having said that the flat tax would be good for Croatia because it would help to constrain government's growth and boost the economy. He also said that it would be helpful in keeping the lid on loopholes and might even help to combat corruption.

It is important to keep in mind what a flat tax is. It is not simply tax applied at a single rate. Instead, Mitchell (2004) offers the following explanation:

The flat tax is simple, fair, and good for growth. It is based on two postcard-sized forms. There is one form for labor income and one form for business and capital income. Unlike most tax systems, which discriminate based on the source of income, use of income, and level of income, the flat tax treats all taxpayers equally. There is only one rate, and income is taxed only one time.

Joel Samy of World Development and Empowerment USA, proposed at the second International Leaders' Summit, held in Zagreb, a flat tax system for Croatia that would be 15-15-15, that is, 15% flat tax on personal income, 15% flat tax on corporate income, and 15% flat tax on value added (VAT). Currently, most personal income tax is paid by people in the 15% tax bracket, the corporate income tax is taxed at 20%, and the VAT is 22%. Certainly an avenue for investigation for Mr. Samy would be to figure out how exactly the 15-15-15 proposition would be achieved within a framework of fiscal balance.

Proponents, such as Mitchell and Rabushka, can site these same lessons as justifications for implementing the flat tax. While they have had little success in getting flat tax legislation in their home country, the U.S., several other countries have recently implemented the flat tax, as listed in Table 9.

Table 9: Flat taxes on personal income: an international comparison

Country	Tax rate in %	Year introduced
Estonia	26	1994
Lithuania	33	1994
Latvia	25	1995
Russia	13	2001
Serbia	14	2003
Slovakia	19	2004
Ukraine	13	2004
Georgia	12	2005
Romania	16	2005

Source: Taken directly from Brook and Leibfrit (2005), their source being The Economist.

There is no cross-country literature empirically demonstrating the benefits of having implemented these flat tax systems in these countries, there are a few, recent country studies

that attempt to do so. For the purposes of this paper, it is sufficient to summarize these studies for the cases of Russia and Slovakia and to see what lessons may be in these cases for Croatia.

The most vociferous objections to the introduction of flat tax come from leftist or social welfare circles that claim that flat tax burdens lower income earners, and favors higher income earners – and is therefore regressive and socially unjust and inequitable. However, counterargument is that most of the developed countries already have a number of tax incentives and breaks for investment and saving that in the end favor higher income groups – the abolishment of those breaks by accompanied by a simplification of the tax rate structure could in turn increase progressivity. Also, where the top marginal personal income tax rate is higher than marginal corporate income tax, there is economic incentive for higher income individuals to open a company and channel economic activities to their company thus legally reducing tax they are obligated to pay, as well as getting the opportunity to deduct certain expenses (such as business lunches, and insurance). In addition, simplicity of the tax rate structure reduces tax compliance costs, reduces time and economic costs of tax administration, allows tax administration to focus on tax oversight, increases efficiency of tax collection, and gives incentives for all transactions to be officially reported.

3.3.1. The flat tax in Slovakia

Slovakia introduced flat tax rate of 19% on personal income, corporate income, and value added in the beginning of 2004. The main idea of the Slovak tax reform was to:

- shift from direct to indirect taxation;
- revoke all exemptions, deductions and special tax breaks;
- introduce the single tax rate for personal income tax;
- eliminate tax instruments aimed at achieving non-fiscal goals (social goals); and,
- eliminate double taxation (tax on dividend).

By introducing the flat tax of 19%, Slovakia equalized tax treatment of all forms of income and simplified tax system enormously.

In personal income taxation, five rates that previously existed (10%, 20%, 28%, 35% and 38%) were replaced by a single tax rate of 19%, and the non-taxed portion (the personal deduction) increased from 968 € to 2021 €. Those with low incomes (up to a half of the average monthly salary in Slovakia) were practically relieved from taxation, while tax remained progressive for middle and higher incomes.

In corporate income taxation, the tax rate was reduced from 25% to 19%, and the tax on dividends was abolished. In that regard, Slovakia became the OECD country with the lowest tax burden on corporations.

Before the tax reform, VAT featured a standard rate of 20% and a lower rate of 14% applied to basic foodstuffs, medicine, electrical power, construction works, books, newspapers, magazines, and hotel and restaurant services. Tax reform introduced the single standard rate of 19% with no exemptions, which was the toughest political decision and resulted in increases of prices of the above mentioned products and services.

The Slovak tax reform also increased excise taxes on mineral fuels, tobacco, cigarettes, alcohol and beer. Although the increase in excise taxes was in line with EU directives, Slovakia increased excise taxes above EU-recommended rates. Entering the EU, Slovakia took a transition period to reduce the excise tax rates to EU-recommended levels.

The fiscal effects of the Slovak tax reform were unexpectedly positive (Goliaš and Kicina, 2005). One year after the introduction of reforms, tax revenues increased 11% (from 2003 to 2004) and 4% more than planned. Direct tax revenues decreased by 34% (from Kn 83 billion in 2003 to Kn 55 billion in 2004), but indirect taxes increased by 21% (from Kn 118 billion in 2003 to Kn 143 billion in 2004). Tax revenue from VAT increased by 23% in part because of the increase in the volume of transactions after the rate reduction, and in part because the reform brought part of the gray economy into the official economy. In addition, excise taxes increased by 13% in the first year of the reform. The overall effect after one year was to halt of the growth of the general government fiscal deficit at less than 5% of GDP.

The macroeconomic effects of the Slovak tax reform in 2004 were (IMF, 2005):

- 5.5% increase in growth of real GDP (planned growth was 4%);
- 2.5% growth of real wages;
- change in income distribution (biggest increases for lowest and highest incomes, while decreases in middle incomes);
- increased entrepreneurial initiative (due to the reduction of the tax burden on higher income earners);
- 50% increase in FDI inflow; and,
- 69% increase in new jobs (including jobs due to FDI).

Lower taxes and a flat tax of 19% seem to have contributed to an increase in investment in mid- and long-term projects, attraction of a larger number of foreign direct investments, an increase in fiscal revenues, and an increase in the competitiveness of the Slovak economy. Having successfully reformed the PIT, CIT, and VAT, Slovakia started reforming social contributions in the latter part of 2004, lowering the combined contributions rate from 51% to 48% of income. We do not yet know the initial results of that reform, but theoretically, it should have further enhanced the competitiveness of the Slovak economy.

Following the positive initial results of the Slovak flat tax reform, there has been a new wave of tax reductions, flat tax reforms and fierce tax competition among countries in the region. Serbia and Montenegro introduced a 14% flat tax, Romania a 16% flat tax. Presently, flat taxes are being considered in Poland and Slovenia as well.

3.3.2. The flat tax in Russia²¹

Flat tax reform in Russia is limited to the personal income tax, while the corporate income tax remained essentially unchanged. The CIT rate remained retained its single rate of 30% except that now local authorities are allowed to charge a CIT of 5%. In 2001, a unified personal income tax rate of 13% replaced a system of 12, 20, and 30%. The next year, PIT revenues increased by 26%.

Ivanova, Keen and Klemm (2005) (for simplicity, this work shall be referred to as **IKK**) have undertaken an exhaustive, empirical study of the Russian case to determine the causes of its success. They find that “it is hard to attribute the very strong performance of PIT revenues after the reform to tax reform itself.”²²

²¹ Much of this discussion draws upon Ivanova, Keen and Klemm (2005).

²² Ivanova, Keen and Klemm (2005) page 40.

Overall, IKK do not find a “supply response,” that is, the increase in revenues did not result because of more jobs, or people worked more. Instead, they find that the increase came about due to improved taxpayer compliance and wage increases that started in about 2000 with the recovery of the Russian economy. They find that a number of factors contributed to the success of this reform.

Tax administration improved. Implementation of a new tax administration code (dated 1999) led to increased authority and resources to audit taxpayers and to implement enforced collection procedures. And, for the first time, the country now has a unified and unique taxpayer identification number (TIN).²³

More important than tax administration modernization is probably the reduction in social insurance taxes (contributions), which reinforced the personal income tax reform’s impact on taxpayers. In addition, the tax on dividends, part of PIT, was increased, though this was later mitigated by a credit back system for CIT paid by companies.

Overall revenues in Russia increased at the same time that PIT revenues were growing, and total revenues as a share of GDP remained stable. The Russian economy was now performing better, not because of the change in tax policy, however, but because the prices of petroleum and gas were on the rise. The increases in energy prices was good for the Russian economy, but seems to only have led to only minimal employment increases – jobs rose only 1.3% in 2001 and most of this increase took place in small businesses.

So what lessons do IKK draw for other countries seeking to improve their tax systems? They conclude “...a key lesson must be that tax-cutting reforms of this kind should not be expected to pay for themselves by greater work effort and improved compliance.” Indeed, growth in wages seems to have been entirely exogenous to the tax cutting exercise, while other efforts to reduce fraud and raise compliance contributed to the revenue increases.

4. Competitiveness and Growth

Sound economic growth can come from investment and exports (“export-led growth paradigm), as well as improving resource use. Investment is an activity that depends on consumption/spending decisions, monetary conditions, and developed financial systems. Tax policy can influence consumption/spending (through consumption taxation), and can influence investment directly (through income and capital taxation).

“Export-led growth” focuses on international markets and gains from trade and competitiveness. According to standard international economic textbooks (cf. Babić and Babić, 2004), most of the gains from trade and reasons to trade come from relative labor productivity and relative labor cost. Tax policy can influence labor market conditions through income tax, and the labor cost through cost on labor (social contributions).

²³ While it is not clear how much tax administration modernization was able to help raise tax compliance, Rozner, Marjanovic, and Sahinagic (2005) show that similar improvements in Bosnia and Herzegovina strongly contributed to doubling tax revenues from 2001 to 2004.

Social contributions and personal income tax together make the “tax wedge” – a measure of labor cost. Table 7 presents the tax wedge data for OECD countries in 2000. The EU average tax wedge in 2000 was 44%, and the OECD average was 33% of net salary. This explains why EU countries were lagging behind the US and Japan, major OECD countries. Croatia had a tax wedge in 2000 of 44% (45.5% today), which was higher than OECD, but right at the average of EU countries.

Table 7 also shows per capita GDP, unemployment, and a residual value that is explained below.

Table 10: The tax wedge and unemployment in OECD and EU countries

Country	GDP per capita (\$ 1995)	Unemployment rate	Tax Wedge	Residual
Australia	23,475	6.2	23.0	0.88
Austria	33,620	3.6	41.0	-2.3
Belgium	30,890	6.6	55.0	-1.3
Canada	22,981	6.8	33.0	0.23
Croatia	5,002	16.1	45.5	5.3
Czech Republic	5,380	8.8	44.0	-1.8
Denmark	38,556	4.5	51.0	-1.8
Finland	31,726	9.8	44.0	3.3
France	30,097	10.0	48.0	2.8
Germany	32,694	7.8	51.0	0.61
Greece	13,174	11.1	35.0	2.8
Hungary	5,426	6.4	52.0	-5.1
Iceland	31,076	2.3	25.0	-2.1
Ireland	27,795	4.3	29.0	-1.1
Italy	20,938	10.5	43.0	2.4
Japan	44,798	4.8	25.0	2.5
Korea, Rep.	13,198	4.1	18.0	-2.2
Luxembourg	58,464	2.3	35.0	0.99
Netherlands	31,257	3.3	45.0	-3.4
New Zealand	17,914	6.0	19.0	0.29
Norway	39,322	3.4	38.0	-1.2
Poland	3,678	16.1	44.0	5.2
Portugal	12,826	3.9	34.0	-4.4
Spain	17,411	13.9	37.0	6
Sweden	32,874	5.8	49.0	-1.1
Switzerland	46,815	2.7	30.0	0.17
Turkey	3,047	6.6	40.0	-3.9
United Kingdom	22,232	5.5	30.0	-0.84
United States	31,730	4.0	31.0	-0.98

All data except for Croatia are from 2000.

Unemployment and GDP per capita are from the World Bank’s World Development Indicators (2004).

Croatia tax wedge is current, while other data are from 2000.

Tax wedge data for OECD countries from OECD.

Tax wedge data for Croatia are HUP calculations.

“Resid” is the difference between actual and predicted unemployment.

Table 10 compares the tax wedge in OECD countries in 2003. Even after Croatia reduced

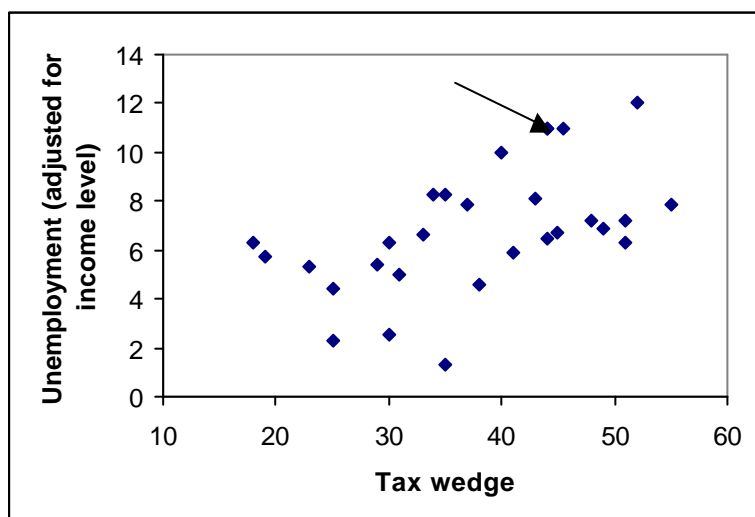
social contributions, we can see that the country still had a higher tax wedge than OECD countries, but lower than the EU average, and several percentage points lower than “new European countries.”

The tax wedge on labor is a very important indicator of the incentive impact on the use of labor in an economy. To assess this impact, we ran a regression where the dependent variable is the unemployment rate and the two explanatory variables are per capita GDP, which is an indicator of wealth or development, and the tax wedge.

Regression analysis allows the analyst to statistically link unemployment, per capita GDP, and the tax wedge. Indeed, that analysis shows that unemployment, once per capita GDP is taken into account, is directly linked to the tax wedge, i.e., the bigger the tax wedge, the greater is the unemployment rate in an economy.

Figure 6 shows the clear, positive, and statistically significant relationship between the tax wedge and the unemployment rate, once per capita GDP is held constant.

Figure 6: Unemployment and the tax wedge



The regression results are reported in table 11, below.

Table 11: Regression results: Unemployment and the tax wedge

Dependent Variable: UNEMPLOYMENT

Method: Least Squares

Included observations: 29

White Heteroskedasticity-Consistent Standard Errors & Covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.252951	1.773924	3.524927	0.0016
GDPPC	-0.000155	4.48E-05	-3.458015	0.0019
WEDGE	0.117584	0.044008	2.671892	0.0128
R-squared	0.439468	Mean dependent var		6.800000
Adjusted R-squared	0.396350	S.D. dependent var		3.846055

Text box 2: Taxation and the gray economy

A 1996 study of the unofficial economy (IPF, 1996) found that tax evasion amounted to between 9% and 15% of GDP in 1996, and unofficial economy amounted to about 25% of GDP, relatively high by international standards. A subsequent study of the unofficial economy (IPF, 2001) confirmed those findings, but established that the size of unofficial economy dropped to 10% of GDP in 2000. Since 2000, the VAT has been made much more complex, with multiple rates and various exemptions. No new study of the unofficial economy has been conducted to measure the results of this change. Nonetheless, with all of the new complexities added to the overall tax system, economists expect that the gray economy has retaken its former position in the Croatian economy.

5. Summary diagnostic

From the analyses and comparative tables presented above, a number of findings are clear. First, the VAT in Croatia is high. It is higher than the worldwide median standard VAT rate of 16% and higher than the worldwide average VAT rate of 17%. Second, the profit tax rate in Croatia is generally competitive, being a full ten percentage points below the worldwide norm of about 30%. Where Croatia's tax rate structure is anomalous and overly complex is in the top marginal tax rate on personal income. Here Croatia's top rate of 45% is much higher than the average of 33%.

Some specific findings from this review are:

- The personal income tax is confusing and provides unproductive incentives, especially with regard to residential location.
- The personal income tax's treatment of small enterprises is complex and could be drastically simplified.
- The personal income tax offers tax incentives to small enterprises that are as questionable in nature as they are when offered to larger companies subject to the corporate income tax.
- There are too many personal income tax rates and the top rate is too high compared to other countries.

- The contributions rates (payroll or social security taxes) are simply too high, placing a great wedge on Croatian labor and a heavy tax burden on employers.
- There is a wide divergence between the top personal income marginal tax rate and the CIT rate. This causes distortionary behavior at best. At worst, it leads to fraud.
- The personal income tax favors capital income over labor income by not including capital gains and interest earnings. This is exacerbated by the lower corporate income tax rate and the fact that dividends are exempt from the personal income tax.
- The CIT has a number of tax incentives in it that are of questionable productivity in terms of fostering investment, growth, and jobs, but certainly lead to lower government revenues.
- The lower CIT rate also favors capital over labor.
- The overall bias against labor that the tax system creates ensures that to the extent there is business investment leading to economic growth, it is unlikely to lead to concomitant increases in jobs. This has been the case for the past several years in Croatia, where economic growth has outpaced new formal sector job creation.

6. HUP reform package

The following table presents HUP's package of recommended reforms. For each reform component, there is a comment about the likely impact of the reform. HUP presents these reforms as a comprehensive, but integral package that should be considered as a whole. Several of the reforms proposed here directly depend on some of the reforms proposed here. For instance, changing the personal income tax rates should not be done unless tax breaks are eliminated and the personal deduction is raised.

Although HUP proposes this integrated package, the issues of implementation must still be discussed and planned. Such implementation should be done very carefully to make sure that adverse impacts on labor, investment, and social concerns are not created. At the same time, the reform must be implemented in a way that does not bring fiscal balance into danger.

Table 12: Reform package

Reform component	Comment
Personal income tax (PIT)	
Reduce the tax rates – to 15% and 25% (abolishing 35% and 45%),	There is little evidence that the highest tax rates brought in progressivity, but rather incentives to channel personal income through corporations (Ltd.). Progressivity can be achieved by increasing the non-taxed (personal deduction)
Increase the non-taxed (personal deduction) to about Kn 51,840 per year.	It will improve compliance and increase efficiency of the Tax administration, it will eliminate the need to file withholding taxes for 46% of formal sector income earners, and will lead to overall simplification of the personal income tax structure. It also reduces the burden of paying taxes for the poorest workers.

Reform component	Comment
Abolish tax relief for war veterans	In the view of numerous benefits to the war veterans, they should pay taxes at least. Increasing of the non-taxed personal deduction and flattening of the tax rate will lower the “shock” of paying tax. Government can intervene to increase their gross pensions to keep the net after-tax amount the same
Abolish tax relief for areas of special state concern, hill and mountain areas, islands and the town of Vukovar	It is highly doubtful that these incentives have lead to any real increase in investment in these areas or any real job creation. Open to fraud and abuse. Lead to complexity in the tax law. Social and rural policies should be dealt in other ways (e.g., targeted expenditure programs), not through taxes.
Abolish tax relief attached to investment incentives	All serious literature analyzing tax incentives of this type show that these incentives generally do not work; if they work, they cost too much, and often lead to increased complexity without real after-tax benefits.
Abolish tax relief for employment incentives	There is no evidence that these incentives have brought about a change in the trend of employment, or made significant impact in reduction of the unemployment. The only thing evident is the cost to the budget.
Abolish all the deductions for medical expenses, education, bassinets, home ownership and mortgages, and any other family or personal deductions.	Those created vertical and horizontal inequality. Flattening of the tax rates and increasing of the non-taxed personal deduction should more than compensate reduction of welfare
Persons gaining income from renting property or other property rights should be taxed at a flat 10%, the same rate as is proposed for taxation of entrepreneurs below. Otherwise, this type of income should be subject to the profit tax law.	This would reduce the costs of administering this tax for both the tax administration and the taxpayer. It could be handled as a single line on the income tax declaration rather than as a set of attached documents or forms. It is more transparent. The option to pay profit tax and follow the profit tax rules is open to the taxpayer.
Change Article 42 para 2 to have tax returns filed with the tax administration by March 30 or April 15.	This would be consistent with other reporting requirements, such as those for the Statistical Institute. Gives taxpayers more time to complete the tax form preparation process.
Change Article 44 paragraphs 4 and 5 to read that these assessments are to be completed by the taxpayer, not the Ministry of Finance. Appropriate rules, penalties, and interest charges would have to be applied. Paragraph 6 is also inappropriate.	Self-assessment is a <i>sine qua non</i> in modern taxation. Reduces the taxpayer’s reliance on getting rulings from the Ministry or Tax Administration. Self-assessment is quicker. Gives Tax Administration more time to do tax oversight. Better reflects reality of the taxpayer and the operation of the taxpayer’s business during the tax year. Less open to fraud and abuse. Makes the taxpayer responsible for compliance with the law.

Reform component	Comment
Persons gaining income from renting property or other property rights should be taxed at a flat 10%, the same rate as is proposed for taxation of entrepreneurs below. Otherwise, this type of income should be subject to the profit tax law.	<p>This would reduce the costs of administering this tax for both the tax administration and the taxpayer.</p> <p>It could be handled as a single line on the income tax declaration rather than as a set of attached documents or forms.</p> <p>It is more transparent.</p> <p>The option to pay profit tax and follow the profit tax rules is open to the taxpayer.</p>
Undertake a study on how the current system of fiscal federalism could lower the tax burden that the county surcharges impose on labor and other personal income.	In line with introducing property tax below
Taxation of Entrepreneurs	
<p>Entrepreneurs would either choose to pay tax under the profit tax law, or apply the simplified method of taxation. This simplified tax method would be:</p> <p>Tax is equal to 10% of total business receipts.</p> <p>This reform must be done jointly with one of the above scenarios.</p> <ul style="list-style-type: none"> - No deductions for costs. - No need to maintain sophisticated books. - Cash and month to month basis - Companies that switch to profit tax cannot return to personal income tax on entrepreneurs - No special areas deductions - No deductions for R&D 	<p>This reform would have considerable benefits to small and medium size businesses, for the treasury, and for the tax administration.</p> <ul style="list-style-type: none"> - Entrepreneurs 1) spend a disproportionately high amount on tax compliance, and 2) actually provide very little money to the treasury. - Simplification of tax treatment of small and medium, sole proprietorships could result in much lower compliance costs. - Lower compliance costs and more easily understood tax regulations would encourage formalization. - Should greatly lower tax administration costs. - Links nicely to VAT, since it is based solely on total sales/receipts. - Cash basis simplifies payments and reduces cash flow difficulties.
As in the case of entrepreneurs, agricultural (and tourism) income taxation could offer a simplified solution, such as a flat tax of 10% on total business revenue.	Benefits small and medium size businesses in agriculture and tourism. There were complaints on the level for lump-sum calculated, and lump-sum has to be recalculated and announced each year.
Contributions (Payroll Taxes)	
<p>Reduce the overall contribution rate from 37,2% to about 30% of earnings, while increasing the maximum contribution base from KN 458,000 per year to KN 600,000 per year.</p> <p>This reform would have to be part of a larger reform of the health sector, which is already under investigation.</p>	<p>This would have the following effects:</p> <ul style="list-style-type: none"> • Would slightly reduce burden on labor, making Croatian labor more attractive to business, and would increase competitiveness, comparably to EU average. • Reduce slightly the benefits accrued by the wealthier taxpayers resulting from the flattening of the Personal Income Tax. • Increasing the tax base maximum is unlikely to generate much new revenue. • Decrease contributions on health insurance, consistent with the health reform that is needed. • Any deeper reform, especially given recent reforms, would require an entirely different study.

Reform component	Comment
Profit tax	
Eliminate all special incentives from the investment incentives law that had been article 27.	All serious literature analyzing tax incentives of this type, show that these incentives generally do not work, if they work they cost too much, and often lead to increased complexity without real after-tax benefits. These incentives are not useful to modern country foreign investors due to non-double taxation of profits. Only a very small number of companies benefit from this incentive.
Eliminate incentives for areas of special concern.	It is highly doubtful that these incentives have lead to any real increase in investment in these areas or any real job creation. Open to fraud and abuse. Lead to complexity in the tax law
Eliminate employment incentives	It is highly doubtful that these incentives have lead to any real increase in investment in these areas or any real job creation. Open to fraud and abuse. Lead to complexity in the tax law
Eliminate exemption for free-zones	EC Opinion
Review the policy on double (200%) deduction for R&D. Suggestion is to reduce it to 100%, or to completely abolish it. EU policies allow “horizontal subsidies” – subsidizing directly R&D is one of them. R&D breaks go against the idea of tax simplification.	There is an economic justification for such a high deduction, but in practice, there are many problems: Tax Administrations cannot adequately determine what is real R&D; taxpayers have incentive to call too many things R&D; and, many cases R&D subsidy from tax incentive, even when it works, may still be too expensive from a cost-benefit point of view.
Review the policy of tax-free status for “pure” R&D firms.	Countries do not usually have 100% tax free status for full R&D firms Impossible to monitor appropriately Not economically justifiable Open to fraud and abuse.
Eliminate differential treatment of unrealized gains and losses from financial assets	Unrealized gains from financial assets are taxed, and unrealized losses from financial assets cannot be deducted from tax obligation. They should both be treated equally.
VAT tax	
Abolish the zero rate	EC Opinion. Social policy and industrial policy should be dealt through social transfers and horizontal measures
Reduce the tax rate to 18-20%	Broadening of the base allows government to reduce the rate to keep revenue neutral, and adjusting for the loss of the welfare in the products that used to have a 0% rate.
Increase VAT census to 100.000 or Kn 150.000	For entrepreneurs and small and medium enterprises. To simplify the compliance combined to entrepreneurial income tax of 10%
Abolish intermediate rate (on organized travel)	Intermediate rates increase tax administration costs by many times
Abolish exemption for free zones	EC opinion. The free-zones should be abolished anyway in the process of accession

Reform component	Comment
Abolish exemption on service of financial institutions	The financial industry is not taxed at all (save for CIT). In the mid-1990s there was reason for that: capital was scarce, and Croatian banks and financial institutions were weak. Today, financing is abundant, and banks and other financial institutions are profitable. It should be considered as a step toward tax on capital and a counter-measure for labor and unions.
Abolish exempt on renting of housing	For the renting, the property owner pay the tax on income, while the tenant should pay a consumption tax.
Abolish the exemption of services delivered by physicians and other care givers.	The health sector should undergo serious reform, and a consumption tax should introduce some economic decisions there. In line with abolishing similar deductions in PIT.
Excise taxes	
Redefine exemptions (especially in the case of alcohol and beer production)	EC opinion, to comply with EU Directives
Increase excise on all oil products to EU minimum	EC opinion, to comply with EU Directives
Introduce excise on kerosene, and usage of various oil and gas products for industrial and heating purposes	EC opinion, to comply with EU Directives
Unify the excise tax on cigarettes	EC opinion, to comply with EU Directives
Increase the excise tax on tobacco products to EU minimum	EC opinion, to comply with EU Directives
Property tax	
Consider implementing a full-fledged market value based real estate tax on all properties, whether in use or not. This would be a local revenue and rates should not exceed one percent of value per year.	All of them are local. Local government should provide zoning etc. The problem would be in the first and regular property census, but that would allow better tax oversight. Such a tax can be developed in a way to encourage regularization of property registration and ownership. Should be undertaken with other local fee (taksa) reform.
Double taxation	
Abolish gift tax and inheritance tax that present double taxation	Double taxation gives wrong incentives in economic decisions
Tax on capital	
Include capital gains in the personal income tax base, with special treatment for long-term capital gains. As an interim step, it might be best to apply a flat tax on capital gains, and introduce it in the future to the personal income tax law.	Taxation of capital gains, with an appropriate adjustment for long-term gains, is prudent and internationally standard. It will raise the progressivity of the tax system while closing a loophole for otherwise avoiding paying personal income tax or for making dividend distributions.
Include interest earnings in the personal income tax, over time. In the meantime, it might be best to impose a flat tax on interest earnings. This could be deducted by the bank or the interest payer.	Taxing interest earnings is reasonable and normal. Interest payments are a deductible expense for business and banks, and should therefore be an income for persons. Including interest earnings in the taxable base will help to raise the progressivity of the tax system.

7. Micro simulations

To analyze the effects of a change in the personal income tax one must develop a microsimulation model. We developed a microsimulation model based on two data sources: the household budget survey, tabular tax revenue data from the 2003 fiscal year. The model allows us to assess the impact on revenues and income earners from changes in tax rates, personal deductions, and the tax base. The changes in the tax rates have been discussed elsewhere in this paper, as have the changes in the tax base.

Before presenting the results of the microsimulation model, it would be useful for context to consider first income distribution in Croatia:

- The richest two percent of Croatian citizens receive 65% of all capital income in the country. This compares to the poorest 85% of Croatian citizens who receive only four percent of all capital income. This difference becomes a bit less stark when one takes into account that the richest ten percent of Croatians receive 90% of all capital income.
- When it comes to property income (such as renting homes or office buildings), the richest ten percent of society receives 98% of this income, while that received by the lowest income groups is negligible.
- The highest paid 1,800 people in Croatia have annual incomes (including capital and property income) 206 times that earned by the lowest paid ten percent of the population.

Given these points about income distribution, it is clear that expanding the Croatian tax system to include income from capital and property will enhance the progressive nature of the tax, even if tax rates are flattened, as proposed.

The following are the inputs to the simulations that represent the basic elements of this reform proposal:

- Single, individual personal deduction of 51,840 (this is equivalent to one personal deduction and two family deductions, the norm in Croatia).
- Two tax rate structure. A 15% marginal income tax is imposed on lower income earners, and a 25% marginal tax rate is imposed for moderate to high-income earners.
- Elimination of all special deductions and reliefs.
- Interest income is incorporated in the tax base as ordinary income.
- Earnings on capital gains are also incorporated in the tax base, though long-term capital gains would only be valued at 50%.

The analysis shows that this new structure would result in:

- No loss in fiscal revenue, i.e., the simulation is revenue neutral.
- Despite the simplification, the Kn 51,840 individual deduction and the tax on capital income combine to keep the Croatian tax system progressive. That is, the tax system still tends to redistribute income from the richer to the poorer segments of society.

- 46% of all formal sector workers would not be required to pay any personal income tax and their employers would not be required to withhold taxes from them
- 15% of all formal sector workers would be paying tax at the 15% marginal rate.
- 39% of all formal sector income earners would pay tax at the 25% marginal tax rate.
- This proposed structure greatly reduces compliance costs for taxpayers, employers, and the tax administration. For instance, many fewer people would need to be subject to withholding taxes, reducing the burden of employers to fill the role of tax agent. In addition, there would be fewer people required to file annual income tax returns requesting refunds.

Table 12 presents the structure of taxpayers' shares in the payment of personal income taxes both under the current personal income tax system and under the HUP-proposed personal income tax system.

Table 13: Comparative structure of personal income taxpayers

<i>Current personal income tax structure</i>			
Marginal Tax Bracket	Share of Revenues from taxpayers in this tax bracket	Percentage of Persons in the tax bracket	
Without tax obligation	0.0%	54.3%	
15%	18.5%	23.9%	
25%	47.2%	17.0%	
35%	33.4%	4.8%	
45%	0.9%	0.0%	
<i>HUP Proposal</i>			
Without tax obligation	0.0%	46.2%	
15%	2.7%	15.5%	
25%	97.3%	38.3%	

Figure 8 shows income distribution after taxes, based on the current tax system and this HUP proposal, by income class. Income classes are in deciles of the population. The richest 10% of the population includes those with monthly incomes of Ksh13,000 or higher, while the poorest 10% are those people with monthly incomes less than Ksh2,400. This figure shows that the HUP proposal enhances the progressive nature of the PIT by redistributing after-tax income from the upper income classes toward the poorer, working classes.²⁴

²⁴ This is the case if all capital income is fully incorporated into the tax base. The changes are less dramatic if capital income is merely subjected to a flat tax of, say, 5%.

Figure 7: Income distribution before and after taxes

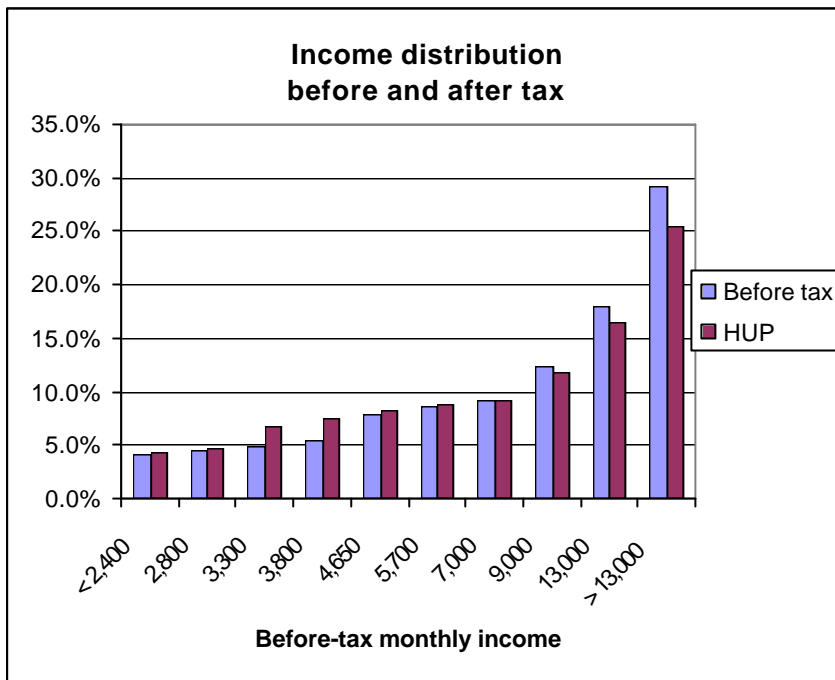
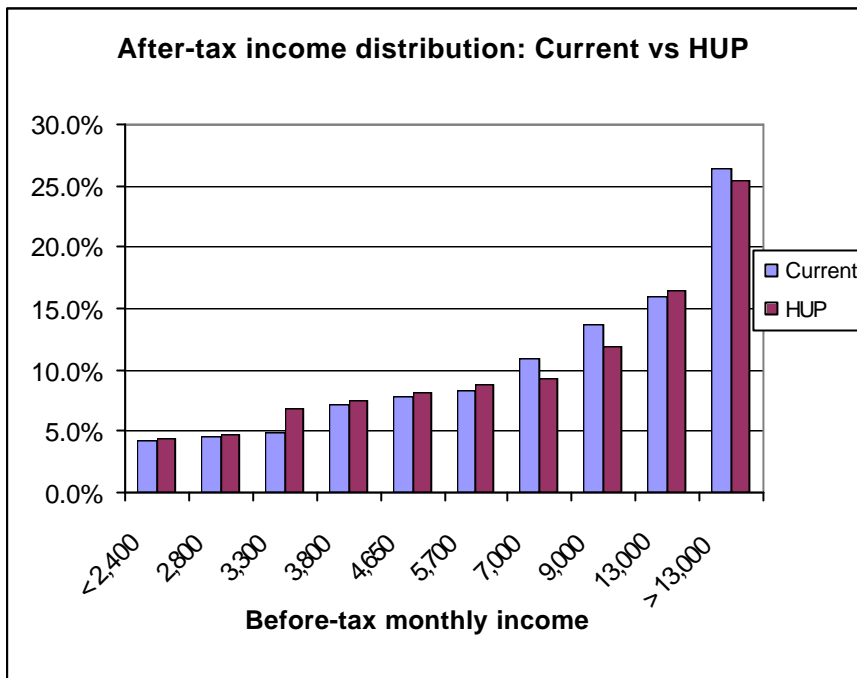


Figure 9 compares the after-tax income distribution under the current, complicated personal income tax system and the after-tax distribution under the HUP proposal. This figure shows that the income share of the richest population decile in Croatia would be lower under the HUP proposal compared to the share it is currently receiving under the present PIT regime, despite facing a lower marginal income tax rate. This results from the fact that most capital and property incomes, which are taxable under the HUP proposal, are concentrated among the richest Croatians.

Figure 8: After-tax income distribution: current vs. HUP proposal



This Figure also shows that lower paid workers are also better off under the HUP proposal than under the current tax regime. The brunt of the change in income shares is borne by the seventh and eighth deciles, which are also the people in the first rungs of the 25% marginal tax bracket under the proposed new regime. These two deciles include people who earn between Kn 6,000 and Kn 9,000 per month.

The next figure compares effective average tax rates at different income levels under the HUP proposal and under the current personal income tax system. “Effective tax rate” is the actual amount of tax due as a percentage of the actual gross income of the taxpayer.

Figure 9: Effective average income tax rates under current and HUP

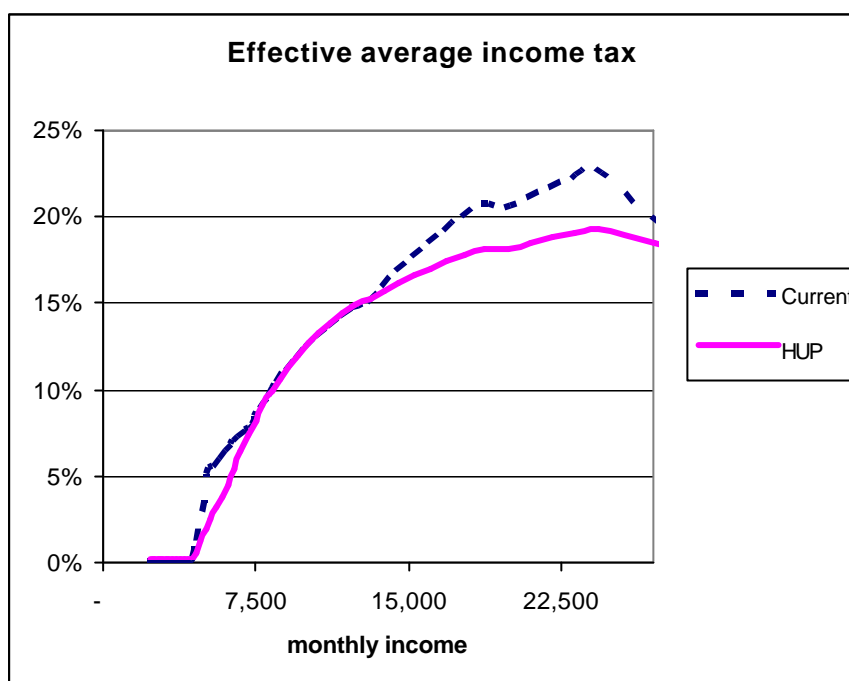


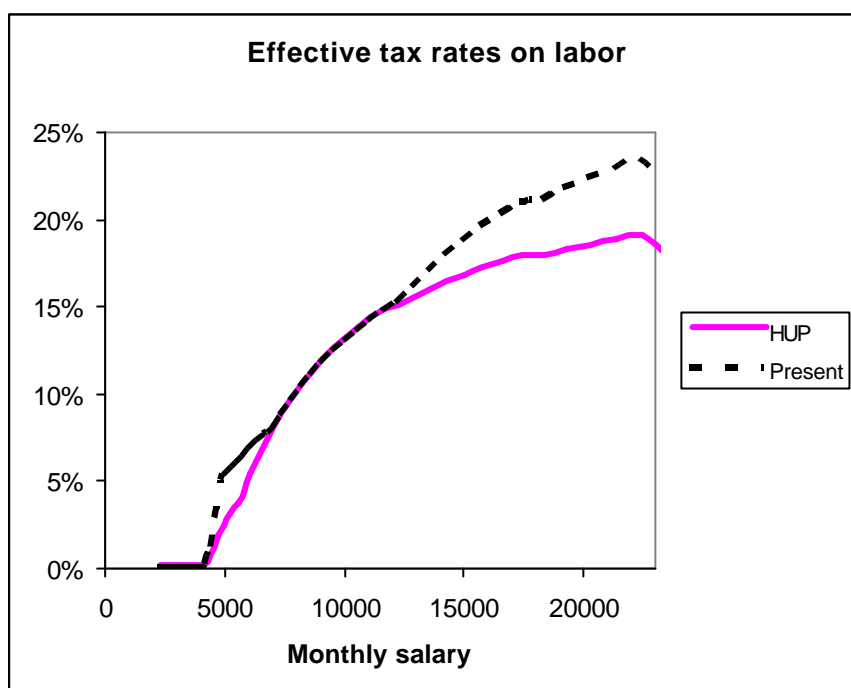
Figure 10 demonstrates that the current personal income tax is regressive at the higher end of the income scale; that is, persons earning Kn 22,500 per month pay a higher effective tax rate than persons earning Kn 35,000 per month. This results entirely from excluding property and capital income from the taxable base.²⁵

Figure 10 eliminates the tax impact on capital income and compares the average effective personal income tax on salaries only. This clearly shows how the HUP reform package would lower the effective rate of taxation on workers at both the low end and high end of the salary scales. This results from broadening the base, especially by including capital income in the personal income tax base, while lowering tax rates for global income.

The total affect on the tax wedge on labor is not great, in and of itself. Indeed, lowering the contribution rate by seven points combined with restructuring the personal income tax as proposed would result in an overall, average reduction in the tax wedge by eight to nine points. But, this reform is in the correct direction to both lead to increased use of the country's labor resources, while also encouraging greater investment, leading to growth and rising incomes. Future reforms, such as those that might be expected to lower the overall tax-to-GDP ratio, should first focus on further reductions in the taxation of labor.

²⁵ Figure 8 also seems to indicate a declining effective average tax rate on the highest income brackets, but this actually results from the crudeness of the database and the lumping together of very disparate income levels into average brackets.

Figure 10: Effective income tax rate on labor of the current system and HUP proposal



7.1. Case studies

We tested the reform package²⁶ on actual firm data in 2004 of two firms in Zagreb. Firm A had average gross wages that were twice the average gross wage in the economy, and Firm B had average gross wages that were three times the average gross wage in the economy. The results showed the following under the HUP reform proposal:

- The total cost of employees to the company went down by 2% in both firms in both variants (PIT 15-25, and PIT with single 20% rate).
- Tax and surtax went down more in Firm A (lower average wage) than in Firm B (higher average wage), and more under Variant II (PIT with a single 20% rate) than under Variant I (PIT 15-25).
- Average net pay for the employee went up more in Firm A (lower wage) than in Firm B (higher wage), and more under Variant II (PIT with a single 20% rate) than under Variant I (PIT 15-25).

Table 14: Case studies of reform effects

% change from present	Variant I		Variant II	
	Firm A	Firm B	Firm A	Firm B

²⁶ Variant I: PIT with a personal deduction of Kn 4,000 per month, 15% tax on monthly income between Kn 4,000 and Kn 8,333, and 25% tax on monthly income above Kn 8,333, Variant II: PIT with a personal deduction of Kn 4,000 per month, and 20% tax on monthly income above Kn 4,000,

- Reduced contribution paid by employers on health insurance,
- Eliminated exceptions in VAT and decreased VAT rate to 20%,
- Eliminated all exceptions in CIT and the 20% rate,
- Introduce property tax, tax on interest and capital gains tax.

system				
Total employee cost	-1.9%	-1.9%	-1.9%	-1.9%
Tax and surtax	-36.4%	-42.5%	-44.1%	-46.6%
Net salary	17.0%	11.4%	19.2%	12.5%

Regarding the CIT, apart from the total employee cost (that went down by 2%), companies experienced a 5% increase in interest costs (due to the introduction of the tax on interest earnings at a rate of 5%), which would lower companies' net operating surplus and profits by 18%.

8. Macro simulations^[MG1]

If we are to consider all the economic effects of the proposed tax reform, we have to simulate macro-effects of the reform. It would be useful to first simulate how the economic situation would proceed as usual—to formulate a “baseline scenario.” Then, we would formulate the reform scenario and change the macro variables accordingly in the future years. In the end, we would be able to compare the two scenarios and comment on the effects of the reform.

It seems most useful to use a standard financial programming framework used by IMF and World Bank (cf. Mikkelsen, 1998). It is easy to project macroeconomic variables within the financial programming framework, and it is consistent with widely accepted macroeconomic modeling approaches—IS-LM, Mundell-Fleming, and aggregate macroeconomic model (AS and AD).

Financial programming starts with projecting real GDP growth, inflation and an external variable (internal reserve level or exchange rate level). Other variables in the tables are projected according to financial programming relations and macro models. Since for 2005 we do not have final data, we have estimated some values based on data that are available.

ICOR in 2003-2005 = 8.5 (this is very high, meaning Croatia does not use its capital well)

ICOR under reform scenario = 4.1, which is much more “normal” around the world, though we should really be shooting for 3.

Ante: I know we do not have number of hours worked per person, but if we had number of people working and output per capita over the past few years, that would be good. If we could show that this is increasing but neither wages nor employment are increasing, except under our reform scenario, then this would support our thesis that the tax system is anti-employment.

Table 15: Baseline scenario

BASELINE SCENARIO	1997	1998	1999	2000	2001	2002	2003	2004	2005
GDP, real growth	6,5%	2,5%	-0,9%	2,9%	4,4%	5,2%	4,3%	3,7%	4,3%
inflation	4,0%	5,6%	4,6%	7,5%	2,6%	2,3%	0,9%	2,4%	3,2%
GDP, current prices, mil.kn	123.811	137.604	141.579	152.519	165.639	179.390	193.067	207.082	222.898
GDP, current prices, mil.USD	20.109	21.628	19.906	18.427	19.863	22.812	28.810	34.311	36.728
GNI, current prices, mil. kn	123.733	136.518	138.961	149.271	161.313	175.109	184.846	202.377	216.829
GNI, current prices, mil. USD	20.085	21.462	19.537	18.030	19.318	22.285	27.592	33.541	35.728
National saving (%GDP)	16,0%	17,0%	15,9%	17,8%	20,1%	21,5%	21,3%	24,1%	21,7%
Nation. Saving minus Inv. (%GDP)	-11,5%	-7,1%	-7,1%	-2,5%	-3,8%	-6,8%	-9,1%	-4,6%	-6,3%
Current account, mil. USD	-2.512	-1.453	-1.398	-439	-725	-1.606	-2.615	-2.172	-2.673
Exports of goods and services, mil. USD	8.262	8.573	8.143	8.687	9.623	10.348	13.568	16.292	17.286
Imports of goods and services, mil. USD	11.426	10.641	9.821	9.628	10.824	12.474	16.373	19.180	20.568
Trade balance, mil. USD	-3.164	-2.067	-1.677	-942	-1.201	-2.125	-2.804	-2.888	-3.282
Total revenue, general government, mil. kn	60.200	72.738	75.010	74.621	77.450	82.803	89.959	93.870	102.533
Taxes, mil. kuna	35.982	45.291	42.942	44.803	45.491	50.649	53.819	55.865	61.297
Social contributions, mil. kuna	22.394	22.930	23.290	23.951	21.529	25.190	27.417	29.478	31.652
Overall balance, general government, mil. kn	-1.497	678	-3.130	-7.688	-7.854	-9.403	-11.787	-12.984	-10.030
Memo:									
GDP pc (USD)	4.398	4.805	4.371	4.206	4.477	5.134	6.489	7.728	8.272
GNI pc (USD)	4.395	4.767	4.290	4.117	4.360	5.012	6.212	7.552	8.047
HRK/USD period average	6,16	6,36	7,11	8,28	8,34	7,86	6,70	6,04	6,07
HRK/EUR period average	6,96	7,14	7,58	7,63	7,47	7,41	7,56	7,50	7,40
USD/EUR period average	1,13	1,12	1,07	0,92	0,90	0,94	1,13	1,24	1,22
Overall balance, general government, % GDP	-1,2%	0,5%	-2,2%	-5,0%	-4,7%	-5,2%	-6,1%	-6,3%	-4,5%

Source: CNB, CBS, own calculations

Reform proposal scenarios can be projected according to micro, macro, and financial effects of tax changes. In macrosimulations, we will incorporate the aggregated effect of microsimulations. In addition, we will use the estimated macroeconomic relationships for Croatia from a macromodel by Babic (2003). Additional help is available through previous estimates of elasticities and correlations between fiscal and macro variables. A study by the Economics Institute Zagreb (2003) provides long-term elasticities of changes in VAT revenue on GDP (1.2), of changes in CIT revenue on GDP (between 2.6 and 3.0), and insights into the problems with modeling of various fiscal revenues[MG2].

We assume that the reform will:

- the average PIT rate will be 20% (15% and 25%);
- increase the personal deduction above 4.000 per month;
- decrease contributions to 30%;
- eliminate all exceptions in VAT and decrease the VAT rate to 20%;
- eliminate all exceptions in CIT and keep the 20% rate; and,
- introduce property tax,
- impose tax on interest and capital gains.

8.1. Effects on personal income tax

Simplifying taxation of property income with a 10% tax rate would have the effect of bringing renting activity from the gray zone into the official economy, bringer more order into the rental market, and tapping the unused potential of the property market. According to tax administration data, there are about 70,000 individuals that have some income from renting on which they pay taxes. Their number has not changed much in recent years despite huge growth in housing construction, suggesting that the gray zone is growing. Rental income brings many higher-income earners into the bracket that pays the highest marginal tax rate. That is why we think that a lower, simple tax rate of 10% would persuade more individuals to report their renting activities, and as a result would bring the government more personal income tax revenue than before. In addition, this change might encourage more property renting, which in turn would generate tax revenues for government. However, there are so many unknown factors to assess the real economic impact of that type of reform.

The Ministry of Finance's own calculations put the effective PIT rate at about 16%. Based on this, the introduction of a 20% tax rate would increase the overall tax burden, which can be compensated by an increase in the personal deduction, presently at Kn 1,600 monthly or Kn 19,200 annually. An increase to, e.g., more than Kn 4.000 monthly (Kn 51,840 annually)—which is approximately equivalent to the average net monthly salary in Croatia—would reduce the number of taxpayers by half. Although this amount is above the poverty line calculated by the Croatian Bureau of Statistics for 2004 (Kn 43,500), it is still below the “basket of goods and services” index calculated monthly by Unions (Kn 5,560 for May 2005). In other words, there are grounds for setting the level of un-taxed income (personal deduction) higher than the poverty line. It would be good, for example, to link it to the average net paid salary for the previous year – for 2004 it was Kn 4,137. This way, the personal deduction would be linked to the average paid salary for the previous year calculated by CBS and HZZ. It would be understandable and easy to calculate by the tax administration, and it would change every year. The higher the personal deduction is, the more incentives there will be to comply. Furthermore, while reported salaries below the un-taxed level will not be taxed, social and pension contributions will still be paid on those amounts – opening up possibilities for further fiscal revenues.

The net effect will be to lower the burden on lower income earners, on upper-middle and higher income earners, and less so on middle income earners. Lower income individuals will be willing to work more. And, since there is a backward-bending effect in the labor supply curve, higher income earners will opt for more free time, but will still save and invest the proceeds – the returns on which, while not subject to personal income taxation, will now be captured through taxation of the capital gain. The overall effect on PIT receipts should, therefore, be neutral. Eliminating tax reliefs for areas of special state concern, investment and employment, as well as all the existing tax deductions would reduce the costs to the budget (by 2% of PIT as estimated, or 0.07% of GDP), but would not adversely effect any of those areas or activities. The overall effect on PIT would be a slight increase in the effective PIT rate from about 8% to 10% (by 20% or 0.7% of GDP), and accordingly a slight increase in the tax wedge.

8.2. Effects of the tax on entrepreneurs

Under the HUP reform proposal, entrepreneurs would have to choose between the tax on profit and the simplified 10% personal income tax. That would reduce their tax burden and their cost of tax compliance a great deal. Consequently, it would free up their resources for productive purposes, and bring many entrepreneurs out of the gray zone into the official economy. Similar would be true for small agriculture and tourism businesses. Many would now be willing to expand their businesses, save, invest, and hire more workers. In fact, we estimate that the simplified regime would increase their production by 1%. According to Ministry of Finance data, there are about 110,000 entrepreneurs in Croatia. In both cases, tax revenues should increase following the reform.

According to Ministry of Finance data, there are about 200,000 independent artists and researchers that were obliged to pay tax. Their income is taxed at 25%, but they can deduct up to 30% of their receipts as material costs. The simplified 10% regime would increase the reported earnings, bringing many taxpayers out of the gray zone into the official economy, and it would lead to increases in government revenue. Our estimation is that it would bring about 10% more in tax revenues, equal to 0.25% of GDP.

8.3. Effects of reduction of social contributions

The proposed reduction of the social contribution rate (e.g., to 30%, mostly from health contributions because of the health reform) would reduce the cost of labor, making businesses more competitive and labor more attractive to employers to hire. It would also reduce revenue to the budget from contributions by 24%, but it would trigger more exports and jobs, and bring gray economy employment into the official sector. Total government revenues from social contributions would be reduced by a smaller percentage than 24%. Increasing the maximum contribution base would reduce the revenue loss even more. Our estimate is that the total revenue effect of the reduction of social contribution rates would be around 5% (24% less 10% due to increased economic activity and competitiveness, and another 10% in gray economy activity shifting to the formal sector), or Kn 2.8 billion (0.7% of GDP).

The combined effect of the contributions and PIT reforms is a reduction in the tax wedge by 5%, making labor more attractive and enhancing the competitiveness of Croatian businesses by 2.5% (a 5% improvement applied to half of the total cost to the business). Improved competitiveness will, in turn, bring more exports and new jobs. To employers, it will provide new incentives for job creation, which in turn will increase overall employment.

Our estimate suggests that overall employment will increase by 2.75% (2.5% from increased competitiveness, and another 10% from gray economy activity shifting to the formal sector).

8.4. Effects of the profit tax

The profit tax would have minimal changes under the reform scheme, since the general tax rate is already 20%. Although there are tax breaks for R&D, employment, and areas of special state concern, elimination of those breaks would have minimal effect, since those activities are negligible and, in any case, the breaks did not yield the expected results in the first place. On the other hand, the Treasury would save. According to the Ministry of Finance's own calculations (for 2004 on data from 2003), the removal of employment incentives would amount to Kn 79 million, R&D incentives to Kn 56 million, incentives for education to Kn 31 million, incentives for areas of special state concern to Kn 103 million, and altogether Kn 269 million in previously foregone revenue. Total government revenue from CIT would increase by about 5% (0.1% of GDP). Furthermore, increased competitiveness, employment and production should bring about another 1.55% increase in CIT revenue (20% of the 7.75% increase in economic activity and competitiveness), equal to 0.03% of GDP.

8.5. Effects on VAT

Eliminating the zero VAT rate would increase prices for those previously exempted products by 20%; yet, those products represent only 17% of the consumer price index. On the other hand, 83% of the goods and services in the consumer basket will decrease in price by 10% because of the decrease in the VAT tax rate from 22% to 20%. The overall price effect from VAT would then be a decrease of 5% (if businesses do not increase their margins) in prices.

Long-run elasticity of consumption on GDP is 0.6, and short-run elasticity is between 0.2 and 0.6, meaning that a 5% decrease in prices caused by the combined effects of VAT reform would increase overall consumption by between 1% and 3%. The direct effect on imports would be an increase between 0.9% and 2.7%, but we have to consider also the change in relative prices between domestic and foreign goods. An overall reduction of VAT makes imported inputs less attractive and domestic inputs more competitive (because of the VAT-deductible import inputs).

Under the proposed VAT reform scheme, government revenue would decrease by less than 5% (83% of the goods and services would bring 10% less revenue, while 17% of the goods and services would bring 20% more revenue). Eliminating the exemption for renting of housing should increase VAT receipts, but since we do not know much about the rental market, it is hard to estimate the net effect. However, the overall effect should be a decrease in VAT receipts by no more than 5%, or 0.7% of GDP. These are only the direct effects; decreasing the general VAT rate would increase the number of transactions, bringing more value added and diminishing the revenue loss. Furthermore, broadening of the base will result in an increase in VAT revenues and a decrease and change in the structure of consumption.

8.6. Effects on excise taxes

If increased to EU minimum levels, the excise on tobacco should increase by 10%, and the excise on oil products by 50% on average. Price elasticities for tobacco products in the world are about -0.5, meaning that increasing the excise tax on tobacco would increase the market price by little less than 10%, decrease consumption by 5%, and increase government revenue

by 0.5%. Price elasticities for oil products in the world are about -0.2, meaning that increasing the excise tax on tobacco^[MG3] would increase the market price by little less than 50%, decrease consumption by 10%, and increase government revenue by 5%.

Increasing excises could boost total government revenue by Kn 313 million, or 0.16% of GDP. The overall increase in prices will be 5% at a maximum, since tobacco products represent 4% and oil products 9% of the overall consumer basket. The overall decrease in private consumption will be 1.1%, and imports 1%.

On the other hand, the overall impact of this reform package is to increase GDP by about 2.3%. Since the income elasticity of private consumption tends to be unitary, we would expect private consumption to rise by about 2.3%, also, *cet. par.* Combining the price and income effects, we arrive at a net, overall expectation that this reform package can actually boost private consumption by about 1.2% (= 2.3% - 1.1^[MG4]%).

8.7. Effects of property tax

The proposed reform of the property tax is essentially a consolidation and reform of various taxes the impact of which is hard to estimate, but if assessed properly it could bring in more tax revenue for local governments. It will also lead to more rational and productive use of property and should bring substantial unused property into economic use.

8.8. Effects of tax on capital

Introduction of the tax on interest earnings at a rate of 5% would bring in about Kn 300 million of revenue for the government (total net interest revenue of banks was about Kn 6 billion in 2004). This reform would increase the cost of capital, but due to increased competition, most of the cost would be borne by banks and not consumers.^[MG5]

Introduction of a capital gains tax at a rate of 5% would have brought about Kn 1 billion in 2005 (5% of the Kn 20 billion increase in market capitalization), but that was a great year with an average 30% increase in stock prices^[MG6].

Both taxes would lead to a slight decrease in the supply of capital, but also more rationing in investment decisions (encouraging saving and rationing investment).^[MG7]

By incorporating capital income (both from earned interest and capital gains) there is a possibility that the supply of loanable and investible funds to the Croatian economy could contract. Since Croatia's is a small economy and a "price taker" in the capital market, this is most likely the result. At the same time, however, since there will be a slight decline in these investible funds, new investment projects will likely have higher productivity, thus yielding greater output per unit of investment.

The overall effect on government revenue would be an increase equal to 0.63% of GDP.

8.9. Macroeconomic effects of the reform package

The overall direct effect of the reform proposal is a 2.5% increase competitiveness, a 2.75% increase in employment (1% from small businesses and entrepreneurs, and 1.75% from other business sectors), and a 2% increase in production (1% from small businesses and

entrepreneurs, and 1% from other business sectors). The overall price effect is zero (a 5% decrease from the VAT reduction, and a 5% increase from excise taxes). Meanwhile, the overall effect on consumption and imports should be neutral, only slightly reducing imports.

The reform would reduce budget expenditures on PIT incentives by 0.07% of GDP, increase tax revenue from PIT by 0.7% of GDP, increase tax revenue from entrepreneurs and small businesses by 0.25% of GDP, decrease social contributions revenue by 0.7% of GDP, increase CIT revenue by 0.12% of GDP, decrease VAT receipts by 0.7% of GDP, increase excise tax revenue by 0.16% of GDP, and increase government revenues from taxes on capital by 0.6% of GDP. The overall budget effect would be an increase in revenues equal to 0.5% of GDP. These are only the immediate or direct macroeconomic effects. There would be other effects that are difficult to estimate (income from renting, entrepreneurial income, property tax, etc.), as well as a host of indirect effects.

Table 16: Reform scenario

REFORM SCENARIO	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
GDP, real growth	6,5%	2,5%	-0,9%	2,9%	4,4%	5,2%	4,3%	3,7%	4,3%	6,8%
inflation	4,0%	5,6%	4,6%	7,5%	2,6%	2,3%	0,9%	2,4%	3,2%	2,0%
GDP, current prices, mil.kn	123.811	137.604	141.579	152.519	165.639	179.390	193.067	207.082	222.898	242.911
GDP, current prices, mil.USD	20.109	21.628	19.906	18.427	19.863	22.812	28.810	34.311	36.728	40.321
GNI, current prices, mil. kn	123.733	136.518	138.961	149.271	161.313	175.109	184.846	202.377	216.829	236.891
GNI, current prices, mil. USD	20.085	21.462	19.537	18.030	19.318	22.285	27.592	33.541	35.728	39.321
National saving (%GDP)	16,0%	17,0%	15,9%	17,8%	20,1%	21,5%	21,3%	24,1%	21,7%	21,7%
Nation. Saving minus Inv. (%GDP)	-11,5%	-7,1%	-7,1%	-2,5%	-3,8%	-6,8%	-9,1%	-4,6%	-6,3%	-6,3%
Current account, mil. USD	-2.512	-1.453	-1.398	-439	-725	-1.606	-2.615	-2.172	-2.673	-2.731
Exports of goods and services, mil. USD	8.262	8.573	8.143	8.687	9.623	10.348	13.568	16.292	17.286	19.131
Imports of goods and services, mil. USD	11.426	10.641	9.821	9.628	10.824	12.474	16.373	19.180	20.568	22.581
Trade balance, mil. USD	-3.164	-2.067	-1.677	-942	-1.201	-2.125	-2.804	-2.888	-3.282	-3.441
Total revenue, general government, mil. Kn	60.200	72.738	75.010	74.621	77.450	82.803	89.959	93.870	102.533	109.141
Taxes, mil. kuna	35.982	45.291	42.942	44.803	45.491	50.649	53.819	55.865	61.297	65.831
Social contributions, mil. kuna	22.394	22.930	23.290	23.951	21.529	25.190	27.417	29.478	31.652	32.061
Overall balance, general government, mil. Kn	-1.497	678	-3.130	-7.688	-7.854	-9.403	-11.787	-12.984	-10.030	-9.631
Memo:										
GDP pc (USD)	4.398	4.805	4.371	4.206	4.477	5.134	6.489	7.728	8.272	9.081
GNI pc (USD)	4.395	4.767	4.290	4.117	4.360	5.012	6.212	7.552	8.047	8.831
HRK/USD period average	6,16	6,36	7,11	8,28	8,34	7,86	6,70	6,04	6,07	6,04
HRK/EUR period average	6,96	7,14	7,58	7,63	7,47	7,41	7,56	7,50	7,40	7,31
USD/EUR period average	1,13	1,12	1,07	0,92	0,90	0,94	1,13	1,24	1,22	1,21
Overall balance, general government, % GDP	-1,2%	0,5%	-2,2%	-5,0%	-4,7%	-5,2%	-6,1%	-6,3%	-4,5%	-4,0%

We can see that the reform scenario would increase real GDP growth to 6.8%, not have any real impact on inflation, and improve the trade balance and current account. It would improve general and central government balances.²⁷

The previous estimation was done considering the direct effects. However, there are indirect effects as well. Because of the estimated long-run elasticity of the CIT on GDP, CIT revenues should also increase as a share of GDP. The PIT, which is more income elastic than is the CIT, would also experience increases in its share of the economy. Increases of GDP should increase also receipts from other taxes. This could improve the overall government balance even more.

8.10. Stakeholder balance of the reform package

The end result of the reform scenario is positive for the Croatian government. The government's fiscal position stands to improve or at least remain neutral. Transactions will increase due to tax system simplification. Croatia's competitiveness will increase. Employment will increase. The gray economy will shrink while the official economy will grow. And, Croatia will see increased production, saving and investment and a change in the structure of consumption.

The end result for the business sector is also positive. Labor costs will decline (with the reduction in PIT and contributions burdens), and tax compliance will be made easier and less costly. At the same time, we anticipate sporadic losses for some business due to the elimination of deductions and the increase in excise taxes. Meanwhile, small and medium enterprises and entrepreneurs will gain an opportunity to report and pay a simplified 10% income tax. Labor-intensive sectors would enjoy greater relief (since the reform proposes to lower the overall cost of labor), and capital-intensive sectors would shoulder a greater burden than before (due to the introduction of taxes on capital).

Finally, labor in the end will enjoy an increase in net income (due to the reductions in PIT and contributions burdens), an increase in the non-taxed personal deduction, and an increase in job openings. The other welfare effects are mixed – a slight worsening for labor due to the reduction of the contribution rate for health insurance, and the increase in tobacco and energy product prices; on the other hand, labor will benefit from price cuts for other products due to the lowering of the VAT rate.

²⁷ Of course, we were assuming that no changes would be made on the expenditure side of the central and general government budget – expenditures would be the same as they were under the baseline scenario (with the exception of reduced spending on areas of special concern). If there were any change on the expenditure side, that would also affect the final balance of the central and/or general government.

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