

# Tax Policy and Fiscal Consolidation in Croatia

---

Šimović, Hrvoje; Blažić, Helena; Štambuk, Ana; Klun, Maja; Lazović-Pita, Lejla; Grdović Grip, Ana; Ćorić, Tomislav; Deskar-Škrbić, Milan; Raos, Višeslav; Pečarić, Mario; ...

**Edited book / Urednička knjiga**

*Publication status / Verzija rada:* **Published version / Objavljena verzija rada (izdavačev PDF)**

*Publication year / Godina izdavanja:* **2017**

*Permanent link / Trajna poveznica:* <https://um.nsk.hr/um:nbn:hr:192:067279>

*Rights / Prava:* [In copyright](#)/[Zaštićeno autorskim pravom.](#)

*Download date / Datum preuzimanja:* **2024-11-17**



SVEUČILIŠTE U RIJECI  
**EKONOMSKI FAKULTET**

*Repository / Repozitorij:*

[Repository of the University of Rijeka, Faculty of  
Economics and Business - FECRI Repository](#)



# Tax Policy and Fiscal Consolidation in Croatia

## Editors

Helena Blažić

Maja Grdinić

TAX POLICY AND FISCAL CONSOLIDATION  
IN CROATIA

### Publisher

University of Rijeka, Faculty of Economics and Business

### For the Publisher

Alen Host, dean

### Editor

Helena Blažić PhD, Full Professor

Maja Grdinić, PhD, Assistant Professor

### Reviewer

Sead Kreso PhD, Full Professor

Stanka Setnikar-Cankar PhD, Full Professor

### Language Editor

Denisse Mandekić

### Proofreader

Denisse Mandekić

### Graphic design and layout

Sanja Jovanović

### Published

July, 2018

ISBN 978-953-7813-40-6

On the grounds of the decision issued by the University of Rijeka Publishing Committee Class: 602-09/18-01/08, Registration number: 2170-57-03-18-3, this book has been published as University of Rijeka Edition.

This book has been supported by the Croatian Science Foundation under the project number IP-2013-11-8174.

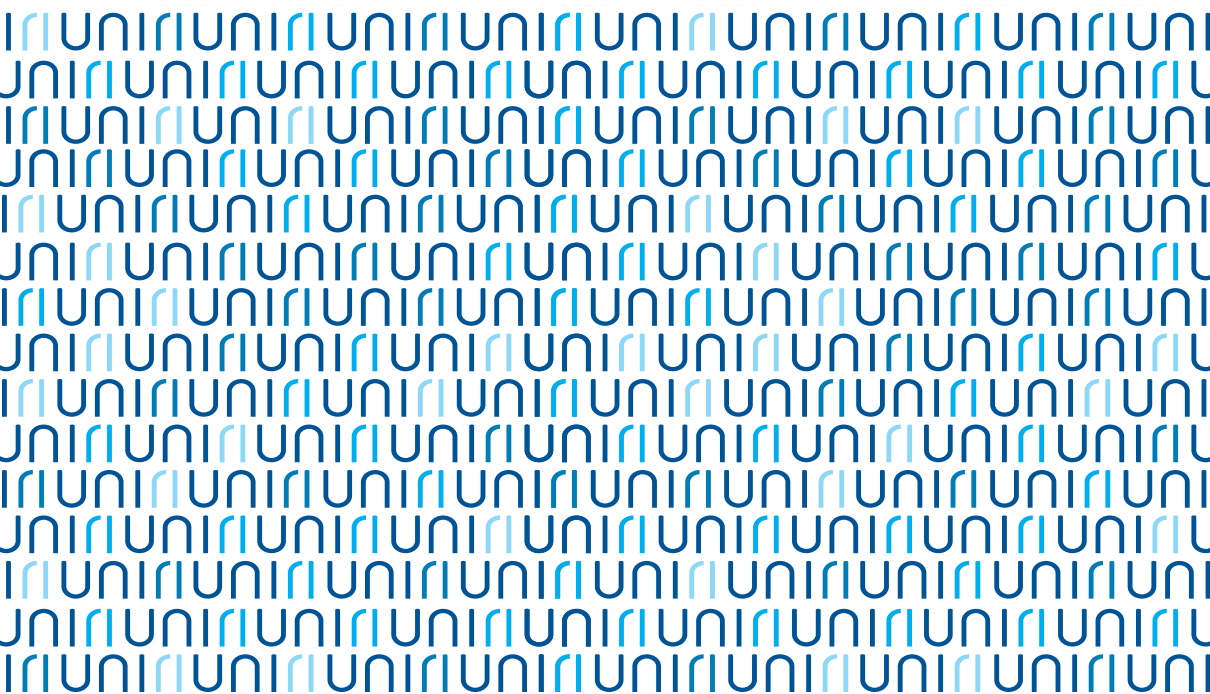


# Tax Policy and Fiscal Consolidation in Croatia

## Editors

Helena Blažić, PhD, Full Professor

Maja Grdinić, PhD, Assistant Professor





# CONTENT

<b>PREFACE</b>	<b>5</b>
<b>INTRODUCTION</b>	<b>6</b>
<b>1. Tax Policy Opinion Surveys</b>	<b>13</b>
<b>1.1. Perspectives of Tax Reforms in Croatia:         Expert Opinion Survey</b> (Šimović, Blažić and Štambuk)	14
<b>1.2. Slovenian Experiences and Lessons from Tax Reforms</b> (Klun)	50
<b>1.3. The state and Perspectives of Tax Reforms in Bosnia         and Herzegovina: Expert Opinion Survey Results</b> (Lazović-Pita and Štambuk)	60
<b>1.4. Utjecaj sociodemografskih obilježja na stavove stručnjaka o         poreznom sustavu i poreznoj politici / The Influence of         Sociodemographic Characteristics on Experts'         Attitudes on Tax System and Policy</b> (Štambuk)	75
<b>2. Fiscal Policy and Consolidation</b>	<b>99</b>
<b>2.1. Empirical Assessment of Stabilization Effects of Fiscal Policy         in Croatia</b> (Grdović Gnip)	100
<b>2.2. Mogućnosti i ograničenja fiskalne politike u Hrvatskoj /         Possibilities and Limitations of Fiscal Policy in Croatia</b> (Šimović, Ćorić i Deskar-Škrbić)	122
<b>2.3. Karakter fiskalne politike i politička ekonomija fiskalne         konsolidacije u Hrvatskoj u poslijekriznom razdoblju /         The Type of Fiscal Policy and Political Economy         of Fiscal Consolidation in Croatia in the Post-Crisis Period</b> (Deskar-Škrbić i Raos)	153
<b>2.4. Javni dug kao strukturni epifenomen monetarno-fiskalnog         nexusa / Public Debt as a Structural Epiphenomenon         of the Monetary and Fiscal Nexus</b> (Pečarić i Slišković)	180
<b>2.5. Fiscal Multiplier Determinants in the CESEE Region</b> (Deskar-Škrbić, Šimović and Buljan)	197

<b>2.6. Public Expenditure Efficiency and the Optimal Size of Government in the European Union</b> (Buljan, Šimović and Deskar-Škrbić)	212
<b>3. Specific Fiscal Issues Relevant for Fiscal Consolidation</b>	<b>232</b>
<b>3.1. Introduction of a Local Real Estate Tax in Croatia: A Survey of Expert and Public Opinion</b> (Blažić, Šimović and Štambuk)	233
<b>3.2. The Impact of Introduction of the Financial Transaction Tax in Croatia</b> (Olgić Draženović)	257
<b>3.3. Income, Personal Income Tax and Transition: The Case of Bosnia and Herzegovina</b> (Lazović-Pita)	270
<b>3.4. Contemporary Government Accounting and Fiscal Consolidation</b> (Drezgić, Vašiček)	295



## PREFACE

The book *Tax Policy and Fiscal Consolidation in Croatia* sums up some of the most interesting papers from the project *Tax Policy and Fiscal Consolidation in Croatia* funded by the Croatian Science Foundation (IP-2013-11-8174). Some of the papers are reprinted/rewritten and some are written originally. Most of the papers are in English and some (the most recent ones) are in Croatian. The entire list of the already published project papers is presented at the end of this book. Some of the latest papers are still in the publication process.

The editors would like to use this opportunity to thank all the team members (in alphabetical order):

Helena Blažić, PhD, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia, principal investigator

Antonija Buljan, University of Zagreb, Faculty of Economics & Business (FEB), Zagreb, Croatia

Milan Deskar-Škrbić, MA, Erste & Steiermärkische Bank, Zagreb, Croatia

Saša Drezgić, PhD, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

Maja Grdinić, PhD, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

Ana Grdović Gnip, PhD, University of Primorska, Faculty of Mathematics, Natural Sciences and Natural Technologies, Koper, Slovenia

Maja Klun, PhD, University of Ljubljana, Faculty of Administration, Ljubljana, Slovenia

Žiga Kotnik, PhD, University of Ljubljana, Faculty of Administration, Ljubljana, Slovenia

Lejla Lazović-Pita, University of Sarajevo, School of Economics and Business, Sarajevo, B&H

Bojana Olgić Draženović, PhD, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

Mario Pečarić, PhD, University of Split, Faculty of Economics, Split, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

Hrvoje Šimović, University of Zagreb, Faculty of Economics & Business (FEB), Zagreb, Croatia

Ana Štambuk, PhD, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

*Helena Blažić and Maja Grdinić*

**Helena Blažić, PhD, Full Professor**

University of Rijeka, Faculty of Economics and Business  
e-mail: helena.blazic@efri.hr

**Maja Grdinić, PhD, Assistant Professor**

University of Rijeka, Faculty of Economics and Business  
e-mail: maja.grdinic@efri.hr

## INTRODUCTION

### Tax Policy and Fiscal Consolidation in Croatia

**Tax policy** is one of the most complex parts of economic policy, since it has to achieve different efficiency, horizontal and vertical equity as well as fiscal and tax compliance objectives. There is often a trade-off between those competing goals which has to be solved by policy making decisions. Such confronting and counteracting goals are especially hard to achieve in a small open economy such as Croatia during the period of **fiscal consolidation**.

In order to shape tax policy in general and in more detail, it is necessary to objectively assess the current state-of-the-art and acceptable tax reform perspectives. The **expert opinion survey** was used to identify not only the most important problems, but also the area of agreement/disagreement concerning tax policy options. The survey for Croatia with almost 100 questions covered all relevant aspects of the tax system – the general ones (tax burden, tax structure) as well as specific ones (particular taxes), with the relevant efficiency and equity aspects. Its main objectives were the following ones:

- State-of-the-art: the overall current situation and problems in the field of tax system and policy;
- Reliability of results: are they consistent and how are they related to the respondents (academics, public administration, private sector; age; academic degree);
- Respondent's attitudes (equity, efficiency, tax compliance, tax burden, tax structure, particular taxes)
- Tax policy recommendations/directions: topics of agreement;
- Tax policy recommendation: topics of disagreement and their causes;
- Interaction and results comparison with other research topics/methodologies on the project (for instance for tax structure: empirical research on tax structure and economic growth, multipliers and fiscal consolidation);
- Foundation for further project research and further research at all (public acceptance/attitude of possible tax increases in terms of

structure shifting; identifying/confirming main particular taxation issues to be elaborated in detail);

- Dissemination of the survey in the neighbouring countries (Slovenia and Bosnia and Herzegovina) including necessary modifications, analysis of results for those countries using the same methodology as in the case of Croatia, comparative analysis of final results: similarities and differences among countries.

The first paper in this book - ***Perspectives of Tax Reforms in Croatia: Expert Opinion Survey*** by Šimović, Blažić and Štambuk presents detailed results of this Croatian survey. The most interesting results suggest the maintenance/(re)introduction of different tax incentives and reduced VAT rates, rejection of a flat tax as well as decrease of tax brackets, an increase in alcohol and tobacco duties, the introduction of a financial activities tax, a further shift from income to consumption, a decrease of the tax share in GDP and a belief in the behavioral responsiveness of tax decreases/exemptions, as well as a firm commitment to the principle of equity. The last three economic views/values are important predictors of other tax attitudes.

Dissemination of the survey in the neighbouring countries (Slovenia and Bosnia and Herzegovina) using the same questions/statements and methodology as in the case of Croatia, but including necessary modifications for those countries, resulted in numerous papers (see the list of papers).

The first paper written for Slovenia - ***Slovenian Experiences and Lessons from Tax reforms*** by Klun criticises tax changes that focused more on fiscal consolidation than on the real change to promote economic growth. The tax experts have a similar opinion, disagreeing with increasing the burden on consumption, but also with lowering taxes for companies and high personal income taxation. They support reintroduction of some non-standard reliefs within personal income tax and agree with corporate income tax reliefs for research and development and for investments. The recommendations for the transfer of the tax burden from labour and capital to consumption have little support among professionals.

The paper for Bosnia and Herzegovina – ***Stanje i perspektive poreznih reformi u Bosni i Hercegovini: rezultati ankete poreznih stručnjaka (The State and Perspectives of Tax Reforms in Bosnia and Herzegovina: Expert Opinion Survey Results)*** by Lazović-Pita and Štambuk points out the support for classic progressive personal income tax (this country has a flat tax), as well as maintenance of existing personal income tax reliefs. The respondents do not support changes in the tax rate of VAT and CIT (their rise), but mostly do support the introduction of reduced VAT rates and different corporate income tax incentives as well as introduction of excise duties for luxury products.

It is obvious that experts in all three countries, in spite of their differences, challenge not only the mainstream „base - broadening“, but also „rate flattening“, and even to some extent general „rate lowering“ issues,

which is ultimately confirmed in the recent comparative analysis of all three countries (What Tax Experts in Former Socialist Countries Think About Tax Policy: The cases of Slovenia, Croatia and Bosnia and Herzegovina – see the list of papers). It seems that equity plays a very important role.

The equity influence was further elaborated in another paper for Croatia by Blažić, Šimović and Štambuk (2014, see the list of papers), where the influence of sociodemographic characteristics or vertical equity-related statements was explored. The same analysis for the remaining questions was performed by Štambuk in the last paper of this part of the book – ***Utjecaj sociodemografskih obilježja na stavove stručnjaka o poreznom sustavu i poreznoj politici (The Influence of Sociodemographic Characteristics on Experts' Attitudes on Tax System and Policy)***.

Possible shifts in tax structure, introduction of new taxes, change of the existing ones and especially raising some of them are also hard to manage without the broad public acceptance (consensus). This public awareness is investigated by further surveys whose results are presented later or are still in the process of publication.

The second part of the book covers papers on fiscal policy and fiscal consolidation from a broader (macroeconomic) perspective. The main focus of this group of papers is on the macroeconomic effects of fiscal policy, especially through the lens of the Keynesian fiscal multiplier concept. Fiscal consolidation programmes can be structured and implemented through cuts on the expenditure side of the budget, through interventions in the tax system or by combination of both. Thus, all fiscal consolidation programmes have various macroeconomic effects and understanding of these effects is of great importance for both policy makers and academics. Some of the papers in this part of the book represent the first attempt of empirical estimation of fiscal multipliers in Croatia and bring more analytical rigor into discussions on fiscal policy effectiveness in Croatia. In this sense, the authors show that public investments and indirect taxes are the most powerful tools of fiscal policy makers in Croatia. Also, this part of the book brings in-depth analysis of the main limitations of fiscal policy and characteristics of fiscal consolidation in Croatia and points out the importance of public debt and openness for the effectiveness of fiscal policy in CEE region. Also, there is a large space for reduction in government size and the resulting fiscal consolidation by raising public expenditures efficiency.

The first paper from this group - ***Empirical Assessment of Stabilization Effects of Fiscal Policy in Croatia*** by Grdović Gnip assesses the stabilization effects of fiscal policy in Croatia in a structural vector autoregression framework. Results prove that the fiscal transmission mechanism in Croatia works mainly in a Keynesian manner. Output reacts negatively to a tax shock and positively to government spending shock. The output multiplier is above 2 at impact and the effect is significant through the whole time span. The negative effect of the tax shock is mostly driven

by indirect (not direct) taxes. The positive effect of government spending is more pronounced when government investment is considered, especially when private consumption and private investment responses are observed.

The second paper – ***Mogućnosti i ograničenja fiskalne politike u Hrvatskoj (Possibilities and Limitations of Fiscal Policy in Croatia)*** by Šimović, Ćorić and Deskar-Škrbić analyzes the possibilities and limitations of fiscal policy in Croatia. Important limitations of fiscal policy such as lack of coordination of fiscal and monetary policy, inadequate budget planning, increasing tax pressure, the size and structure of public expenditures and deficit financing problems are pointed out. The possibilities of stabilizing role of fiscal policy are empirically assessed by analyzing the impact of general government revenues and expenditures on GDP growth. A structural VAR model to evaluate the impact of various components of public expenditures and revenues on economic growth in Croatia is developed. Further, fiscal policy possibilities are synthesized through the proposed measures of so-called “smart fiscal consolidation” which is the foundation for achieving the stabilizing role of fiscal policy.

In the third paper - ***Karakter fiskalne politike i politička ekonomija fiskalne konsolidacije u Hrvatskoj u poslijekriznom razdoblju (The Type of Fiscal Policy and Political Economy of Fiscal Consolidation in Croatia in the Post-Crisis Period)*** Deskar-Škrbić and Raos analyse both phenomena using the data about cyclically adjusted primary budget deficit in Croatia. They also analyse the basic characteristics of fiscal consolidation, with special emphasis on budget expenditures. The results indicate that most of the Croatian governments applied restrictive procyclical fiscal policy. A large part of fiscal consolidation is achieved by a decrease in capital investments, although it is a productive expenditure category which could have played an important role in the fulfilment of stabilisation function of fiscal policy. It was confirmed that unstable governments, mostly depending on small parliamentary groups/individuals to keep the majority have difficulties achieving success in the process of fiscal consolidation. However, all governments were inclined to frequent changes in tax legislation.

In the fourth paper – ***Javni dug kao strukturni epifenomen monetarno-fiskalnog nekusa (Public Debt as a Structural Epiphenomenon of the Monetary and Fiscal Nexus)*** Pečarić (together with Slišković) analyses this important part of fiscal policy, whose management has been neglected for a long time in economic literature. The paper points out that the rise of public debt is not the cause of the crisis, but the effect of the “model crisis”, which is often neglected by the mainstream economic policy. Efficient public debt management implies reconceptualisation of the theoretical framework and the role of public debt and the resulting institutional structure.

In the fifth paper - ***Fiscal Multiplier Determinants in the CESEE Region*** Deskar-Škrbić, Šimović and Buljan use the panel VAR model with

exogenous variables to analyse the effects of government consumption on economic growth in the Central, Eastern and Southeastern Europe, controlling for the effects of the size of the economy, level of public debt, level of tax burden, openness of the economy, rigidity of labour market, monetary regime and the phase of the business cycle. These characteristics have a significant effect on the size of the fiscal multiplier and they are in line with the theoretical assumption. The recessionary phase of the cycle, size of the economy, rigidity of the labour market and the fixed exchange rate regime increase the average size of fiscal multipliers while tax burden, indebtedness and openness of the economies reduce its size.

The last paper from this part of the book – ***Public Expenditure Efficiency and the Optimal Size of Government in the European Union*** by Buljan, Šimović and Deskar-Škrbić investigates public expenditure efficiency and its relation to the optimal size of government. There are significant differences in efficiency coefficients across countries with most countries having the potential for increased efficiency of public spending. The conclusion is that there is a large space for reduction in government size and the resulting fiscal consolidation by increasing efficiency.

Moreover, further research shows significant multiplicative effects of public investment on GDP, not only in Croatia but most of the South-East European countries. Such effect is delivered primarily through crowding in of private investment. Public investment does not seem to increase the debt-to-GDP ratio, but reduces the debt level in the long term with positive effects on the unemployment rate in the case of Croatia. Such macroeconomic effects cannot be observed for total government spending, which confirms that both in South-East Europe and the advanced economies public investment can be viewed as a catalyst of positive spill-over effects to other sectors of the economy and thus contribute to productivity growth. Social policies do not deliver such favourable conditions; therefore, structural policies in the perspective of fiscal consolidation should be focused on transport and energy as main growth drivers. Such a conclusion is even more important given that further research within the project shows how an increase in taxes has a significant negative effect on macroeconomic aggregates. With both sides of the coin investigated, it seems that public investment could deliver the most efficient outcomes on the path of fiscal consolidation.

Some further elements of tax and the entire fiscal system relevant for fiscal consolidation have been investigated in the project, based on the analysed survey results, different economic growth effects, public attitude and current Croatian tax system development. The most important among them are specific taxes such as local property (real estate) tax, financial transaction tax (enhanced procedure in the EU), flat tax as well as specific government accounting issues relevant for fiscal consolidation.

Local property tax (real estate tax) seems to be the best tax regarding economic growth. It is one of the most advocated taxes in times of fiscal

consolidation, taking into account not only its efficiency and fiscal aspects but also equity aspects. A public opinion survey about the introduction of this tax in Croatia was conducted in addition to the presented expert opinion survey. The results are presented in the paper ***Introduction of a Local Real Estate Tax in Croatia: A Survey of Expert and Public Opinion*** (Blažić, Šimović and Štambuk). Support for the introduction of the real estate tax is stronger among the experts than the general public. However, the experts differ on professional lines, with faculty specialised in economics from departments of finance and accounting generally being against the tax. There is a positive relationship between support for the tax and support for more equitable taxation. The broader expert model is, besides profession and equity, also negatively influenced by attitudes in favour of lower taxation costs and positively influenced by attitudes in favour of property being an adequate indicator of ability to pay and of the need to tax capital income. The public opinion model is positively influenced by equity and negatively influenced by negative expectations about the abolition of existing real estate user charges and taxes. Work status is also relevant.

Recent financial crises and the resulting fiscal consolidation have put taxation of financial services in the limelight. In 2011 European Commission constructed a proposal for an EU-level Financial Transaction Tax (FTT). In the paper ***The Impact of Introduction of the Financial Transaction Tax in Croatia*** Olgjić Draženović analyses the fiscal role of the financial transaction tax and its effects on the Croatian tax system. The research results imply considerable negative effects on the domestic illiquid and highly concentrated capital market. Moreover, the tax base is very narrow due to the lack of derivatives trading. The assessment of total economic and fiscal effects has shown that the introduction of the financial transaction tax in Croatia cannot be supported.

Regarding personal income, tax efficiency principle has been given priority over equity principle in the past thirty years in both developed and transition countries. The motivation of the paper ***Income, Personal Income Tax and Transition: The Case of Bosnia and Herzegovina*** by Lazović-Pita was to show that, under macroeconomic circumstances, 'flat tax' is the best solution for Bosnia and Herzegovina. Progressive income tax can be introduced, similarly to the case of Slovakia, once the society as a whole becomes wealthier and when the transition process comes to an end. Application of the 'flat tax' in transition countries can be therefore observed as an intermediate phase in the wider transition process. A move from 'flat tax' to progressive income tax in transition countries can occur when the top one per cent of the wealthiest members of the society becomes visible.

In the last paper – ***Contemporary Government Accounting and Fiscal Consolidation*** – Drezgić and Vašiček cover methodological changes in government accounting related to the application of the European system of national and regional accounts and Government Finance

Statistics Manual (IMF, 2014). They analyse their influence on fiscal consolidation efforts and give recommendations related to the introduction of new changes in order to achieve fiscal consolidation and public finance stability.



# **1.**

# **Tax Policy Opinion Surveys**

**Hrvoje Šimović, PhD, Associate Professor**

University of Zagreb, Faculty of Economics and Business

e-mail: hsimovic@efzg.hr

**Helena Blažić, PhD, Full Professor**

University of Rijeka, Faculty of Economics and Business

e-mail: helena.blazic@efri.hr

**Ana Štambuk PhD, Associate Professor**

University of Rijeka, Faculty of Economics and Business

e-mail: ana.stambuk@efri.hr

## **PERSPECTIVES OF TAX REFORMS IN CROATIA: EXPERT OPINION SURVEY<sup>1</sup>**

### **ABSTRACT**

In order to shape tax reform it is necessary objectively to assess the current state-of-the-art of and of the outlook for the tax system. After having reviewed all previous reforms in the light of the consumption-based (interest-adjusted) concept of direct taxation, which was almost systematically implemented in Croatia in 1994, we present the results of a broad expert opinion survey about the Croatian tax system. The most interesting results suggest the maintenance/(re) introduction of different tax incentives and reduced VAT rates, rejection of a flat tax as well as decrease of tax brackets, an increase in alcohol and tobacco duties, the introduction of a financial activities tax, a further shift from income to consumption, a decrease of the tax share in GDP and a belief in the behavioral responsiveness of tax decreases/exemptions, as well as a firm commitment to the principle of equity. The last three economic views/values are important predictors of other tax attitudes.

**Key words:** opinion survey, tax reform, tax system, tax policy, Croatia

### **1. Introduction**

In the summer of 2013 a *Survey about State and Perspectives of the Croatian Tax System* (Šimović et al., 2013) was conducted. The survey was based on a similar US survey from the beginning of 2013, organized by the National Tax Association (NTA) and ran among its members. This survey is referred and compared to previous similar US surveys from 1994 and 1934 (Lim et al, 2013).

---

1 This is a reprint of a paper published in the *Financial Theory & Practice*, 38(4), 2014, p. 405-439, [http://www.fintp.hr/upload/files/ftp/2014/4/simovic\\_blazic\\_stambuk.pdf](http://www.fintp.hr/upload/files/ftp/2014/4/simovic_blazic_stambuk.pdf)  
This work has been supported in part by the Croatian Science Foundation under project number IP-201311-8174 and in part by the University of Rijeka under project number 13.02.1.2.02

The purpose of our research, like that of the US survey, was to find out what tax experts think about the overall current situation and problems in the Croatian tax system and what they expect from tax policy in the future. Since similar research has never been done in Croatia, the analysis is especially directed towards income versus consumption as the tax base, which has influenced all Croatian tax reforms. Besides that, there are some other motivations behind such an investigation. Croatia has witnessed two relatively turbulent decades and some very influential tax reforms. Above all, the research was begun in order to establish the attitudes of tax experts almost 20 years after the fundamental tax reform in 1994, when consumption-based taxation (interest-adjusted personal and corporate income tax) was introduced. Furthermore, apart from Greece, Croatia is the only EU country that is still in (5 year) recession with no positive expectations even in 2014. The decline in economic activity is causing additional political instability, changes to the system of taxation as well as changes in attitudes to the tax system and policy.

As in the US survey, our survey encompasses three sectors of experts: government, private and academic. The results are assessed using the percentage of negative/positive answers of 61% as degree of consensus and analyzing that degree of consensus in more detail. We also wanted to analyze the possible influence of specific values and economic views on tax system/policy attitudes using binomial probit regression.

After the Introduction, the second part of the paper gives a short overview of Croatian tax reforms, with a special emphasis on changes related to the main taxation concepts of direct taxation (income versus consumption). In the third part, the tax survey is analyzed giving an overview of the attitudes and outlining the prevailing consensus among Croatian tax experts. The fourth part entails binomial probit regressions in order to determine how specific values and economic views (concerning behavioral responsiveness as well as incidence) influence experts' policy opinions.

## 2. Tax reforms in Croatia

In 2014, Croatia will mark 20 years from the first big tax reform, which set up foundations of the current tax system to a great extent. The tax system from 1994 was in the spotlight of the numerous debates in the Croatian as well as international tax literature.<sup>2</sup> At that time, Croatia was the only country consistently implementing consumption-based taxation –

---

<sup>2</sup> For the literature overview of the debates and arguments about the consumption versus income concept of taxing personal and corporate income in Croatia see Šimović (2012: 10-11), for the general literature overview about the advantages and disadvantages of consumption-based taxation, especially ACE tax, see Blažić (2006: 67-68). For contributions to the debate, and especially concerning the Croatian ACE model 1994-2000, see Schmidt et al. (1996), Rose & Wiswesser (1998), Keen & King (2002) and Klemm (2007) and Blažić (2008).

interest-adjusted personal and corporate income tax<sup>3</sup> (PIT and CIT). According to that, special contribution to the debate was influenced by the Allowance for Corporate Equity (ACE) tax (called “protective interest” in Croatia). In addition to corporate income tax, Croatia introduced “synthetic” personal income tax that in some elements still departed from the interest-adjusted income tax (the treatment of income from real estate) but included “protective interest” for business income (self-employed) also. In 1994 new excise taxes were also introduced, and the number of retail sales tax rates was gradually reduced in order to prepare for the introduction of value added tax (VAT). Although the first VAT law was enacted in 1995, it only entered into force in 1998.

However, Croatia relatively quickly abandoned interest-adjusted personal and corporate income tax in its second great tax reform from 2001, which followed after parliamentary elections and a change in the party in power. The biggest changes happened in the field of corporate and personal income tax, where ACE was abandoned and numerous incentives introduced. Personal income tax started to encompass some capital incomes, but the main part of them was still exempt. Apart from introduction of the General Tax Act, there were no substantial changes in other tax forms. It could be said that this tax reform shapes in a substantial way the present characteristics of the Croatian tax system as *modus operandi* of the tax system and policy, which are changed with every change of the ruling party.<sup>4</sup> So, the “mini” tax reform at the beginning of 2005 abolished the taxation of dividends again (which was reintroduced in 2012), but did not bring back ACE as the basic element of consumption-based taxation at the entire business (corporate and personal – self-employed) level. The current Croatian tax system is a hybrid system, where both the elements of income-based and consumption-based taxation concept are present and where the domination of the particular concept depends mostly on the current ruling party.

An overview of tax reforms in Croatia with special emphasis on the changes in direction to either the consumption or the income concept is presented in Table 1.

---

3 The term “corporate income tax” used in this paper for the reasons of international comparability, would not be completely appropriate for Croatia. The tax payers of this tax are corporations, but also parts of the non-corporate sector (partnerships with “trader status” and even sole traders). In this way the typical distortion of the classical income tax concept – between the corporate and the non-corporate sector - was avoided, as the consumption tax concept requires, and this remains even now. On the other hand, it could be argued that it is simply replaced by the distortion between business units (enterprises) that pay corporate income tax and business units that pay personal income tax (self-employed in “crafts and trades” that are relatively small or do not want to opt to pay a corporate income tax). In order to mitigate the problem, the Croatian legislation has from the very beginning given the self-employed the option of paying corporate income tax instead of personal income tax - the self-employed can opt to pay corporate income tax or have to pay it if the business is big enough in terms of number of employees, assets, income or turnover (see also Blažić, 2008).

4 In contrast to the tax reform from 1994, that of 2001 did not cause nearly as much debate. Although it was shown that this reform brought about a significant decrease in the tax burden, it remained questionable whether the results of the changes were the original intention of tax policy creators (Švaljek, 2005).

<b>Period and system</b>	<b>Basic changes</b>
<p><b>1994-2000</b></p> <p>Consumption-based system (interest-adjusted PIT and CIT)</p>	<p><b>1994</b></p> <ul style="list-style-type: none"> <li>• Non-taxation of capital income (exception: property income)</li> <li>• ACE (at CIT and PIT for business income)</li> </ul>
<p><b>2001-2004</b></p> <p>Mostly income-based system (with some of consumption-based elements: savings and interest-adjusted PIT and CIT)</p>	<p><b>2001</b></p> <ul style="list-style-type: none"> <li>• Introduction of capital income taxation (dividends and part of interest)</li> <li>• Abolishment of ACE and introduction of numerous incentives (tax holidays)</li> </ul> <p><b>Elements of consumption concept: interest-adjusted income tax</b></p> <ul style="list-style-type: none"> <li>• Non taxation of most interest (bank saving and deposit accounts, securities) and capital gains from financial assets</li> <li>• Some dual income tax elements retained (linear taxation of most capital/property income by the way of final withholding tax)</li> </ul> <p><b>Elements of consumption concept: saving-adjusted income tax and cash-flow tax</b></p> <ul style="list-style-type: none"> <li>• Not only compulsory, but also voluntary pensions as well as life insurance contributions deductible (and later taxable)</li> <li>• Immediate write-off and enhanced accelerated depreciation</li> </ul>
<p><b>2005-2013</b></p> <p>Hybrid system – elements of income-based and consumption-based taxation (interest-adjusted and saving-adjusted)</p>	<p><b>2005 „Mini“ tax reform</b></p> <ul style="list-style-type: none"> <li>• Abolition of dividend taxation</li> <li>• Abolition of immediate write-off and enhanced accelerated depreciation (the accelerated depreciation in the form of doubled depreciation rates from before (2007) remains)</li> <li>• Modifications of CIT incentives</li> </ul> <p><b>2010</b></p> <ul style="list-style-type: none"> <li>• Abolition of deductibility for voluntary pension insurance and life insurance premiums (from saving-adjusted to interest-adjusted model)</li> </ul> <p><b>2012</b></p> <ul style="list-style-type: none"> <li>• Reintroduction of dividend taxation (towards the income concept, but not systematically)</li> <li>• Non-taxation of reinvested profit</li> </ul>

**Table 1** Overview of tax reforms and changes in the tax system relevant for the income/consumption concept

Source: Authors

### 3. 2013 expert opinion survey about tax policy in Croatia

#### 3.1. Survey methodology

Opinion/attitude surveys, either rather general<sup>5</sup> or more specific<sup>6</sup> have been applied in taxation research. The Croatian survey is mostly based on the latest US NTA expert opinion survey (Lim et al., 2013; DeGroat, 2013), which has a long history behind it (Walker, 1935; Slemrod, 1994; Brannon, 1995). However, a lot of modifications had to be made, with the majority of new questions introduced as well as a lot of questions omitted/changed. The 92 questions (i.e. statements) combine general issues and questions concerning the basic types of taxes, with specific questions about the most topical tax policy elements in Croatia. The basic yes/no/other question methodology has also been changed and Likert items (5 levels) are used instead. After the pilot (a couple of academic colleagues of the authors and tax practitioners) some questions were omitted/clarified.

The survey was performed between May and July 2013. The call was sent by e-mail at the beginning of May to 1,000 addresses and sent to other addresses in the middle of July. Most of the answers were gathered by web page, with a small part by post (in hard copy). Out of the population of 1,000 experts targeted, 304 responded.

In accordance with the relevant mentioned surveys (Walker, 1935; Slemrod, 1994; Lim et al., 2013) the tax experts that could be divided into the following three groups: academe, the government sector and the private sector<sup>7</sup> were the population targeted. Academics include professors and researchers at departments (faculties) of economics at universities and research institutes that devote at least part of their scientific and teaching work to the tax system and policy. The government sector consists of the Tax Administration (employees of sectors inside Central Office, heads of regional and local offices) and local and regional government units (heads of the finance departments of those units). The private sector means mostly tax advisors, but also some lecturers of private business polytechnics as well as employees in tax accounting, advising and publishing companies.

---

5 For instance for US: Behrens (1973), Fisher (1985), IRS (1993), McCabe & Stream (2006), Campbell (2009), Lim et al. (2013), for Israel: Dornstein (1987), for Austria: Kirchler (1999), for Australia: Murphy (2004), for Sweden: Hammar et al. (2008).

6 For instance for cigarette taxes Green & Gerken (1989), for local tax rates Ashworth & Heyndels (1997), for flat tax and sales taxes McGowan (2000), for estate tax and flat tax Fleischman & Hutchison (2001), for the income tax Eicher et al. (2001), Hasseldine & Hite (2003), for environmental taxes Thalmann (2003), Kallbekken & Saelen (2011), for tax deductibility of mortgages Van der Heijden et al. (2007), for the tax compliance and morale Torgler & Schneider (2005, 2007), Alm et al. (2006), Eicher & Stuhldreher (2007), Randlane (2012), for the estate tax Birney et al. (2006), Fatemi et al. (2008), for CO<sub>2</sub> tax Löfgren & Nordblom (2010), for minimum corporate tax rates Osterloh & Heinemann (2013).

7 Table A1 in Appendix entails detailed information about respondents' structure.

As in similar surveys, the 92 survey questions could be thematically divided into a handful of groups: property taxes, personal income tax, corporate income tax, VAT, excise taxes, social contributions, general tax issues and values. In addition, some general questions were set to establish the demographic and professional characteristics of the respondents.

### 3.2. Degree of Consensus

In order to enable comparison with the relevant NTA survey, at least 61% positive or negative answers (excluding neutral responses) are taken as the threshold for consensus (Lim et al., 2013). Since the Croatian survey was made with 5-level Likert items, the answers under “yes” entail answers “totally/strongly agree” and “mostly agree”, while the answers under “no” entail answers “mostly disagree” and “totally/strongly disagree”. Table 2 presents the number of answers with the consensus degree of at least 61%<sup>8</sup>. Table A2 in Appendix includes detailed data for the degree of consensus for all 92 survey statements/questions.

Degree of consensus	Total	Academic	Government	Private
Total 61-74%	29	35	33	36
Total 75-100%	35	36	38	32
Total 61-100%	64	71	71	68
Total 61-100% (in %)	69.9	77.2	77.2	73.9

**Table 2** Degree of consensus (number of questions, excluding the neutral response)  
*Source:* authors based on survey responses

As many as 84 questions (out of 100) had a degree of consensus above 61% in the US NTA survey, while such a degree of consensus in Croatian survey was elicited by only 64 statements or 69.9%. If the consensus threshold were raised to 75% equal answers, the number would decline to only 38% (35 out of 92). Due to the frequent tax reforms and tax law changes in Croatia, such a low degree of consensus was to be expected. It is interesting that a slightly broader consensus was reached inside the academic and government sector in contrast to the private one. Unfortunately, there are a significant number of statements without any general (total) consensus, which is not the case at the level of particular groups of respondents (sectors). When the experts are divided into sectors, there is much more homogeneity inside each sector, so a higher percentage of consensus was to be expected. We hope that the further development of the Croatian society will result in a higher level of legal certainty and tax stability, which could also lead to a higher degree of consensus between tax experts. Such a trend is observed in the US with a higher level of consensus in 2013 in comparison with 1994.

<sup>8</sup> This arbitrary but seemingly reasonable threshold for consensus is taken for the relevant comparison with the US survey also (Lim et al., 2013). More certain degree would be 75% for sure, so this is also taken into account.

However, there are some contrary statements, even when a consensus was reached. So it is hard to reach an agreement concerning specific issues without further analysis. Still, there is a significant difference in the degree of consensus even among the questions in which a consensus is achieved.

### 3.3. Special Tax Issues

As mentioned previously, the 92 statements are divided into several groups concerning special tax issues (see Table A2).

Concerning property taxation, only half of the statements reached the percentage for a consensus to have been reached (61%). The main question related to the introduction of real estate tax reached no consensus ("only" 59% of answers in favor). The greatest opposition is found in the academic community, while private and government sectors reached a consensus in favor of that tax. Consensus was also reached about real estate tax being a local tax, for the maintenance of the local surcharge as well as the real estate transfer tax and for property being a necessary additional indicator of ability to pay. Furthermore, the respondents have different ideas about the tax burden of the real estate tax for business and citizens. Overall consensus was reached concerning the statement that citizens should not pay higher rates than businesses, but not concerning the statement that business should pay higher rates than citizens. Naturally, academia and the government sector supported the latter statement (62% and 65% in favor), in contrast to the private sector (68% against).

Concerning the relatively different systems of property taxes and inheritance and gift taxes in Croatia and the US, it is hard to make any meaningful comparisons. Still, respondents in both countries share the traditional view that real estate tax should be a local tax. On the other hand, unlike Croatian, US experts generally do not think that a real estate tax should distinguish between citizens and business.

Most personal income tax statements, especially those about progressivity, reached a consensus. Most of the respondents agree that the lowest (but not also the highest) marginal rate should be additionally reduced, that a flat tax should not be introduced, that there is no need to reduce the number of tax brackets any further and that tax allowances (deductions) for voluntary pension and life insurance, health insurance/costs and owner-occupied housing should be reintroduced. It could be concluded that respondents strongly share the common vertical equity principle, but this could not be broadened to include capital income taxation in general. Although a consensus was reached concerning dividends and financial capital gains taxation, there was no such consensus about interest on saving and securities.

Concerning the different tax treatments of incomes from labor and from capital, the private sector was alone in not achieving a consensus against



the lower taxation of capital incomes. Concerning additional arguments in favor of lower dividend taxation, there are significant differences between the academic and the private sector on the one hand (accepting it) and the government sector on the other hand. There is a general agreement that capital incomes should not be taxed at lower rates, but there is no consensus about equal treatment of all sources of income or preferential dividend taxation – moreover, there are strong differences between particular sectors.

Due to the long tradition of a consumption-based (interest-adjusted) system of direct taxation in Croatia in general and especially interest-adjusted personal income tax, the basic elements of which remained in force even after 2001, a higher preference of experts for this concept could have been expected. The only such preference is seen in the area of interest on savings (and securities) and, as already said, could be partially attributed to the individual taxpayer's circumstances (in contrast to dividends and financial capital gains taxation<sup>9</sup>). Some "modified element" of consumption-based taxation – a hybrid system between the income and the consumption concept – a lower taxation of capital incomes (instead of their being exempted) – the case of dual income tax, which is coming strongly into Croatian tax system, has, again, reached no support.<sup>10</sup> It seems that experts strongly advocate classical comprehensive income taxation. One could then expect to get a (positive) consensus about the taxation of all sources of income in the same way (regarding Q27 as the control question), but this consensus is achieved only in the government sector. However, this may not be the case, since the question is (could be) related to currently taxable (mostly labor) incomes in Croatia and the very topical problem of "other" (additional, part-time) work being taxed at lower rates (by a way of final withholding tax) in contrast to wages/salaries. The recent idea of the Croatian Ministry of Finance to tax all labor incomes in a same way in order to get additional budgetary revenues was (for the time being) rejected.

As in the previous case, it is hard to make comparisons with the US survey, especially concerning capital income taxation, where the US system is strongly developed, also due to the development of the financial system. A similar conclusion could be drawn regarding the numerous tax allowances/deductions that exist in the US personal income tax system. However, some characteristics in common could be found - affinity to stronger personal income tax progressivity as well as disagreements

---

9 Not surprisingly, there is a strong and highly significant correlation between advocating dividend and capital gains taxation ( $r_s = 0.878$ ;  $p < 0.01$ ) and much lower between former and interest taxation ( $r_s = 0.365$ ;  $p < 0.01$ ) and later and interest taxation ( $r_s = 0.431$ ;  $p < 0.01$ ). Moreover, these Spearman correlations are calculated for original Lykert type answers (1-5). The same applies to footnote 9.

10 There is, of course, negative correlation between advocating capital incomes taxation (Q24, 25 and 26) and their lower taxation than labor incomes (Q28). The correlation coefficients are highly significant ( $p < 0.01$ ), but low ( $r_s = -0.295$ ,  $r_s = -0.340$ ,  $r_s = -0.262$ ). The same is true for the correlation between advocating dividend taxation and their lower taxation ( $r_s = -0.304$ ).

about taxation of capital income in the US, especially at the capital gains level. There is also a general conclusion about the preference for stronger comprehensive taxation, but some views regarding capital income, property and inheritance and gifts mean that such a view is not undivided.

Experts do not consider that the minimum monthly assessment base for social contributions should be abolished. On the other hand, there is no consensus for the abolition of a maximum base (a ceiling). Furthermore, there is a strong disagreement here between the private sector (against abolition) and the government sector (in favor of abolition). Most of the respondents consider the first pillar contributions (intergenerational solidarity) too high, suggesting they should be lowered. Although there is no general consensus, the private sector and academia circles support an increase in the second pillar (individual capitalized saving accounts) contributions.

There is consensus for almost all statements in the field of corporate income tax. Most of the respondents consider that it should boost economic activity, so different incentives should be retained or (re)introduced (different tax holidays and investment allowances). Especially pronounced is the high degree of support (91%) for R&D and educational incentives. A high degree of consensus is achieved for reintroduction of ACE, favoring consumption-based taxation at the corporate level (in contrast to the personal level). The experience of Belgium proves that such system is still (for the time being<sup>11</sup>) compatible with EU requirements. Yet one of the reasons given for its withdrawal in Croatia was its uniqueness in in the EU (which was only partially true, due to some already existing elements of ACE in Austria and Italy at that time). Interestingly and relatively unexpectedly, no consensus has been reached for the lowering of the CIT rate. It is especially interesting that the private sector is the only opponent, reaching a consensus against rate lowering. They are probably aware of the relatively low effective rate due to numerous incentives. No comparison of the US and the Croatian survey is possible, since the questions completely differ.

Experts are mostly against aiming at having only one (standard) VAT rate and also against abolition of the reduced rates. So, a consensus was reached concerning the maintenance of reduced rates for basic food-stuffs as well as their extension to all food products. Such an attitude could be explained by the already mentioned relatively high preference of experts for vertical equity. A huge majority (97%, and 100% for the private sector) claim that the standard VAT rate should not be increased further, which is completely expected, since the Croatian VAT rate of 25% is the second highest (after Hungary with 27%) in the EU.

---

11 Recent CCCTB development trends should be taken into account, including even the possibility of future shift of this tax base from optional to compulsory.

There is high degree of consensus for most statements in the field of excise taxes. Most think that different excise taxes on energy and electricity should “not be raised” / “be lowered”. In contrast, most think that excise taxes on tobacco and tobacco products should be increased and that taxation of luxury products should be reintroduced. Here, some resemblance with the US survey, where similar opinions prevail, could be established. Most experts support excise taxes on cars, aircrafts and vessels, while no consensus was reached for excise taxes for coffee and car insurance premiums. Interesting, a consensus was reached for introducing excise taxes on “junk food”, where the Croatian differ from the US experts, who do not support such special taxes.

### **3.4. General Tax Issues, Experts' Values and Economic Model**

The last twenty survey statements relate to general attitudes about the tax system and policy as well as some economic models. These questions are pretty comparable to the US survey. In contrast to the US survey, no overall consensus has been reached for three of the statements, although even here some partial consensus exists.

For many questions the degree of consensus is high (over 75%). Most of the respondents solve the traditional “equity-efficiency trade-off” in favor of equity. This attitude is expected, taking into consideration the previous survey parts about particular taxes. It could be explained by the historical inheritance and the general justice awareness that prevails in Croatia, but maybe also by some recent tax policy tendencies due to the economic crisis. A high degree of consensus is present for the statement that penalties for tax evasion should be increased and administrative and compliance costs as well as para-fiscal levies decreased. The results for these statements are mostly in accordance with the US experts' opinion.

Most experts think that the share of government in GDP (measured by public revenues and expenditures) should be decreased. In accordance with that there is a consensus about related statements that the entire tax burden should be lowered and the tax structure changed. There is no consensus about the currently advocated introduction of a financial transaction tax, as it is the case in the US survey. On the other hand, there is a consensus about a financial activities tax. One of the reasons for the different attitudes to those financial sector taxes could be the concern of the experts about the incidence of the former tax.

There is also consensus concerning some views about economic effects. Most think that lower marginal income tax rates increase work effort and reduce leisure (81%) and that such a change would increase the tax base so that the revenue lost could be compensated for (65%). Most think also that non taxation of interest encourages saving (78%) and respectively non taxation of financial capital gains encourages investment

and promotes economic growth (65%)<sup>12</sup>. The bulk of these reasonings are close to those in the US survey.

While the US experts consider consumption taxes regressive, Croatian experts (except academics) have reached no consensus about regressivity. Maybe this is due to the lack of knowledge of other groups about that term. However, experts from both countries have reached the consensus that CIT is shifted mostly to consumers and employees.

The efficiency of regional tax investment incentives in Croatia (the city of Vukovar and areas of special national concern) is one of the questions where no general consensus was achieved. A consensus about them not being efficient was reached only in the academic community (68%), while the percentage of negative answers in the private (58%) and government sector (51%) was not high enough. It could be concluded that this attitude supports recently (after the survey) conducted reform of stated investment incentives (their narrowing).

#### 4. Determinants of experts' policy opinions in Croatia

This part of the paper analyses factors that influence tax experts' attitudes in Croatia using a serial binomial probit regression. As in the case of the degree for consensus being reached, only positive and negative answers (without the neutral one) are observed. As in other relevant research (Lim et al., 2013), the analysis is aimed in two directions. The first part analyses tax expert's attitudes related to some value judgments (values) in the area of taxation, where two questions (Q75 - *The entire tax burden (the level of taxes relative to GDP) should be reduced* and Q91 - *The equity principle should have precedence over the efficiency principle in creating tax policy*) are used as predictors (independent variables). The second part of the analysis encompasses particular economic views related to the behavioral responsiveness and tax incidence, whose predictors (independent variables) are tested over five questions (Q84 - *Non taxation of interest encourages saving*, Q85 - *Non taxation of financial capital gains encourages investment and promotes economic growth.*, Q86 - *Different government tax reductions (reliefs, incentives) promote economic growth*, Q79 – *The tax burden should be shifted from personal and corporate income to consumption* and Q80 – *The tax burden should be shifted from personal and corporate income to property*). In both cases, the regression includes also demographic characteristics (employment-sector, age and education level) as independent variables.

---

12 However, one should keep in mind that the neutral answer (3) was eliminated from the survey results. Where it comes to such economic modelling statements (as well as value statements) such skepticism/indecisiveness could be reasonable, expressing no lack of knowledge of the respondents, but their awareness of complexity. The inclusion of neutral answers in these statements would make the results a little bit less optimistic (Blažić, Šimović, Štambuk, 2014).

They are not particularly analyzed but detailed probit regression results, as well for demographic characteristics, are presented in Table A3 and A4 in Appendix.

Seventeen different models are observed, where seventeen questions/statements that best reflect topical disputes in Croatian tax systems and could be used to assess future tax trends were chosen as dependent variables.

#### 4.1. Values

This part of the analysis wants to establish the influence of tax equity values and general values concerning the government's role in the economy on professional attitudes about tax system and policy. In order to establish that influence, Q75 (*The entire tax burden (the level of taxes relative to GDP) should be reduced*) and Q91 (*The equity principle should take precedence over the efficiency principle in creating tax policy*), which somehow express different views concerning tax policy, were chosen as independent variables (predictors). The respondents that support the reduction in the entire tax burden (expressed as the level of taxes relative to GDP) - those that gave that gave the positive answer to Q75 (*The entire tax burden (the level of taxes relative to GDP) should be reduced*) could be regarded as having more (neo)liberal economic views i.e. advocating a smaller role of government in the economy. On the other hand, those that claim the equity is more important than the efficiency principle (compared to those that have answered negatively) support a greater role for equity i.e. higher state intervention regarding redistributive issues. Concerning consumption-based taxation, the former group could be expected to be more in favor of and the latter group to be more against it. Table 3 presents the results of binomial probit regression for variables Q75 (*The entire tax burden (the level of taxes relative to GDP) should be reduced*) and Q91 (*The equity principle should take precedence over the efficiency principle in creating tax policy*) reflecting values in the field of taxation.

Question/statement	Q75 <sup>a</sup>	Q91 <sup>b</sup>	$\chi^2$ <sup>c</sup>
Q01 Croatia should introduce the proposed real estate tax.	0.014 (0.324)	0.820** (0.337)	14.658 [0.041]
Q03 Taxation should include other forms of property too (movable property, financial property etc.) i.e. synthetic taxation of property (net wealth tax)	0.223 (0.343)	0.179 (0.320)	4.136 [0.764]
Q16 Instead of more PIT rates only one rate should be introduced (a flat tax) along with maintenance of personal exemptions.	0.206 (0.341)	-0.672* (0.345)	8.783 [0.269]
Q24 Inside PIT dividends should be taxed.	-0.577 (0.454)	0.740** (0.353)	18.562 [0.010]
Q25 Inside PIT financial capital gains should be taxed.	-0.264 (0.392)	0.843** (0.332)	19.636 [0.006]
Q26 Inside PIT interest on saving and securities should be taxed.	-0.782** (0.362)	0.485 (0.345)	7.758 [0.354]
Q27 All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing the lower withholding tax to be final).	-0.519 (0.421)	-0.048 (0.358)	3.443 [0.841]
Q30 CIT (general) rate should be reduced.	0.841** (0.350)	0.067 (0.328)	10.177 [0.179]
Q31 CIT burden for SMEs should be reduced.	0.810** (0.359)	0.047 (0.394)	14.573 [0.042]
Q32 Reinvested profits should be exempt from taxation.	0.129 (0.428)	-0.141 (0.412)	5.012 [0.659]
Q39 Tax incentives for investment should be maintained.	0.279 (0.430)	0.741 (0.466)	5.067 [0.408]
Q40 Protective interest (allowance for corporate equity - ACE) should be reintroduced.	-0.306 (0.408)	0.580 (0.372)	9.150 [0.242]
Q42 Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/eliminated).	0.031 (0.324)	-0.475 (0.314)	5.973 [0.543]
Q73 A financial transaction tax should be introduced.	-0.167 (0.342)	0.752** (0.360)	15.518 [0.030]
Q74 A financial activities tax should be introduced.	-0.486 (0.482)	1.378*** (0.386)	65.922 [<0.001]
Q76 General government should be financed less from taxes and more from different non-tax revenues (with an emphasis on different user charges).	0.955*** (0.328)	0.327 (0.364)	12.132 [0.096]
Q81 Para-fiscal levies should be reduced.	0.893** (0.447)	0.288 (0.526)	19.890 [0.006]

**Table 3** Binomial probit regression results for values

Source: authors' calculation

Notes: Robust standard errors are in parenthesis. The p-values of the  $\chi^2$  are in brackets. Other regressors include indicators of sector of employment, age and education.

\* p < 0,1; \*\* p < 0,05; \*\*\* p < 0,01

a) Q75 - Entire tax burden (the level of taxes relative the GDP) should be reduced.

b) Q91 - The equity principle should be prior to efficiency principle in creating tax policy.

c) Wald  $\chi^2$  tests the hypothesis that at least one of the regression coefficients is not equal to zero

Presented results imply relatively consistent attitudes of Croatian tax experts. For the most observed models, the experts with neoliberal economic views have mostly different preferences than the experts that advocate greater equity in taxation. Furthermore, Q91 (*The equity principle should take precedence over the efficiency principle in creating tax policy*) is also a more significant predictor than the Q75 (*The entire tax burden (the level of taxes relative to GDP) should be reduced*) - which could imply that the equity principle is the dominant value in shaping tax attitudes for most of the experts.<sup>13</sup>

More neoliberal tax experts i.e. those that answered to Q75 (*The entire tax burden (the level of taxes relative to GDP) should be reduced*) positively are more inclined to reduce the CIT rate, especially for SMEs. They are also inclined to reduce para-fiscal levies and consider that the government should be financed less from taxes and more from user charges. This could be explained by their inclination to the benefit principle (“quid pro quo”) as an alternative (in effect older) understanding of equity (equality) instead of the ability to pay principle. That is why they are also not inclined to the taxation of interest income (as well as other capital incomes<sup>14</sup>) following consumption-based (interest-adjusted) taxation concept.

Tax experts expressing a preference for a greater role for vertical equity (those that reacted positively to Q91) are, expectedly, more inclined to the introduction of a real estate tax (as additional indicator of ability to pay) as well as to the taxation of capital incomes such as dividends and capital gains.<sup>15</sup> Not unexpectedly they are also in favor of a financial transaction tax and especially a financial activities tax (as additional ability to pay tax on the “undertaxed” banking sector). Needless to say that they are against the flat tax, which, due to its indirect progressivity, jeopardizes the traditional equity-founded appreciation of the ability to pay principle.

## 4.2. Economic views

In order to establish the prevalence of specific economic views in taxation, statements/questions that relate to taxpayers’ behavior and tax incidence are used as independent variables (predictors). For the taxpayers’ behavioral response questions/statements QP84 (*Non taxation of interest encourages saving*), QP85 (*Non taxation of financial capital*

---

13 It is harder to make the comparison with the US survey in this context since the set of observed models i.e. dependent variables is somehow different. The predictors are not identical also, but they could be put in the similar comparable context. In the US survey the question “Is the redistribution of income within the United States a legitimate role for government” turned out to be more important predictor (with the negative influence on attitudes of lower capital income and dividend taxation) than the question about higher equality of income distribution in the US (Lim et al., 2013: 790-791).

14 However, there is no statistical significance established for other capital incomes.

15 There is a positive influence on interest taxation also, but without statistical significance.

*gains encourages investment and promotes economic growth*) and QP86 (*Different government tax reductions (reliefs, incentives) promote economic growth*) are used and for the tax incidence additional two questions/statements (Q79 – *The tax burden should be shifted from personal and corporate income to consumption* and Q80 – *The tax burden should be shifted from personal and corporate income to property*) are used. Table 4 presents the results of a binomial probit regression for the stated variables.

Results relating to tax incidence show a relatively consistent attitude among tax experts. On the other hand, there are some inconsistencies concerning behavioral responses, which have already been referred to in the part of the analysis concerning the degree of consensus achieved.

Among behavioral response questions/statements, Q86 (*Different government tax reductions (reliefs, incentives) promote economic growth*) turned out to be the best predictor. The experts that answered that question positively (compared to those that answered negatively) are more inclined to exempt the reinvested profits from taxation, to maintain different tax incentives and to reduce para-fiscal levies. They are also not inclined to abolish reduced VAT rates. This approach in favor of tax incentives and reliefs could be regarded as “classical interventionist” approach, where economic efficiency is not understood in a sense of neutrality, but more from a (cost)-effectiveness approach. Although the critics could say this has been consigned to history and is definitely incompatible with modern consumption-based proposals, as well as with modern tax reform proposals in general from the eighties on, it is still popular especially in the tax practice of developing countries and (post)transition economies. The recent (re)introduction of numerous incentives in the developed countries at the beginning of the economic and financial crisis, shows that they are indeed still compatible with a modern tax system. Furthermore, the respondents that reacted positively to Q86 are in favor of real estate tax as well as net wealth tax, which could be easier explained by a traditional “interventionist” approach than the newest reform tendencies in favor of these taxes.

Since it is more narrow, Q85 (*Non taxation of financial capital gains encourages investment and promotes economic growth*) turned out to be a less important predictor. The experts that answered this question positively (compared to those that answered negatively) are, logically, not in favor of capital gains taxation only, but also of dividend taxation as well as a financial activities tax. Since the non-taxation of capital gains (as well as all capital incomes) is one of the crucial characteristics of consumption-based (interest-adjusted) taxation it is completely logical that the same reasoning should be broadened to include dividend taxation (and also interest taxation, where the relationship is negative also, but not statistically significantly so). Furthermore, those interested in reducing the tax burden and tax distortions in financial markets are, logically again, not in favor of a financial transaction tax.



It is interesting that the same experts do not think that CIT incentives should be maintained. Although it could seem peculiar to the general public, it is completely in accordance with consumption-based approach or the more general modern “base broadening” approach, where non-taxation of capital incomes and rate lowering of taxable incomes are advocated as better and more neutral incentive measures.

Q84 (*Non taxation of interest encourages saving*) showed all the controversiality of interest taxation attitudes as well as of the survey in general. Although there is a negative influence presented concerning the need for interest taxation (Q26), it is not statistically significant. Q84 turned out to be significant predictor only for flat tax introduction. The link between non-taxation of interest as one of the basic characteristic of consumption-based (interest-adjusted) taxation and Hall-Rabushka flat tax – one of the typical examples of interest-adjusted personal income tax accompanied with only one rate needn't to be additionally explained. Regardless of statistical insignificance of other relationships, it is interesting that some of them are of a different direction in comparison with Q85 (*Non taxation of financial capital gains encourages investment and promotes economic growth*), which implies a lot of disagreements but also inconsistencies among tax experts.

Regardless of the stated inconsistencies, statements/questions Q85 (*Non taxation of financial capital gains encourages investment and promotes economic growth*) and Q86 (*Different government tax reductions (reliefs, incentives) promote economic growth*) turned out to be significant predictors, which work in the expected direction in most of the tested models i.e. imply similar attitudes of the tax experts about different tax incentive mechanisms. Similar tendencies could be established in relation with the relevant US survey, where similar attitudes prevail and the question about influence of taxation on private saving turned out to be the weakest predictor (Lim et al., 2013: 791-793).

Economic incidence results show relatively consistent attitudes of tax experts.<sup>16</sup> Q79 (*The tax burden should be shifted from personal and corporate income to consumption*) turned out to be the most important predictor. The experts that responded to that question positively (compared to those that answered negatively) are, expectedly, not in favor of capital income taxation in general (dividends, interest and capital gains) and are in favor of flat tax introduction, only one (standard) VAT rate as well as a reduction of the tax burden for SMEs. These experts follow contemporary tax policy recommendations and consumption-based (interest-adjusted) tax concept in general. Those experts are very precise in their attitudes and the answers are in accordance with expectations at most tested models. Again, it is not surprising that the experts that favor a general non-taxation of capital incomes, flat tax and only one VAT

---

<sup>16</sup> In contrast to behavioral questions/statements, the comparison with US survey results is not possible here since the Croatian research entails other predictor questions that are more applicable to the Croatian tax system characteristics.

rate are against retaining specific tax incentives. So, they prefer general horizontal and “neutral” effects and not “distortive” tax incentives. Not surprisingly, these incentives were introduced after Croatia abandoned consumption-based taxation at personal and corporate levels (Table 1).

Q80 (*Tax burden should be shifted from personal and corporate income to property*) also turned out to be important predictor. The experts that answered this question positively (compared to those that answered negatively) are, logically, in favor of real estate tax as well as net wealth tax. But they are also more inclined to income-based taxation (in contrast to consumption-based of the former group) – they are in favor of capital income taxation (interest, dividends and capital gains) as well as of taxing all income sources in the same way (classical comprehensive S-H-S income). Not surprisingly that they are also in favor of a proposed financial transaction tax.

Although both predictors (Q79 – *The tax burden should be shifted from personal and corporate income to consumption.* and Q80 – *The tax burden should be shifted from personal and corporate income to property*) point to the experts’ attitudes relatively precisely, neither of them turned out to be significant (and positive) for Q40 (reintroduction of ACE tax). This is about an instrument that was crucial for the consumption-based interest-adjusted corporate income taxation in Croatia implemented in 1994-2000. On the other hand, both predictors are significant for the (non)-taxation of capital incomes (Q24, Q25 and Q26) - the instruments that were crucial for the consumption-based interest-adjusted personal income tax not only in the same period, but also even further. The fact that ACE, unlike non-taxation of capital incomes non-taxation, has not been in effect since 2001 i.e. that it is almost forgotten, could be the main reason behind the lack of consistent (and positive) reactions to that instrument as well as a lot of neutral answers for this question (more than one quarter).

Question/statement	Behavioral Responsiveness			Incidence		$\chi^2$ <sup>f</sup>
	Q84 <sup>a</sup>	Q85 <sup>b</sup>	Q86 <sup>c</sup>	Q79 <sup>d</sup>	Q80 <sup>e</sup>	
Q01 Croatia should introduce the proposed real estate tax.	-0.777 (0.530)	-0.472 (0.396)	0.661* (0.381)	-0.273 (0.359)	1.333*** (0.326)	30.322 [0.001]
Q03 Taxation should include other forms of property too (movable property, financial property etc.) i.e. synthetic taxation of property (net wealth tax)	-0.762 (0.587)	-0.411 (0.424)	0.658* (0.379)	-0.409 (0.342)	0.628** (0.308)	20.325 [0.026]
Q16 Instead of more PIT rates only one rate should be introduced (a flat tax) along with the maintenance of personal exemptions.	1.203* (0.63)	-0.280 (0.387)	0.059 (0.361)	0.797** (0.357)	-0.079 (0.316)	16.127 [0.096]
Q24 Inside PIT, dividends should be taxed.		-1.120* (0.622)	0.593 (0.44)	-0.836** (0.413)	0.987*** (0.363)	24.869 [0.003]
Q25 Inside PIT, financial capital gains should be taxed.	-0.066 (0.752)	-2.005*** (0.766)	0.305 (0.444)	-0.802** (0.406)	1.289*** (0.367)	27.245 [0.002]
Q26 Inside PIT, interest on saving and securities should be taxed.	-0.04 (0.632)	-0.072 (0.426)	0.111 (0.395)	-1.588*** (0.434)	1.709*** (0.427)	34.057 [<0.001]
Q27 All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing the lower withholding tax to be the final tax).	0.233 (0.604)	-0.044 (0.426)	-0.644* (0.38)	-0.408 (0.384)	0.614* (0.338)	9.065 [0.526]
Q30 The CIT (general) rate should be reduced.	0.396 (0.487)	0.186 (0.377)	0.393 (0.342)	0.621* (0.324)	-0.310 (0.299)	15.61 [0.111]
Q31 The CIT burden for SMEs should be reduced.	0.249 (0.493)	-0.433 (0.405)	0.525 (0.375)	1.068*** (0.384)	-0.297 (0.331)	19.723 [0.032]
Q32 Reinvested profits should be exempt from taxation.	0.309 (0.489)	0.245 (0.386)	0.966** (0.383)	-0.194 (0.352)	0.02 (0.354)	18.369 [0.049]

Q39 Tax incentives for investment should be maintained.	0.582 (0.672)	-1.243** (0.593)	1.194** (0.571)	-1.542** (0.777)	-0.466 (0.423)	13.31 [0.149]
Q40 Protective interest (allowance for corporate equity - ACE) should be reintroduced.	-0.149 (0.629)	0.074 (0.430)	0.307 (0.410)	-0.261 (0.394)	-0.353 (0.364)	3.929 [0.950]
Q42 Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/eliminated).	0.429 (0.528)	0.565 (0.381)	-0.882** (0.360)	0.902*** (0.328)	0.060 (0.308)	16.966 [0.075]
Q73 A financial transaction tax should be introduced.	-0.009 (0.569)	-0.441 (0.424)	0.330 (0.380)	-0.135 (0.361)	0.857** (0.343)	24.79 [0.006]
Q74 A financial activities tax should be introduced.	0.168 (0.653)	-0.971* (0.500)	-0.003 (0.445)	0.150 (0.423)	0.427 (0.375)	43.793 [<0.001]
Q76 General government should be financed less from taxes and more from different non-tax revenues (with emphasis of different user charges).	0.146 (0.471)	-0.087 (0.374)	0.481 (0.338)	0.054 (0.348)	-0.046 (0.309)	6.269 [0.792]
Q81 Para-fiscal levies should be reduced.		0.051 (0.862)	1.562*** (0.581)	0.309 (0.663)	0.545 (0.515)	163.172 [<0.001]

**Table 4** Binomial probit regression results for economic views

Source: authors' calculation

Notes: Robust standard errors are in parenthesis. The  $p$ -values of the  $\chi^2$  are in brackets. Other regressors include indicators of sector of employment, age and education. Omitted variable dropped from the estimation because model predicts success perfectly.

\*  $p < 0,1$ ; \*\*  $p < 0,05$ ; \*\*\*  $p < 0,01$

a) Q84 - Non taxation of interest encourages saving.

b) Q85 - Non taxation of financial capital gains encourages investment and promotes economic growth.

c) Q86 - Different government tax reductions (reliefs, incentives) promote economic growth.

d) Q79 - Tax burden should be shifted from personal and corporate income to consumption.

e) Q80 - Tax burden should be shifted from personal and corporate income to property.

f) Wald  $\chi^2$  tests the hypothesis that at least one of the regression coefficients is not equal to zero

## 5. Conclusion

Maybe disappointingly, but not unexpectedly, there is no high and broad consensus of Croatian tax experts although the technique which was applied (elimination of neutral answers, yes or no answers only) implies as high a consensus as possible.

However, the relatively high degree of consensus concerning some specific questions enables us to draw some general conclusions about experts' attitudes. In the field of (personal and corporate) income taxation they include maintenance of corporate tax incentives, reintroduction of personal income tax reliefs (deductions), and rejection of a flat tax as well as a decrease in number of tax brackets. Concerning consumption taxation, the most interesting results are in favor of the maintenance and even broadening of reduced VAT rates as well as an increase in alcohol and tobacco duties. Although experts support financial sector taxation in general, consensus was reached not about a financial transaction tax, but about a financial activities tax. Concerning general tax issues a further shift from income to consumption as well as decrease of the share of taxation in GDP, as expected, is advocated. Experts showed remarkable belief in behavioral responsiveness of tax decreases/exemptions, but, on the other hand, solved the traditional equity-efficiency trade-off in favor of equity.

In a sectoral comparison, the government sector expresses higher social sensibility (equity principle) and a stronger inclination to the classical income-based – ability to pay principle (which is reflected also in the property as additional ability to pay indicator). However, government officers are not in favor of personal income tax deductions, maybe due to their high administrative costs, which burden the tax administration directly. The academic sector could be said to be more “rational” being not so much against a consumption-based (interest-adjusted) taxation as other sectors, but still not in favor of it (with the exception of the ACE tax that received substantial support).

Some values and economic views are found to be important and consistent predictors of tax opinions. This is especially true of the equity principle, the behavioral effects of tax reductions and attitudes related to tax incidence. The results are consistent with the consumption-based versus income-based concepts.

## Appendix

Structure of respondents	Valid Percent
Age	
18-29	17.2
30 - 44	46.7
45 - 54	19.4
55+	16.7
Education	
High school degree	4.6
Associate degree/ BA	11.2
Graduate / Master	45.2
Mr. sc.	7.3
PhD	31.7
Sector	
Private sector	9.6
Government sector	43.5
Academic community	46.9
Sector: Private sector	
Tax advisor	50.0
Editor and/or business advisor	16.7
Others	20.8
High business school (lecturer)	12.7
Sector: Government sector	
Local and regional units	48.7
Tax Administration	41.6
Ministry of Finance (outside Tax Administration)	1.8
Others	4.4
Sector: Academic community	
Economics	86.2
Law	12.2
Political sciences	1.6
Sector: Academic community - Economics	
Public finance	23.1
Monetary finance and financial markets	18.3
Corporate finance and accounting	26.0
Macroeconomics	24.0
Management/entrepreneurship	8.7

**Table A1** Demographics and sample information

*Source:* authors-survey

Br.	Statement / question	Total		Academic		Government		Private	
		NO	YES	NO	YES	NO	YES	NO	YES
Property taxes, Inheritance and gift taxes									
1.	Croatia should introduce the proposed real estate tax.	41	59	47	53	37	<b>63</b>	39	<b>61</b>
2.	Real estate tax should be a local tax.	18	<b>82</b>	18	<b>82</b>	21	<b>79</b>	16	<b>84</b>
3.	Taxation should include other forms of property too (movable property, financial property etc.) i.e. should be a synthetic taxation of property (net wealth tax)	44	56	50	50	39	<b>61</b>	50	50
4.	Regardless of any possible real estate tax introduction, communal charge should still remain local revenue.	48	52	42	58	50	50	<b>71</b>	29
5.	Regardless of any possible real estate tax introduction, tax on holiday houses should remain local revenue too.	43	57	34	<b>66</b>	46	54	<b>68</b>	32
6.	Regardless of any possible real estate tax introduction, surtax on income tax should still remain local revenue too.	33	<b>67</b>	30	<b>70</b>	33	<b>67</b>	48	52
7.	Real estate tax should be assessed at the same rate for business and residents.	<b>71</b>	29	<b>75</b>	25	<b>71</b>	29	<b>68</b>	32
8.	Business should be taxed at a higher rate than residents.	40	60	38	<b>62</b>	35	<b>65</b>	<b>68</b>	32
9.	Residents should be taxed at a higher rate than business.	<b>88</b>	12	<b>87</b>	13	<b>88</b>	12	<b>82</b>	18
10.	Inheritances and gifts should be taxed.	56	44	54	46	<b>61</b>	39	43	57
11.	Inheritance and gift taxation should be progressive - according to the property inherited/gifted and the proximity of the relationship (in contrast to the current 5% with the exemption for the closest family members).	51	49	52	48	49	51	46	54
12.	Real estate transfers should be taxed.	16	<b>84</b>	20	<b>80</b>	14	<b>86</b>	8	<b>92</b>
13.	Property is a necessary additional indicator of ability to pay besides income.	17	<b>83</b>	14	<b>86</b>	17	<b>83</b>	23	<b>77</b>

Br.	Statement / question	Total		Academic		Government		Private	
		NO	YES	NO	YES	NO	YES	NO	YES
Personal income tax									
14.	The highest PIT rate should be reduced further (recently reduced from 45% to 40%).	52	48	49	51	57	43	48	52
15.	The lowest PIT rate should be reduced further (recently reduced from 15% to 12%).	34	<b>66</b>	36	<b>64</b>	29	<b>71</b>	46	54
16.	Instead of more PIT rates only one rate should be introduced (a flat tax") along with maintaining personal exemption.	<b>69</b>	31	<b>63</b>	37	<b>72</b>	28	<b>79</b>	21
17.	The number of tax brackets should be increased (currently three).	47	53	41	59	49	51	<b>70</b>	30
18.	The number of tax brackets should be decreased (currently three).	<b>81</b>	19	<b>77</b>	23	<b>83</b>	17	<b>86</b>	14
19.	Tax deductions/allowances for health costs should be reintroduced.	27	<b>73</b>	23	<b>77</b>	27	<b>73</b>	46	54
20.	Tax deductions/allowances for owner-occupied housing should be reintroduced.	30	<b>70</b>	23	<b>77</b>	35	<b>65</b>	48	52
21.	Tax deductions/allowances for life insurance should be reintroduced.	40	60	34	<b>66</b>	47	53	39	<b>61</b>
22.	Tax deductions/allowances for voluntary pension insurance should be reintroduced.	35	<b>65</b>	29	<b>71</b>	42	58	32	<b>68</b>
23.	Tax deductions/allowances for additional and private health insurance should be reintroduced.	35	<b>65</b>	30	<b>70</b>	38	<b>62</b>	36	<b>64</b>
24.	Inside PIT, dividends should be taxed.	27	<b>73</b>	35	<b>65</b>	14	<b>86</b>	38	<b>63</b>
25.	Inside PIT, financial capital gains should be taxed.	23	<b>77</b>	34	<b>66</b>	13	<b>87</b>	29	<b>71</b>
26.	Inside PIT interest on saving and securities should be taxed.	54	46	60	40	46	54	55	45



Br.	Statement / question	Total		Academic		Government		Private	
		NO	YES	NO	YES	NO	YES	NO	YES
27.	All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing the lower withholding tax to be the final tax due).	43	57	42	58	36	<b>64</b>	55	45
28.	Capital incomes should be taxed at lower rates than labor incomes.	<b>70</b>	30	<b>61</b>	39	<b>80</b>	20	57	43
29.	Dividends should be taxed at lower rates than other incomes (due to the economic double taxation of dividends).	43	57	28	<b>72</b>	<b>61</b>	39	38	<b>62</b>
Corporate income tax									
30.	CIT (general) rate should be reduced.	46	54	41	59	48	52	<b>64</b>	36
31.	CIT burden for SMEs should be reduced.	21	<b>79</b>	21	<b>79</b>	17	<b>83</b>	36	<b>64</b>
32.	Reinvested profits should be exempt from taxation.	12	<b>88</b>	7	<b>93</b>	12	<b>88</b>	25	<b>75</b>
33.	Tax incentives for areas of special national concern should be maintained.	32	<b>68</b>	29	<b>71</b>	35	<b>65</b>	15	<b>85</b>
34.	Tax incentives for mountain areas should be maintained.	32	<b>68</b>	34	<b>66</b>	31	<b>69</b>	15	<b>85</b>
35.	Tax incentives for free trade zones should be maintained.	31	<b>69</b>	27	<b>73</b>	32	<b>68</b>	28	<b>72</b>
36.	Tax incentives for the city of Vukovar should be maintained.	23	<b>77</b>	23	<b>77</b>	21	<b>79</b>	16	<b>84</b>
37.	Tax incentives (state aid) for R&D should be maintained.	9	<b>91</b>	8	<b>92</b>	8	<b>92</b>	17	<b>83</b>
38.	Tax incentives (state aid) for the education of employees should be maintained..	9	<b>91</b>	6	<b>94</b>	10	<b>90</b>	14	<b>86</b>
39.	Tax incentives for investment should be maintained.	11	<b>89</b>	9	<b>91</b>	12	<b>88</b>	13	<b>88</b>
40.	Protective interest (allowance for corporate equity - ACE) should be reintroduced.	25	<b>75</b>	27	<b>73</b>	24	<b>76</b>	26	<b>74</b>
41.	Accelerated depreciation (double depreciation rates) should be maintained.	26	<b>74</b>	20	<b>80</b>	28	<b>72</b>	39	<b>61</b>

Br.	Statement / question	Total		Academic		Government		Private	
		NO	YES	NO	YES	NO	YES	NO	YES
VAT									
42.	Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/eliminated).	<b>64</b>	36	<b>65</b>	35	<b>63</b>	37	<b>62</b>	38
43.	In the transitional period (after accessing EU) Croatia should have tried to maintain zero rate of VAT for some goods and services that have a social purpose.	25	<b>75</b>	28	<b>72</b>	18	<b>82</b>	36	<b>64</b>
44.	Tourist and restaurant services should be taxed at lower VAT rate.	51	49	48	52	57	43	39	61
45.	Some basic foodstuff (bread, milk, baby food, edible oils and fats) should be taxed at a reduced VAT rate.	13	<b>87</b>	17	<b>83</b>	8	<b>92</b>	20	<b>80</b>
46.	A special scheme for VAT for farmers should be introduced.	25	<b>75</b>	20	<b>80</b>	27	<b>73</b>	26	74
47.	Standard/general VAT rate should be increased.	<b>97</b>	3	<b>97</b>	3	<b>98</b>	2	<b>100</b>	0
48.	An increase of the standard/general VAT rate is better than the introduction of "crises tax".	<b>62</b>	38	<b>67</b>	33	<b>63</b>	37	37	63
49.	Instead of reduced VAT rates for some "basic" foodstuffs the reduced VAT rate for all foodstuffs (and water) should be introduced.	36	<b>64</b>	39	<b>61</b>	35	<b>65</b>	41	59
50.	The reduced VAT rate for newspapers and periodicals should not be applied for "the yellow press".	27	<b>73</b>	26	<b>74</b>	25	<b>75</b>	36	64
51.	The reduced VAT rate should be higher for scientific journals than for the daily press.	60	40	58	42	58	42	<b>78</b>	22
52.	VAT revenues should be partially directed to local government.	40	60	43	57	35	<b>65</b>	55	45
Excise duties									
53.	A special tax on "junk food" should be introduced.	34	<b>66</b>	29	<b>71</b>	34	<b>66</b>	47	53
54.	Excise taxes on mineral oil and petroleum products should be decreased.	27	<b>73</b>	33	<b>67</b>	21	<b>79</b>	32	<b>68</b>

Br.	Statement / question	Total		Academic		Government		Private	
		NO	YES	NO	YES	NO	YES	NO	YES
55.	Excise duties on natural gas should be increased.	<b>91</b>	9	<b>91</b>	9	<b>91</b>	9	<b>89</b>	11
56.	Excise duties on electricity should be increased.	<b>94</b>	6	<b>90</b>	10	<b>98</b>	2	<b>95</b>	5
57.	Excise duties on alcohol should be increased.	18	<b>82</b>	18	<b>82</b>	18	<b>82</b>	18	<b>82</b>
58.	Excise duties on wine should be introduced.	60	40	58	42	59	41	<b>71</b>	29
59.	Excise duties on tobacco and tobacco products should be increased.	15	<b>85</b>	11	<b>89</b>	15	<b>85</b>	24	<b>76</b>
60.	Croatia has enough excise duties.	7	<b>93</b>	6	<b>94</b>	9	<b>91</b>	5	<b>95</b>
61.	Excise duties should be levied on luxury products.	20	<b>80</b>	19	<b>81</b>	16	<b>84</b>	42	58
62.	Excise duties should be levied on cars and other vehicles.	36	<b>64</b>	32	<b>68</b>	37	<b>63</b>	45	55
63.	Excise duties should be levied on aircrafts and vessels.	22	<b>78</b>	24	<b>76</b>	15	<b>85</b>	40	60
64.	Excise duties should be levied on liability and comprehensive road vehicle insurance premiums.	59	41	55	45	60	40	<b>81</b>	19
65.	Excise duties should be levied on coffee.	55	45	50	50	58	42	55	45
66.	Excise duties should be levied on non-alcoholic beverages.	<b>68</b>	32	<b>65</b>	35	<b>74</b>	26	<b>65</b>	35
Social contributions									
67.	The ceiling for pension insurance contributions should be abolished.	43	57	44	56	37	<b>63</b>	<b>70</b>	30
68.	Minimum assessment base for pension insurance contributions should be abolished.	<b>72</b>	28	<b>70</b>	30	<b>72</b>	28	<b>76</b>	24
69.	Rates for compulsory pension insurance contributions for intergenerational solidarity (I. pillar) should be decreased.	39	<b>61</b>	39	<b>61</b>	41	59	33	<b>67</b>

Br.	Statement / question	Total		Academic		Government		Private	
		NO	YES	NO	YES	NO	YES	NO	YES
70.	Rates for compulsory pension insurance contributions for individual capitalized savings accounts (II. pillar) should be increased.	40	60	34	<b>66</b>	48	52	33	<b>67</b>
71.	Health insurance contributions should be decreased.	41	59	40	60	44	56	30	<b>70</b>
72.	Small business personal income taxpayers are in a favorable position compared to employment income taxpayers concerning compulsory social security contributions' payment.	47	53	43	57	51	49	43	57
General tax issues, experts' values and economic model									
73.	A financial transaction tax should be introduced.	44	56	50	50	36	<b>64</b>	53	47
74.	A financial activities tax should be introduced.	23	<b>77</b>	33	<b>67</b>	6	<b>94</b>	53	47
75.	The entire tax burden (the level of taxes relative to GDP) should be reduced.	15	<b>85</b>	17	<b>83</b>	15	<b>85</b>	5	<b>95</b>
76.	General government should be financed less from taxes and more from different non-tax revenues (with an emphasis on different user charges).	35	<b>65</b>	33	<b>67</b>	38	<b>62</b>	37	<b>63</b>
77.	The entire level of public revenues (and public expenditures) relative to GDP should be lowered.	18	<b>82</b>	23	<b>77</b>	16	<b>84</b>	9	<b>91</b>
78.	The tax structure should be changed.	8	<b>92</b>	11	<b>89</b>	8	<b>93</b>	0	<b>100</b>
79.	The tax burden should be shifted from personal and corporate income to consumption.	33	<b>67</b>	31	<b>69</b>	34	<b>66</b>	35	<b>65</b>
80.	The tax burden should be shifted from personal and corporate income to property.	48	52	47	53	45	55	<b>71</b>	29
81.	Para-fiscal levies should be reduced.	5	<b>95</b>	7	<b>93</b>	3	<b>97</b>	4	<b>96</b>

Br.	Statement / question	Total		Academic		Government		Private	
		NO	YES	NO	YES	NO	YES	NO	YES
82.	Lower marginal income tax rates reduce leisure and increase work effort.	19	<b>81</b>	18	<b>82</b>	18	<b>82</b>	21	<b>79</b>
83.	Lower marginal income tax rates increase work effort and taxable income generally so much as to raise revenue.	35	<b>65</b>	34	<b>66</b>	37	<b>63</b>	31	<b>69</b>
84.	Non taxation of interest encourages saving.	22	<b>78</b>	22	<b>78</b>	24	<b>76</b>	14	<b>86</b>
85.	Non taxation of financial capital gains encourages investment and promotes economic growth.	35	<b>65</b>	34	<b>66</b>	37	<b>63</b>	24	<b>76</b>
86.	Different government tax reductions (reliefs, incentives) promote economic growth.	21	<b>79</b>	19	<b>81</b>	24	<b>76</b>	17	<b>83</b>
87.	VAT is regressive.	40	60	33	<b>67</b>	42	58	59	41
88.	CIT is mostly shifted onto consumers and employees.	26	<b>74</b>	23	<b>77</b>	28	<b>72</b>	33	<b>67</b>
89.	Regional tax incentives (city of Vukovar, areas of special national concern) are efficient concerning investment attraction.	59	41	<b>68</b>	32	51	49	58	42
90.	Administrative and compliance costs of taxation should play significant role in creating tax policy (these costs should be reduced by making the tax system significantly simpler).	6	<b>94</b>	9	<b>91</b>	5	<b>95</b>	5	<b>95</b>
91.	The equity principle should have priority over the efficiency principle in creating tax policy.	13	<b>87</b>	15	<b>85</b>	6	<b>94</b>	40	60
92.	Penalties for tax evasion should be increased.	13	<b>87</b>	11	<b>89</b>	12	<b>88</b>	29	<b>71</b>

**Table A2** Responses' distribution (in %) for all respondents and main groups according to employment (without neutral answer)

Source: authors – the survey

Note: Answers above 61% are bolded.

Question/statement	Sector. <sup>c</sup>					Education <sup>d</sup>		X <sup>2e</sup>
	Q75 <sup>a</sup>	Q91 <sup>b</sup>	Public	Academic	Age	Level 7 Master	Level 8.1-8.2 MSc / PhD	
Q01 Croatia should introduce the proposed real estate tax.	0.014 (0.324)	0.820** (0.337)	-0.456 (0.401)	-0.432 (0.410)	-0.007 (0.011)	0.171 (0.329)	-0.431 (0.436)	14.658 [0.041]
Q03 Taxation should include other forms of property too (movable property, financial property etc.) i.e. synthetic taxation of property (net wealth tax)	0.223 (0.343)	0.179 (0.320)	0.140 (0.404)	-0.030 (0.402)	0.009 (0.010)	-0.149 (0.339)	-0.275 (0.450)	4.136 [0.764]
Q16 Instead of more PIT rates only one rate should be introduced (a flat tax) along with the maintenance of personal exemption.	0.206 (0.341)	-0.672* (0.345)	0.079 (0.490)	0.356 (0.481)	-0.004 (0.011)	-0.257 (0.331)	0.065 (0.456)	8.783 [0.269]
Q24 Inside PIT, dividends should be taxed.	-0.577 (0.454)	0.740** (0.353)	0.702 (0.448)	-0.240 (0.418)	0.014 (0.012)	0.390 (0.398)	0.190 (0.535)	18.562 [0.010]
Q25 Inside PIT, financial capital gains should be taxed.	-0.264 (0.392)	0.843** (0.332)	0.387 (0.453)	-0.586 (0.412)	0.012 (0.013)	0.567 (0.414)	0.356 (0.534)	19.636 [0.006]
Q26 Inside PIT, interest on saving and securities should be taxed.	-0.782** (0.362)	0.485 (0.345)	-0.011 (0.413)	-0.301 (0.415)	0.008 (0.011)	-0.216 (0.363)	0.090 (0.477)	7.758 [0.354]
Q27 All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing for the lower withholding tax to be the final tax due).	-0.519 (0.421)	-0.048 (0.358)	0.231 (0.481)	0.350 (0.459)	0.009 (0.011)	-0.075 (0.361)	0.028 (0.503)	3.443 [0.841]
Q30 CIT (general) rate should be reduced.	0.841** (0.350)	0.067 (0.328)	0.133 (0.409)	0.723* (0.412)	0.010 (0.011)	0.210 (0.341)	-0.579 (0.455)	10.177 [0.179]
Q31 CIT burden for SMEs should be reduced.	0.810** (0.359)	0.047 (0.394)	0.596 (0.514)	0.781* (0.460)	-0.018 (0.012)	0.501 (0.418)	-0.184 (0.558)	14.573 [0.042]
Q32 Reinvested profits should be exempt from taxation.	0.129 (0.428)	-0.141 (0.412)	0.012 (0.475)	0.534 (0.525)	0.004 (0.012)	0.613 (0.392)	-0.130 (0.544)	5.012 [0.659]

Question/statement	Sector. <sup>c</sup>				Education <sup>d</sup>			$\chi^2$ <sup>e</sup>
	Q75 <sup>a</sup>	Q91 <sup>b</sup>	Public	Academic	Age	Level 7 Master	Level 8.1-8.2 MSc / PhD	
Q39 Tax incentives for investment should be maintained.	0.279 (0.430)	0.741 (0.466)	-0.966 (0.598)		-0.013 (0.016)		-0.939 (0.616)	5.067 [0.408]
Q40 Protective interest (allowance for corporate equity - ACE) should be reintroduced.	-0.306 (0.408)	0.580 (0.372)	-0.690 (0.610)	-0.094 (0.538)	-0.003 (0.011)	-0.052 (0.411)	-0.865 (0.528)	9.150 [0.242]
Q42 Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/eliminated).	0.031 (0.324)	-0.475 (0.314)	0.192 (0.394)	-0.014 (0.413)	0.004 (0.01)	-0.283 (0.318)	0.147 (0.432)	5.973 [0.543]
Q73 A financial transaction tax should be introduced.	-0.167 (0.342)	0.752** (0.360)	0.419 (0.432)	-0.203 (0.440)	0.015 (0.011)	0.792** (0.342)	0.722* (0.436)	15.518 [0.030]
Q74 A financial activities tax should be introduced.	-0.486 (0.482)	1.378*** (0.386)	1.600*** (0.539)	0.313 (0.5)	0.018 (0.015)	0.653 (0.558)	-0.206 (0.716)	65.922 [<0.001]
Q76 General government should be financed less from taxes and more from different non-tax revenues (with an emphasis on different user charges).	0.955*** (0.328)	0.327 (0.364)	-0.202 (0.466)	0.266 (0.456)	0.001 (0.011)	-0.436 (0.355)	-0.772 (0.473)	12.132 [0.096]
Q81 Para-fiscal levies should be reduced.	0.893** (0.447)	0.288 (0.526)	0.531 (0.802)	0.066 (0.669)	0.034* (0.02)	0.187 (0.626)	0.096 (0.766)	19.89 [0.006]

**Table A3** Binomial probit regression results for values, detailed

Source: authors' calculation

Notes: Robust standard errors are in parenthesis. The p-values of the  $\chi^2$  are in brackets. Other regressors include indicators of sector of employment, age and education. Omitted variable dropped from the estimation because model predicts success perfectly.

\*  $p < 0,1$ ; \*\*  $p < 0,05$ ; \*\*\*  $p < 0,01$

a) Q75 - Entire tax burden (the level of taxes relative the GDP) should be reduced.

b) Q91 - The equity principle should be prior to efficiency principle in creating tax policy.

c) Reference category is private sector

d) Reference category is Level 4.2-6 according to Croatian Qualification Framework (high school - bachelor)

e) Wald  $\chi^2$  tests the hypothesis that at least one of the regression coefficients is not equal to zero

Question/statement	Behavioral Responsiveness		Incidence		Sector. <sup>f</sup>			Education. <sup>g</sup>			
	Q84 <sup>a</sup>	Q85 <sup>b</sup>	Q86 <sup>c</sup>	Q79 <sup>d</sup>	Q80 <sup>e</sup>	Public	Academic	Age	Level 7 Master	Level 8.1-8.2 MSc PhD	$\chi^2$ <sup>h</sup>
Q01 Croatia should introduce the proposed real estate tax.	-0.777 (0.530)	-0.472 (0.396)	0.661* (0.381)	-0.273 (0.359)	1.333*** (0.326)	0.420 [0.527]	-0.035 (0.528)	0.005 (0.015)	0.296 (0.474)	0.411 (0.580)	30.322 [0.001]
Q03 Taxation should include other forms of property too (movable property, financial property etc.) i.e. synthetic taxation of property (net wealth tax)	-0.762 (0.587)	-0.411 (0.424)	0.658* (0.379)	-0.409 (0.342)	0.628** (0.308)	-0.806 [0.527]	-0.573 (0.490)	0.027** (0.013)	-0.288 (0.459)	-0.510 (0.602)	20.325 [0.026]
Q16 Instead of more PIT rates only one rate should be introduced (a flat tax) along with the maintenance of personal exemption.	1.203* (0.630)	-0.280 (0.387)	0.059 (0.361)	0.797** (0.357)	-0.079 (0.316)	0.364 [0.516]	-0.111 (0.525)	-0.022 (0.014)	0.039 (0.414)	0.831 (0.554)	16.127 [0.096]
Q24 Inside PIT, dividends should be taxed.		-1.120* (0.622)	0.593 (0.44)	-0.836** (0.413)	0.987*** (0.363)	0.342 [0.634]	-0.428 (0.578)	0.006 (0.014)	0.244 (0.505)	-0.538 (0.677)	24.869 [0.003]
Q25 Inside PIT, financial capital gains should be taxed.	-0.066 (0.752)	-2.005*** (0.766)	0.305 (0.444)	-0.802** (0.406)	1.289*** (0.367)	0.184 [0.656]	-0.875 (0.61)	0.002 (0.014)	0.485 (0.499)	-0.076 (0.651)	27.245 [0.002]
Q26 Inside PIT, interest on savings and securities should be taxed.	-0.040 (0.632)	-0.072 (0.426)	0.111 (0.395)	-1.588*** (0.434)	1.709*** (0.427)	-1.496*** [0.58]	-0.843 (0.582)	-0.001 (0.016)	-0.554 (0.515)	-1.084 (0.709)	34.057 [<0.001]



Question/statement	Behavioral Responsiveness		Incidence		Sector. <sup>f</sup>			Education. <sup>g</sup>			
	Q84 <sup>a</sup>	Q85 <sup>b</sup>	Q86 <sup>c</sup>	Q79 <sup>d</sup>	Q80 <sup>e</sup>	Public	Academic	Age	Level 7 Master	Level 8.1-8.2 MSc / PhD	X <sup>2h</sup>
Q27 All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing the lower withholding tax to be the final tax due).	0.233 (0.604)	-0.044 (0.426)	-0.644* (0.38)	-0.408 (0.384)	0.614* (0.338)	-0.532 [0.559]	-0.111 (0.513)	-0.006 (0.013)	-0.312 (0.439)	-0.477 (0.593)	9.065 [0.526]
Q30 CIT (general) rate should be reduced.	0.396 (0.487)	0.186 (0.377)	0.393 (0.342)	0.621* (0.324)	-0.310 (0.299)	0.422 [0.552]	0.101 (0.54)	-0.014 (0.013)	0.400 (0.415)	0.560 (0.571)	15.610 [0.111]
Q31 CIT burden for SMEs should be reduced.	0.249 (0.493)	-0.433 (0.45)	0.525 (0.375)	1.068*** (0.384)	-0.297 (0.331)	0.878 [0.64]	0.298 (0.684)	-0.022 (0.018)	0.792* (0.447)	0.970 (0.669)	19.723 [0.032]
Q32 Reinvested profits should be exempt from taxation.	0.309 (0.489)	0.245 (0.386)	0.966** (0.383)	-0.194 (0.352)	0.020 (0.354)	0.540 [0.579]	1.002 (0.614)	0.016 (0.017)	0.809* (0.461)	0.324 (0.630)	18.369 [0.049]
Q39 Tax incentives for investment should be maintained.	0.582 (0.672)	-1.243** (0.593)	1.194** (0.571)	-1.542** (0.777)	-0.466 (0.423)	1.527 [0.979]	2.015*** (0.748)	0.012 (0.019)		-0.454 (0.784)	13.310 [0.149]
Q40 Protective interest (allowance for corporate equity - ACE) should be reintroduced.	-0.149 (0.629)	0.074 (0.43)	0.307 (0.41)	-0.261 (0.394)	-0.353 (0.364)	-0.211 [0.643]	0.316 (0.599)	0.020 (0.015)	-0.044 (0.498)	-0.484 (0.628)	3.929 [0.950]
Q42 Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/eliminated).	0.429 (0.528)	0.565 (0.381)	-0.882** (0.36)	0.902*** (0.328)	0.060 (0.308)	-0.239 [0.566]	-0.771 (0.527)	<0.001 (0.015)	0.332 (0.469)	0.720 (0.618)	16.966 [0.075]

Question/statement	Behavioral Responsiveness		Incidence		Sector. <sup>f</sup>			Education. <sup>g</sup>			
	Q84 <sup>a</sup>	Q85 <sup>b</sup>	Q86 <sup>c</sup>	Q79 <sup>d</sup>	Q80 <sup>e</sup>	Public	Academic	Age	Level 7 Master	Level 8.1-8.2 MSc PhD	$\chi^2$ <sup>h</sup>
Q73 A financial transaction tax should be introduced.	-0.009 (0.569)	-0.441 (0.424)	0.330 (0.380)	-0.135 (0.361)	0.857** (0.343)	1.193** [0.546]	0.101 (0.563)	0.035** (0.014)	0.985** (0.465)	1.087* (0.596)	24.790 [0.006]
Q74 A financial activities tax should be introduced.	0.168 (0.653)	-0.971* (0.500)	-0.003 (0.445)	0.150 (0.423)	0.427 (0.375)	3.411*** [0.715]	1.909*** (0.718)	0.037** (0.017)	1.174** (0.546)	0.107 (0.684)	43.793 [<0.001]
Q76 General government should be financed less from taxes and more from different non-tax revenues (with an emphasis on different user charges).	0.146 (0.471)	-0.087 (0.374)	0.481 (0.338)	0.054 (0.348)	-0.046 (0.309)	-0.504 [0.601]	-0.102 (0.548)	<0.001 (0.015)	-0.803* (0.438)	-0.918 (0.624)	6.269 [0.792]
Q81 Para-fiscal levies should be reduced.		0.051 (0.862)	1.562*** (0.581)	0.309 (0.663)	0.545 (0.515)	5.182*** [0.832]		0.040 (0.028)	4.872*** (0.728)	4.915*** (1.331)	163.172 [<0.001]

**Table A4** Binomial probit regression results for economic views, detailed

Source: authors' calculation

Notes: Robust standard errors are in parenthesis. The p-values of the  $\chi^2$  are in brackets. Other regressors include indicators of sector of employment, age and education. Omitted variable dropped from the estimation because model predicts success perfectly.

\*  $p < 0,1$ ; \*\*  $p < 0,05$ ; \*\*\*  $p < 0,01$

a) Q84 - Non taxation of interest encourages saving.

b) Q85 - Non taxation of financial capital gains encourages investment and promotes economic growth.

c) Q86 - Different government tax reductions (reliefs, incentives) promote economic growth.

d) Q79 - Tax burden should be shifted from personal and corporate income to consumption.

e) Q80 - Tax burden should be shifted from personal and corporate income to property.

f) Reference category is private sector

g) Reference category is Level 4.2-6 according to Croatian Qualification Framework (high school - bachelor)

h) Wald  $\chi^2$  tests the hypothesis that at least one of the regression coefficients is not equal to zero

## References

- Alm, J., Martinez-Vazque, J., Torgler, B., (2006.), Russian attitudes toward paying taxes: before, during, and after the transition. *International Journal of Social Economics*, 33(12), p. 832-857.
- Ashworth, J., Heyndels, B., (1997.), Politicians' Preferences on Local Tax Rates: An Empirical Analysis, *European Journal of Political Economy*, 13(3), p. 479-502.
- Behrens, J.O. (1973.), The Public and the Publicans Talk Taxes, *National Tax Journal*, 26(2), p. 221-232.
- Birney, M., Graetz, M.J., Shapiro, I. (2006.), Public opinion and the push to repeal the estate tax, *National Tax Journal*, 59(3), p.439-461.
- Blažić, H. (2006.), *Usporedni porezni sustavi*, Rijeka: Ekonomski fakultet.
- Blažić; H. (2008.) Croatian Tax System: From Consumption-based to Income-based. In: McGee, Robert (ed.). *Taxation and Public Finance in Transition and Developing Economies*. New York: Springer, p. 433-459.
- Blažić, H., Šimović, H., Štambuk, A. Mjesto socijalne politike u poreznoj politici RH: anketa eksperata, *unpublished*
- Brannon, G.M. (1995.), What will the "NTA Opinions" have to do with Federal Tax policy – 1995-6, *National Tax Journal*, 48(1), p. 149-154.
- Campbell, A.L. (2009.), How Americans Think About Taxes: Lessons from the History of Tax Attitudes. In: *NTA Proceedings of the 102nd Annual Conference on Taxation*, p.157-164.
- DeGroat, B. (2013.), What do tax policy experts think about U.S. tax policy? *Michigan News*, University of Michigan's Office of Tax Policy Research and the National Tax Association. Available at: <http://ns.umich.edu/new/releases/21386-what-do-tax-policy-experts-think-about-u-s-tax-policy>
- Dornstein, M. (1987.), Taxes: Attitudes and Perceptions and their Social Bases. *Journal of Economic Psychology*, 8(1), p.55-77.
- Eicher, J.D. & Stuhldreher, T.J. (2007.), Taxes and Ethics: Taxpayer Attitudes Over Time, *Journal of Tax Practice & Procedure*, 9(3), p. 33-41.
- Eicher, J.D., Stuhldreher, W.L., Stuhldreher, T.J. (2001.), Attitudes Toward Income Taxes: Regional vs. National, *Tax Notes*, 90 (8), February 19, 2001.
- Fatemi, D.J., Hasseldine, D.J., Hite, P.A. (2008.), Resisting Framing Effects: The Importance of Prior Attitude on Estate Tax Preferences, *Journal of the American Taxation Association*, 30(1), p.101-121.
- Fisher, R.D. (1985.), Taxes and Expenditure in the U.S. Public Opinion Surveys and Incidence Analysis Compared, *Economic Inquiry*, 23(3), p.525-551.

- Fleishman, G.M., Hutchison, P.D. (2001.), A Tax Reform Conundrum: Insights From A Survey Of Tax Professors, *Journal of Applied Business Research*, 17(4), p.17-29.
- Green, D.P. & Gerken, A.E. (1989.), Self-Interest and Public Opinion toward Smoking Restrictions and Cigarette Taxes, *Public Opinion Quarterly*, 53, p. 1-16.
- Hammar, H., Jagers, C.J., Nordblom, K. (2008.), Attitudes towards Tax Levels: A Multi-Tax Comparison, *Fiscal Studies*, 29(4), p.523-543.
- Hasseldine, J., Hite, P.A. (2003.), The Effects of Attribute Framing and Political Party Affiliation on Taxpayer Preferences, *eJournal of Tax Research*, 1(1), p. 5-18.
- IRS (Internal Revenue Service) (1993.), *1990 Taxpayer Opinion Survey Final Report*. Conducted for the IRS by Schulman, Ronca and Bucuvalas, Inc., for Commissioner (Planning and Research), Research Division.
- Kallbekken, S., Saelen, H. (2011.), Public Acceptance for Environmental Taxes: Self-Interest, Environmental and Distributional Concerns, *Energy Policy*, 39 (5), p. 2966-73.
- Keen, M., King, J. (2002.), The Croatian Profit Tax: An ACE in Practice, *Fiscal Studies*, 23(3), p. 401-418.
- Kirchler, E. (1999.), Reactance to taxation: Employers' attitudes towards taxes, *Journal of Socio-Economics*, 28(2), p. 131-139.
- Klemm, A. (2007.), Allowances for corporate equity in practice, *CESinfo Economic Studies*, 53(2), p. 229-262.
- Lim, D., Slemrod, J., Wilking, E. (2013), Expert and public attitudes towards tax policy: 2013, 1994, and 1934. *National Tax Journal*, 66(4), p. 775-806.
- Löfgren, A., Nordblom, K. (2010.), Attitudes towards CO2 taxation – is there an Al Gore effect? *Applied Economics Letters*, 17(9), p. 845–848.
- McCabe, B.C. & Stream, C., 2006. The Chicken or the Egg: A Recent History of public Opinion and tax Reform in Florida. *Journal of Public Budgeting, Accounting & Financial Management*, 18(2), pp.167-191.
- McGowan, J.R. (2000.), The Effect of Political Affiliation on Taxpayers' Attitudes Toward Alternative Tax Systems, *Journal of the American Taxation Association*, 22(1), p. 111-128.
- Murphy, K. (2004.), An examination of taxpayers' attitudes towards the Australian tax system: Findings from a survey of tax scheme investors, *CTSI working paper*, No.46. Centre for Tax System Integrity, Research School of Social Sciences, Australian National University, Canberra, <http://regnet.anu.edu.au/sites/default/files/CTSI-WorkingPaper46-full.pdf>
- Osterloh, S., Heinemann, F. (2013.), The Political Economy of Corporate Tax Harmonization - Why Do European Politicians (Dis)like Minimum Tax Rates? *European Journal of Political Economy*, 29(C), p. 18-37.

- Randlane, K. (2012.), Tax Compliance and Tax Attitudes: The Case of Estonia, *Journal of Management and Change*, 29(1), p. 89-103.
- Rose, M., Wiswesser, R. (1998.), Tax reform in transition economies: experiences from Croatian tax reform process in the 1990s. In: P.B. Sørensen (eds.), *Public Finance in a Changing World*. London: Macmillan, p. 257-278.
- Schmidt, P., Wissel, H., Stockler, M. (1996.), The new Croatian tax system, *Bulletin of International Fiscal Documentation*, 50 (April), p. 155–163.
- Slemrod, J. (1995.), Professional opinions about tax policy: 1994 and 1934, *National Tax Journal*, 48(1), p. 121-147.
- Šimović, H. (2012.), Razvoj poreza na dohodak u Hrvatskoj: reforme i promašaji, *Revija za socijalnu politiku*, 19(1), p. 1-24.
- Šimović, H., Blažić, H., Štambuk, A. (2013.), Što porezni stručnjaci misle o poreznom sustavu i poreznoj politici u Hrvatskoj? *Porezni vjesnik*, 22(12), p. 31-37., <http://www.ijf.hr/upload/files/file/PV/2013/12/simovic.pdf>
- Švaljek, S. (2005.), The 2000 Tax Reform in Croatia: Causes and Consequences. *Ekonomski pregled*, 56(12), p. 1217-1236.
- Thalmann, P. (2004.), The Public Acceptance of Green Taxes: 2 Million Voters Express Their Opinion, *Public Choice*, 119(1-2), p. 179-217.
- Torgler, B., Schneider, F. (2005.), Attitudes Towards Paying Taxes in Austria: An Empirical Analysis, *Empirica*, 32(2), p. 231–250.
- Torgler, B., Schneider, F. (2007.), What Shapes Attitudes Toward Paying Taxes? Evidence from Multicultural European Countries, *Social Science Quarterly*, 88(2), p. 443-470.
- Van der Heijden, E., Nelissen, J., Potters, J. (2007.), Opinions on the Tax Deductibility of Mortgages and the Consensus Effect, *De Economist*, 155(2), p. 141-59.
- Walker, M.L. (1935), Opinion of American Professors of Public Finance on Important Tax Questions as of January 1, 1935. In: *Tax Systems of the World* edited by Tax Research Foundation. Chicago: Commerce Clearing House, Inc.

**Maja Klun, PhD, Full Professor**  
University of Ljubljana, Faculty of Administration  
e-mail: maja.klun@fu.uni-lj.si

## **SLOVENIAN EXPERIENCES AND LESSONS FROM TAX REFORMS<sup>17</sup>**

### **ABSTRACT**

Budget constraints push several changes in fiscal policy and Slovenia is not an exception. Several debates and policy changes were focused on the fiscal golden rule, decrease of social transfers and tax reforms. Following the tax policy priorities put forward by the European Commission and taking into consideration budget deficit reduction, Slovenia made several changes in its tax system in the past three years. In the paper we present tax changes in Slovenia, discuss how they are aligned with EC recommendations (shifting taxation away from labour, broadening tax bases, reducing corporate tax debt bias, and improving tax compliance), and with regard to fairness, neutrality and redistribution. We also present research results of professionals' opinions about tax policy in Slovenia. A survey among different professionals (academics, tax advisors and employees at the Ministry of Finance) was concluded in January 2014. The research results show the opinions about different statements connected with tax policy in the country. We tried to find out whether there were differences between professionals' opinion and at which points they disagreed the most. We focused on the statements that are in connection with the actual tax changes in the last years (i.e. whether they are in accordance with the professionals' opinions). The research results could be of great importance, especially since comparisons with similar research in Croatia and Bosnia and Herzegovina could be done in the future.

### **1. Introduction**

The growing economic crisis has led to a range of reforms. The tax system is no exception. As part of the Europe 2020 strategy, the European Commission has decided to report on and propose measures to increase economic growth using the Annual Growth Survey. Consequently, at the end of 2012, the European Commission proposed that the following taxation measures be implemented in 2013: shifting the tax burden away

---

<sup>17</sup> This is a language edited reprint of a conference paper published in: Ott, K; Blažič, H. and Šimović H. (eds), 2014, Tax reforms: Experiences and Perspectives, Conference Proceedings, Institute of Public Finance, Zagreb, Croatia, p. 149-156, [http://www.ijf.hr/upload/files/file/knjige/tax\\_reform\\_proceedings.pdf](http://www.ijf.hr/upload/files/file/knjige/tax_reform_proceedings.pdf)

This work has been supported in part by the Croatian Science Foundation under the project number IP- 2013-11-8174 and by the University of Rijeka under the project number 13.02.1.2.02.

from labour, broadening the tax bases, improving tax compliance and reducing company debts as a result of corporate income tax (European Commission, 2013a). An overview of the reforms in the past three years shows that most countries have made considerable efforts to prevent tax evasion; in order to stimulate economic growth, the EU member states have decreased corporate income tax or adopted additional tax measures to promote scientific and research work, investments and entrepreneurship in general (Garnier *et al.*, 2013). In the recommendations for 2012, one of the proposals for tax measures concerns property tax, proposing that reform processes be focused mainly on introducing the kind of changes to property tax that will be effective in preventing the re-emergence of financial risks in real estate. The special recommendation for Slovenia does not include measures in the field of taxation (Council of the European Union, 2013). This is also true for recommendations for Slovenia for the years 2011–2013. Regardless of the recommendations for Slovenia, in the past three years the country has begun to implement a number of changes, also in the field of taxation, which do not necessarily comply with the recommendations of the 2012 Annual Growth Survey.

The central thesis of this paper is that, despite the familiar theoretical assumptions on tax reforms promoting economic growth, most of the reforms are actually focused on fiscal consolidation. In the first part of the paper, the tax reforms in Slovenia are compared to measures adopted by other EU member states. Afterwards we present methodology of the research conducted among tax professionals. The next section presents the research results and the paper concludes with final remarks and recommendations.

## **2. Tax reforms in Slovenia and comparison with the member states**

While there are a number of reasons for tax reforms, the reforms introduced in the last four years have undoubtedly been focused on the economic crisis. In most countries, the initial changes were unplanned and mainly concerned with increasing the budget, but eventually it became clear that these types of reforms can actually have a detrimental effect on economic development. One thing is clear: the greater our focus on partial goals, the greater the likelihood that the whole system will no longer function in line with the principles of a good tax system.

Slovenia has witnessed several important stages in the tax system development. The greatest change came after independence, when Slovenia modified its tax system to match those of developed countries. The previous system consisted of a variety of tax levels and a multitude of taxes: according to some information, companies paid as many as 47 different taxes and contributions. There were a number of levels and bases for each individual tax. The system of direct levies went through a thorough audit and reduction in the number of taxes and contributions,

different tax and contribution bases and tax sources. The corporate profit tax was introduced as the main tax for corporations and personal income tax as the main tax for natural persons. The Slovenian tax system underwent several other significant changes in the 1990s. Environmental taxes were introduced in 1995. 1996 saw a thorough reform of the organisation of tax collection and the monitoring of tax payments. A single tax administration was established, combining the Republic of Slovenia's Administration for Public Revenue and the Agency for Payment Transactions. Previously, the former had collected and monitored the taxes paid by natural persons, while the latter monitored and collected corporate taxes. A single tax administration allowed more efficient collection and monitoring of taxes. Tax ID numbers were introduced and with them the central register of taxable persons. The last significant change to be implemented in the 1990s was the introduction of VAT in 1999. To date, VAT tax levels have increased twice, in 2005 and 2013.

The second important period of the tax system reform in Slovenia took place in 2004-2006. Most of the changes were implemented in 2005, followed only by corrections. The main changes to personal income tax included: broadening income to include global income (i.e. the taxation of income generated in Slovenia and abroad) and some other sources (e.g. savings interest), lowering some direct (e.g. relief for expenditure) and indirect reliefs (e.g. lowering the flat rate expenses for royalty payments and rent), reducing the number of tax brackets and lowering the marginal tax rate for the lowest bracket. The corporate profit tax was renamed corporate income tax, expenditure was more clearly defined, and the rates of depreciation were lowered. Investment relief was practically eliminated, but soon reintroduced with stricter restrictions. Due to the membership in the EU, the Tax Procedure Act was amended, as was the Tax Administration Act, since EU membership brought additional duties to the tax administration (reporting on taxable persons, assistance with tax collection, the VIES system). In addition to these major changes, in September 2004 the burden on the lowest salaries in the form of payroll tax was lifted and the tax on the balance sheet total of banks and savings institutions was abolished.

In 2005, the government established a special tax team that prepared proposals for adjustments of the 2004 reform. The most significant changes concerned personal income tax with the schedular system of taxation for some types of income and changes to some types of tax relief. Changes deemed advantageous for taxable persons entered into force the same year, in 2005. The tax process was simplified, the default interest rate was decreased (almost by half), the debt repayment method was changed, the period for debt repayment in instalments was extended (from 12 to 24 months) and the option of self-reporting was introduced. The simplification process continued in 2006: the number of tax brackets for personal income tax was reduced to three, the highest marginal tax rate was lowered, non-standard tax reliefs were eliminated, and pre-completed tax returns were introduced. In



addition, changes were made concerning tax reliefs in the taxation of companies and several other taxes (e.g. the tax on motor boats and the tax on trading in real estate). It was clearly a period of considerable instability for the tax system, with new changes being introduced virtually every six months.

This was followed by a period of relative stability of the tax system, with only a few minor changes being made. The third significant stage in the development of Slovenia's tax system came as a consequence of the economic crisis. Several measures were introduced in 2010, mainly aimed at promoting and supporting the economy; however, these changes were replaced by a major adjustment in 2013, aimed at fiscal consolidation. In 2010, the tax rate for corporate income tax was planned to be lowered gradually to 15%, but the changes introduced in 2013 brought the tax rate to 17%. The tax on the balance sheet total of banks was re-introduced in 2011. The changes in the second half of 2012 and in 2013 started with the Fiscal Balance Act, which introduced several changes to personal and corporate income taxes. 2013 saw the introduction of an additional personal income tax bracket and the re-introduction of the highest personal income tax rate of 50%. In addition, the tax rate for the taxation of income using the schedular system (interests, capital gains, dividends, and rent) was increased from 20% to 25%. The tax relief for student work was lowered, while the tax relief for people over 65 and commuters was abolished altogether. The recognised costs for people reporting their income based on flat rate expenses increased to 70%, establishing a flat rate system for people engaged in business. When it comes to corporate income tax, the upper limit on reliefs for investments was abolished, the reliefs for research and development increased to 100% and, as previously mentioned, gradual lowering of the tax rate was halted. This period also saw an increase in the VAT rate and an increase in the threshold for entry into the VAT system from EUR 25,000 to EUR 50,000.

Comparing the last two stages of tax reforms in Slovenia with those in other EU member states in particular, we find that Slovenia has adopted similar measures to most other countries. If we compare the reforms introduced after the year 2000 and before the onset of the economic crisis, we find that most tax reforms are focused on lowering the tax rates for the taxation of natural persons, increasing tax reliefs for people with low income and lowering the highest tax rates. A review of the changes adopted in the tax legislation of the EU member states in 2009 and 2010 shows some measures in a similar direction (more details in Klun & Jovanović, 2012). In the 2009-2010 period, 9 EU member states lowered the personal income tax rates, while as many as 20 increased the income tax personal allowance or non-taxable amounts. When it comes to corporate income tax, 7 EU member states lowered the tax rate, while tax reliefs or other measures for lowering the tax base (e.g. transferring losses to the following year, changes in depreciation rates) were amended by as many as 14 member states. Fewer tax rates were lowered when

it comes to social security contributions. Just three EU member states lowered their VAT rates, while four lowered some excise duties (Klun & Jovanović, 2012).

A different trend has emerged after 2009. A more detailed review of the changes in each member state in 2012 and 2013 shows that most measures do not conform to the recommendations included in the 2012 Annual Growth Survey. Where indirect taxes are concerned, most countries introduced VAT reforms that increase the tax rates. Excise duties were also increased. The VAT rate was increased by as many as nine EU member states, including Slovenia, while the rate was lowered in three member states. The excise duties on at least one group of excisable products were increased by a total of 19 member states. No member states decided to decrease excise duties. Staying with indirect taxes, 11 member states increased the environmental tax rates, while three member states decreased them. Despite the recommendations, the trend of increasing tax rates is noticeable even when it comes to the most important direct taxes. The corporate income tax rates were increased by six EU member states, while another six decided to lower them. On the other hand, as many as 16 member states adopted measures lowering the tax base (e.g. by increasing tax reliefs or introducing special arrangements). The personal income tax rates were increased by nine member states and lowered by two. Additionally, a number of members adjusted the tax bases and introduced special tax arrangements. It is interesting to note that half of all the EU member states introduced reforms concerning the taxation of property. Seven countries increased the tax rates, and additional four increased the tax base, while three countries lowered the tax rates (Garnier *et al.*, 2013).

Comparing the measures adopted in individual member states with the recommendations for individual member states, we find that the recommendation for the transfer of the tax on labour to other tax bases was given to 11 member states, none of which implemented it fully by 2013. The broadening of the tax base, particularly to achieve greater efficiency and competitiveness, was implemented only partially in some member states. The recommendation was given to seven member states in 2012 and further three in 2013. It was only implemented in Slovakia. A similar failure is apparent when it comes to recommendations to reduce borrowing incentives in the context of corporate income tax. The recommendation was first given to three EU member states and then to further two member states. None of them implemented it. When it comes to recommendations related to the taxation of property, the rate of implementation was also low. A total of 13 member states were given the recommendation to transfer the tax burden from labour to property. The recommendation was implemented by just four member states (European Commission, 2013b).

### 3. Survey on the opinion of tax experts on the tax system in Slovenia

In preparing the survey, we followed the example of a 2013 survey in the USA, which was carried out for the purpose of comparison with similar surveys in 1994 and 1934 (NTA, 2013, and Slemrod, 1995), and a survey in Croatia (Šimović *et al.*, 2013). The survey was adapted to Slovenia's tax system and includes both identical and partially different statements connected to tax legislation and the participants' opinions. There is a total of 92 statements, which the participants evaluated with five grades. The survey was concluded with questions about the participants' age, education and area of work. The survey was carried out in a population that is professionally involved with the tax system. The survey was carried out from December 2013 to April 2014 among three groups: employees at the Ministry of Finance (including the Tax Administration and Customs Administration), tax consultants and academics in the field of finance and economics. The academics and tax consultants were sent the survey using e-mail addresses available on the websites of various faculties and institutes or in the business register. The survey was sent to a total of 53 academics and 300 tax consultants. The employees at the Ministry of Finance were forwarded the survey through the managing director of the Tax Administration, the Customs Administration head office, and the Ministry of Finance. The total number of recipients is therefore unknown, as it depends on how many heads of departments forwarded the survey, but the response in this group was considerable, with 101 employees filling in the survey. The response was the poorest in the private sector (just 18%) and somewhat better among academics (22.6%). In total, 169 individuals responded to the survey. The structure of the respondents is presented below.

	N	%
The academic community (universities, institutes)	13	7.7
The general government sector	101	59.8
The private sector	55	32.5
<b>Total</b>	<b>169</b>	<b>100.0</b>

Table 1. Respondent structure

Below, we wanted to analyse the respondents' opinions concerning just a few specific areas. We will only focus on statements connected to changes made in the last stage of tax reforms in Slovenia. We will analyse responses to questions on personal income tax and corporate income tax rates and reliefs and about the VAT rate. The table below shows only the most interesting findings. In general, most responses indicate an indifferent attitude to individual statements, as most grade averages are around 3. This means that the professional public is indifferent about a higher tax rate and about changes to the lowest tax rate. There is more of a general agreement when it comes to re-introducing some non-standard reliefs (mainly housing relief and relief for donations, while there is less agreement where insurance relief is concerned). There is a clear lack of agree-

ment with abolishing pre-completed personal income tax returns. There is also a considerable lack of agreement with the statements on comprehensive taxation, as most respondents feel that the schedular taxation of passive income is required. It is interesting to note that the groups of respondents have expressed similar agreement or disagreement with individual statements. The greatest difference is apparent when it comes to the matter of the highest tax rate, which the government employees seem reasonable, while the respondents in the private sector disagree.

	<b>Academics</b>	<b>The general government sector</b>	<b>Tax consultants</b>	<b>Total</b>
The highest personal income tax rate should be lowered (recently set at 50%).	3.182	2.780	3.852	3.158
The lowest personal income tax rate should be lowered (currently 16%).	2.091	3.000	3.037	2.952
Instead of multiple personal income tax rates, a single tax rate should be introduced and personal allowances preserved.	2.333	1.950	2.611	2.192
Individual completion of tax returns should be re-introduced instead of the current informative statement.	1.417	1.564	1.623	1.572
All income should be taxed using the same method (by rates or a flat rate).	2.750	2.634	2.302	2.536

**Table 2.** The average evaluation of statements connected to personal income tax

When it comes to the second set of questions, concerning corporate income tax, there is less of a consensus between the three groups of respondents. Interestingly, the government employees and the academics both disagree with the continued lowering of the tax rates. The tax consultants also disagree with lowering the tax rate, but their average grade is somewhat higher. The tax consultants agree more with the statement that there should be a smaller tax burden on small and medium-sized enterprises, government employees are indifferent to this statement, while the academics disagree with it. Overall, the three groups agreed most with the statements connected to tax relief for research and development and tax relief for investments; most respondents agreed with the statements. The respondents disagree with regional tax relief or tax relief in particular areas.

	Academics	The general government sector	Tax consultants	Total
The corporate income tax rate should be lowered.	2.250	2.740	3.196	2.847
The tax burden on small and medium-sized enterprises should be reduced.	2.583	3.168	3.889	3.359
There should be more regional tax reliefs.	2.583	3.178	3.148	3.126
The tax reliefs for Pomurje should be preserved even after expiry.	2.500	2.663	2.944	2.743
The tax reliefs for research and development purposes are important.	4.083	4.228	4.315	4.246
The tax relief for investments should be suspended.	4.000	4.059	4.333	4.145

**Table 3.** The average evaluation of statements connected to corporate income tax

It is evident that recommendations for the transfer of tax burden from labour and capital to consumption have little support among professionals. Analysing the statements connected to VAT, we found that most respondents believe that the VAT rate should not be increased and feel that it would be better to introduce a “crisis tax” instead.

	Academics	The general government sector	Tax consultants	Total
Standard VAT should be increased	1.182	1.693	1.667	1.651
Higher VAT rate is better than “crisis tax”	1.833	2.820	2.778	2.735

**Table 4.** The average evaluation of statements connected to VAT

## 4. Conclusion

Considering the recommendations given to other EU member states and their response, it is interesting to note that Slovenia adopted amendments to the tax legislation in a similar direction, focusing more on fiscal consolidation than on change to promote economic growth. The professionals have a similar opinion, disagreeing with increasing the burden on consumption, but also disagreeing with lowering taxes for companies and disapproving high personal income taxation. It is interesting to note that in their comments, the respondents emphasised that the tax system

in Slovenia is good for the most part, but that it is too hard on people willing to pay taxes. The respondents' opinion is that much more effort and changes should be aimed at non-payers and the elements of the tax system that allow particular groups to enjoy special status.

## References:

Council of the European Union (2013.), *Recommendation for a COUNCIL RECOMMENDATION on Slovenia's 2013 national reform programme and delivering a Council opinion on Slovenia's stability programme for 2012-2016*, Brussels: Council of the European Union

European Commission (2013a.), *Annual Growth Survey 2014*, Brussel: European Commission

European Commission (2013b.), *Tax reforms in EU Member States: Tax policy challenges for economic growth and fiscal sustainability*, Luxembourg: Office for Official Publications of the European Communities

Eurostat (2013.), *Taxation trends in the European Union*, Luxembourg: Publications Office of the European Union

Garnier, G., Gburzynska, A. G., Milena, M., Prammer, D., Rua, S., Skonieczna, G. (2013.), *Recent Reforms of Tax Systems in the EU: Good and Bad News*, Brussels: European Commission

Klun, M., Jovanović, T. (2012.), Primerjava različnih segmentov javnih financ s poudarkom na davčnih sistemih In Vintar, M. et al., ed. *Primerjalni pogled na delovanje izbranih področij javnega sektorja v Sloveniji*, p. 159-172. Ljubljana: Fakulteta za upravo

National Tax Association (2013.), *Opinion survey 2013*

Šimović, H., Blažič, H., Štambuk, A. (2013.), Što porezni stručnjaci misle o poreznom sustavu i poreznoj politici u Hrvatskoj? *Porezni vjesnik*, p. 31-37.

**doc. dr. sc. Lejla Lazović-Pita**  
Ekonomski fakultet Univerziteta u Sarajevu  
e-mail: lejla.lazovic@efsa.unsa.ba

**doc. dr. sc. Ana Štambuk**  
Ekonomski fakultet Sveučilišta u Rijeci  
e-mail: ana.stambuk@efri.hr

## **STANJE I PERSPEKTIVE POREZNIH REFORMI U BOSNI I HERCEGOVINI: REZULTATI ANKETE POREZNIH STRUČNJAKA<sup>18</sup>**

### **THE STATE AND PERSPECTIVES OF TAX REFORMS IN BOSNIA AND HERZEGOVINA: EXPERT OPINION SURVEY RESULTS**

#### **SAŽETAK**

Cilj ovoga rada je analizirati odgovore poreznih stručnjaka na skupinu anketnih pitanja u vezi stanja i perspektive poreznih reformi u Bosni i Hercegovini (BiH), odnosno u Federaciji BiH (FBiH). Anketa je provedena u 2014. godini, a obuhvatila je zaposlene u tri sektora: privatnom, javnom i akademskom dajući odgovore na preko šezdeset pitanja u vezi glavnih poreznih oblika kao i općih stavova o poreznoj politici u BiH. Anketa je, osim u FBiH, provedena i u Republici Srpskoj te su u radu uspoređeni i odgovori na ista pitanja u dva entiteta u BiH. Rezultati pokazuju da se u međuentitetskoj usporedbi ispitanici u tri sektora slažu oko uvođenja progresivnog poreza na dohodak, zadržavanja standardnih odbitaka u sustavu poreza na dohodak, uvođenja trošarina na luksuzne proizvode i zadržavanja trenutnih stopa poreza na dodanu vrijednost i poreza na dobit. Međutim, postoje entitetske razlike u percepciji ispitanika u vezi eventualnog uvođenja diferenciranih stopa PDV-a, te ravnoteže koja postoji između načela pravednosti i efikasnosti u oporezivanju dohotka. U fokusu analize su odgovori ispitanika iz FBiH. U binomnoj probit regresijskoj analizi provedenoj na bazi odgovora danih u FBiH u smislu ekonomskih vrijednosti odnosno neoliberalnih ili klasično-intervencionističkih percepcija ispitanika, utvrđena su odstupanja odgovora u odnosu na očekivana. Kao eventualno objašnjenje odstupanja, u radu je dana i kratka usporedba stavova i percepcija poreznih stručnjaka s aktualnim prijedlozima Reformske agende za BiH čime se dodatno naglašava činjenica da se porezne reforme u BiH i dalje provode *ad hoc*.

**Ključne riječi:** porezna reforma, porezna politika, anketa stručnjaka, BiH

---

<sup>18</sup> Ovaj rad sufinancirala je Hrvatska zaklada za znanost projektom IP-2013-11-8174 te Sveučilište u Rijeci projektom 13.02.1.2.02.

Dijelovi empirijske analize prikazani u ovome radu su ranije objavljeni u časopisu *The South East European Journal of Economics and Business*, volume 10 (2), 2015, str. 29-45 i časopisu *Journal of Advanced Research in Law and Economics*, vol 7, issue 8 (22), winter 2016, str. 2106.-2120.



## ABSTRACT

The aim of this paper is to analyse the answers of tax experts to a group of survey questions regarding the state and perspective of tax reforms in Bosnia and Herzegovina (B&H) and in the Federation of B&H (FB&H). The survey was conducted in 2014 and included employees in three sectors: the private, public and academic sector providing answers to over 60 questions regarding major tax forms as well as general views on tax policy in Bosnia and Herzegovina. Except in FB&H, the survey was also conducted in the Republika Srpska and the answers to the same questions in the two entities of Bosnia and Herzegovina were compared in this paper. The results show that, in inter-entity comparisons, the respondents in the three sectors agree on introducing progressive income tax, retaining standard income tax deductions, introducing excise tax on luxury products, and keeping current value added tax and profit tax rates. However, there are differences between entities in the respondents' perception of the possible introduction of differentiated rates of VAT and the trade-off balance between the principles of fairness and efficiency in income taxation. The focus of the analysis is on the answers of respondents from FB&H. In the binomial probit regression analysis carried out based on responses provided in FB&H in terms of economic values, i.e. neoliberal or classic-interventionist perceptions of respondents, deviations of responses were recorded in relation to expected responses. As a possible explanation of deviations, there is also a short comparison of attitudes and perceptions of tax experts with the current proposals of the Reform Agenda for Bosnia and Herzegovina which further emphasises the fact that tax reforms in B&H are still being conducted *ad hoc*.

**Key words:** tax reform, tax policy, expert survey, B&H

## 1. Uvod

BiH se nakon potpisivanja Daytonskog mirovnog sporazuma i okončanja rata u BiH našla u jedinstvenoj ustavnoj organizaciji asimetrične federacije koja se neminovno odrazila i na poreznu politiku i porezne reforme. Naime, porezna politika i reforme koje su se provodile i koje se provode u BiH u posljednja dva desetljeća uglavnom su posljedica savjeta i preporuka međunarodnih financijskih institucija pa je provedeno istraživanje između poreznih stručnjaka u vezi stanja i perspektive poreznih reformi u BiH bilo dodatno zanimljivo i izazovno u odnosu na slično provedeno istraživanje u zemljama u regiji (za slučaj Hrvatske: Šimović, Blažić i Štambuk, 2013. i naknadno provedeno istraživanje za slučaj Slovenije: Klun i Štambuk, 2015.). Dakle, od 2006. godine kada se posljednji put provela sveobuhvatna porezna reforma u BiH uvođenjem poreza na dodanu vrijednost, nadležnost i jurisdikcija nad pojedinim poreznim oblicima organizirana je na sljedeći način: svi neizravni porezi, dakle porez na dodanu vrijednost kao predstavnik poreza na promet, trošarine, carine i cestarine zakonski su regulirane na razini BiH te je nadležnost za prikupljanje i raspodjelu prihoda od neizravnih poreza dodijeljena posebnoj poreznoj upravi – Upravi za neizravno oporezivanje u BiH; izravni porezi su u entitetskim nadležnostima zajedno sa socijalnim doprinosima, tako da u

području oporezivanja dohotka, dobiti i imovine te doprinosa nadležnost dijele dvije entitetske porezne uprave – Porezna uprava FBiH i Porezna uprava RS-a bez međusobnih formalnih dogovora. Ovakav kompleksan porezni sustav organizacije porezne politike u BiH ima svoje učinke i na pokretanje inicijative i provođenje porezne politike u BiH, što izvjesno dovodi do nejednakog poreznog tretmana svojih građana, stimuliranje i privlačenje stranih ulaganja i dr.

Aktualno stanje porezne politike u BiH je pred velikim izazovima. Naime, Lazović-Pita i Štambuk (2015: 32) daju kratki prikaz svih provedenih poreznih reformi u BiH od 1995. do 2014. godine kada je anketa i provedena. Međutim, od 2014. g. do danas BiH se našla pred novim izazovima u području porezne politike i poreznih reformi definiranih u sklopu Reformske agende za BiH<sup>19</sup> zarazdoblje 2015.-2018. g. (Vlada FBiH, 2015) pa su time rezultati provedene ankete u godini prije predloženih reformi još važniji i zanimljiviji za analizu. Dakle, Reformsku agendu su potpisale i usvojile sve razine vlasti u BiH (entiteti, kantoni) na temelju prijedloga i preporuka međunarodnih financijskih institucija kako bi uspješno izvršili reformu u šest područja, gdje se prvo definirano područje odnosi na javne financije, oporezivanje i fiskalnu održivost. S tim u vezi, cilj ovoga rada je predstaviti rezultate ankete o stanju i perspektivama poreznih reformi u BiH s fokusom na odgovore iz FBiH u godini prije usvajanja Reformske agende kako bi se mišljenja poreznih stručnjaka mogla usporediti s implementacijom poreznih reformi danih u Reformskoj agendi. Početno stanje poreznog sustava u BiH po osnovnim poreznim oblicima je sažeto u tablici 1 te će poslužiti kao temelj za daljnju analizu.

---

<sup>19</sup> Reformska agenda za BiH za razdoblje 2015.-2018. godine je dokument koji implementira Vijeće Ministara BiH, a na temelju tzv. „britansko-njemačke inicijative za BiH“ iz 2014. godine kako bi se ubrzao skup reformi u BiH i kako bi se BiH približila ispunjavanju uvjeta za pridruživanje integracijama EU-a.

Vrste davanja	BiH	
	FBiH	RS
Imovinski porezi		
Porez na nekretnine	Nominalno postoji porez na imovinu, kantonalno definiran (10 kantona), paušalno plaćanje na bazi m <sup>2</sup> prema lokaciji/reforma nije provedena	Da, reforma provedena od 2013.g., niska stopa od maks. 0,2 % godišnje na procijenjenu vrijednost
Porez na darove i nasljedstvo	Da, kantonalno određen u nekim kantonima, stope 2 %-10 %	Ne
Porez na promet nekretnina	Da, kantonalno definiran, stope do 5 %	Ne
Porez na dohodak		
Porezne stope	10 %	10 %
Standardni odbitci (osobni, za uzdržavane članove obitelji)	Da	Da
Nestandardni odbitci	Da, npr. kamata na stambeni kredit	Da, npr. kamata na stambeni kredit
Oporezivanje dividendi	Ne	Da
Oporezivanje kamate na štednju i vrijednosne papire	Ne	Ne
Porez na dobit		
Porezne stope	10 %	10 %
Izuzeća i investicijski poticaji	Da	Da
Doprinosi	Da, 31 % (mirovinsko, zdravstveno, za slučaj nezaposlenosti) – snosi zaposlenik; 10,5 % (po istim osnovama) snosi poslodavac	Da, 33 % (mirovinsko, zdravstveno, za slučaj nezaposlenosti, dječja zaštita) – snosi zaposlenik
Neizravni porezi		
BiH razina		
Stope PDV-a (standardne, snižene)	Da, 17 % standardna stopa, bez snižene stope	
Trošarine	Da, kao u standardnoj praksi EU-a + kava i bezalkoholna pića	

**Tablica 1.** Stanje poreznog sustava u BiH<sup>20</sup> (2014.-2015. g.)

Izvor: vlastiti prikaz na temelju relevantnih zakonskih rješenja

20 Značajne zakonske izmjene nisu prisutne ni u 2017. godini.

## 2. Metodologija

Blažić *et al.* (2017) navode kako, za razliku od uobičajene američke prakse (Lim, Slemrod i Wilking, 2013), koja uključuje istraživanja stanja i perspektiva poreznih reformi u redovnim ciklusima, u (post)tranzicijskim zemljama ovakva istraživanja nisu uobičajena. Dakle, anketa o stanju i perspektivama poreznih reformi u BiH koja je provedena u proljeće i ljeto 2014<sup>21</sup>. godine je prva anketa ikada provedena u BiH. Anketa je paralelno provedena i u RS, ali s malim brojem anketiranih (svega 28 potpunjenih anketa, Antić, 2014) tako da će se u nastavku analize dati kratki usporedni prikaz između odgovora ispitanika u FBiH i RS. Anketni upitnik je sastavljen tako da sadrži 64 odnosno 61 pitanje u FBiH i RS anketi redom, a odgovori su Likertovog tipa od 1 do 5 (1 - u potpunosti se ne slažem; 5 - slažem se u potpunosti). Odgovori na pitanja Likertovog tipa će biti prikazani kao da / ne / neutralna pitanja tako da će ocjene 1 i 2 (u potpunosti se ne slažem i uglavnom se ne slažem) biti prikazane kao negativan odgovor, neutralni odgovori odgovaraju ocjeni 3 (niti se slažem niti se ne slažem), a odgovori 4 i 5 (uglavnom se slažem i u potpunosti se slažem) kao pozitivni odgovori.

U smislu strukture ankete u oba entiteta, pitanja u području indirektnih poreza jednaka su u obje ankete, gdje su pitanja u vezi s poreznom politikom u nadležnosti entiteta modificirana i prilagođena aktualnom entitetskom zakonodavstvu. Kao što je navedeno, u RS je anketa provedena na 28 ispitanika, a prikaz osnovnih rezultata je dan u Antić (2014). Anketa u FBiH je uključivala 194 ispitanika grupiranih u tri grupe: javni sektor, privatni sektor i akademski sektor, te je prikaz rezultata dan u Lazović-Pita i Štambuk (2015) i u Lazović-Pita i Štambuk (2016). Ispitanici su na anketu uglavnom odgovarali elektronskim putem (putem e-pošte) te pisanim putem, odnosno putem pošte. Pošto je provođenje ankete u javnom sektoru povjereno zaposlenicima Porezne uprave FBiH, a na temelju odobrenja direktora Porezne uprave FBiH, točan broj osoba kojima je poslan upitnik je nepoznat, ali se procjenjuje da je anketu zaprimilo oko 214 službenika, odnosno šefova i pomoćnika šefova poreznih ispostava u FBiH kao i predstavnika poreznih odjela u Federalnom Ministarstvu financija. Anketiranje u privatnom sektoru je izvršeno tako da su kontaktirani zaposlenici domaćih i međunarodnih računovodstveno-revizorskih kuća te porezni savjetnici, a anketiranje akademskog osoblja je izvršeno slanjem anketa putem pošte, uglavnom javnim sveučilištima u FBiH gdje su ciljna skupina bili profesori iz područja ekonomije, odnosno javnih financija. Stopa ispitanika koji su odgovorili na upitnik u privatnom i akademskom sektoru iznosi oko 47 %, (za javni sektor možemo procijeniti da je stupanj ispitanika koji su odgovorili na anketu visok te da iznosi oko 51 %). Slično kao i u američkoj (Lim, Slemrod i Wilking, 2013), hrvatskoj (Šimović, Blažić i Štambuk, 2014: 410) i slovenskoj anketi (Klun i Štambuk, 2015), u nastavku će se koristiti prag konsenzusa od barem

---

21 Jedan dio ispitanika je dostavio anketu u rujnu 2014. g., a uslijed nasilnih prosvjeda u FBiH u proljeće kada je anketa prvi put poslana.

61 % pozitivnih ili negativnih odgovora, bez neutralnih odgovora. U slučaju FBiH takav stupanj konsenzusa postignut je u 57 od 64 pitanja. Ovaj visok stupanj konsenzusa ne treba poistovjećivati s konzistentnom primjenom porezne politike u FBiH odnosno BiH.

Dakle, u nastavku analize, najprije ćemo dati strukturu ispitanika u FBiH u sve tri grupe prema osnovnim statističkim, demografskim i obrazovnim karakteristikama, a zatim ćemo izvršiti dvije analize: prva će se odnositi na usporedni prikaz i analizu rezultata na skup pitanja po poreznim oblicima i prema općim stavovima prema poreznoj politici u FBiH i RS, a druga analiza će se odnositi na procjenu ekonomskih vrijednosti ispitanika u FBiH u smislu njihove veće ili manje sklonosti ka neoliberalnim ili klasično-intervencionističkim preferencijama u provođenju porezne politike. Lazović-Pita i Štambuk (2015) i Lazović-Pita i Štambuk (2016) daju detaljniju empirijsku analizu prezentiranih ekonomskih vrijednosti i perspektiva prema grupama ispitanika, ali za potrebe ovoga rada, one neće biti dodatno analizirane. U dijelu rasprave ćemo pokušati dati odgovore na osnovna pitanja u smislu stanja i perspektiva poreznih politika u FBiH, odnosno BiH.

### 3. Rezultati istraživanja

Kako je navedeno u metodologiji, u nastavku u tablici 2 dajemo strukturu ispitanika u FBiH u sve tri grupe prema osnovnim statističkim, demografskim i obrazovnim karakteristikama.

FBiH	Učešće svake grupe u ukupnom broju anketiranih ( u %)	Starosna struktura (prosječna starost ispitanika po grupama), u godinama	Obrazovna struktura u svakoj grupi (% sa min. završenim poslijediplomskim studijem)	Učešće ispitanika u svakoj grupi prema području/ djelatnosti (od 100 %)
Akademski sektor	23 %	41	93 %	84 % ekonomija
Privatni sektor	20 %	35	28 %	26 % porezni savjetnici
Javni sektor	57 %	49	11 %	91 % porezna uprava
Ukupno	100 %	(prosječna starost cijele populacije: 44 godine)	...	...

**Tablica 2.** Prikaz strukture ispitanika u FBiH u sve tri grupe  
Izvor: obrada autora

Iz tablice 2 je vidljivo da najveći broj anketiranih (57 %) dolazi iz javnog sektora te da u okviru ove grupe najveći broj ispitanika dolazi iz Porezne uprave FBiH. Prosječna starost u ovoj grupi je 49 godina, što je iznad

prosjeaka ukupnog broja anketiranih (44 godine). Svi ispitanici imaju minimalno predbolonjski ili bolonjski stupanj obrazovanja, a svega 11 % ispitanika u javnom sektoru ima minimalno magistarski<sup>22</sup> stupanj obrazovanja ili doktorat. Privatni sektor u ukupnoj strukturi ispitanika ima najmanje učešće (svega 20 %), ali je ova grupa ispitanika i najmlađa (35 godina) i znatno ispod prosječne starosti ukupno anketiranih. Svega 26 % ispitanika iz privatnog sektora dolazi iz područja poreznog savjetovanja jer ovo područje u FBiH nije zakonski-strukovno regulirano. Većina ispitanika u ovom području dolazi iz finansijskih institucija kao zaposlenici u području računovodstva i revizije. Akademski sektor sudjeluje s 23 % ispitanika u ukupnom broju ispitanika, te, očekivano, najveći broj ispitanika ima minimalno završene poslijediplomske studije (93 %) i to u području ekonomije. Prosječna starost ove grupe iznosi 41 godinu.

U nastavku analize u tablici 3 dajemo skraćeni prikaz odgovora ispitanika u FBiH i RS grupiranih kao da / ne / neutralni odgovori u okviru svakog poreznog oblika te kao opći stavovi prema poreznom sustavu. Posebno je zanimljivo usporediti odgovore u oba entiteta, utvrditi eventualne različitosti u stavovima te dati osvrt na aktualno stanje s aspekta preporučenih poreznih reformi definiranih u Reformskoj agendi za BiH čiji su potpisnici i entitetske vlade.

---

22 Slično kao i kod klasifikacije dodiplomskih studija, poslijediplomski studiji uključuju predbolonjski magistarski program i bolonjski magistarski program.

Stavovi	RS			FBiH		
	Ne	Neutralno	Da	Ne	Neutralno	Da
<b>Neizravni porezi</b>						
Treba uvesti sniženu stopu PDV-a na određene proizvode.	50	0	50	27	2	72
Treba povećati opću stopu PDV-a.	78	12	10	71	6	22
Trošarine na naftu i naftne derivate treba povećati.	71	10	19	68	14	18
Luksuzne proizvode treba oporezivati trošarinama.	7	7	86	9	6	85
<b>Izravni porezi i socijalni doprinosi</b>						
Treba povećati stope doprinosa po svim osnovama.	100	0	0	86	5	9
(Re)investiranu dobit treba izuzeti od oporezivanja.	18	2	80	21	10	68
Treba povećati stopu poreza na dobit.	65	10	25	62	9	29
Dividende treba oporezivati nižom stopom od ostalih dohodaka (zbog ekonomskog dvostrukog oporezivanja dividendi, tj. prethodnog plaćanja poreza na dobit).	22	14	64	34	16	51
Umjesto jedne stope poreza na dohodak od 10 %, treba uvesti više graničnih stopa / razreda poreza na dohodak.	28	15	57	29	5	66
Imovina je nužan dopunski pokazatelj ekonomske (porezne) snage uz dohodak.	6	13	81	8	10	82
<b>Opći stavovi prema poreznom sustavu</b>						
Treba povećati kazne za porezne prekršaje.	22	8	70	25	7	67
Načelo pravednosti treba biti ispred načela efikasnosti u kreiranju porezne politike.	33	33	34	19	19	62
Ukupno porezno opterećenje tj. udio poreza u BDP-u treba smanjiti.	15	18	67	16	18	66
Porezni teret treba što više prebaciti s dobiti i dohotka na potrošnju.	45	15	40	39	17	44
Porezni teret treba što više prebaciti s dobiti i dohotka na imovinu.	32	18	50	28	21	51

**Tabela 3.** Skraćeni prikaz odgovora ispitanika u FBiH i RS prema osnovnim poreznim oblicima, u %

Izvor: obrada prema Lazović-Pita i Štambuk 2015: 35.-38. i Antić 2014

Drugi dio analize se temelji na procjeni stavova ispitanika i njihove sklonosti ka neoliberalnim ili klasično-intervencionističkim preferencijama u provođenju porezne politike u FBiH. Za te potrebe, u binomnom probit regresijskom modelu se kao prediktori (nezavisne varijable) koriste dva stava: stav br. 24 (Ukupni udio javnih prihoda (i javnih rashoda) u BDP-u treba smanjiti) koji odražava neoliberalne sklonosti i stav br. 34 (Načelo pravednosti treba biti ispred načela efikasnosti u kreiranju porezne politike) koji odražava klasično-intervencionističke preferencije. Regresijska analiza je izvršena na temelju grupiranih odgovora kao da/ne, bez neutralnih odgovora, te su demografski podaci (stupanj obrazovanja, sektor u kojemu su ispitanici zaposleni i dob) korišteni kao kontrolne varijable, ali kao takve nisu posebno analizirane. Dakle, oni ispitanici koji su potvrdno odgovorili na stav br. 24 (u odnosu na one koji su odgovorili protivno) smatraju se neoliberalnijima u svojim ekonomskim vrijednostima, odnosno promoviraju manju ulogu države u gospodarstvu. Takvi ispitanici će u odnosu na one koji nisu protiv smanjenja ukupnog udjela javnih prihoda/rashoda u BDP-u biti skloniji pozitivno odgovarati na pitanja u vezi proširenja porezne osnovice kao i na pitanja u vezi smanjenja najviših poreznih stopa (u području oporezivanja dohotka). Na isti način, oni koji su potvrdno odgovorili na stav br. 34 (u odnosu na one koji su odgovorili protivno) smatraju se sklonijima klasično-intervencionističkim mjerama u ekonomiji, dakle, većoj redistributivnoj funkciji države, a time i njenim značajnijim učešćem. U smislu oporezivanja dohotka, ova grupa ispitanika koja je potvrdno odgovorila na stav br. 34 u odnosu na one koji su odgovorili protivno, trebala bi preferirati sveobuhvatnu definiciju dohotka prema Schanz-Haig-Simonsu (S-H-S) kao poreznu osnovicu. Provedeno je 26 regresija čiji su zbirni prikazi dani u tablici 4.

Stav	P24 <sup>a</sup>	P34 <sup>b</sup>	$\chi^2$
Treba uvesti sniženu stopu PDV-a na određene proizvode.	0.222 (0.369)	0.484 (0.327)	6831 [0.337]
Treba povećati opću stopu PDV-a.	-0.651 (0.424)	-0.767** (0.389)	10425 [0.108]
Trošarine na duhan i duhanske prerađevine treba povećati.	-0.168 (0.445)	0.42 (0.397)	6037 [0.419]
Treba povećati stope doprinosa po svim osnovama.	0.621 (0.386)	0.447 (0.568)	491025 [0]
Treba uvesti porez na financijske transakcije (npr. trgovina vrijednosnim papirima i izvedenim vrijednosnim papirima, devizne transakcije, itd.)	1.182** (0.533)	-0.713* (0.416)	18869 [0.004]
Treba uvesti porez na aktivu banaka.	0.176 (0.391)	1.341*** (0.413)	21.32 [0.002]



Financiranje funkcija države treba biti manje iz poreza, a više iz različitih neporeznih prihoda (s naglaskom na različite naknade korisnika).	1.424*** (0.431)	-0.595 (0.394)	13315 [0.038]
Oporezivanjem treba obuhvatiti i ostale oblike imovine (npr. pokretnine, financijsku imovinu i sl.), tj. uvesti sintetički porez na imovinu fizičkih osoba.	0.348 (0.453)	-0.431 (0.406)	500844 [0]
Nasljedstva i darove treba oporezivati.	0.204 (0.373)	-0.117 (0.344)	8643 [0.195]
Imovina je nužan dopunski pokazatelj ekonomske (porezne) snage uz dohodak.	-0.108 (0.595)	0.678* (0.402)	8727 [0.19]
Umjesto jedne stope poreza na dohodak od 10 %, treba uvesti više graničnih stopa/razreda poreza na dohodak.	0.214 (0.386)	0.112 (0.34)	19025 [0.866]
Treba povećati postojeću stopu poreza na dohodak.	-0.883* (0.486)	0.917* (0.534)	18982 [0.004]
Treba ukinuti osobni odbitak u sustavu poreza na dohodak.	0.12 (0.434)	-0.75* (0.407)	9613 [0.142]
Treba ukinuti odbitke za uzdržavane članove obitelji u sustavu poreza na dohodak.	-0.093 (0.434)	-0.702* (0.373)	7129 [0.309]
Treba ukinuti olakšice kod poreza na dohodak po osnovi plaćenih zdravstvenih usluga (dodatni osobni odbitak).	1.117** (0.548)	-0.722* (0.376)	10044 [0.123]
Treba ukinuti olakšice kod poreza na dohodak po osnovi rješavanja (prvog) stambenog pitanja (dodatni osobni odbitak).	0.511 (0.455)	-0.517 (0.348)	26146 [0.191]
U okviru poreza na dohodak treba oporezivati dividendu i udjele.	-0.098 (0.398)	-0.71* (0.404)	6848 [0.335]
U okviru poreza na dohodak treba oporezivati realizirane financijske kapitalne dobiti.	-0.29 (0.421)	-0.697* (0.401)	5332 [0.502]
U okviru poreza na dohodak treba oporezivati kamate na štednju.	-0.435 (0.386)	-0.24 (0.344)	42253 [0.33]
Sve izvore dohotka u okviru poreza na dohodak treba oporezivati na isti način kako je aktualno stanje.	0.186 (0.377)	-0.28 (0.357)	9184 [0.163]
Dohotke od kapitala treba oporezivati nižom stopom nego dohotke od rada.	0.451 (0.474)	0.193 (0.393)	9193 [0.163]
Dividende treba oporezivati nižom stopom od ostalih dohodakka (zbog ekonomskog dvostrukog oporezivanja dividendi tj. prethodnog plaćanja poreza na dobit).	0.003 (0.373)	-0.085 (0.346)	0.958 [0.987]

Naknade zaposlenima (topli obrok, regres, dnevnice do propisanog iznosa) treba i dalje izuzeti iz oporezivanja porezom na dohodak.	0.112 (0.422)	0.186 (0.359)	3347 [0.764]
Treba povećati stopu poreza na dobit.	0.047 (0.435)	-0.253 (0.377)	4057 [0.669]
Treba uvesti diferencirane stope poreza na dobit tj. snižene stope za određene industrijske grane (npr. poljoprivreda, turizam).	-0.229 (0.427)	-0.072 (0.348)	34001 [0.818]
(Re)investiranu dobit treba izuzeti od oporezivanja.	0.255 (0.448)	0.17 (0.422)	2392 [0.793]

**Tablica 4.** Rezultati binomne probit regresije za ekonomske vrijednosti u FBiH

Izvor: obrada prema: Lazović-Pita i Štambuk 2015: 39.-40.

*N.B: Kontrolne varijable su sektor zaposlenja, dob i obrazovanje. Robusna standardna pogreška je u zagradama. p-vrijednost  $\chi^2$  je u zagradama.*

*\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$*

*<sup>a</sup>P24 - Ukupni udio javnih prihoda (i javnih rashoda) u BDP-u treba smanjiti.*

*<sup>b</sup>P34 - Načelo pravednosti treba biti ispred načela efikasnosti u kreiranju porezne politike.*

## 4. Analiza rezultata i rasprava

Skraćeni usporedni prikaz stavova poreznih stručnjaka u FBiH i RS prikazanih u tablici 3 pokazuje da su porezni stručnjaci složni oko većine odgovora u oba entiteta. Ispitanici i u FBiH i u RS se uglavnom slažu da ne treba povećavati opću stopu PDV-a te da ne treba povećavati trošarine na naftu i naftne derivate, kao i da bi trebalo trošarinom oporezivati luksuzne proizvode. Jedino pitanje na koje postoje različitosti u odgovorima između ispitanika u FBiH i RS odnosi se na mogućnost uvođenja diferencirane (snižene) stope PDV-a gdje su ispitanici iz RS podijeljeni u svom mišljenju, a u FBiH većina ispitanika smatra da bi trebalo uvesti sniženu stopu PDV-a. Ovi odgovori su posebno zanimljivi u odnosu na aktualno stanje u poreznoj politici u BiH u smislu Reformske agende gdje se u sektoru oporezivanja trošarina na naftu i naftne derivate u praksi dogodio potpuno suprotan scenarij u odnosu na stavove poreznih stručnjaka. Naime, u BiH su nedavno, nakon više mjeseci odbijanja usvajanja Izmjena i dopuna zakona o troširanama na naftu i naftne derivate, usvojene predložene zakonske izmjene koje planiraju povećanje trošarina u navedenoj skupini trošarina, koje će imati status namjenske trošarine – cestarine s ciljem izgradnje autocesta i cestovne infrastrukture u BiH (oba entiteta). Zanimljivo je napomenuti da je trošarina na naftu i naftne derivate prije usvajanja zakonskih izmjena i dopuna također imala namjensku dimenziju, odnosno status cestarine koja je sada pribrojena nenamjenskoj trošarini na naftu i naftne derivate.

Sljedeća analizirana skupina pripada području izravnih poreza i doprinosa gdje su odgovori slični u svim skupinama, iako su zakonodavstva u ovoj oblasti u entitetskoj nadležnosti pa su time i različita. Dakle, ispitanici se slažu da reinvestiranu dobit treba izuzeti od oporezivanja, da dividende treba oporezivati nižom stopom od ostalih dohodaka, da treba

uvesti progresivno oporezivanje dohotka te da je imovina nužan dopunski pokazatelj ekonomske (porezne) snage uz dohodak. Ispitanici se ne slažu da treba povećati stope doprinosa, niti da treba povećati stopu poreza na dobit. U federalnom akcijskom planu u FBiH koji je sastavljen na temelju Reformske agende, neki segmenti ove analize su uključeni u nacрте i prijedloge zakona. Primjerice, nacрт zakona o porezu na dohodak u FBiH, bez uporišta u Reformskoj agendi, predlaže, *inter alia*, uvođenje progresivnih stopa poreza na dohodak od 10 % i 20 %, proširenje porezne osnovice za dosad neoporezive kategorije toplog obroka, regresa, naknade za prijevoz i dr., povećanje iznosa standardnog osobnog odbitka, ali i ukidanje osobnih odbitaka za uzdržavane članove obitelji. Ovaj zakon je u nacртnoj fazi predložen zajedno s novim zakonom o doprinosima koji podrazumijeva ukidanje stopa doprinosa na plaće koje su teretile poslodavce, ali i povećanje stopa doprinosa iz plaće s postojećih 31 % na 33 % koje terete zaposlenike. Iz tablice 3 vidimo da su stavovi poreznih stručnjaka po osnovi većine navedenih pitanja protivni predloženim zakonskim rješenjima.

U tablici 3 je dan i skraćeni prikaz općih stavova poreznih stručnjaka prema poreznoj politici gdje bilježimo najznačajnija odstupanja u stavovima poreznih stručnjaka u dva entiteta. Porezni stručnjaci u FBiH i RS su uglavnom suglasni da se trebaju povećati kazne za porezne prekršaje, da ukupno porezno opterećenje, tj. udio poreza u BDP-u treba smanjiti te da dio poreznog tereta treba prebaciti s dohotka i dobiti na imovinu. Razlike u odgovorima postoje u važnom pitanju u vezi s davanjem preferencije načelu pravednosti u odnosu na načelo efikasnosti u kreiranju porezne politike, gdje se ispitanici u FBiH uglavnom slažu s ovim stavom, a u RS su odgovori višeznačni. Slično stanje u odgovorima u oba entiteta je i u slučaju prebacivanja poreznog tereta s dohotka i dobiti na potrošnju što otvara pitanje opravdanosti fiskalne devalvacije koja se javila kao ideja u institucijama BiH u posljednjih nekoliko godina.

U smislu mjere ekonomskih vrijednosti u FBiH, u tablici 4 smo dali rezultate 26 regresijskih analiza. Oni ispitanici s većim neoliberalnim preferencijama koji su odgovorili potvrdno na stav br.24<sup>23</sup> skloniji su podržavanju uvođenja poreza na financijske transakcije. Ovaj odgovor nije u skladu s neoliberalnim preferencijama koje bi ispitanici trebali podržavati. U području oporezivanja dohotka porezom na dohodak, ispitanici koji su skloniji neoliberalnom stavu podržavaju ukidanje poreznih izdataka za zdravstvene usluge što se može objasniti kao mjera proširivanja porezne osnovice poreza na dohodak. Jedino preostalo pitanje koje se pokazalo signifikantnim je protivljenje povećanju stope poreza na dohodak s postojećih 10 %. Slično kao i prethodnom pitanju, i ovaj stav je u skladu s neoliberalnim preferencijama.

Za razliku od prethodne grupe, ispitanici s klasično-intervencionističkim preferencijama koji su na stav br. 34 odgovorili pozitivno, skloniji su odgovoriti negativno na pitanje u vezi s povećanjem standardne stope

---

23 Svi stavovi u pitanjima br. 24 i 34 mjereni su u odnosu na one koji su odgovorili protivno.

PDV-a. Ovaj stav se može objasniti kao sklonost ispitanika ka regresivnom djelovanju PDV-a kakav je u primjeni u BiH s jednom standardnom stopom od 17 %. Ovdje je važno napomenuti da su ispitanici negativno odgovorili na stav po pitanju regresivnog djelovanja PDV-a iako po ovom pitanju konsenzus nije postignut. Neočekivan odgovor u smislu navedenih klasično-intervencionističkih preferencija ove grupe odnosi se na negativan odgovor ispitanika u vezi s uvođenjem poreza na financijske transakcije. Međutim, ovakav stav poreznih stručnjaka može se objasniti činjenicom da je financijsko tržište u BiH, pa time i u FBiH, fragmentirano i nedovoljno razvijeno. Osim toga, oni koji su pozitivno odgovorili na stav br. 34 preferiraju uvođenje poreza na aktivu banaka što se može objasniti trenutnim stanjem na financijskom tržištu BiH i FBiH koje je bankocentrično. Očekivani odgovori su vidljivi u izjavama vezanima za povećanje trenutne stope poreza na dohodak od 10 % kao i činjenice da je imovina nužni pokazatelj ekonomske snage uz dohodak. Ovaj odgovor je posebno zanimljiv u odnosu na pitanje o uvođenju progresivnog sistema oporezivanja dohotka u FBiH koje se nije pokazalo signifikantnim. Ispitanici koji preferiraju načelo pravednosti u odnosu na načelo efikasnosti u oporezivanju skloniji su protivljenju ukidanju standardnih i nestandardnih odbitaka (osobnih, obiteljskih, po osnovi plaćenih zdravstvenih usluga i dr.), što je u skladu s očekivanjima. Međutim, ono što nije očekivano od ove grupe ispitanika, a izravno se veže za aktualna zakonska rješenja, jest da se ova grupa ispitanika protivi oporezivanju dividendi i udjela te ostvarenih financijskih dobitaka. Iako ovaj stav nije u skladu sa sveobuhvatnom definicijom dohotka prema S-H-S, djelomično bi se mogao opravdati činjenicom da u zemlji kakva je BiH, gdje se odvija prvobitna akumulacija kapitala, neoporezivanje dohotka iz štednje kakve su dividende, udjeli i dr. dovode do brže akumulacije domaćeg kapitala, što je jako značajno u postojećim ekonomskim uvjetima.

Iz kratke analize možemo utvrditi da postoje odstupanja od očekivanih odgovora u obje grupe mjerenja stavova što se može djelomično objasniti *ad hoc* poreznim reformama koje se provode u posljednjih dvadeset godina u BiH, i to pod pritiscima ili čak konačnim odlukama međunarodnih financijskih institucija u BiH. Posljednja u nizu, Reformska agenda za BiH, ujedno je i dokaz ovoga stava gdje postoje značajna odstupanja u smislu implementacije Reformske agende u odnosu na inicijalnu reformsku ideju kao i utvrđena odstupanja stavova poreznih stručnjaka u odnosu na prijedloge implementacije Reformske agende za BiH.

## 5. Zaključak i preporuke

Cilj ovoga rada je dati prikaz stanja i perspektiva porezne politike u BiH s fokusom na stanje u FBiH. S tim u vezi, provedena anketa o stanju i perspektivama poreznog sistema BiH u oba entiteta u BiH je pokazala da se ispitanici uglavnom slažu u većini postavljenih pitanja. Razlike u odgovorima ispitanika u oba entiteta postoje i uglavnom se odnose na pitanja u vezi uvođenja diferenciranih stopa PDV-a, te na pitanja u vezi s općim stavovima o poreznoj politici u BiH, kao što su davanje preferencije načelu pravednosti u odnosu na načelo efikasnosti u oporezivanju ili po pitanju prebacivanja poreznog tereta s dohotka i dobiti na potrošnju.

Provedena binomna probit regresija vezana uz ekonomske vrijednosti u FBiH ukazala je na neka odstupanja u odnosu na očekivane odgovore ispitanika u smislu njihovih više ili manje neoliberalnih ili klasično-intervencionističkih preferencija. U svakoj grupi je regresijska analiza pokazala većinom očekivane odgovore, ali i odstupanja od očekivanih odgovora koja se mogu djelomično objasniti *ad hoc* poreznim reformama koje se provode u posljednjih dvadeset godina u BiH, i to pod pritiscima ili čak konačnim odlukama međunarodnih financijskih institucija. Kratka analiza odgovora poreznih stručnjaka u godini prije predložene Reformske agende za BiH s analizom prijedloga reformi i provedenih reformi od 2015. godine do danas posljednji je dokaz da se, nažalost, porezna politika u BiH i dalje provodi *ad hoc* i uglavnom pod pritiscima međunarodnih financijskih institucija u BiH.

Kao prijedlog unaprjeđenja postojeće analize, bilo bi korisno anketu ponovno provesti kako bismo eventualno ustanovili postoje li promjene u stavovima i percepciji poreznih reformi u BiH. Osim toga, odgovore postojeće tri grupe ispitanika bi u perspektivi trebalo usporediti s odgovorima donositelja odluka, odnosno predstavnika u Parlamentima u BiH.

## Literatura:

Antić, D., 2014. Anketa o poreznom sistemu i poreznoj politici BiH iz ugla poreznih eksperata iz Republike Srpske. *Porezni savjetnik*, 9 (10), 14–23.

Blažić, H. et al. 2017. What tax experts in former socialist countries think about tax policy: The cases of Slovenia, Croatia and Bosnia and Herzegovina. *Economic systems*, 41, 667-693.

Klun, M., Štambuk, A., 2015. Tax Experts' opinion on tax system in Slovenia. *Ejournal of tax research*, 13 (3), 784-798.

Lazović-Pita, L., Štambuk, A., 2015. Professional opinions and attitudes on tax policy in Bosnia and Herzegovina with a special focus on the Federation of Bosnia and Herzegovina. *South East European Journal of Economics and Business*, 10 (2), 29–44.

Lazović-Pita, L., Štambuk, A. 2016. What are the Opinions of Tax Administration Officials Regarding Tax Policy Reforms in Bosnia and Herzegovina? *Journal of Advanced Research in Law and Economics*, Volume VII, Issue 8(22), 2106-2121.

Lim, D., Slemrod, J., Wilking, E., 2013. Expert and public attitudes towards tax policy: 2013, 1994, and 1934. *National Tax Journal*, 66 (4), 775–806.

Šimović, H., Blažić, H. and Štambuk, A., 2013. Što porezni stručnjaci misle o poreznom sustavu i poreznoj politici u Hrvatskoj?. *Porezni vjesnik*, 22(12), pp.31-37.

Šimović, H., Blažić, H., & Štambuk, A. (2014). Perspectives of tax reforms in Croatia: expert opinion survey. *Financial Theory and Practice*, 38(4), 405-439.

Vlada FBiH. 2015. Reformska agenda za Bosnu i Hercegovinu za period 2015.-2018. godina. Dostupno na: <http://www.fbihvlada.gov.ba/pdf/Reformska%20agenda.pdf> (pregledano 15/12/2017.)

**doc. dr. sc. Ana Štambuk**  
Ekonomski fakultet Sveučilišta u Rijeci  
e-mail: ana.stambuk@efri.hr

## **UTJECAJ SOCIODEMOGRAFSKIH OBILJEŽJA NA STAVOVE STRUČNJAKA O POREZNOJ SUSTAVU I POREZNOJ POLITICI<sup>24 25</sup>**

### **THE INFLUENCE OF SOCIODEMOGRAPHIC CHARACTERISTICS ON EXPERTS' ATTITUDES ON TAX SYSTEM AND POLICY**

#### **SAŽETAK**

Svrha rada je istražiti utjecaj nekih sociodemografskih obilježja stručnjaka na njihove stavove o poreznoj sustavu i poreznoj politici. Provedena je anketa o stanju i perspektivama hrvatskoga poreznog sustava kojom su se ispitali stavovi stručnjaka iz akademske zajednice, javnog i privatnog sektora. Osim pitanja vezana uz poreznu tematiku, u anketi su postavljena i pitanja o raznim sociodemografskim obilježjima ispitanika. Povezanost karakteristika anketiranih stručnjaka sa stavovima o poreznoj tematici istražena je neparametrijskim statističkim metodama: Mann-Whitneyevim testom, Kruskal-Wallisovim testom s *post hoc* Dunnovim testom s Bonferronijevom korekcijom te neparametrijskom Spearmanovom korelacijom, po potrebi kontroliranom po slojevima. Provedeno istraživanje pokazalo je kako karakteristike vezane uz sektor i područje zaposlenja često imaju veći utjecaj na stavove stručnjaka o poreznoj tematici nego njihove demografske karakteristike. Mnoge razlike u stavovima stručnjaka mogu se objasniti njihovim radnim mjestom, ali i samointeresom.

**Ključne riječi:** anketa stručnjaka, porezni sustav, sociodemografska obilježja, Hrvatska

#### **ABSTRACT**

The purpose of the paper is to explore the influence of some sociodemographic characteristics of experts on their attitudes on tax system and tax policy. The conducted survey on the state and perspectives of the Croatian tax system examined the attitudes of experts from the academic community, the public and private sector. In addition to questions related to tax topics, the survey also included questions about different sociodemographic characteristics of the respondents.

---

24 Ovaj rad financirala je Hrvatska zaklada za znanost projektom IP-2013-11-8174.

25 Autorica zahvaljuje prof. dr. sc. Heleni Blažić s Ekonomskoga fakulteta u Rijeci na korisnim prijedlozima u vezi porezne tematike te prof. dr. sc. Hrvoju Šimoviću s Ekonomskoga fakulteta u Zagrebu na ustupljenim podacima.

The relationship of these characteristics with attitudes on tax topics was explored using non-parametric statistical methods: Mann-Whitney test, Kruskal-Wallis test with *post hoc* Dunn's test with Bonferroni correction and non-parametric Spearman correlation. The research indicates that sector-related and employment-related characteristics often have greater influence on experts' attitudes on tax topics than their demographic characteristics. Many differences in experts' attitudes can be explained by their workplace, but also their self-interest.

**Key words:** survey of experts, tax system, sociodemographic characteristics, Croatia

## 1. Uvod

Članak se bavi istraživanjem pristranosti pri ispunjavanju anketnog upitnika; konkretno, istraživanjem utjecaja nekih sociodemografskih karakteristika anketiranih stručnjaka na njihove odgovore o poreznoj temi. Tijekom 2013. godine provedena je Anketa o stanju i perspektivama hrvatskog poreznog sustava (Šimović *et al.*, 2013) kojim je istraženo mišljenje stručnjaka. Anketni upitnik sastavljen je najviše prema uzoru na anketu koju je provela američka *National Tax Association* (NTA, 2013; Lim *et al.*, 2013), ali je prilagođen hrvatskom poreznom sustavu. U istraživanju su sudjelovali stručnjaci iz akademske zajednice, javnog i privatnog sektora. U anketi su ispitani stavovi prema 92 tvrdnje grupirane u područja: oporezivanje imovine, oporezivanje dohotka, oporezivanje dobiti, porez na dodanu vrijednost, trošarine te opći stavovi o poreznoj politici.

Uz pitanja kojima se istražuju stavovi stručnjaka ispitane su i razne sociodemografske karakteristike anketiranih stručnjaka.

Provedena anketa omogućila je dublja saznanja i izradu modela o stavovima u području horizontalne i vertikalne pravednosti (Blažić *et al.*, 2014), direktnog i indirektnog oporezivanja (Šimović *et al.*, 2016), porezne reforme (Šimović *et al.*, 2014), poreza na nekretnine (Blažić *et al.*, 2016a, 2016b), kao i usporedbu (Blažić *et al.*, 2017) sa sličnim anketama provedenim u Sloveniji (Klun, 2014; Klun & Štambuk, 2015a, 2015b, 2016; Klun *et al.*, 2016, Klopčić & Klun, 2018) te Bosni i Hercegovini (Lazović-Pita, 2016; Lazović-Pita & Štambuk, 2015, 2016).

Ovaj rad predstavlja nastavak istraživanja rada *Mjesto socijalne politike u poreznoj politici RH: anketa poreznih stručnjaka* (Blažić *et al.*, 2014). U tom članku je analiziran utjecaj nekih obilježja stručnjaka na njihove stavove o socijalnoj politici u okviru porezne politike. Obradena su 32 pitanja povezana sa socijalnom politikom.

Pri odgovaranju na anketu postoji pristranost, što vrijedi čak i za anketu na koju odgovaraju stručnjaci u nekom području (Melnick & Everitt, 2008; Meyer & Booker, 2001; Burgman *et al.*, 2006); stoga je u ovome radu istražen utjecaj demografskih i socioekonomskih obilježja stručnjaka na 60 pitanja čija povezanost s obilježjima ispitanika nije bila istražena na ovaj način. Navedena pitanja prikazana su u tablici 1.



Prilikom navođenja pitanja zadržan je redni broj pitanja iz ankete, kao i oznaka područja kojim se pitanje bavi<sup>26</sup>.

---

## Pitanje

---

P02-imo-Porez na nekretnine treba biti lokalni porez.

P04-imo-Bez obzira na uvođenje poreza na nekretnine komunalna naknada treba ostati kao lokalni prihod

P05-imo-Bez obzira na uvođenje poreza na nekretnine i porez na kuće za odmor treba ostati kao lokalni prihod.

P06-imo-Bez obzira na uvođenje poreza na nekretnine kao lokalni prihod u budućnosti treba ostati i prirez.

P07-imo-Porez na nekretnine treba se razrezivati po istoj stopi i za poslovne subjekte i za građane.

P08-imo-Poslovni subjekti kod oporezivanja nekretnina trebaju platiti veću stopu od građana.

P09-imo-Građani kod oporezivanja nekretnina trebaju platiti veću stopu nego poslovni subjekti.

P21-doh-Treba ponovno uvesti olakšice kod poreza na dohodak po osnovi premija životnog osiguranja s obilježjem štednje (dodatni osobni odbitak).

P22-doh-Treba ponovno uvesti olakšice kod poreza na dohodak po osnovi premija dobrovoljnog mirovinskog osiguranja (dodatni osobni odbitak).

P29-doh-Dividende treba oporezivati niže od ostalih dohodaka (zbog ekonomskog dvostrukog oporezivanja dividendi tj. prethodnog plaćanja poreza na dobit).

P30-dob-Treba sniziti (opću) stopu poreza na dobit.

P31-dob-Treba sniziti porezno opterećenje za mala i srednja poduzeća.

P32-dob-Reinvestiranu dobit treba izuzeti od oporezivanja.

P33-dob-Treba zadržati olakšice za područja posebne državne skrbi.

P34-dob-Treba zadržati olakšice za brdsko-planinska područja.

P35-dob-Treba zadržati olakšice za slobodne zone.

P36-dob-Treba zadržati olakšice za Grad Vukovar.

P37-dob-Treba zadržati olakšice (državnu potporu) za istraživačko-razvojne projekte.

P38-dob-Treba zadržati olakšice (državnu potporu) za obrazovanje i izobrazbu zaposlenika.

P39-dob-Treba zadržati poticaje za ulaganja.

P40-dob-Treba ponovno uvesti zaštitnu kamatu.

P41-dob-Treba zadržati ubrzanu amortizaciju (porezno dopuštanje podvostroćavanja godišnjih amortizacijskih stopa).

P44-pdv-Turističke i ugostiteljske usluge trebaju se oporezivati sniženom stopom PDV-a.

P46-pdv-Treba uvesti posebni postupak (shemu) kod PDV-a za poljoprivrednike.

---

26 Oznake područja: imo – porez na imovinu, doh - porez na dohodak, dob - porez na dobit, pdv - PDV, tro - trošarine, dop – doprinosi, opc - opći stavovi o načelima porezne politike i uvođenju novih poreza

---

## **Pitanje**

---

P50-pdv-Kod snižene stope PDV-a za novine i časopise treba provesti diferencijaciju između dnevnog informativnog tiska i „žutog tiska“.

---

P51-pdv-Snižena stopa PDV-a treba biti viša za znanstvene časopise nego za dnevni tisak.

---

P52-pdv-Prihode od PDV-a treba jednim dijelom prepustiti nižim razinama vlasti (općine i gradovi).

---

P53-tro-Treba uvesti posebni porez na „nezdravu hranu“ (masnoće, prženo, „fast-food“, pretjerano zaslađenu).

---

P54-tro-Trošarine na naftu i naftne derivate treba smanjiti.

---

P55-tro-Trošarine na prirodni plin treba povisiti.

---

P56-tro-Trošarine na el. energiju treba povisiti.

---

P57-tro-Trošarine na alkohol treba povisiti.

---

P58-tro-Treba uvesti trošarine na vino.

---

P59-tro-Trošarine na duhan i duhanske prerađevine treba povisiti.

---

P60-tro-Hrvatska ima dovoljno trošarina /posebnih poreza.

---

P64-tro-Treba razrezivati posebne poreze na police osiguranja AO i kasko osiguranja.

---

P65-tro-Treba razrezivati poseban porez na kavu.

---

P66-tro-Treba razrezivati posebne poreze na bezalkoholna pića.

---

P67-dop-Treba ukinuti najvišu mjesečnu osnovicu za obračun doprinosa za mirovinsko osiguranje.

---

P68-dop-Treba ukinuti najnižu mjesečnu osnovicu za obračun doprinosa za mirovinsko osiguranje.

---

P69-dop-Treba sniziti stope doprinosa za obvezno mirovinsko osiguranje na temelju generacijske solidarnosti (I. stup).

---

P70-dop-Treba povisiti stope doprinosa za obvezno mirovinsko osiguranje na temelju individualne kapitalizirane štednje (II. stup).

---

P71-dop-Treba sniziti doprinose za zdravstveno osiguranje.

---

P72-dop-Obrtnici i slobodna zanimanja su u povoljnijem položaju u odnosu na nesamostalni rad kod obračuna obveznih doprinosa.

---

P75-opc-Ukupno porezno opterećenje tj. udio poreza u BDP-u treba smanjiti.

---

P76-opc-Financiranje opće države treba biti manje iz poreza, a više iz različitih neporeznih prihoda (s naglaskom na različite naknade korisnika).

---

P77-opc-Ukupni udio javnih prihoda (i javnih rashoda) u BDP-u treba smanjiti.

---

P78-opc-Porezna struktura (udio prihoda pojedinih poreza u ukupnim poreznim приходima) se treba promijeniti.

---

P80-opc-Porezni teret treba što više prebaciti s dobiti i dohotka na imovinu.

---

P81-opc-Treba smanjiti parafiskalne namete.

---

P82-opc-Niže granične stope poreza na dohodak smanjuju dokolicu i potiču/povećavaju rad.

---

---

## Pitanje

---

P83-opc-Niže granične stope poreza na dohodak potiču toliko puno rad i dovode do tako velikog povećanja porezne osnovice da se time kompenziraju izgubljeni porezni prihodi.

---

P84-opc-Neoporezivanje kamata potiče štednju.

---

P85-opc-Neoporezivanje financijskih kapitalnih dobitaka potiče investicije i ekonomski rast.

---

P86-opc-Različita smanjenja poreznog opterećenja (olakšice, poticaji i sl.) potiču ekonomski rast.

---

P87-opc-PDV je nepravedan (regresivan, nesocijalan) porez.

---

P88-opc-Porez na dobit se prevladuje uglavnom na potrošače i radnike.

---

P89-opc-Regionalni porezni poticaji (grad Vukovar, područja posebne državne skrbi, brdsko-planinska područja) su učinkoviti s obzirom na privlačenje investicija u ta područja.

---

P90-opc-Troškovi poreznih vlasti (administrativni troškovi) i troškovi poreznih obveznika (troškovi ispunjavanja porezne obveze odnosno svi troškovi udovoljavanja poreznoj obvezi mimo samih iznosa poreza) trebaju igrati značajnu ulogu u kreiranju porezne politike (u smislu da je nužno smanjiti ove troškove kroz značajno pojednostavljenje sustava).

---

P92-opc-Treba povećati kazne za porezne prekršaje.

---

**Tablica 1.** Analizirana pitanja iz upitnika (60 pitanja)

Izvor: autorica

## 2. Obilježja ispitanih stručnjaka

Istražene su sociodemografske karakteristike ispitanika, a kako pojedini anketirani stručnjaci nisu odgovorili na sva pitanja, u pojedine analize su uvršteni samo oni ispitanici koji su odgovorili na relevantna pitanja.

Ispitani stručnjaci u podjednakoj mjeri dolaze iz akademske zajednice (46,9 %) i iz javnog sektora (43,5 %), te manji broj iz privatnog sektora (9,6 %). Iz akademske zajednice anketirani su sveučilišni profesori te znanstvenici iz instituta koji se bave poreznom tematikom. U javnom sektoru anketirani su u najvećoj mjeri zaposleni u jedinicama lokalne i regionalne samouprave te Poreznoj upravi Ministarstva financija (tablica 2). Iz privatnog sektora anketirani su porezni savjetnici te stručnjaci iz računovodstvenih i savjetničkih kuća i visokih škola (tablica 3).

Podsektor	%
Jedinice lokalne i regionalne samouprave	48,7
Porezna uprava Ministarstva financija	41,6
Javno poduzeće	3,5
Ministarstvo financija (izvan Porezne uprave)	1,8
Ostali	4,4

**Tablica 2.** Struktura anketiranih stručnjaka iz javnog sektora

Izvor: obrada autorice

Podsektor	%
Porezni savjetnik	50,0
Poslovni savjetnik / urednik	16,7
Predavač visoke poslovne škole	12,5
Ostali	20,8

**Tablica 3.** Struktura anketiranih stručnjaka iz privatnog sektora

*Izvor: obrada autorice*

Za akademsku zajednicu navedeno je dolazi li ispitanik iz područja ekonomije (86,2 %), prava (12,2 %) ili političkih znanosti (1,6 %). Kao što je i očekivano, najveći je udio anketiranih iz područja ekonomije te je za ekonomiste dodatno ispitano i uže područje, što se vidi u tablici 4.

Područje	%
Javne financije	23,1
Monetarne financije i financijska tržišta	18,3
Poslovne financije i računovodstvo	26,0
Makroekonomija	24,0
Menadžment/poduzetništvo	8,7

**Tablica 4.** Struktura anketiranih ekonomista u akademskoj zajednici

*Izvor: obrada autorice*

Ispitani stručnjaci iz svih triju sektora grupirani su po područjima pa je napravljeno grupiranje u skupine.

Grupirajući stručnjake dobiveno je sedam skupina prema načinu grupiranja u tablici 5. Nekolicina ispitanih nije ubrojena u ove skupine, već se vode se u rubrici ostalo te ne ulaze u daljnje analize po ovom obilježju.

R br.	Grupacija	Obuhvaćeno
1.	PS	Porezni savjetnici
2.	PU	Ministarstvo financija – Porezna uprava i Ministarstvo financija (ostalo)
3.	JLS	Jedinice lokalne i regionalne samouprave
4.	Prav	Pravnici iz akademskog sektora
5.	JF	Ekonomisti u akademskoj zajednici iz područja javnih financija
6.	PFR	Ekonomisti u akademskoj zajednici iz područja poslovnih financija i računovodstva
7.	MM	Ekonomisti u akademskoj zajednici iz područja makroekonomije, monetarnih financija i financijskih tržišta

**Tablica 5.** Grupiranje stručnjaka u sedam grupacija

*Izvor: obrada autorice*

Ispitanici su u pravilu visokoobrazovani te je njihova stručna sprema grupirana u tri razreda, koji su prema Hrvatskom kvalifikacijskom okviru označeni kao razine 4.2-6 kao najniža razina s 15,8 % ispitanih, razina 7 s 45,2 % ispitanih te najviša razina 8.1-8.2 s 39 % ispitanih.

Dob ispitanika kreće se u rasponu od 21 do 75 godina, s prosječnom starošću od 40,82 godine (SD = 11,61).

### 3. Uporabljene metode

Povezanost sociodemografskih obilježja ispitanika sa stavovima o poreznom sustavu i poreznoj politici ispitana je kroz usporedbu odgovora koje su na anketna pitanja dali ispitanici različitih karakteristika.

Ispitane varijable, tj. anketna pitanja, pitanja su Likertovog tipa, i kao takva vrsta su ordinalne mjerne ljestvice. Iz tog razloga provedene su neparametrijske statističke metode. Svi izračuni rađeni su na razini signifikantnosti  $\alpha = 0,05$ .

Kod usporedbe distribucije odgovora dviju skupina ispitanih stručnjaka rabljen je Mann-Whitneyev test, a u slučaju usporedbe više od dviju skupina ispitanih rabljen je Kruskal-Wallisov test. Za varijable kod kojih se Kruskal-Wallisov test pokazao signifikantnim napravljena je *post hoc* analiza Dunnovim testom s Bonferronijevom korekcijom kako bi se ispitalo koji parovi skupina se međusobno signifikantno razlikuju. Uz Mann-Whitneyev i Kruskal-Wallisov test navedeni su i medijani (Mdn) te rangovi odgovora po skupinama ispitanika. Kada je ispitivana sociodemografska varijabla na ordinalnoj ili na kvantitativnoj mjernoj ljestvici, primijenjena je neparametrijska Spearmanova korelacija ranga kako bi se ispitala povezanost karakteristika ispitanika s danim odgovorima o poreznoj tematici. U slučaju kontroliranja korelacije po skupinama, kako se radi o neparametrijskoj korelaciji, ne računa se novi koeficijent korelacije kao pri parametrijskoj korelaciji, već se varijabla rastavlja po slojevima te se računaju koeficijenti korelacije za svaki sloj zasebno.

Dobiveni rezultati prikazani su u nastavku rada na način da su za svaku ispitanu karakteristiku navedene varijable kod kojih postoji signifikantna razlika u distribuciji odgovora između anketiranih stručnjaka različitih sociodemografskih obilježja. Varijable kod kojih provedena analiza nije pokazala signifikantan rezultat nisu prikazane u rezultatima. U slučajevima kada je provedeni test pokazao veći broj signifikantnih varijabli, tumačenje rezultata nije dano za sve varijable koje su prikazane u rezultatima, već samo za varijable s izračunatom signifikantnošću manjom od 0,01.

### 4. Rezultati i rasprava

#### Povezanost dobi sa stavovima o poreznom sustavu

Izračunati su neparametrijski Spearmanovi koeficijenti korelacije ranga između godina starosti ispitanika i analiziranih pitanja iz anketa.

Spearmanov koeficijent korelacije signifikantan je za 10 pitanja prikazanih u tablici 6.

Pitanje	$r_s$
P08-imo-Poslovni subjekti kod oporezivanja nekretnina trebaju platiti veću stopu od građana.	-,151*
P33-dob-Treba zadržati olakšice za područja posebne državne skrbi.	-,177**
P34-dob-Treba zadržati olakšice za brdsko-planinska područja.	-,185**
P35-dob-Treba zadržati olakšice za slobodne zone.	-,189**
P36-dob-Treba zadržati olakšice za Grad Vukovar.	-,178**
P37-dob-Treba zadržati olakšice (državnu potporu) za istraživačko-razvojne projekte.	-,158*
P38-dob-Treba zadržati olakšice (državnu potporu) za obrazovanje i izobrazbu zaposlenika.	-,146*
P39-dob-Treba zadržati poticaje za ulaganja.	-,151*
P41-dob-Treba zadržati ubranu amortizaciju (porezno dopuštanje podvostručavanja godišnjih amortizacijskih stopa).	,146*
P51-pdv-Snižena stopa PDV-a treba biti viša za znanstvene časopise nego za dnevni tisak.	-,167*
P53-tro-Treba uvesti posebni porez na „nezdravu hranu“ (masnoće, prženo, „fast-food“, pretjerano zaslađenu).	-,135*
P56-tro-Trošarine na el. energiju treba poviciti.	-,132*
P58-tro-Treba uvesti trošarine na vino.	-,152*
P64-tro-Treba razrezivati posebne poreze na police osiguranja AO i kasko osiguranja.	-,288**
P65-tro-Treba razrezivati poseban porez na kavu.	-,210**
P66-tro-Treba razrezivati posebne poreze na bezalkoholna pića.	-,255**
P77-opc-Ukupni udio javnih prihoda (i javnih rashoda) u BDP-u treba smanjiti.	,259**
P81-opc-Treba smanjiti parafiskalne namete.	,234**
P86-opc-Različita smanjenja poreznog opterećenja (olakšice, poticaji i sl.) potiču ekonomski rast.	-,150*

Tablica 6. Spearmanovi koeficijent korelacije s dobi za varijable kod kojih je korelacija signifikantna

Izvor: obrada autorice

Napomena: \*\* - signifikantnost na razini 0,01; \* - signifikantnost na razini 0,05.

Iako su korelacije signifikantne, koeficijenti korelacije su slabi; apsolutna vrijednost koeficijenta korelacije manja je od 0,3 za sve analizirane varijable.

Pretežno negativne vrijednosti koeficijenta korelacije ukazuju na to da, što su ispitanici stariji, to su manje skloni poreznim olakšicama i trošarinama i stavu da smanjenja poreznog opterećenja potiču ekonomski rast. Također, sa starošću se smanjuje stav da poslovni subjekti kod oporezivanja nekretnina trebaju platiti veću stopu od građana. S dobi raste stav da je potrebno smanjiti parafiskalne namete te udio javnih prihoda i rashoda u BDP-u.

Ovo je zanimljiv rezultat jer bi se očekivalo bi se da stariji i konzervativni budu skloniji poreznim olakšicama (to je posebno bilo aktualno i smatralo se pozitivnim u svijetu 60-ih i 70-ih, a očekivalo bi se i da stariji budu skloniji tome jer će im i osobno više trebati). Isto bi tako bilo logično da su skloniji trošarinama jer ih vjerojatno sve manje plaćaju.

Isto vrijedi i za porez na nekretnine. Zanimljivo je da su stariji za smanjenje parafiskalnih nameta (koji uglavnom terete poduzetnike, a ne umirovljenike) te da su za smanjenje udjela javnih prihoda i rashoda, a baš njima u starosti više trebaju ti javni rashodi, dok skoro uopće više ne uplaćuju prihode ( mirovine su najvećim dijelom neoporezive).

### Povezanost stručne spreme sa stavovima o poreznom sustavu

Povezanost stručne spreme sa stavovima o poreznom sustavu istražena je pomoću Spearmanovog koeficijenta korelacije. S obzirom na to da je u akademskoj zajednici stupanj obrazovanja u pravilu veći nego u drugim sektorima, moguće je da pravi čimbenik nije toliko sama stručna sprema, već ulogu igra sektor. Iz tog razloga korelacija sa stručnom spremom kontrolirana je po sektoru. Kontroliranje je izvedeno kao rastavljanje po slojevima, u ovom slučaju po sektorima, te su izračunati koeficijenti korelacije za svaki sloj, tj. sektor posebno.

Rezultati korelacijske analize dani su u tablici 7.

Pitanje	$r_s$	Sig. po sektoru
P09-imo-Građani kod oporezivanja nekretnina trebaju platiti veću stopu nego poslovni subjekti.	,153*	Ne
P29-doh-Dividende treba oporezivati niže od ostalih dohoda (zbog ekonomskog dvostrukog oporezivanja dividendi tj. prethodnog plaćanja poreza na dobit).	,243**	Ne
P36-dob-Treba zadržati olakšice za Grad Vukovar.	-,154*	Da
P51-pdv-Snižena stopa PDV-a treba biti viša za znanstvene časopise nego za dnevni tisak.	-,131*	Da
P52-pdv-Prihode od PDV-a treba jednim dijelom prepustiti nižim razinama vlasti (općine i gradovi).	-,177**	Ne

Pitanje	$r_s$	Sig. po sektoru
P54-tro-Trošarine na naftu i naftne derivate treba smanjiti.	-,209**	Da
P55-tro-Trošarine na prirodni plin treba povisiti.	,179**	Da
P56-tro-Trošarine na el. energiju treba povisiti.	,184**	Da
P66-tro-Treba razrezivati posebne poreze na bezalkoholna pića.	,149*	Da
P89-opc-Regionalni porezni poticaji (grad Vukovar, područja posebne državne skrbi, brdsko-planinska područja) su učinkoviti s obzirom na privlačenje investicija u ta područja.	-,157*	Da

**Tablica 7.** Spearmanovi koeficijenti korelacije te kontrola po sektorima za pitanja kod kojih je korelacija sa stručnom spremom signifikantna

Izvor: obrada autorice

Napomena: NE – varijabla kontrolirana po sektorima u nastavku analize nije imala signifikantnu korelaciju niti za jedan sektor; DA – korelacija sa stručnom spremom je signifikantna za barem jedan sektor

\*\* - signifikantnost na razini 0,01; \* - signifikantnost na razini 0,05.

Utjecaj sektora na povezanost stručne spreme sa stavovima o poreznom sustavu pobliže je analiziran u tablici 8 koja prikazuje rezultate korelacijske analize kontrolirane po sektorima za one sektore u kojima postoji signifikantna korelacija sa stručnom spremom.

Sektor	Pitanje	$r_s$ sektor	$r_s$ svi
Privatni	P39-dob-Treba zadržati poticaje za ulaganja.	-,402*	-,083
Privatni	P80-opc-Porezni teret treba što više prebaciti s dobiti i dohotka na imovinu.	-,414*	-,028
Privatni	P89-opc-Regionalni porezni poticaji (grad Vukovar, područja posebne državne skrbi, brdsko-planinska područja) su učinkoviti s obzirom na privlačenje investicija u ta područja.	-,429*	-,157*
Javni	P36-dob-Treba zadržati olakšice za Grad Vukovar.	-,233*	-,154*
Javni	P54-tro-Trošarine na naftu i naftne derivate treba smanjiti.	-,251**	-,209**
Javni	P55-tro-Trošarine na prirodni plin treba povisiti.	,200*	,179**
Javni	P56-tro-Trošarine na el. energiju treba povisiti.	,194*	,184**
Javni	P66-tro-Treba razrezivati posebne poreze na bezalkoholna pića.	,207*	,149*
Javni	P85-opc-Neoporezivanje financijskih kapitalnih dobitaka potiče investicije i ekonomski rast.	-,214*	-,040
Akademski	P37-dob-Treba zadržati olakšice (državnu potporu) za istraživačko-razvojne projekte.	-,182*	-,013



Sektor	Pitanje	$r_s$ sektor	$r_s$ svi
Akademski	P38-dob-Treba zadržati olakšice (državnu potporu) za obrazovanje i izobrazbu zaposlenika.	-,189*	-,008
Akademski	P39-dob-Treba zadržati poticaje za ulaganja.	-,183*	-,083
Akademski	P50-pdv-Kod snižene stope PDV-a za novine i časopise treba provesti diferencijaciju između dnevnog informativnog tiska i „žutog tiska“.	-,200*	-,044
Akademski	P51-pdv-Snižena stopa PDV-a treba biti viša za znanstvene časopise nego za dnevni tisak.	-,214*	-,131*
Akademski	P75-opc-Ukupno porezno opterećenje tj. udio poreza u BDP-u treba smanjiti.	,189*	,075

**Tablica 8.** Spearmanov koeficijent korelacije kontroliran po sektorima i usporedba s koeficijentom za sve anketirane zajedno za pitanja gdje je korelacija po sektorima signifikantna

Izvor: obrada autorice

\*\* - signifikantnost na razini 0,01; \* - signifikantnost na razini 0,05.

Kontroliranjem varijabli po sektoru pokazalo se da korelacija sa stručnom spremom više nije signifikantna za dio pitanja, što se vidi iz tablice 7 gdje u stupcu „signifikantnost po sektoru“ piše *Ne*. Prilikom kontroliranja po sektoru pokazale su se signifikantnima i neke varijable koje prije toga nisu pokazivale signifikantnu korelaciju sa stručnom spremom, što je navedeno u tablici 8; međutim, može se primijetiti da su sve korelacije zadržale isti smjer, bilo pozitivni, bilo negativni.

### Povezanost sektora sa stavovima o poreznom sustavu

Usporedba stavova o poreznom sustavu po sektorima istražena je Kruskal-Wallisovim testom. Za varijable za koje je utvrđeno da postoji signifikantna razlika među sektorima provedena je *post hoc* analiza Dunnovim testom s Bonferronijevom korekcijom kojim se pronašlo koji parovi sektora se međusobno signifikantno razlikuju u distribuciji odgovora. Rezultati Kruskal-Wallisovog testa i *post hoc* analize za varijable sa signifikantnim Kruskal-Wallisovim testom, kao i medijani i rangovi po sektorima prikazani su u tablici 9.

Pitanje	Mdn (rang)			K-W	
	Privatni	Javni	AZ	H	p
P02-imo-Porez na nekretnine treba biti lokalni porez.	5 <sup>a</sup> (149)	5 <sup>a</sup> (139)	4 <sup>a</sup> (119)	6,130	0,047
P04-imo-Bez obzira na uvođenje poreza na nekretnine komunalna naknada treba ostati kao lokalni prihod	1 <sup>a</sup> (97)	3 <sup>ab</sup> (131)	4 <sup>b</sup> (137)	6,047	0,049

Pitanje Sektor	Mdn (rang)			K-W	
	Privatni	Javni	AZ	H	p
P08-imo-Poslovni subjekti kod oporezivanja nekretnina trebaju platiti veću stopu od građana.	2 <sup>a</sup> (88)	4 <sup>b</sup> (139)	3 <sup>b</sup> (131)	10,056	0,007
P09-imo-Građani kod oporezivanja nekretnina trebaju platiti veću stopu nego poslovni subjekti.	1 <sup>ab</sup> (132)	1 <sup>a</sup> (118)	2 <sup>b</sup> (142)	7,116	0,028
P29-doh-Dividende treba oporezivati niže od ostalih dohodaka (zbog ekonomskog dvostrukog oporezivanja dividendi tj. prethodnog plaćanja poreza na dobit).	4 <sup>ab</sup> (141)	3 <sup>a</sup> (106)	4 <sup>b</sup> (151)	22,406	0,000
P52-pdv-Prihode od PDV-a treba jednim dijelom prepustiti nižim razinama vlasti (općine i gradovi).	3 <sup>a</sup> (111)	4 <sup>a</sup> (143)	3 <sup>a</sup> (123)	6,772	0,034
P54-tro-Trošarine na naftu i naftne derivate treba smanjiti.	4 <sup>ab</sup> (111)	4 <sup>a</sup> (147)	4 <sup>b</sup> (119)	10,745	0,005
P56-tro-Trošarine na el. energiju treba povisiti.	2 <sup>ab</sup> (135)	2 <sup>a</sup> (117)	2 <sup>b</sup> (143)	8,032	0,018
P67-dop-Treba ukinuti najvišu mjesečnu osnovicu za obračun doprinosa za mirovinsko osiguranje.	1 <sup>a</sup> (86)	3 <sup>b</sup> (143)	3 <sup>b</sup> (128)	12,779	0,002
P75-opc-Ukupno porezno opterećenje tj. udio poreza u BDP-u treba smanjiti.	5 <sup>a</sup> (170)	4 <sup>b</sup> (125)	4 <sup>b</sup> (127)	8,617	0,013
P77-opc-Ukupni udio javnih prihoda (i javnih rashoda) u BDP-u treba smanjiti.	4 <sup>a</sup> (166)	4 <sup>ab</sup> (133)	4 <sup>b</sup> (121)	8,247	0,016
P81-opc-Treba smanjiti parafiskalne namete.	5 <sup>a</sup> (165)	4 <sup>ab</sup> (131)	4 <sup>b</sup> (123)	7,378	0,025
P90-opc-Troškovi poreznih vlasti (administrativni troškovi) i troškovi poreznih obveznika (troškovi ispunjavanja porezne obveze odnosno svi troškovi udovoljavanja poreznoj obvezi mimo samih iznosa poreza) trebaju igrati značajnu ulogu u kreiranju porezne politike (u smislu da je nužno smanjiti ove troškove kroz značajno pojednostavljenje sustava).	5 <sup>a</sup> (159)	4 <sup>ab</sup> (134)	4 <sup>b</sup> (122)	6,204	0,045

**Tablica 9.** Medijani i rangovi po sektorima, Kruskal-Wallisov test i post hoc Dunnov test s Bonferronijevom korekcijom za pitanja sa značajnim Kruskal-Wallisovim testom

Izvor: obrada autorice

Napomena: K-W – Kruskal-Wallisov test

Grupe koje ne dijele isti superskript značajno se razlikuju

Kruskal-Wallisov test pokazao se signifikantnim za 13 varijabli što je grafički prikazano rangovima odgovora po sektorima na slici 1 u prilogu. Uočene razlike su u pravilu objašnjive s pozicija pojedinih sektora, kao što se može vidjeti u tumačenjima u nastavku koja su dana za one varijable kod kojih je pri Krusal-Wallisovovom testu  $p < 0,01$ .

P08 – osobni interes – privatni sektor su poslovni subjekti ili oni koji izravno rade za poslovne subjekte

P29 – akademski sektor je puno informiraniji o problemu ekonomskog dvostrukog oporezivanja dividendi (porezna teorija i politika – praksa većine zemalja), a službenici javnog sektora o tome u pravilu ne znaju.

P54 – ovo je pitanje bilo postavljeno uzevši u obzir trenutne promjene u poreznom sustavu odnosno kretanja koja su bila u suprotnome smjeru od postavljenih pitanja te su stoga logični ovakvi suprotni (no ipak blago suprotni) odgovori

P67- Sasvim logično. Kod privatnog sektora opet je samointeres u pitanju jer su među onima koji sigurno imaju više osnovice pa bi platili više doprinosa; javni sektor je vjerojatno manje plaćena skupina, pa želi da privatni sektor plati više, a i svjesni su da zbog toga nedostaje poreznih prihoda. U akademskoj zajednici svjesni su da je takva mjera regresivna (relativno više opterećuje niže dohotke tj. rasterećuje konkretno više dohotke).

Ispitanici su nadalje grupirani u različite skupine kako bi se utvrdila povezanost različitih skupina stručnjaka sa stavovima o poreznom sustavu. Usporedba je napravljena unutar različitih podsektora akademske zajednice i javnog sektora. Za privatni sektor takva usporedba zbog manjeg broja anketiranih nije napravljena.

Usporedba stavova o poreznom sustavu napravljena je i za različite skupine svih ispitanika zajedno, pa su tako uspoređeni stavovi ispitanika grupiranih u sedam skupina kao u tablici 5.

### **Usporedba ekonomista i neekonomista u akademskoj zajednici**

Unutar akademske zajednice uspoređeni su stavovi ekonomista i neekonomista. Analiza je napravljena pomoću Mann-Whitneyevog testa, a rezultati analize za varijable koje su pokazale signifikantne razlike između ekonomista i neekonomista u akademskoj zajednici zajedno s medijanima i rangovima dani su u tablici 10.

Pitanje	Mdn (Rang)		Mann-Whitney	
	Neekonomisti	Ekonomisti	U	p
P02-imo-Porez na nekretnine treba biti lokalni porez.	5 (78)	4 (59)	635,500	0,042
P60-tro-Hrvatska ima dovoljno trošarina /posebnih poreza.	4 (45)	4 (65)	607,500	0,023
P71-dop-Treba sniziti doprinose za zdravstveno osiguranje.	2 (41)	3 (65)	549,000	0,008

**Tablica 10.** Usporedba ekonomista i neekonomista u akademskoj zajednici: medijan, rang i Mann-Whitneyev test za pitanja gdje postoji signifikantna razlika  
*Izvor:* obrada autorice

Iako broj pitanja kod kojih postoji signifikantna razlika u akademskoj zajednici između ekonomista i neekonomista nije velik, o doprinosima ekonomisti ne misle toliko s fiskalnog aspekta (da bude dosta javnih prihoda u proračunu odnosno za financiranje zdravstva, koje definitivno ima konstantni deficit – pokriva se iz općih poreza, npr. PDV-a jer doprinosa nije dovoljno), već s ekonomskog, i to sa stajališta poduzetnika – kroz smanjenje troškova poduzetnika, i to troškova radne snage – doprinos za zdravstveno osiguranje najveća je komponenta doprinosa posloprimaca.

Neekonomisti više gledaju „sebično“, tj. kao obični ljudi da njima ostane više za zdravstvene troškove; što je i razumljivo zbog gore navedenih velikih problema financiranja zdravstva. Slična briga da gospodarstvo, odnosno porezni obveznici ne budu previše opterećeni (što ima negativne ekonomske učinke) vidi se i kod trošarina. Tu se, osim ekonomskoga, očituje i tzv. „tehnički učinak“ – konkretnije, briga za pojednostavljenje poreznog sustava i smanjenje troškova poreznih obveznika (s većim brojem poreza više se povećavaju troškovi poreznih obveznika u smislu administracije – tzv. „troškovi ispunjavanja porezne obveze“ – *tax compliance costs*).

Kod poreza na nekretnine imaju pravo neekonomisti jer je to u svijetu u pravilu lokalni porez (iako ima izuzetaka, npr. Švedska); dakle, ekonomisti su skloniji fiskalnoj centralizaciji, što opet ima svoju logiku zbog situacije visokog deficita i javnog duga.

### Usporedba unutar javnog sektora: zaposleni u Poreznoj upravi Ministarstva financija i zaposleni u jedinicama lokalne i regionalne samouprave

Među ispitanicima u javnom sektoru napravljena je usporedba zaposlenih u jedinicama lokalne i regionalne samouprave i zaposlenih u Poreznoj upravi Ministarstva financija kao najbrojnijih grupacija anketiranih iz javnog sektora. Usporedba je izvedena primjenom Mann-Whitneyevog testa, a rezultati testa te pripadajući medijani i rangovi za varijable koje imaju signifikantan rezultat testiranja navedeni su u tablici 11.

Pitanje	Mdn (rang)		Mann-Whitney	
	JLS	PU	U	p
P02-imo-Porez na nekretnine treba biti lokalni porez.	5 (59)	4 (43)	891,000	0,003
P06-imo-Bez obzira na uvođenje poreza na nekretnine kao lokalni prihod u budućnosti treba ostati i prirez.	5 (58)	3 (44)	947,000	0,015
P30-dob-Treba sniziti (opću) stopu poreza na dobit.	4 (60)	3 (41)	808,000	0,001
P31-dob-Treba sniziti porezno opterećenje za mala i srednja poduzeća.	4 (58)	4 (43)	915,000	0,007
P32-dob-Reinvestiranu dobit treba izuzeti od oporezivanja.	4 (57)	4 (45)	975,500	0,023
P33-dob-Treba zadržati olakšice za područja posebne državne skrbi.	4 (59)	3 (43)	900,500	0,007
P34-dob-Treba zadržati olakšice za brdsko-planinska područja.	4 (57)	4 (45)	995,500	0,039
P35-dob-Treba zadržati olakšice za slobodne zone.	4 (59)	3 (43)	896,500	0,006
P36-dob-Treba zadržati olakšice za Grad Vukovar.	5 (58)	4 (44)	952,500	0,016
P37-dob-Treba zadržati olakšice (državnu potporu) za istraživačko-razvojne projekte.	5 (59)	4 (42)	864,500	0,002
P38-dob-Treba zadržati olakšice (državnu potporu) za obrazovanje i izobrazbu zaposlenika.	5 (59)	4 (42)	856,000	0,001
P39-dob-Treba zadržati poticaje za ulaganja.	5 (58)	4 (44)	917,000	0,007
P40-dob-Treba ponovo uvesti zaštitnu kamatu.	4 (63)	3 (38)	675,500	0,000
P41-dob-Treba zadržati ubranu amortizaciju (porezno dopuštanje podvostručavanja godišnjih amortizacijskih stopa).	4 (58)	3 (44)	944,000	0,016
P52-pdv-Prihode od PDV-a treba jednim dijelom prepustiti nižim razinama vlasti (općine i gradovi).	5 (68)	2 (32)	377,000	0,000
P58-tro-Treba uvesti trošarine na vino.	2 (46)	3 (58)	979,000	0,031
P65-tro-Treba razrezivati poseban porez na kavu.	2 (46)	3 (58)	995,500	0,041
P71-dop-Treba sniziti doprinose za zdravstveno osiguranje.	3 (46)	4 (58)	967,000	0,025
P89-opc-Regionalni porezni poticaji (grad Vukovar, područja posebne državne skrbi, brdsko-planinska područja) su učinkoviti s obzirom na privlačenje investicija u ta područja.	4 (61)	3 (40)	753,000	0,000

**Tablica 11.** Usporedba zaposlenih u jedinicama lokalne i regionalne samouprave sa zaposlenima u Poreznoj upravi Ministarstva financija: medijani, rangovi i Mann-Whitneyev test za pitanja gdje postoji signifikantna razlika  
Izvor: obrada autorice

Unutar javnoga sektora veće je nesuglasje nego unutar akademske zajednice; razlika između zaposlenih u lokalnoj i regionalnoj samoupravi te zaposlenih u Poreznoj upravi Ministarstva financija signifikantna je za skoro jednu trećinu ispitanih varijabli. S obzirom na tako veliki broj signifikantnih razlika na razini  $\alpha=0,05$ , u nastavku nisu objašnjene sve razlike, nego samo razlike za koje je  $p<0,01$ .

Sasvim je logično da su jedinice lokalne samouprave (njihovi službenici) skloniji stavu da porez ide njima. Isto je tako logično da se brinu za smanjenje poreznog tereta poreznih obveznika jer su im bliže (sa stajališta lokalnog razvoja su itekako više zainteresirani, a imaju i više doticaja s poreznim obveznicima poduzetnicima).

Isti je slučaj s olakšicama i poticajima, a prepuštanje prihoda nižim razinama vlasti i ne treba posebno komentirati (tu je najveće odstupanje). U konačnici, isti je slučaj i s regionalnim poticajima.

### Usporedba zaposlenih grupiranih u sedam skupina

Anketirani stručnjaci iz svih područja grupirani su u sedam skupina kao u tablici 5. Usporedba stavova prema poreznom sustavu među zaposlenima u sedam skupina provedena je Kruskal-Wallisovim testom, a za varijable kod kojih je test signifikantan u nastavku je sprovedena *post hoc* analiza Dunnovim testom s Bonferronijevom korekcijom. Rezultati tako provedene analize zajedno s medijanima i rangovima prikazani su u tablici 12 za varijable kod kojih je utvrđena signifikantnost Kruskal-Wallisova testa.

Pitanje	PS	PU	JLS	Prav	JF	PFR	MM	H	p
P02-imo-Porez na nekretnine treba biti lokalni porez.	5 <sup>ab</sup> (138)	4 <sup>a</sup> (98)	5 <sup>b</sup> (138)	5 <sup>ab</sup> (132)	5 <sup>ab</sup> (128)	4 <sup>ab</sup> (94)	4 <sup>a</sup> (91)	24.457	0.000
P05-imo-Bez obzira na uvođenje poreza na nekretnine i porez na kuće za odmor treba ostati kao lokalni prihod.	1 <sup>a</sup> (60)	3 <sup>ab</sup> (111)	4 <sup>b</sup> (126)	4 <sup>ab</sup> (118)	3 <sup>ab</sup> (101)	4 <sup>b</sup> (133)	3 <sup>ab</sup> (108)	14.486	0.025
P29-doh-Dividende treba oporezivati niže od ostalih dohodaka (zbog ekonomskog dvostrukog oporezivanja dividendi tj. prethodnog plaćanja poreza na dobit).	4 <sup>ab</sup> (143)	2 <sup>a</sup> (81)	3 <sup>ab</sup> (99)	3 <sup>ab</sup> (129)	4 <sup>b</sup> (137)	3 <sup>ab</sup> (125)	4 <sup>b</sup> (135)	28.383	0.000
P30-dob-Treba sniziti (opću) stopu poreza na dobit.	2 <sup>ab</sup> (91)	3 <sup>a</sup> (93)	4 <sup>b</sup> (133)	3 <sup>ab</sup> (121)	4 <sup>ab</sup> (119)	3 <sup>ab</sup> (100)	3 <sup>ab</sup> (121)	13.852	0.031
P33-dob-Treba zadržati olakšice za područja posebne državne skrbi.	4 <sup>a</sup> (121)	3 <sup>a</sup> (93)	4 <sup>a</sup> (130)	2 <sup>a</sup> (88)	4 <sup>a</sup> (98)	4 <sup>a</sup> (125)	4 <sup>a</sup> (123)	14.894	0.021
P34-dob-Treba zadržati olakšice za brdsko-planinska područja.	4 <sup>a</sup> (123)	4 <sup>a</sup> (103)	4 <sup>a</sup> (130)	2 <sup>a</sup> (81)	3 <sup>a</sup> (88)	4 <sup>a</sup> (126)	4 <sup>a</sup> (120)	14.448	0.025
P35-dob-Treba zadržati olakšice za slobodne zone.	3 <sup>abc</sup> (89)	3 <sup>ac</sup> (95)	4 <sup>b</sup> (134)	3 <sup>abc</sup> (94)	2.5 <sup>a</sup> (80)	4 <sup>abc</sup> (132)	4 <sup>bc</sup> (129)	24.433	0.000
P36-dob-Treba zadržati olakšice za Grad Vukovar.	4 <sup>a</sup> (115)	4 <sup>a</sup> (103)	5 <sup>a</sup> (135)	4 <sup>a</sup> (84)	4 <sup>a</sup> (96)	4 <sup>a</sup> (114)	4 <sup>a</sup> (116)	13.523	0.035
P38-dob-Treba zadržati olakšice (državnu potporu) za obrazovanje i izobrazbu zaposlenika.	4 <sup>ab</sup> (108)	4 <sup>a</sup> (86)	5 <sup>b</sup> (127)	4 <sup>ab</sup> (122)	4 <sup>ab</sup> (105)	5 <sup>ab</sup> (121)	5 <sup>b</sup> (126)	16.568	0.011
P39-dob-Treba zadržati poticaje za ulaganja.	5 <sup>a</sup> (142)	4 <sup>a</sup> (93)	5 <sup>a</sup> (128)	4 <sup>a</sup> (110)	4 <sup>a</sup> (84)	4 <sup>a</sup> (122)	4 <sup>a</sup> (122)	18.414	0.005
P40-dob-Treba ponovo uvesti zaštitnu kamatu.	5 <sup>ac</sup> (151)	3 <sup>b</sup> (88)	4 <sup>a</sup> (144)	3 <sup>bc</sup> (83)	3.5 <sup>abc</sup> (98)	4 <sup>abc</sup> (116)	4 <sup>abc</sup> (111)	29.931	0.000
P52-pdv-Prihode od PDV-a treba jednim dijelom prepustiti nižim razinama vlasti (općine i gradovi).	3 <sup>a</sup> (85)	2 <sup>a</sup> (81)	5 <sup>b</sup> (167)	3 <sup>a</sup> (109)	3 <sup>a</sup> (103)	4 <sup>a</sup> (116)	3 <sup>a</sup> (96)	57.588	0.000
P54-tro-Trošarine na naftu i naftne derivate treba smanjiti.	4 <sup>ab</sup> (102)	4 <sup>a</sup> (127)	4 <sup>a</sup> (131)	4 <sup>ab</sup> (101)	3 <sup>b</sup> (79)	4 <sup>ab</sup> (118)	3 <sup>ab</sup> (100)	16.855	0.010

Pitanje	PS	PU	JLS	Prav	JF	PFR	MM	H	p
P56-tro-Trošarine na el. energiju treba povisiti.	2.5 <sup>a</sup> (142)	2 <sup>a</sup> (108)	1 <sup>a</sup> (93)	2 <sup>a</sup> (118)	2 <sup>a</sup> (136)	2 <sup>a</sup> (122)	2 <sup>a</sup> (118)	13.523	0.035
P58-tro-Treba uvesti trošarine na vino.	2 <sup>ab</sup> (96)	3 <sup>ab</sup> (125)	2 <sup>a</sup> (96)	2 <sup>ab</sup> (98)	3 <sup>b</sup> (145)	3 <sup>ab</sup> (118)	3 <sup>ab</sup> (114)	13.226	0.040
P64-tro-Treba razrezivati posebne poreze na police osiguranja AO i kasko osiguranja.	2 <sup>ab</sup> (84)	3 <sup>ab</sup> (120)	2 <sup>ab</sup> (104)	3 <sup>ab</sup> (106)	2 <sup>a</sup> (87)	3 <sup>b</sup> (143)	3 <sup>ab</sup> (125)	15.810	0.015
P67-dop-Treba ukinuti najvišu mjesečnu osnovicu za obračun doprinosa za mirovinsko osiguranje.	1 <sup>a</sup> (56)	3 <sup>b</sup> (128)	3 <sup>b</sup> (120)	3 <sup>ab</sup> (117)	3 <sup>ab</sup> (120)	3 <sup>ab</sup> (107)	3 <sup>ab</sup> (105)	14.414	0.025
P71-dop-Treba sniziti doprinose za zdravstveno osiguranje.	4 <sup>ab</sup> (144)	4 <sup>a</sup> (130)	3 <sup>ab</sup> (101)	2 <sup>b</sup> (70)	3 <sup>ab</sup> (103)	3 <sup>ab</sup> (119)	4 <sup>ab</sup> (120)	16.239	0.013
P77-opc-Ukupni udio javnih prihoda (i javnih rashoda) u BDP-u treba smanjiti.	4 <sup>a</sup> (160)	4 <sup>ab</sup> (108)	4 <sup>ab</sup> (123)	4 <sup>ab</sup> (98)	4 <sup>ab</sup> (126)	4 <sup>ab</sup> (109)	3.5 <sup>b</sup> (96)	14.186	0.028
P89-opc-Regionalni porezni poticaji (grad Vukovar, područja posebne državne skrbi, brdsko-planinska područja) su učinkoviti s obzirom na privlačenje investicija u ta područja.	3 <sup>ab</sup> (128)	3 <sup>a</sup> (100)	4 <sup>b</sup> (146)	2 <sup>ab</sup> (94)	2 <sup>a</sup> (94)	3 <sup>ab</sup> (113)	2.5 <sup>a</sup> (102)	22.894	0.001
P90-opc-Troškovi poreznih vlasti (administrativni troškovi) i troškovi poreznih obveznika (troškovi ispunjavanja porezne obveze odnosno svi troškovi udovoljavanja poreznoj obvezi mimo samih iznosa poreza) trebaju igrati značajnu ulogu u kreiranju porezne politike (u smislu da je nužno smanjiti ove troškove kroz značajno pojednostavljenje sustava).	5 <sup>a</sup> (148)	4 <sup>a</sup> (121)	4 <sup>a</sup> (111)	4 <sup>a</sup> (113)	4.5 <sup>a</sup> (134)	4 <sup>a</sup> (108)	4 <sup>a</sup> (91)	13.089	0.042
P92-opc-Treba povećati kazne za porezne prekršaje.	3 <sup>ab</sup> (73)	4 <sup>a</sup> (110)	4 <sup>b</sup> (123)	4 <sup>ab</sup> (105)	4 <sup>ab</sup> (112)	4 <sup>ab</sup> (93)	5 <sup>a</sup> (133)	14.139	0.028

**Tablica 12.** Usporedba zaposlenih grupiranih u sedam skupina: medijani, rangovi i Kruskal-Wallisov test s post hoc Dunnovim testom s Bonferronijevom korekcijom za pitanja sa značajnim Kruskal-Wallisovim testom

Izvor: obrada autorice

*Napomena: PS – porezni savjetnici; PU – Ministarstvo financija - Porezna uprava i ostali anketirani iz Ministarstva financija; JLS – jedinice lokalne i regionalne samouprave; Prav – pravnici iz akademskog sektora; JF – ekonomisti u akademskoj zajednici iz područja javnih financija, PFR – ekonomisti u akademskoj zajednici iz područja poslovnih financija i računovodstva; MM – ekonomisti u akademskoj zajednici iz područja makroekonomije, monetarnih financija i financijskih tržišta*

*H – Kruskal-Wallisov H, p – značajnost Kruskal-Wallisovog testa*

*Grupe koje ne dijele isti superskript značajno se razlikuju.*



Na slici 2 (u Prilogu) grafički su prikazani rangovi odgovora po skupinama za sva pitanja sa signifikantnim Kruskal-Wallisovim testom. S obzirom na to da se kod čak 22 od 30 pitanja Kruskal-Wallisov test pokazuje signifikantnim, nisu objašnjene sve navedene varijable, već samo one kod kojih je  $p < 0,01$ . Tumačenja rezultata nisu nužno dana samo na osnovi Dunnovog testa s Bonferronijevom korekcijom, već i temeljem medijana i rangova, što se može vidjeti na slici 2.

Kod poreza na nekretnine (P02) reflektira se već prije rečeno. Očekivano je da se tu dodaju i pravnici, jer, kako je već rečeno, to je u pravilu u zakonodavstvu svih zemalja lokalni porez. Zato je i logično da su je taj stav blizak profesorima iz javnih financija (JF). Porezni savjetnici (PS) to isto vjerojatno jako dobro znaju.

Logično je da će se porezni savjetnici zalagati da se dividende manje oporezuju (P29) (da njihovi klijenti manje plate, a vjerojatno su upoznati i s teorijom koja tome ide u prilog – tzv. „dvostruko oporezivanje dividendi“ tj. prvo dobiti pa dividendi – u pravilu se kritizira i treba ga smanjiti – zato su tu i profesori javnih financija (JF) koji to znaju. Ekonomisti u akademskoj zajednici iz područja makroekonomije, monetarnih financija i financijskih tržišta (MM) na to slično gledaju kao i porezni savjetnici (PS) – sa stajališta klijenata.

P35 (olakšice za slobodne zone) i slične olakšice i poticaji (npr. Vukovar – P89) – vidi se da se svugdje ističu zaposlenici u jedinicama lokalne i regionalne samouprave (JLS) (kao što je i prije zaključeno). Za spuštanje prihoda PDV-a (P52) već je sve prethodno navedeno.

Kod zaštitne kamate (P40) nije čudno da se jako ističu i porezni savjetnici (PS) kao i kod poticaja ulaganja općenito jer je to najbolje za poslovne subjekte (njihove klijente). Za zaštitnu kamatu tu su i poslovne financije i računovodstvo (PFR) jer oni sa stajališta računovodstva razumiju i o čemu se radi i shvaćaju takav poticaj slično kao porezni savjetnici.

U vezi prepuštanja dijela prihoda od PDV-a nižim razinama vlasti (P52) stručnjaci iz jedinica lokalne i regionalne samouprave (JLS) signifikantno se razlikuju od svih ostalih skupina ispitanika. Ovo se u potpunosti može objasniti vlastitim interesom kojim bi više poreznih prihoda pripalo njima.

Kod stava da su regionalni poticaji učinkoviti za privlačenje investicija u ta područja (P89) opet je uočljiv interes jedinica lokalne i regionalne samouprave (JLS) čiji su djelatnici, logično, skloniji tom stavu za razliku od djelatnika Porezne uprave (PU) koji se također mogu objasniti vlastitim interesom te stavova ekonomista u akademskoj zajednici iz područja javnih financija (JF) i makroekonomije, monetarnih financija i financijskih tržišta (MM) koji nemaju povjerenja u djelovanje te mjere, a mjeri nisu skloni niti pravnicima iz akademske zajednice (Prav).

## 5. Zaključak

Istraživanje stavova stručnjaka o poreznom sustavu i poreznoj politici važan je doprinos čitavoj financijskoj, posebno javnofinancijskoj, i unutar nje poreznoj znanosti i može poslužiti kreatorima ekonomske te osobito fiskalne i porezne politike. Ipak, pri provođenju ankete uvijek postoji pristranost, čak i kada se anketa provodi među stručnjacima.

Istraživanje je pokazalo da postoji povezanost obilježja ispitanika s njihovim odgovorima, posebice sa sektorom zaposlenja i užim područjem rada. Korelacija s dobi pokazala je neočekivane rezultate. Kod starijih ispitanika, za koje se očekuje da su konzervativniji i skloniji poreznim olakšicama te trošarinama, pokazalo se suprotno. Također, suprotno očekivanjima, pokazalo se da su stariji za smanjenje parafiskalnih nameta, iako ih manje terete, te da su za smanjenje udjela javnih prihoda i rashoda, iako im javni rashodi više trebaju, a javne prihode uglavnom više ne uplaćuju.

Povezanost stručne spreme sa stavovima o poreznoj politici jednim dijelom može se objasniti sektorom zaposlenja, s obzirom na to da je u akademskoj zajednici stupanj obrazovanja u pravilu veći nego u drugim sektorima.

Utjecaj sektora zaposlenja pokazao je da do razlike u stavovima najčešće dolazi između privatnog i akademskog sektora. Može se primijetiti da se u privatnom sektoru često zauzimaju stavovi sukladno vlastitom interesu.

Unutar akademske zajednice nema puno pitanja po kojima se razlikuju stavovi ekonomista i neekonomista, ali u manjem broju pitanja u kojemu postoje razlike pokazuje se da ekonomisti ne polaze toliko s fiskalnog aspekta koliko s ekonomskog aspekta, i to s gledišta poduzetnika. Neekonomisti češće polaze od osobnog interesa.

Usporedba stručnjaka iz jedinica lokalne i regionalne samouprave te stručnjaka iz Porezne uprave Ministarstva financija unutar javnog sektora pokazala je puno više neslaganja. Tu je također prisutan samointeres jer u jedinicama lokalne i regionalne samouprave smatraju kako porezi trebaju pripasti njima.

Grupirajući stručnjake različitih profila u sedam skupina prema njihovom užem području rada, može se primijetiti kako su stručnjaci koji dolaze iz jedinica lokalne i regionalne samouprave oni čiji stavovi najčešće odudaraju od stavova neke druge skupine stručnjaka. Te razlike u stavovima često su posljedica interesa jedinica lokalne i javne samouprave.

Iz tog razloga, pri izvođenju zaključaka na temelju ankete, nužno je voditi računa i o karakteristikama anketiranih stručnjaka.

## Literatura:

Blažić, H., Šimović, H., Štambuk, A. (2014.), Mjesto socijalne politike u poreznoj politici RH: anketa poreznih stručnjaka. *Revija za socijalnu politiku*, 21(3), p. 327-360.

Blažić, H., Šimović, H., Štambuk, A. (2016a.), Area Based versus Value Based Recurrent Taxation of Immovable Property. In *The EU Economic Environment Post-crisis: Policies, Institutions and Mechanisms*. Juraj Dobrila University of Pula.

Blažić, H., Šimović, H., Štambuk, A. (2016b.), Introduction of a Local Real Estate Tax in Croatia: A Survey of Expert and Public Opinion, *Lex localis-Journal of Local Self-Government*, 14(1), p. 53-74.

Blažić, H., Štambuk, A., Šimović, H., Lazović-Pita, L., Klun, M. (2017.), What tax experts in former socialist countries think about tax policy: The cases of Slovenia, Croatia and Bosnia and Herzegovina, *Economic Systems*, 41(4), p. 667-693.

Burgman, M., Fidler, F., McBride, M., Walshe, T., Wintle, B. (2006.), Eliciting expert judgments: literature review.

Klopčič, J., Klun, M. (2018.), Analysis of the Relationship of Professionals towards the Vertical Equity of the Slovenian Tax System and Its Comparison with Croatia, Bosnia and Herzegovina and the USA, *International Public Administration Review*, 15(3-4), p. 145-166.

Klun, M. (2014.), Slovenian experiences and lessons from tax reforms, *Tax reforms: Experiences and Perspectives*, Conference Proceedings, Institute of Public Finance Zagreb, p. 149-156.

Klun, M., Štambuk, A. (2015a.), Davčni strokovnjaki in njihovo mnenje o davčni politiki v Sloveniji: U Aristovnik, A. (ur.): *Slovenski javni sektor na razpotju strateških sprememb: zbornik prispevkov / XXII. Dnevi slovenske uprave* Ljubljana, 24.-25. September 2015.

Klun, M., Štambuk, A. (2015b.), Tax experts' opinion on the tax system in Slovenia, *eJournal of Tax Research*, 13(3), p. 784-798.

Klun, M., Štambuk, A. (2016.), Administrativni stroški: pomemben element davčne politike u *Slovenski javni sektor na razpotju strateških sprememb*, Fakulteta za Upravo Ljubljana.

Klun, M., Štambuk, A., Stare, J. (2016.), How Different Is Opinion About The Tax System Among Citizens And Experts: The Case Of Slovenia, *International Journal of Applied Business and Economic Research*, 14(2), p. 591-601.

Lazović-Pita, L. (2016.), *Tax policy and tax administration reforms in Bosnia and Herzegovina* Tax Administration Research Centre (TARC), 4th Annual Workshop, University of Exeter, Exeter, April 21-22, 2016.

Lazović-Pita, L., Štambuk, A. (2015.), Professional Opinions And Attitudes On Tax Policy In Bosnia And Herzegovina With A Special Focus On The Federation Of Bosnia And Herzegovina<sup>1</sup>. *South East European Journal of Economics and Business*, 10(2), p. 29-44.

Lazović-Pita, L., Štambuk, A. (2016.), What are the Opinions of Tax Administration Officials Regarding Tax Policy Reforms in Bosnia and Herzegovina?, *Journal of Advanced Research in Law and Economics*, 7(8 (22))

Lim, D., Slemrod, J., Wilking, E. (2013.), Expert and public attitudes towards tax policy: 2013, 1994, and 1934. *National Tax Journal*, 66(4), p. 775.

Melnick, E. L., Everitt B. S. (Eds.). (2008.), *Encyclopedia of quantitative risk analysis and assessment* (Vol. 1). John Wiley & Sons.

Meyer, M. A., Booker, J. M. (2001.), *Eliciting and Analysing Expert Judgment: A Practical Guide* (Philadelphia, PA: American Statistical Association and the Society for Industrial and Applied Mathematics).

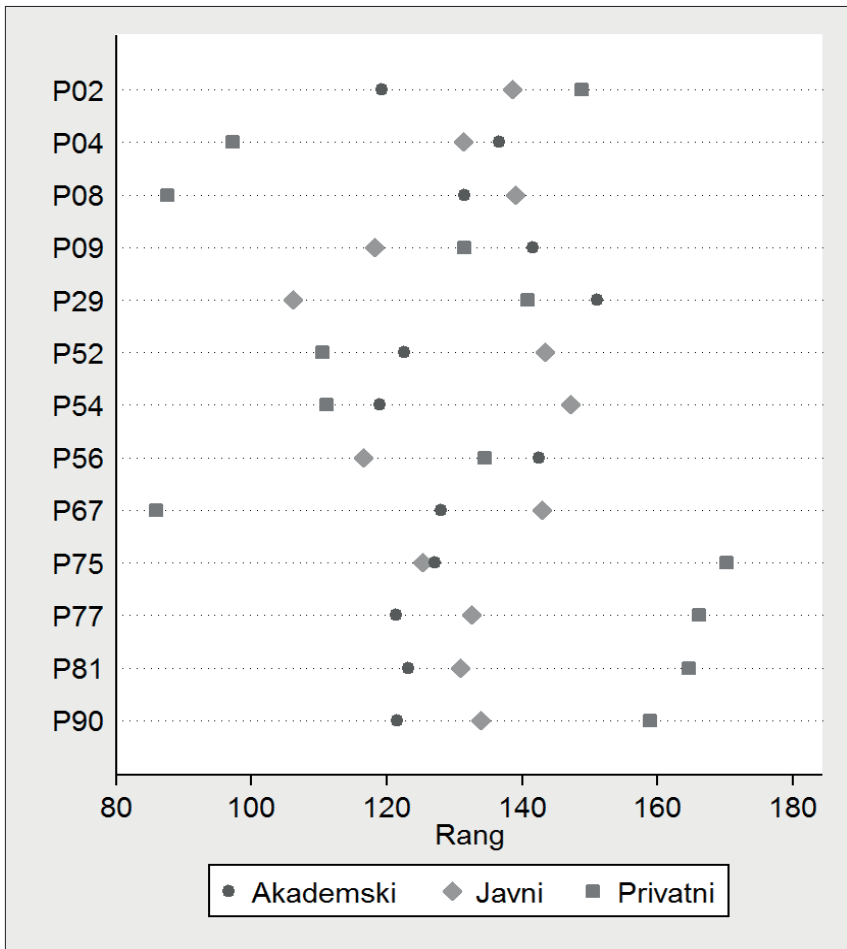
National Tax Association/Office of Tax Policy Research (2013.), *Opinion Survey*

Šimović, H., Blažić, H., Štambuk, A. (2013.), Što porezni stručnjaci misle o poreznom sustavu i poreznoj politici u Hrvatskoj?. *Porezni vjesnik*, 22(12), p. 31-37.

Šimović, H., Blažić, H., Štambuk, A. (2014.), Perspectives of tax reforms in Croatia: expert opinion survey. *Financial Theory and Practice*, 38(4), p. 405-439.

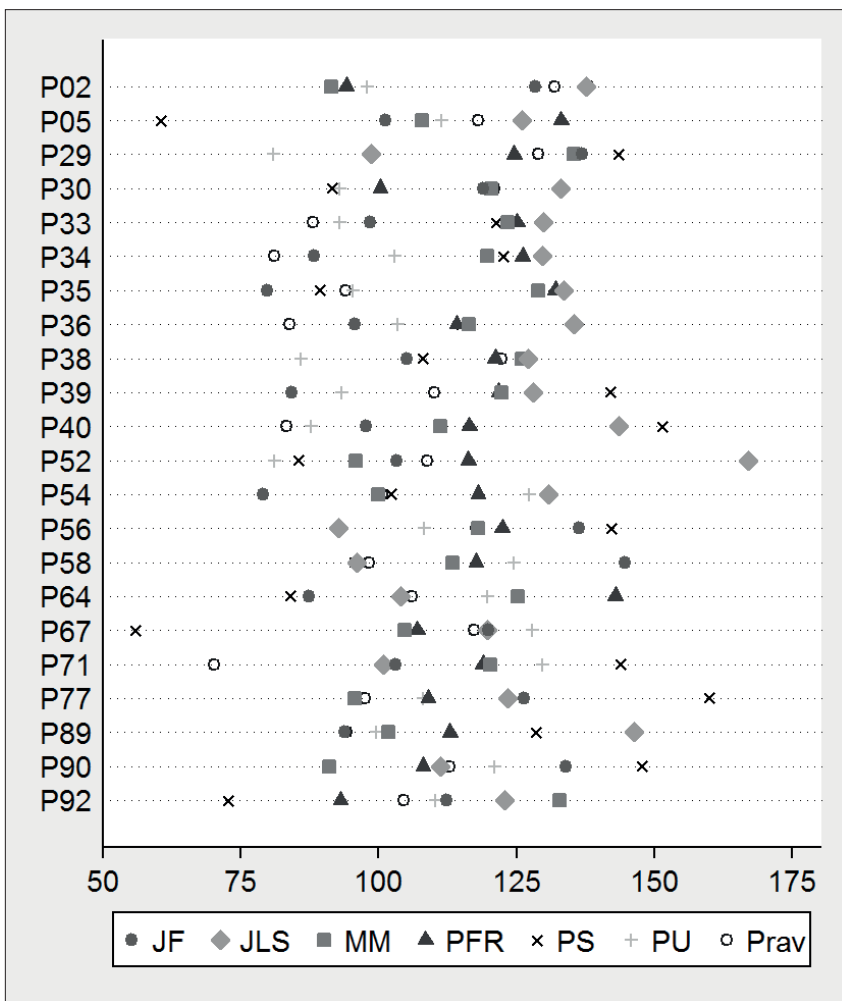
Šimović, H., Blažić, H., Štambuk, A. (2016.), Income vs. Consumption-based concept of direct taxation: eternal debate in Croatia, *Ekonomski pregled*, 67(3), p. 185-205.

## Prilozi



Slika 1. Rangovi odgovora po sektorima za pitanja sa signifikantnim Kruskal-Wallisovim testom

Izvor: obrada autorice



**Slika 2.** Rangovi odgovora ispitanika grupiranih u sedam skupina za pitanja sa signifikantnim Kruskal-Wallisovim testom

Izvor: obrada autorice

*Napomena: PS – porezni savjetnici; PU – Ministarstvo financija – Porezna uprava i ostali anketirani iz Ministarstva financija; JLS – jedinice lokalne i regionalne samouprave; Prav – pravnici iz akademskog sektora; JF – ekonomisti u akademskoj zajednici iz područja javnih financija, PFR – ekonomisti u akademskoj zajednici iz područja poslovnih financija i računovodstva; MM – ekonomisti u akademskoj zajednici iz područja makroekonomije, monetarnih financija i financijskih tržišta*

# **2.**

## **Fiscal Policy and Consolidation**

**Ana Grdović Gnip, PhD, Assistant Professor**

Univeristy of Primorska, Faculty of Mathematics, Natural Sciences and Natural Technologies Koper

e-mail: ana.grdovic@famnit.upr.si

## **EMPIRICAL ASSESSMENT OF STABILIZATION EFFECTS OF FISCAL POLICY IN CROATIA <sup>27 28</sup>**

### **ABSTRACT**

The aim of this paper is to assess the stabilization effects of fiscal policy in Croatia in a structural vector autoregression framework as proposed by Blanchard and Perotti (2002). Results prove that the fiscal transmission mechanism in Croatia works mainly in a Keynesian manner. Output reacts negatively to a tax shock and positively to government spending shock. The output multiplier is above 2 at impact and the effect is significant throught the whole time span. The negative effect of the tax shock is mostly driven by indirect (not direct) taxes. The positive effect of government spending is more pronounced when government investment is considered, especially when private consumption and private investment responses are observed.

**Key words:** fiscal multiplier, spending shock, tax shock, SVAR, Croatia

### **1. Introduction**

Fiscal policy has been in center of debates in economic circles since decades, even more in periods of economic downturn (during the 1980s or recently in the 2010s), focusing merely on the role of expansionary fiscal policy in stimulating economic growth. Such a debate goes mainly around one question: *what is the transmission of fiscal shocks?*

Empirical research of fiscal policy effects has not shown an absolute consensus on the effects of fiscal policy on the macroeconomics. Even theoretical literature suggests diverging positions with respect to the general effectiveness of fiscal policy (and fiscal stimuli packages at the end). Real business cycle models for instance predict that an increase in government consumption will be completely offset by the decrease in private consumption, while Keynesian models assume that the same increase will lead to an increase in private. Moreover, Pappa (2003, 2) points that fiscal shocks are difficult to identify in practice due to the *“endogeneity of fiscal variables, interactions between fiscal and monetary policy var-*

---

27 This is a reprint of a paper published in the Romanian Journal of Economic Forecasting, Volume 18, Issue 1, year 2015 that is available at: [http://www.ipe.ro/rjef/rjef1\\_15/rjef1\\_2015p47-69.pdf](http://www.ipe.ro/rjef/rjef1_15/rjef1_2015p47-69.pdf)

28 The author would like to thank anonymous referees. This work has been supported by the Croatian Science Foundation under the project number IP-2013-11-8174.



*ables, delays between planning, approval and implementation of fiscal policies and scarceness of reasonable zero-identifying restrictions”.*

However, empirical results agree on one fact only, i.e. that a *positive government spending shock has a positive effect on output*. The effects of a tax shock on output as well as effects of expenditure and tax shocks on other macroeconomic variables (GDP components, employment, interest rate, inflation) provide contradictory evidence<sup>29</sup>. Blanchard & Perotti (2002) find evidence of Keynesian predictions in a case of a positive government expenditure shock as well as a negative tax shock, both exerting a positive and significant effect on output and private consumption. Nevertheless, they find that investment reacts negatively to the expenditure shock, which is in line with neoclassical models. Kirchner, Cimadomo & Hauptmeier (2010) show that in the Euro area the reaction of investment to an expenditure shock is positive and significant: a 1% GDP increase in expenditure raises investment by 1.6% GDP. Perotti (2004) shows that the effects of fiscal policy on economic activity in five OECD countries (US, Canada, Australia, Germany and UK) have the propensity to be small and substantially weaker over time. Furthermore, in the case of European countries, Marcellino (2002) finds heterogeneous responses to fiscal shocks in France, Germany, Italy and Spain, but concludes that expenditure shocks are usually rather ineffective in boosting the economy and that tax shocks have minor effects on output. Similarly, Heppke-Falk, Tenhofen & Wolff (2006), de Castro & de Cos (2008) and Biau & Girard (2005) evidence that a tax shock does not significantly affect output in Germany, Spain and France respectively.

There are quite few studies that try to assess stabilization effects of fiscal policy in emerging economies. Baxa (2010) shows that the Czech economy behaves in line with Keynesian assumptions, because government expenditures positively affect economic activity. Still, Baxa (2010, 27) finds that government tax shock exercises a *“very uncertain, very to zero, but most probably rather negative”* effect on output. Oppositely, by analyzing fiscal policy shocks in a group of six European transition economies (Czech Republic, Hungary, Poland, Slovak Republic, Bulgaria and Romania) Mirdala (2009) finds that output increases after a tax shock in the Czech Republic. The same is evidenced for Hungary, Slovak Republic, Bulgaria and Romania. Jemec, Strojan Kastelec & Delakorda (2011) show that in Slovenia a 1% GDP increase in government revenue makes output fall by 0.38%, but the negative effect is evidenced only in the first quarter after the shock. Furthermore, they find that the reaction of

---

29 Although the latter can be attributed in some extent to different variables, sample periods, dummies and trend, Caldara & Kamps (2008) prove that different methodologies applied to the same dataset lead to conflicting conclusions for responses of GDP components on a fiscal shock. Moreover, even when estimated responses to fiscal shocks are of the same sign and direction, the estimated magnitude and duration can quite differ. However, the most widely applied method in assessing responses to fiscal policy shocks is the Blanchard and Perotti SVAR, based on the assumption that fiscal variables do not react contemporaneously to changes in economic conditions.

private consumption and investment to a tax shock is negative (being 0.05% GDP and 0.35% GDP respectively), while an expenditure shock positively affects both components (evidence show an increase of 1.1% GDP and 1.6% GDP respectively).

Responses to fiscal shocks on the Croatian case are studied in Ravnik & Žilić (2011) and Šimović & Deskar-Škrbić (2013). Based on a monthly data span 2001M1 to 2009M12 Ravnik & Žilić (2011) conclude that the strongest response after both fiscal shocks has the interest rate, while the lowest the price level. Moreover, non-commonly, they show that the response of output (proxied with industrial production) is positive after a tax shock and negative after a spending shock, concluding that on one hand industrial production may not be a good proxy variable for output, and on the other hand that maybe the crowding out effect predominates the output effect. On the other hand, Šimović & Deskar-Škrbić (2013) show that output reacts strongly and positively to spending shocks (being the multipliers 2.18 at the consolidated general government level and 0.82 at the central government level), while a negative response is evidenced after a tax shock.

Although this research employs the same SVAR method there are *two main novelties* with respect to Ravnik & Žilić (2011) and Šimović & Deskar-Škrbić (2013): (i) *except the effects of fiscal shocks on output, prices and interest rates, the analysis embraces also the response of GDP components (private consumption and private investment), and (ii) the investigation also includes effects of different government expenditure and revenue components on macroeconomic variables.* The main motivation of the paper in investigating the aforementioned comes from the need of a deeper discussion of the transmission mechanism of fiscal policy in Croatia for policy makers and academics. Croatia, like other countries, opted for several fiscal discretionary measures during the latest economic crisis in order to *ad hoc* achieve fiscal consolidation. Still, no previous research investigated the possible effects of such measures on private consumption and private investment, and thus did not take into account possible outcomes in a medium and long run. Being that the fact, the taken restrictive tax measures (introduction of new taxes, increment of tax rates, narrowing the tax base, etc.) during recessionary times, may have been the driving force why Croatia is experiencing one of the longest recessionary periods amid EU countries. Moreover, this research with respect to the aforementioned has a different data frequency and longer time span, making the estimates more suitable and reliable.

Main results are in line with Keynesian theory. A spending shock positively affects output, private consumption and private investment and the response is significant. Moreover, when investigating the effect of government consumption versus government investment, the positive effect of both with respect to output and output components are significant. A tax shock leads to a drop in output, private consumption and

private investment. Interesting is the fact that output responds negatively on impact after a shock in direct taxes, but the negative effect lasts only for a quarter, being afterwards positive and significant for two years. Oppositely, the negative effect of indirect taxes on output is more persistent and lasts for three years. This is in line with the expectations because, among others, indirect taxes make more than 70% of total tax receipts (social security contributions excluded) in Croatia.

This paper is structured as follow: section two explains the methodology and data, while section three presents the results. The fourth section underlines concluding remarks and gives policy recommendation.

## 2. Methodology and data information

### 2.1. Data description and VAR setup

The empirical analysis of the impact of fiscal policy on macroeconomic variables in this study is based on a structural vector autoregression (SVAR) approach, particularly on the methodology proposed by Blanchard & Perotti (2002), which is considered the pioneering paper for fiscal policy SVAR analysis. Blanchard & Perotti (2002) argue that governments cannot react within the same quarter to changes of macroeconomic setting mainly because fiscal policy decisions involve many agents (parliament, government and society) and therefore need a long period of time for implementation. All fiscal policy events that do not reflect automatic responses are seen as structural fiscal policy shocks. The latter are unaffected by the macroeconomic variables in the VAR model, because discretionary fiscal policy shocks are analyzed using fiscal policy decision lags.

This paper uses a quarterly dataset from 1996Q1 to 2011Q4 for output ( $Y_t$ ), government spending ( $G_t$ ), government revenue ( $R_t$  - also referred to as taxes or net taxes in the rest of the paper), prices ( $\pi_t$ ) and interest rates ( $r_t$ ) in the 5 variable baseline SVAR model. Fiscal variables are defined as in the Blanchard and Perotti (2002) setup, i.e. both net of transfers, but at the consolidated central government level<sup>30</sup>. The price level is measured by the Consumer Price Index, while the interest rate is represented by the short term interest rate on the interbank demand deposit trading. All variables, except the interest rate, are in logarithms,

---

30 It is common empirical practice to analyze fiscal policy of a country using general government data. Still, this paper (as many others that examine fiscal policy in Croatia (Benažić, 2006; Rukelj, 2009; Grdović Gnip, 2011; Ravnik & Žilić, 2011)) bases the research on consolidated central government data. It is important to point out that quarterly fiscal data for Croatia at the general government level are not available for the period 1995-2004. Nevertheless, such a limitation should not pose significant differences amid results of fiscal policy effects in the Croatian case, principally for two reasons: (1) discretionary decisions are carried by the consolidated central government, and (2) the share of local governments' budgets in the general budget is on average less than 10% and embrace only 53 local units (20 regions, 32 cities plus the City of Zagreb, out of 555 cities and counties in total).

while output and fiscal variables are additionally seasonally adjusted using the ARIMA X12 algorithm. Moreover, all variables are in real terms, they are CPI deflated 2000=100.

Unit root tests find conclusive evidence that only the interest rate variable is stationary in levels at the 1% significance level, while other variables present unit roots in levels, according to the Augmented Dickey Fuller (ADF) test. Moreover, results show the presence of co-integrating relations and a possible specification of a vector error correction model, but as noted by Heppke-Falk, Tenhofen & Wolff (2006, 12), when estimating models that have many disaggregated time series it is difficult to find economically interpretable cointegration vectors<sup>31</sup>. Moreover, Blanchard & Perotti (2002) find no significant differences between results obtained with and without taking the cointegration relation into account.

Although the system is stationary in first differences, the analysis is done using variable in levels, because the focus of the analysis is on the dynamics (i.e. impulse responses), not the coefficient estimation<sup>32</sup>. To choose the appropriate lag length the judgment is based on information criteria results, the length of the sample and economic sense. The AIC criterion suggests two lags, while the BIC and HQC indicate one lag as optimal. This analysis will allow for dynamic interaction up to two lags as suggested by the Akaike criterion.

As mentioned previously five variables enter in the baseline model setup and their order is of particular importance since it defines the relationship structure amid innovations. It is common empirical practice to order variables according the timeline of their occurrence. This analysis orders the variables as in Caldara & Kamps (2008), i.e. government spending is ordered first, followed by output, prices, net taxes and interest rate<sup>33</sup>.

The reduced form VAR model can be written as:

$$Y_t = C(L)Y_{t-1} + U_t \quad (1)$$

where  $Y_t$  is vector of endogenous variables,  $C(L)$  is a  $n \times n$  autoregressive lag polynomial matrix and  $U_t$  is a vector of reduced form residuals<sup>34</sup>.

The errors from a VAR in its reduced form are expected to be i.i.d., but correlated across equations. Perotti (2005) asserts that innovations in the fiscal variables  $u_t^g$  and  $u_t^r$  can be thought as a linear combination of three types of structural shocks, i.e. of (1) the *automatic* responses

---

31 Due to the limited space these results are not reported here but are available upon request.

32 This is common empirical practice. Studies that estimate a SVAR in levels no matter of the stationarity in first differences are Perotti (2002), Heppke-Falk, Tenhofen & Wolff (2006), de Castro & de Cos (2006), Jemec, Strojjan-Kastelec & Delakorda (2011), Ravnik & Žilić (2011).

33 Refer to Caldara & Kamps (2008, 13) for a detailed discussion about the mentioned ordering.

34 Reduced form residuals  $U_t$  are a linear combination of different structural innovations and therefore have no economic interpretation.

of government expenditure and revenue to real output, inflation and interest rate, (2) the *systematic discretionary* response of government expenditure and revenue to the same macroeconomic variables and (3) the *random discretionary* fiscal policy shocks. Since a  $u_t^j$  shock contains information about other shocks of the system, it is not possible to isolate a shock of just one of the variables. Thus, to be able to isolate the shocks in focus, i.e. fiscal shocks, there is a need of structure on the VAR. This structure is obtained by defining the contemporaneous effects (those that occur in lag=0) of variables among each other. If reduced form residuals  $U_t$  are written as a linear combination of structural shocks  $V_t$  then the structural VAR can be written as:

$$AY_t = AC(L)Y_{t-1} + BV_t \quad (2)$$

To make the system just identified 35 restrictions should be imposed<sup>35</sup>. The matrix representation of the mentioned system is the following:

$$\begin{bmatrix} 1 & -\alpha_y^g & -\alpha_\pi^g & -\alpha_r^g & -\alpha_i^g & u_t^g \\ -\alpha_g^y & 1 & -\alpha_\pi^y & -\alpha_r^y & -\alpha_i^y & u_t^y \\ -\alpha_g^\pi & -\alpha_y^\pi & 1 & -\alpha_r^\pi & -\alpha_i^\pi & u_t^\pi \\ -\alpha_g^r & -\alpha_y^r & -\alpha_\pi^r & 1 & -\alpha_i^r & u_t^r \\ -\alpha_g^i & -\alpha_y^i & -\alpha_\pi^i & -\alpha_r^i & 1 & u_t^i \end{bmatrix} = \begin{bmatrix} \beta_g^g & 0 & 0 & \beta_r^g & 0 \\ 0 & \beta_y^y & 0 & 0 & 0 \\ 0 & 0 & \beta_\pi^\pi & 0 & 0 \\ \beta_g^r & 0 & 0 & \beta_r^r & 0 \\ 0 & 0 & 0 & 0 & \beta_i^i \end{bmatrix} \begin{bmatrix} v_t^g \\ v_t^y \\ v_t^\pi \\ v_t^r \\ v_t^i \end{bmatrix} \quad (3)$$

The imposed restrictions include the following: (i) values across the main diagonal of matrix A are set to one, which makes five restrictions; (ii) matrix B contains 18 elements set to zero, which makes additional 18 restrictions; (iii) in the equation explaining reduced innovation in government spending  $a_y^g$ ,  $a_r^g$  and  $a_i^g$  are set to zero because it is assumed that government spending is solely under the control of fiscal authority, while the impact of inflation  $a_\pi^g$  is assumed to be -0.5, as in Perotti (2002) among others; all these make additional four restrictions; (iv) the assumption that the short term interest rate innovation does not influence the other reduced innovations makes  $a_i^y$ ,  $a_i^\pi$  and  $a_i^r$  zero; the reduced form innovation of output is not affected by the innovation of inflation, so  $a_\pi^y$  is also set to zero; all these add four restrictions; (v) the impact of the innovation of output and prices on the innovation of taxes, i.e.  $a_y^r$  and  $a_\pi^r$  respectively, are estimated exogenously (see further in this section) which makes two addition restrictions; (vi) the remaining two restrictions depend on how the relationship between two fiscal variables are modeled. The impact of government spending on taxes is modeled through the B matrix, so  $a_g^r$  is set to zero, and assuming that government spending decisions come first means setting  $b_r^g$  to zero, which gives the last two needed restrictions.

The *random discretionary* fiscal policy shocks are actually of main interest and represent underlying structural shocks used to study the response of macroeconomic variables. Thus, to explain the relationship

35 The system needs  $2n^2 - \left(\frac{n^2 - n}{2} + n\right)$  restrictions, where n is the number of endogenous variables.

between fiscal variables, lets focus on the equations showing the reduced form innovations of government spending and revenues:

$$u_t^g = \alpha_y^g u_t^y + \alpha_\pi^g u_t^\pi + \alpha_i^g u_t^i + \beta_r^g v_t^r + v_t^g \quad (4)$$

$$u_t^r = \alpha_y^r u_t^y + \alpha_\pi^r u_t^\pi + \alpha_i^r u_t^i + \beta_g^r v_t^g + v_t^r \quad (5)$$

where  $v_t^g$  and  $v_t^r$  represent structural shocks to government spending and revenue respectively. The  $a_i^j$  coefficients capture the automatic responses of macroeconomic variables to a government spending and revenue shock under the existing fiscal policy rules as well as any discretionary adjustment of fiscal policy in response to unexpected movements in macroeconomic environment. The  $b_i^j$  coefficients express how the structural shock to government spending and revenue affects revenue or spending respectively.

Since the reduced form residuals are correlated with pure structural shocks  $v_t^g$  and  $v_t^r$ , in order to correctly identify the shocks *exogenous elasticities* are used to compute cyclically adjusted reduced form fiscal policy shocks:

$$u_t^{g,CA} = u_t^g - (\alpha_y^g u_t^y + \alpha_\pi^g u_t^\pi + \alpha_i^g u_t^i) = \beta_r^g v_t^r + v_t^g \quad (6)$$

$$u_t^{r,CA} = u_t^r - (\alpha_y^r u_t^y + \alpha_\pi^r u_t^\pi + \alpha_i^r u_t^i) = \beta_g^r v_t^g + v_t^r. \quad (7)$$

Next, it is necessary to make a *decision with respect to the relative ordering of the fiscal variables*. Assuming that tax decisions come first means setting  $b_g^r$  equal to zero, while oppositely, assuming that expenditure decisions represent government priority number one means setting  $b_r^g$  equal to zero.

Although Perotti (2002) points out that neither of the alternatives of priority has any theoretical or empirical basis, most of the works as well as Blanchard & Perotti (2002) and this research test both assumptions to see whether the ordering makes difference to the impulse responses.

Assuming that a government tends to decide on expenditure first means that:

$$u_t^{g,CA} = v_t^g \quad (8)$$

$$u_t^{r,CA} = \beta_g^r v_t^g + v_t^r, \quad (9)$$

where  $b_g^r$  is estimated by OLS to retrieve the structural shocks to the fiscal variables.

*Other reduced form residuals' equations are estimated recursively using instrumental variables regressions*, in order to account for the correlation of the respective regressors and error terms. Since the cyclically adjusted variables are orthogonal, they are used as instruments (Blanchard & Perotti, 2002)<sup>36</sup>.

36 Since Blanchard & Perotti (2002) base their seminal work on a three variable VAR, cyclically adjusted fiscal variables are used as instruments only. Nevertheless in a five variable VAR, there is more than one equation to be estimated using the IV method, therefore obtained structural shocks are used as instruments as well (Perotti, 2005; Heppke-Falk, Tehnhofen & Wolff, 2006; Giordano, Momigliano, Neri & Perotti, 2007; among others).

## 2.2. Exogenous elasticities

The exogenous elasticities of a budgetary item with respect to output are obtained as product of the elasticity of the budgetary item to its macroeconomic base and the elasticity of this base with respect to output. If the elasticity of a budgetary item is constructed as an average value of two or more sub-components' elasticities, then their respective shares in the budgetary item's volume are used as weights<sup>37</sup>. The tax elasticity to output is:

$$\alpha_y^r = \sum_{i=1}^n \alpha_{B_i}^{\tau_i} \cdot \alpha_y^{B_i} \cdot \frac{T_i}{T} \quad (10)$$

Table 1 shows the elasticities of different budget components to output and prices. It is important to note that the overall total tax elasticity is 0.93, but since the fiscal variable regarding government revenues used in the analysis is constructed following the Blanchard & Perotti (2002) assumptions, i.e. net of transfers, it is corrected by the elasticity of unemployment related expenditures to output weighted by the share of this expenditure in total government expenditure<sup>38</sup>.

Calculating the elasticity of taxes with respect to prices means adjusting equation (11) for the elasticity of the macroeconomic base with respect to prices, i.e.  $a_p^{B_i}$  instead of  $a_y^{B_i}$ . The results indicate that the price elasticity of taxes ( $a_p^r$ ) is 0.73, which is again does not deviate from results obtained by other studies in this field.

Budgetary item	w.r.t. real output	w.r.t. prices
	$a_y^r$	$a_p^r$
Net taxes	0.92	0.73
Direct taxes	0.53	-0.32
Indirect taxes	1.36	1.90
Government expenditure	0	-0.5
Current expenditure	0	-1
Capital expenditure	0	-1
Public wages expenditure	0	0
Public purchases expenditure	0	-1

**Table 1.** Exogenous elasticities with respect to output and prices

Source: Perotti (2002) and author's calculation

Note: For details on sub-components' elasticities see Appendix C; The price elasticity of total government expenditure and its components is set as in Perotti (2002).

<sup>37</sup> Details on each tax item elasticity to its macroeconomic base, as well as the elasticity of the latter with respect to output or prices are available upon request.

<sup>38</sup> Following Grdović Gnip (2011) the output elasticity of unemployment related expenditures is -0.58, and these expenditures amount to 0.85% of total consolidated central government expenditures, which allows for a -0.01 correction of the total tax elasticity, to obtain the output elasticity of net taxes.

Same as in Heppke-Falk, Tenhofen & Wolff (2006) among others, this study assumes that expenditure do not respond to output within a quarter because they are predetermined in a budgetary plan and therefore not elastic in the short run<sup>39</sup>.

### 2.3. Fiscal policy effects in alternative models

In order to assess the stabilization effects of fiscal policy on different GDP components (private consumption and private investment) and labour market, as well as effects of different spending and tax components the re-estimation of (4) is done by extending the SVAR to a six variable model as follows:

- a. In order to examine the effects of fiscal shocks on GDP components (private consumption and private investment) the vector of endogenous variables  $Y_t$  is extended, being yet  $\begin{bmatrix} g_t & y_t & z_t & p_t & r_t & i_t \end{bmatrix}$  where  $z_t$  corresponds to the (in turn) added variable, i.e. private consumption or private investment. This order follows the suggestion by Caldara & Kamps (2008), as in the case of the baseline model and the mentioned assumptions (see Footnote (7)). To recall, placing private consumption or private investment at the third place means it does not react contemporaneously to prices, taxes and interest rates shocks, but is contemporaneously affected by government spending and output shocks. Yet, the equations showing reduced form innovations of fiscal variables are:

$$u_t^g = \alpha_y^g u_t^y + \alpha_z^g u_t^z + \alpha_\pi^g u_t^\pi + \alpha_i^g u_t^i + \beta_r^g v_t^r + v_t^g \quad \text{and} \quad (17)$$

$$u_t^r = \alpha_y^r u_t^y + \alpha_z^r u_t^z + \alpha_\pi^r u_t^\pi + \alpha_i^r u_t^i + \beta_g^r v_t^g + v_t^r \quad (18)$$

where  $a_z^g$  and  $a_z^r$  represent the elasticity with respect to the GDP component (private consumption or private investment) of government spending and taxes respectively, while  $u_t^z$  are the reduced form innovations of the GDP component under analysis. In order to fully identify the SVAR the mentioned two elasticities have to be estimated. Recalling the assumption that government spending are solely under the control of fiscal authority, in the equation explaining reduced innovation in government spending all elasticities (except the price elasticity) are again set to zero. Therefore the spending elasticity with respect to private consumption and private investment is zero. On the other hand, the tax elasticities with respect to private consumption and private investment have to be estimated. Following the same procedure as in case of previous exogenous elasticity estimation, the elasticity of (total) taxes with respect to private consumption and private investment results to be 0.84 and 0.49 respectively.

<sup>39</sup> However, worth noting is that some recent studies challenge this assumption. Among others, Rodden & Wibbles (2010) find evidence of spending elasticity with respect to output at the state and local level in the US being 0.17. But, this work (as well as others in this field) is based on annual data, so it is reasonable to assume that such a procyclicality vanishes in quarterly frequencies.



- b. Since different government spending components can affect economic activity in a different manner, the effects of government consumption and government investment shocks on the macroeconomic environment in Croatia are inspected. To do so, total government spending  $g_t$  is replaced in the six variable model in turn by government consumption or government investment. Therefore, the vector of endogenous variables  $Y_t$  is now  $[g_t^j \ y_t \ z_t \ p_t \ r_t \ i_t]$ , being  $g_t^j$  a spending component. Government consumption is defined as in Heppke-Falk, Tenhofen & Wolff (2006), i.e. the sum of personnel and operating budget expenditure, while government investment corresponds to capital spending.
- c. Following a similar rationale as ad b., the vector of endogenous variables in case of investigating the effects of tax shocks by component is  $Y_t = [g_t \ y_t \ z_t \ p_t \ r_t^j \ i_t]$ , being  $r_t^j$  a tax component, i.e. direct taxes or indirect taxes. In order to correctly define the fiscal equation, the exogenous elasticities in case of different tax components with respect to output and prices were already presented in Table 1 of this work. Since it is important to inspect different tax components' effect on GDP components as well, the elasticities of direct and indirect taxes with respect to private consumption and private investment were estimated. In line with the previously explained methodology, the elasticity of direct taxes with respect to private consumption and private investment results to be in Croatia 0.23 and 0.29 respectively. On the other hand, the elasticities of indirect taxes with respect to private consumption and private investment are 1.53 and 0.7 respectively.

### 3. Results

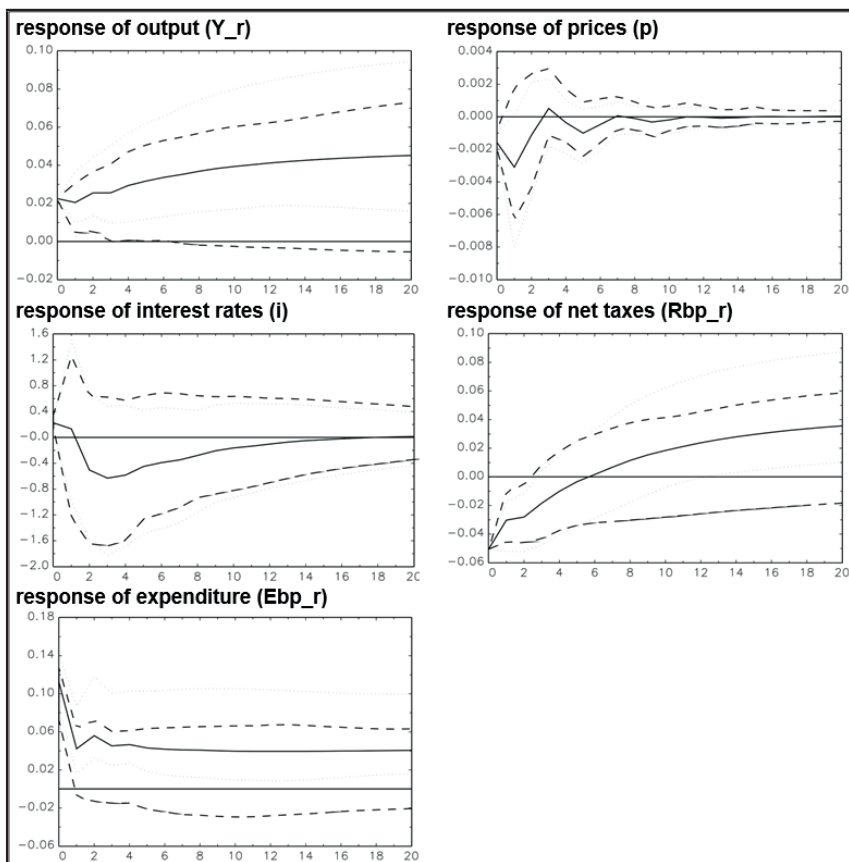
This section presents impulse response functions and multipliers derived from the baseline model as well as extended models. According to the level specification, structural shocks are interpreted as one percentage point increase in the policy variables, while impulse responses represent the percent change of the responding variable. The path is shown for a horizon of 20 quarters i.e. five years. Moreover, the 95% percentile confidence intervals coverages are shown, obtained from 100 bootstraps of the impulse response distribution<sup>40</sup>.

#### 3.1. Baseline model

It is possible to notice that output responds positively to a government spending shock and the positive impact is significant throughout the whole time horizon (Figure 1). A long term positive effect is also evi-

40 Confidence intervals are obtained using the Hall (dashed lines) and Efron (dotted lines) Bootstrap available in the JMulTi package, which was used along with Gretl software throughout the estimations in this paper.

denced in Blanchard & Perotti (2002), Perotti (2004) and Fatas & Mihov (2001), who show that in the case of the US the government spending positively affects output for more than five years<sup>41</sup>.



**Figure 1.** Impulse responses to an increase in government spending (baseline model)  
*Source:* Author's estimation

Although not of typical hump-shape, the response of output results to be similar to the same in developing countries. Mirdala (2009) shows that, after the initial positive impact, output starts to gradually increase in Romania, Slovak Republic, Poland and Hungary, and its effects vanish only in the long term. The cumulative output multiplier in Croatia is above one unit in all presented periods, being the highest at impact<sup>42</sup> (Table 2)

<sup>41</sup> In case of other developed countries the positive impact is more of short and/or medium term. Refer to Perotti (2004), Marcellino, (2002), Biau & Girard (2005) and Giordano et al (2007) among others.

<sup>42</sup> The cumulative output multiplier in a given quarter is calculated as the ratio between the cumulative response of output and the cumulative response of government expenditure after the government spending shock.

Shock to:	Quarters			
	4 <sup>th</sup>	8 <sup>th</sup>	12 <sup>th</sup>	16 <sup>th</sup>
Government spending	2.45	1.79	1.49	1.33

**Table 2.** Cumulative output multipliers to government spending shocks

Source: Author's estimation

If the given multipliers are compared to those obtained by Šimović & Deskar-Škrbić (2013) for the same (consolidated central) government level then it is possible to observe that in the first year their multiplier is for almost one percentage point lower (being 1.58), while the one corresponding for first two years is almost the same (being 1.80 in their case). The difference that occurs in the short-run may be due to two things mainly: (1) a shorter time span in Šimović & Deskar-Škrbić (2013) and (2) a "smaller" VAR model which embraces three variables only.

The negative response of price after the same spending shock is minimal and vanishes in two years. Empirical evidence does not find conclusive results here although theoretically one would expect an increase in the price level after a government spending shock either at impact or for a longer time period. Still, among developing countries evidence show a predominant, at least initially, positive effect<sup>43</sup>, while in case of developed countries results are various<sup>44</sup>.

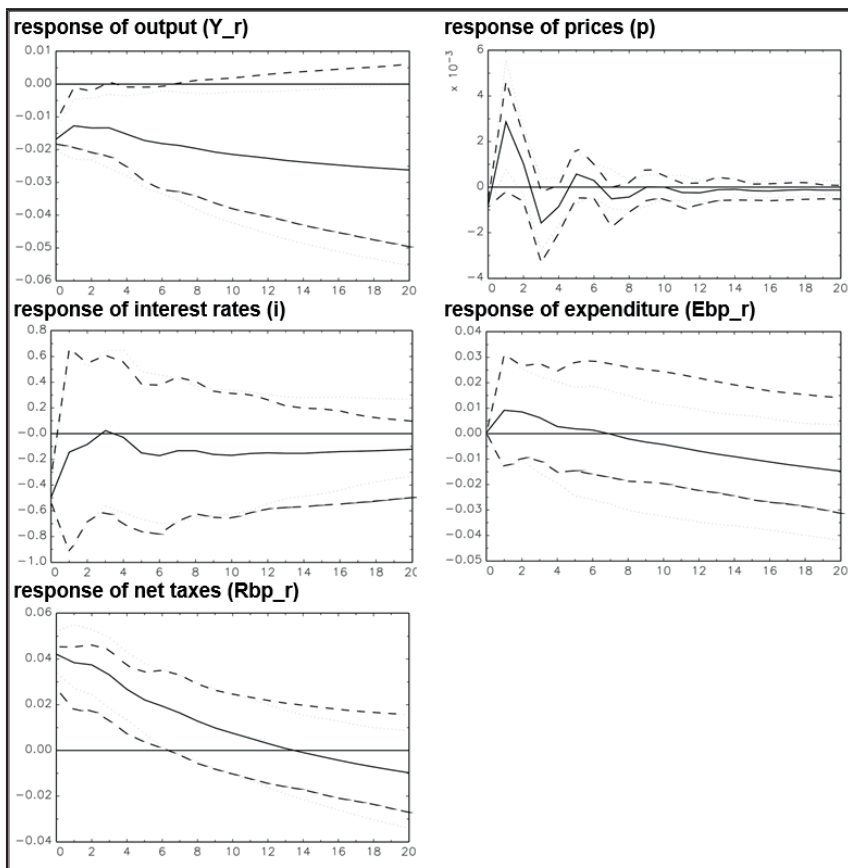
A spending shock positively affects interest rates only at impact, while afterwards the response is negative throughout the whole period, as in Caldara & Kamps (2006) or Mancellari (2011). Keynesian theory suggests that an increase in interest rates is due to an increase in income. Moreover, Barro (1987) argues that, when the increase in government spending is taken as permanent the increase in output will be realized without increasing interest rates.

If innovations in taxes are considered, the response of output after a tax shock is negative the whole time horizon of five years (Figure 2). Important to notice is that it shows to be permanent, not temporary, and moreover, as in case of a spending shock, the response is significant throughout the whole time horizon. If this is looked through the lenses of other empirical studies it maybe concluded that Croatia is closer to the average results of developed than developing countries, where one can find more evidence of a positive response of output initially or for a

43 Mirdala (2009) shows that prices react positively after a spending shock in the Czech Republic, Hungary, Poland, Slovak Republic, Bulgaria and Romania, vanishing in the latter only in the long run.

44 Similar to results of this study, Fatas & Mihov (2001), Mountford & Uhlig (2002) and Caldara & Kamps (2006) evidence that, prices react negatively through the whole time horizon.

longer time horizon<sup>45</sup>. Moreover, the response of taxes after a tax shock confirms the hypothesis of permanent change.



**Figure 2.** Impulse responses to an increase in net taxes (baseline model)  
*Source:* Author's estimation

If tax multipliers are considered than it is possible to conclude that its size on impact is very similar to the same obtained by a spending increase but of opposite direction (Table 3). Moreover, the effect is highly comparable to Šimović & Deskar-Škrbić (2013, 67).

45 In case of the US Blanchard & Perotti (2002), Perotti (2004) and Mountford & Uhlig (2002) show that the negative response of economic activity lasts for more than five years. Empirical evidence based on German data does not provide such unanimous results (Perotti, 2004; Marcellino, 2002; Heppke-Falk, Tenhofen & Wolff, 2006), while in case of Spain, France and Italy output response to a revenue shock is insignificant, being negative in the first two cases and positive in case of Italy (de Castro & de Cos, 2008; Biau & Girard, 2005; and Giordano et al, 2005; respectively). On the other hand, Mirdala (2009) shows that after a tax shock output increases in Czech Republic, Hungary, Poland, Slovak Republic, Bulgaria and Romania, being positive throughout the whole time horizon in all cases except Poland. Same is evidenced for Albania (Mancellari, 2011), while in Colombia the positive response vanishes after two years.

Shock to:	Quarters			
	4 <sup>th</sup>	8 <sup>th</sup>	12 <sup>th</sup>	16 <sup>th</sup>
Taxes	-2.35	-1.66	-1.17	-0.81

**Table 3.** Cumulative output multipliers to tax shocks

Source: Author's estimation

The response of prices to a tax shock is positive the first two quarters and then volatile around zero. Similar evidence can be found among other studies. The effect of a revenue shock on prices in the US is initially positive and then turns negative. According to Perotti (2004) inflation is evidenced only in the first quarter, while Mountford & Uhlig (2002) prove that it lasts for the first four quarters. Oppositely, the same effect in Germany is negative according to Perotti (2004), while Marcellino (2002) partly disagrees stating that the effect turns negative after being initially positive during the first year. Moreover, Giordano et al. (2005) find the effects on inflation very small and insignificant in the case of Italy. In Poland, the Slovak Republic and Bulgaria a tax shock increases inflation, while in the Czech Republic, Hungary and Romania it decreases the rate of inflation (with differing intensity and durability in both cases) (Mirdala, 2009, 11).

A tax shock exercises a negative and insignificant response of the interest rate in Croatia. A negative response of the interest rate on a tax shock is also evidenced in the case of Hungary, Poland, Slovak Republic and Bulgaria and remained permanent through the whole time horizon (Mirdala, 2009). Additionally, the effects on interest rates in Croatia showed to be insignificant after a tax shock, same as in Germany (Heppke-Falk, Tenhofen & Wolff, 2006), while in Spain, interest rates tend to increase persistently (de Castro & de Cos, 2008).

### 3.1.1. Robustness check

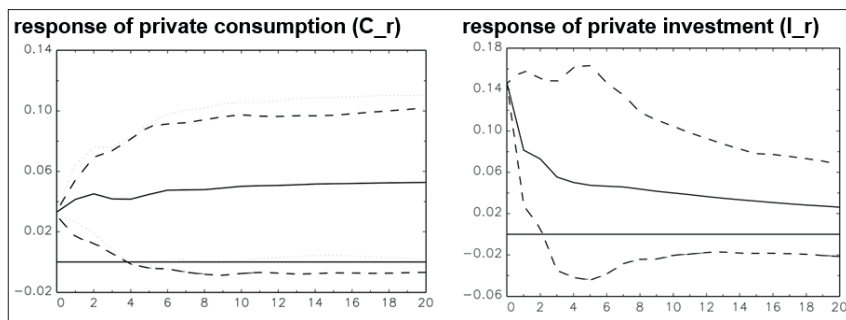
The robustness of the baseline results was checked by means of four alternatives: (1) Changing the values for  $a_y^r$  and  $a_p^r$ , i.e. using different elasticities of taxes with respect to output and prices. In this case elasticities obtained by Ravnik & Žilić (2011) are used to estimate the model and extract the impulse response functions. (2) Changing the value of  $a_p^g$ , i.e. the price elasticity of government spending. It has been mentioned earlier that the price elasticity of spending is set to be -0.5 following Perotti (2002). Still, this elasticity ranges from -1 to 0, so both extreme cases of  $a_p^g$  are tested. (3) Assuming that a government tends to decide on taxes first, i.e. defining that  $b_g^t=0$ . (4) Using a first order lag polynomial as suggested by Schwarz and Hannan-Quinn.

In none of the four cases the results do not change substantially. The pattern of response remains the same. Moreover, since the response of prices and interest rates is small and/or insignificant, a simple three variable SVAR including government spending, output and net taxes (as in the seminal paper of Blanchard & Perotti (2002)) is also run, in order to

check whether the responses of output move in the same direction after a fiscal. Indeed, results are similar and the responses are significant in cases of both confidence intervals bootstrapping method. Furthermore, nothing changes if the observed time period is shorten, starting from first quarter 2000<sup>46</sup>.

### 3.2. Alternative models

Government spending increases lead to a positive effect in private consumption and private investment, with a slightly different development throughout the time horizon (Figure 3). Interesting is the fact that the effects are significant in the short run and result to be permanent.



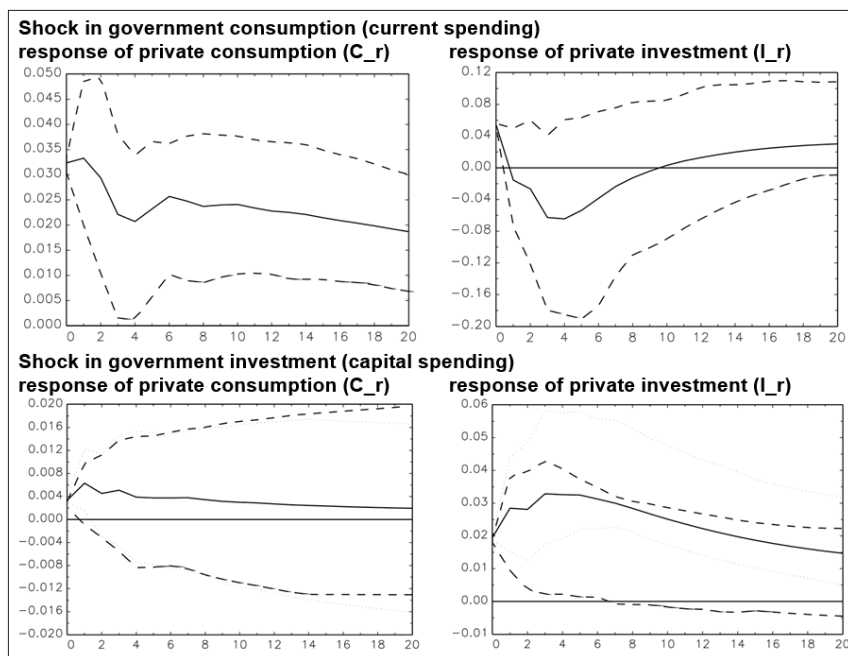
**Figure 3.** Responses to an increase in government spending (alternative model)  
*Source:* Author's estimation

Fatas & Mihov (2001), Blanchard & Perotti (2002) and Caldara & Kamps (2006) outline that a positive government spending shock in the US increases significantly private consumption. In case of Germany and Spain private consumption increases initially after the expenditure shock, falling subsequently to levels below the initial one (Heppke-Falk, Tenhofen & Wolff, 2006; and de Castro & de Cos, 2008, respectively). Giordano et al (2007) and Biau & Girard (2005) find that the response of private consumption to an expenditure shock in Italy and France respectively is hump-shaped, i.e. after the initial stimulation the effect decreases progressively in the medium term. Still, Kirchner, Cimadomo & Hauptmeiere (2010) find evidence that in the Euro area the reaction of private consumption is positive and significant. A 1% GDP increase in expenditure raises private consumption by 1.1% GDP.

46 The reasoning behind this decision is supported by the fact that the Croatian Bureau of Statistics started to publish a quarterly GDP estimation in 2000 (quarter by quarter). The quarterly GDP/output data prior to year 2000 are results of an a posteriori estimation done also by Mikulić & Lovrinčević (2000), which is commonly and widely used in empirical studies on the Croatian case.

Although both responses are persistent, the positive response of private investment to a spending shock is higher (in terms of units of measurement) throughout the whole time horizon. Kirchner, Cimadomo & Hauptmeiere (2010) find evidence that in the Euro area the reaction of investment to an expenditure shock is positive and significant. A 1% GDP increase in expenditure raises investment by 1.6% GDP. Oppositely, Fatas & Mihov (2001) show that investment does not react significantly to increases in government spending in the US. Similarly, in Spain investment does not appear too persistent to a government expenditure shock (De Castro & de Cos, 2008), while in Italy the impact is evidenced in the fourth quarter at about 0.2 percentage points of GDP (Giordano et al., 2007).

Private consumption reacts in a Keynesian manner after a government spending shock; still the effect is not the same when the spending shock occurs due to increase in government consumption or due to government investment (Figure 4).



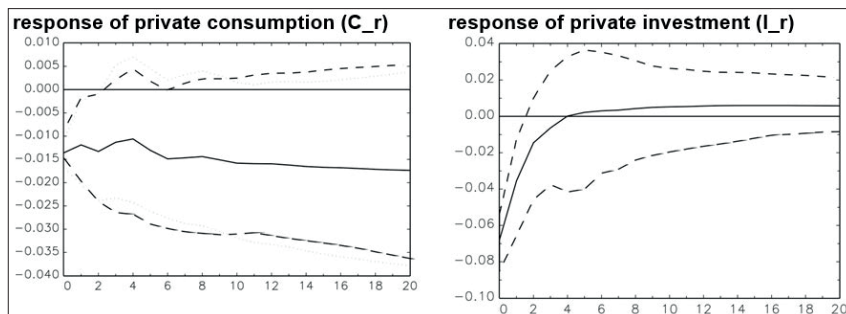
**Figure 4.** Responses of private consumption and private investment to an increase in government spending component (alternative model)

Source: Author's estimation

Both (government consumption and investment) shocks increase private consumption, but the effect after a government consumption shock is significant, permanent and larger throughout the whole period (Figure 4). On the other hand, the response of private investment is larger, significant and permanent after a government investment shock. Similarly,

Heppke-Falk, Tenhofen & Wolff (2006) find that in Germany after a government investment shock private investment increase<sup>47,48</sup>.

When investigating tax shocks on private consumption and private investment it is noticeable that the effect on impact is negative in both cases, but with a different development afterwards (Figure 5).



**Figure 5.** Responses to an increase in taxes (alternative model)

Source: Author's estimation

After a tax shock private consumption drops and remains permanent and negative throughout the whole time horizon. On the other hand, the effect of the same shock on investment is much larger but it stabilizes after the first year. Blanchard & Perotti (2002) reveal that both increases in taxes and increases in government spending have a strong negative effect on investment spending in the US. Moreover, the response of investment after a tax shock is insignificant in Germany and Spain (Heppke-Falk, Tenhofen & Wolff, 2006; and de Castro & de Cos, 2008; respectively).

In the Croatian case it can be concluded that results go in favor of Keynesian assumptions because on one hand a spending shock affects positively private consumption, and on the other hand the response of private investment to a spending shock is opposite of its response to a tax shock.

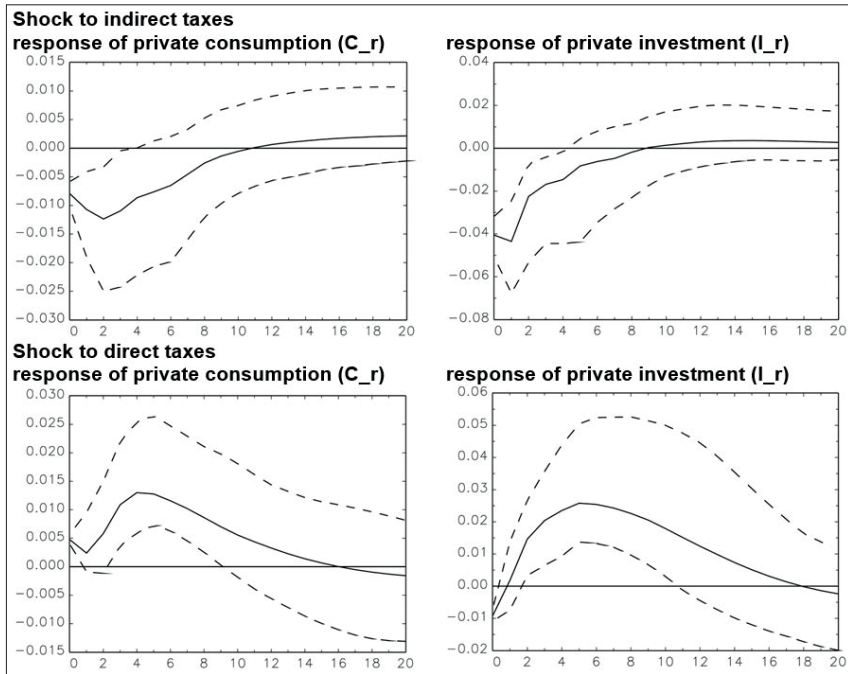
Recalling that the baseline model results showed that a tax shock negatively affects output, it is yet possible to inspect whether the negative effect comes more from direct or indirect taxes. The results are in line with the expectations, since one would expect that, due to its high share in total taxes, indirect taxes category mainly affects economic activity.

47 Moreover, in this case Heppke-Falk, Tenhofen and Wolff (2006) find that output reaction is weak and insignificant in case of a government consumption shock, being strong, significant and persistent in case of a government investment shock.

48 It is important to point that, no matter of the GDP component included in the model and of the spending component under analysis, the effect on prices and interest rates results to be insignificant and of similar pattern as in the baseline model. A government consumption shock makes prices fluctuate around zero (after an initial positive impact) and stabilize after a year, while the effect on interest rates is negative and permanent. A government investment shock exercises a small and negative effect on prices and a positive and permanent effect on interest rates, the latter being expected in accordance to the increase in output.



Results show that an indirect tax shock negatively affects private consumption for three years, when the effect stabilizes around zero (Figure 6). Private investment also reacts negatively after an indirect tax shock, but the effect fades out after two years.



**Figure 6.** Responses of private consumption and private investment to an increase in indirect and direct taxes (alternative model)

Source: Author's estimation

The response of output components to a tax shock are a bit “odd” in the Croatian case. An increase in direct taxes leads to an increase in private consumption (although the magnitude of the effect is really small) and to a decrease in private investment at impact only. This may be also due to several reasons. On one hand methodological limitations may influence the results, since a SVAR model implies time-invariant elasticities. In case of direct taxes on the Croatian case this may be a problem due to the fact that, since its introduction in 1994 the personal and corporate income tax legislations are characterized by numerous changes (more than forty in case of personal income tax only). Although, the elasticity estimation procedure embraces all those changes it ends up as a one-number only, which cannot effectively represent the whole time span under analysis. Indirectly, these odd results may be attributed to the problem of “shadow economy” in the Croatian case. Namely, an increase in personal income taxes reduces employers’ incentives to hire new persons. Since decades, Croatia registers a substantial gap between the registered and the LFS unemployment rate, meaning that a substantial number of persons registered as unemployed exercise on the labour market. This share of individuals gets paid, and thus consumes (keep in mind that the direct

tax revenues do not capture labour market outcomes). A further research extended for labour market outcomes is needed in order to deeply investigate the propagation of direct tax shocks<sup>49</sup>.

#### 4. Policy recommendations and conclusion

This paper assesses the stabilization effects of fiscal policy in Croatia in the period 1996-2011 using the structural vector autoregression model proposed by Blanchard & Perotti (2002). Results show that output moves in line with Keynesian propositions, i.e. it increases after a government spending shock and decreases after a tax shock. The impact multiplier is above 2 in both cases, but being positive when the government uses spending- and negative when using a tax-increase. Moreover the effects on output are permanent and significant in a long term. When extending the model for an additional macroeconomic variable, among others it is worth mentioning the following results: (a) private consumption and private investment follow the same responses as output after a government shock, (b) government consumption shock leads to a significant increase in private consumption, while government investment exercise an even more important effect on private investment, (c) a drop in output and private consumption after a tax shock is mainly driven by indirect (not direct) taxes.

If considering the mentioned results through the lenses of the recent crisis that affected the economic activity of all countries across the globe, there are several relevant points. In order to achieve fiscal consolidation Croatian governments during the last five years mainly opted for discretionary measures on the tax side of the budget, i.e. increment of the VAT standard rate twice, several increments of excise duties, introduction of the so-called "crisis tax" levied on net wages, and reduction of the personal income tax base in all three tax brackets. The spending side of the budget grew more or less according to constant rates and was left intact, since the governments were confident that increased revenues would cover eventual deficits. Having in mind the shown results, that an increase in taxes leads to a drop in output (being the multiplier larger than 2) and that an increase in indirect taxes, as Croatian major revenue spring, leads to a significant decrease in private consumption and investment, the effectiveness of the taken discretionary measures as stabilizing tool are under question. Although this will be possible to empirically investigate, once the crisis period ends and the data become available, it is already noted that Croatia, among EU countries, registers the longest recessionary period. Moreover, the assigned excessive deficit procedure proves that taken were a leading force in creating a so-called fiscal cliff. Additionally, a drop in output resulted to a huge drop in employment, giving additional headaches to the Croatian government, since it implies even higher spending and lower revenue collection.

---

<sup>49</sup> This paper does not go into detail regarding this respect mainly because of the availability of labour market data for the given (1996Q1-2011Q4) time span. Reducing the time span would seriously lower the power of tests in a 6 variable SVAR.

## References:

- Barro, R. (1987.): The economic effects of budget deficits and government spending: introduction. *Journal of Monetary Economics*, 20(2), p.191-193.
- Baxa, J. (2010.): What the data say about the effects of fiscal policy in the Czech Republic? *Mathematical Methods in Economics*, p. 24-29.
- Benazić, M. (2006.): Fiskalna politika i gospodarska aktivnost u Republici Hrvatskoj: model kointegracije, *Ekonomski pregled*, 57(12), p. 882-918.
- Biau, O., Girard, E. (2005.): Politique budgétaire et dynamique économique en France: l'approche VAR structurel, *Revue économique*, 56(3), p. 755-764.
- Blanchard, O., Perotti, R. (2002.): An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output, *Quarterly Journal of Economics*, 117(4), p. 1329-68.
- Bouthevillain, C., Cour-Thimann, P., van der Dool, G., de Cos, P., Langeenus, G., Mohr, M., Momigliano, S., Tujula, M. (2001.): Cyclically Adjusted Budget Balances: an Alternative Approach, ECB Working Paper No. 77., <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp077.pdf> (Accessed on October 2013)
- Caldara, D., Kamps, C. (2006.): What Do we Know about the Effects of Fiscal Policy Shocks? A Comparative Analysis, Computing in Economics and Finance Series, No. 257/2006, <http://repec.org/sce2006/up.9905.1140994990.pdf> (Accessed on September 2013)
- Caldara, D., Kamps, C. (2008.): What are the effects of fiscal policy shocks? a VAR-based comparative analysis, ECB Working Papers series No. 877, <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp877.pdf> (Accessed on August 2013)
- Davidson, R., MacKinnon, J. (1993.): *Estimation and Inference in Econometrics*, London: Oxford University Press
- de Castro, F., de Cos, P. (2008.): The economic effects of fiscal policy: The case of Spain, *Journal of Macroeconomics*, 30(3), p. 1005-1028.
- Edelberg, W., Eichenbaum, M., Fisher, J. (1999.): Understanding the Effects of a Shock to Government Purchases, *Review of Economics Dynamics*, 2(1), p. 166-206.
- Fatás, A., Mihov, I. (2001.): The Effects of Fiscal Policy on Consumption and Employment: Theory and Evidence, Center for Economic Policy Research, Discussion Paper No. 2760. [http://www.cepr.org/active/publications/discussion\\_papers/dp.php?dpno=2760](http://www.cepr.org/active/publications/discussion_papers/dp.php?dpno=2760) (Accessed on August 2013)
- Giordano, R., Momigliano, S., Neri, S., Perotti, R. (2005.): The Effects of Fiscal Policy in Italy: Estimates With a Svar Model, <http://ssrn.com/abstract=2028353> (Accessed on July 2013)

Grdović Gnip, A. (2011.): Discretionary measures and automatic stabilizers in the Croatian fiscal policy, *Ekonomska istraživanja*, 24(3), p. 45-74.

Heppeke-Falk, K. Tenhofen, J., Wolff, G. (2006.): The Macroeconomic Effects of Exogenous Fiscal Policy Shocks in Germany: a Disaggregated SVAR Analysis, Deutsche Bundesbank Discussion Paper Series 1: Economic Studies No 41/2006, <http://www.eea-esem.com/files/papers/EEA-ESEM/2007/1937/Heppeke-FalkTenhofenWolff2006final.pdf> (Accessed on August 2013)

Jemec, N. Strojhan Kastelec, A., Delakorda, A. (2011.): How do fiscal shocks affect the macroeconomic dynamics in the Slovenian economy, Banka Slovenije: Prikazi in analize 2/2011, <http://www.bsi.si/library/includes/datoteka.asp?Datotekald=4444> (Accessed on July 2013)

Kirchner, M., Cimadomo, J., Hauptmeier, S. (2010.): Transmission of government spending shocks in the euro area: Time variation and driving forces, ECB Working Paper Series No. 1219., <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1219.pdf> (Accessed on August 2013)

MacKinnon, J. G. (1996.): Numerical Distribution Functions for Unit Root and Cointegration Tests, *Journal of Applied Econometrics*, 11(6), p. 601-618.

Mancellari, A. (2011.): Macroeconomic effects of fiscal policy in Albania: a SVAR approach, Bank of Albania Working Paper No. 05(28)2011, [http://www.bankofalbania.org/web/Macroeconomic\\_effects\\_of\\_fiscal\\_policy\\_in\\_Albania\\_A\\_Svar\\_approach\\_6225\\_2.php?kc=0,22,11,12,0](http://www.bankofalbania.org/web/Macroeconomic_effects_of_fiscal_policy_in_Albania_A_Svar_approach_6225_2.php?kc=0,22,11,12,0) (Accessed on August 2013)

Marcellino, M. (2002.): Some Stylized Facts on Non-Systematic Fiscal Policy in the Euro Area, Center for Economic Policy Research Discussion Papers No. 3635, [http://www.cepr.org/active/publications/discussion\\_papers/dp.php?dpno=3635](http://www.cepr.org/active/publications/discussion_papers/dp.php?dpno=3635) (Accessed on September 2013)

Mirdala, R. (2009.): Effects of Fiscal Policy Shocks in the European Transition Economies, MPRA Paper No. 19481, <http://mpra.ub.uni-muenchen.de/19481/> (Accessed on August 2013)

Mountford, A., Uhlig, H. (2002.): What Are the Effects of Fiscal Policy Shocks? Center for Economic Policy Research, Discussion Paper No. 3338, <http://qed.econ.queensu.ca:80/jae/2009-v24.6/> (Accessed on September 2013)

Pappa, E. (2003.): New-keynesian or RBC transmission? The effects of fiscal policy in labour markets. <http://www.aueb.gr/crete2004/docs/Pappa.pdf> (Accessed on October 2013)

Perotti, R. (2002.): What Do We Know About the Effects of Fiscal Policy? In: M. Bordignon and D. da Empoli, ed. *Politica fiscale: flessibilità dei mercati e crescita*, Milano: Franco Angeli, Ch. 4.

Perotti, R. (2004.): Estimating the effects of fiscal policy In OECD countries, <http://www.frbsf.org/economics/conferences/0503/fpoecd.pdf> (Accessed on September 2013)

Ramey, V. A., Shapiro, M. D. (1998.): Costly Capital Reallocation and the Effects of Government spending, *Carneige-Rochester Conference series on Public Policy* 48 (June), p. 145-194.

Ravnik, R., Žilić, I. (2011.): The use of SVAR analysis in determining the effects of fiscal shocks in Croatia, *Financial theory and practice*, 35(1), p. 25-58.

Rodden, J., Wibbles, E. (2010.): Fiscal Decentralization and The Business Cycle: The Empirical Study Of Seven Federations, *Economics and Politics*, 22(3), p. 37-67.

Rukelj, D. (2009.): Modelling Fiscal and Monetary Policy Interactions in Croatia Using Structural Vector Error Correction Model, *Privredna kretanja i ekonomska politika*, 121(2009), p. 27-58.

Šimović, H., Deskar-Škrbić, M. (2013.): Dynamic effects of fiscal policy and fiscal multipliers in Croatia, *Zbornik radova Ekonomskog fakulteta u Rijeci*, 31(1), p. 55-78.

**izv. prof. dr. sc. Hrvoje Šimović**  
Ekonomski fakultet Sveučilišta u Zagrebu  
e-mail: [hsimovic@efzg.hr](mailto:hsimovic@efzg.hr)

**doc. dr. sc. Tomislav Čorić**  
Ekonomski fakultet Sveučilišta u Zagrebu  
e-mail: [tcoric@efzg.hr](mailto:tcoric@efzg.hr)

**Milan Deskar-Škrbić**  
Erste i Steiermarkische Banka d.d.  
e-mail: [mdskrbic@erstebank.com](mailto:mdskrbic@erstebank.com)

## **MOGUĆNOSTI I OGRANIČENJA FISKALNE POLITIKE U HRVATSKOJ<sup>50</sup>**

### **POSSIBILITIES AND LIMITATIONS OF FISCAL POLICY IN CROATIA**

#### **SAŽETAK**

U radu se analiziraju mogućnosti i ograničenja fiskalne politike u Hrvatskoj. Prvo se analiziraju brojna ograničenja fiskalne politike u Hrvatskoj od (ne)koordinacije fiskalne s monetarnom politikom, lošeg proračunskog planiranja, trendova u kretanju javnih prihoda, problem postojeće visine i strukture javnih rashoda te problem financiranja deficita. U središnjem dijelu analize ispituju se mogućnosti stabilizacijske uloge fiskalne politike kroz analizu utjecaja prihoda i rashoda opće konsolidirane države na kretanje BDP-a. U tu svrhu razvijen je strukturni VAR model kojim se ispituje koje komponente javnih prihoda i rashoda najviše doprinose ekonomskom rastu u Hrvatskoj. Nadalje, mogućnosti fiskalne politike sintetiziraju se kroz prijedlog mjera tzv. pametne fiskalne konsolidacije kao temelja učinkovito stabilizacijsko djelovanje fiskalne politike.

**Gljučne riječi:** fiskalna politika, multiplikatori javnih rashoda, porezni multiplikatori, ekonomski rast, pametna fiskalna konsolidacija, Hrvatska

#### **ABSTRACT**

This paper analyzes the possibilities and limitations of fiscal policy in Croatia. Firstly, we analyze important limitations of fiscal policy such as lack of coordination of fiscal and monetary policy, inadequate budget planning, increasing tax pressure, the size and structure of public expenditures and deficit financing

---

<sup>50</sup> This is a reprint of a paper published in the *Ekonomski pregled*, 65 (6), 2014., p. 541-575, <http://hrcak.srce.hr/file/196254>

This work has been supported in part by the Croatian Science Foundation under project number IP-201311-8174 and in part by the University of Rijeka under project number 13.02.1.2.02

problems. In the central part of the analysis we empirically estimate the possibilities of stabilizing role of fiscal policy by analyzing the impact of general government revenues and expenditures on GDP growth. For this purpose we develop a structural VAR model to evaluate the impact of various components of public expenditures and revenues on economic growth in Croatia. Further, fiscal policy possibilities are synthesized through the proposed measures of so-called “smart fiscal consolidation” which is the foundation for achieving the stabilizing role of fiscal policy.

**Key words:** Fiscal policy, expenditure multipliers, tax multipliers, economic growth, smart fiscal consolidation, Croatia

## 1. Uvod

U uvjetima ekonomske krize često se preispituju mogućnosti i ograničenja stabilizacijske fiskalne politike. Rasprava se posebno intenzivira u vrijeme donošenja državnog proračuna, odnosno rebalansa. S obzirom na učestale rebalanse državnog proračuna u Hrvatskoj kao i negativne projekcije ekonomskog rasta, za očekivati je kako će fiskalna politika još neko vrijeme biti predmet rasprave kako u znanstvenoj i stručnoj, tako i u široj javnosti. Tome će posebno doprinijeti članstvo u Europskoj uniji (EU) i procedura prekomjernog deficita.

Teza od koje se polazi u ovom radu je da i uz brojna ograničenja fiskalna politika u Hrvatskoj ima određene mogućnosti stabilizacijskog djelovanja koje se mogu postići kroz promjenu strukture javnih rashoda i prihoda. Kako bi se istražile mogućnosti fiskalne politike potrebno je izračunati koji segmenti javnih rashoda i javnih prihoda imaju najveći multiplikativni učinak na BDP. Osnovni cilj rada je procijeniti veličinu multiplikatora pojedinih komponenti javnih rashoda i javnih prihoda u Hrvatskoj, što je prema uvidu u postojeću literaturu predstavlja prvi takav pokušaj. Također, cilj rada je analizirati u ograničenja fiskalne politike u Hrvatskoj koja su brojna i kompleksna te će imati značajan utjecaj formuliranje diskrecijskih mjera fiskalne politike u predstojećem srednjoročnom razdoblju.

Kako bi se ostvarili ciljevi istraživanja, nakon uvoda, u drugom dijelu rada daje iscrpan pregled dosadašnjih istraživanja o fiskalnoj politici u Hrvatskoj. U trećem dijelu rada analizirana su ograničenja fiskalne politike koja se pretežno se promatraju kroz razdoblje od 2004. do 2012. godine, koje najbolje ocrtava posljednji ekonomski ciklus (prvo visoke i stabilne stope rasta BDP-a, te kasnije recesija). Četvrti dio radi predstavlja središnji dio istraživanja u kojem se analiziraju mogućnosti fiskalne politike. U ovom dijelu predložene su konkretne promjene u strukturi javne potrošnje odnosno mjere tzv. pametne fiskalne konsolidacije. Posljednji dio je zaključak.

## 2. Pregled literature o fiskalnoj politici u Hrvatskoj

U Hrvatskoj postoji relativno velik broj radova vezanih uz fiskalnu politiku. Stvaranjem određenih preduvjeta (izgradnja bazi podataka, duljina

vremenskih serija itd.), posljednjih godina intenzivirao se broj ali i kvaliteta istraživanja. Ovisno o području, postojeća istraživanja o fiskalnoj politici mogu se svrstati u nekoliko skupina. U Tablici 1. dan se sažet pregled istraživanja primarno empirijskih radova, ovisno o području istraživanja, s tim da je potrebno napomenuti kako određeni radovi sadrže doprinos u više od jednog segmenta djelovanja fiskalne politike.

Područje istraživanja	Reference	Rezultati
Učinci fiskalne politike na ekonomski rast ili (pojedinu) ekonomsku aktivnost	Pivac i Jurun (2002), Benazić (2006), Rukelj (2009), Šimović (2009), Darvas (2010), Ravnik i Zilić (2011), Tkalec i Vizek (2011), Šimović & Deskar-Škrbić (2013), Grdović Gnip (2013; 2014), Deskar-Škrbić et al. (2014)	Pretežno se radi o pozitivnim kratkoročnim učincima javnih rashoda i negativnim učincima poreza na gospodarski rast.
Utjecaj strukture javnih rashoda (i prihoda)	Sever et al. (2011), Dalić (2013a)	Uglavnom kapitalni rashodi su ti koji imaju pozitivne dugoročne i kratkoročne učinke. Tekući rashodi (pojedine kategorije) mogu imati tek kratkoročne pozitivne učinke. Porezi uglavnom negativni.
Karakter fiskalne politike	Jurković (2002), Švaljek (2003), Švaljek et al. (2009), Grdović Gnip (2011), Dalić (2013b)	Uglavnom procikličnog karaktera, iako postoje razdoblja promjenjivog karaktera fiskalne politike. Djelovanje automatskih stabilizatora relativno slabo.
Koordinacija monetarne i fiskalne politike (ili nekih elemenata fiskalne politike, npr. upravljanje javnim dugom)	Švaljek (2003), Babić et al. (2001), Rukelj (2009), Grgurek i Vidaković (2009), Mihaljek (2009), Zdunić (2010), Čorić et al. (2013, 2014)	Uglavnom se ističe problem slabe koordinacije ili nikakve koordinacije fiskalne i monetarne politike, te rizika kojim fiskalna politika (zaduživanja) može ugroziti stabilnost cijena (cilj monetarne politike).
Održivost fiskalne politike (i javnog duga)	Babić et al. (2001), Krznar (2002), Sever (2005), Babić et al. (2003), Mihaljek (2003, 2009), Sopek (2009, 2010, 2011)	Uglavnom neodržive projekcije postojećeg modela fiskalne politike i zaduživanja. Ograničena (ekspanzivnu) uloga fiskalne politike u Hrvatskoj uvjetovanju ograničenjima u visini javnog i/ili vanjskog duga.
Politička ekonomija i fiskalna politika	Bratić (2004), Klašnja (2008), Vučković (2011), Vučković i Basarac Sertić (2013), Mačkić (2014)	Utjecaj na rast rashoda i deficita prije izbora, posebno socijalnih izdataka (oportunistički ciklusi). Na rast rashoda utječu fragmentiranost vlade. Izvršna vlast ima odlučujuću ulogu u proračunskom procesu.

**Tablica 1.** Empirijska istraživanja o fiskalnoj politici u Hrvatskoj  
Izvor: obrada autora



Prvu skupinu čine radovi koji prema različitim metodologijama istražuju učinke djelovanja fiskalne politike. Najbrojniji su radovi koji koriste VAR (ili VEC) metodologiju (uključujući i SVAR). Iako postoje određene razlike u rezultatima istraživanja, svi radovi ukazuju na određene pozitivne mogućnosti djelovanja fiskalne politike na ekonomski rast. Uglavnom se javni rashodi ističu kao ključni instrument fiskalne politike koji ima pozitivan učinak na gospodarski rast, i to uglavnom u kratkom roku. Slično vrijedi i za poreze, pri čemu je njihov utjecaj na ekonomski rast pretežno negativan (Benazić, 2006; Rukelj, 2009; Belullo i Dužman, 2013; Šimović i Deskar-Škrbić, 2013, Grdović Gnip, 2013 i 2014.). No, postoje i radovi koji nude bitno drukčije rezultate, što ukazuje na potrebu opreza pri interpretaciji podataka (Šimović, 2009; Ravnik i Žilić, 2011). Nadalje, Tkalec i Vizek (2011) primjenom višestruke regresijske analize pokazuju da državna potrošnja ima signifikantan učinak na prerađivačku industriju u Hrvatskoj, pogotovo na sektore s niskom razinom tehnologije.

Na sličan zaključak vezano uz smjer djelovanja ukupnih prihoda i rashoda upućuju i radovi koji se dominantno bave strukturom javnih prihoda i rashoda. Sever et al. (2011) VAR analizom utvrdili su da su kapitalni rashodi ti koji i u dugom i u kratkom roku imaju pozitivan učinak na gospodarski rast, dok su rashodi za dobra i usluge te subvencije značajni tek u kratkom roku. Tekući rashodi i rashodi za plaće nemaju pozitivan učinak na BDP (Sever et al., 2011). Slične zaključke iznosi i Dalić (2013a) na temelju panel analize Hrvatske i novih zemalja članica EU-12. Također, ukazuje se na problem hirovitosti fiskalne politike koja u pogledu državnih investicija može također negativno djelovati na rast (Dalić, 2013a).

Bez obzira na visinu i strukturu javnih prihoda i rashoda, važno je napomenuti da je Hrvatska mala otvorena ekonomija te da otvorenost privrede i učinak izlivanja dodatno umanjuju eventualne pozitivne učinke fiskalne politike na ekonomski rast (Deskar-Škrbić et al., 2014).

Također, treba uzeti u obzir kako je fiskalna politika u zemljama u razvoju ali i tranzicijskim zemljama prociklična (Ilzetski & Vegh, 2008). To se posebice odnosi na pojedine kategorije javnih rashoda koji daju dodatni impuls rastu (npr. kapitalni rashodi). Iako u Hrvatskoj istraživanja tek parcijalno ukazuju na procikličnost fiskalne politike (Švaljek et al., 2009; Grdović Gnip, 2011), naša zemlja je uključena u neka šira istraživanja iz kojih se takav zaključak može sa sigurnošću iznijeti (Darvas, 2010; Dalić, 2013b).

Kad je riječ o karakteru fiskalne politike, Jurković (2002) nudi prvu značajniju analizu za razdoblje od 1994. do 2000. godine. Prema autoru, fiskalna politika u tom razdoblju bila je prije svega podređena punjenju proračuna i financiranju često preambiciozno utvrđenih prava i nerealnih aspiracija, a sve to nauštrb ostvarivanju stabilizacijskih i razvojnih ciljeva. Na taj način, fiskalna politika je uglavnom neutralno djelovala na očekivanu stopu gospodarskog rasta. Dojam je da se u tom razdoblju utvrđeni obrazac fiskalne politike do danas nije promijenio.

Kasnija ekonometrijska istraživanja preko procjene ciklički prilagođenog proračunskog salda omogućuju izvođenje pokazatelja fiskalnog stanja koji upućuju na karakter fiskalne politike. U razdoblju od 1996. do 2008. godine može se govoriti o izmjenjivanju razdoblja procikličke i anticikličke fiskalne politike, pri čemu posljednjih godina prevladava restriktivna i prociklička politika (Švaljek et al. 2009). Nadalje, Grdović Gnip (2011) analizira u kojoj mjeri automatski stabilizatori odnosno diskrecijske mjere doprinose uravnoteženju poslovnog ciklusa. Rezultati ukazuju na relativno slabo djelovanje automatskih stabilizatora u odnosu na zemlje EU i OECD-a, odnosno da je stabilizacijsko djelovanje fiskalne politike potpomognuto diskrecijskim mjerama što je u Hrvatskoj dovelo do destabilizacije ekonomske aktivnosti u procikličnom smjeru (Grdović Gnip, 2011).

Kad se govori o koordinaciji fiskalne i monetarne politike u Hrvatskoj, ne postoji velik broj empirijskih radova (SVAR) koji izravno analiziraju interakciju monetarne i fiskalne politike (Rukelj, 2009; Ćorić et al., 2014). Uglavnom prevladavaju pregledni radovi koji analiziraju interakciju monetarne politike s politikom javnog zaduživanja (Babić et al., 2001; Raspudić Gomeljić, 2007 i 2012). Bez obzira na aspekt analize, prevladavaju stavovi o slaboj ili nikakvoj koordinaciji fiskalne i monetarne politike u Hrvatskoj, ili pak potpune koordiniranosti u slučaju obostranog procikličkog djelovanja (Grgurek i Vidaković, 2009).

Uloga monetarne politike često se propitkuje (Jakovčević et al., 2011), ali se od strane kritičara često zaboravlja da se na Hrvatsku kao malu otvorenu ekonomiju mogu primijeniti predikcije Mundell-Fleming modela odnosno tzv. nemoguće trojstvo makroekonomskih ciljeva (engl. impossible trinity), što implicira nemogućnost istovremenog održavanja fiksnog deviznog tečaja, slobodu kretanja kapitala i nezavisnost monetarne politike. I u tom kontekstu postoje radovi koji negativno promatraju postojeći koncept monetarne i fiskalne politike (Zdunić, 2010), kao i radovi koji vide prostor u mogućnosti zajedničkog djelovanja monetarne i fiskalne politike u jačanju konkurentnosti hrvatskog gospodarstva (Ćorić et al., 2013).

Kad se govori o održivosti fiskalne politike, riječ je području u kojem je kod dosadašnjih istraživanja prisutna najveća razina usklađenosti rezultata istraživanja. Uglavnom se već više od jednog desetljeća upozorava na neodrživi koncept fiskalne politike, pogotovo u segmentu deficitarnog financiranja potrošnje, što samo dodatno ograničava potencijalno (ekspanzivno) djelovanje fiskalne politike u Hrvatskoj (Tablica 1.).

Ključ neuspjeha i nelogičnosti u provedbi fiskalne politike u Hrvatskoj najbolje se može objasniti kroz prizmu političke ekonomije. Na žalost, broj i opseg empirijskih istraživanja u tom području vrlo su ograničeni. Svakako je potrebno spomenuti kako na rast državne potrošnje značajan utjecaj ima fragmentiranost vlade (koalicije) (Vučković i Basarac Sertić, 2013), zatim oportunistički političko-poslovni i političko-proračunski ciklusi na središnjoj i lokalnoj razini prije i poslije izbora (Klašnja, 2008; Vučković, 2010; Mačkić, 2014), čemu svakako doprinosi veći utjecaj izvršne

vlasti (Vlade) u odnosu na zakonodavnu (Sabor) u proračunskom procesu (Bratić, 2004).

Ne bi bilo korektno ne spomenuti čitav niz radova i teorijskih rasprava koji su značajno doprinijeli znanstvenoj raspravi o ulozi fiskalne politike u Hrvatskoj. Potrebno je napomenuti kako je većina tih radova nastala tijekom globalne ekonomske i financije krize čiji se negativan u Hrvatskoj još uvijek osjeti. Upravo je stabilizacijska funkcija fiskalne politike postala primarni fokus istraživanja u Hrvatskoj, što nije bio toliki slučaj prije krize (Jurčić, 2010; Mates, 2011), kao i kritika politike fiskalne konsolidacije i štednje (Radošević, 2012). Naprotiv, radovi o fiskalnoj politici u Hrvatskoj prije krize ukazivali su na iscrpljivanje fiskalnog kapaciteta, nužnost konsolidacije i smanjivanja javne potrošnje, nužnost intervencije u pre-raspodjeli dohotka te poticanju ekonomskog rasta i razvoja kroz strukture elemente i poticanje ponude (Družić, 1999; Škare i Škrčić, 2002; Kraft i Stučka, 2002; Krtalić, 2005; Družić i Krtalić, 2006). Nadalje, u čitavom nizu istraživanja upozorava se na neusklađenost fiskalne i drugih ekonomskih politika te nužnost izgradnje primjerenijih socijalnih odnosa, kao i realokaciju državne potrošnje infrastrukturnim i kapitalnim rashodima (Družić, 1998; Sever, 2002a i 2002b; Sever et al., 2009; Drezgic, 2009 i 2011).

### 3. Ograničenja i nedostaci fiskalne politike u Hrvatskoj

Ograničenja fiskalne politike u Hrvatskoj su brojna. Ona se ogledaju kroz (ne)koordinaciju fiskalne s monetarnom politikom, kontinuirano loše proračunsko planiranje i nepovoljne projekcije gospodarskog rasta, trendove u kretanju javnih prihoda, problem postojeće visine i strukture javnih rashoda te problem financiranja deficita i nepostojećeg sustava upravljanja javnim dugom. Svako ograničenje može biti zasebno područje istraživanja, ali u kontekstu ovog rada promatra se kroz prizmu stabilizacijskog djelovanja fiskalne politike.

#### 3.1. „Policy mix“ i uloga monetarne politike

U domaćoj ekonomiji je tijekom posljednjih 20 godina generiran čitav anomalija koje u velikoj mjeri onemogućavaju značajniji doprinos monetarne politike ukupnoj ekonomskoj politici (valutna klauzula, neslužbena dolarizacija/euroizacija, nepovjerenje u domaću valutu itd.). Nadalje, značajan utjecaj na razvoj sustava imala je činjenica da je domaći bankarski sektor krajem 90-ih godina u najvećoj mjeri prodan stranim vlasnicima. U uvjetima relativno slabe domaće likvidnosti i nastojanja središnje banke da kontrolira novčanu masu, domaće banke okrenule su se inozemnim izvorima sredstava. U okolnostima stalnog jeftinog novčanog priljeva iz inozemstva, središnja banka je u potpunosti ignorirana kao „posljednje utočište“. Njezine kamatne stope bile su i ostale nereferentne. Unatoč rastu BDP-a, negativni trendovi rasta vanjskog duga i deficita bilance plaćanja, s vremenom su postajali sve veći problem. Pokušaji središnje banke da uspori vanjsko zaduživanje banaka

stigli su relativno kasno. Njezina funkcije emisije novca svela se na instrument deviznih aukcija, dok su operacije na otvorenom tržištu kao osnovni instrument moderne monetarne politike bile i jesu od sekundarnog značaja. Na žalost, doprinos središnje banke suzbijanju negativnih trendova i više je nego ograničen jer je postojeće stanje u monetarnoj sferi ekonomije gotovo nemoguće značajnije izmijeniti (vidjeti više Ćorić et al., 2014).

U takvom režimu monetarne politike, koja se zasniva na stabilnom tečaju, središnja banka je znatno ograničena u suzbijanju utjecaja inozemnih šokova i stimuliranju gospodarske aktivnosti u realnom sektoru. Smanjivši regulatorno opterećenje i povećavši time likvidnost banaka središnja banka je djelomično uspjela samo neutralizirati negativan utjecaj vanjskih šokova. Također, središnja banka je jednim dijelom uspjela spriječiti državu u istiskivanju realnog sektora s tržišta kredita, koji je nastao zbog povećanih potreba za deficitarnim financiranjem države (Bokan et al., 2009).

Takva reakcija monetarne politike je bila jedina moguća ali nedovoljna da se preokrenu ekonomski trendovi. Zbog postojećih ograničenja monetarne politike, u fiskalnoj se politici često vidi jedina mogućnost značajnijeg djelovanja u uvjetima krize. Posebno se od HNB-a ističe potreba za jačom fiskalnom prilagodbom i konsolidacijom, što je razumljivo jer bi se time prije svega olakšala pozicija HNB-a u provedbi monetarne politike. S druge strane, ako se štedi u uvjetima krize kakva je onda uloga fiskalne politike u poticanju (održavanju) ekonomske aktivnosti?

Zbog toga, u cijelom razdoblju krize postavlja se pitanje da li bi zbog kreditnih ograničenja (visok i rastući javni dug i deficit, pad kreditnog rejtinga, poskupljenje tržišnih izvora financiranja) ekspanzivna fiskalna politika u Hrvatskoj bila učinkovita, odnosno koliko bi umanjila fiskalnu održivost i financijsku stabilnost. Budući da su diskrecijske mjere fiskalne politike u domeni političkog procesa donošenja odluka, pravovremeno djelovanje fiskalne politike, bez obzira na moguća ekonomska ograničenja, često se svodi na domenu „magije“, dok je monetarna politika ostala u domeni „znanosti“ (prema Leeper, 2010). Navedena Leeper-ova (2010) hiperbola najbolje oslikava postojeći „policy mix“, odnosno (ne)koordinaciju fiskalne i monetarne politike u Hrvatskoj.<sup>51</sup> Zbog navedenih ograničenja postojeća interakcija se svodi na primarno prilagođavanje fiskalne politike monetarnoj politici, iako bi po logici problema u uvjetima krize trebalo biti obrnuto (Leeper, 2010).

### 3.2. Proračunsko planiranje, projekcije rasta i kretanje javnih prihoda i rashoda

Jedna od temeljnih pretpostavki za vođenje odgovorne i kredibilne fiskalne politike je proračunsko planiranje i značajno pridržavanje zacrtanih planova u srednjoročnom razdoblju koje planira kroz *Smjernice*

<sup>51</sup> Za teorijsku analizu i kritiku interakcije fiskalne i monetarne politike u Hrvatskoj vidjeti Drezgić (2011).

*ekonomske i fiskalne politike*. Na žalost, Hrvatska je u razdoblju od 1995. do 2009. godine gotovo svake godine imala minimalno jedan rebalans državnog proračuna, iznimka su davne 1996. i 1997. godina (Beš i Ott, 2010; Švaljek, 2009). Od 2010. do 2013. godine ta se praksa nastavlja, odnosno u posljednje četiri godine jedino u 2011. godini nije bilo rebalansa dok su u 2013. godini bila čak dva rebalansa državnog proračuna.<sup>52</sup> Također, i u tekućoj 2014. godini nije izostao rebalans, nadamo se jedini u ovoj godini. U skladu s lošim proračunskim planiranjem ali i negativnim ekonomskim kretanjima nakon 2008. godine, sve srednjoročne projekcije fiskalne politike uglavnom se nisu ostvarile (vidjeti Ministarstvo financija, razna godišta).

Temelj za svako proračunsko planiranje, odnosno za planiranje fiskalne politike u narednom razdoblju su projekcije rasta BDP-a u srednjem roku. U Tablici 2. prikazane su projekcije rasta BDP-a za Hrvatsku od strane Vlade RH, Ekonomske komisije, Međunarodnog monetarnog fonda (MMF), Hrvatske narodne banke (HNB) i Ekonomskog instituta Zagreb (EIZ).

	2012	2013p	2014p	2015p	2016-18
Vlada RH (prosinac 2013.)	-2,0	0,2	1,3	2,2	2,5 (2016)
Vlada RH (ožujak 2014.)	-2,0	?	?	?	?
MMF	-2,0	-0,6	1,5	-	2,5 (2018)
Europska komisija (Jesen 2003)	-2,0	-0,7	0,5	1,2	-
Europska komisija (Zima 2014)	-2,0	-0,7	0,5	1,2	
HNB	-2,0	-0,8	0,7	0,9	-
EIZ	-2,0	-0,7	0,0	1,0	

Tablica 2. Projekcije rasta BDP-a za Hrvatsku

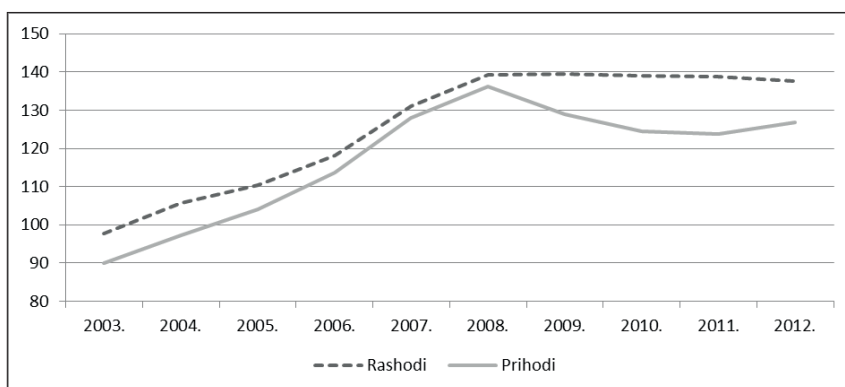
Izvor: Ministarstvo financija (2013: 12), European Commission (2013b: 67; 2014a: 69), IMF (2013: 59 i 157), HNB (2013: 4), EIZ (2014).

Već je jasno da će Hrvatska 2013. godinu, odnosno petu godinu zaredom, završiti s negativnom stopom rasta BDP-a, a u 2014. godini očekuje se stagnacija ili blagi rast. Ono što je važno analizirati jest na kojim činjenicama Vlada RH bazira svoj optimizam. Najveći doprinos rastu u razdoblju od 2014. do 2016. godine Vlada vidi u rastu bruto investicija u fiksni kapital. S druge strane, Europska komisija ne očekuje takav doprinos rastu kroz povećanje investicija već primarno kroz blagi oporavak domaće potražnje. Na neki način to je i očekivano jer je upravo najveći doprinos padu ekonomske aktivnosti posljedica pada domaće potražnje, prije svega osobne potrošnje koja čini najveći udio u hrvatskom BDP-u. Također, potrebno je spomenuti kako su sve navedene projekcije rasta BDP-a skromne. Čak i najviša predviđena stopa rasta BDP-a od 2,5% ne može biti dovoljna da okrene trendove u javnim financijama, odnosno da učini javni dug održivim (npr. vidjeti procjene kod Sopek (2009, 2010 i 2011)).

<sup>52</sup> Važno je napomenuti kako je u 2012. godini, uz rebalans u studenom 2012., zbog parlamentarnih izbora bilo tzv. privremeno financiranje za prvo tromjesečje tako da je državno proračun za 2012. izglasan tek krajem veljače 2012.

S obzirom na postojeće projekcije rasta BDP-a te očekivani doprinos rastu pojedinih kategorija BDP-a, može se zaključiti kako bi moglo doći do problema u ostvarivanju pojedinih planiranih stavki, prije svega, na prihodnoj strani proračuna (na svim razinama vlasti). Na Slici 1 prikazano je kretanje prihoda i rashoda na razini opće države od 2003-2012. godine.

Kad se promatraju javni prihodi na razini opće države, najveći doprinos smanjenju javnih prihoda je ostvaren kroz pad prihoda od PDV-a (nominalno 4,3 mlrd kuna u 2012. u odnosu na 2008. godinu), što je posljedica pada osobne potrošnje ali i uvoza kao temeljnih makroekonomskih osnovica za ubiranje PDV-a. Oporavak prihoda od PDV-a u narednim godinama posljedica je prije svega u dva navrata povećanja stope PDV-a (prvo na 23% pa na 25%), a tek onda slabog i neznčajnog oporavka osobne potrošnje. Uz PDV, socijalni doprinosi su najznačajniji javni prihod, a zajedno čine preko 60% ukupnih javnih prihoda. U razdoblju prije krize doprinosi su davali najveći doprinos rasu javnih prihoda. Uslijed smanjenja mase plaća (bruto plaća i broja zaposlenih) u razdoblju nakon 2008. godine, prihodi od doprinosa bilježe konstantan pad. U tom kontekstu, bez značajnijeg oporavka bruto dohotka i/ili broja zaposlenih ne može se očekivati rast javnih prihoda na temelju doprinosa.



**Slika 1.** Prihodi i rashodi opće države (u mlrd. kuna)

Izvor: autori na temelju Ministarstvo financija (2014)

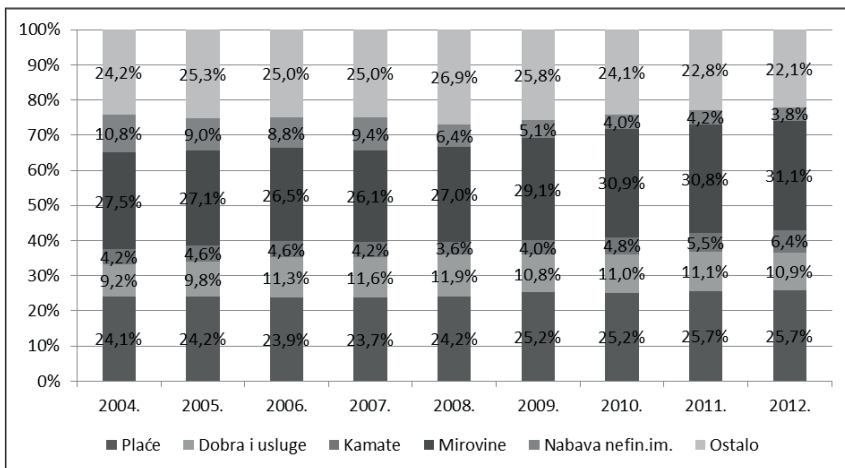
Napomena: Ukupne prihode čine prihodi poslovanja i prihodi od prodaje nefinancijske imovine. Ukupne rashode čine rashodi poslovanja i rashodi za nabavku nefinancijske imovine.

Slično vrijedi i za ostale porezne oblike. Prihodi od poreza na dohodak također ovise o masi plaća, koja je uvjetovana brojem zaposlenih i visinom bruto plaća. Budući da se porez na dobit u tekućoj godini plaća na temelju poslovanja poduzetnika prethodne godine, očekuje se pad poreznih prihoda po osnovi ovog poreza s obzirom na negativnu stopu rasta BDP-a u proteklih pet godina. Eventualni rast poreznih prihoda, kao što je i slučaj u kriznim godinama, može se temeljiti isključivo na rastu porezne presije i/ili uvođenju novih poreznih oblika (npr. porez na nekretnine).

Za razliku od javnih prihoda, rashodi na razini opće države nisu doživjeli značajniji pad, odnosno zadržani su na pretkriznoj razini, a što se kasnije odrazilo na rast javnog duga. Sukladno već dokazanoj praksi (procikličnost fiskalne politike), u pretkriznom razdoblju gotovo sve kategorije javnih rashoda bilježe rast. Doprinos rastu daju upravo kategorije rashoda koje imaju najveći udio u javnim rashodima kao što su plaće, mirovine i izdaci za dobra i usluge. Nastupanjem krize ni jedna kategorija tekućih rashoda ne bilježi značajniji pad već stagnaciju. Jedina kategorija koja bilježi značajnije smanjenje su kapitalni rashodi, odnosno rashodi za nabavku nefinancijske imovine. Nadalje, jedina kategorija rashoda koja bilježi kontinuirani rast su rashodi za kamate. Kontinuirano deficitarno financiranje, posebno u posljednjim kriznim godinama, generiralo je visoku razinu javnog duga. Pad kreditnog rejtinga te uvjeti na finansijskim tržištima poskupili su zaduživanje države. Posljedično, rashodi za kamate nakon 2009. godine prosječno godišnje rastu preko 15,2%. Za očekivati je da će se taj trend nastaviti i u narednim godinama, što značajno umanjuje prostor za djelovanje ekspanzivne fiskalne politike.

### 3.3. Struktura javnih rashoda i primarni saldo

Prethodno je spomenuto kako su javni rashodi generator neučinkovite fiskalne politike. Zbog toga je potrebno detaljnije proučiti strukturu javnih rashoda prema ekonomskoj ali i funkcijskoj klasifikaciji. Na Slici 2. prikazana je struktura rashoda opće države prema ekonomskoj klasifikaciji za razdoblje od 2004. do 2012. godine.



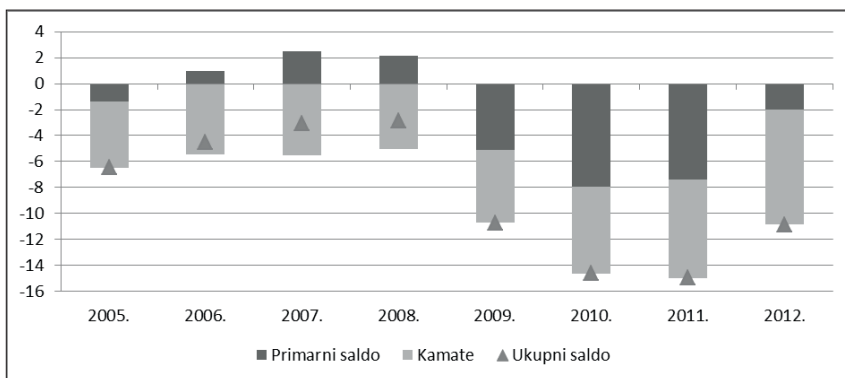
Slika 2. Struktura rashoda opće države (ekonomska klasifikacija)

Izvor: obrada autora prema Ministarstvo financija 2014

Iz priloženog je razvidno kako se struktura javne potrošnje u promatranom razdoblju samo pogoršava, odnosno zanemaruje se razvojni aspekt javne potrošnje kojom se uglavnom financira tekuća potrošnja. Najveći udio u rashodima opće države čine plaće i mirovine što je ukupno

u 2012. godini iznosilo 56,8%. Nadalje, taj se udio povećao u promatranom razdoblju za 5,2 postotna boda godišnje i to najviše u segmentu mirovina, prije svega zbog rasta broja korisnika mirovina. U prethodnom dijelu je već navedeno, a grafički prikaz potvrđuje konstantan pad udjela izdataka za nabavku nefinancijske imovine (kapitalni izdaci) s 10,8% u 2004. na 3,8% u 2012. godini. S druge strane, raste udio rashoda za kamate koji se, prema podacima iz 2012. godine, povećao za 50% u odnosu na početak promatranog razdoblja.

Koliko izdaci za kamate umanjuju prostor za djelovanje fiskalne politike pokazuje Slika 3. na kojoj su prikazani primarni saldo i rashodi za kamate. Primjerice, Hrvatska je od 2006. do 2008. bilježila primarni suficit, ali zbog rashoda za kamate ukupni saldo je bio u deficitu. Danas smo došli u situaciju da smo tekuće prihode i rashode sveli u ravnotežu, ali povećani rashodi za kamate jednostavno istiskuju prostor za produktivnije deficitarno financiranje i fiskalnu ekspanziju.



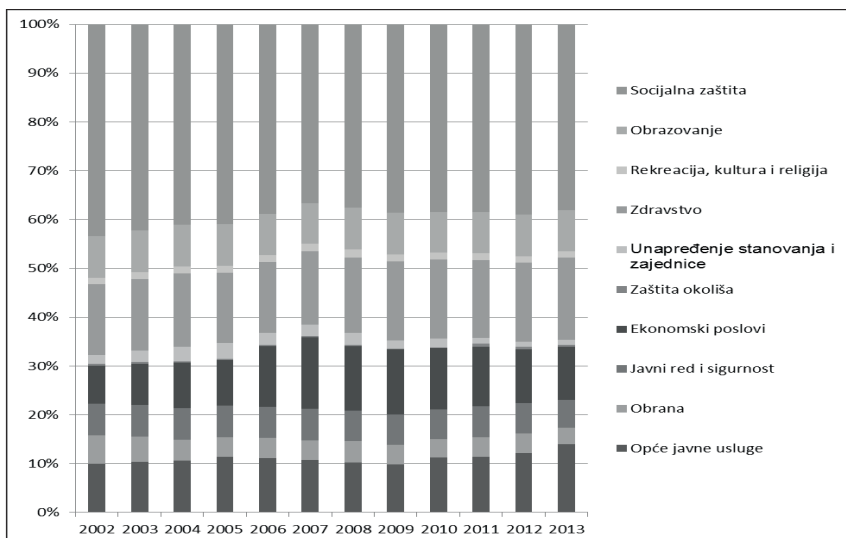
**Slika 3.** Primarni saldo i rashodi za kamate (GFS, u milijardama kuna)

Izvor: izračun autora prema podacima Ministarstva financija 2014

Utvrđivanje konkretne namjene pojedinih rashoda zahtijeva analizu funkcijske klasifikacije javnih rashoda.<sup>53</sup> Na Slici 4. prikazana je funkcijska klasifikacija državnog proračuna za razdoblje od 2004. do 2013. godine. Slično kao i kod ekonomske klasifikacije, iz analize funkcijske klasifikacije je jasno kako država trenutno preko 55% proračunskih sredstava troši na socijalnu zaštitu (38,1%) i zdravstvo (16,9%). Radi se o tekućim rashodima čiji udio raste u promatranom razdoblju.

<sup>53</sup> Funkcijska klasifikacija javnih rashoda dostupna je samo na razini državnog proračuna.





**Slika 4.** Struktura rashoda državnog proračuna (funkcijska klasifikacija)

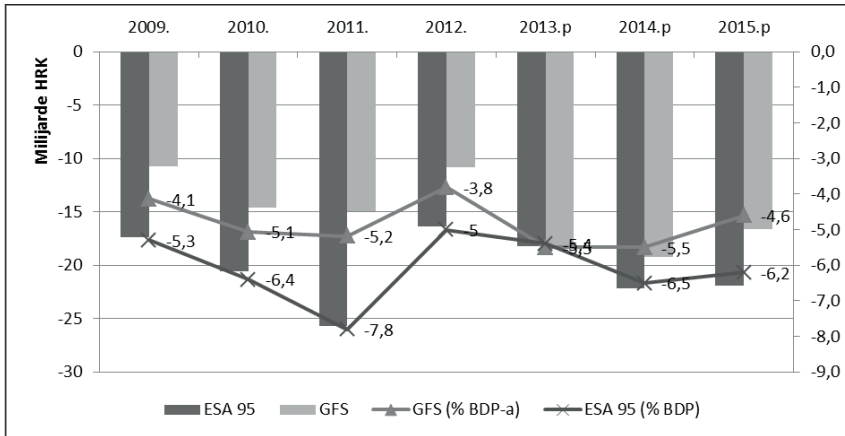
Izvor: obrada autora prema Ministarstvo financija

Nakon općih javnih usluga, najveći udio rashoda države odnosi se na ekonomske poslove (10,8% ili 13,7 mlrd. kuna). Oni predstavljaju rashode sa značajnim dodatnim impulsom ekonomskoj aktivnosti kao mjera fiskalne politike. U slučaju Hrvatske, radi se o relativno velikom udjelu države u gospodarstvu, no očekivani učinak na ekonomsku aktivnost i stopu rasta je izostao jer su u promatranom razdoblju kod rashoda za ekonomske poslove dominirale uglavnom subvencije neefikasnim sektorima kao što su promet (cestovni 3,25 mlrd. kuna, željeznički 1,17 mlrd. kuna) i poljoprivreda (3,4 mlrd. kuna).

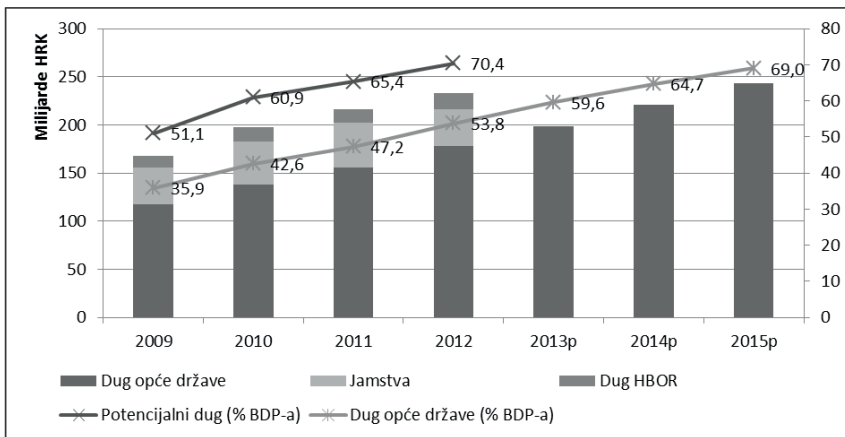
### 3.4. Dug i deficit opće države

Politika deficitarnog financiranja pretežno tekućeg potrošnje posljednjih 15 godina utjecala je na kumuliranje visoke razine javnog duga. Izuzev 1998. godine, Hrvatska je od svoje samostalnosti svake godina imala deficit proračuna opće države. Kao što je prethodno prikazano, u kriznim godinama dolazi do značajnog smanjivanja prihoda, a rashodi se uopće nisu smanjivali. Sve to utječe na eksploziju proračunskog deficita, neovisno o metodologiji njegova izračuna.<sup>54</sup> Na Slici 5. prikazano je kretanje deficita opće države prema obje metodologije te procjena do 2015. godine, dok Slika 6. prikazuje kretanje duga opće države i procjenu za isto razdoblje.

<sup>54</sup> Ministarstvo financija koristi metodologiju MMF-a (GFS – Government Finance Statistics 2001), dok Europska komisija, odnosno Eurostat za potrebe procedure prekomjernog deficita (EDP – Excessive Deficit Procedure) primjenjuje metodološke standarde ESA 95. Za razliku najbolje vidjeti European Commission (2014b).



**Slika 5.** Deficit opće države prema GFS i ESA 95 (u milijardama kuna i % BDP-a)  
Izvor: obrada prema Ministarstvo financija i Eurostat



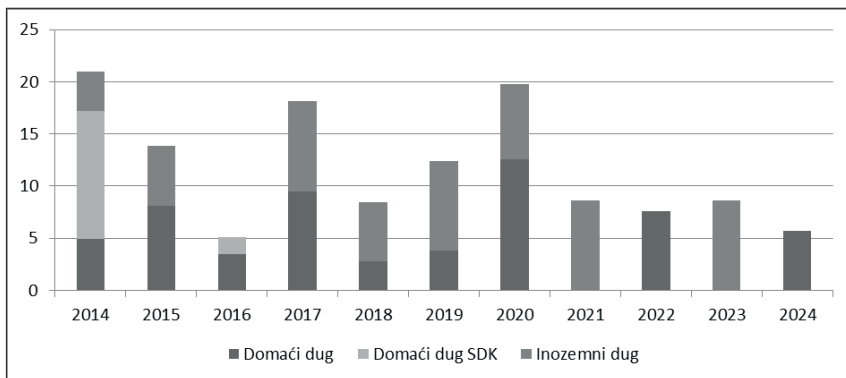
**Slika 6.** Dug opće države prema (u milijardama kuna i % BDP-a)  
Izvor: obrada prema Ministarstvo financija i Eurostat

Krajem 2008. godine razina javnog duga bila je oko 100 milijardi kuna, dok se krajem 2013. godine očekuje da će doseći razinu od 200 milijardi kuna. Udvostručenje javnog duga u petogodišnjem razdoblju rezultat je eksplozije deficita tijekom krize. Ovako snažna dinamika rasta javnog duga sigurno će se nastaviti i naredne tri godine jer je procedurom prekomjernog deficita predviđeno da deficit opće države bude iznad 3% BDP-a sve do 2016. godine, kada će razina javnog duga biti već preko 70% BDP-a (European Commission, 2013).

Također, važno je spomenuti tzv. potencijalni javni dug koji se krije u državnim jamstvima i dugu HBOR-a za kojeg također garantira države. Krajem 2012. godine jamstva i dug HBOR-a iznosili su preko 55 milijardi kuna, što je pridodano postojećem javnom dugu premašivalo 70% BDP-a

### 3.5. Financiranje deficita

Prethodno analizirana kretanja i trendovi u iznosu javnog duga ukazuju na izazov financiranja deficita i u narednim godina. Na žalost, u Hrvatskoj ne postoji sustav upravljanja javnim dugom i gotovo svako izdanje državnih obveznica predstavlja tek refinanciranje dospjelih dugova. Na Slici 7. prikazano je dospijeće dugoročnog duga u razdoblju od 2014. do 2024. godine. Većinu dugoročnog duga predstavljaju obveznice izdane na domaćem ili međunarodnom financijskom tržištu. Iznimka su sindicirani devizni krediti kod domaćih banaka koja dopijevaju većinom u 2014. godini.



**Slika 7.** Dospijeće dugoročnog duga (stanje studeni 2013., u mlrd. kuna)

Izvor: izračun autora

Napomena: SDK –sindicirani devizni krediti

U 2014. godini dospijeva preko 21 milijarda kuna dugoročnog duga. Osim 2016. godine, u predstojećem srednjoročnom razdoblju intenzivirat će se potreba i aktivnosti za refinanciranjem postojećih dugova. Uzimajući u obzir i novo kreirani dug u vidu planiranih deficita (Slika 7.) bruto potreba za kreiranjem novog duga premašivati će i 40 milijardi kuna na godišnjoj razini.

Postavlja se pitanje pod kojim uvjetima možemo refinancirati dospjeli dug i kakva je percepcija Hrvatske na financijskim tržištima. Pri tom treba uzeti u obzir činjenicu da je našoj zemlji u posljednjih godina u nekoliko navrata smanjivan kreditni rejting (Tablica 3.), a izgledi za servisiranje duga prognozirani su kao negativni.

Godina	Moody's Investors Service	Standard & Poors	Fitch Ratings
2009	Baa3/stabilan	BBB/stabilan	BBB-/negativan
2010	Baa3/stabilan	BBB-/negativan	BBB-/negativan
2011	Baa3/stabilan	BBB-/negativan	BBB-/negativan
2012	Baa3/negativan	BB+	BBB-
2013	Ba1/negativan	BB+	BB+ /stabilan
2014		BB/stabilan	BB+/negativan

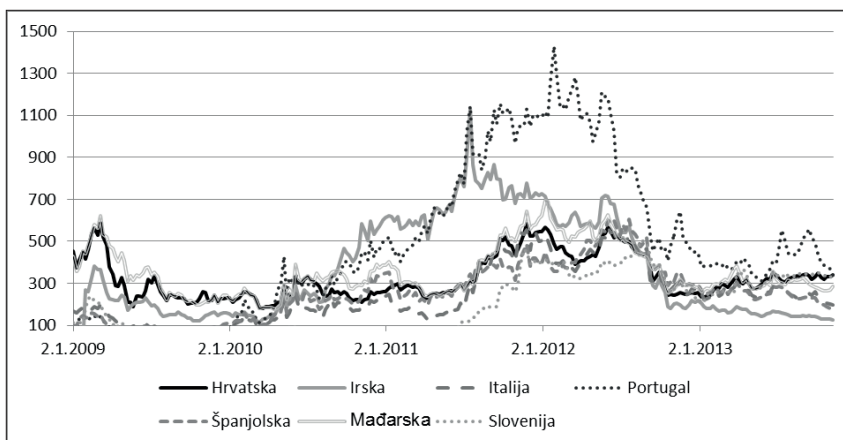
**Tablica 3.** Dugoročna ocjena Hrvatske za dug u inozemnoj valuti

Izvor: web stranice navedenih rejting agencija

Bez obzira na kreditni rejting, u prvim godinama krize uvjeti na međunarodnim financijskim tržištima općenito su bili nepovoljni za (re)financiranje. Sve je to utjecalo na rast kamatnih stopa. Prije krize u razdoblju od 2004-08. godine Hrvatska se na domaćem tržištu prosječno (dugoročno) zaduživala po kamatnoj stopi od 4,97%, a na inozemnom tržištu od 5,00%. Nakon krize, odnosno u razdoblju od 2009-13. godine prosječna kamatna stopa na domaćem financijskom tržištu iznosila je 6,04%, a na inozemnom 6,23% (izračun autora).<sup>55</sup>

Nadalje, percepcija Hrvatske na međunarodnom financijskom tržištu uopće nije povoljna. Kao pokazatelj rizika neplaćanja dospjelih obveza često se uzima CDS (Credit Default Swap), koji ujedno služi kao dobra podloga za usporedbu rizičnosti među pojedinim zemljama. Na Slici 8. prikazan je CDS na petogodišnju obveznicu za odabrane zemlje EU koje su posljednjih godina imale određenih problema u financiranju javnog duga i prema rizičnosti slične Hrvatskoj. Prema ovom pokazatelju, Hrvatska je među najrizičnijim zemljama u EU. Krajem 2013. godine CDS na hrvatsku petogodišnju obveznicu iznosio je oko 340 bodova. Sličnu razinu rizičnosti ima Slovenija i Portugal, s time da Portugal ima silazni trend. Najgore razine rizičnosti u EU imaju Grčka i Cipar (preko 1000), ali zbog preglednosti nisu uvrštene na grafikon.

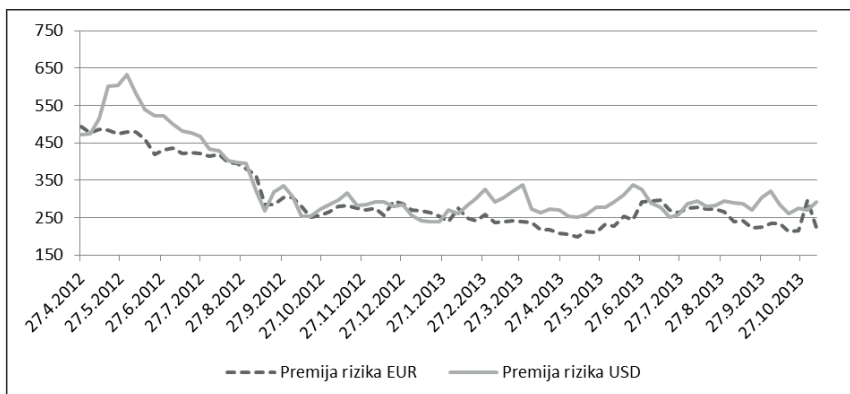
Uslijed negativnih makroekonomskih pokazatelja i daljnjeg pada kreditnog rejtinga, buduće refinanciranje i novo zaduživanje Hrvatske pratit će vjerojatno još lošiji uvjeti od dosadašnjih, što predstavlja dodatni pritisak na rast rashoda za kamate i sužava mogućnost za ekspanzivno djelovanje fiskalne politike.



**Slika 8.** Credit Default Swap (CDS, 5-godišnja obveznica)

Izvor: izračun autora i Bloomberg

<sup>55</sup> Važno je napomenuti kako se ovdje radi uglavnom o nominalnim kuponskim kamatnim stopama na izdanjima obveznica. Često su obveznice izdane uz određeni diskont pa je prinost do dospijeća uglavnom bio viši od kamatne stope. Također, postoje i razni drugi troškovi koji nastaju prilikom izdanja obveznice (npr. agencijske naknade, valutni swap-ovi ako se ugovaraju i sl.) koje efektivno mogu poskupiti zaduživanje.



**Slika 9.** Premija rizika (razlika prinosa)

Izvor: izračun autora i Bloomberg

Od 2009. godine čak je šest izdanja obveznica bilo je na američkom financijskom tržištu. Razlog tome su nešto povoljniji uvjeti nego na europskom tržištu, te izbjegavanje domaćeg tržišta kako bi se izbjeglo istiskivanje privatnih investicija. Takvo zaduživanje ima i svoje lošije strane, jer je proizvelo narušavanje valutne strukture duga i povećanja valutnog rizika. To se vidi iz Slike 9. na kojoj je s jedne strane prikazana razlika prinosa između referentne američke obveznice i hrvatske obveznice izdane u SAD-u, a na drugoj između referentne njemačke obveznice i hrvatske euro-obveznice. U promatranom razdoblju ta razlika prinosa je u prosjeku bila veća za 35 baznih bodova, što ukazuje na to da je premija rizika na dug u američkim dolarima veća nego na dug u eurima.

#### 4. Mogućnosti fiskalne politike u Hrvatskoj

Bez obzira na prethodno iznesena ograničenja, iz pregleda literature predstavljenog u prvom dijelu rada naziru se određene mogućnosti fiskalne politike u Hrvatskoj. Važno je još jednom naglasiti kako se mogućnosti fiskalne politike promatraju u kontekstu postojećeg polito-ekonomskog okvira (donošenje diskrecijskih mjera fiskalne politike od strane Vlade) te makroekonomskog modela u Hrvatskoj (uloga HNB-a i ciljevi monetarne politike ostaju nepromijenjeni). Imajući na umu navedeno, postavlja se pitanje koji je najbolji način za iskorištavanje ograničenog prostora fiskalne intervencije?

Mogućnosti djelovanja ogledaju se prije svega kroz promjenu strukture javnih rashoda te davanju naglaska na onim rashodima koji imaju najveće multiplikativne učinke na rast BDP-a u Hrvatskoj. U skladu s time u nastavku se provodi ekonometrijsko istraživanje kojim se nastoji ispitati koji segmenti javnih rashoda i javnih prihoda imaju najveći multiplikativni učinak na BDP. Preciznije, u nastavku rada se ispituju mogućnosti stabilizacijske uloge fiskalne politike i javnih financija kroz analizu utjecaja prihoda i rashoda opće konsolidirane države na kretanje bruto domaćeg

proizvoda (BDP). Zbog izražene međuovisnosti navedenih varijabli, strukturnog karaktera teorijskih modela na kojima se istraživanje temelji te potrebe za ekonomskom interpretacijom inovacijske analize u radu se koristi model strukturne vektorske autoregresije (SVAR). Nadalje, u radu se analizira tzv. pametna fiskalna konsolidacija kao temelj za stvaranje određenog prostora za djelovanje mjera fiskalne politike.

#### **4.1. Empirijski pristup procjeni učinaka fiskalne politike na ekonomski rast u Hrvatskoj**

Empirijska analiza se provodi na kvartalnim podacima u razdoblju od trećeg kvartala 2004. do trećeg kvartala 2013. godine, što čini uzorak od 37 opservacija. Zbog malog uzorka rezultati koji će biti prezentirani u nastavku rada moraju biti uzeti s dozom opreza budući da veličina uzorka značajno utječe na osnovne pretpostavke regresijske analize (koja je u osnovi VAR metodologije). Razlog za odabir ovog uzorka je dostupnost podataka na stranicama Ministarstva financija koje, zbog promjene GFS metodologije, podatke o prihodima i rashodima opće konsolidirane države objavljuje od trećeg kvartala 2004. godine.

Opća konsolidirana država je u fokusu ovog rada jer se pretpostavlja da se mogućnosti fiskalne politike u Hrvatskoj najbolje mogu procijeniti ako se u analizu uključi zajedničko djelovanje središnjeg proračuna, izvanproračunskih korisnika te jedinica lokalne i regionalne samouprave. Zavisna varijabla u modelima koji će se prikazati u nastavku je bruto domaći proizvod, pri čemu se pretpostavlja da, osim „domaćih“ objašnjavajućih fiskalnih varijabli, na njegovo kretanje značajan učinak ima i inozemna potražnja, budući da je Hrvatska mala otvorena ekonomija, sve snažnije integrirana u tržište Europske unije. Detaljan opis podataka nalazi se u Tablici 4.

Kategorija	Naziv varijable	Očekivani utjecaj na zavisnu varijablu	Opis varijable	Izvor podataka
Zavisna varijabla	BDP	n/a	Bruto domaći proizvod u stalnim cijenama iz 2005. godine	Državni zavod za statistiku; Nacionalni računi
Objašnjavajuće varijable	<b>Prihodi opće konsolidirane države</b>	-	Originalni podaci izraženi u tekućim cijenama i tisućama kuna deflacijonirani su Indeksom potrošačkih cijena HNB-a s bazom 2005. i preračunati u jedinicu milijun kuna	Ministarstvo financija; Vremenske serije podataka; Konsolidirana opća država
	Porez na dohodak	+/-		
	Porez na dobit	-		
	PDV	-		
	Trošarine	-		
	Socijalni doprinosi	-		
	<b>Rashodi opće konsolidirane države</b>	+/-		
	Plaće	+/-		
	Dobra i usluge	+		
	Subvencije	+/-		
	Socijalne naknade	+/-		
	Kapitalne investicije*	+		
	Inozemna potražnja	+	Varijabla je konstruirana kao ponderirani zbroj BDP-a Njemačke, Austrije, Slovenije i Italije pri čemu se kao ponderi koriste ponderi koje koristi Hrvatska narodna banka za izračun Indeksa realnog efektivnog tečaja kune	Eurostat; National accounts

**Tablica 4.** Opis korištenih podataka

Izvor: autori

Napomena: \*Varijabla kapitalne investicije je konstruirana kao zbroj kapitalnih rashoda i nabave nefinancijske imovine

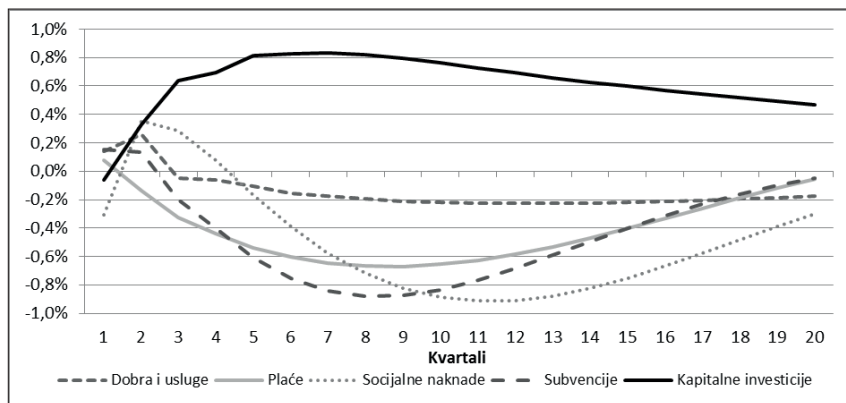
Model od kojeg polazimo u analizi je reducirani oblik multivarijatnog<sup>56</sup> VAR modela:

$$X_t = \alpha + \sum_{i=1}^p A_i X_{t-i} + u_t, \quad (1)$$

$$X_t = \begin{bmatrix} F_t \\ BDP_t \\ BDPf_t \end{bmatrix}, u_t = \begin{bmatrix} f_t \\ bdp_t \\ bdpf_t \end{bmatrix}, u_t \sim (0, \Sigma_u)$$

u kojem vektor  $X_t = [F_t, BDP_t, BDPf_t]'$  uključuje deflacionirane, sezonski prilagođene i logaritmirane vrijednosti pojedine fiskalne varijable ( $F_t$ ), bruto domaćeg proizvoda ( $BDP_t$ ) i ponderiranog BDP-a glavnih trgovinskih partnera Hrvatske ( $BDPf_t$ ), koji služi kao *proxy* varijabla za inozemnu potražnju. Vektor  $u_t = [f_t, bdp_t, bdpf_t]'$  je vektor reziduala iz reduciranog VAR modela (RF), pri čemu se pretpostavlja da je  $u_t \sim (0, \Sigma_u)$ .<sup>57</sup>

Nakon identifikacije SVAR modela pristupa se njegovoj procjeni te analizi funkcija impulsnog odziva temeljenoj na strukturalnoj dekompoziciji. Funkcije impulsnog odziva u ovako postavljenom modelu prikazuju reakciju BDP-a u % na promjenu pojedine fiskalne varijable u %, a prikazane su na Slikama 10 i 11.



**Slika 10.** Impulsna reakcija BDP-a na strukturalni šok u rashodima opće države (%)\*

Izvor: izračun autora

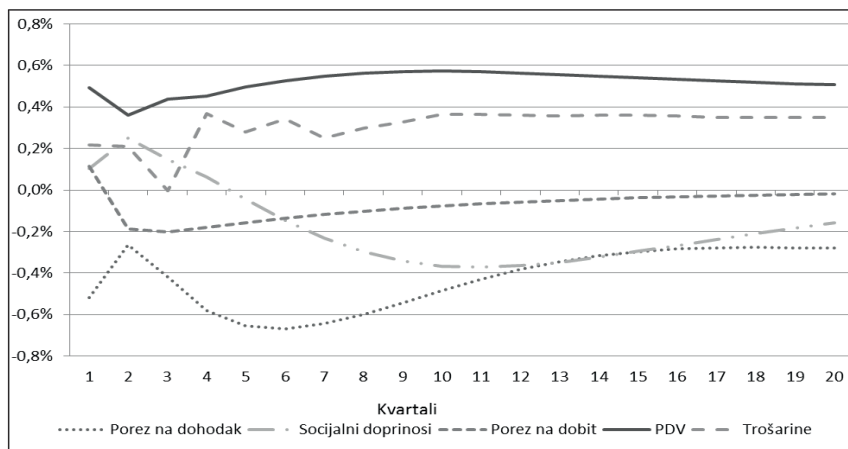
*Napomena: \*zbog preglednosti na slici nisu prikazani intervali pouzdanosti (68%) pa je potrebno istaknuti da efekti povećanja dobara i usluga nisu statistički značajni u navedenom periodu; efekti plaća su statistički značajni od petog do desetog kvartala; socijalnih naknada od desetog do dvanaestog kvartala; subvencija od sedmog do desetog kvartala te kapitalnih investicija od trećeg do sedmog kvartala*

<sup>56</sup> Zbog ograničene veličine uzorka u radu se provodi zasebna analiza učinaka javnih prihoda i javnih rashoda.

<sup>57</sup> SVAR metodologija temelji se identifikaciji prema Blanchard-Perotti (2002). Za detalje o specifikaciji modela vidjeti Šimović i Deskar-Škrbić (2013: 229-232). Također, zbog ekstenzivnosti ispisa svi su testovi stabilnosti modela te heteroskedastičnosti, autokorelacije i normalnosti reziduala dostupni na zahtjev.



Funkcije impulsnog odziva na Slici 10 pokazuju kako fiskalni šok povećanja izdataka na dobra i usluge kratkoročno povećava BDP u prva tri kvartala nakon nastanka šoka, nakon čega ostaje negativan do iščezavanja šoka. Šok povećanja plaća vrlo je blago pozitivan u trenutku nastanka šoka, nakon čega utjecaj postaje dominantno negativan do iščezavanja. Impulsni odziv na šok povećanja socijalnih naknada pokazuje kako one kratkoročno imaju pozitivan učinak na BDP (s vremenskim odmakom od jednog kvartala), međutim nakon četvrtog kvartala utjecaj postaje negativan i doseže svoj minimum u jedanaestom kvartalu, nakon čega počinje iščezavati. Zanimljivo je zamijetiti da socijalne naknade, prema rezultatima analize, imaju i najniži minimum od svih rashoda, tj. dugoročno imaju najizraženiji negativan utjecaj na BDP. Šok povećanja subvencija kratkoročno povećava BDP, u trajanju od dva kvartala nakon čega utjecaj postaje negativan i intenzivno se pojačava do osmog kvartala nakon kojeg počinje iščezavati. Kapitalne investicije su jedina kategorija javnih rashoda koja prema rezultatima ima dugotrajno pozitivan učinak na BDP. Maksimalan utjecaj na BDP kapitalne investicije ostvaruju u sedmom kvartalu, nakon čega on počinje iščezavati.



**Slika 11.** Impulsna reakcija BDP-a na strukturni šok u prihodima opće države (%)\*

Izvor: izračun autora

*Napomena: \*zbog preglednosti na slici nisu prikazani intervali pouzdanosti (68%) pa je potrebno istaknuti da su efekti povećanja poreza na dohodak statistički značajni u prvom kvartalu; da efekti socijalnih doprinosa i poreza na dobit nisu značajni u promatranom razdoblju; da su efekti PDV-a i trošarina značajni u prvom kvartalu*

Na Slici 11 su prikazane funkcije impulsnog odziva koje prikazuju reakciju BDP-a na šokove u komponentama prihoda opće konsolidirane države. Mogućnosti porezne politike o pozitivnom učinku na BDP mnogo su manje u odnosu na javne rashode, što je uostalom u skladu s recentnom teorijom i praksom (npr. vidjeti Myles, 2000). Prema rezultatima inovacijske analize porez na dohodak ima negativan učinak na kretanje BDP-a u cijelom promatranom razdoblju, a minimum (najveći negativan učinak) doseže u šestom kvartalu. Socijalni doprinosi kratkoročno povećavaju BDP u prva tri kvartala nakon čega efekti njihovog povećanja postaju negativni do

iščezavanja. Prema rezultatima analize upravo ove dvije komponente prihoda proračuna opće države imaju najnepovoljniji učinak na kretanje BDP-a. Šok povećanja poreza na dobit ima negativan učinak na BDP od prvog kvartala nakon nastanka šoka, ali taj učinak najbrže iščezava.

Iznađujući rezultati analize odnose se na indirektno poreze, PDV i trošarine. Funkcije impulsnog odziva za ove dvije kategorije prihoda pokazuju kako one u cijelom promatranom razdoblju imaju pozitivan učinak na kretanje BDP-a, što nije moguće objasniti standardnom ekonomskom teorijom. Međutim, Mirdala (2009), čiji su rezultati analize pokazali pozitivnu reakciju BDP-a na šokove u javnim приходima u šest tranzicijskih zemalja središnje i jugoistočne Europe, ističe kako povećanje prihoda proračuna ne mora nužno biti posljedica povećanja poreznih stopa. Rast prihoda proračuna prirodna je posljedica intenziviranja ekonomske aktivnosti<sup>58</sup>. S obzirom na karakteristike poreznog sustava u Hrvatskoj, koji je potrošno orijentiran, PDV i trošarine su posebno osjetljivi na kretanje BDP-a pa bi ova činjenica mogla poslužiti kao potencijalno objašnjenje ovakvog kretanja impulsnih reakcija ovih kategorija prihoda.

Prije nastavka potrebno je istaknuti određena metodološka ograničenja prikazane empirijske analize. Prvo i vrlo važno ograničenje proizlazi iz vrlo kratke vremenske serije na kojoj je analiza provedena. Mali broj stupnjeva slobode može značajno utjecati na rezultate analize s obzirom da može narušiti centralni granični teorem i temeljne pretpostavke OLS-a, na kojem se temelji VAR metodologija. Drugo, kratka vremenska serija u ovom razdoblju u kontekstu hrvatske ekonomije rezultira činjenicom da je Hrvatska u gotovo 50% analiziranog perioda u recesiji, što može značajno utjecati na veličinu fiskalnih impulsa i njihovo kretanje. Također, zbog recesijskog šoka u svim serijama postoji značajan strukturni lom za koji se može reći da dijeli analizirani period na dva „ekonomska režima“ pa bi u budućnosti učinke fiskalnih šokova trebalo promatrati u okviru tzv. *regime-switching* modela (vidi Auerbach i Gorodnichenko, 2012). Posljednje, Caldara (2011) ističe kako su rezultati fiskalnih SVAR modela prilično osjetljivi na pretpostavke o veličini poreznih elastičnosti pa se u interpretaciji rezultata treba uzeti u obzir kako su u radu korištene porezne elastičnosti iz radova koji su ih procjenjivali na drugim razdobljima i na drugim razinama konsolidacije proračuna. Iz svih navedenih razloga rezultate treba tumačiti s dozom opreza.

## 4.2. Pametna fiskalna konsolidacija

Kas se govori o mogućnostima fiskalne politike, fiskalna konsolidacija često se spominje i zagovara u Hrvatskoj kao jedina preostala mjera. Uzimajući u obzir prethodno analizirana ograničenja, jasno je da se u kratkom roku zadani koncept ne može sprovesti, izuzev nepopularnih

---

<sup>58</sup> Iako VAR metodologija rješava određene probleme endogenosti, nije moguće u potpunosti ukloniti problem reverzne kauzacije.

političkih poteza na strani rezanja rashoda (plaće i mirovine) te dodatnog povećanja porezne presije.

Ostvarivanje ciljeva fiskalne konsolidacije u kratkom roku, bez prethodno učinjenih priprema (strukturne reforme), izaziva određene rizike i prijeti daljnjim produbljanjem krize. Već je prije dokazano kako karakter fiskalne politike u Hrvatskoj uglavnom prociklički (vidjeti Tablicu 1.), što znači da bi svako značajnije smanjenje rashoda (i/ili povećanje poreza) vodilo padu ekonomske aktivnosti. Nadalje, u međunarodnoj literaturi postoji vrlo malo dokaza da fiskalna konsolidacija vodi oporavku u vrijeme krize. To vrijedi i za razvijene zemlje ali i u zemlje u razvoju, posebno one s velikom kreditnim ograničenjima (Ghosh et al., 2009; Baldacci et al., 2013; Blanchard & Liegh, 2013).

Politika zadržavanje postojećeg stanja, odnosno „politika nečinjenja“, također bi izazvala probleme u ekonomskoj slici Hrvatske. To prije svega podrazumijeva stagnaciju (niske stope rasta), daljnje istiskivanje investicija i fiskalnu neodrživost (visok domaći i inozemni javni dug). Visoka razina nezaposlenosti jamči daljnje ubrzavanje procesa socijalnog raslojavanja stanovništva čemu već pridonosi regresivan porezni sustav (potrošno orijentiran) kao i nepovoljni monetarni uvjeti u zemlji (visoke kamatne stope).

Prethodno iznesena ograničenja nisu karakteristična samo za Hrvatsku. Više zemalja EU tijekom ove krize suočilo se s politikom fiskalne konsolidacija i politike štednje, što je u konačnici izazvalo negativne rezultate ali i sve veću kritiku takve politike (vidjeti npr. Butti & Carnot, 2013). S druge strane aktivnija uloge fiskalne politike zahtijeva određen prostor koji je teško ostvariti bez značajnih rezova. Pomirbu ova dva naočigled različita cilja najbolje utjelovljuje koncept tzv. pametne fiskalne konsolidacije (prema Kolev & Matthes, 2013). U okviru ovog koncepta, fiskalna konsolidacija ne prestaje biti cilj koji je potrebno postići kako bi fiskalna politika mogla učinkovito djelovati, ali su brzina, dinamika i vrijeme fiskalne prilagodbe te usmjerenost na veće multiplikativne učinke ključni u postizanju učinkovitosti fiskalne politike.

Sukladno proučenoj literaturi i rezultatima empirijske analize može se istaknuti nekoliko skupina mjera. Prije svega, svakako bi bilo uputno zadržati postojeću razinu javne potrošnje (nikako smanjenje), s time da je potrebno mijenjati njezinu strukturu. Pritom je nužno orijentirati se na produktivne javne rashode s najvećim multiplikativnim učincima (kapitalni i investicijski rashodi). Nikakva hirovitost, odnosno naglo povećanje ili smanjenje, u pogledu navedenih investicija neće doprinijeti rastu BDP-a. Nasuprot tome, najmanje bi se trebalo težiti tekućim rashodima jer imaju najmanje multiplikativne učinke i najmanje su produktivni u duljem roku. Bez obzira na negativan učinak plaća, u dugom roku subvencije i socijalne naknade imaju najsnažniji negativan utjecaj na BDP, pa bi u tim područjima trebalo prije pristupiti reformama. Strukturne reforme vezane uz javnu upravu i zdravstvo prije bi trebale biti usmjerene ka povećanju učinkovitosti nego smanjenju plaća. Nadalje, uz reformu

javne uprave potrebno je provesti reformu lokalne samouprave te težiti optimalnoj fiskalnoj decentralizaciji, što konkretno podrazumijeva učinkovitiji i pravedniji sustav fiskalnog izravnjanja. Također, mirovinski sustav u pogledu kapitalizirane štednje (II. stup) treba postepeno jačati, prije svega zbog negativnih demografskih trendova i prisutnog raslojavanja stanovništva. Ne treba bježati od procesa privatizacije u svim sektorima u kojima ne postoji određeni stupanj monopola ili javnog dobra, te unaprijediti određene modele javno-privatnog partnerstva, posebice na lokalnoj razini.

Drugo, fiskalna prilagodba (konsolidacija) treba se provoditi postepeno. Svakako tu u prilog ide i postojeća procedura u slučaju prekomjernog deficita koja je Hrvatskoj ostavila dosta prostora i vremena za nužne reforme. U najkraćem mogućem roku potrebno je uspostaviti adekvatan sustav upravljanja javnim dugom jer on u Hrvatskoj uopće ne postoji.<sup>59</sup> Hrvatska će tijekom 2014. godine na razini opće države platiti 13,6 milijardi kuna kamata. S obzirom na to da se radi o velikom trošku te velikoj imovini s kojom nitko adekvatno ne upravlja (javni dug preko 60% BDP-a), samo na rashodima za kamate mogle bi se napraviti značajne uštede za proračun. Nadalje, proračunsko planiranje je ključno za provedbu fiskalne prilagodbe. Svaka godina bez rebalansa znači i manje uplitanje u promjene u poreznom sustavu te razne *ad hoc* intervencije na strani javnih rashoda. Realno proračunsko planiranje dodatno bi utjecalo na jačanje kredibilitnosti fiskalne politike te bi svim potencijalnim investitorima slalo sliku kredibilne porezne politike.

Treće, uz promjenu strukture potrošnje i fiskalnu prilagodbu, osiguravanje dugoročne kredibilitnosti fiskalne politike potrebno je dodatno istaknuti. Uz prethodno napomenuto (EDP i planiranje) ne treba bježati od potencijalnih aranžmana s MMF-om koji bi dugoročno osigurao provedbu reformi ali i bitno smanjio politički rizik vezan uz koalicijske vlade i zastupanje određenih interesnih skupina.

Četvrto, karakter i intenzitet fiskalne politike treba usmjeriti na kretanje strukturnog salda (deficita), a ne ukupnog fiskalnog salda. To bi doprinijelo jačanju fiskalne pozicije, smanjilo bi prociklički karakter fiskalne politike u Hrvatskoj te bi osiguralo kakvu takvu zaštitu od vanjskih šokova. To podrazumijeva i doradu postojećih fiskalnih pravila<sup>60</sup> koja su se u uvjetima kriza pokazala dosta rigidna i restriktivna. U tom kontekstu treba jačati i analitičku podlogu Ministarstva financija (Zavod za makroekonomske analize). S obzirom na relativno slabo djelovanje automatskih stabilizatora, a s ciljem bržeg djelovanja i povećanja učinkovitosti fiskalne politike potrebno je jačati automatske stabilizatore u Hrvatskoj. To znači reformu sustava socijalne zaštite ali i poreznog sustava gdje se

59 Konkretno prijedloge u pogledu upravljanja javnim dugom vidjeti Bajo i Primorac (2013: 6-7).

60 Fiskalna pravila se ogledaju kroz Zakon o fiskalnoj odgovornosti, *Narodne novine* 139/10. Trenutno se ta pravila, odnosno Zakon uopće ne poštuju pa se postavlja pitanje smislenosti uspostave takvih pravila koja se u uvjetima krize neće poštovati.

treba osigurati veća progresivnost putem svih direktnih poreza (ne samo poreza na dohodak). To podrazumijeva širenje porezne osnovice na druge oblike dohotka i imovine (vidjeti Šimović, 2012; Drezgić, 2009), gdje bi adekvatni oblik poreza na imovinu mogao pozitivno djelovati.

Peto, svaka porezna reforma ne bi trebala biti ishitrena (krpanje proračunskih rupa) nego dobro utemeljena, raspravljena, najavljena te na koncu donijeta kroz paket zakona. Empirijska analiza pokazala je na pretežno negativan učinak poreza na BDP, te lažan dojam koji ostavljaju indirektni porezi. U uvjetima smanjenja ekonomske aktivnosti svaka oblik poreznog poticaja kod indirektnih poreza (npr. snižena stopa PDV-a) za određena dobra i usluge koje nisu socijalnog karaktera apsolutno je neopravdan. Takvi potezi samo značajno smanjuju porezne prihode, povećavaju proračunski deficit, a ne djeluju na povećanje ekonomske aktivnosti (BDP-a).

Prethodno iznesene mjere primarno se odnose na kratki te srednji rok do pet godina. Potrebno je spomenuti i određene mjere koje se odnose na nešto dulju dimenziju djelovanja fiskalne politike (srednji i dulji rok). Svakako, još jednom valja naglasiti dugoročne pozitivne učinke produktivnih javnih investicija. U tom kontekstu potrebno je težiti smanjenju onih javnih rashoda koji se pokazuju neučinkovitima u dugom roku (npr. subvencije). Drugi segment tzv. „poželjnih rashoda“ jesu oni za zdravstvo i obrazovanje, jer se u literaturi uglavnom promatraju kao produktivni javni rashodi. S obzirom na to da je postojeća razina navedenih rashoda već visoka, treba kroz pojedine reforme težiti većoj kvaliteti (obrazovanje) i učinkovitosti (zdravstvo). S prihodovne strane, u dugom roku trebalo bi težiti poreznom rasterećenju rada, posebice onoga s nižim dohocima, čime bi se preko utjecaja na štednju dao dodatni impuls investicijama u privatnom sektoru. Također, to implicira prethodno spomenuto povećanje progresivnosti poreznog sustava i prebacivanja poreznog tereta s rada na kapital i imovinu. Općenito, treba težiti ka smanjivanju države, odnosno javnog sektora u BDP-u, ali osigurati snažan regulatorni i institucionalni okvir za uklanjanje potencijalnih neuspjeha tržišta.

## 5. Zaključak

Ograničenja fiskalne politike u Hrvatskoj su velika i brojna. S druge strane, empirijski je dokazano da mogućnost pozitivnog djelovanja fiskalne politike na BDP postoji, ali da bi fiskalna politika bila što učinkovitija trebalo bi se pridržavati nekoliko skupina preciznih mjera koje su prethodno formulirane kao mjere pametne fiskalne konsolidacije. S obzirom da na to da se Hrvatska nalazi pred šestom godinom recesije i stagnacije, svako značajnije smanjenje javnih rashoda, a time i državne potrošnje, zasigurno će u kratkom roku negativno utjecati na BDP i prolongirati krizu. Rezultati empirijske analize ukazuju na potrebu promjene strukture javnih rashoda, odnosno davanja većeg značenja javnim rashodima koji u dugom roku pozitivno djeluju na BDP. Također, takva politika implicira relativno smanjenje svih onih rashoda koji u dugom roku

nemaju pozitivan učinak na BDP, odnosno jačanje pratećih politika koje ne bi uvjetovale dugoročnu ovisnost pojedinih subjekata o državnom proračunu (npr. razne subvencije). Također, kad se govori o fiskalnoj politici, u javnosti se često mogu čuti prijedlozi raznih mjera u domeni porezne politike prije svega zbog političke popularnosti određenih poreznih mjera (razne poticaji i olakšice, snižene stope i sl.). Empirijska analiza je pokazala kako direktni porezi, posebno porez na dohodak i doprinosi, imaju dugotrajno negativan i snažan učinak na kretanje BDP-a, dok pozitivne učinke indirektnih poreza treba promatrati dozom opreza.

Sva ograničenja fiskalne politike u Hrvatskoj posljedica su tzv. „politike nečinjenja“, gdje se sustav javnog financiranja podredio kupovanju socijalnog mira i održavanju visoke razine neproduktivnih rashoda, što je uvelike utjecalo na prociklički karakter fiskalne politike u promatranom razdoblju. Pregled istraživanja o fiskalnoj politici u Hrvatskoj pokazao je kako je većina istraživanja ukazivala na iste ili slične probleme, te upozoravala na crne scenarije koje posljednjih godina proživljavamo. Da se nositelji ekonomske politike ne žele suočiti s problemima pokazuje i kontinuirana praksa prosječno više od jednog rebalansa državnog proračuna godišnje. Strukturna obilježja hrvatskog gospodarstva poput režima tečaja, stupnja zaduženosti (javnog i vanjskog duga), razvijenosti tržišta kapitala, percepcije investitora, otvorenosti ekonomije, članstva EU itd., ne bi trebala (više) biti opravdanje za inertnost nositelja ekonomske politike, a isto tako nije fiskalna politika ta koja može riješiti sve probleme hrvatskog društva i gospodarstva.

## Literatura:

- Auerbach, J.A., Gorodnichenko, Y. (2012.), Measuring the Output Responses to Fiscal Policy, *American Economic Journal: Economic Policy*, (4), 2, p. 1-27.
- Babić, A., Bajo, A., Bubaš, Z., Švaljek, S. (2001.), Javni dug u Republici Hrvatskoj, *Financijska teorija i praksa*, (25), 1, p. 1-97.
- Babić, A.; Krznar, I.; Nestić, D., Švaljek, S. (2003.), Dinamička analiza održivosti javnog i vanjskog duga Hrvatske, *Privredna kretanja i ekonomska politika*, (13), 97, p. 77-126.
- Bajo, A., Primorac, M. (2013.), Troškovi zaduživanja i prinosi na hrvatske državne obveznice, *IJF Newsletter*, br. 83, <http://www.ijf.hr/upload/files/file/newsletter/83.pdf>
- Baldacci, E., Gupta, S., Mulas-Granados, C. (2013.), Debt Reduction, Fiscal Adjustment, and Growth in Credit-Constrained Economies, *IMF Working Paper WP/13/238*
- Belullo, A., Dužman, T., (2011.), Relations among government revenues and gross domestic product (GDP) of the Republic of Croatia, *Ekonomika istraživanja*, (24), 4, p. 143-152.
- Benazić, M. (2006.), Fiskalna politika i gospodarska aktivnost u Republici Hrvatskoj: model kointegracije, *Ekonomski pregled*, (57), 12, p. 882-917.
- Beš, D., Ott, K. (2010.), Kratka povijest rebalansa hrvatskog državnog proračuna, *IJF Newsletter*, br. 50, <http://www.ijf.hr/newsletter/50.pdf>
- Blanchard, O., Liegh, D. (2013.), Growth Forecast Errors and Fiscal Multipliers, *IMF Working Paper WP/13/1*
- Blanchard, O., Perotti, R. (2002.), An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output, *The Quarterly Journal of Economics*, (117), 4, p. 1329-1368.
- Bokan, N., Grgurić, L., Krznar, I., Lang, M. (2010.), Utjecaj financijske krize i reakcija monetarne politike u Hrvatskoj, *HNB Istraživanja*, 1-25 (veljača 2010.), <http://www.hnb.hr/publikac/istrazivanja/i-025.pdf>
- Bratić, V. (2004.), Uloga parlamenta u proračunskom procesu: primjer Hrvatskog sabora, *Financijska teorija i praksa*, (28), 1, p. 7-23.
- Buit, M., Carnot, N. (2013.), The Debate on Fiscal Policy in Europe: Beyond the Austerity Myth, *ECFIN Economic Brief No. 20.*, [http://ec.europa.eu/economy\\_finance/publications/economic\\_briefs/2013/pdf/eb20\\_en.pdf](http://ec.europa.eu/economy_finance/publications/economic_briefs/2013/pdf/eb20_en.pdf)
- Caldara, D. (2011.), The Analytics of SVARs: A Unified Framework to Measure Fiscal Multipliers, Institute for International Economic Studies, Stockholm University, *Job Market Paper*, [http://people.su.se/~dcald/JMP\\_Caldara.pdf](http://people.su.se/~dcald/JMP_Caldara.pdf)
- Ćorić, T., Šimović, H., Deskar-Škrbić, M. (2014.), Monetary and fiscal policy mix in a small open economy: Case of Croatia", *unpublished*.

Čorić, T., Šimović, H., Deskar-Škrbić, M. (2013.), Restoring International Competitiveness in Croatia: the Role of Fiscal and Monetary Policy, *Economic Annals*, (58), 199, p. 39-55.

Dalić, M. (2013a.), Fiscal policy and growth in new member states of the EU: a panel data analysis, *Financial theory and practice*, (37), 4, p. 335-360.

Dalić, M. (2013b.), Cyclical properties of fiscal policy in new member states of the EU, *Post-Communist Economies*, (259), 3, p. 289-308.

Darvas, Z. (2009.), The Impact of the Crisis on Budget Policy in Central and Eastern Europe, *OECD Journal on Budgeting*, (10), 1, p.1-42.

Deskar Škrbić, M., Šimović, H., Čorić, T. (2014.), Effects of Fiscal Policy in a Small Open Transition Economy: Case of Croatia, *Acta Oeconomica*, 64(SI)

Drezgić, S. (2009.), Porez na imovinu lokalnih jedinica, u: D. Vašiček (ur.), *Hrvatski javni sektor - u aktualnim gospodarskim uvjetima*. Zagreb: HZRFD, p. 70-90.

Drezgić, S. (2010.), Fiskalna politika europskih tranzicijskih zemalja u uvjetima recesije, u: D. Radošević (ur.) *Kriza i ekonomska politika - Politika i ekonomija razvoja Hrvatske*, Zagreb: Lijeva (s)kretanja, p. 205-225.

Drezgić, S. (2011.), Interakcija hrvatske fiskalne i monetarne politike, u: D. Jakovčević et al. (ur.), *Novac i ekonomski rast: Monetarna politika ekonomskog rasta i zaposlenosti*. Zagreb: Ekonomski fakultet Zagreb, p. 149-167.

Družić, G. (1998.), Fiskalna politika i njezin utjecaj na kretanja u hrvatskom gospodarstvu, *Ekonomski pregled*, (49), 4-5, p. 381-398.

Družić, G. (1999.). "Utjecaj javnih prihoda i rashoda na gospodarstvo Hrvatske", *Ekonomski pregled*, (50), 12: 1986-2009.

Družić, G., Krtalić, S. (2006.), Kakvu ulogu treba imati fiskalna politika u Republici Hrvatskoj?, *Ekonomija*, (13), 1, p. 67-85.

EIZ (2014.), *Croatian Economic Outlook Quarterly*, br. 57, siječanj 2014.

European Commission (2013.), Analysis by the Commission services of the budgetary situation in Croatia, *Commission Staff Working Document*, SWD(2013) 523 final, [http://ec.europa.eu/economy\\_finance/economic\\_governance/sgp/pdf/30\\_edps/other\\_documents/2013-12-10\\_hr\\_126-7\\_commission\\_-\\_swd\\_en.pdf](http://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/30_edps/other_documents/2013-12-10_hr_126-7_commission_-_swd_en.pdf)

European Commission (2013a.), Croatia – Ongoing procedure, [http://ec.europa.eu/economy\\_finance/economic\\_governance/sgp/deficit/countries/croatia\\_en.htm](http://ec.europa.eu/economy_finance/economic_governance/sgp/deficit/countries/croatia_en.htm)

European Commission (2013b.), *European Economic forecast, Autumn 2013*, chapter 11 "Croatia: Fiscal challenges amidst weak growth outlook", [http://ec.europa.eu/economy\\_finance/eu/forecasts/2013\\_autumn/hr\\_en.pdf](http://ec.europa.eu/economy_finance/eu/forecasts/2013_autumn/hr_en.pdf)



European Commission (2014a.), *European Economic forecast, Winter 2014*, chapter 11 "Croatia: Muted growth prospects amid a high fiscal deficit and rising debt", [http://ec.europa.eu/economy\\_finance/eu/forecasts/2014\\_winter/hr\\_en.pdf](http://ec.europa.eu/economy_finance/eu/forecasts/2014_winter/hr_en.pdf)

European Commission (2014b.), Guidance on accounting rules for EDP and GFS, [http://epp.eurostat.ec.europa.eu/portal/page/portal/government\\_finance\\_statistics/methodology/guidance\\_accounting\\_rules](http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/methodology/guidance_accounting_rules)

Ghosh, A.R., Chamon, M., Crowe, C., Kim, J.I., Ostry, J.D. (2009.), Coping with the Crisis: Policy Options for Emerging Market Countries, *IMF Staff Position Note*, SPN/09/08, April 23, 2009, <http://www.imf.org/external/pubs/ft/spn/2009/spn0908.pdf>

Grdović Gnip, A. (2011.), Discretionary Measures and Automatic Stabilizers in Croatian Fiscal Policy, *Ekonomika istraživanja*, (24), 3, p. 44-74.

Grdović Gnip, A. (2013.), Empirical assessment of stabilization effects of fiscal policy in Croatia, *EFZG Working Paper* 13-06, <http://web.efzg.hr/repec/pdf/Clanak%2013-06.pdf>

Grdović Gnip, A. (2014.), The power of fiscal multipliers in Croatia, *Financial theory and practice*, 38(2), p. 173-219.

Grgurek, M., Vidaković, N. (2009.), Usklađenost fiskalne i monetarne politike u RH, *Ekonomija/Economics*, (16), 2, p. 395-428.

HNB (2013.), *Bilten HNB-a*, br. 198. (Prosinac 2013), <http://www.hnb.hr/publikac/bilten/arhiv/bilten-198/hbilt198.pdf>

Ilzetzki, E., Mendoza, E.G., Végh, C.A. (2011.), How Big (Small?) are Fiscal Multipliers?, *IMF Working Paper*, WP/11/52.

Ilzetzki, E., Carlos A. Vegh (2008.), Procyclical Fiscal Policy in Developing Countries: Truth or Fiction?, *NBER Working Paper*, No. 14191.

IMF (2013.), *World economic outlook: Transition and Tensions, October 2013*

Jakovčević, D., Lovrinović, I., Radošević, D. (ur.) (2011.), *Novac i ekonomski rast: Monetarna politika ekonomskog rasta i zaposlenosti*. Zagreb: Ekonomski fakultet Zagreb.

Jurčić, Lj. (2010.), Financijska kriza i fiskalna politika, *Ekonomski preglad*, (61), 5-6, p. 317-334.

Jurković, P. (2002.), Fiskalna politika u Hrvatskoj u razdoblju 1994.-2000.g., *Ekonomija/Economics*, (9), 2, p. 269-291.

Klašnja, M. (2008.), Electoral rules, forms of government and political budget cycles in transition countries, *Panoeconomicus*, (55), 2, p. 185-218.

Kolev, G., Matthes, J. (2013.), *Smart Fiscal Consolidation: A Strategy for Achieving Sustainable Public Finances and Growth*. Brussels: Centre for European Studies.

- Kraft, E., Stučka, T. (2002.), Fiskalna konsolidacija, inozemna konkurentnost i monetarna politika: odgovor WIIW-u, *Pregledi - Hrvatska narodna banka*, P-13 rujan 2002.
- Krtalić, S. (2005.), Proračunski deficit: Koliki je težak teret gospodarstvu?, *Ekonomija/Economics*, (12), 1, p. 221-248.
- Krznar, I. (2002.), Analiza održivosti fiskalne politike u RH, *Financijska teorija i praksa*, (26), 4, p. 813-835.
- Leeper, E.M. (2010.), Monetary Science, Fiscal Alchemy, *NBER Working paper*, No. 16510.
- Mačkić, V. (2014.), Analysis of Political Budget Cycles at Municipal Level in Croatia, *Financial Theory and Practice*, 38(1), p. 1-5.
- Mates, N. (2011.), Fiscal Policy: Lessons from the Global Crisis, *Croatian Economic Survey*, (13), p. 5-56.
- Mihaljek, D. (2003.), Analiza održivosti javnog i vanjskog duga Hrvatske pomoću standardnih financijskih pokazatelja, *Privredna kretanja i ekonomska politika*, (13), 97, p. 29-75.
- Mihaljek, D. (2009.), The global financial crisis and fiscal policy in Central and Eastern Europe: the 2009 Croatian budget odyssey, *Financial Theory and Practice*, (33), 3, p. 239-272.
- Ministarstvo financija (2013.), *Smjernice ekonomske i fiskalne politike za razdoblje 2014.-16*. Zagreb: Ministarstvo financija.
- Ministarstvo financija (2014.), Vremenske serije podataka, <http://www.mfin.hr/hr/vremenske-serije-podataka>
- Ministarstvo financija (razna godišta), *Smjernice ekonomske i fiskalne politike*, <http://www.mfin.hr/hr/smjernice-ekonomske-i-fiskalne-politike>
- Mirdala, R. (2009.), Effects of Fiscal Policy Shocks in the European Transition Economies, *MPRA Working Papers*, No. 19481, <http://mpra.ub.uni-muenchen.de/19481/>
- Myles, G.D. (2000.), Taxation and Economic Growth, *Fiscal Studies*, (21), 1, p.141-168.
- Pivac, S., Jurun, E. (2002.), Effect of Fiscal Policy under Rational Expectations, *Operational Research Proceedings KOI*, Croatia, Trogir, p. 175-183.
- Radošević, D. (2012.), Fiscal Policy in Crisis: Rethinking Austerity, *Zagreb International Review of Economics & Business*, (15), 2, p. 45-60.
- Raspudić Golomejić, A. (2007.), Koordinacija upravljanja javnim dugom i vođenja monetarne politike u Hrvatskoj, *Financijska teorija i praksa*, (31), 2, p. 151-179.
- Raspudić Golomejić, A. (2012.), Coordination between the monetary and public debt management policies in Croatia, *Financial Theory & practice*, (36), 2, p.109 – 138.

- Ravnik, R., Žilić, I. (2011.), The use of SVAR analysis in determining the effects of fiscal shocks in Croatia, *Financial Theory and Practice*, (35), 1, p. 25-58.
- Rukelj, D. (2009.), Modelling Fiscal and Monetary Policy Interactions in Croatia Using Structural Vector Error Correction Model, *Privredna kretanja i ekonomska politika*, (19), 121, p. 27-58.
- Sever, I. (2002a.), Fiskalna politika kao bitan činitelj koncepcije i strategije gospodarskog i socijalnog razvoja, *Ekonomija/Economics*, (9), 3, p. 583-596.
- Sever, I. (2002b.), Socijalna neravnoteža zahtijeva ekonomsko-fiskalnu politiku državnog intervencionizma, *Ekonomija/Economics*, (9), 4, p. 769-791.
- Sever, I. (2005.), Kreirani vanjski javni dug Hrvatske i njegova upotreba, u: B. Jelčić & J. Šimović (ur.) *Hrvatska pred vratima EU: fiskalni aspekt*, Zagreb: HAZU, p. 125-149.
- Sever, I. et al. (2009.), The starting points of new economic policy in the conditions of recession, *Zbornik radova Ekonomskog fakulteta u Rijeci*, (27), 2, p. 217-262.
- Sever, I., Drezgić, S., Blažić, H. (2011.), Budget spending and economic growth in Croatia: dynamics and relationship over the past two decades, *Zbornik radova Ekonomskog fakulteta u Rijeci*, (29), 2, p. 291-331.
- Sobel, R.S., Holcombe, R.G. (1996.), Measuring the growth and variability of tax bases over the business cycle, *National Tax Journal*, (49), 4, p. 535-552.
- Sopek, P. (2009.), Utjecaj financijske krize na primarni proračunski deficit i javni dug Hrvatske, *Financijska teorija i praksa*, (33), 3, p. 277-302.
- Sopek, P. (2010.), Proračunski deficit i javni dug, *Newsletter IJF*, br. 49 (lipanj 2010.), <http://www.ijf.hr/newsletter/49.pdf>
- Sopek, P. (2011.), Testing the sustainability of the Croatian public debt with dynamic models, *Financial Theory & practice*, (35), 4, p. 413 – 442.
- Šimović, H., Deskar-Škrbić, M. (2013.), Dynamic effects of fiscal policy and fiscal multipliers in Croatia, *Zbornik radova Ekonomskog fakulteta u Rijeci*, (31), 1, p. 55-78.
- Šimović, H. (2009.), Međuovisnost oporezivanja i gospodarskog rasta u Hrvatskoj, *Ekonomska istraživanja*, (22), 1, p. 33-46.
- Šimović, H. (2012.), Razvoj poreza na dohodak u Hrvatskoj: reforme i promašaji, *Revija za socijalnu politiku*, (19), 1, p. 1-24.
- Škare, M., Škrčić, D. (2002.), Može li aktualna fiskalna politika potaknuti gospodarski rast u Hrvatskoj?, *Ekonoski pregled*, (53), 1-2, p. 122-143.
- Škreb, M. (1998.), Iskustvo tranzicije u Hrvatskoj: Pogled iznutra, *HNB Pregledi*, rujanj 1998, <http://www.hnb.hr/publikac/pregledi/tranzhr.pdf>

Švaljek, S. (2003.), Utjecaj fiskalnog stanja na vođenje monetarne politike, u: *Analitičke osnove za vođenje monetarne politike tijekom procesa pridruživanja Europskoj uniji*, Zagreb: Ekonomski institut, p. 148-185.

Švaljek, S. (2009.), Projekcija prihoda državnog proračuna u Hrvatskoj: zašto nastaju greške?, *Privredna kretanja i ekonomska politika*, (18), 119, p. 53-68.

Švaljek, S., Vizek, M., Mervar, A. (2009.), Ciklički prilagođeni proračunski saldo: primjer Hrvatske, *Privredna kretanja i ekonomska politika*, (18), 120, p. 49-81.

Tkalec, M., Vizek, M. (2009.), The Impact of Macroeconomic Policies on Manufacturing Production in Croatia, *Privredna kretanja i ekonomska politika*, (19), 121, p. 61-92.

Vučković, V., Basarac Sertić, M. (2013.), The effect of political institutions on the size of government spending in European Union member states and Croatia, *Financial Theory & Practice*, (37), 2, p. 161-179.

Vučković, V. (2011.), Političko-poslovni ciklusi: postoje li u Hrvatskoj?, *Privredna kretanja i ekonomska politika*, (20), 125, p. 61-88.

Zakon o fiskalnoj odgovornosti, *Narodne novine*, br. 139/10.

Zdunić, S. (2010.), Hrvatski monetarni trokut, devizne klauzule i razvoj. Rad prezentiran na znanstvenom skupu *Izazovi monetarne i fiskalne politike u uvjetima nestabilnosti financijskih tržišta*, Ekonomski fakultet Zagreb, 25.11.2010., <http://web.efzg.hr/dok/FIN//Zdunić-Hrvatski%20monetarni%20trokut,%20devizne%20klauzule%20i%20razvoj.pdf>

**Milan Deskar-Škrbić**

Erste & Steiermärkische Bank  
e-mail: mdskrbic@erstebank.com

**doc.dr.sc. Višeslav Raos**

Fakultet političkih znanosti Sveučilišta u Zagrebu  
e-mail: viseslav.raos@fpzg.hr

## **KARAKTER FISKALNE POLITIKE I POLITIČKA EKONOMIJA FISKALNE KONSOLIDACIJE U HRVATSKOJ U POSLIJEKRIZNOM RAZDOBLJU<sup>61</sup>**

### **THE TYPE OF FISCAL POLICY AND POLITICAL ECONOMY OF FISCAL CONSOLIDATION IN CROATIA IN THE POST-CRISIS PERIOD**

#### **SAŽETAK**

U ovome radu se na temelju podataka o ciklički prilagođenom primarnom proračunskom saldu (CAPB-u) analizira karakter fiskalne politike te snaga fiskalne konsolidacije u poslijekriznom razdoblju. Osim toga, analiziraju se temeljna obilježja fiskalne konsolidacije s posebnim naglaskom na rashode proračuna budući da u političko-ekonomskom smislu oko ovih kategorija postoji najveći sukob između nositelja fiskalne politike i različitih interesnih skupina. Rezultati analize pokazuju da su sve vlade, osim vlade Jadranke Kosor, vodile restriktivnu procikličku fiskalnu politiku te da je najveća fiskalna konsolidacija provedena u vrijeme socijaldemokratske vlade Zorana Milanovića kada je CAPB poboljšana za 5,7 postotnih bodova BDP-a, što otvara i pitanje je li ova činjenica jedan od temeljnih razloga za gubitak parlamentarnih izbora 2015. godine. Također, analiza je pokazala da je veliki dio fiskalne konsolidacije proveden kroz smanjenje kapitalnih investicija, iako se radi o produktivnoj kategoriji rashoda koja je mogla imati važnu ulogu u ispunjavanju stabilizacijske funkcije fiskalne politike. Analiza ekonomske politike vlade pokazala je kako nestabilne vlade, koje ovise o nizu manjih parlamentarnih aktera koji joj održavaju većinu, teško uspijevaju biti uspješne u fiskalnoj konsolidaciji. One vlade koje su najviše pozornosti pridavale fiskalnoj politici bile su i najuspješnije u fiskalnoj konsolidaciji. Analiza akata Vlade i Sabora pokazala je kako su sve vlade bile sklone korištenju učestalih izmjena poreznog zakonodavstva kao instrumenta fiskalne politike.

**Ključne riječi:** fiskalna konsolidacija, politička ekonomija, kapacitet vlade, stabilnosti vlade, *policy*- kapacitet, Hrvatska

---

61 Ovaj rad sufinancirala je Hrvatska zaklada za znanost projektom "Održivost javnih financija na putu u monetarnu uniju" IP-2016-06-460 i projektom "Tax Policy and Fiscal Consolidation in Croatia" IP-2013-11-8174.

## ABSTRACT

Based on cyclically adjusted primary budget balance (CAPB), this paper analyses the type of fiscal policy and the power of fiscal consolidation in the post-crisis period. Basic characteristics of fiscal consolidation are also analysed with special emphasis on budget expenditures since the greatest conflict in the political and economic sense of these categories is between fiscal policy makers and different interest groups. The results of the analysis indicate that all governments, except for Jadranka Kosor's, applied a restrictive procyclical fiscal policy and that the largest fiscal consolidation was carried out during the social democratic government of Zoran Milanović when CAPB was improved by 5,7 percentage points of GDP, which brings up the issue whether this fact is one of the main reasons for the loss of parliamentary elections in 2015. Also, the analysis indicated that a large part of fiscal consolidation was achieved by a decrease in capital investments, although it is a productive expenditure category which could have played an important role in the fulfilment of the fiscal policy stabilisation function. The analysis of the government's economic policy has shown that unstable governments that depend on a number of smaller parliamentary groups to keep the majority can hardly succeed in the process of fiscal consolidation. The governments that devoted the most attention to fiscal policy were also the most successful in fiscal consolidation. Analysis of the acts passed by the Government and the Parliament indicated that all governments were inclined to use frequent tax legislation changes as a fiscal policy instrument.

**Key words:** fiscal consolidation, political economy, government capacity, government stability, policy capacity, Croatia

## 1. Uvod

Prelijevanje globalne financijske krize na domaće gospodarstvo u 2008. godini<sup>62</sup> rezultiralo je višegodišnjom recesijom te pogoršanjem fiskalne pozicije i narušavanjem održivosti javnih financija u Hrvatskoj. Zbog značajnih fiskalnih neravnoteža Hrvatska je bila prva članica Europske unije nad kojom je pokrenut *Postupak u slučaju prekomjernog proračunskog manjka* (engl. *Excessive Deficit Procedure*, EDP) gotovo odmah po ulasku u Uniju 2013. godine (usp. Bartlett, 2014: 17). Sredinom 2017. godine Vijeće je donijelo odluku o obustavljanju EDP-a za Hrvatsku zbog značajnog smanjenja deficita opće države ispod referentne razine od 3 % BDP-a i stabilizacije putanje javnog duga. Ovo smanjenje deficita je posljedica fiskalne konsolidacije.

Iako se radi o značajnom napretku u smjeru održivosti javnih financija, koji pozitivno djeluje i na percepciju rizika, ostaju otvorena pitanja na koji je način fiskalna konsolidacija provedena te je li ona potencijalno djelovala destabilizirajuće na hrvatsko gospodarstvo. Ciljevi ovoga rada su: (i) utvrditi karakter fiskalne politike nakon izbijanja globalne financijske krize i ulaska hrvatskog gospodarstva u recesiju, (ii) detaljno ana-

---

62 Strogo metodološki gledajući, recesija je u Hrvatskoj započela u trećem kvartalu 2008. godine (Krznar, 2011).

lizirati obilježja fiskalne konsolidacije u Hrvatskoj u poslijekriznom razdoblju, (iii) utvrditi nositelje najsnažnijeg dijela fiskalne konsolidacije, (iv) identificirati proračunske kategorije i interesne skupine koje su podnijele najveći teret fiskalne konsolidacije.

Rad je podijeljen u šest dijelova. U prvome dijelu rada se definiraju temeljni pokazatelji proračunskog salda. U drugome dijelu rada se na temelju tih pokazatelja određuje karakter fiskalne politike. U trećemu dijelu rada se identificiraju razdoblja fiskalne konsolidacije te se analiziraju njihova temeljna obilježja, dok se u četvrtome dijelu rada promatraju odrednice kretanja javnog duga. U petome dijelu se ova fiskalna kretanja stavljaju u širi okvir političke ekonomije, a u šestome dijelu se iznosi zaključak.

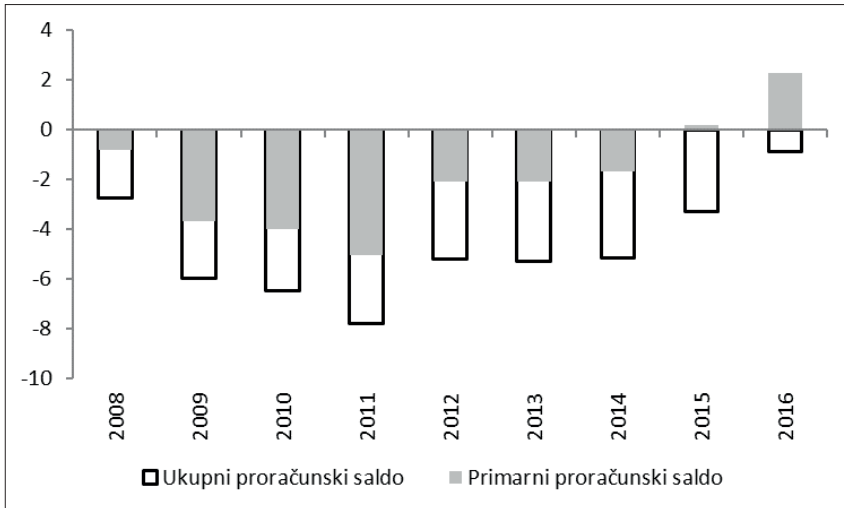
## 2. Mjere proračunskog salda

Financijsko poslovanje države se u užem smislu promatra kroz koncept proračunskog salda. Pritom postoje različite mjere proračunskog salda koje nude informacije o različitim aspektima financijskog poslovanja države.

Najčešće korištena definicija proračunskog salda je *ukupni proračunski saldo* ili *neto pozajmljivanje / zaduživanje* koji se prema metodologiji ESA 2010 (Eurostat, 2016) definira kao razlika ukupnih prihoda i rashoda proračuna. Ova mjera uključuje tekuće prihode i rashode te prihode i rashode od transakcija na dugoročnoj nefinancijskoj imovini.

*Operativni (tekući) saldo* predstavlja razliku između redovitih prihoda i rashoda poslovanja bez promjena u dugoročnoj nefinancijskoj imovini. Tako definiran pokazatelj, pojednostavljeno, pruža informaciju o tekućoj likvidnosti države. (Bajo i dr., 2011).

*Primarni saldo* se definira kao razlika između ukupnih prihoda i ukupnih rashoda umanjениh za izdatke za kamate. Ovo je važna mjera u visokozaduženim zemljama (s visokim udjelom izdataka za kamate u ukupnim rashodima) koja jasnije pokazuje trenutačne aktivnosti nositelja fiskalne vlasti. Slika 1 pokazuje kako je ovaj pokazatelj u tom kontekstu vrlo važan za Hrvatsku budući da troškovi kamata predstavljaju značajan dio rashodne strane proračuna (iznad 3 % BDP-a) te postoji značajna razlika između ukupnog i primarnog proračunskog salda.



Slika 1. Ukupni i primarni proračunski saldo (% BDP-a)

Izvor: obrada prema AMECO-u

Navedena tri pokazatelja daju važne informacije i najčešće se koriste u međunarodnim usporedbama. Međutim, glavna manjkavost ovih mjera je ta što ne uzimaju u obzir djelovanje ekonomskog okruženja na prihode i rashode proračuna. Konkretnije, one ne uzimaju u obzir djelovanje automatskih stabilizatora (npr. progresivni porez na dohodak ili naknada za nezaposlene).

Iz tog razloga su definirani pokazatelji koji daju bolje informacije o karakteru tekuće fiskalne politike, *ciklički prilagođeni saldo*, *ciklički saldo* i *strukturni saldo*.

*Ciklički saldo* je fiskalni pokazatelj koji mjeri visinu proračunskog salda kao posljedicu djelovanja isključivo cikličkih oscilacija na elemente proračuna.

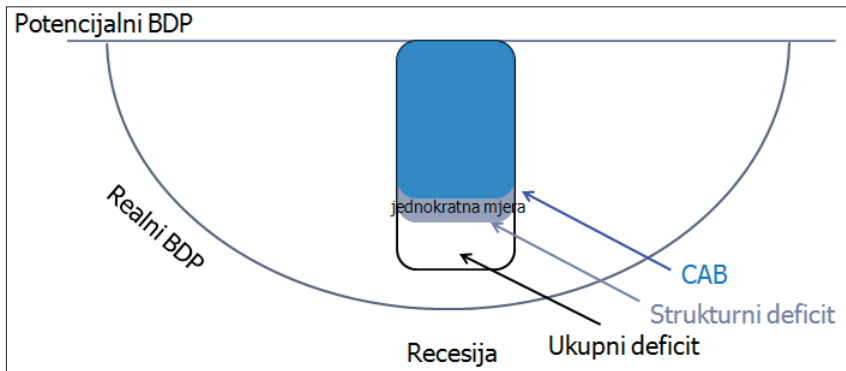
*Ciklički prilagođeni saldo* (CAB) se definira kao fiskalni pokazatelj koji prikazuje koliko bi iznosio proračunski saldo kada bi stvarni *output* bio jednak potencijalnom, odnosno kada bi upotreba faktora proizvodnje bila na «normalnoj» razini (Švaljek i dr., 2003). *Strukturni saldo* je ciklički prilagođeni saldo koji je dodatno prilagođen za učinke jednokratnih i privremenih mjera fiskalne politike (Moure i dr., 2014). Prema Joumard i dr. (2008), u jednokratne i privremene mjere se ubrajaju prodaja nefinancijske imovine, adsorpcija sredstava mirovinskih fondova<sup>63</sup> u proračun, privremeni porezi (npr. krizni porez u Hrvatskoj) i sl.

Radi boljeg razumijevanja razlike između ovih fiskalnih pokazatelja, na slici 2 je prikazana shema koja prezentira hipotetsku situaciju recesije u nekoj zemlji (realni BDP ispod potencijalne razine) koja je dovela

<sup>63</sup> Mađarska vlada je 2010. g. u proračun transferirala sredstva iz mirovinskih fondova u vrijednosti 9 % BDP-a.

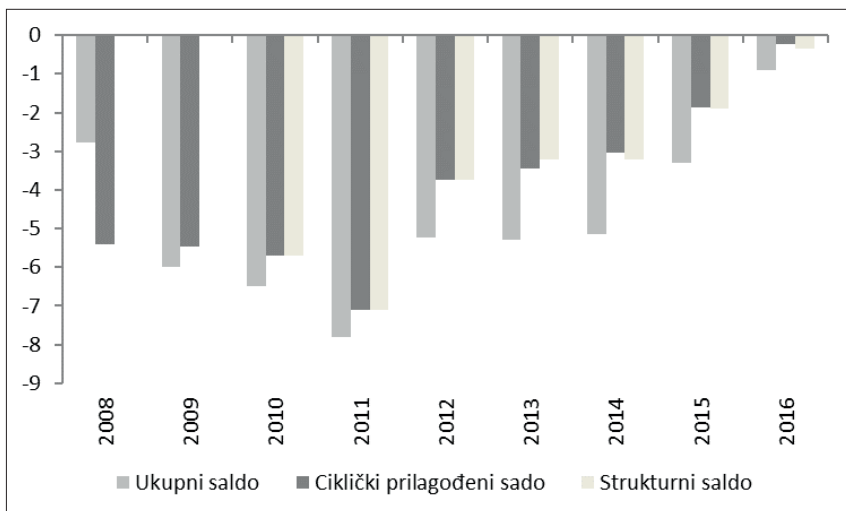


do rasta ukupnog deficita. Ciklički prilagođeni deficit (plavo) je manji od ukupnog deficita jer ne uključuje učinke pada prihoda i rasta rashoda proračuna koji su posljedica usporavanja gospodarstva. Pretpostavka je da je zemlja provela i pojedine jednokratne mjere za smanjenje deficita pa postoji razlika između ciklički prilagođenog i strukturnog salda (svijetloljubičasto).



**Slika 2.** Shematski prikaz različitih definicija proračunskog manjka  
Izvor: obrada autora

Na slici 3 su prikazani ukupni, ciklički prilagođeni i strukturni proračunski saldo. Kretanje ovih pokazatelja daje važnu informaciju o uzrocima značajnog porasta deficita na početku recesije. U razdoblju od 2009. do 2011. godine rast ukupnog proračunskog salda se velikim dijelom može pripisati posljedicama diskrecijskog dijela fiskalne politike budući da je razlika između ukupnog salda i ciklički prilagođenog / strukturnog salda vrlo mala.



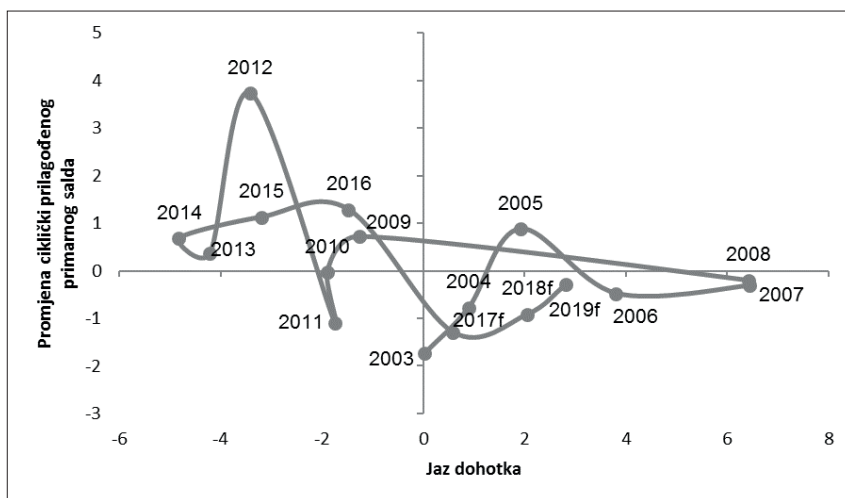
**Slika 3.** Ukupni, ciklički prilagođeni i ukupni proračunski saldo (% BDP-a)  
Izvor: obrada autora prema AMECO-u

Osim što daju uvid u izvore promjene deficita (diskrecijske mjere nasuprot djelovanju automatskih stabilizatora), ovi pokazatelji daju važnu informaciju o karakteru fiskalne politike. Ako se ciklički prilagođeni saldo dodatno prilagodi oduzimanjem troškova kamata, dobiva se „čisti“ pokazatelj fiskalne politike koji je izravno pod utjecajem tekućih diskrecijskih mjera. On se naziva ciklički prilagođeni proračunski saldo (CAPB).

Kako bi se utvrdio karakter fiskalne politike, potrebno je ovaj pokazatelj staviti u odnos sa stadijem poslovnog ciklusa pa se mogu definirati četiri temeljne vrste fiskalne politike.

- ekspanzivna prociklička – nositelji politike povećavaju CAPB u uvjetima gospodarske ekspanzije
- ekspanzivna protuciklička – nositelji politike povećavaju CAPB u uvjetima recesije
- restriktivna prociklička – nositelji politike smanjuju ciklički CAPB u uvjetima gospodarske ekspanzije
- restriktivna protuciklička – nositelji politike smanjuju CAPB u uvjetima recesije

Na slici 4 je prikazan karakter fiskalne politike u Hrvatskoj od 2003. godine s očekivanjima do kraja 2019. godine na temelju ciklički prilagođenog primarnog salda.



**Slika 4.** Karakter fiskalne politike  
Izvor: obrada autora prema AMECO-u

Ovaj grafikon zorno prikazuje neadekvatnost karaktera fiskalne politike u Hrvatskoj s aspekta stabilizacijske uloge javnih financija, tj. upravljanja poslovnim ciklusom.

U fazi od 2003. do 2008. godine vlade su uglavnom vodile ekspanzivnu procikličku politiku umjesto da su restriktivnom protucikličkom politikom

pokušavale stvoriti fiskalni prostor za reakciju na buduće recesije. Nedostatak fiskalnih zaliha rezultirao je restriktivnom procikličkom politikom tijekom razdoblja recesije, kada je stvarni dohodak bio ispod potencijalne razine, umjesto da se u ovom razdoblju djelovalo ekspanzivnom protucikličkom politikom koja bi mogla doprinijeti bržoj stabilizaciji gospodarske aktivnosti. Prema projekcijama Europske komisije u razdoblju od 2017. do 2019. godine ponovno se očekuje neadekvatna reakcija fiskalnih vlasti budući da se očekuje procikličko djelovanje.

Adekvatnost fiskalne politike je u Hrvatskoj od posebne važnosti budući da je, zbog različitih strukturnih obilježja hrvatskog gospodarstva i financijskog sustava, prostor za djelovanje monetarne politike u Hrvatskoj (v. Šimović, Čorić i Deskar-Škrbić, 2014) prilično ograničen, pa fiskalna politika predstavlja glavni instrument ekonomske politike. Uloga i važnost fiskalne politike u Hrvatskoj će dodatno porasti nakon uvođenja eura.

Osim što ovi pokazatelji daju potpuniju informaciju o karakteru fiskalne politike, budući da su pod utjecajem isključivo diskrecijskih mjera nositelja fiskalne politike, oni su izrazito važni za vođenje fiskalne politike zemalja članica unutar fiskalnog okvira EU-a.<sup>64</sup>

Kako ističu Švaljek i dr. (2003), Sporazumom o stabilnosti i rastu za članice je EU-a propisano da njihova proračunska pozicija mora biti u srednjem roku uravnotežena ili u suficitu kako bi nositelji fiskalne politike mogli djelovati anticiklički u fazi recesije. Strukturni saldo upravo pokazuje koliko „manevarskog“ prostora imaju nositelji politike da anticikličkim diskrecijskim mjerama ne prodube deficit iznad EDP razine od 3 % BDP-a.

Razina, u ovom smislu dozvoljenog, strukturnog deficita se određuje u okviru tzv. „srednjoročnog proračunskog cilja“ (engl. *medium term objective*, MTO),<sup>65</sup> koji za zemlje članice određuje Odbor za ekonomska i financijska pitanja (ECOFIN), a vlade zemalja članica implementiraju u Program konvergencije. Za proračunsko razdoblje 2018.-2020. g. razina strukturnog deficita je određena na 1.75 % BDP-a (Vlada Republike Hrvatske, 2017b).

Osim gore navedenih primjena ciklički prilagođenog i strukturnog salda, oni su važni i za definiciju fiskalne prilagodbe u okviru *Procedure za suzbijanje prekomjernog proračunskog manjka* (EDP) (tzv. „djelotvorne mjere“; engl. *effective action*) te opću definiciju fiskalne konsolidacije.

### 3. Obilježja fiskalne konsolidacije u poslijekriznom razdoblju

Prema Burnać (2017) i Mirdala (2013), razdoblje fiskalne konsolidacije predstavlja onu godinu u kojoj se ciklički prilagođeni primarni proračunski saldo poboljšao za najmanje 1.5pb BDP-a (tzv. „hladni tuš“) ili razdoblje

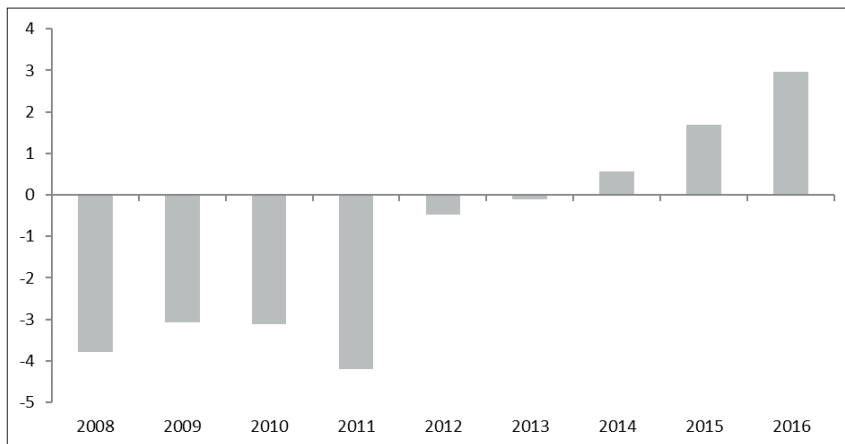
<sup>64</sup> Za detaljni pregled fiskalnog okvira Europske unije pogledati Šimović (2005).

<sup>65</sup> U Hrvatskoj je ovaj cilj definiran i u Zakonu o fiskalnoj odgovornosti (NN 139/10, 19/14).

od tri uzastopne godine u kojima se ciklički prilagođeni primarni proračunski saldo neće pogoršati za više od 0.5pb BDP-a (postupna konsolidacija).

U ovome radu će se koristiti manje stroga definicija te će se svako poboljšanje ciklički prilagođenog primarnog proračunskog salda smatrati oblikom fiskalne konsolidacije.

Na slici 5 je prikazano kretanje ciklički primarnog proračunskog salda od 2008. do 2016. godine, a u tablici 1 promjena CAPB-a u postotnim bodovima BDP-a.



**Slika 5.** Ciklički prilagođeni primarni proračunski saldo

Izvor: obrada autora prema AMECO-u

Godina	Promjena CAPB-a	Predsjednik vlade	Kumulativna promjena CAPB-a
2009.	-0.7		
2010.	0.0		
2011.	1.1		
2012.	-3.7	<b>Milanović</b>	<b>-5.9</b>
2013.	-0.4	Orešković/Plenković	-1.3
2014.	-0.7	Sanader/Kosor	-0.7
2015.	-1.1		
2016.	-1.3	Kosor	1.1

\*osjenčana područja predstavljaju razdoblja fiskalne konsolidacije; negativan predznak upućuje na poboljšanje fiskalne pozicije

**Tablica 1.** Promjena CAPB-a u postotnim bodovima BDP-a

Izvor: obrada autora prema AMECO-u

Iz gornje slike i tablice se može zaključiti kako je do prvih konsolidacijskih mjera došlo 2009. godine za vrijeme mandata vlade Ive Sanadera / Jadranke Kosor. Ciklički prilagođeni primarni deficit se u toj godini smanjio za 0,9 postotnih bodova BDP-a. U 2010. i 2011. godini, u mandatu vlade Jadranke Kosor, konsolidacija je zaustavljena. Nastavak fiskalne konsolidacije i najsnažnija konsolidacija zabilježena je 2012. godine, na početku mandata vlade Zorana Milanovića, kada je CAPB smanjen za visokih 3,7 postotnih bodova. Kukuriku koalicija je nastavila s konsolidacijom do kraja mandata kada je zabilježen ciklički prilagođeni primarni suficit.

Vlade Tihomira Oreškovića i Andreja Plenkovića nastavile su s konsolidacijom budući da je ukupni deficit i dalje bio iznad referentne vrijednosti od 3 % te da je Hrvatska i dalje bila u EDP-u, bez obzira na činjenicu da je CAPB već bio u suficitu.

Kako bi se dobio bolji uvid u prirodu fiskalne konsolidacije, u tablici 2 je prikazano kretanje ciklički prilagođenih prihoda i rashoda bez kamata, a u tablici 3 je prikazano kretanje temeljnih kategorija rashoda proračuna budući da je u kontekstu političke ekonomije „rezove“ uobičajeno promatrati kroz prizmu rashoda<sup>66</sup>. U tom kontekstu su najvažniji rashodi za plaće te transferi budući da upravo oko ovih kategorija dolazi do najvećeg sukoba između nositelja fiskalne politike i različitih interesnih skupina (v. Perotti, 1998). U tablici 4 su kao zasebna kategorija potrošnje izdvojene naknade građanima i kućanstvima<sup>67</sup> budući da je u političko-ekonomskom pristupu posebno zanimljiv odnos nositelja politike prema skupinama koje ovise o socijalnoj zaštiti države.

	Rashodi (bez kamata)	Prihodi
<b>2009.</b>	<b>-1.18</b>	<b>-0.47</b>
2010.	-0.66	-0.69
2011.	0.69	-0.40
<b>2012.</b>	<b>-2.12</b>	<b>1.61</b>
2013.	-0.06	0.30
2014.	-0.23	0.45
2015.	0.27	1.39
2016.	0.79	2.07

**Tablica 2.** Ciklički prilagođeni prihodi i rashodi bez kamata (promjena u postotnim bodovima BDP-a)  
Izvor: obrada autora prema AMECO-u

<sup>66</sup> Za detaljnu analizu poreznih promjena vidjeti Šimović (2017)

<sup>67</sup> S obzirom na specifičnost teme zdravstva u ovome radu se neće analizirati uzroci promjena na toj stavci naknada građanima i kućanstvima. Također, u kontekstu političke ekonomije, zdravstvo nije kategorija u kojoj se mogu jasno identificirati interesne skupine.

Godina	Rashodi poslovanja	od čega:							Rashodi za nabavu nefinancijske imovine
		Rashodi za zaposlene	Plaće	Materijalni rashodi	Subvencije	Pomoći	Naknade građanima i kućanstvima	Ostali rashodi	
2009.	2,632	916	850	-511	-149	-285	3,864	-1,643	-1,024
2010.	2,399	-215	-21	168	-128	172	886	378	-717
2011.	-384	474	289	531	-27	-681	-225	-1,127	-65
2012.	-1,210	-374	129	-477	-793	-167	-287	-336	-378
2013.	4,776	-727	-184	-230	-224	1,737	2,871	288	456
2014.	2,184	-215	-389	-416	-363	2,155	397	152	293
2015.*	-10,234	3,583	2,814	3,445	1,252	2,956	-22,273	194	1,295
2016.	1,720	793	355	95	-339	1,790	-366	63	-90

\*učinci izdavanja HZZO-a iz proračuna

Tablica 3. Najznačajnije kategorije rashoda (bez kamata) – promjena u milijunima kuna

Izvor: obrada autora prema Ministarstvu financija

Godina	Naknade građanima i kućanstvima	od čega:							Dječji doplati	Skrb za branitelje
		Mirovine	Zdravstvo	od čega: HZZO	Socijalna skrb	Porodijne naknade	Naknade za nezaposlene	Ostali rashodi		
2009.	3,864	1,615	1,383	1,367	184	308	432	-113	8	
2010.	886	422	17	17	30	94	259	-39	-116	
2011.	-225	76	-399	-401	67	-85	-11	5	-8	
2012.	-287	250	-351	-355	33	-10	-11	-18	-97	
2013.	2,871	928	1,854	1,847	85	-34	149	-19	-28	
2014.	397	275	28	21	73	-108	-137	-51	-156	
2015.*	-22,273	352	-21,950	-21,953	15	-780	36	-51	-58	
2016.	-366	122	-6	0	125	-40	-88	-109	-1	

\*učinci izdavanja HZZO-a iz proračuna

Tablica 4. Naknade građanima i kućanstvima – promjena u milijunima kuna

Izvor: obrada autora prema Ministarstvu financija

Iz tablice 2 se može zaključiti kako je konsolidacija 2009. godine prvenstveno posljedica smanjenja rashoda, a tablica 3 ukazuje na to da su najveći rezovi u toj godini napravljeni u kapitalnim investicijama, ostalim rashodima (veliki dio čine sredstva za modernizaciju HŽ-a), materijalnim rashodima i pomoćima. Iako je vlada Ive Sanadera / Jadranke Kosor donijela odluku o smanjenju plaća u javnom i državnom sektoru za 6 %, učinci ove odluke su se većinom vidjeli 2010. godine. Ova je vlada također povećala PDV s 22 % na 23 % u toj godini, ali to nije bilo dovoljno da bi se spriječio pad prihoda proračuna. Na temelju tablice 4 se može zaključiti kako je dječji doplatok jedina kategorija transfera koja je u toj godini smanjena.

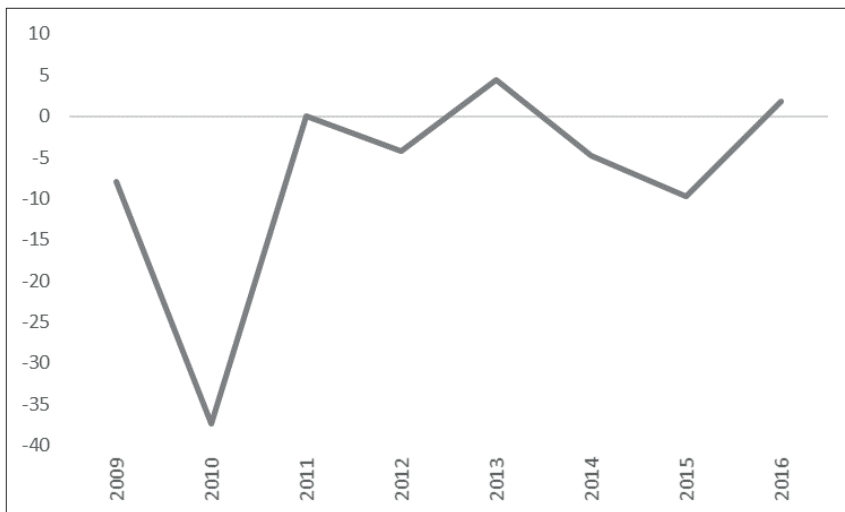
U mandatu Jadranke Kosor 2010. godine fiskalna konsolidacija je zaustavljena jer su ciklički prilagođeni prihodi proračuna padali brže od rashoda. Međutim, u toj godini je zabilježen pad rashoda za zaposlene (utjecaj smanjenja plaća iz 2009. g.) te je zanimljivo zamijetiti prvo smanjenje sredstava za skrb za branitelje. Također, u ovoj je godini došlo do najznačajnijeg pada kapitalnih investicija (slika 6). U 2011. g. je došlo do rasta rashoda, pri čemu su ključnu ulogu imali povećanje troškova plaća i materijalnih rashoda, ali je prvi put zabilježen pad ukupnih naknada građanima i kućanstvima. Iako je veći dio pada bio rezultat odnosa državnog proračuna i HZZO-a, zanimljivo je zamijetiti da je došlo i do smanjenja naknada za nezaposlene bez obzira na porast nezaposlenosti, što se jednim dijelom može protumačiti boljom kontrolom prava po toj osnovi. Pad porodiljnih naknada je teže objasniti diskrecijskim mjerama budući da veliki dio iznosa naknada ovisi o broju roditelja.

Vlada Zorana Milanovića je u 2012. godini provela najveću konsolidaciju (koja se s obzirom na veličinu može klasificirati kao pristup „hladnog tuša“), pri čemu je ona većim dijelom posljedica smanjenja rashoda nego povećanja prihoda proračuna (najvažnija izmjena odnosila se na povećanje opće stope PDV-a s 23 % na 25 %). Iz tablice 3 je vidljivo kako je u toj godini zabilježeno smanjenje svih kategorija rashoda proračuna, pri čemu se smanjenje rashoda za zaposlene velikim dijelom može pripisati manjem trošku doprinosa zbog smanjenja doprinosa za zdravstveno osiguranje s 15 % na 13 %. U 2012. g. je zabilježen i značajniji pad naknada građanima i kućanstvima, pri čemu su smanjenje zabilježile sve kategorije rashoda osim rashoda za socijalnu skrb. U 2013. i 2014. godini je nastavljeno smanjenje ciklički prilagođenih rashoda bez kamata, pri čemu je kao posebno važnu mjeru potrebno istaknuti smanjenje plaća u državnim i javnim službama za 3 % u 2013. godini, koja je rezultirala značajnijim smanjenjem rashoda za zaposlene u 2013. i 2014. godini. Rast rashoda vezanih uz članstvo u EU-u i sanacija zdravstva u 2013. godini ne pripisuje se promjeni karaktera politike. U 2013. g. je zabilježen blagi porast investicija u fiksni kapital (slika 6). U 2014. godini je zabilježeno najveće smanjenje izdataka za braniteljsku skrb zbog stupanja na snagu novog Zakona o mirovinskom osiguranju koji je smanjio određena prava primatelja mirovina po posebnim propisima, dok su određene kategorije naknada građanima i kućanstvima bile obuhvaćene uvođenjem

zajamčene minimalne naknade (od siječnja 2014. g.) i strožih pravila u sustavima socijalne skrbi i dječjeg doplatka. Kraj mandata Zorana Milanovića u 2015. godini obilježen je rastom ciklički prilagođenog primarnog suficita na 1.7 % BDP-a te značajnom promjenom u sustavu financiranja zdravstva nakon izdvajanja HZZO-a iz državne riznice, što otežava analizu rashoda u ovoj godini (npr. značajan rast rashoda za zaposlene je velikim dijelom posljedica uključivanja rashoda za zaposlene ustanova u zdravstvu kojima je osnivač Republika Hrvatska u državni proračun). Javne investicije su u toj godini smanjene za 10 % na godišnjoj razini, što je imalo značajan doprinos približavanju ukupnog salda referentnoj vrijednosti od 3 % BDP-a.

U 2016. godini, u mandatima Tihomira Oreškovića i Andreja Plenkovića, konsolidacija je nastavljena gotovo isključivo na strani prihoda budući da su ciklički prilagođeni rashodi bez kamata narasli za relativno visokih 0,8 postotnih bodova BDP-a, što je jednim dijelom i posljedica rasta javnih investicija. Međutim, u toj je godini važno istaknuti značajno smanjenje izdataka za dječji doplatnik.

U kontekstu adekvatnosti fiskalne politike iz prethodnog poglavlja potrebno je istaknuti kako je veliki dio fiskalne konsolidacije u promatranom razdoblju bio temeljen na smanjenju izdataka za nabavu nefinancijske imovine, tj. rezovima u kapitalnim investicijama, što se bolje vidi na temelju EDP definicije bruto investicija u fiksni kapital na razini opće države (slika 6). Kumulativno su javne investicije u promatranom razdoblju smanjene za gotovo 60 %.



**Slika 6.** Bruto investicije u fiksni kapital na razini opće države – postotna promjena  
/zvor: Eurostat; DZS; autori

Šimović (2017) ističe kako se ovakva odluka nositelja vlasti može smatrati paradoksalnom jer upravo ti rashodi generiraju najveći impuls za poticanje gospodarskog rasta u odnosu na ostale kategorije javnih ra-



shoda (vidi Šimović, Ćorić i Deskar-Škrbić, 2014; Sever, Drezgić i Blažić, 2011). Međutim, potrebno je istaknuti kako su neki autori skeptični prema javnim investicijama kao instrumentu ekonomske stabilizacije u Hrvatskoj (npr. Šonje, 2014).

#### 4. Odrednice kretanja javnog duga

Fiskalna konsolidacija je u uvjetima usporavanja gospodarstva i značajnog rasta potrebe za financiranjem zbog viših deficita u recesiji vrlo važna za stabilizaciju putanje javnog duga. Međutim, kretanje javnog duga nije određeno isključivo ponašanjem nositelja fiskalne vlasti. Ono je određeno kretanjem i međuovisnošću različitih faktora vezanih uz rast, inflaciju, troškove kamata, deficit, jednokratne učinke, promjene tečaja, privatizacijske prihode i sl. Zbog toga je u analizi održivosti javnog duga uobičajeno rekonstruirati promjene duga i utvrditi koji je od navedenih faktora najzaslužniji za njegovu putanju.

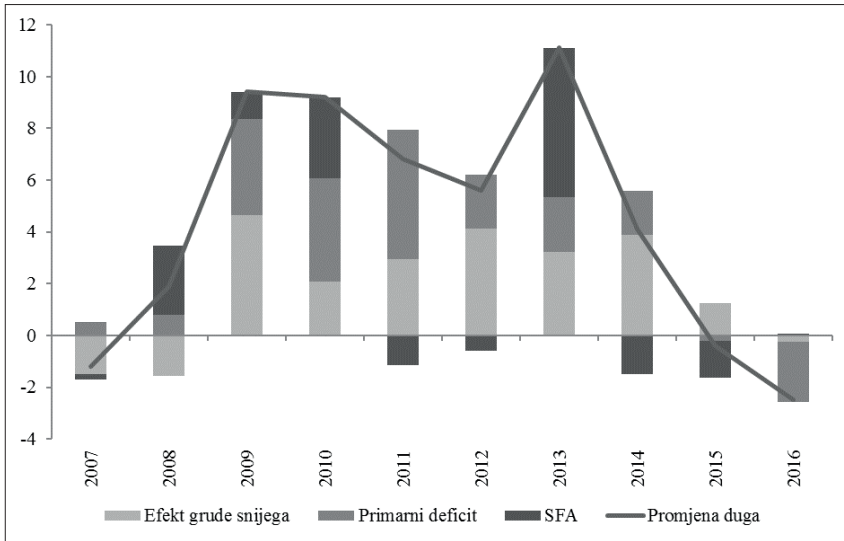
Pojednostavljeni pristup dekompoziciji javnog duga se, prema ECB-u (2016) i Andabaka, Družić i Mustać (2017) temelji na jednadžbi 1:

$$\Delta b_t = \frac{i_t - g_t}{1 + g_t} b_{t-1} - pb_t + SFA_t \quad (1)$$

gdje je  $\Delta b$  promjena duga,  $g$  je stopa rasta nominalnog BDP-a,  $i$  je nominalna kamatna stopa na javni dug (efektivna, prosječna),  $pb$  je primarni deficit (ukupni deficit umanjen za troškove kamata), a  $SFA$  (engl. *stock-flow adjustment*) predstavlja dio duga koji nije posljedica ovih faktora, a može uključivati promjenu tečaja, privatizacijske prihode, učinke predfinanciranja i sl.

Prvi izraz se naziva „efekt grude snijega“. Logika iza tog efekta je da, ako nominalni BDP raste sporije od nominalne kamate, kamate će se kumulirati na postojeću grudu javnog duga koja će se povećavati kao kada grudu snijega zakotrljate niz liticu. Primarni deficit u jednadžbu ulazi s negativnim predznakom jer smanjenje primarnog deficita ili primarni suficit smanjuju javni dug. SFA može imati pozitivan ili negativan utjecaj na kretanje duga, ovisno o tome koji faktori u njemu prevladaju.

Na temelju ove jednadžbe je na slici 7 prikazana dekompozicija promjene javnog duga u Hrvatskoj u desetogodišnjem razdoblju od 2007. do 2016. godine.



Slika 7. Dekompozicija javnog duga (u pb BDP-a)

Izvor: obrada autora

Slika pokazuje kako je u promatranom razdoblju kretanje javnog duga bilo podjednako određeno efektom grude snijega i primarnim deficitom. Učinak SFA nije bio velik, osim u 2013. godini, što se može povezati s učinkom izdanja USD euroobveznice koja je služila za refinanciranje dospjeća duga u 2014. godini (učinak predfinanciranja) (HNB, 2010).

Ako se promatraju kumulativni rast duga i doprinosi ovih komponenti, može se zaključiti da je efekt grude snijega čak bio i nešto važniji za kretanje duga od primarnog deficita, što je prikazano u tablici 5.

	Kumulativ	Udio
Promjena duga	44	
Efekt grude snijega	18.8	43%
Primarni deficit	17.4	40%
SFA	7.8	18%

Tablica 5. Kumulativni rast duga i doprinosi od 2008. do 2016. (u pb BDP-a i %)

Izvor: obrada autora

Najveće povećanje duga (osim 2013.g.zbog predfinanciranja) zabilježeno je 2009. godine uz istovremeni snažan utjecaj grude snijega i rasta primarnog deficita. U 2010. i 2011. godini rast duga je većinom bio potaknut rastom primarnog deficita, a značajniji konsolidacijski naponi nakon 2012. godine smanjili su doprinos primarnog deficita te je kretanje duga većinom bilo određeno efektom grude snijega. Smanjenje u 2015. godini bilo je potaknuto poboljšanjem primarnog deficita (ostvaren je suficit) i dijelom SFA-om, dok je značajno smanjenje u 2016. godini bilo rezultat pozitivnog djelovanja sva tri čimbenika.

## 5. Politička ekonomija fiskalne konsolidacije

Mjere fiskalne konsolidacije u promatranom su razdoblju (2008.-2016. godine) provodile vlade raznolike unutarnje strukture (s obzirom na broj i narav koalicijskih partnera) i raznolikih parlamentarnih većina, što je uvelike utjecalo na javnopolitičke kapacitete izvršne vlasti da dosljedno i učinkovito provede zacrtane ciljeve fiskalne politike koji su isticani kao prioriteta u Vladinim dokumentima. U ovom dijelu rada ćemo skicirati strukturu vlada u promatranom razdoblju, skrenuti pozornost na ključne faktore stabilnosti/nestabilnosti koji su utjecali na provedbene sposobnosti pojedinih kabineta te potom analizirati Vladinu agendu, ali i konkretne javnopolitičke ishode (akte Vlade i Sabora) u tematskim područjima koja spadaju pod fiskalnu politiku kako bismo ispitali kakve su točno mjere poduzimane u okviru (ne)uspješne fiskalne konsolidacije.

Razdoblje	Premijer	Ostale stranke u vladi	Većina	Tip vlade
siječanj 2008.- srpanj 2009.	Ivo Sanader (HDZ)	HSS, SDSS, HSLŠ	77/153	minimalna pobjednička koalicija
srpanj 2009. - srpanj 2009.	Jadranka Kosor (HDZ)	HSS, SDSS, HSLŠ	77/153	minimalna pobjednička koalicija
srpanj 2009.- prosinac 2011.	Jadranka Kosor (HDZ)	HSS, SDSS	75/153	manjinska vlada
prosinac 2011.- siječanj 2016.	Zoran Milanović (SDP)	HNS, IDS	77/151	minimalna pobjednička koalicija
siječanj 2016.- listopad 2016.	Tihomir Orešković (nestranački)	HDZ, MOST	64/151	manjinska vlada
listopad 2016.- travanj 2017.	Andrej Plenković (HDZ)	MOST	70/151	manjinska vlada

Tablica 6. Struktura hrvatskih vlada u poslijekriznom razdoblju, 2008.-2016. g.

Izvor: obrada autora prema Döring, Manow, 2016; Nikić Čakar, Raos, 2015, 2016

U tablici 6 prikazana je struktura hrvatskih vlada koje su sudjelovale u procesu fiskalne konsolidacije, s time da je svaka rekonfiguracija u sudjelovanju političkih stranaka u vladi tretirana kao nastanak novog kabineta, bez obzira na to je li novi sastav vlade potvrđen investiturom (glasovanjem o povjerenju) ili je tek nastavak postojeće vlade, no s drugačijim brojem koalicijskih partnera. Za razliku od konvencionalnog tumačenja, često prisutnog u medijima, ali i među samim političarima u Hrvatskoj, da je manjinska vlada samo ona koja nema zajamčenu natpolovičnu saborsku većinu, već mora sklapati *ad hoc* saveze oko svakog zakonskog prijedloga koji poželi „progurati“ kroz Sabor, ovdje se dosljedno, sukladno uvriježenoj teoriji koalicija (usp. Lijphart, 2014: 82-86), minimalnim kabinatom, tj. minimalnom vladom, smatra svaka vlada čije stranke članice (stranke koje daju ministre u vladi) samostalno ne raspolažu

parlamentarnom većinom. Sukladno tome, većinu promatranog, poslijekriznog razdoblja, izvršna je vlast bila u obliku manjinskih vlada. Kada nisu bili manjinski, kabineti su bili minimalne pobjedničke koalicije, tj. sadržavale su minimalan broj stranaka koji je potreban kako bi se osigurala natpolovična većina.

Manjinski kabinet koji djeluje u parlamentarnom sustavu koji ne iziskuje investituru nove vlade, poput danskog, može proizvoditi kvalitetne javnopolitičke ishode budući da je u poziciji da traži široki konsenzus, no manjinski kabinet u hrvatskom slučaju, koji mora okupiti parlamentarnu većinu da bi uopće mogao funkcionirati, a uz činjenicu relativno visoke fragmentiranosti Sabora,<sup>68</sup> lako može biti podložan ucjenama i izvlačenju partikularnih javnopolitičkih koncesija manjih zastupničkih klubova ili pojedinačnih zastupnika koji su potrebni za ostvarivanje većine. Naime, kako je još ustvrdio Sartori (2002: 259), relevantnost političkih stranaka nije nužno vezana uz njihovu stvarnu veličinu (broj zastupnika), već uz njihov koalicijski i ucjenjivački potencijal kojim provode utjecaj na izvršnu vlast ili na smjer provođenja javnih politika. Sukladno navedenom, bit će stabilniji (pa onda i javnopolitički bolje kapacitirani i jasnije usmjereni) oni kabineti koji neće ovisiti o velikom broju koncesija koje treba dati u procesu iznalaženja parlamentarne većine. Nadalje, kada govorimo o minimalnim pobjedničkim koalicijama, možemo očekivati da će stabilnije i propulzivnije biti one vlade koje se temelje na minimalnim pobjedničkim koalicijama koje su bile formirane prije izbora, tj. koje su proizašle iz predizbornih koalicija, za razliku od onih koje su bile plod poslijeizbornog pregovaranja.

Naime, kapacitet vlade za provedbu jasne fiskalne politike ovisi o (1) stabilnosti parlamentarne potpore, (2) homogenosti vladine koalicije, (3) javnopolitičkoj kompatibilnosti koalicije, (4) provedbenim kapacitetima predsjednika vlade te o (5) kadrovskoj i institucionalnoj stabilnosti. Već smo bili rekli kako se (1) stabilnijima mogu očekivati vlade čije same stranke imaju većinu u parlamentu te koje nisu primorane tražiti širok broj parlamentarnih aktera koji će im osigurati natpolovičnu većinu. Kada govorimo o (2) homogenosti vladine koalicije, idemo s pretpostavkom da su homogenije koalicije s manjim brojem stranaka koje u njoj sudjeluju i u kojima je premijerova stranka značajno veća od ostalih koalicijskih partnera. Što se tiče (3) javnopolitičke kompatibilnosti koalicije, snažniji kapacitet vlade očekujemo u slučaju koalicije koja je ideološki homogenija, pa će biti i suglasnija oko ključnih javnih politika. Ideološka homogenost se očituje u tome da stranke u vladi dolaze iz iste ili srodnih stranačkih obitelji te da su se već obvezale na usuglašavanje javnopolitičkih prioriteta putem predizbornog koalicijskog sporazuma. (4) Provedbene kapacitete predsjednika vlade možemo mjeriti razlikovanjem između stranačkih i nestranačkih premijera, zatim premijera koji

---

68 U promatranom razdoblju efektivni broj (parlamentarnih) stranaka (indeks Laakso-Taagepera), standardna mjera fragmentiranosti nacionalnog predstavničkog tijela, za Hrvatsku je iznosio iznad četiri, s time da je nakon izbora 2015. godine skočio na 4,78 (usp. Döring, Manow, 2016).

dolaze iz najveće stranke i onih koji su članovi manjih koalicijskih partnera te naposljetku razlikovanjem između onih premijera koji su bili na čelu vlastite stranke prije nego što su postali predsjednici vlade i onih koji to nisu. Može se očekivati da će premijer ili premijerka koji dolazi iz najveće stranke u vladi te koji je već bio predsjednik/ca svoje stranke prije nego što je preuzeo/la mjesto premijera/ke, imati više političke i upravljačke moći koju će moći pretočiti u provedbene kapacitete potrebne za javnopolitičku uspješnost izvršne vlasti. (5) Kadrovsku i institucionalnu stabilnost možemo mjeriti na temelju učestalosti promjena ministara u vladi te promjena strukture ministarstava. Naime, može se pretpostaviti da će vlada koja rjeđe mijenja svoju strukturu prema ovim dimenzijama biti uspješnija u provedbi svojega programa i zacrtanih javnopolitičkih prioriteta, u ovom slučaju fiskalne konsolidacije.

Vlada	Stabilnost	Homogenost	Javnopolitička kompatibilnost	Provedbeni kapaciteti premijera	Kadrovska i institucionalna stabilnost
Ivo Sanader III	+	+	+	+	-
Jadranka Kosor I	-	+	+	-	+
Jadranka Kosor II	-	+	+	+	+
Zoran Milanović	-	+	+	+	-
Tihomir Orešković	-	-	-	-	-
Andrej Plenković I	-	-	-	+	+

Tablica 7. Kapaciteti hrvatskih vlada u poslijekriznom razdoblju, 2008.-2016. g.

Izvor: obrada autora prema Döring, Manow, 2016; Nikić Čakar, Raos, 2014, 2015, 2016

Tablica 7 otkriva nam stanje poslijekriznih vlada prema gore prezentiranih pet kriterija za procjenjivanje njihovog kapaciteta. Kasna Sanaderova vlada tijekom 2008. i 2009. godine uživala je stabilnu parlamentarnu potporu, bila je interno homogena, kao numerički, tako i ideološki, te je premijer kao šef najveće stranke svakako posjedovao provedbene kapacitete. Međutim, o kadrovskoj i institucionalnoj nestabilnosti ove vlade svjedoče brojne ostavke i smjene ministara (usp. Kasapović, 2011: 4-5). Premijerka Kosor se, za razliku od svoga prethodnika, morala nositi s neizvjesnom potporom u Saboru, a i bila je opterećena time što predsjednica stranke nije postalarodovnim putem, već aklamacijom na poticaj prethodnika koji joj je ujedno prepustio premijersko mjesto. Vlada Zorana Milanovića posjedovala je unutarnju homogenost, kako odnosa strana-ka, tako i njihovih javnopolitičkih prioriteta. Milanović je kao šef najveće stranke u vladi imao nepobitne provedbene kapacitete, no kadrovska stabilnost je bila ozbiljno narušena odlaskom brojnih ministara, uključu-

jući dvojicu ključnih potpredsjednika vlade. Usto, zbog neizborne parlamentarizacije, Milanovićeva vlada dočekala je kraj mandata kao manjinska vlada, iako su stranke u vladi većinu mandata imale jasnu parlamentarnu većinu (usp. Nikić Čakar, Raos, 2016: 51, 54). Vlada Tihomira Oreškovića nije zadovoljavala nijedan kriterij za kapacitete za provođenje uspješne fiskalne politike. Naime, nije uživala stabilnu parlamentarnu potporu, činile su je dvije stranke od kojih je jedna stalno erodirala u članstvu (MOST), a druga (HDZ) nije bila navikla na koalicijskog partnera srednje, a ne male veličine. Premda načelno ideološki kompatibilni, zbog nedorečenosti programa stranke MOST, ni ovaj uvjet nije mogao biti zadovoljen. Ne stranački premijer nije mogao nametnuti osobne kapacitete, a česte promjene članova Vlade narušile su i kadrovski kapacitet. Situacija se prema posljednja dva kriterija poboljšala s vladom Andreja Plenkovića, a značajno se poboljšala nakon što je Plenković osnovao svoju drugu vladu, ovaj put s HNS-om, no to izlazi iz vremenskog okvira ove analize.

Zanimljivo je istaknuti razliku između fiskalne politike Jadranke Kosor i Zorana Milanovića, tj. njihovih vlada, osvrtno na analizu izbornih programa 2011. godine koja je pokazala značajan zaokret HDZ-a ulijevo u ekonomskoj politici te stavljanje programskih prioriteta na (proračunsko) zadovoljavanje stranci važnih biračkih skupina (usp. Nikić Čakar, 2011: 15). Usto, valja naglasiti da upravo „fragmentiranost donositelja odluka“, tj. raspršivanje procesa donošenja na mnogo aktera (koalicijskih partnera ili podupiratelja iz parlamenta) utječe na štedljivost, odnosno rastrošnost javnih politika koje oni predlažu, tj. pokušavaju „progurati“ kroz odluke Vlade (Perotti, 1998: 376). Ovo dodatno objašnjava gore spomenute razlike u (potencijalnim) provedbenim kapacitetima pojedinih vlada u poslijekriznom razdoblju.

Nakon što smo utvrdili velike razlike u pretpostavljenim kapacitetima pojedinih vlada koje su djelovale u promatranom razdoblju, trebamo se osvrnuti i na njihove deklarativne fiskalno-političke prioritete na temelju kojih možemo procjenjivati njihove rezultate na području fiskalne konsolidacije, tematizirane u ranijim dijelovima ovoga rada. Prioritete ćemo tumačiti na temelju istaknutih ciljeva u programima vlade ili ekvivalentnim, javno dostupnim dokumentima.

Prva vlada koja je započela svoje djelovanje nakon izbijanja svjetske gospodarske krize 2008. g. i njenog prelijevanja na hrvatsko gospodarstvo bila je vlada Jadranke Kosor, koja u travnju 2010. godine donosi *Program gospodarskog oporavka* koji u okviru ciljeva fiskalne politike podcrtava fiskalnu konsolidaciju koju namjerava provesti uz kombinaciju prodaje državnih udjela u trgovačkim društvima, racionalizaciju troškova, veću prohodnost i učinkovitost poreznog sustava te uz cilj postupnog smanjenja udjela opće države (na prihodovnoj i na rashodovnoj strani) za 3 pb u BDP-u do 2020. godine (Vlada Republike Hrvatske, 2010: 13-14). Iste godine, Vlada donosi (u okviru paketa zakona koji su bili potrebni zbog prilagodbe zakonodavstvu Europske unije) Zakon o fiskalnoj odgovornosti, noveliran 2014. godine za vrijeme vlade Zorana Milanovića.

Program vlade Zorana Milanovića, donesen u prosincu 2011. g. u svojem planu fiskalne konsolidacije predvidio je ciljeve poput „smanjenja deficita konsolidirane države na manje od 3 % BDP-a i primarnoga deficita na nulu, smanjenja udjela proračunskih rashoda u BDP-u za oko 4,5 postotnih poena do kraja mandata, zaustavljanja rasta i preokretanja trenda udjela javnoga duga, uvećanoga za državna jamstva, u BDP-u na razinama manjima od 60 %“ (Vlada Republike Hrvatske, 2011: 10). Kao instrumenti postizanja ovih ciljeva istaknuti su pomaci u strukturi javne potrošnje (od neproduktivnih do produktivnih) te općenita racionalizacija javne i državne uprave te državnih poduzeća, a ne toliko puke kontrakcije na rashodovnoj strani. Program vlade Tihomira Oreškovića, usvojen u siječnju 2016. godine, u okviru svoje vizije za 2020. godinu, navodi ciljeve smanjenja javnog duga na ispod 80 posto BDP-a te deficita na ispod 3 posto BDP-a kako bi se zadovoljili kriteriji iz Maastrichta, no ne eksplicira konkretne mjere kojima se ovi ciljevi trebaju postići (Vlada Republike Hrvatske, 2016: 8). Vlada Andreja Plenkovića u svojem programu iz listopada 2016. g. ističe dugoročnu održivost javnih financija uz zacrtani cilj održavanja uravnoteženih državnih proračuna te smanjenja udjela javnog duga u BDP-u za 10 pb tijekom četverogodišnjeg mandata (Vlada Republike Hrvatske, 2017: 22).

Slijedi nam analiza agende Vlade iz perspektive fiskalne politike, kao i odlučivačkih ishoda temeljenih na Vladinim fiskalno-političkim prioritetima. Ova analiza temelji se na bazi podataka prikupljenoj u okviru projekta Poliptih (Politički prioriteti u Hrvatskoj), koji prati odlučivačku, zakonodavnu i medijsku agendu u Hrvatskoj od 1990. do kraja 2015. g. na temelju svjetske istraživačke mreže *Comparative Agendas Project* (CAP).<sup>69</sup> Budući da ova baza pokriva samo podatke do kraja 2015. godine, ona ne može reflektirati rad Oreškovićeve i Plenkovićeve vlade, no pružit će uvid u razvoj političkih prioriteta tijekom glavnine poslijekriznog razdoblja analiziranoga u ovome radu.

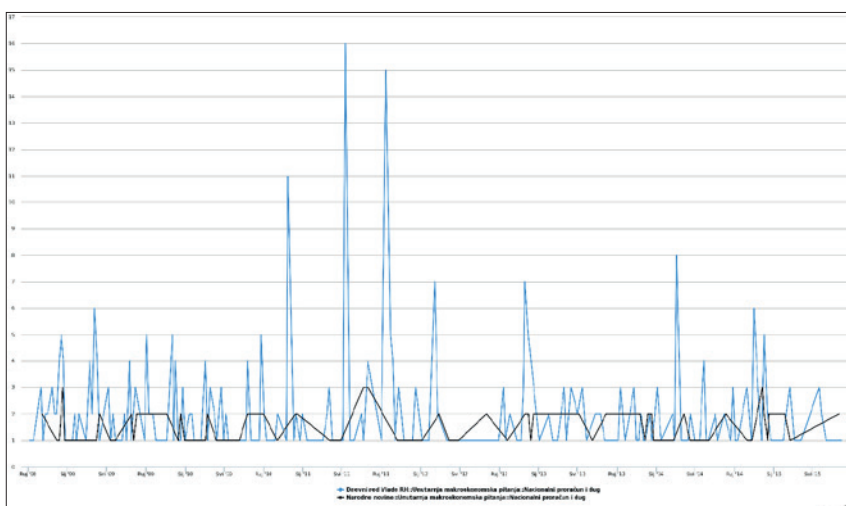
Na temelju CAP-ovog šifrnika javnopolitičkih sadržaja (tematskih odrednica), u bazi podataka izlučena su, unutar glavne teme „Unutarnja makroekonomska pitanja (kôd 100)“, dva tematska bloka – „Nacionalni proračun i dug (kôd 105)“ te „Oporezivanje, porezna politika, PDV i porezna reforma (kôd 107)“. Premda je Vlada u hrvatskom slučaju dominantni akter koji nameće političke prioritete te presudno utječe na proces stvaranja javnih politika (usp. Petek, 2017: 831), te bez obzira na to što, kao što se može vidjeti i iz priloženih Slika 8 i 9, raspravna aktivnost Vlade opsegom nadmašuje njen odlučivački *output*, kao i *output* Sabora, naglasak u ovoj analizi bit će na praćenju trendova političkih prioriteta, ali i političkih odluka u području fiskalne politike kroz tri segmenta. Prvi segment odnosi se na Vladinu agendu, tj. na razvoj političkih prioriteta mjerenih prema tematskim odrednicama točaka dnevnog reda sjednica Vlade prikupljenih u okviru već spomenutog projekta. Drugi segment se

---

69 Projekt Poliptih proveden je od 2015. do 2016. g. na Fakultetu političkih znanosti u Zagrebu uz financiranje iz Europskog socijalnog fonda. Na temelju Projekta osnovan je Centar za empirijska politološka istraživanja (CEPIS) pri Fakultetu političkih znanosti.

odnosi na akte Vlade objavljene u *Narodnim novinama*. Drugim riječima, radi se o segmentu u kojemu raspravne točke rezultiraju Vladinim političkim odlukama. Treći segment odnosi se na akte Sabora, uz pretpostavku da je Vlada kao dominantni akter u kreiranju javnih politika i glavni inicijator zakonodavnog procesa ujedno i akter koji „stoji“ iza spomenutih akata Sabora, tako da sva tri segmenta zajedno tvore sliku o fiskalnoj politici hrvatskih vlada u promatranom razdoblju.

Slika 8 nam pokazuje kako je Vladina agenda u području proračuna i duga imala nekoliko vrhunaca u promatranom razdoblju, tj. u nekoliko je točaka u vremenu došlo do značajnog povećanja količine raspravljenih točaka dnevnog reda sjednice Vlade o ovim pitanjima. Značajne skokove u postavljanju prioriteta izvršne vlasti na pitanja proračuna i duga možemo uočiti pred kraj vlade Jadranke Kosor, konkretnije tijekom 2011. godine. Doneseni akti Vlade i akti Sabora, objavljeni u *Narodnim novinama*, ne prate ove skokove, tj. nije moguće govoriti o paralelnim trendovima. U tablici 7 su pak pobrojane Vladine odluke, tj. akti Vlade i Sabora objavljeni u *Narodnim novinama* koji se tiču tematskog područja proračuna i duga, s time da su pojedine odluke izostavljene budući da su procijenjene irelevantnima. Nazivi odluka su reducirani radi ekonomičnosti, a brojke u zagradama označavaju ponavljajuće odluke.



**Slika 8.** Kretanje Vladine agende te akti Vlade i Sabora u području proračuna i duga, 2008.-2015. g.

Izvor: obrada autora prema Širinić i dr., 2016; www.cepis.hr

Sadržaj tablice 8 potvrđuje opaženi trend snažnog fokusa Vladine agende na temu proračuna i duga u kasnoj fazi mandata Jadranke Kosor. Veliki broj akata Vlade vrtio se oko tuzemnog i inozemnog zaduživanja, kao i oko optimiziranja sustava državne potpore. Za vrijeme Milanovićeve vlade manje se poseže za novim izvorima financiranja, no i dalje se pokušava preraspodjelama unutar okvira državnih potpora postići svrhovitiju alokaciju sredstava uz istovremene uštede. Analiza akata Vlade



i Sabora pokazuje učestalu praksu preraspodjele proračunskih sredstava, što svjedoči o ne posve uravnoteženom proračunskom planiranju. Sve ovo baca drugačije svjetlo na proces fiskalne konsolidacije opisan u ranijim dijelovima rada.

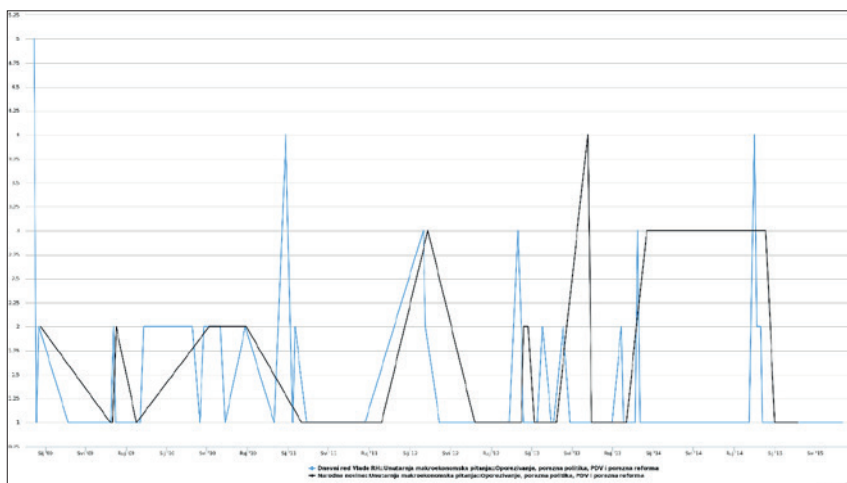
<b>Vlada</b>	<b>Godina</b>	<b>Akt Vlade</b>	<b>Akti Sabora</b>
Sanader	2008.	Preraspodjela proračunskih sredstava (4) Pravila o potpori u prometu	Državni proračun (3)
Sanader	2009.	Pravila o državnim potporama Tuzemni kredit, 750 000 000 eura Pravila o državnoj potpori u obliku jamstava Pravila privremenog okvira za mjere državnih potpora gospodarskoj krizi Euroobveznice, 750 000 000 eura	Državni proračun (2)
Kosor	2009.	Preraspodjela proračunskih sredstava (3) Euroobveznice, 1 500 000 000 dolara	Državni proračun (7)
Kosor	2010.	Tuzemne obveznice, 350 000 000 eura Pravila o državnim potporama za javne radio-difuzijske usluge Pravila o državnim potporama Tuzemni kredit, 500 000 000 eura Tuzemne obveznice, 650 000 000 eura Euroobveznice, 1 250 000 000 dolara Tuzemni kredit, 750 000 000 eura Preraspodjela proračunskih sredstava	Državni proračun (6)
Kosor	2011.	Euroobveznice, 1 500 000 000 dolara Euroobveznice, 750 000 000 eura Tuzemne obveznice, 600 000 000 eura Preraspodjela proračunskih sredstava (2)	Državni proračun Zakon o državnim potporama
Milanović	2011.	Državne potpore kinematografiji Preraspodjela proračunskih sredstava	
Milanović	2012.	Privremeno financiranje državnih tijela i drugih proračunskih korisnika Euroobveznice, 1 500 000 000 dolara Pravila o državnim potporama	Državni proračun (10)

Milanović	2013.	Pravila o državnim potporama	Zakon o državnim potporama (2) Državni proračun (8)
Milanović	2014.	Visina, rok i način uplate sredstava strateškim poduzećima Dubinska analiza proračunskih rashoda Pravila o državnim potporama Preraspodjela proračunskih sredstava	Zakon o državnim potporama Državni proračun (9)
Milanović	2015.	Dubinska analiza proračunskih rashoda	Državni proračun (2)

**Tablica 8.** Akti Vlade u području proračuna i duga, 2008.-2015. g.

Izvor: obrada autora prema Širinić i dr., 2016

Drugi bitan aspekt fiskalne politike, pa onda i napora oko fiskalne konsolidacije, leži u Vladinim intervencijama na prihodovnoj strani proračuna. Stoga se posljednji dio ove analize bavi kretanjem Vladine agende, te aktima Vlade i Sabora u području porezne politike. Za razliku od prethodnog grafikona, slika 9 ne pokazuje tako izražene trendove ni amplitude, dok su pak intenzitet Vladine deliberacije (dnevni redovi) i *outputa* (akti Vlade i Sabora) puno ujednačeniji.



**Slika 9.** Kretanje Vladine agende te akti Vlade i Sabora u području porezne politike, 2008.-2015. g.

Izvor: obrada autora prema Širinić i dr., 2016; www.cepis.hr

Vlada	Godina	Akt Vlade	Akti Sabora
Sanader	2008.	-	Zakon o porezu na dobit Opći porezni zakon
Sanader	2009.	-	-
Kosor	2009.	-	Zakon o trošarinama Zakon o PDV-u (2) Zakon o posebnom porezu na plaće Zakon o posebnom porezu na primitke od samostalnog rada
Kosor	2010.	Trošarina na benzin Trošarina na cigarete	Zakon o posebnom porezu na plaće Zakon o posebnom porezu na primitke od samostalnog rada Zakon o porezu na dohodak Zakon o porezu na dobit
Kosor	2011.	-	Opći porezni zakon Zakon o posebnom porezu na kavu Zakon o porezu na dohodak
Milanović	2011.	-	
Milanović	2012.	Trošarina na cigarete	Zakon o PDV-u (2) Zakon o porezu na dohodak (2) Zakon o porezu na dobit Opći porezni zakon (2) Zakon o trošarinama Porez na luksuzne proizvode
Milanović	2013.	-	Zakon o trošarinama (3) Zakon o PDV-u (2) Zakon o porezu na dohodak (2) Zakon o porezu na dobit Zakon o porezu na kavu
Milanović	2014.	Pravilnik o porezu na dobit	Zakon o PDV-u Zakon o porezu na dohodak Zakon o porezu na dobit
Milanović	2015.	-	Opći porezni zakon

**Tablica 9.** Akti Vlade i Sabora u području porezne politike, 2008.-2015. g.

Izvor: obrada autora prema Širinić i dr., 2016

Tablica 9 pokazuje da su mahom sve vlade koje su djelovale u poslijekriznom razdoblju intenzivno i opetovano mijenjale gotovo sve ključne porezne zakone kako bi optimizirale državne prihode uz istovremeno ciljano rasterećenje pojedinih slojeva stanovništva. Dakako, poznato je kako učestale izmjene poreznog zakonodavstva unose poslovnu nesigurnost koja se negativno reflektira na tuzemne i inozemne investicije, što pak dodatno usporava gospodarski rast. Iz ovih podataka nije moguće razlučiti razlike u fiskalnim politikama pojedinih vlada u poslijekriznom razdoblju budući da se njihova porezna politika kao dio šire fiskalne politike nije odveć razlikovala.

## 6. Zaključak

Ovaj rad je pokazao kako je početna fiskalna konsolidacija za vrijeme kasnog dijela mandata premijera Ive Sanadera i početka mandata Jadranke Kosor bila temeljena na dizanju poreznog opterećenja da bi zatim u uvjetima bržeg prihoda od mogućnosti zauzdavanja rashoda konsolidacija prestala u drugom dijelu mandata Jadranke Kosor. Naj snažnija fiskalna konsolidacija provedena je za vrijeme vlade Zorana Milanovića, s time da se u tom razdoblju nastavio rast poreznog opterećenja, kao i rezanje plaća te odgađanje ili zaustavljanje investicija. Za vrijeme vlada Tihomira Oreškovića i Andreja Plenkovića veći je naglasak stavljen na snaženje prihodovne strane proračuna, negoli na daljnje racionaliziranje troškova. Analiza strukturnih političkih pretpostavki za kapacitet izvršne vlasti u području fiskalne politike, a posebice u kontekstu ispunjavanja ciljeva fiskalne konsolidacije, pokazala je da manjinske vlade, oslonjene na šarolik potporu u parlamentu, teško mogu izbjeći popuštanje discipline i otvaranje prostora fragmentiranom ostvarenju partikularnih interesa nauštrb balansirano proračuna. Vlade temeljene na predizbornim, ideološki homogenim koalicijama, imaju jače pretpostavke za punu upotrebu svojih provedbenih kapaciteta u svrhu ispunjenja ciljeva fiskalne konsolidacije. Kada se analiziraju dnevni redovi Vlade, kao i akti Vlade i Sabora, može se ustvrditi kako je najveći fokus na fiskalnoj konsolidaciji, ali ne i najveći uspjeh u njoj, bio tijekom 2011. godine, u zadnjoj godini mandata Jadranke Kosor. Analiza akata Vlade i Sabora pokazuje snažna zaduživanja tijekom vlade Jadranke Kosor te jačanje fiskalne discipline za vrijeme Zorana Milanovića, uz učestalo dorađivanje sustava državnih potpora kroz cijelo promatrano razdoblje. Usto, pokazalo se da su sve vlade u promatranom razdoblju izrazito često mijenjale ključne porezne zakone te da su po više puta godišnje preraspoređivale proračunska sredstva, što svjedoči o izostanku planiranja.

Zaključno možemo reći da je fiskalna konsolidacija u Hrvatskoj više reaktivne, a manje proaktivne naravi budući da je snažno obilježena potrebom za ispunjavanjem kriterija koje nameću institucije Europske unije, a manje je plod unutarpolitičkih prioriteta i stranačkih opredjeljenja.

## Literatura:

- Andabaka, A., Družić, I. Mustać, N., (2017.), Drivers of public debt in Croatia. *Ekonomski pregled*, 68(5), p. 463-487.
- Bajo, A., Primorac, M., Andabaka Badurina, A., (2011.), *Osnove upravljanja javnim dugom*, Institut za javne financije, Zagreb
- Bartlett, W., (2014.), Ekonomska politika Milanovićeve vlade 2012.-2014, *Političke analize*, 5(20), p.15-21.
- Burnač, P., (2017.), Fiskalna konsolidacija: teorijski okvir i slučaj Republike Hrvatske, *EFZG working paper series*, (06), p.1-16.
- Deskar-Škrbić, M., Šimović, H., (2014.), Porezna politika Milanovićeve vlade od 2012. do 2014. *Političke analize*, 5(20), p. 22-32.
- Döring, H., Manow, P., (2016.), *Parliaments and governments database (ParlGov): Information on parties, elections and cabinets in modern democracies, Development version*, <http://www.parlgov.org/>
- European Central Bank (2016.), Government debt reduction strategies in the euro area, *ECB Economic Bulletin*, Issue 3, [https://www.ecb.europa.eu/pub/pdf/other/eb201603\\_article02.en.pdf](https://www.ecb.europa.eu/pub/pdf/other/eb201603_article02.en.pdf)
- Eurostat (2016.), *Manual on Government Deficit and Debt: Implementation of ESA 2010*, Eurostat; <http://ec.europa.eu/eurostat/documents/3859598/7203647/KS-GQ-16-001-EN-N.pdf/5cfae6dd-29d8-4487-80ac-37f76cd1f012>
- Hrvatska narodna banka (2014.), *Bilten*, br. 200, Zagreb, Hrvatska narodna banka
- Joumard, I., Minegishi, M., André, C., Nicq, C., Price, R. W., (2008.), Accounting for one-off operations when assessing underlying fiscal positions, <https://ssrn.com/abstract=1618204>
- Kasapović, M., (2011.), Drugi kritični izbori u Hrvatskoj - slom jednog modela vladanja, *Političke analize*, 2(8), p. 3-9.
- Krznar, I., (2011.), Identifikacija razdoblja recesija i ekspanzija u Hrvatskoj, *Istraživanja I-32*, Hrvatska narodna banka
- Lijphart, A., (2014.), *Modeli demokracije: oblici i učinkovitost vlasti u trideset šest zemalja*, Fakultet političkih znanosti, Zagreb
- Mirdala, R., (2013.), Lessons learned from tax versus expenditure based fiscal consolidation in the European transition economies, *Journal of Applied Economic Sciences*, 8(1), p. 73-98.
- Mourre, G., Astarita, C., Princen, S. (2014.), *Adjusting the budget balance for the business cycle: the EU methodology* No. 536, Directorate General Economic and Financial Affairs (DG ECFIN), European Commission
- Nikić Čakar, D., (2011.), Kukuriku versus HDZ – analiza izbornih programa, *Političke analize*, 2(8), p. 10-15.

Nikić Čakar, D., Raos, V., (2014.), Croatia. *European Journal of Political Research Political Data Yearbook*, 53(1), p. 66-77.

Nikić Čakar, D., Raos, V., (2015.), Croatia. *European Journal of Political Research Political Data Yearbook*, 54(1), p. 60-68.

Nikić Čakar, D., Raos, V., (2016.), Croatia. *European Journal of Political Research Political Data Yearbook*, 55(1), p. 50-58.

Nikić Čakar, D., Raos, V., (2017.), Croatia. *European Journal of Political Research Political Data Yearbook*, 56(1), p. 51-59.

Perotti, R., (1998.), The political economy of fiscal consolidations, *The Scandinavian Journal of Economics*, 100(1), p. 367-394.

Petek, A., (2017.), Croatian Decision Agenda: An Analysis of the Acts Published in the National Gazette Since 1990, *Zbornik Pravnog fakulteta u Zagrebu*, 67(5), p. 815-841.

Sartori, G., (2002.), *Stranke i stranački sustavi: analitički okvir*, Politička kultura, Zagreb

Sever, I., Drezgić, S., Blažić, H., (2011.), Budget spending and economic growth in Croatia-Dynamics and relationships over the past two decades, *Zbornik radova Ekonomskog fakulteta u Rijeci: časopis za ekonomsku teoriju i praksu*, 29(2), p. 291-331.

Šimović, H., (2005.), Fiskalna politika u Europskoj uniji i Pakt o stabilnosti i rastu, *Zbornik Ekonomskog fakulteta u Zagrebu*, 3(1), p. 75-88.

Šimović, H., (2017.), Potraga za optimalnim i efikasnim javnim financijama u Hrvatskoj: od reformi do zaduživanja, *EFZG working paper series*, (08), p. 1-31.

Šimović, H., Ćorić, T., Deskar-Škrbić, M., (2014.), Mogućnosti i ograničenja fiskalne politike u Hrvatskoj, *Ekonomski pregled*, 65(6), p. 541-575.

Širinić, D., Nikić Čakar, D., Petek, A., Šipić, J., Raos, V., Kekez, A. (2016.), *Politički prioriteti u Hrvatskoj od 1990. do 2015. – Arhiva deklasificiranih dnevnih redova sjednica Vlade Republike Hrvatske (v.1.0) (Arhiva dokumenata i šifarnik)*, Zagreb: Centar za empirijska politološka istraživanja, Fakultet političkih znanosti Sveučilišta u Zagrebu

Šonje, V., (2014.), Mijenjati se ili nestati: tri godine vlade Zorana Milanovića iz ekonomskog kuta. *Političke analize*, 5(20), p. 3-14.

Švaljek, S., Vizek, M., Mervar, A., (2009.), Ciklički prilagođeni proračunski saldo: primjer Hrvatske, *Radni materijali Ekonomskog instituta*, Zagreb, (1), p. 5-51.

Vlada Republike Hrvatske (2010.), *Program gospodarskog oporavka*, [http://www.hrt.hr/uploads/media/Program\\_gospodarskog\\_oporavka.pdf](http://www.hrt.hr/uploads/media/Program_gospodarskog_oporavka.pdf)

Vlada Republike Hrvatske (2011.), *Program Vlade Republike Hrvatske za mandat 2011.-2015.*, <http://www.sabor.hr/fgs.axd?id=19445>

Vlada Republike Hrvatske (2016.), *Strategija transformacije Hrvatske*, <https://www.scribd.com/doc/296251691/Mandatar-Prezentacija-Programa-Vlade-Rh-Sabor-22-1-2016>

Vlada Republike Hrvatske (2017a.), *Program Vlade Republike Hrvatske za mandat 2016.-2020.*, [https://vlada.gov.hr/UserDocsImages/ZPPI/Dokumenti%20Vlada/Program\\_Vlada\\_RH\\_2016\\_2020.pdf](https://vlada.gov.hr/UserDocsImages/ZPPI/Dokumenti%20Vlada/Program_Vlada_RH_2016_2020.pdf)

Vlada Republike Hrvatske (2017b.), *Program konvergencije Republike Hrvatske za razdoblje 2017.-2020.*, <https://ec.europa.eu/info/sites/info/files/2017-european-semester-convergence-programme-croatia-hr.pdf>

**prof. dr. sc. Mario Pečarić**

Ekonomski fakultet Sveučilišta u Rijeci i Ekonomski fakultet Sveučilišta u Splitu

e-mail: mpecaric@efst.hr

**Vlado Slišković, M. Fin.**

e-mail: vlado.sliskovic@gmail.com

## JAVNI DUG KAO STRUKTURNI EPIFENOMEN MONETARNO-FISKALNOG NEKSUSA

### PUBLIC DEBT AS A STRUCTURAL EPIPHENOMENON OF THE MONETARY AND FISCAL NEXUS<sup>70</sup>

#### SAŽETAK

Iako javni dug i njegovo upravljanje predstavljaju eminentno područje fiskalne politike, javni dug je u suštini strukturni monetarno-fiskalni fenomen. Dugovna kriza i odgovori na nju ukazali su na nedostatke u poimanju značaja, učinaka i poimanja optimalnog upravljanja dugom. Štoviše, ekonomska teorija dugo je zanemarivala značaj dugova (dugovne ekonomije) općenito, osobito javnog duga. U radu se naglašava da nagli rast javnog duga nije uzrok krize, već posljedica „krize modela“. Antikrizna politika zbog dominantnog *mainstream* teorijskog okvira te na njenim temeljima izgrađene institucionalne strukture zamjenjuje uzrok i posljedicu, čime slabi učinkovitost svoje reformske pozicije. Učinkovito upravljanje javnim dugom pretpostavlja rekonceptualizaciju teorijskog okvira značaja i uloge javnog duga i na tim temeljima reformu institucionalne strukture. Cilj rada je analizirati endogeni karakter javnog duga heterodoksnim teorijskim pristupom kao podlogom reforme monetarno-fiskalnog nekusa.

**Gljučne riječi:** javni dug, monetarno-fiskalni neksus, heterodokсни pristup, kriza modela

#### ABSTRACT

Although public debt and its management are an eminent fiscal policy area, public debt is basically a structural monetary and fiscal phenomenon. The debt crisis and the subsequent responses pointed to the shortcomings in understanding the importance, effects and the perception of optimal public debt management. However, economic theory has for a long time neglected the importance of debts (“debt economy”) in general, especially public debt. It is pointed out in the paper that sudden growth of public debt is not the cause of the crisis, but the effect of the “model crisis”. The counter-crisis policy, due to the dominant mainstream theoretical framework and the resulting institutional structure, confuses causes and effects, thus weakening the effectiveness of its reform position. Effective public

---

<sup>70</sup> This work has been supported by the Croatian Science Foundation under the project number IP-2013-11-8174.



debt management implies reconceptualisation of the theoretical framework and the role of public debt and the subsequent reform of the institutional structure. The aim of the paper is to analyse the endogenous character of public debt using the heterodox theoretical framework as the foundation for the reform of the monetary and fiscal nexus.

**Key words:** public debt, monetary and fiscal nexus, heterodox approach, model crisis

## 1. Uvod

Financijska kriza u EU-u ubrzo se pretvorila u krizu javnog duga. Kriza javnog duga nametnula je potrebu iznalaženja sustava njegovog razvojnog učinkovitog upravljanja. Upravljanje javnim dugom je, *par excellence*, pitanje kompleksne interakcije monetarne i fiskalne politike te se svako teoretiziranje značaja i učinaka javnog duga svodi na pitanje adekvatnosti postojećeg teorijskog koncepta interakcije i iz njega proizašlog institucionalnog okvira. U radu se argumentira potreba rekonceptualizacije ovoga odnosa. Dugovna kriza i odgovori na nju ukazali su na nedostatke u poimanju značaja, učinaka i poimanja upravljanja dugom. Štoviše, ekonomska teorija dugo je zanemarivala značaj dugova (dugovne ekonomije) općenito, osobito javnog duga.

Vjera u efikasnost financijskih tržišta i njome strukturno oblikovane monetarne sfere i monetarne politike (monetarno-financijska dominacija), pridala je fiskalnoj politici prvenstveno deflacijski i prilagođavajući značaj. Vertikalna koordinacija politika značila je prilagođavanje fiskalne sfere i njenih ciljeva ciljevima monetarne stabilnosti kao poželjnog i „zdravog“ razvojnog okruženja. Stoga ne čudi razumijevanje suvremene krize kao krize javnog duga i naglašavanje neodgovorne proračunske politike gomilanja proračunskih deficita sukladno diskrecijskoj prirodi fiskalne politike i političkih odluka. Zato se i politika štednje (*austerity*) i fiskalne konsolidacije naglašava kao prioritetna politika u cilju povećanja konkurentnosti i poticanja stopa gospodarskog rasta. U radu se naglašava da nagli rast javnog duga nije uzrok krize, već posljedica „krize modela“. Antikrizna politika zbog dominantnog *mainstream* teorijskog okvira i na njenim temeljima izgrađene institucionalne strukture zamjenjuje uzrok i posljedicu, čime slabi učinkovitost svoje reformske pozicije. Stoga se u radu obrazlaže heterodokсни pristup značaju i ulozi javnog duga.

Dosadašnji teorijski i iz njega proizašli institucionalni okvir ocjenjuje se neadekvatnim za reformske procese. Egzogeno tretiranje javnog duga i njegovih učinaka na inflaciju, kamatne stope i rast nužno je zamijeniti endogenim tretiranjem javnog duga poštujući razvojnu specifičnost zemalja, a u cilju minimiziranja razvojnih troškova reformskih procesa. Temeljna teza rada je da je kretanje javnog duga prvenstveno monetarno-financijski fenomen, premda je upravljanje javnim dugom prvenstveno zadatak fiskalne politike.

Suodnos monetarno-financijskog i fiskalnog nekusa određen je karakterom i prevladavanjem financijske sfere i iz nje izvedenog načela

gospodarskog rasta na temelju neograničene multiplikacije (eksplozije) privatnog duga. Temeljni problem suvremenih gospodarstava je nekontrolirano pretkrizno bujanje dugova, posebice privatnog duga i njegove strukture, te negativni učinci istog na rast i kretanje javnog duga. Naglasak reformskih procesa zato mora biti na redizajniranju nekusa monetarno-financijske i fiskalne sfere. Naglašavanje reforme i institucionalnog okvira samo fiskalne sfere argumentira se nedostatnim za prevladavanje „krize modela“.

Efikasno upravljanje javnim dugom kao endogenim fenomenom, u cilju minimiziranja razvojnih troškova, pretpostavlja teorijski okvir istraživanja njegovih odrednica (kratkoročnih i dugoročnih), nacionalnih i supranacionalnih razina koordinacije upravljanja dugom te promjenu institucionalnog okvira koordinacije, posebice za posttranzicijske zemlje EU-a. Prisilna konvergencija putem financijske integracije kojoj su podređene fiskalna i druge politike pokazala se naivnom i štetnom za sam integracijski proces. Reforma dosadašnjeg institucionalnog okvira mora biti sveobuhvatna. Oslanjanje samo na fiskalna ograničenja ne osigurava trajnu stabilizaciju i održivost javnog duga, niti otklanja eventualne štetne učinke visokog javnog duga na gospodarstvo. Dapače, smanjivanje javnog duga u situaciji nereformiranog monetarno-financijskog sektora i njegovog slabog utjecaja na rast samo produbljava recesiju. Preduvjet reforme institucionalnog okvira je rekonceptualizacija nekusa politika.

Rad je teorijskog karaktera i dio je šireg istraživanja međuovisnosti monetarne i fiskalne sfere. Cilj rada je analizirati značaj javnog duga kao endogenog strukturnog fenomena u heterodoksnom teorijskom okviru. U drugom dijelu rada opisana je ukratko fenomenologija krize javnog duga, dok se u trećem dijelu analiziraju teorijski aspekti tretiranja duga uz naglašavanje njegovog konceptualno endogenog karaktera. Na kraju se, u zaključku, daju smjernice za institucionalnu reformu.

## 2. Fenomenologija krize javnog duga

Globalna financijska kriza 2008. g. koja se javila u većini razvijenih ekonomija svijeta u 2009. g. je u Europskoj uniji rezultirala Europskom krizom javnog duga (*European Sovereign Debt Crisis*) iznjedriviši mnogobrojne strukturne probleme specifične za EU (*European Union*) i EMU (*European Monetary Union*).

Preljevanje krize iz SAD-a u Europu se, kao i drugdje, dogodilo uslijed naglog prestanka prekograničnog priljeva kapitala (*sudden stop*) u privatni sektor uzrokujući ispuhivanje imovinskih balona i pad vrijednosti kolateralata, što je kod banaka uzrokovalo problem adekvatnosti kapitala ograničavajući izdavanje novih kredita. Padom očekivanja privatnog sektora i prestankom ulaska novih kredita zupčanici ekonomije prestali su se podmazivati uzrokujući duboku financijsku krizu. Ona se ubrzo pretvorila u krizu realnog sektora što je za rezultat imalo pad agregatne potražnje, rast nezaposlenosti i, u konačnici, pad BDP-a.

Aktivacijom fiskalnih stabilizatora i socijalnih transfera dolazi do povećanja državne potrošnje, a kako s druge strane dolazi do smanjenja poreznih prihoda, to rezultira strelovitim rastom fiskalnih deficita.<sup>71</sup> Padom BDP-a relativna zaduženost mjerena udjelom javnog duga (JD) u BDP-u postaje još izraženija i dovodi do Europske krize javnog duga.

Iako je svoje korijene neupitno imala u prelijevanju financijske krize iz SAD-a, Europska kriza javnog duga potpuno je zasebna kriza i predstavlja drugu rundu globalne financijske krize, specifične samo za EMU/EU. Ona je svoje neposredne uzroke imala u promjeni investitorske percepcije o rizičnosti ulaganja u državne obveznice pojedinih zemalja EMU-a, i to gotovo isključivo onih s periferije, a posebno Grčke. Rastom rizika na financijskim tržištima dolazi do pada cijena obveznica i rasta kamatnih stopa, povećavajući *spread* u odnosu na centralne zemlje, što kod tih zemalja dovodi do problema izdavanja novog javnog duga i refinanciranja starog. Dotad se pretpostavljalo da se ovakve stvari ne bi trebale/mogle dogoditi u monetarnoj uniji kakva je EMU. S obzirom na to da Europska središnja banka (ESB) nema mandat kreditora u krajnjoj nuždi (*lender of last resort*), a fiskalne politike su u rukama zemalja članica, došlo je do krize javnog duga. Investitori su, uz pomoć kreditnih rejting agencija koje su snizile kreditne rejtinge pojedinih perifernih zemalja, EMU doživjeli kao nedovoljno „unioniziranu“, a obveznicama njenih članica pripisali *default* rizike kakve imaju korporativne obveznice koje nemaju pokriće u središnjem bankarskom sustavu.

Naime, neoliberalni koncept EMU-a/EU-a temelji se na (njemačkom) modelu izvozom poticanog rasta (*export led growth*) čija je okosnica niska i stabilna inflacija kao pretpostavka provođenja zajedničke monetarne politike i opstojnosti eura kao zajedničke valute. Eurozona nije po kriterijima OCA teorije optimalno valutno područje, ali je uvođenje zajedničke valute zamišljeno kao poluga daljnje integracije tržišta i povećanja blagostanja njenih stanovnika (endogenost optimalnog valutnog područja). Da bi prihvatile zajedničku valutu (i time se odrekle monetarne suverenosti), zemlje su trebale ispuniti nominalne kriterije nominalne konvergencije (*Maastricht criteria*). Njihova svrha bila je sniziti inflaciju prvenstveno ograničavajući proračunski deficit i razinu javnog duga. Fiskalna konsolidacija time je postala jedna od nužnih pretpostavki funkcioniranja modela. Naime, značajne razlike u stopama inflacije među zemljama činile bi provođenje monetarne politike putem jedinstvene kamatne stope za cijelu eurozonu neostvarivom. „Zdrava“ (*sound*) fiskalna politika time je strukturni preduvjet niskih kamatnih stopa kao pretpostavke investicija i rasta uz, naravno, slobodu kretanja kapitala i strukturne prilagodbe, prvenstveno fleksibilizaciju tržišta rada. Heterogene zemlje EMU-a/EU-a ostale su bez nacionalnih monetarnih politika, a fiskalne, iako u nacionalnim domenama, umnogome su ograničene (*Stability and Growth Pact*).

---

71 Kumulirajući deficiti (s prosjekom od 0,7 % BDP-a prije krize na 6 % BDP-a u 2010. g.) dovode do snažnog rasta JD-a (ukupni JD EMU-a prije krize iznosio je 66 %, a u 2010. g. 85 % udjela u BDP-u) čiji razmjeri kod pojedinih zemalja dosežu rekordne razine.

Optimistična neoliberalna perspektiva temeljila se na pretpostavci da će sloboda kretanja kapitala i financijska integracija uz tržišno orijentirane reforme dovesti do većih ulaganja, povećanja alokativne efikasnosti i blagostanja njenih stanovnika. Dakle, koristi zajedničkog tržišta nadići će troškove odustajanja od nacionalnih monetarnih politika. Umjesto stalnih devalvacija i valutnih fluktuacija, zajednička valuta trebala je stvoriti pretpostavke brzog neinflatornog rasta i makroekonomske stabilnosti.

Odustajući od vlastite valute i monetarne politike, u načelu, zemlje više nisu izdavatelji valute već njeni korisnici, a valutni rizik zamijenjen je, kao što će se pokazati, rizikom bankrota (*default*). S druge strane, vjerovalo se da će euro dovesti do pada kamatnih stopa, većih ulaganja i time bržeg rasta. Zbog zajedničke monetarne politike konzervativnog usmjerenja te ograničene fiskalne politike, zemljama ostaju samo tržišne reforme, odnosno mikroekonomske reforme. Temeljni smisao ovoga koncepta je uvjerenje kako apatridna valuta (*stateless currency*) putem financijske integracije i uz slobodu kretanja kapitala dovodi do veće konkurentnosti i rasta, a time i konvergencije. Financijske frikcije imaju kratkoročni negativni utjecaj na ekonomiju, dok se dugoročni utjecaj pretpostavlja pozitivnim.

Usklađivanje u modelu zajedničke valute / fiksnih tečajeva odvija se, kao što je poznato, internom devalvacijom odnosno deflacijom. Fiskalna ekspanzija u pojedinim zemljama povećavala bi inflacijske i kamatne diferencijale te stvarala percepciju investitora o mogućem bankrotu (*default*) u situaciji endogenih kamatnih stopa. Monetarno nesuverene zemlje, da bi trošile više, moraju se: zadužiti, povećati poreze ili prodavati imovinu (privatizacija). Monetarno suverene zemlje imaju još jednu mogućnost - monetizirati javni dug utječući pritomna kamatne stope i održavajući ih niskim kao što je to slučaj u nizu velikih ekonomija. Monetarno suverene zemlje, u načelu, izdaju javni dug u vlastitoj valuti (monetizacija javnog duga) i ne mogu bankrotirati te investitori percipiraju javni dug tih zemalja niskorizičnim. U tom slučaju *ceteris paribus*, visina javnog duga neće imati značajan utjecaj na kamatne stope, odnosno kamatna stopa je egzogena.

Koristeći pogodnost percepcije niskog kreditnog rizika i uz obilje kapitala došlo je u pretkriznom vremenu do ubrzanja gospodarskog rasta, ali uz velike makroekonomske neravnoteže, posebice u manje razvijenim zemljama. Zbog naglog priljeva kapitala rastu deficiti tekuće bilance plaćanja, privatni i javni dugovi zemalja.

### 3. Endogenost javnog duga

U ovom kontekstu problem javnog duga postaje prvorazredni politički problem što otvara mnoga pitanja koja se u konačnici svode na to radi li se kod krize javnog duga o platno-bilančnom problemu, čisto fiskalnom ili institucionalno monetarno-financijskom problemu? Platno-bilančni problem podrazumijeva da su njeni uzroci rezultat makroekonomskih neravnoteža prethodnih razdoblja manifestiranih kroz kontinuirani deficit

tekućeg računa bilance plaćanja i pretjerana vanjska zaduženost (Gros, 2011)<sup>72</sup>.

S druge strane, institucionalni montarno-financijski problem pretpostavlja mnogo šire i dublje uzroke krize i stvaranja makroekonomskih neravnoteža dovodeći u pitanje sam teorijski okvir zasnovan na *New Consensus Macroeconomics* (NCM-u) na kojemu je izgrađena EMU, a time i njen institucionalni dizajn i arhitektura monetarnog okvira kao optimalnog valutnog područja, kao i uloga, međusobni odnos i adekvatnost ekonomskih politika primjenjivanih prije i nakon izbijanja krize.

U okviru prevladavajućeg teorijskog okvira NCM-a, iz kojeg proizlazi i struktura te instrumenti politike i njihovi međusobni odnosi, problem makroekonomskih neravnoteža dijagnosticiran je ključnim. Time je odabran put vraćanja sustava u ravnotežu jačanjem fiskalne discipline u cilju jačanja financijske integracije i veće slobode kretanja kapitala među zemljama članicama, ali i tržišno orijentiranih reformi kao preduvjeta, čini se, više zbog održavanja postojeće monetarne arhitekture i održavanja eura kao zajedničke valute negoli zbog ostvarenja stopa rasta BDP-a. Kriza strukture, odnosno modela predstavlja se time kao pitanje neadekvatnosti teorijskog okvira iz kojeg je i nastala, a rješavanje krize i potonje recesije neostvarivim.

Konačno, govorom Marija Draghija, predsjednika ESB-a, u kojem navodi da će ESB „*napraviti sve što je potrebno*“ da sačuva euro, završava se i europska kriza javnog duga pri čemu je Europa već u međuvremenu kliznula u treću uzastopnu krizu, „*krizu modela*“, koja traje do danas i kojoj je kriza javnog duga bila samo uvod i naznaka dubljih problema kojima je EU izložena. Kriza modela rezultat je dijagnostičkih pogreški nastanka europske krize javnog duga (arhitektura) kao i kasnije primijenjene terapije u okviru ekonomskih politika, a rezultirala je anemičnim gospodarskim rastom i visokom zaduženošću javnog sektora.

Uloga monetarno-fiskalnog neksusa je pritom izuzetno bitna. Rekonceptualizacija ovog odnosa u smislu izgradnje razvojno učinkovitog institucionalnog mehanizma mora uzeti u obzir kako fiskalnu tako i monetarno-financijsku sferu. Recentna kriza dovela je u pitanje paradigmu pretkrizne monetarne i fiskalne politike. Pretkrizna paradigma monetarne politike temeljila se na konsenzusu o neovisnosti središnjih banaka uz održavanje cjenovne stabilnosti. Ovo razdoblje (*Great Moderation*) karakterizirano je niskom i stabilnom inflacijom i makroekonomskom stabilnošću, ali i uvjerenjem, ne toliko zastupljenim kod ESB-a, o nepostojanju jake veze između novčanih i kreditnih agregata i inflacije, uvjerenju o značajnoj ulozi monetarne politike u kratkoročnom upravljanju potražnjom te uvjerenju u efikasnost financijskih tržišta i zanemarivanju uloge

---

<sup>72</sup> Također, naglašavanje makroekonomske neravnoteže u obliku vanjske zaduženosti kao uzroka krize javnog duga pružaju radovi koji se mogu sažeti u rečenici da „nijedna zemlja koja je tijekom 2008. godine imala suficit tekućeg računa i/ili pozitivnu neto vanjsku imovinsku poziciju nije imala dugotrajnu financijsku krizu - bez obzira na razinu javnog duga“ (Gros, 2015). Time se samo dobilo na potvrdi dijagnoze da je vanjski dug, odnosno cjenovna nekonkurentnost glavni krivac europske krize javnog duga.

monetarne politike prilikom stvaranja cjenovnih „mjehura“ na kapitalnim tržištima. Financijske neravnoteže i eksplozija dugova, praćene enormnim rastom novca i kredita, dovele su u pitanje strategije monetarne politike i ispunjavanje cilja stabilnosti cijena te iznjedrile zahtjev za njenom srednjoročnom *ex ante* orijentacijom, nužnost adekvatne regulatorne i kontrolne politike (prvenstveno makroprudencijalne politike i politike kapitalnih zahtjeva)<sup>73</sup>. U situaciji velikih dugova ESB je dovodio u pitanje učinkovitost monetarne politike u poticanju rasta i smanjivanju *output gapa* preporučujući strukturne politike kao najbolji lijek. Spona između financijskog sektora i institucija te vlada rezultiralo je povratnom vezom – rast javnog duga uzrokovan strukturnim nedostacima financijskog sektora doveo je u pitanje financijsku stabilnost samog sektora jer financijske institucije drže najveći dio javnog duga.

S obzirom na pristup „krize modela“ analitički napori u literaturi posebno dovode u pitanje:

- 1) inzistiranje na neutralnosti fiskalne politike i njen „deflatorni karakter“ ograničavanjem „rastročnosti i zaduženosti“ javnog sektora
- 2) poboljšanje cjenovne konkurentnosti privatnog sektora (nekonkurentnost je indicirana kao rezultat kroničnih deficita tekućeg računa u vremenima prije krize) postavljeno je za cilj ekonomske politike. Zbog pretpostavljenog negativnog utjecaja visokog javnog duga i proračunskih deficita na kamatne stope i inflaciju, a time i na konkurentnost, fokus reforme bio je upravo na fiskalnoj stabilizaciji i ograničavanju rasta javnog duga.

Odgovor na pitanje značaja stabilizacijske funkcije te održivosti javnog duga može se dati samo razumijevanjem načina i uzroka njegova nastanka (endogenost pristupa), a ne samo analizom učinaka koje on ima na rast. Upravo su način i uzrok njegova nastanka systemske prirode, tj. vezani za pitanja monetarno-financijske sfere odnosno systemske prirode nastanka privatnog duga. S obzirom na nedovoljnu razinu razumijevanja uzročno posljedičnog odnosa između javnog duga (posebice njegove održivosti) i rasta te uopće značaja, odnosno uloge privatnog duga, u ovom odnosu i dalje ne postoji jasan uvid u kojim slučajevima i u kojem roku javni dug ima prevladavajuće negativan utjecaj na rast, a još manje je li on uzrok slabog rasta.

---

73 Poziciju ESB-a vidjeti kod Stark (2011)

Pregledom literature uočena su uvjetno dva pristupa (doktrine) u tretiranju navedenog problema: ortodokсни i heterodokсни. Dok se ortodokсни, prije svega, bavi odnosom javnog duga na rast ( $\mathbf{JD} \rightarrow \mathbf{G}$ ), i, *ceteris paribus*, mogućnosti njegove održivosti s aspekta postojećeg financijskog sustava i njegovih karakteristika, heterodokсни pristup propituje endogenost stvaranja i uloge javnog duga te time njegove održivosti kao posljedice dinamike i institucionalnih uvjeta pod kojima se stvara i poništava javni dug.

Potvrdu opravdanosti mjera ograničavanja visine i rasta javnog duga pokušala su dati i brojna istraživanja koja utvrđuju negativnu korelaciju odnosa javnog duga i gospodarskog rasta koristeći tzv. „*threshold* pristup“. Jedan od najutjecajnijih radova ovoga tipa je onaj autora Carmen Reinhart i Kennetha Rogoffa *This Time is Different*. U istome i popratnim radovima autori provode opsežna empirijska ispitivanja predmetnog utjecaja, utvrđujući pritom da razina javnog duga ima utjecaj na gospodarski rast čiji se predznak i intenzitet razlikuju ovisno o visini relativnog udjela duga u BDP-u, dajući podlogu za provođenje ekonomske politike štednje (Reinhart i Rogoff, 2010a,b). Dodatnu potvrdu za to daju i druga empirijska istraživanja<sup>74</sup> koja, osim negativnog utjecaja javnog duga na gospodarski rast, utvrđuju i negativnu vezu privatnog duga na isti (Cecchetti, Mohanty i Zampolli, 2011). Tako, primjerice, utvrđuju slične „prihvatljive“ razine duga javnog sektora, ali ukazuju i na postojanje značajne negativne veze između duga nefinancijskih tvrtki i kućanstava i BDP-a.

---

74 Od niza radova treba izdvojiti: (Kumar, Woo, 2010; Cecchetti, Mohanty, Zampolli, 2011; (Checherita-Westphal, Hallet, Rother, 2012).

S druge strane, kritike takvog *threshold* pristupa, uz metodološke manjkavosti, kao temeljni problem ističu pitanje uzročnosti, s obzirom na to da prethodno navedena istraživanja polaze od javnog duga kao zadane varijable i pretpostavke da smjer utjecaja ide od javnog duga ka stopi rasta<sup>75</sup>. Istraživanja koja provode Irons i Bivnes (2010); Herndon *et al.* (2013), Dube (2013) pokazala su nedostatak jasnog teorijskog okvira utjecaja, odnosno kauzalnosti veze javnog duga i rasta te podastrla razloge za odbacivanje implikacija rezultata gore navedenih istraživanja.

Ono što gotovo sva empirijska istraživanja detektiraju, osim nelinearne prirode javnog duga i rasta, je nemogućnost utvrđivanja kauzalnosti te veze, tj. nemogućnost potvrde da korelacija (nekad negativna, nekad pozitivna) kretanja javnog duga i rasta ima kakav uzročan odnos. Upravo problem kauzalnosti, tj. uzročnosti, ključan je za definiranje teorijskog okvira odnosa duga i rasta. Problemu kauzalnosti treba pristupiti prvenstveno kroz razumijevanje utjecaja monetarno-financijske sfere na javni dug i na BDP s obzirom na to da je upravo rast privatnih dugova, a time i njegova kvaliteta investiranja, odrednica i javnog duga i rasta<sup>76</sup>.

---

75 Ova debata je prethodila, a još više i rezultirala, mnogobrojnim istraživanjima koja su u pokušaju rasvjetljavanja značaja i utjecaja javnog duga na ekonomiju utvrdila nekoliko spoznaja o ovom odnosu, a to su:

- postojanje negativne korelacije između rasta javnog duga i rasta BDP-a
- nemogućnost utvrđivanja kauzalnosti tog odnosa (kako empirijske tako i teorijske)
- nelinearnost tog odnosa (očituje se u različitim prihvatljivim granicama javnog duga u BDP-u, tzv. *thresholdima*) te
- postojanje drugih varijabli koje bolje objašnjavaju uzročnost ove veze, od kojih je najznačajniji privatni dug.

Prema Keenu, jedino se uvidom u proces nastanka i kretanja privatnog duga može objasniti uzročnost između javnog duga i gospodarskog rasta. Keen daje teorijski okvir zaključujući da promjena privatnog duga uvjetuje zaposlenost, pri čemu kriza započinje kada dolazi do smanjenja privatnog duga u BDP-u, odnosno razduživanja privatnog sektora, te da javni dug raste kao odgovor na rast nezaposlenosti. I on prepoznaje teorijska ograničenja postojećih modela, odbacujući neutralnost duga, prvenstveno zbog endogenosti njegova stvaranja, čime odbacuje tezu o neutralnosti banaka, odnosno bankarskog i financijskog sustava kao kreatora duga. Keen uviđa da krediti banaka podižu ukupnu kupovnu moć u ekonomiji jer banke ostvaruju profit, utječući time na agregatnu potražnju, pritom se pozivajući na teoriju endogenosti novca. Ovim doprinosom Keen ujedno odbacuje neoklasične i neokejnezijanske teorijske modele smatrajući ih manjkavima (Keen, 2014).

S druge strane, važnost privatnog sektora naglašava i Michel Roberts, ali on ide i dalje, jer smatra da divergencija između rasta kredita i rasta BDP-a nije dobar pokazatelj s obzirom na to da javni dug dijelom preuzima funkciju rasta (Roberts, 2012). Iz tog razloga smatra da je marksistički pogled (*law of profitability*) bolji s obzirom na to da on mjeri divergenciju između opadajućih profita i rasta kredita. Na taj način on zamjenjuje BDP s profitabilnošću. Pritom drži da je najbolji pokazatelj profitabilnosti neto vrijednost (*net worth*) koju, smatra Roberts, treba usporediti s kapitalom (fiksnom imovinom, ali i skupnom imovinom koja uključuje i financijsku – fiktivni kapital). On utvrđuje da se rast javnog duga podudara s rastom ulaganja privatnog sektora u fiktivni kapital (financijsku imovinu) kao rezultat pada profitabilnosti (neto vrijednosti) privatnog sektora. Kontrakcija profitabilnosti uzrokuje pad investicija i ekonomije što uzrokuje rast privatnog duga. Ako pritom država mora spašavati privatni sektor, dolazi i do rasta javnog duga. Javni sektor nije izravno uključen u proces uzročnosti. 76 Ovu poziciju dodatno objašnjava niz radova u kojima se argumentira pozitivni značaj JD-a u manje razvijenim zemljama kao značajne poluge prikupljanja štednje i njenog ciljnog razvojnog usmjeravanja. Dapače, u takvim okolnostima JD potiče razvoj financijskog sustava.



Sve je više radova koji empirijskim uvidima ukazuju na mogućnost da je javni dug tek posljedica određenih zbivanja koja su mu prethodila, a u kojima on igra tek stabilizacijsku ulogu. Sukladno takvim uvidima, u kojima je njegova uloga posljedična, i ortodoksnim uvidima, u kojima je njegova uloga uzročna, nastaju dva osnovna doktrinarna pristupa rješavanju problema sporog rasta, pri čemu jedan zagovara politiku državne štednje, smatrajući javni dug uzrokom slabog rasta, a drugi politiku stimulacije, doduše, tijekom recesije, smatrajući ga posljedicom slabog rasta.

Cilj ranije uvedenih kriterija fiskalne stabilnosti definiranih kroz Pakt o stabilnosti i rastu te u 2011.g. uvedenih ekonomskih mjera implementiranih kroz Procedure makroekonomskih neravnoteža (MIP) koje su uslijedile, bio je prevenirati buduće i ispraviti postojeće riskantne makroekonomske pozicije kao što su deficiti tekućeg računa, neodržive razine vanjskog i javnog duga itd.<sup>77</sup>.

Cilj politike štednje bio je smanjiti trgovinske deficite, odnosno deficite tekućeg računa te zaustaviti rast JD-a smanjenjem razlike između prihoda i rashoda državnog sektora ne bi li navedeno dovelo do povećanja konkurentnosti. Suprotno očekivanjima, smanjenje deficita tekućih računa (pad priljeva kapitala) te pad javne potrošnje, a na koncu i nastavak pada neto investicija u privatnom sektoru (*deleveraging*), uzrokovali su stagnaciju, a ponegdje i daljnji pad BDP-a. Mjere štednje kratkoročno negativno utječu na BDP, dok je njihov dugoročan utjecaj nepoznat.

Kako je rast BDP-a preduvjet (u smislu zadovoljenja uvjeta  $g \geq r$ ) refinanciranja, pa i smanjenja nagomilanih javnih dugova, oni mjerama štednje nisu zaustavljeni već je njihov rast nastavljen. Treba prepoznati stoga da su pad i stagnacija BDP-a nakon provedbe navedenih ekonomskih mjera rezultat njihove provedbe i da nisu vezani za inicijalni pad koji se javio kao rezultat u krizi nastalih makroekonomskih neravnoteža<sup>78</sup>.

Visoke stope nezaposlenosti, blage stope rasta i visoke stope štednje navode na zaključak kako postojeći makroekonomski okvir politika temeljenih na NMC-u nije uspješno razriješio pitanje neravnoteža, niti je rezultirao željenim učincima te da je Europa i dalje žrtva vlastite nesposobnosti da iznađe ekonomska, ali prvenstveno politička rješenja za

---

77 Tako se, primjerice, kroz MIP-ov korektivni mehanizam Procedura prekomjernog deficita (EDP) pristupilo provođenju politike štednje, tzv. *austerity measures*, a za povećanje konkurentnosti politike strukturnih reformi, prvenstveno u vidu promjene strukture rashodne strane proračuna te interne devalvacije. U skladu s neoklasičnom i nekokejnezijanskom teorijomna čijim osnovama je MIP i kreiran, JD je problem makroekonomskih neravnoteža, pa tako i platno-bilančne. Prema tome se u optici postojećeg liberalnog institucionalnog okvira EU-a/EMU-a može rješavati daljnjim *supply-side* reformama, strukturnim promjenama i politikom štednje u okviru *export-led* strategije (*German money mercantilism*), zapravo kao prisilna konvergencija.

78 Budući da prije krize JD i fiskalni deficiti u većini članica, osim Italije i Grčke, nisu predstavljali nikakav problem, između ostalog i zbog institucionalnih ograničenja u obliku Maastrichtskih kriterija, koji su udio JD-a ograničavali na dopuštenih 60 % udjela u BDP-u, a deficita na 3 % BDP-a, u posljednjih nekoliko godina navedeni razvoj događaja rezultirao je sve glasnijim kritikama takve ekonomske politike.

stanje u kojemu se nalazi. Doveden je u pitanje kako okvir ekonomske politike tako i politika *one-size-fits-all* kao razvojno neučinkovita neoliberalna politika merkantilističkog tipa.

Kako se monetarna politika već ranije pokazala neefikasnom, s obzirom na već dosegnuti *zero lower bound*, a fiskalna politika pasivnom, sumnja da je ekonomski instrumentarij na raspolaganju dostatan i adekvatan za rješavanje navedenih neravnoteža sve je izraženija.

Kritike dijagnoze uzroka sve su artikuliranije pa se objašnjenje uzroka krize kao institucionalno monetarno-financijskog pitanja sve više traže u pokušajima alternativnog pristupa (npr. u različitim kejnzejanskim i poslijekejnzejanskim teorijskim konceptima koji problem javnog duga razumijevaju kao monetarno-financijski fenomen i javni dug kao endogenu varijablu.

Prema njima, javni dug je posljedica inherentne dominacije financijskih tržišta (financijalizacije) i vjere u njihovu savršenost (Minsky, 1992) te nedovršenosti institucionalne arhitekture EMU-a/EU-a, koja nije postigla stupanj optimalnog valutnog područja (OCA). Palley (2017) tako govori o „izvornom grijehu“ razdvojenosti monetarne i fiskalne politike, odsutnosti bankarske unije itd.

Sve to vodi ka potrebi za alternativnim rješenjima ekonomske politike i redefiniranog institucionalnog okvira za situaciju u kojoj se nalaze zemlje EMU-a/EU-a, i osobito za one koje se nalaze u EU-u, a nisu članice EMU-a.

S obzirom na navedeno, razlozi makroekonomskih neravnoteža mogu se tražiti u uzrocima prije same krize, što upućuje na probleme adekvatnosti arhitekture financijsko-monetarnog sustava EMU-a/EU-a, dizajnu samih institucija nastalih na novoklasičnim i neokejnzejanskim teorijskim pretpostavkama, kao i nedovršenoj arhitekturi Unije u pogledu bankarske i fiskalne unije, preliberalnom pristupu financijskim tržištima i kretanju kapitala, kao i cijelog *export-led-growth* modela rasta koji proizlazi iz konkurentnosti Njemačke kao dominantne ekonomske izvozne sile Unije.

Iz navedenog slijedi cijeli niz razloga, a svode se na tri osnovna: neadekvatna teorijska osnova temeljena na NMC-u, pogrešno postavljena institucionalna arhitektura koja je iz nje proizašla i ekonomske politike koje su proizašle iz prethodnog.

Kriza se može slikovito objasniti kao neodrživa neravnoteža nekog sektora koja utječe na stvaranje ili prelijevanje neravnoteže na druge sektore. Međusektorska povezanost ukazuje na to da neravnoteža jednog sektora mora izazvati neravnoteže drugih. Sukladno teorijskom i institucionalnom okviru ekonomskih politika, međusektorski odnos pretpostavlja i naglašava različite smjerove uzročnosti i time djelovanja ekonomskih politika. Tako npr. „tržišni fundamentalizam“ financijalizirane ekonomije pretpostavlja efikasnost tržišta i nepostojanje „*private failure*“ a naglašava „*public failure*“, odnosno nedostatke države (Melor, 2010).

Pretpostavljeni suodnosi i ocjene učinkovitosti politika proizlaze iz teorijskih elemenata institucionalnog okvira ekonomske politike.

Objašnjenje uzroka pojedine neravnoteže otvara brojna teorijska i institucionalna pitanja, kao i modele ekonomske politike u njihovu rješavanju. Postojeći okvir ekonomske politike EU-a/EMU-a naglašava u recentnoj krizi makroekonomske neravnoteže vanjskog i javnog sektora te traži poveznice između njih, i to u segmentu konkurentnosti. Naime, u situaciji pada investicija i porasta štednje privatnog sektora i posljedično pada BDP-a (razduživanja), rješenje je, sukladno institucionalnoj strukturi i politikama, u štednji – smanjivanju nadnica i javne potrošnje, odnosno internoj devalvaciji zemalja fiksnog tečaja ili monetarne unije, odnosno, u održivosti ili smanjenju javnog duga. Pretpostavlja se da visoki i rastući javni dug djeluje na inflaciju i kamate te time i na privatni sektor (istiskivanje - *crowding out*), rikardijanska ekvivalencija itd.). Fiskalna ravnoteža se osobito drži preduvjetom makroekonomske stabilnosti zemalja s fiksnim tečajem i učinkovitosti zajedničke monetarne politike zemalja monetarne unije.

U situaciji apatridne valute (*stateless currency*) razdvojenost monetarne i fiskalne politike (tzv. „ruptura“) osmišljena je kao pokušaj „nekvarenja novca“ i njegove dugoročno neutralne uloge na realne varijable s jedne strane (klasična dihotomija), te, s druge strane, u sprječavanju deficitnog financiranja državnog proračuna od strane monetarnih vlasti. Privatni i javni sektor svedeni su pojmovno na kućanstvo (*household*) s „tvrdim budžetskim ograničenjima“. Time je i fiskalna politika zadobila neutralnu ulogu u srednjem i dugom roku. Ekonomska politika je svedena na mikroekonomske reforme u cilju povećanja efikasnosti (konkurentnosti) u stabilnom makroekonomskom okruženju. Deficiti ili suficiti privatnog i javnog sektora namiruju se na financijskom tržištu posredstvom „neutralnih“ financijskih posrednika (*loanable funds theory* u vremenima dominantnog endogenog stvaranja novca) (!!!).

Dinamika neravnoteže sektora, osobito privatnog (koji u razvijenim zemljama nosi rast), rezultira stanjem (*stock*) duga. U *mainstream* literaturi se zbog pojednostavljenih teorijskih pretpostavki o funkcioniranju suvremene ekonomije i njenih institucionalnih oblika zanemaruju uloga i proces stvaranja privatnog duga na makrorazini i formiranja domaće i strane štednje iz kojih se financiraju investicije. Neravnoteža štednje i investicija, pa time i deficiti i suficiti, naizgled su normalna razvojna pojava. Problem nastaje na makrorazini koja ima drugačije zakonitosti i nije ju moguće objasniti mikroekonomskim zakonitostima i modelima (poznati Keenov uvid na temeljima Keynesovih stavova). Kriza privatnog duga rezultat je nepostojanja ugrađenog (*in built*) kanala osiguranja (*private insurance channel*). Ako ovoga kanala nema, neravnoteže će se preliti na druge sektore, a okvir ekonomske politike mora biti toliko efikasan da spriječi negativne učinke na cjelokupno gospodarstvo.

Vjera u pozitivne učinke slobode kretanja kapitala, značaj financijske integracije i efikasnost „samoregulirajućih financijskih tržišta“ doprinijelo je

stvaraju EU/EMU modela čija je temeljna strukturna odrednica financijska integracija kao preduvjet zajedničke valute. Cjelokupna ekonomska politika svodi se na omogućavanje procesa financijske integracije i slobode kretanja kapitala pri čemu se teorijski ne dovodi u pitanje adekvatnost institucionalne strukture financiranja privatnog sektora i održivost njegovih neravnoteža.

Rastuća i neodrživa neravnoteža investicija i štednje, kroz odvojenost financijskog i realnog sektora, dovela je, bez sumnje, do neravnoteže vanjskog i javnog sektora. Tekući deficiti (*flow*) kumulirali su se u stanja (*stock*) „neodrživih“ vanjskih i javnih dugova. Suvremenu situaciju ponajbolje je moguće opisati kao eksploziju dugova. *Mainstream* pozicija, zahvaljujući gore navedenim pretpostavkama, teško može razriješiti postojeću situaciju.

Problem jednih i drugih zemalja u EU-u/EMU-u prije svega je kako osigurati ekonomski rast dovoljan za pokriće dugova. Ako je stopa rasta manja od kamate na dug ( $g < r$ ): 1) privatni i javni subjekti moraju se zadužiti, odnosno mora doći do priljeva kapitala, što povećava dug ili 2) ako to nije moguće, do mjera štednje. Kao što to navodi Collignon (2017), problem zemalja EMU-a je kriza likvidnosti, što upućuje na nedovoljan stupanj integracije bankovnog sustava. Dakle, fokusiranje primarno na smanjivanje deficita za zemlje EMU-a/EU-a može biti negativno za rast, a time i srednjoročnu i dugoročnu održivost javnog duga.

Ono što bi bilo potrebno, kako zaključuje Collignon (2017), je diferencirani pristup utjecaju navedenih varijabli na ekonomski rast i fokusiranje na kapitalnu produktivnost (on ju mjeri kao udio nominalnog BDP-a u agregiranom stanju (*stock*) kapitala i pokazuje stopu iskorištenosti kapaciteta u kejnzejanskom stilu). Dakle, problem konkurentnosti vezuje prije svega za produktivnost. To znači da je MIP politika kontraproduktivna, jer ne uzima u obzir distorzije između zemalja i nema eksplicitni cilj utjecaja na stopu rasta. Prema ovim autorima, štednja smanjuje produktivnost i time negativno djeluje na rast. S tim u vezi, povezivanje reformi na strane ponude (*supply side*) u svrhu povećanja produktivnosti i rasta predstavlja se kao alternativni model izlaska iz današnje recesije što bi značilo i napuštanje modela konkurentne dezinflacije te naglasilo drugačiju i aktivniju fiskalnu politiku kreiranu specifično za pojedine zemlje (*custom approach*).

Dakle, uzrok financijske krize ili krize konkurentnosti i nadnica, kako je predstavljena od strane promotora dosadašnje ekonomske politike u EU-u/EMU-u, jesu, zapravo, ogromni priljevi kapitala koji su uzrokovali dugovno financiranje, mjehure imovina i slabiji rast praćen inflatornim pritiscima i deficitima bilanci plaćanja. Kapitalni priljevi posebno su utjecali rast uvozne potražnje praćen i rastom cijena i nadnica. Asimetrični ishodi ove situacije vidljivi su u povećanju profitnih marži u Njemačkoj bez značajnijeg reinvestiranja i plasiranja tih sredstava kroz bankovni sektor zemljama periferije i novopridošlim zemljama EU-a/EMU-a. U situaciji financijske krize, kao krize privatnog duga, jedina politika suklad-

na institucionalnom okviru bila je interna devalvacija kroz strukturne reforme i smanjivanje nadnica i javne potrošnje što je negativno djelovalo na domaću potražnju i rast čineći problem javnog duga još izraženijim. Kritika interne devalvacije kako je vidi Janssen (2017) može se sažeti u sljedećem:

- 1) smanjivanje plaća (*wage moderation*) dovelo je do povećanja profitnih margina koje su se koristile kao interni izvor financiranja u nedostatku priljeva kapitala. Bila je to slaba zamjena za jasnu financijsku politiku poticanja kreditiranja i obnavljanja monetarnog transmisijskog mehanizma
- 2) zanemarivanje strukturnih razlika između ekonomija dovodi do necjenovne konkurencije. Stoga se u slučaju EU-a radilo o klasičnoj grešci dijagnoze prema kojoj je konkurentnost vezana samo za plaće, odnosno cjenovnu konkurentnost.
- 3) jedna od naznačenih kritika interne devalvacije vezana je za je za poznatu Fisherovu teoriju deflacije duga (*debt deflation theory*). Naime, realan teret duga raste što su plaće i cijene niže, što dovodi do narušavanja domaće potražnje i rasta (Fisher, 1933).

Postojeći model ne samo da pogrešno dijagnosticira probleme EU-a/EMU-a, nego nije ni adekvatan mehanizam za prevladavanje postojećih neravnoteža između zemalja. Drugim riječima, financijsko spašavanje kombinirano s politikama štednje dovodi do deflacijske stagnacije, odnosno recesije s duplim dnom, poništavajući napore u smanjivanju omjera državne potrošnje i BDP-a (Arestis, 2012). Postizanje rasta, pa time i konvergencije, dakle je nesigurno u ovome modelu kako za zemlje periferije EMU-a, tako i za novopridošle zemlje EU-a.

Prema poslijekejnezijskoj teoriji, ako zemlje smanjuju deficit tekuće bilance plaćanja, državni deficit u srednjem roku mora trajno nadopunjavati razliku veće štednje od investicija privatnog sektora u cilju zadržavanja željene razine ekonomske aktivnosti i zaposlenosti. To imanentno znači da fiskalna politika mora imati aktivnu ulogu u uravnoteživanju volatilnosti razlike privatne štednje i investicija. Naravno, to znači da u situaciji većih investicija od štednje privatnog sektora, državni sektor mora biti u plusu kako bi se izbjegao fiskalni moralni hazard. Iz ovoga proizlazi još nekoliko važnih uvida, a to su: 1) da fiskalna politika može biti učinkovito sredstvo kontrole inflacije, 2) da će ekspanzivna monetarna politika sama po sebi u situaciji primijenjene politike štednje biti neefikasna te 3) da strukturno gledajući, uz kreiranje specifičnih industrijskih regionalnih politika, fiskalna politika može biti učinkovita pod uvjetom postojanja kreditora u krajnjoj nuždi od strane ESB-a.

U konačnici, prethodno ukazuje na to da je kriza u EU-u svoje izvore imala u prekomjernom i pre naglom gomilanju privatnog duga, a ne javnog duga, što vrijedi i za zemlje u kojima je javni dug rastao čak i prije krize. Dokaz tomu su upravo makroekonomske neravnoteže vanjskog sektora proizašle iz masovnog porasta prekograničnih tokova kapitala

nakon uvođenja eura (što je dovelo do jednako masovnih neravnoteža tekućih računa unutar samih članica EMU-a). Stoga je važno prepoznati strukturne uzroke nastanka duga: sve to može biti praćeno stvaranjem i neispravnom arhitekturom monetarne unije, ali, također, predstavljati loš okvir ekonomske politike zemalja koje su članice EU-a, a još nisu ušle u EMU.

#### 4. Zaključak

Iz gore navedenog proizlazi da se JD prvenstveno može razumjeti kao strukturni monetarno-financijski fenomen. S obzirom na pretpostavljeni negativni utjecaj javnog duga na BDP i posljedično poslijekriznih ekonomskih politika, poput politike štednje, kojima je cilj, posebno u EU-u/EMU-u bio upravo njegovo ograničavanje kroz fiskalno ujednačavanje javnih prihoda i rashoda te, u konačnici, odsutnost ikakvih značajnih pozitivnih učinaka takvog pristupa, nameće se pitanje: je li identifikacija javnog duga kao glavnog krivca anemičnog poslijekriznog rasta točna te je li razumijevanje uloge i nastanka javnog duga uopće takvo da može iznjedruti ikakva pozitivna rješenja kako po sâm javni dug tako i po ekonomski rast? Pretpostavka je da je pitanje održivosti JD-a strukturni problem, kako EMU-a tako i EU-a, koji se ne može riješiti politikom štednje, prvo zbog pogrešne dijagnoze, a zatim i zbog ograničenja okvira ekonomske politike temeljene na NMC modelu. Ovo, naravno, ne znači aboliciranje neodgovorne fiskalne politike i mogućnost deficitnog dugoročnog poticanja rasta.

Monetarno-fiskalni neksus u situaciji financijskih neravnoteža, koje su se preile u brzi rast javnog duga, doveo je do paradoksalnog stanja u situaciji nepostojanja monetarnog financiranja javnog duga. Pitanje dugoročne održivosti javnog duga i njegovog utjecaja na financijsku stabilnost pretpostavilo se kao temeljno pitanje izlaska iz krize. Visoki javni, ali i privatni dug, dovodi u pitanje cjenovnu stabilnost i cjelokupni dosadašnji koncept rasta. U članku se argumentira da bi dosadašnji koncept temeljen na nereguliranom financijskom sektoru i akumuliranju duga trebao biti zamijenjen konceptom povećanja produktivnosti i konkurentnosti kroz jaču financijsku kontrolu i snažan, ali i aktivan, fiskalni okvir. Reforma monetarno-financijskog sektora tako je uvjet održivosti javnog duga. Štoviše, linearne monetarne mjere, kako zbog zamke likvidnosti, tako i nepovoljne kreditne strukture bankovnog sektora, neće značajnije doprinijeti rastu, posebice ako su praćene fiskalnim restrikcijama. Potrebno je, u takvoj situaciji stvoriti okvir aktivne uloge javnog duga kroz reformu politika javnih rashoda i istražiti pozitivan utjecaj javnog duga kroz investicije u socijalnu infrastrukturu na ukupnu faktorsku produktivnost, konkurentnost i rast.

## Literatura:

Arestis, P. (2012.), Fiscal policy: a strong macroeconomic role, *Review of Keynesian Economics, Inaugural Issue*, p. 93–108.

Cecchetti, S. G., Mohanty, M. S., Zampolli, F. (2011.), The Real Effects of Debt, BIS Working papers No. 352

Checherita, C.D., Rother, P. (2012.), The Impact of High Government Debt on Economic Growth and its Channels: An Empirical Investigation for the Euro Area, *European Economic Review*, 56(7), p. 1392–1405.

Collignon, S. (2017.), Macroeconomic imbalances in Europe a mistaken concept?, In Watt, A., Herr, H., Priewe, J. (ed), *Saving the Euro – redesigning Euro Area economic governance*, p. 275-300.

Dube, A. (2013.), Guest Post: Reinhart/Rogoff and Growth in a Time Before Debt, Next New Deal: The Blog of the Roosevelt Institute, <http://www.nextnewdeal.net/arindrajit-dube>

Fisher, I. (1933.), The Debt-Deflation Theory of Great Depressions, *Econometrica*, 1(4), p. 337-357.

Gros, D. (2011.), External versus Domestic Debt in the Euro Crisis, CEPS Policy Brief, No. 243

Gros. D. (2015.), The Eurozone crisis as a sudden stop: It is the foreign debt which matters, VOX CEPR's Policy Portal, <http://voxeu.org/article/eurozone-crisis-and-foreign-debt>

Herndon, T., Ash, M., Pollin R. (2013.), Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff, Workingpaper Series, No. 322, Political Economy Research Institute, University of Massachusetts Amherst

Irons, J., Bivens, J. (2010.), Government Debt and Economic Growth - Overreaching Claims of Debt "Threshold" Suffer from Theoretical and Empirical Flaws, Briefing Paper No. 271, Economic Policy Institute, Washington

Janssen, R. (2017.), Coordinating wages in the European Monetary Union – practical experiences and lessons to be learned, In Watt, A., Herr, H., Priewe, J. (ed), *Saving the Euro – redesigning Euro Area economic governance*, p. 301-316.

Kumar, M., Woo J. (2010), Public debt and growth, IMF Working Papers, No 10/174

Lapavitsas, C., Kaltenbrunner, A., Lambrinidis, G., Lindo, D., Meadway, J., Michell, J., Paineira, J.P., Pires, E., Powell, J., Stenfors, A., Teles, N.(2010.). "The Eurozone Between Austerity and Default, RMF occasional report September 2010

Mellor, M. (2010.), Could the money system be the basis of a sufficiency economy?, *Real-world economics review*, Issue No. 54, , p. 79-88.

Minsky, H.P. (1992.), *The Financial Instability Hypothesis*, The Jerome Levy Economics Institute of Bard College Working paper No. 74

Palley, T. (2017.), *Fixing the Euro's original sins: The monetary fiscal architecture and monetary policy conduct*, In Watt, A., Herr, H., Priewe, J. (ed), *Saving the Euro – redesigning Euro Area economic governance*, p. 83-104.

Reinhart, C. M., Rogoff, K. S. (2010.), *Debt and Growth Revisited*, MPRA Paper No. 24376, Department of Economics, College Park, University of Maryland, <http://mpa.ub.uni-muenchen.de/24376/>

Reinhart, C. M., Rogoff, K. S. (2010.), *Growth in a Time of Debt*, *The American Economic Review*, 100 (2), p. 573-578

Staehr, K. (2016.), *Capital Flows and Growth Dynamics in Central and Eastern Europe*, Eesti Pank. Working Paper Series 10/2016

Stark, J. (2011.) *Speech at the 13th Annual Emerging Markets Conference 2011*, Washington, 24 September 2011

The Economist (2015.), *Flightless. Political worries increase the fragility of an economy badly in need of reform*”, 1.8.2015, p. 60.



**Milan Deskar-Škrbić**

Erste & Steiermarkische bank Croatia

e-mail: mdskrbic@erstebank.com

**Hrvoje Šimović, PhD, Associate Professor**

University of Zagreb, Faculty of Economics and Business

e-mail: hsimovic@efzg.hr

**Antonija Buljan**

Faculty of Economics and Business, University of Zagreb

e-mail: abuljan2@efzg.hr

## **FISCAL MULTIPLIER DETERMINANTS IN THE CESEE REGION<sup>79</sup>**

### **ABSTRACT**

In this paper we use the panel VAR model with exogenous variables to analyse the effects of various structural characteristics of the economies on the effectiveness of government consumption in the Central Eastern and Southeastern European region (CESEE). More precisely, we analyse the effects of government consumption on economic growth in this region, controlling for the effects of the size of the economy, level of public debt, level of tax burden, openness of the economy, rigidity of the labour market, monetary regime and the phase of the business cycle. Our results indicate that these characteristics have a significant impact on the effectiveness of fiscal policy (in terms of the size of the fiscal multiplier). Also, these effects are in line with the theoretical assumptions as the recessionary phase of the cycle, size of the economy, rigidity of the labour market and the fixed exchange rate regime increase the average size of fiscal multipliers while tax burden, indebtedness and openness of the economies reduce the size of the fiscal multiplier, when compared to the base model.

**Key words:** fiscal multipliers, CESEE region, panel VAR

### **1. Introduction**

The importance and possibilities of fiscal policy were neglected by the academia and by the policy makers for decades after the revolution of

---

79 This is a reprint of a paper published in the Journal of Management and Financial Sciences, X, 29, p. 11-26, that is available at: [http://kolegia.sgh.waw.pl/KZIF/czasopisma/Journal\\_of\\_Management\\_and\\_Financial\\_Sciences\\_JMFS/Documents/Issue%2029%20September%202017.pdf](http://kolegia.sgh.waw.pl/KZIF/czasopisma/Journal_of_Management_and_Financial_Sciences_JMFS/Documents/Issue%2029%20September%202017.pdf)

This work has been supported in part by the Croatian Science Foundation under project number IP-2013-11-8174, and in part by the University of Zagreb under project number DP 079-2016.

Research results from the paper were presented at the International Scientific Conference "Mechanisms of financial system stability in an unstable environment", 21st November 2016, Warsaw School of Economics

macroeconomics in the 1970/80s. However, the Great Recession, euro zone crisis and prolonged recession in many European economies have put fiscal policy, especially its stabilization role, in the middle of expert and public discussions again recently. The role of fiscal policy is especially important in the countries which are characterized by the high share of the government sector in the economy and whose monetary policy is limited by various structural characteristics of the economy and financial system, which make fiscal policy the main economic policy channel and lever. Exactly these characteristics typify most of the countries in the Central Eastern and Southeastern European (CESEE) region, which makes this region convenient for the analysis of the effectiveness of fiscal policy.

Thus, in this paper we conduct an empirical analysis of the effects of government consumption on the economic growth through the concept and size of the fiscal multiplier in eleven selected CESEE countries, namely Bulgaria, Croatia, the Czech Republic, Hungary, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia. However, the aim of this paper is not only to estimate the size and a sign of fiscal multiplier in selected CESEE countries, but also to analyse the determinants of its size, based on various characteristics of the selected economies: the size of the economy, level of public debt, level of tax burden, openness of the economy, rigidity of the labour market, monetary regime and the phase of the business cycle.

Our methodological approach relies on the panel VAR analysis, with the introduction of exogenous “control” variables, which allows us to: (i) estimate the size of the fiscal multiplier in the panel framework and (ii) to analyse the effect of aforementioned determinants on the size of the fiscal multiplier, i.e. on the effectiveness of government consumption. Our sample covers eleven economies and ten years (2006-2015), which gives us a relatively small, but still acceptable sample size<sup>80</sup>.

The paper is structured as follows. After the introduction in the second part of the paper we present a literature overview, mostly focusing on the panel VAR approaches. In the third part we briefly present our methodological approach and data, which is followed by the discussion of the results in the fourth part of the paper. In the last part of the paper we present the concluding remarks.

## 2. Literature Review

Following the empirical approach employed in the paper, the literature review is focused mainly on papers using the panel VAR and SVAR methodology in analysing the determinants of fiscal multipliers. Table 1 gives a brief literature overview on determinants of government consumption multipliers. Most of the reviewed literature is based on a heterogeneous sample of countries, including both advanced and emerging economies. Very few papers estimate fiscal multipliers and their determinants for emerging economies only.

---

<sup>80</sup> Our sample is determined by data availability and comparability of the countries.

<b>Determinants</b>	<b>Authors</b>	<b>Country</b>	<b>Time period</b>	<b>Methodology</b>	<b>Results</b>
	Iizetzi et al. (2013)	44 EMEs and AEs	1960Q1- 2007Q4	Panel SVAR	A higher government debt-to-GDP ratio decreases consumption multipliers
	Hory (2016)	48 EMEs and AEs	1990Q1-2013Q4	PVAR	
	Deskar-Škrbić and Šimović (2015)	Croatia, Serbia Slovenia	2001Q1-2014Q1 (Croatia, Slovenia) and 2003Q1-2014Q1 (Serbia)	SVAR Blanchard & Perotti (2002)	
<b>Level of public debt</b>	Contreras Banco and Battelle (2014)	55 EMEs and AEs	1988Q1-2010Q4	GMM estimator, panel SVAR model	Government consumption multiplier equal to zero in high-debt countries
	Iizetzi et al. (2013)	44 EMEs & AEs	1960Q1- 2007Q4	Panel SVAR	Trade openness reduces the government consumption multiplier
	Kraay (2013)	102 EMEs and AEs	1970–2010	OLS, 2SLS, and first-stage regressions	
	Silva et al. (2013)	Euro area	1998-2008	PVAR	
	OECD (2009)				
	Deskar-Škrbić et al. (2014)	Croatia	2000Q1- 2012Q2	SVAR Blanchard & Perotti (2002)	
	Deskar-Škrbić and Šimović (2015)	Croatia, Serbia Slovenia	2001Q1-2014Q1 (Croatia, Slovenia) and 2003Q1-2014Q1 (Serbia)	SVAR Blanchard & Perotti (2002)	
<b>Labour market rigidity</b>	Cole and Ohanian (2004)	US		DSE	Labour market rigidities increase FM (if imply wage rigidities)
	Gorodnichenko et al. (2012)	Finland		DSGE	

	Kraay (2013)	102 EMEs and AEs	1970–2010	OLS, 2SLS, and first-stage regressions	
	Silva et al. (2013)	Euro area	1998–2008	Panel-data VAR approach	
	Corsetti et al. (2012)	17 OECD countries:	1975–2008	PVAR	
				SVAR	Government consumption multipliers are higher in recessions
<b>Business cycle phase</b>	Grdović, Gnip (2014)	Croatia	1996Q1–2011Q4	Blanchard & Perotti (2002); STVAR	
	Muir and Weber (2013)	Bulgaria	1999Q1–2011Q4	Auerbach & Gorodnichenko (2010)	
	Iizetzki et al. (2013)	44 EMEs & AEs	1960Q1–2007Q4	Panel SVAR	Government consumption multipliers are higher in fixed exchange rate regime
<b>Exchange rate regime</b>	Kraay (2013)	102 EMEs and AEs	1970–2010	OLS, 2SLS, and first-stage regressions	Government consumption multiplier is larger in the flexible exchange rate regime
	Contreras Banco and Battelle (2014)	55 EMEs and AEs	1988Q1–2010Q4	GMM estimator, panel SVAR model	Government consumption multiplier equal to zero in flexible exchange rate regime
	Iizetzki et al. (2013)	44 EMEs & AEs	1960Q1–2007Q4	Panel SVAR	
	Hory (2016)	48 EMEs and AEs	1990Q1–2013Q4	PVAR	Government consumption multipliers higher in AEs
	Kraay (2013)	102 EMEs and AEs	1970–2010	OLS, 2SLS, and first-stage regressions	
<b>Development</b>	Contreras Banco and Battelle (2014)	55 EMEs and AEs	1988Q1–2010Q4	GMM estimator, panel SVAR	Positive and larger government consumption multiplier in developing than in high-income countries

**Table 1.** Determinants of the size of fiscal multipliers  
*Source:* the authors' elaboration

Starting with the level of public debt, the theory indicates that a higher government debt-to-GDP ratio decreases the government consumption multiplier due to a higher risk premium and a decrease in private sector confidence which is consequently de-stimulating consumption and investment. This determinant is often accounted for in the empirical literature, which generally confirms the theory (Ilzetzki et al., 2013; Hory, 2016; Deskar-Škrbić and Šimović, 2015).

When it comes to trade openness, another determinant broadly observed, especially for small open economies, the theory suggests that countries more open to trade have lower the government consumption multiplier due to outflow effects. The surveyed empirical literature is in line with previous hypothesis (Ilzetzki et al., 2013; Kraay, 2013; Silva et al., 2013; Deskar-Škrbić et al., 2014; Deskar-Škrbić and Šimović, 2015).

Regarding labour market rigidity, theory suggests that a more rigid labour market is less responsive to economic movements, thus reduces the effectiveness of fiscal policy. Cole and Ohanian (2004) and Gorodnichenko et al. (2012) find that labour market rigidities increase FM.

Another determinant of the multiplier size often investigated in empirical literature is the business cycle phase. The reviewed papers (Kraay, 2013; Silva et al., 2013; Corsetti et al., 2012; Grdović Gnip, 2014) confirm that government consumption multipliers are higher in recessions.

The reviewed literature on the exchange rate regime is ambiguous. Ilzetzki et al. (2013) find that government consumption multipliers are higher in the fixed exchange rate regime while Kraay (2013) claims that the government consumption multiplier is larger in the flexible exchange rate regime. On the other hand, Contreras Banco and Battelle (2014) find that the government consumption multiplier is equal to zero in the flexible exchange rate regime.

Finally, regarding the level of development, Ilzetzki et al. (2013), Hory (2016) Kraay (2013) confirm that government consumption multipliers are higher in AEs while Contreras Banco and Battelle (2014) obtain a positive and larger government consumption multiplier in developing than in high-income countries.

### 3. Methodology and Data

As shown in the literature review, when assessing the effects of government consumption most authors look through the lens of fiscal multipliers. The fiscal multiplier is the ratio in which the change in a country's GDP is affected by government spending. The fiscal multiplier is used to measure the effect of government consumption (fiscal policy) on the subsequent level of that country. In theory, increased fiscal spending can lead to increased consumption, which then leads to a cycle of consumption and wealth creation (for more details on the fiscal multipliers see Šimović, H. & Deskar-Škrbić, M. (2013)).

We can divide fiscal multipliers in two main categories. The first category is the impact multiplier which measures the effect of government consumption on GDP in the first period after the shock. The second category is the cumulative multiplier which can be defined as the sum of multipliers in each period after the shock. The calculation of these multipliers is based on Equation 1 (a) and (b):

$$\begin{array}{ll}
 \text{(a) Impact multiplier} & \text{(b) Cumulative multiplier} \\
 M = \frac{\Delta Y(t)}{\Delta G(t)} & M = \frac{\sum_{j=0}^N \Delta Y(t+j)}{\sum_{j=0}^N \Delta G(t+j)}
 \end{array} \quad (1)$$

As already stated above, our methodological approach is based on the panel vector autoregression with the exogenous variables framework. Thus, our model takes the following form:

$$Y_{it} = \beta(L)Y_{it-1} + \gamma X_{it} + \varepsilon_{it} \quad (2)$$

where  $\beta(L)$  is matrix polynomials in the lag operator  $L$ ,  $\gamma$  coefficients of exogenous variables. the country pair index is  $i$ , the time index is  $t = 1, 2, \dots, T$  and  $\varepsilon_{it}$  is the vector of errors. The endogenous variables vector  $Y_{it}$  comprises the real annual change in GDP and the real annual change in government consumption, defined as the final government expenditure in national accounts. Depending on the estimated model, vector  $X_{it}$  includes one of seven “control” variables: the size of the economy, level of public debt, level of tax burden, openness of the economy, rigidity of the labour market, monetary regime and the phase of the business cycle. The analysis is based on the sample of eleven economies (Bulgaria, Croatia, the Czech Republic, Hungary, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia) in the 2006-2015 time period. Table 2 presents the main characteristics of the variables included in the analysis.

Variables		Characteristics	Source
<b>Endogenous variables (<math>Y_{it}</math>)</b>	GDP	Real growth rate	Eurostat; national statistical offices
	Government consumption	Real growth rate	Eurostat; national statistical offices
<b>Exogenous (<math>X_{it}</math>)</b>	Public debt	Share of GDP	Eurostat; national ministries of finance
	Openness	Share of GDP (sum of imports and exports)	Eurostat; national statistical offices
	Size	Population (in mil)	World bank
	Tax burden	Share of GDP (tax revenues)	Eurostat; national ministries of finance
	Labour market rigidity	Labour market flexibility score	Global Competitiveness Report Database
<b>Exogenous (dummy) (<math>X_{it}</math>)</b>	Business cycle	Recession = 1	Eurostat; national statistical offices
	Monetary regime	Eurozone/fixed = 1	ECB; national central banks

**Table 2.** Variable list and explanations

*Source:* the authors' elaboration

Endogenous variables are defined as an annual percentage change of gross domestic product (GDP) and final consumption expenditure of general government in 2010 constant prices, in millions of euros. Exogenous, non-binary, variables are public debt expressed as a percentage of GDP, openness of the economy, defined as a sum of imports and exports and expressed as a percentage of GDP, population in millions of citizens, tax burden defined as a share of tax revenues in GDP and labour market rigidity defined through the indicator of labour market flexibility (1-7) in the Global Competitiveness Report Database<sup>81</sup>. We also included two binary exogenous variables. The first variable, the business cycle dummy, is constructed in a way that it takes the value of 1 if the country of interest recorded a negative real GDP change in a particular year and 0 otherwise. The second dummy variable takes the value of 1 if the country is a member of the euro zone (Slovenia and Slovakia), unilaterally adopted the euro (Montenegro) or has the fixed exchange rate regime (Macedonia).

Before the presentation of the obtained results it is important to explain the expected effects of the included exogenous variables on the size of fiscal multipliers, i.e. the effectiveness of fiscal consumption. Following Batini et al. (2014)<sup>82</sup>, we can divide our determinants in two groups, structural and conjectural.

81 In this paper we inverted the scale meaning that a higher value of the indicator points to the more rigid labour market.

82 Although we follow Batini et al. (2014), the determinants selected in this paper slightly differ as we included the level of tax burden and the size of the economy but we do not assess the effects of automatic stabilizers and ZLB

Starting with the structural determinants:

- i) a high degree of *trade openness* reduces the size of the fiscal multiplier through the “outflow effects” of the imports;
- ii) countries with more rigid *labour markets* have larger fiscal multipliers since rigid wages tend to amplify the response of output to demand shocks;
- iii) countries that have the *flexible exchange rate* regime have lower fiscal multipliers because effects of fiscal policy on their domestic economy are limited by the effects on international flows;
- iv) countries with high levels of *public debt* have lower fiscal multipliers because an additional fiscal expansion can lead to an increase in the risk premium and a decrease private sector confidence, thus de-stimulating consumption and investment;
- v) countries with a higher *tax burden* tend to have lower fiscal multipliers as the fiscal capacity of a country is limited and there is a stronger possibility of the prevalence of Ricardian households, and finally
- vi) large economies have *large domestic markets*, so the multiplicative effects of fiscal policy are stronger.

As for the conjunctural determinants, as already mentioned, fiscal policy is more effective in conjunctures than in the expansionary phase of the business cycle

The summary of this discussion is given in Table 3:

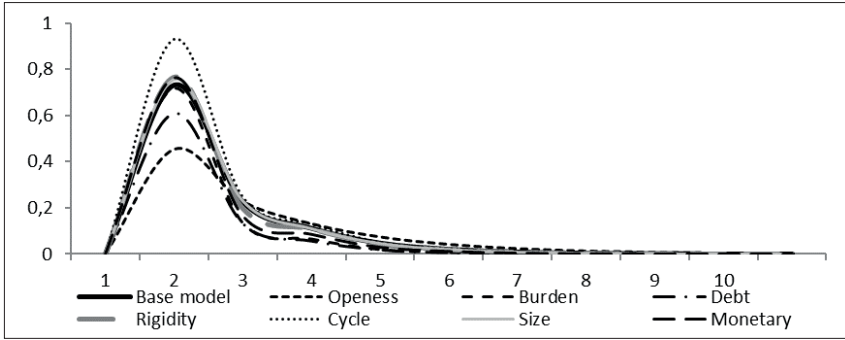
<b>Determinant</b>	<b>Expected effect on the size of fiscal multiplier</b>
Public debt	-
Openness	-
Size	+
Tax burden	-
Labour market rigidity	+
Fixed exchange rate	+
Recession	+

**Table 3.** Determinants of the size of fiscal multipliers and expected effect  
*Source:* the authors' elaboration

## 4. Results

The most common approach in the presentation of VAR-based results are impulse responses (IRFs). Thus, in Figure 1 we present the impulse responses functions of each estimated model, which gives us the total of eight models – the baseline model (without control, exogenous variables) and seven models including each of the aforementioned exogenous variables.

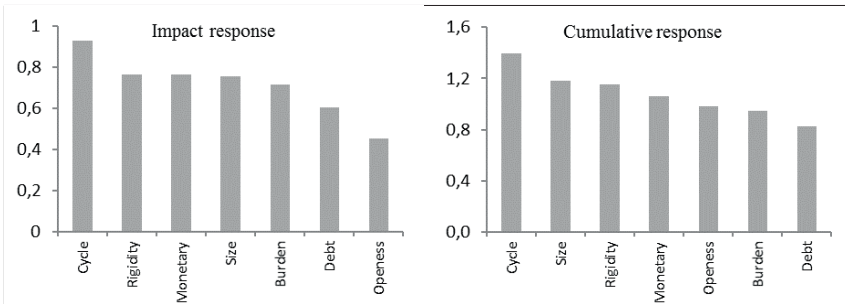




**Figure 1:** Impulse response of real GDP growth to the shock in government consumption  
*Source:* the authors' elaboration  
*Note:* x-axis shows the number of periods after the shock and y-axis shows the size of the impulse (in pp)

The estimation of the base model suggests that the average size of the fiscal multiplier in selected CESEE countries in the first year after the shock is 0.8, which is in line with the conclusions of the fiscal multiplier literature for individual countries in the sample (see Appendix 1). When compared to the baseline results we can see that the introduction of the business cycle dummy, monetary regime dummy, size and rigidity increase the size of the fiscal multiplier, while trade openness, tax burden and a high level of public debt decrease the size of the fiscal multiplier, in line with the assumptions presented in Table 3.

To get a clearer view on the size of fiscal multipliers, in Figure 2 we present the impact and the cumulative multipliers, ordered by the size of the multiplier, given the corresponding determinant.



**Figure 2:** Size of impact and cumulative multipliers  
*Source:* the authors' elaboration

Looking at the cumulative responses (which can be seen as the total effect of fiscal consumption) we can conclude that recessions lead to the largest multipliers, followed by the size of the economy and the rigidity of the labour market. On the other hand, tax burden and indebtedness lead to a notable reduction in the effectiveness of fiscal policy. These results are in line with theoretical assumptions and the existing literature indicating that they are robust.

## 5. Conclusion

The results presented in this paper indicate that fiscal policy is an important growth determinant in the CESEE region as the increase in government consumption has a positive and relatively strong (the fiscal multiplier around 0.8) effect on economic growth. Such a result fits well to our discussion in the Introduction, where we pointed out that fiscal policy is especially important in countries whose monetary policy is constrained and in which government holds a large chunk of the economy; the characteristics which are strongly related to the countries included in this analysis. In addition, our results confirmed the theoretical assumptions and expert view on the effects of various structural characteristics of the countries on the effectiveness of fiscal consumption. More precisely, our analysis showed that countries that face a recession, which are larger, which have a more rigid labour market and have the fixed exchange rate (or are a member of a monetary union) tend to have larger multipliers. On the other hand, the effectiveness of fiscal policy is limited in highly open economies, economies with a high public debt level and economies with a high tax burden.

Our conclusions have some policy implications, as in our view fiscal policy makers should take all these determinants into account when making policy proposals and defining the main policy instruments. Large fiscal packages aimed at the stabilization of the domestic economy could be “wasted” if countries are characterized by the determinants that significantly reduce the size of fiscal multipliers. In that case policy makers should look beyond the traditional fiscal measures. On the other hand, some policy makers are faced with strong opposition when proposing a fiscal stimulus, but if they stress that all determinants are favorable and that the empirical and theoretical literature suggest that the proposed stimulus could be effective, critics could become more benevolent. Finally, all the discussions related to changes in fiscal consumption and/or tax policy should be founded on a systemic analysis and not so-called “fiscal alchemy”.

## References:

- Ambriško, R., Babecký, J., Ryšánek, J., Valenta, V. (2013.), Assessing the Impact of Fiscal Measures on the Czech Economy, *Economic Research Bulletin, Macroeconomic Effects of Fiscal Policy*, Czech National Bank, 11(2)
- Baxa, J. (2010.), What the Data Say about the Effects of Fiscal Policy in the Czech Republic? In: Houda, M., Friebelova, J. (eds.) *Mathematical Methods in Economics*, University of South Bohemia, Ceske Budejovice, p. 24-29.
- Babecký, J., Franta, M., Ryšánek, J. (2016.), Effects of Fiscal Policy in the DSGE-VAR Framework: The Case of the Czech Republic, *Economic Research Bulletin, Financial Cycles and Macroprudential and Monetary Policies*, Czech National Bank, 14(2)
- Batini, N., Eyraud, L., Weber, A. (2014.), A Simple Method to Compute Fiscal Multipliers, IMF Working Paper, 14/93, Washington: IMF
- Boiciuc, I. (2015.), The effects of fiscal policy shocks in Romania. A SVAR Approach, *Procedia Economics and Finance*, 32, p. 1131–1139.
- Cole, H., Ohanian, L. (2004.), New Deal Policies and the Persistence of the Great Depression: A General Equilibrium Analysis, *Journal of Political Economy*, 112(August), p. 779-816.
- Contreras Banco, J., Battelle H. (2014.), Fiscal Multipliers in a Panel of Countries, Banco de México Working Papers No. 2014-15.
- Corsetti, G., Meier, A., Müller, G. J. (2012.), What Determines Government Consumption Multipliers?, IMF Working Paper, Monetary and Capital Markets Department, WP/12/150.
- Crespo Cuaresma, J., Eller, M., Mehrotra, A. (2011.), The Economic Transmission of Fiscal Policy Shocks from Western to Eastern Europe, *Focus on European Economic Integration*, 2, p. 44-68.
- Deskari-Škrbić, M., Šimović, H., Čorić, T. (2014.), The Effects of Fiscal Policy in a Small Open Transition Economy: The Case of Croatia, *Acta Oeconomica*, 64, S1, p. 133-152.
- Deskari-Škrbić, M., Šimović, H. (2015.), The size and determinants of fiscal multipliers in Western Balkans: comparing Croatia, Slovenia and Serbia, EFZG Working Paper Series 2015, p. 15-10.
- Filipovski, V., Fiti, T., Trenovski, B. (2016.), Efficiency of the fiscal policy and the fiscal multipliers – the case of the Republic of Macedonia, *Ikonicheski Izsledvania (Economic Studies journal)*, Issue 1, p. 1-21.
- Franta, M. (2012.), Effects of Fiscal Policy in the Czech Republic: Evidence Based on Various Identification Approaches in a VAR Framework, Working Paper Series, Czech National bank 2012, 13/12.
- Gorodnichenko, Y., E.G. Mendoza, E., Tesar, L. (2012.), The Finnish Great Depression: From Russia with Love, *American Economic Review*, 102(4), p. 1619-1643.

Grdović Gnip, A. (2014.), The power of fiscal multiplier in Croatia, *Financial Theory and Practice*, 38(2), p. 173-219.

Grdović Gnip, A. (2015.), Empirical assessment of stabilization effects of fiscal policy in Croatia, *Romanian Journal of Economic Forecasting*, 18(1), p. 47-69.

Hinić, B., Miletić, M., Tomin, A. (2013.), Efficiency of the fiscal and monetary stimuli: the case of Serbia, Proceedings of the 2nd Research Conference Policy Nexus and the Global Environment: A New Consensus Emerging from the Crisis?, National Bank of the Republic of Macedonia, Skopje

Hory, M.P. (2016), Fiscal multipliers in Emerging Market Economies: Can we learn something from Advanced Economies experiences, *International Economics*, 146(2016), p. 59-84.

Ilzetzki, E., Mendoza, E., Végh, C. (2013.), How big (small?) are fiscal multipliers?, *Journal of Monetary Economics*, 60(2), p. 239-254.

Jemec, N., Kastelec, A.S., Dalekorda, A. (2013.), How Do Fiscal Shocks Affect the Macroeconomic Dynamics in the Slovenian Economy?, Bank of Slovenia Working Paper 2013, No. 1/2013.

Karagyozyova-Markova, K., Deyanov, G., Iliev, V. (2013.), Fiscal Policy and Economic Growth in Bulgaria, Bulgarian National Bank Discussion Paper 2013, DP/90/2013.

Klyuev, V., Snudden, S. (2011.), Effects of Fiscal Consolidation in the Czech Republic, IMF Working Papers 2011, WP/11/65.

Kraay, A. (2013.), Government consumption multipliers in developing countries: evidence from lending by official creditors, World Bank Policy Research Working Paper 2013, No. 6099.

Muir, D., Weber, A. (2013.), Fiscal Multipliers in Bulgaria: Low But Still Relevant, IMF Working Paper 2013, WP/13/49.

OECD (2009.), *The Effectiveness and Scope of Fiscal Stimulus*, OECD Economic Outlook Interim Report, Paris, <http://www.oecd.org/eco/outlook/42421337.pdf>

Silva, R., Carvalho, V.M., Ribeiro, A.P. (2013.), How Large are Fiscal Multipliers? A Panel Data VAR Approach for the Euro Area, FEP Working Papers 2013, No. 500 August 2013.

Stoian, A. (2012.), *The Macroeconomic Effects of Fiscal Policy in Romania*, Academy of Economic Studies Doctoral School of Finance and Banking, June 2012 Presentation, <http://finsys.rau.ro/docs/Stoian%20Anca.pdf>

Šimović, H., Deskar-Škrbić, M. (2013.), Dynamic Effects of Fiscal Policy and Fiscal Multipliers in Croatia, *Proceedings of Rijeka Faculty of Economics - Journal of Economics and Business*, 31(1), p. 55-78.

Zeman, J. (2016.), Fiscal multipliers in Slovak economy, DSGE simulation, NBS Working Paper 2016, 2/2016.

## Appendix

Country	Authors	Time period	Methodology and identification method	Short term government consumption multiplier
Bulgaria	Mulr and Weber (2013)	1999Q1–2011Q4	SVAR, Blanchard & Perotti (2002)	Insignificant
		2003M1–2006M12	SVAR, Blanchard & Perotti (2002)	0.16
Czech Republic	Karagyozova-Markova et al. (2013)	1999 Q1–2011Q3	GIMF	0.51
			VAR, recursive identification	0.17
			SVAR, Blanchard & Perotti (2002) TVP-VAR	0.41 0.3-0.15 (higher in recessions)
Czech Republic	Franta (2012)	1999Q1–2011Q3	VAR, recursive identification	0.32
			VAR, sign restrictions	1.43
	Klyuev and Snudden (2011)	1996Q1–2011Q4	GIMF	0.41
			Structural DSGE	0.21
	Babecký et al. (2016)	1996Q1–2011Q4	DSGE-VAR	0.90
			DSGE	0.42
	OECD (2009)	Crespo Cuaresma et al. (2011)	DSGE	0.3
			SVAR Blanchard & Perotti (2002)	-0.01

<b>Croatia</b>	Šimović and Deskar-Škrbić (2013)	2004Q1- 2012Q4	SVAR	General level
			Blanchard & Perotti (2002)	2.18
	GrdovićGnip (2015)	1996Q1- 2011Q4	SVAR	Central consolidated level
			Blanchard & Perotti (2002)	1.58
				Central level
				0.82
				2.45
<b>Hungary</b>	Deskar-Škrbić and Šimović (2015)	2001Q1- 2014Q1	SVAR	0.80
	OECD (2009)		Blanchard & Perotti (2002)	
			DSGE	0.3
	Crespo Cuaresma et al. (2011)	1995Q1- 2009Q4	SVAR	0.02
			Blanchard & Perotti (2002)	
<b>Macedonia</b>	Filipovski et al. (2016)	2000Q1- 2011Q4	recursive VAR-model adjusted Blanchard & Perotti (2002)	-0,29816
<b>Montenegro</b>	-	-	-	-
<b>Poland</b>	OECD (2009)		DSGE	0.4
	Crespo Cuaresma et al. (2011)	1995Q1- 2009Q4	SVAR	-0.01
			Blanchard & Perotti (2002)	
<b>Romania</b>	Stoian (2012)	2000Q1- 2011Q3	VAR, Blanchard and Perotti (2002), IV estimator	0.57
	Boiciuc (2015)	2000Q1- 2012Q4	Recursive VAR model	0.1

<b>Serbia</b>	Hinić et al. (2013)	n.a.	SVAR	0.77
	Deskar-Škrbić and Šimović (2015)	2003Q1-2014Q1	Blanchard & Perotti (2002) SVAR	0.37
		1999Q1-2007Q4	Blanchard & Perotti (2002) <b>DSGE</b>	(insignificant) 0.55
<b>Slovakia</b>	Zeman(2016)	1995Q1-2009Q4	DSGE	0.3
	OECD (2009)	1995Q1-2009Q4	SVAR	-0.01
	Crespo Cuaresma et al. (2011)	1995Q1-2009Q4	Blanchard & Perotti (2002)	
<b>Slovenia</b>	Crespo Cuaresma et al. (2011)	1995Q1-2009Q4	SVAR Blanchard & Perotti (2002)	0.00
	Deskar-Škrbić and Šimović (2015)	2001Q1-2014Q1	SVAR Blanchard & Perotti (2002)	-0.53
		1995Q1-2010Q4	<b>SVAR</b> Blanchard & Perotti (2002)	1.61

**Table A1.** Short term government consumption multipliers in 11 CEE economies

Source: the authors' elaboration

**Antonija Buljan**

Faculty of Economics and Business, University of Zagreb

e-mail: abuljan2@efzg.hr

**Hrvoje Šimović, PhD, Associate Professor**

Faculty of Economics and Business, University of Zagreb

e-mail: hsimovic@efzg.hr

**Milan Deskar-Škrbić**

Erste & Steiermarkische bank Croatia

e-mail: mdskrbic@erstebank.com

## **PUBLIC EXPENDITURE EFFICIENCY AND THE OPTIMAL SIZE OF GOVERNMENT IN THE EUROPEAN UNION<sup>83</sup>**

### **ABSTRACT**

This paper investigates public expenditure efficiency and its relation to the optimal size of government. It provides an insight into methods developed for estimating efficiency and possible constraints of the analysis. Literature review of related papers covering the European Union and OECD countries shows significant differences in efficiency coefficients across countries with most countries having the potential for increased efficiency of public spending. Specifically, there is large space for reduction in government size by raising the efficiency. The literature includes aggregate expenditure efficiency analysis and efficiency analysis of its main components. A more disaggregated analysis of individual public functions seems to be more adequate to capture the efficiency and determine the main drivers of inefficiency and draw policy implications. In that respect, the paper provides an insight into the structure of government expenditure by function across the EU countries and its changes over the period 2002-2015. Differences in tradition and priorities in financing public goods and services can be noted between countries. Due to high sensitivity of non-parametric methods to data heterogeneity, this should be taken into account when selecting the sample for the analysis.

**Key words:** government expenditure efficiency, optimal size of government, functional classification

---

<sup>83</sup> This paper was originally published in „Proceedings of the 11th International Conference European Entrepreneurship Forum 2017 Euro zone: Evolution or Revolution?“. Special thanks to the Proceedings editors for their permission to reprint the paper in this book. The paper was language edited.

This work has been supported by the Croatian Science Foundation under the project number IP-2013-11-8174 and IP-2016-06-4609.



## 1. Introduction

In recent years, the European Union (EU) countries are facing severe challenges in public finance management. Globalisation (free movement of capital induces tax competition and causes revenue erosion) and demographic trends (aging population causes social protection and health expenditure to rise) have exerted pressure on both revenue and expenditure side of the budget. Given that the countries are bound to fiscal discipline through the Stability and Growth Pact, space for further indebtedness is limited. With these problems in focus, the question of reduction of the size of government becomes the most important. The key question is: Is it possible to reduce the government size without hampering the economy's growth? If so, how can it be done?

A number of research investigated the size of government-growth nexus. Government size is commonly proxied by general government expenditure in % of GDP. There have been mixed results regarding this relationship. While some researchers find positive effects (Ram, 1986), others find negative effects of government size on growth (Afonso & Jalles, 2011). Recent papers describe the size-growth relationship as inverted U-shaped relation. This connection is in literature often called the BARS (Barro-Armeij-Rahn-Scully) curve (Barro, 1990; Rahn & Fox, 1996; Scully, 1998, 2003). Barro's (1990) endogenous growth model was the first to introduce the non-monotonic relationship between government size and growth.

The aim of this paper is to investigate the efficiency of public expenditure and its relation to the optimal government size in the European Union countries. Methodology and literature review on government efficiency will be provided in that respect. The aim is to accentuate the importance of decomposing government expenditure due to different structure of government expenditure across EU countries. The countries have different traditions in financing public goods and services and different priorities. Taking only the overall expenditure into account could cause losing valuable information.

The paper is organized as follows: the first part introduces the concept of public sector efficiency, the second part surveys measurement techniques developed for efficiency estimation, the third part provides a brief overview and discussion of previous literature on government efficiency, the fourth section provides a brief insight into the size and structure of government expenditure of the EU countries and conclusion is provided in the last section.

## 2. The concept of government expenditure efficiency

The prevailing measurement of utility from public activities in the general public is the amount of budget allocated to a certain function. Higher budget would imply proportionally larger utility from a certain activity.

In reality, that is not necessarily the case. The concept of efficiency is being introduced to explain the relation between the input and the output and to objectively measure the performance of public activities.

In terms of efficiency, it is important to distinguish technical from allocative efficiency. Technical efficiency reveals whether the same output could have been attained with lower quantity of inputs (input inefficiency) or whether a higher output could have been attained with the same quantity of inputs (output inefficiency). It puts the unit's performance in relation with the best output-input ratio that could have been attained. On the other hand, allocative efficiency shows the best possible allocation of inputs with respect to their market prices and includes the cost-benefit analysis. Together they form the overall economic efficiency (Farrell, 1957). However, the concept of efficiency is often confounded with productivity. While productivity is a simple ratio of output over input, it does not give information on the highest output-input ratio attainable.

Analysis can be conducted for aggregate level of government expenditure (Adam *et al.* 2011; Afonso *et al.*, 2005a, 2010; Agasisti, 2011; Angelopoulos *et al.*, 2008; Bađun *et al.*, 2014; De Witte, 2009; Rahmayanti & Horn, 2011) and for each of the government services separately. Also, some researchers conduct the analysis at local government level (Balaguer-Coll *et al.*, 2007; Afonso & Fernandes, 2008).

Aggregate level efficiency analysis has several drawbacks. Since the composition of government expenditure varies among countries, data can be highly heterogeneous and lead to spurious results. Furthermore, such an analysis provides weak information on environmental factors that can affect efficiency. Inefficiency can be detected, but its main drivers remain unfound. In that respect, disaggregated analysis of specific government activities has recently become more frequent. Most researched public expenditure functions are health and education (Adam *et al.* 2011; Afonso *et al.* 2005a; Afonso & St Aubyn, 2005b; Aristovnik, 2009; Hauner & Kyobe, 2010; Herrera & Pang, 2005; Jafarov & Gunnarsson, 2008; Prasetyo, 2013), education alone (Aristovnik, 2011; Afonso & Aubyn, 2006) while a number of researchers deal with public investment and public administration efficiency (Afonso *et al.*, 2005a; Adam *et al.*, 2011; Bađun *et al.*, 2014

### 3. Methods for measuring efficiency

Methods for measuring government efficiency usually rely on formulation of a production possibility frontier. The most common methods can be divided into parametric and non-parametric methods. The main difference between them is that non-parametric methods do not require a predetermined form of the production function while parametric methods do. Non-parametric methods use input-output data from the sample to form a production possibility frontier which links the best performing units in the sample following a mathematical linear programming method. Once

formed, best practice frontier is used to calculate the efficiency scores based on distance of each unit to frontier.

Data Envelopment Analysis (DEA) is a non-parametric method mostly used in recent research. It was originally introduced by Charnes *et al.* (1978). This method uses input-output data to form the best practice frontier. The frontier is calculated as linear combination of the best performing units. Units positioned on the frontier are given the score of 1, while the units inside the frontier have an efficiency score between 0 and 1. However, the fact that a unit is positioned on the frontier does not imply that it is fully efficient. It means the unit is more efficient in relation to the other units. DEA analysis can be input- or output-oriented. Input-oriented DEA reveals how many resources can be saved maintaining the output unchanged, while the output-oriented DEA shows whether a higher output can be reached without changing the inputs.

The main advantage of DEA analysis is simplicity of its application, given that it does not require a predetermined production function. It is mainly data driven, simply takes the output- input data, and does not need input or output prices, it is thus appropriate for analysing non-profit institutions. However, this method has its downsides. An important shortcoming of this method is sensitivity to outliers and measurement errors since it interprets random errors as inefficiency. Bearing this in mind, homogeneous data would be a prerequisite for the analysis, which is already an issue given the fact that expenditure is relatively heterogeneous among countries. Another shortcoming of this method is that it does not account for possible exogenous macroeconomic and environmental factors that could affect efficiency, which could result in biased efficiency coefficients.

There are many ways to deal with this issue. The most common is the two-stage DEA/Tobit approach while some researchers use the simple least square regression (OLS). Both approaches are parametric methods. Tobit approach is usually considered appropriate due to the censored nature of efficiency coefficients. It is a maximum likelihood method used for limited data with lower and upper bound (efficiency coefficients range between 0 and 1). The coefficients, previously calculated through DEA, are being regressed on a number of possible determinants. This approach has been recently criticised for being inconsistent since efficiency scores are estimated through a non-parametric method, while efficiency determinants are detected by using a parametric method. Alternative approach is using non-parametric approach in the first and in the second stage applying single and double bootstrap procedures.<sup>84</sup>

Another non-parametric method for efficiency estimation is Free Disposal Hull (FDH) suggested by Deprins *et al.* (1984) and Tulkens (1986). FDH poses the least restrictions compared to the other methods. The units that are efficient under the DEA are efficient under the FDH method, but not necessarily *vice-versa*. The only difference between the two is

---

<sup>84</sup> For more details on bootstrapping techniques, see Simar and Wilson (2007)

that, in DEA analysis, any linear combination of efficient units forms the frontier, while FDH does not require convexity.

An example of a parametric approach for estimating efficiency is stochastic frontier analysis (SFA). Its advantage is that it can include other exogenous and environmental factors affecting efficiency aside from the production inputs, which provides more robust results. Its most important shortcoming is that it requires a predetermined shape of the production function.

Composite indicators are another measure that can be used to compare different countries' performance and efficiency. They can serve as input or output indicator in the efficiency analysis or an overall efficiency indicator. Developed by Afonso *et al.* (2005a) the Public Sector Efficiency Index (PSE) takes the performance (PSP) of each of the selected disaggregated government functions and compares it to related expenditure. Afterwards, the calculated sub-indicators are given weights and composed into a composite overall indicator of government efficiency. However, the results are dependent on the arbitrary selection of sub-indicators and given weights and can vary substantially depending on the sample selection.

A few important issues regarding input and output measurement in the efficiency analysis need to be noted. Inputs are usually defined in monetary terms, but can also be referred to in physical terms. When measuring resources in monetary rather than physical terms, countries that have comparably more expensive resources can wrongly reveal inefficiency. On the other hand, countries in which the resources are less expensive can have overestimated efficiency scores. The former is called the Baumol (1967) effect. Moreover, some issues can occur with output measurement. Since public goods are not tradable, there is no information on their prices. With no information on output prices, it becomes difficult to take the output quality into account. By comparing only quantity, important information might be omitted causing biased results.

#### **4. Review of the recent literature on government expenditure efficiency**

A systematic review of the related papers on efficiency and the optimal government size can be found in the appendix. While many of them apply to the EU countries, the OECD countries are the most investigated in this field. Considering that most EU countries are members of OECD, literature review includes papers based on both samples. The results suggest that there is large space for reducing government expenditure by using resources more efficiently (Afonso *et al.*, 2005a, 2010; Afonso & St Aubyn, 2005b; Aristovnik, 2009, 2011; Bađun *et al.*, 2014). Afonso *et al.* (2005a) find that the average input efficiency of the EU-15 shows that the same level of output could be attained using only 73% of the inputs. Bađun *et al.* (2014), on the other hand, find that the average optimal size

of government in old EU countries is larger than that in new EU countries. Moreover, old EU member states have, on average, more efficient governments than new EU countries regarding education expenditure, health care, public investment and public administration.

Research in individual spending areas is more frequent than aggregate level analysis with health and education in the lead. The usual monetary input for education is public expenditure on education (% of GDP) or (public) expenditure per student (% of GDP *per capita*), while quantitative input is hours per year in school. The education output is usually test results (PISA), secondary or tertiary school enrollment or teacher/pupil ratio. The usual monetary input for health sector is average public spending on health (% GDP) or health spending *per capita* (private and public) while quantitative inputs are number of doctors, nurses, hospital beds etc. The most common health outputs are infant mortality rate and life expectancy at birth. For the efficiency at aggregate level the usual input is total government expenditure (% GDP) and the output is per GDP growth rate or public sector performance composite indicator (PSP). Some researchers use Human Development Index as the output (Prasetyo, 2013).

As mentioned above, recent papers include the analysis of efficiency determinants. Since this is an in-depth analysis, efficiency determinants become more specific and targeted. Due to limited space, only the most frequent ones are reviewed in this paper. One of them is the size of government expenditure. Afonso *et al.* (2005a) find that “small” governments are the most efficient among industrialised countries, implying diminishing marginal products of higher public spending. Hauner & Kyobe (2010) and Herrera & Pang (2005) reach the same conclusion for health and education sector, that higher government expenditure (% of GDP) is associated with lower efficiency. Aristovnik (2009) finds a negative effect of high public spending on health efficiency. On the other hand, at local government level, the efficiency scores are found to be higher for large municipalities. (Balaguer-Coll *et al.*, 2007).

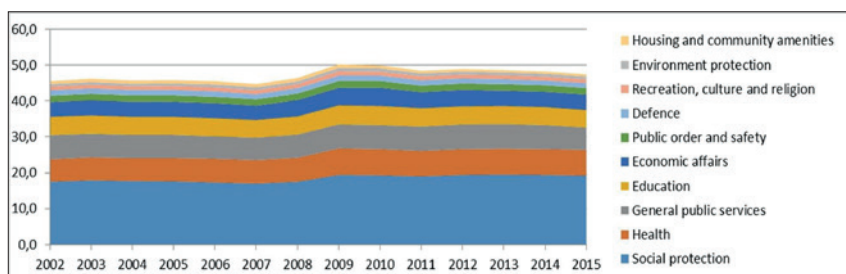
Another determinant is income *per capita*, found to have a positive effect of efficiency on aggregate level (Agasisti, 2011; Afonso *et al.* 2010) and for health and education (Herrera & Pang, 2005; Afonso & Aubyn, 2006; Hauner & Kyobe, 2010). It was found that a country's openness had a negative effect on efficiency (Bađun *et al.*, 2014; De Witte & Moesen, 2010). The explanation would be that open economies are more sensitive to external shocks and need a larger government take on the role of economy stabilizer (Rodrik, 1998). It was proven that family size had a positive effect on gross efficiency (Bađun *et al.*, 2014; De Witte & Moesen, 2010). Countries with larger average family size can attain the same growth rates with lower government expenditure. Findings show that a higher degree of urbanisation has a positive effect on aggregate level efficiency (De Witte & Moesen, 2010), also in health and education (Herrera & Pang, 2005). Higher urbanisation enables providing public services at lower costs through the economy of scale. Regarding capital stock of a country, Afonso *et al.* (2010) point out that physical capital has

a positive effect on government efficiency. Countries with larger physical capital stock, measured by the share of gross investment in GDP, can attain the same growth rates with less government expenditure (Bađun *et al.* 2014). It was found that greater population density, like urbanisation, had a positive effect on efficiency due to economies of scale which enable the provision of public goods and services at a lower cost (Herrera and Pang, 2005; De Witte & Moesen, 2010). It was also found that greater population density improved the performance in education and health (Hauner & Kyobe, 2010).

## 5. The structure of government expenditure in the European Union

The average EU-28 general government expenditure has been continuously stagnating since its peak in 2009 (induced by the economic crisis, increases in unemployment and social protection) when it amounted to 50.1% of GDP. It decreased from 47.3% of GDP in 2015 to 46.6% of GDP in 2016. The greatest reduction was reported in Greece, Bulgaria and Slovakia respectively. General government expenditure in the EU varied between 29.4% of GDP in Ireland and 57.0 % of GDP in both France and Finland in 2015. Regarding the general government expenditure structure, notably four government functions amount to 79.2% of total expenditure in 2015. These are respectively social protection (40.6% of the total), health (15.2% of the total), general public services (13.1% of the total) and education (10.3% of the total).

Growing share of government expenditure in GDP was primary driven by growing social protection and health expenditure. Social protection expenditure as the largest function has become more important in terms of share of GDP and in the share of total expenditure. It increased in the share of GDP by 1.7 p.p. between 2002 and 2015. A slight slowdown is noticeable in the last two years when it decreased from 19.4% of GDP in 2014 to 19.2% of GDP in 2015. It was accompanied by total general government expenditure slowdown. Health expenditure kept a stable share in the past 4 years (7.2% of GDP). The evolution of EU-28 general government expenditure by function as share of GDP between 2002 and 2015 is illustrated in Graph 1.

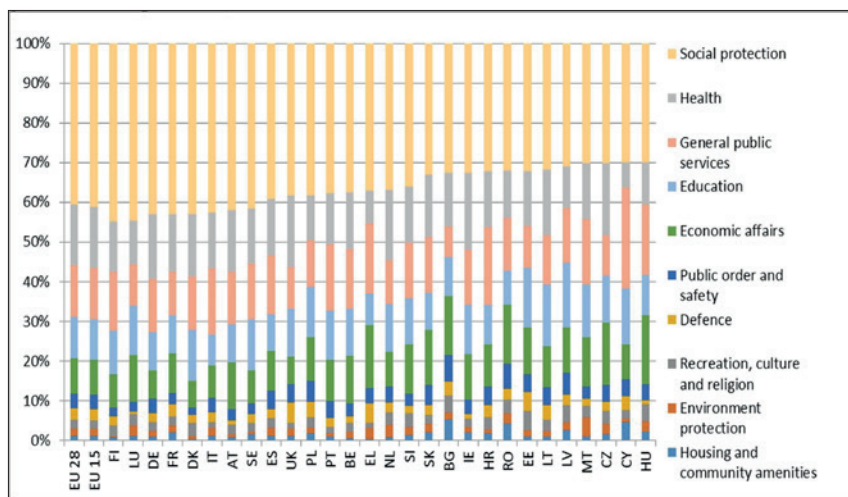


**Graph 1.** EU-28 average general government expenditure by function 2002-2015 (% of GDP)

Source: Eurostat; authors' calculations

Regarding the average shares of total expenditure, social protection in the EU increased in the share of total expenditure from 38.4% in 2002 to 40.6% in 2015, and continues to move upwards. Health expenditure increased from 13.7% in 2002 to 15.2% in 2015, while education has been on a downward trend in the last years (from 11.1% in 2002 to 10.3% in 2015). General public services ranged from 14.9 % in 2002 to 13.1 % of total expenditure in 2015. The shares of each function in total expenditure are very stable. However, a trend towards an increase in social protection (+2.2 p.p.) and health (+1.5 p.p.) shares at the expense of general public services (-1.8 p.p.), education (-0.8 p.p.), housing and community amenities (-0.6 p.p.), and defence (-0.4 p.p.) shares can be noticed in the period 2002-2015.

Observing government expenditure structure across the EU countries, it is evident from Graph 2 that shares show significant heterogeneity. Relatively higher shares of social protection are reported in the old EU member states compared to the new EU member states (joined 2004 or after). Social protection varies from 29.9% of the total in Cyprus to 44.9% of total expenditure in Finland. The divergence across the EU countries can be noted in public health expenditure. It ranges from 6.4% in Cyprus to 19.3% of total government expenditure in Ireland.



**Graph 2.** EU-28 General government expenditure by function in 2015 (% of total government expenditure)

Source: Eurostat; authors' calculations

Along with the fact that education and health have features of private goods, it is important to account not only for public expenditure, but also include also private expenditure on education and health. According to WHO data, high variety can be found across countries. Public expenditure on health in the EU amounted to, on average, 73 % of total health expenditure in 2014. The reported range is between 45% of the total in Cyprus and 87% of total health expenditure in the Netherlands. Public expenditure on education is generally larger in share than private when

compared to health expenditure. Public expenditure accounts for the average 88% of education expenditure ranging from 79% in the United Kingdom to 98% of education expenditure in Finland in 2011 (Eurostat, 2017).

The reported data show a large variety of government expenditure size and structure across countries, which can be a serious drawback in efficiency analysis. Moreover, with different tradition of financing public services among countries (private vs. public funding), some countries are not suitable for comparison. Leaving out the private sources of health and education expenditure could result in serious bias. All these constraints need to be borne in mind when selecting the sample, conducting the research and interpreting the results.

## 6. Conclusion

In the environment of government expenditure cuts being in the centre of attention of both economists and the public, the question of optimal government size and its efficiency is taking center stage. Numerous research have been conducted on this topic, both parametric and non-parametric. It can be concluded from the literature review that most countries suffer from government inefficiency and could retain the same output with lower government size. With fiscal pressure most countries are facing, these findings provide a positive sign that substantial resources can be saved without hampering the economy's growth. However, more recent research include 2-stage or 3-stage approaches to investigate the possible exogenous environmental factors affecting efficiency. These newer, more sophisticated methods can distinguish inefficiency from other factors affecting the performance that is beyond control of policy makers. Substantial gains in measurement techniques have been made in the past few years; however the availability of data is a drawback in the analysis. For future research, it would be useful to track efficiency progress in countries over time. Given the drawback of non-parametric methods and sensitivity of their results to sample variation, it would be beneficial to apply the parametric methodology to check the robustness of the results. The future is in a more targeted analysis on specific public functions where the inputs, outputs and drivers of efficiency can be more accurately measured. A deeper analysis could help create a targeted policy mix to improve efficiency and assess the performance of the public sector. A more detailed research of causes of inefficiency in specific public services would help reveal the mystery behind the varying efficiency coefficients across countries. Nowadays, efficiency analysis is a developing area of research, expected to become even more important in the coming years with substantial contributions to public finance management.



## References:

- Adam, A., Delis, M., Kamas, P. (2011.), Public sector efficiency: leveling the playing field between OECD countries, *Public Choice*, 146(1), p. 163-183. DOI: 10.1007/s11127-009-9588-7
- Afonso, A., Aubyn, M. S. (2006.). Cross-country efficiency of secondary education provision: A semi-parametric analysis with non-discretionary inputs, *Economic modelling*, 23(3), p. 476-491. <https://doi.org/10.1016/j.econmod.2006.02.003>
- Afonso, A., Fernandes, S. (2008.), Assessing and explaining the relative efficiency of local government, *The Journal of Socio-Economics*, 37(5), p. 1946- 1979., DOI:10.1016/j.socec.2007.03.007
- Afonso, A. Jalles, J.T. (2011.), Economic Performance and Government Size, European Central Bank, Working paper series, No. 1399.
- Afonso, A., Schuknecht, L., Tanzi, V. (2005a.), Public sector efficiency: an international comparison, *Public choice*, 123(3), p. 321-347, DOI: 10.1007/s11127-005-7165-2
- Afonso, A., Schuknecht, L., Tanzi, V. (2010.), Public sector efficiency: evidence for new EU member states and emerging markets, *Applied Economics*, 42(17), p. 2147-2164., DOI: 10.1080/00036840701765460
- Afonso, A., St Aubyn, M. (2005b.), Non-parametric approaches to education and health efficiency in OECD countries, *Journal of Applied Economics*, 8(2), p. 227-246.
- Agasisti, T. (2011.), Performances and spending efficiency in higher education: a European comparison through non-parametric approaches, *Education Economics*, 19(2), p. 199-224., DOI: 10.1080/09645290903094174
- Angelopoulos, K., Philippopoulos, A., Tsionas, E. (2008.), Does public sector efficiency matter? Revisiting the relation between fiscal size and economic growth in a world sample, *Public Choice*, 137(1), p. 245-278., <https://doi.org/10.1007/s11127-008-9324-8>
- Aristovnik, A. (2009.), Public Sector Efficiency and Effectiveness – An Application to the New EU Member States and Croatia (April 2, 2009). Proceedings of 7th International Conference «Economic Integration, Competition and Cooperation», 2-3 April, 2009, Opatija, University of Rijeka – Faculty of Economics, <https://ssrn.com/abstract=2237404> or <http://dx.doi.org/10.2139/ssrn.2237404>
- Aristovnik, A. (2011.), An analysis of the efficiency of education spending in central and Eastern Europe. In Management, Knowledge and Learning (MakeLearn) International Conference, 22nd to 24th. Celje, Slovenia.
- Bađun, M., Pribičević, V., Deskar-Škrbić, M. (2014.), Government size and efficiency as constraints to economic growth: comparing Croatia with other European countries, *Post- Communist Economies*, 26(3), p. 297-323., DOI: 10.1080/14631377.2014.937089

Balaguer-Coll, M. T., Prior, D., Tortosa-Ausina, E. (2007.), On the determinants of local government performance: A two-stage nonparametric approach, *European Economic Review*, 51(2), p. 425-451., DOI:10.1016/j.euroecorev.2006.01.007

Barro, R.J. (1990.), Government spending in a simple model of endogenous growth, *Journal of political economy*, 98 (5), p. 103–125., <https://doi.org/10.1086/261726>

Baumol, W. J. (1967.), Macroeconomics of unbalanced growth: the anatomy of urban crisis, *The American economic review*, 57(3), p. 415-426.

Charnes, A., Cooper, W. W., Rhodes, E. (1978.), Measuring the efficiency of decision making units, *European journal of operational research*, 2(6), p.429-444., [https://doi.org/10.1016/0377-2217\(78\)90138-8](https://doi.org/10.1016/0377-2217(78)90138-8)

Deprins, D., L. Simar, Tulkens, H. (1984.), Measuring Labour Efficiency in Post Offices, in: M. Marchand, e.a. (eds), *The Performance of Public Enterprises: Concepts and Measurement*, Elsevier, Amsterdam, p. 243-267.

De Witte, K., Moesen, W. (2010.), Sizing the government, *Public Choice*, 145(1), p.39-55., DOI: 10.1007/s11127-009-9527-7

Farrell, M. J. (1957.), The measurement of productive efficiency, *Journal of the Royal Statistical Society, Series A (General)*, 120(3), p. 253-290.

Hauner, D., Kyobe, A. (2010.), Determinants of Government Efficiency, *World Development*, 38(11), p. 1527–1542.

IMF (1998.), *World Economic Outlook*, IMF: Washington, DC, <https://doi.org/10.1016/j.worlddev.2010.04.004>

Herrera, S., Pang, G. (2005.), Efficiency of Public Spending in Developing Countries: An Efficiency Frontier Approach, World Bank Policy Research Working Paper.

Jafarov, E., Gunnarsson, V. (2008.), Efficiency of government social spending in Croatia, *Financial theory and practice*, 32(3), p.289-320.

Mutascu, M., Milos, M. (2009.), Optimal size of government spending. The case of European Union member states, *Annales Universitatis Apulensis: Series Oeconomica*, 11(1), p. 447-456.

Prasetyo, A. D., Pudjono, A. N. S. (2013.), Measuring Government Expenditure Efficiencies towards Peace and Human Development, *The Asian Journal of Technology Management*, 6(2), p. 82 -91., DOI: 10.1016/S2212-5671(13)00072-5

Rahmayanti, Y., Horn, T. (2011.), Expenditure efficiency and the optimal size of government in developing countries, *Global Economy and Finance Journal*, 4(2), p. 46-59.

Rahn, R., Fox, H. (1996.), What is the optimum size of government, Vernon K. Kriebel Foundation.

Ram, R. (1986.), Government size and economic growth: A new framework and some evidence from cross-section and time-series data, *The American Economic Review*, 76(1), p. 191-203.

Rodrik, D. (1998.), Why do more open economies have bigger governments? *Journal of Political Economy*, 106(5), p. 997-1032., <https://doi.org/10.1086/250038>

Scully, G. (1998.), Measuring the burden of high taxes , National Center for Policy Analysis, policy report, No. 215., <http://www.ncpa.org/pdfs/st215.pdf>

Scully, G. (2003.), Optimal taxation, economic growth and income inequality, *Public choice*, 115 (1), p. 299–312, <https://doi.org/10.1023/A:1024223916710>

Simar, L., Wilson, P. W. (2007.), Estimation and inference in two-stage, semi-parametric models of production processes, *Journal of econometrics*, 136(1), p. 31- 64, <https://doi.org/10.1016/j.jeconom.2005.07.009>

Tulkens, H. (1986.), The performance approach in public sector economics: An introduction and an example, *Annales de l'économie publique, sociale et cooperative*, 57(4), p. 429-443., DOI: 10.1111/j.1467-8292.1986.tb01937.x

## Appendix: Literature Review

Author	Analysis subject	Method and sample	Input and output	Results
<b>Adam et al. (2011)</b>	Efficiency of public spending on: education, health, social security and welfare, general-public services, economic affairs, overall government spending	<ol style="list-style-type: none"> <li>1. Input-oriented DEA</li> <li>2. SFA (to account for environmental factors)</li> <li>3. DEA sensitivity analysis</li> </ol> <p>Sample 19 OECD countries 1980 – 2000</p>	<p>INPUT: Government spending (% GDP) for each function OUTPUT:</p> <p>EDUCATION: (secondary school enrollment, quality indicator) HEALTH: (infant mortality rate, life expectancy at birth) WELFARE: (GINI coefficient) ECONOMIC AFFAIRS: (the electric power transmission losses, standard telephone access lines)</p> <p>GENERAL PUBLIC SERVICES:(corruption in government, bureaucratic quality measures)</p> <p>GENERAL GOVERNMENT: <u>general economic performance indicator</u> (unemployment rate, GDP <i>per capita</i>, annual GDP growth rate) and economic stability indicator (standard deviation of the GDP growth rate, the inflation rate)</p>	<p>-The results in all 3 stages are not significantly different, implying that governance quality is more important than the environmental factors.</p> <p>Efficiency determinants</p> <p>-Urbanisation rate, population density, proportion of the population above 65 years of age, international market openness, government stability measure, the investment profile variable, general proxy of socioeconomic conditions</p>

<p>- Public sector performance (PSP)</p> <p>- Public sector efficiency (PSE) composite and 7 sub-indicators (administrative, education and health outcomes, quality of public infrastructure, the rule of law, allocation, distribution and stabilisation functions)</p>	<p>- PSP</p> <p>- PSE</p> <p>- FDH (input and output efficiency)</p> <p>Sample: 23 industrialised countries 1990, 2000</p>	<p>INPUT: PSP, PSE, total public spending, average spending on goods, services, transfers, functional spending on education and health and public investment</p> <p>OUTPUT: Administration (corruption, red tape, quality of the judiciary, the size of the shadow economy) The education indicator (secondary school enrollment, OECD educational attainment indicators) The health performance indicator (infant mortality, life expectancy) public infrastructure indicator (communications quality, transport infrastructure quality) Income distribution (income share of the poorest 40% of the households) Economic stability (the coefficient of variation of output growth and average inflation) Economic performance (per-capita GDP, GDP growth, unemployment)</p> <p>FDH-INPUT: Public spending % GDP OUT-PUT: PSP indicator</p>	<p>- Small governments are the most efficient among industrialised countries, implying diminishing marginal products of higher public spending.</p> <p>- Large potential for expenditure savings in many countries</p> <p>FDH: - The average input efficiency of the EU-15 shows that the same level of output could be attained using only 73% of the inputs</p> <p>- The output efficiency score implies that with given public expenditures, PSP is 82% (or 18% less) of what could be attained with the same level of expenditure</p>
--	--	---	---

**Afonso et al. (2005a)**

<p><b>Afonso &amp; St Aubyn, 2005b)</b></p>	<p>Education efficiency Health efficiency</p>	<p>DEA, FDH input and output efficiency (quantity and monetary inputs) Sample: 30 OECD</p>	<p>INPUT: 1. monetary – spending per student (secondary) 2. quantitative – hours per year in school, teachers per 100 students OUTPUT: PISA results INPUT: 1. monetary – health spending <i>per capita</i> (private and public) 2. quantitative – doctors, nurses, hospital beds. OUTPUT: the infant survival rate, life expectancy</p>	<p>FDH education - In the education sector, the average input efficiency varies between 0.859 and 0.886 in health, between 0.832 and 0.946 - There is a scope for attaining higher output using the existing resources.</p>
<p><b>Afonso &amp; Aubyn(2006)</b></p>	<p>Secondary education efficiency</p>	<p>DEA/Tobit, single and double bootstrap Sample: 25 OECD</p>	<p>INPUT: teachers per student, time spent at school OUTPUT: PISA results</p>	<p>Countries could attain higher output by 11.6% using the same resources, on average Efficiency determinants: Country's wealth and parents' education levels are associated with higher education efficiency</p>
<p><b>Afonso et al. (2010)</b></p>	<p>General government spending efficiency</p>	<p>PSP, PSE DEA/Tobit Sample: EU-12</p>	<p>INPUT: the total Government spending (% GDP) OUTPUT: PSP</p>	<p>- Countries with public expenditure around 30% of GDP are the most efficient according to PSP and PSE - From the average input scores countries could attain the same output with 45% less resources - Average output scores show that countries are attaining around two-thirds of the output they could attain with the same resources Efficiency determinants: higher income, civil service competence, education levels and the security of property rights prevent government inefficiency</p>

<p><b>Afonso &amp; Fernandes (2008)</b></p>	<p>Efficiency of Portuguese local municipalities</p>	<p>DEA/Tobit approach Sample: 278 Portuguese municipalities, 2001</p>	<p>INPUT: level of <i>per capita</i> municipal spending for the input measure. OUTPUT: composite local government indicator of municipal performance</p>	<p>The results suggest that most municipalities could attain higher output with the same resources</p>
<p><b>Angelopoulos et al.(2008)</b></p>	<p>General government spending efficiency and growth</p>	<p>PSP, PSE, SFA, growth regression Sample: 64 developing countries 1980-2000</p>	<p>INPUT: Total government expenditure % GDP OUTPUT: PSP Growth regression: INDEPENDENT VARIABLES: total government expenditure (% GDP), PSE, TE, control variables DEPENDENT VARIABLE: GDP <i>per capita</i> growth</p>	<p>When the fiscal size is measured by the government consumption share in GDP, the size-efficiency mix is significant in explaining the size-growth relationship.</p>
<p><b>Aristovnik (2009)</b></p>	<p>Health and education efficiency</p>	<p>DEA, FDH Sample: new EU member states</p>	<p>Health: INPUT: average public spending on health (% GDP) in 2001-2004 OUTPUT: standardised death rates (per 100,000 people) Education: INPUT: average public spending on health (% GDP) in 2001-2004 period</p>	<p>- Efficiency and effectiveness differ across the sample - Health inefficiencies are related to high public spending - Education inefficiencies appear in the transforming of intermediate output into real outcomes. - Space to reduce public (health and education) spending and retain the same output.</p>

<p><b>Aristovnik (2011)</b></p>	<p>Education efficiency (primary, secondary, tertiary and total)</p>	<p>DEA output-oriented sample: 37 EU, OECD</p>	<p>OUTPUT: PISA test scores INPUT: (public) expenditure per student, tertiary (% of GDP <i>per capita</i>) - total expenditure on education (% GDP) OUTPUT: school enrollment tertiary, teacher/pupil ratio, primary completion rate, unemployment with tertiary education, labour force with tertiary education, and PISA 2006 average score.</p>	<ul style="list-style-type: none"> <li>- New EU member states show relatively high efficiency in tertiary education efficiency</li> <li>- CEE countries, Hungary, Estonia and Slovenia have high efficiency in primary, secondary and tertiary education, respectively.</li> <li>- Most CEE countries have a potential for increased efficiency in (public) spending</li> </ul>
<p><b>Bađun et al. (2014)</b></p>	<p>Total government spending efficiency, optimal government size, Public investment efficiency, public administration efficiency</p>	<p>DEA/Tobit approach Sample: EU member states plus Iceland and Norway</p>	<p>Total: INPUT: general government expenditure % GDP , OUTPUT: average GDP growth rate Public investment: INPUT: general government gross investment in % GDP OUTPUT: The public infrastructure quality Public administration: INPUT: share of expenditure on general government employees' salaries in GDP OUTPUT: government effectiveness, 2) regulatory quality and 3) rule of law efficiency of the legal framework in settling disputes and the number of days to start a business (both from GCR).</p>	<ul style="list-style-type: none"> <li>-The average optimal size of government in old EU countries is larger than that in new EU countries</li> <li>-The optimal government size for the sample is 39.21%; thus, the countries should, on average, reduce their general government expenditure (% GDP) by 3.54 p. p.</li> <li>Efficiency determinants</li> <li>- Family size has a positive effect on gross efficiency, openness has a negative effect on efficiency</li> <li>- GDP <i>per capita</i>, the share of population over 65, total population, population density, are insignificant.</li> <li>- Countries with larger physical capital stock can achieve the same growth rates with less government expenditure.</li> <li>- Countries with longer life expectancy show a larger optimal government size with the given growth rates.</li> </ul>



<p><b>De Witte &amp; Moesen (2010)</b></p>	<p>Optimal government size</p>	<p>DEA/Tobit regression  Sample: 23 OECD, 1999</p>	<p>INPUT: general government spending  OUTPUT: GDP growth, PSP composite indicator</p>	<p>Public sectors should decrease by 3.74 p. p. to reach an overall tax burden of 41.22% of GDP.  Efficiency determinants: larger exports have a negative effect on efficiency, GDP <i>per capita</i> shows a positive, but insignificant effect on efficiency, family size, country size, population density and urbanisation show a positive effect on efficiency</p>
<p><b>Herrera &amp; Pang (2005)</b></p>	<p>Efficiency of government spending in health and education</p>	<p>DEA, FDH, input and output oriented  Sample: 140 countries 1996-2002.</p>	<p>INPUT: Public expenditure on health <i>per capita</i> in PPP terms, public expenditure on education <i>per capita</i> in PPP terms OUTPUT: Education: Primary school enrollment, secondary school enrollment, literacy of youth, average years of school, first level complete, second level complete, and learning scores. Health: Life expectancy at birth, immunisation, disability, adjusted life expectancy</p>	<p>Higher expenditure levels, the wage bills a larger share of the total budget, publicly financed service provision, the prevalence of the HIV/AIDS epidemic, income inequality, and the degree of external aid financing (negatively associated with efficiency)  Degree of urbanisation (positively correlated with efficiency)</p>

<p><b>Jafarov &amp; Gunnarsson (2008)</b></p>	<p>Health care, education, social protection efficiency</p>	<p>DEA sample: social spending in Croatia is evaluated against frontiers estimated for the EU-15, the EU-10, Cyprus, Malta, and OECD countries.</p>	<p>INPUT: public health expenditures (PPP <i>per capita</i>), public expenditure social benefits (PPP dollars <i>per capita</i>)</p> <p>OUTPUT: Health care: intermediate output (the density of physicians, pharmacists, and healthcare workers, number of hospital beds, number of immunisation vaccines), outcome (infant, child, and maternal mortality rates; the standardised death rate from all causes per 1,000people, incidences of tuberculosis, healthy average life expectancy) - Education: intermediate output indicator (primary pupil-teacher ratios, enrollment rates, rates of progression to secondary education, and graduation rates), outcome indicator (PISA). Social protection: The key outcome indicator is poverty rates</p>	<p>Evidence of significant inefficiencies in Croatia's social spending (inadequate cost recovery for health and education services, weaknesses in the financing mechanisms and institutional arrangements, weak competition in the provision of social services, and weaknesses in targeting benefits)</p> <p>Efficiency determinants: Inefficiencies in health spending in Croatia related to high pharmaceutical spending, long stays in hospitals, low levels of out-of-pocket spending and of private participation. - Positive relationship between overall efficiency and the share of current expenditure in total education, classroom size, parents' education and school quality and autonomy indicators</p>
---	---	---	--	--

<p><b>Prasetyo (2013)</b></p>	<p>Government expenditure efficiency in health, education, transfers and subsidies</p>	<p>DEA, Malmquist Index Sample: 81 countries, 2006-2010</p>	<p>INPUT: government expenditures <i>per capita</i> on education and health sectors and also on subsidies and other transfers OUTPUT: Human Development Index</p>	<p>Armenia, Australia, Bangladesh, Chile, Georgia, Japan, Republic of Korea, Lao PDR, Madagascar, Niger, Norway, the Philippines, Sierra Leone, Singapore, the US, and Zambia remained efficient in the sample period</p>
<p><b>Rahmayant &amp; Horn (2011)</b></p>	<p>government efficiency optimal government size</p>	<p>DEA, panel fixed effect regression, (GMM-HAC) Sample: 63 developing countries 1990-2003</p>	<p>INPUT: government share to GDP (%) OUTPUT: - literacy rate for education (%), electricity use for infrastructure, life expectancy for health (%)</p>	<p>-Above a certain threshold, efficiency reduces the government expenditure required to maximise growth. - Optimal size for government expenditure exists if the country's efficiency score is higher than 0.865. -With the average sample efficiency score of 0.89, the optimal government expenditure is around 15% of GDP.</p>

**3.**

**Specific Fiscal Issues  
Relevant for Fiscal  
Consolidation**

**Helena Blažić, PhD, Full Professor**

University of Rijeka, Faculty of Economics and Business

e-mail: [helena.blazic@efri.hr](mailto:helena.blazic@efri.hr)

**Hrvoje Šimović, PhD, Associate Professor**

University of Zagreb, Faculty of Economics and Business

e-mail: [hsimovic@efzg.hr](mailto:hsimovic@efzg.hr)

**Ana Štambuk, PhD, Associate Professor**

University of Rijeka, Faculty of Economics and Business

e-mail: [ana.stambuk@efri.hr](mailto:ana.stambuk@efri.hr)

## INTRODUCTION OF A LOCAL REAL ESTATE TAX IN CROATIA: A SURVEY OF EXPERT AND PUBLIC OPINION<sup>85</sup>

### ABSTRACT

This paper presents the results of surveys of both expert and public opinion regarding the introduction of a local real estate tax in Croatia. The methodology encompasses descriptive statistics and two models (the PLS-SEM and the binomial probit regression model). Support for the introduction of the real estate tax is stronger among the experts than the general public. However, the experts differ on professional lines, with faculty specialized in economics from departments of finance and accounting generally being against the tax. Both models reveal positive relationships between support for the tax and support for more equitable taxation. Meanwhile, the broader expert model is, besides profession and equity, also negatively influenced by attitudes in favour of lower taxation costs and positively influenced by attitudes in favour of property being an adequate indicator of ability to pay and of the need to tax capital income. The public opinion model is positively influenced by equity and negatively influenced by negative expectations about the abolition of existing real estate user charges and taxes. Work status is also relevant.

**Key words:** real estate tax, expert opinion survey, public opinion survey, Croatia

### 1. Introduction

Local real estate tax (local recurrent immovable property tax) is traditionally regarded as a “good” local tax that increases fiscal decentralization and the fiscal capacities and autonomy of local government units (e.g. Oates, 1999; Bird, 2011: 3-5; Bahl and Bird, 2008:8-10; Bahl and Mar-

---

<sup>85</sup> This is a reprint of a paper published in the Lex Localis, Vol 14, No 1, 2016, <http://pub.lex-localis.info/index.php/LexLocalis/article/view/14.1.53-74%282016%29>

This work has been supported in part by the Croatian Science Foundation under project number IP-201311-8174 and in part by the University of Rijeka under project number 13.02.1.2.02

tinez-Vasquez, 2007:8). The strong and renewed interest for this tax is, besides strengthening local governments, especially in (post)transition and developing countries, also based on macroeconomic efficiency and equity aspects.

Real estate tax (local property tax) seems to be the best tax in terms of minimizing negative impacts on economic growth (Arnold 2008; Johansson et al. 2008; Arnold et al. 2011 and Xing 2011, 2012; European Commission, 2014a: 44; European Commission 2014b). This implies the necessity of shifting taxes away from corporate and personal (especially labor) income towards the real estate tax (i.e. recurrent tax on immovable property) (e.g. Arnold, 2008; Arnold et al., 2011; European Commission, 2014b, Coda Moscarola et al., 2015). This tax has been advocated especially in recent times of financial and economic crises and resultant fiscal consolidation (e.g. OECD 2010; Norregaard, 2013; IMF 2013; Garnier et al. 2014) not only based on its efficiency<sup>1</sup> and fiscal considerations<sup>2</sup>, but also on equity<sup>3</sup> considerations (Hills, 2013; IMF 2013). Unfortunately, many advantages of this tax (transparency, visibility, minimized evasion opportunities) are the main causes of its greater disadvantage – strong unpopularity among taxpayers (e.g. Norregaard, 2013: 4; Bahl and Martinez – Vasquez, 2007: 6; Bahl and Bird, 2008: 15-18; Cabral and Hoxby, 2012; Cole and Kincaid, 2006; National Public Radio/Kaiser Family Foundation/Kennedy School of Government, 2003: 3; Hammar et al., 2008). Therefore “the differences of opinion are probably stronger on property taxation than on most other taxes” (Norregaard, 2013: 4). While economists favour it, there is a widespread popular and hence political resistance” (Norregaard, 2013: 4; Bahl and Bird, 2008:15). The resistance could be especially pronounced in (post)transition and developing countries concerning low-income households with relatively highly valued real estate (e.g. European Commission, 2012: 23), which could lead to regressivity of the tax. An additional problem in comparison with the area-based assessments / user charges are administrative costs, that are particularly high and troublesome at the time of the introduction of “real” – value-based real estate tax. These costs and lack of administrative capacity in general are especially significant in developing and transition countries (e.g. Bahl and Martinez – Vasquez, 2007: 5-6, 14-15, Bahl and Bird, 2008: 15; McCluskey and Plimmer, 2011: 130-132; Bahl, 2013: 29-30; Ahmad et al., 2014: 24-27).

Unfortunately, the literature overview does not provide a general unique conclusion, so “... property taxes may be viewed as either equitable and efficient ways of raising revenue or regressive and undesirable forms of local public finance, depending upon one’s assumptions, the environment and how exactly the taxes are designed and applied.” (Bird and Slack, 2004: 1). So, with regard to (post)transition and developing countries, the local real estate tax is “still full of potential, but also full of uncertainty as an instrument for bringing revenues and accountability to sub-national governments” (Bahl and Martinez – Vasquez, 2007: 15). The intention of this research is to contribute to this issue.

Although Croatia's real estate tax legislative proposal dates from 2012, the debate about its pros and cons is ongoing. Establishing whether the proposal has general acceptance is difficult. This research aims to better understand attitudes (and associated underlying reasons and assumptions) in relation to this tax in Croatia, which are, of course, under the influence of its institutional and fiscal environment as well as design and application of the existing and future real estate charges/taxes. Two opinion surveys (expert and public) were used to facilitate proper assessment. Besides descriptive statistics and correlations, two relevant models were developed — the Partial Least Squares Structural Equation Model (PLS-SEM) and a binomial probit regression model—indicating influences on acceptance/rejection of the introduction of a real estate tax.

The research hypotheses indicate lesser support of the general public for real estate introduction in comparison with experts. Furthermore, decisions are expected to be influenced by attitudes towards equity, property as the ability to pay indicator, costs of taxation and general tax burden attitude, also including some other parts of the (local) tax system, as well as demographic characteristics.

After the introduction, the proposed legislative model of a real estate tax in Croatia is presented, including discussion of its pros and cons. The methodological presentation includes a description of two surveys along with other research methods. First, the results of the survey of expert opinion are presented using analysis of frequency distribution, median, mode, interquartile range and correlations between research questions on real estate tax, followed by application of the PLS-SEM model, and explanation of the latent endogenous variables using latent exogenous variables. Second, the same descriptive statistic data are presented for a shorter survey of public opinion on real estate taxation, followed by application of the binomial probit regression model.

## **2. Real estate tax in Croatia: proposed model**

Exceptional circumstances, such as economic crisis, necessitate rethinking and changes in the tax system. Thus, the Ministry of Finance, in 2012, proposed a new local tax: the real estate tax. This tax was an entirely new tax concept that did not previously exist in the Croatian tax system, and was part of the pre-election program of the new coalition Government (Ministarstvo financija 2012). Meanwhile, due to the critics (based mostly on the already stated arguments against such a tax) and unpopularity, as well as the upcoming elections, the Government delayed the introduction of the tax.<sup>4</sup>

### **2.1. The basic characteristics of the proposed model**

The real estate tax is intended to target all immobile properties located within the construction zone of the living area. These can be either constructed or unconstructed properties that are listed in the fiscal cadastre.

Taxpayers are to be either the landlord or users of the property, namely occupants/tenants. In the case of a concession or lease, the taxpayer would be the user of that concession/lease.

The tax base is to be 70% of the fiscal value, where fiscal value is based on the market value and parameters of the real estate as registered in the fiscal cadastre. The valuation would be set by the Tax Authority at intervals of 5 years or less. Local self-government units would be entitled to seek a reassessment from 3 years after the previous assessment if they believed a significant change in quality of life had affected the property value.

The planned tax rate is to be 1.5% levied on a predefined tax base. Tax relief is planned for properties that provide permanent housing (for the owner, family members and even tenants), and even for temporary residences and places of business. However, tax relief would not apply to unused, non-functional or illegal properties.

The proposed real estate tax would replace existing utility fees (the “communal charge” would be replaced immediately and the monument annuity would be replaced later) and tax on holiday houses (with the local income tax surtax to be replaced later). An easement system would ensure the final tax burden does not significantly exceed the burden of current utility fees and related taxes. A range of tax relief measures has been defined, with the actual amount of relief to be stipulated by local self-government units. Because real estate tax revenue goes to local units, those local units should spend part of the collected tax on financing public utilities.

## 2.2. Discussion

The Government announced a correction of the tax system to ensure it is equitable and considers the real economic strength of taxpayers. This means higher taxation of capital income and extra assets over and above those used directly by the taxpayer, including the introduction of a real estate tax (Vlada RH 2011: 11).

Currently in Croatia the only official tax on real estate ownership is a tax on holiday houses. The most important feature of this tax is that it is determined by the area of built floor space on the property rather than by its market value. The same is true for the local utility charge, called the “communal charge”, which is a simple local property tax based on property location and the area of built floor space on the property, and whose level varies significantly among autonomous municipalities. Other local real estate charges encompass the monument annuity, which is levied on real estate protected for historical value reasons and shared between local and central government, and the flooding amelioration charge, which is collected together with the communal charge and based on the same collection principle. Although the latter is collected by local municipalities and spent locally, it is revenue of Croatian Waters (the public company concerned with national water management).



During the time that Croatia was part of Yugoslavia, a property tax was levied on the ownership of real estate, allowing certain experiences and lessons to be drawn from the past. Problems and doubts from that period remain valid, such as the problem of determining the value of real estate (tax base), incomplete records of assets (lack of fiscal cadastre) and shortfalls in tax administration (Šimović 1989: 70-72). A recent example of mass valuation in Slovenia indicates the time, resources and knowledge needed to establish a tax base for the real estate tax (Mitrović and Žibrik 2012).

The main reason for the introduction of the real estate tax is fiscal. Existing property taxes in Croatia do not contribute significantly to public revenue, particularly at the local level. When the share of property taxes to the total tax revenues is compared between Croatia and other EU countries, it becomes clear that a property tax offers significant potential for revenue raising (Kesner-Škreb 2009; Kordić and Podborkić 2010; Blažić and Grdinić 2012; Kukić and Švaljek 2012; Rašić Bakarić 2014). Moreover, this potential contribution increases further when different local real estate charges are added (Fatur and Žiković 2009). Furthermore, reasons for the introduction of the “real” local real estate tax should be sought in the absence of such tax concepts in Croatia, which would mean establishing the tax base according to market (estimated, fiscal) value, which is the most common model throughout most of the EU.

The proposed real estate tax should immediately replace the local utility fee (communal charge) and tax on holiday houses. The basis for determining tax liability in the case of utility fees and taxes on holiday houses was property location and the area of built floor space on the property. By abolishing these tax forms their revenue loss would be neutralized by new real estate tax, while significant redistribution of the tax burden and strengthening of the equity principle is expected (Ministarstvo financija 2012 and 2013).

The Ministry of Finance stated a number of secondary reasons for introducing a real estate tax, such as the arrangement of cadastre (real estate evidence data), legalization of property ownership, shrinking the unofficial economy, boosting liquidity of the real estate market, and lowering real estate prices (Ministarstvo financija, 2013).<sup>5</sup>

The proposed real estate tax caused great debate between advocates and critics, based on its numerous apparent advantages and disadvantages. It should once again be mentioned that the introduction of the proposed tax would broaden the tax base, which would not only contribute to tax revenues, but also increase equity in taxation (Kordić and Podborkić 2010: 117). Besides fiscal effects, Blažić and Grdinić (2012: 74) point out the arguments in favour of the real estate tax, such as possible negative savings (through better use of existing assets), enhanced control over economic resources, status and non-monetary forms of income (unrealized capital gains and imputed rent). The real estate tax is considered less distortionary than a net wealth tax (synthetic taxation of

property) because it does not influence decisions of economic entities regarding labour supply and investment in capital (Blazić and Grdinić 2012: 76). Furthermore, Kukić and Švaljek (2012: 55–60) point out the advantages of the real estate tax in terms of improved stabilization, because it shifts the tax burden from labour to consumption and property (real estate), thus indirectly promoting employment. The real estate tax can also contribute to redistributive goals and ability-to-pay principle.

On the other hand, the proposed real estate tax has disadvantages. It represents an additional burden on taxpayers, increases administrative costs (especially the cost of determining the tax base), and in this context, uncertainty regarding effects on net revenue is usually the most emphasized drawback (Kordić and Podborčić 2010: 108; Kesner-Škreb 2012; Kukić and Švaljek 2012: 61-62). The most notable disadvantage is that the real estate tax would negatively impact investment allocation, because it would encourage economic entities to change their behaviours to avoid tax, whether fully or partially. Also, the complaint most often singled out by tax theorists is that the real estate tax, and other taxes on property, lead to double taxation of the same tax base (i.e. income). Taxation first occurs when income is earned, and then repeats when income is directed to pay real estate tax (Kukić and Švaljek 2012: 58-60).

The disadvantage emphasized by all authors, and even the Government, is the cost of establishing a fiscal cadastre. This disadvantage relates to problems of expensive administration and property valuation mentioned above, especially in the first years of implementation. Also, for any property tax, unanswered questions remain: what is net effect of a tax<sup>6</sup>, which property (real estate) should not be taxed, and how to estimate the tax base. Of course, the truth always lies somewhere in the middle; the real estate tax could enhance the Croatian local tax system, based on the key assumptions underlying its implementation.

### 3. Methodology

#### 3.1. Two Surveys

Opinion/attitude surveys in taxation research often include local real estate taxation and may be administered to experts (Slemrod 1995; Brannon 1995; Ashworth and Heyndels 1997; Lim et al. 2013, Šimović et al. 2014) as well as to the general public (e.g. National Public Radio/Kaiser Family Foundation/Kennedy School of Government 2003; Hammar et al. 2008; Cole and Kincaid, 2006).

To obtain a broad perspective on reactions to the proposed local real estate tax in Croatia, both types of survey were administered. First was a general expert opinion survey dealing with the entire Croatian tax system (and policy); this was followed by a public opinion survey focused specifically on the proposed local real estate tax.

The general expert opinion survey<sup>7</sup>, conducted in Croatia in the summer of 2013, covered taxes of all types and levied by all levels of government (92 statements/questions). The proposed local real estate tax thus was included as the future main source of local tax revenue, together with its relationship to other local taxes and charges, which are presumed to be abolished in the course of the tax's introduction and further development (including the elimination of the public utility charge, called the "communal charge", the tax on holiday houses and the surtax on personal income tax). The alternative to the proposed tax, i.e. a net wealth tax, was also questioned. Besides questions on specific tax types, the survey also included general questions on tax policy (efficiency, equity, tax burden shift in tax structure and tax compliance costs) in relation to new real estate taxation.

Croatian tax experts from the public (local government units, heads of finance departments, and the tax administration), private (tax advisers and accounting houses) and academic sectors were asked by e-mail to assess relevant on-line questions/statements using five-level Likert items. Out of 1,000 targeted population experts, 304 responded.

The second survey, that of public opinion, was performed in autumn 2014 and targeted the entire Croatian population over 18 years old, excluding collective households. For simplicity, but also because the proposed real estate tax lacked certain details, the survey focus was limited to developed real estate. With a confidence level of 95%, the smallest required sample size of 385 respondents (necessary to ensure a 5% margin of error) was successfully achieved, with the number of survey respondents reaching 407. The sample was structured by region, age, sex, type of settlement (i.e. urban versus rural) and work status.

A short telephone survey based on random sampling was used. The relatively short survey encompassed the following questions: two questions about taxpayers' perceptions/attitudes concerning the new real estate tax and redistributive characteristics of the tax system (using five-level Likert items), questions about real estate ownership, including number and type of properties owned, questions about taxpayer awareness of the current burden associated with the communal charge, as well questions regarding awareness/doubts concerning the announced abolishment of both the charge and other local taxes (following the introduction of new real estate tax), and finally questions on demographic characteristics.

### **3.2. Research methods**

Questions in both relevant surveys are analysed using descriptive statistics - frequency distribution, median, interquartile range and mode—and this is followed by correlation analysis of the questions on property taxation.

To establish the relationships relevant to the introduction of the proposed local real estate tax, Partial Least Square Structural Equation Modelling (PLS-SEM) or Partial Least Squares Path Modelling has been applied

to the expert survey, using all the relevant survey questions and data. This is a method for estimating causal relationships between unobserved latent variables, which are measured indirectly by observed or manifest variables. PLS-SEM comprises three components: inner or structural model, outer or measurement model and weighting schemes. The inner model specifies the relationship between latent constructs, the outer model specifies the relationship between latent constructs and their manifest variables, and the weighting scheme is used to determine the inner weights. This method is selected because the PLS-SEM model can deal with non-normal data and be applied to models with reflective and formative constructs. SmartPLS v. 3.1.6. (Ringle et al. 2014) was used to perform model estimation.

The model for the public opinion survey on real estate tax introduction was developed using binomial probit regression with relevant attitude/value questions and demographic variables as independent variables.

## 4. Results and discussion

### 4.1. Expert opinion survey: basic descriptive statistics results

The expert opinion survey entails 10 questions related to the introduction of a real estate tax in Croatia. These questions, together with basic descriptive statistics on the answers provided, are presented in Table 1.<sup>8</sup>

Questions-Statements	Answers (%) <sup>a</sup>					Mdn (IQR)	Mode
	1	2	3	4	5		
Q1: Croatia should introduce the proposed real estate tax.	19	18	9	34	20	4 (2-4)	4
Q2: Real estate tax should be a local tax.	8	8	11	29	44	4 (3-5)	5
Q3: Taxation should include other forms of property too (movable property, financial property etc.) i.e. should be a synthetic taxation of property (net wealth tax).	21	19	10	25	25	3,5 (2-4,75)	4 <sup>b</sup>
Q4: Regardless of any possible real estate tax introduction, communal charge should still remain local revenue.	30	13	9	19	29	3 (1-5)	1
Q5: Regardless of any possible real estate tax introduction, tax on holiday houses should remain local revenue too.	29	9	12	19	32	4 (1-5)	5
Q6: Regardless of any possible real estate tax introduction, surtax on personal income tax should still remain local revenue too.	18	12	10	24	36	4 (2-5)	5
Q7: Real estate tax should be assessed at the same rate for business and residents.	36	28	10	11	15	2 (1-4)	1
Q8: Business should be taxed at a higher rate than residents.	21	11	18	28	22	3 (2-4)	4
Q9: Residents should be taxed at a higher rate than business.	60	17	13	7	4	1 (1-2)	1
Q10: Property is a necessary additional indicator of ability to pay besides income.	6	9	11	33	41	4 (3-5)	5

**Table 1.** Frequency distribution, median (Mdn), interquartile range (IQR) and mode for experts

Source: Authors, based on survey responses

Notes: <sup>a</sup> 1-completely/strongly disagree, 2 – mostly disagree, 3 – neither agree nor disagree, 4 – mostly agree, 5- completely/strongly agree

<sup>b</sup> Multiple modes exist. The smallest value is shown

Although most respondents moderately supported the introduction of the real estate tax, the interquartile range reveals both a considerable number of moderate opponents of the tax as well as lack of strong supporters. Consensus that the tax should be local (as proposed by the legislator) was much stronger, with the bulk of respondents fully supporting the idea. The same degree (and structure) of support exists for the general idea of the introduction of property taxation. Since support for a net wealth tax, traditionally enforced by central government, is generally slightly weaker than that for the real estate tax (though the number of full supporters is also slightly higher), it can be concluded that respondents generally support property taxation, especially a local real estate tax, but have reservations concerning the current legislative proposal. Surprisingly, and in contrast to the proposed real estate tax that includes immediate abolition of the communal charge (local utility charge) and tax on holiday houses, as well as future abolition of the local personal income tax surtax, respondents generally do not favour the removal of those taxes/charges. This holds especially true for the taxes (i.e. the tax on holiday houses and the surtax), unlike for the communal charge, since the latter takes the form of a “simplified” (i.e. built area based) local real estate tax. The respondents thus are more aware of the similarity of the proposed tax to the “classic” real property tax, and of the fact that it is to be replaced by the more appropriate real estate tax. Not surprisingly, the mode for the communal charge is only 1, while for the other taxes and charges it is 5. As expected, local government financial officials favour retention of all three taxes/charges and this support rises with each additional question/statement, but academics also support this attitude, and especially in relation to the local (personal income tax) surtax (based on detailed survey results).<sup>9</sup>

The other surprising fact is that respondents, despite advocating strongly for property taxation (in addition to income taxation), remain reluctant to pay such taxes personally.

Furthermore, some consistency exists among respondent answers. This consistency is presented by the Spearman’s correlation coefficients, presented in Table 2. Table 2 shows the correlation matrix with only those coefficients that are statistically significant.

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Q1									
Q2	0.319***								
Q3	0.313***	0.118**							
Q4	-0.234***								
Q5	-0.248***			0.600***					
Q6		0.137**		0.368***	0.214***				
Q7				0.096*		0.097*			
Q8							-0.468***		
Q9							0.103*	-0.214***	
Q10	0.411***	0.197***	0.282***	-0.148***	-0.102*	0.136**			

**Table 2.** Correlation matrix (Spearman's rank correlation coefficients)

Source: Authors, based on survey responses

Notes: \*  $p < 0,1$ ; \*\*  $p < 0,05$ ; \*\*\*  $p < 0,01$

As expected, a significant and strongest positive correlation exists between maintaining the communal charge and the tax on holiday houses (despite the introduction of the local real estate tax). There is also a highly significant correlation between maintaining the local income tax surtax and both those questions, but the correlation is weaker. The reason lies in the immediate abolishment of the former taxes/charges and the planned future abolishment of the surtax.

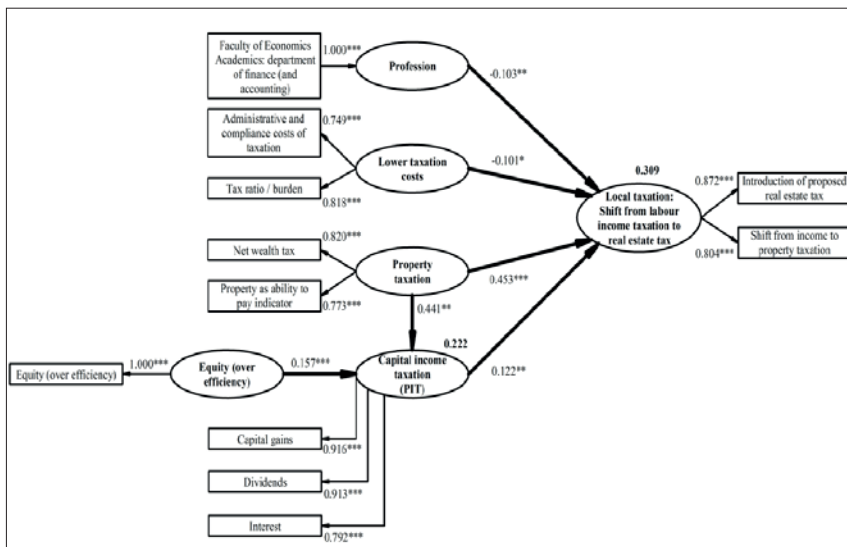
The highly significant and positive correlation between general attitude in favour of property taxation and the introduction of a real estate tax is completely expected, as is the correlation between the introduction of such a tax and its belonging to the local government. Not surprisingly, experts supporting a new real estate tax mostly also support the "theoretical ideal" of a synthetic property tax, i.e., a net wealth tax. However, the positive correlation between a general attitude in favour of property taxation and the property tax is stronger for the real estate tax than the net wealth tax (although one could expect the same correlation to exist in reverse). This probably reveals the awareness of respondents that recurrent property taxation, due to administrative obstacles, could be easily applied through a real estate tax.

## 4.2. PLS-SEM model

The different causal relationships of the introduction of a real estate tax with the survey questions have been further investigated using the PLS-SEM model (Figure 1). The manifest variables (survey questions/statements<sup>10</sup>) in rectangles (jointly) form latent variables in ovals. The direction of their relationships (arrows, including coefficients and their statistical significance) depends on whether the manifest variables are reflective (survey questions/statements reflecting taxpayers' opinions/attitudes about tax policy) or formative (explicit data, like profession). The inner model, that proves most of the hypotheses, is made by manifest variables (in ovals) and their relations (again, including coefficients and their statistical significance). The manifest variables that form the final

endogenous variable are the statement in favor of introduction of the proposed real estate tax (Q1) together with the statement that the tax burden should be shifted from income to property. These manifest variables form the final endogenous latent variable - the planned shift from income to property (real estate) taxation. This final endogenous variable is influenced by a couple of latent variables (inner model), which are measured indirectly by observed/manifest variables (outer model).

The highest positive influence comes from the general positive attitude towards property taxation, manifested by accepting property as a necessary additional indicator of ability to pay as well as supporting the net wealth tax as the “real” synthetic property tax. The same support for property taxation influences also support for capital taxation alongside personal income tax. Within personal income tax (PIT) the reliance on indirect taxation of property/capital through taxation of capital/property income (dividends, interests and capital gains), which naturally is positively influenced by the importance of equity (over efficiency), has a positive causal relationship with the final endogenous latent variable. Since the introduction of local real property taxation is accompanied by higher administrative costs of taxation and could result in a higher tax burden in the end, it is logical that it is negatively influenced by the latent variable reflecting attitude towards lower taxation costs (tax burden and especially administrative and compliance costs of taxation). In the end, profession of tax experts has been already found to play a significant role in the local real estate tax introduction (Blažič et al. 2014, 349-354, 358, 359). While academics from finance departments (from the faculties of economics) are strongly opposed to that proposal (median of 2), other experts are much supportive (median of 4). It is evident that the stated hypotheses/expectations about different influences on decision-making have been verified.



**Figure 1.** Path model

Source: Authors, based on survey responses

Notes: \*  $p < 0,1$ ; \*\*  $p < 0,05$ ; \*\*\*  $p < 0,01$

The estimated path model presented in Figure 1 is evaluated in two steps, by testing both the measurement model and the structural model.

#### 4.2.1. Assessment of the measurement model

The measurement model comprises both reflective and formative blocks. The reflective measurement blocks are assessed by reliability and validity analysis of multiple-item latent constructs. The formative measurement block is a single-item latent variable and has the control variable *Profession*, which shows whether a person is a member of the *Faculty of Economics Academics: Department of Finance (or accounting)*.

Reliability analysis is examined based on the internal reliability of the latent variables and the reliability of the indicator variables. Validity analysis is tested using convergent and discriminant validity.

Results of the internal consistency reliability and convergent validity analysis are given in the appendix Table A1, and indicator reliability measured by item loading is given in Table A3. The internal consistency reliability as indexed by the composite reliability exceeds the recommended threshold value of 0.7 (Fornell and Larcker 1981). Outer loadings exceeding 0.7 show that latent constructs explain a substantial amount of the variance of each indicator (Henseler et al. 2009).

Convergent validity measured by average variance extracted (AVE) exceeded the threshold of 0.5 (Fornell and Larcker 1981), indicating that on average the latent construct can explain over half the variance of its manifest variables.

Discriminant validity is analysed by the Fornell–Larcker criterion (Fornell and Larcker 1981) given in the appendix (Table A3) and by cross-loadings (Chin 1998, Grégoire and Fisher 2006) given in Table 3.

Appendix Table A2 shows that the square root of AVE of every latent construct (diagonal numbers) exceeds the correlation with every other latent construct. The Fornell–Larcker criterion indicates that the latent variable shares more variance with its block of manifest variables than with other blocks of manifest variables.

Table A3 shows that every manifest variable correlates more closely with its own latent variable than with any other latent variable. The Fornell–Larcker criterion shows that discriminant validity is reached on the construct level, while the cross-loadings show it is reached on the indicator level.

#### 4.2.2. Assessment of the structural model

Since the measurement model reached acceptable fit, the structural model could be assessed. Before assessing the structural model, multicollinearity is checked and all VIF values are less than 5, so path coefficients are not biased by significant collinearity (Hair et al. 2013).



The structural model is evaluated by analysing the explained variance, path coefficients and predictive relevance.

The explained variance of the endogenous latent construct is assessed by  $R^2$ . According to Chin (1998),  $R^2$  is evaluated as substantial, moderate, or weak based on values of 0.67, 0.33, or 0.19, respectively. Figure 1 shows that the  $R^2$  of *Capital income taxation (PIT)* is 0.22 and the  $R^2$  of *Local taxation shift from PIT surtax to real estate tax* is 0.31, so the factors included in the model explain weak and moderate variance for endogenous latent constructs.

The bootstrapping technique with 5000 samples is used to estimate the significance of the path coefficients. Table 3 shows that all the coefficients between latent constructs in the model are significant at least at the  $\alpha = 0.10$  level. *Property taxation* with  $\beta=0.453$  and *Capital income taxation (PIT)* with  $\beta=0.122$ , have positive direct effect on *Local taxation: Shift from PIT surtax to real estate tax*, while the control variable *Profession* with  $\beta=-0.103$  and *Lower taxation costs* with  $\beta=-0.101$  exert a negative direct effect. *Property taxation* has the greatest direct effect on *Local taxation: Shift from PIT surtax to real estate tax* and with indirect effect via *Capital income taxation (PIT)* has also the greatest total effect of 0.507.

The predictive relevance of the exogenous latent construct for endogenous latent construct is achieved by a blindfolding procedure that calculates the cross-validated redundancy measure  $Q^2$ . Positive  $Q^2$  implies the predictive relevance of the model for a particular reflective endogenous latent construct, while negative values imply a lack of predictive relevance (Chinn, 1988). Construct cross-validated redundancy for *Capital income taxation (PIT)* is 0.162 while that for *Local taxation: Shift from PIT surtax to real estate tax* is 0.204, indicating the model has predictive relevance.

	Original Sample (O)	Sample Mean (M)	Standard Error (STERR)	T Statistics ( O/STERR )	P Values
Capital income taxation (PIT) -> Local taxation: Shift from PIT surtax to real estate tax	0.122	0.124	0.061	2.013	0.044
Equity (over efficiency) -> Capital income taxation (PIT)	0.157	0.159	0.058	2.705	0.007
Lower taxation costs -> Local taxation: Shift from PIT surtax to real estate tax	-0.101	-0.113	0.060	1.688	0.091
Profession -> Local taxation: Shift from PIT surtax to real estate tax	-0.103	-0.101	0.051	2.032	0.042
Property taxation -> Capital income taxation (PIT)	0.441	0.441	0.052	8.418	0.000
Property taxation -> Local taxation: Shift from PIT surtax to real estate tax	0.453	0.455	0.051	8.840	0.000

**Table 3.** Path coefficients

Source: Authors, based on survey responses

### 4.3. Public opinion survey

Unlike the previous survey, the public opinion survey concentrated solely on the introduction of the real estate tax. The relevant attitude questions and basic descriptive statistics of the answers are presented in Table 4. Besides different demographic and real estate characteristics, question(s) about knowledge of tax/user charges and real estate economic plans (buying or selling property), three basic survey questions were set. The first one closely resembled the expert opinion survey question regarding real estate tax, but also used the term “property” since the tax is denoted as such to the general public. The equity question (Q2) was also modified to better suit the public. We also wanted to check whether people know/believe that communal charge (and tax on holiday houses) will be abolished, and so Q3 was also set. This related not so much to knowledge of the new law, but to what people expect to happen. Unlike the previous five Likert items, this one has only four answers—1) They will be abolished; 2) They will be reduced; 3) They will remain; 4) They will be increased—with “Do not know” answers being excluded from the analysis.

Questions-Statements	Answers (%) <sup>a, b</sup>					Mdn (IQR)	Mode
	1	2	3	4	5		
Q1: Do you think that Croatia should introduce new property tax e.g. real estate tax? <sup>a</sup>	39	10	21	8	21	3 (1-4)	1
Q2: Do you consider that tax system should contribute to the redistribution of income (from the richer to the poorer)? <sup>a</sup>	5	1	13	17	64	5 (4-5)	5
Q3: After the introduction of new property tax, what will, according to your opinion, happen to the communal charge and tax on holiday houses? <sup>b</sup>	9	19	38	34	-	3 (2-4)	3

**Table 4.** Frequency distribution, median (Mdn), interquartile range (IQR) and mode for general public

Source: Authors, based on survey responses

Notes: <sup>a</sup> Answers to questions Q1 and Q2: 1-completely/strongly disagree, 2 – mostly disagree, 3 – neither agree nor disagree, 4 – mostly agree, 5- completely/strongly agree

<sup>b</sup> Answers to question Q3: 1- They will be abolished, 2 – They will be reduced, 3- They will remain, 4 – They will be increased

As expected (indicated under hypothesis), the general public is less in favor of a local real estate tax introduction than tax experts. The Mann-Whitney test indicates that the difference in medians between experts and general population regarding a local real estate tax is significant,  $U=6752$ ,  $p=0.280$ .

As seen from the modes in Table 4, the largest groups of taxpayers strongly favour tax equity in general but oppose the introduction of the real estate tax and believe in increasing the real estate burden, i.e., they expect retention of the communal charge and the tax on holiday houses. However, medians still suggest strong reliance on equity together with acceptance, perhaps better expressed as indifference to the introduction of the real estate tax (again based on the belief that existing taxes will remain).

It is interesting to gain insights into the correlations among the questions, which are presented in Table 5, together with two additional questions concerning real estate planning (Q4 — Do you plan to sell the real estate within the next 5 years?; Q5 — Do you plan to buy real estate within the next 5 years?)<sup>11</sup>.

Question	Q1	Q2	Q3	Q4
Q2	0.178***			
Q3	-0.356***			
Q4		0.115**	Sd=0.507*	
Q5			-0.194***	0.323***

**Table 5.** Correlation matrix (Spearman's rank correlation coefficients)

Source: Authors, based on survey responses

Notes: <sup>a</sup> Somers' d for Q3/Q4

\*  $p < 0,1$ ; \*\*  $p < 0,05$ ; \*\*\*  $p < 0,01$

The very weak but still statistically significant positive correlation between Q1 and Q2 suggests that, as expected, some of those supporting the equity principle still believe it can be achieved through the introduction of the real estate tax. The slightly stronger negative correlation between Q1 and Q3 is very important, and indicates that the strongest opponents of the introduction of the real estate tax are those who remain sceptical about the government's promise to abolish existing real estate taxes or those who are not even aware of that promise. The median of Q1 (3, Table 4) together with this negative correlation offer potential for (mild) acceptance of the introduction of the real estate tax given sharing of appropriate information among the general public, followed by a strong and reliable assurance that the existing taxes/charges are to be abolished. Furthermore, even if both were accomplished, scepticism remains that a new tax might (somehow) bring an additional burden.

The remaining correlations are logical. Those planning to sell real estate (Q4) do so, among other reasons, because of financial problems and it is logical that they are more inclined to income redistribution (Q2). Naturally, since other factors influence this relationship the correlation is very weak. The positive correlation between Q4 and Q5 is easy to explain, while those highly engaged in selling real estate (Q4) are also highly engaged in buying it (Q5) owing to resale. More interesting for our analysis are the correlations of Q3 with Q4 and Q5, respectively, with the first being positive and the second being negative, as expected. Those who do not believe the existing real estate charge (and tax) will be abolished and even fear they will increase, combining with the new real estate tax to increase the combined tax burden, much more strongly favour divesting from real estate.

Ultimately, the binomial probit regression model for real estate introduction (Q1) was developed (Table 6), using Q2 and Q3 as well as one demographic variable (D1)—work status (employment)—as regressors<sup>12</sup>. For Q1 and Q2, the neutral answer (3) is omitted and the remaining answers are classified as either "Yes" (4, 5) or "No" (1, 2), where "No" is a reference value (RF). Q3 is divided into a group that believes the

previous charges/taxes will be abolished (reference value) and the remaining group that does not believe that (expecting a decrease, maintenance of the status quo, or increase). For the demographic variable (D1), work status is grouped as follows: permanent employment (reference value), fixed-term contract workers, unemployed, pensioners, students and housewives.

Variable	Coef.	Robust Std. Err.
Q2 Tax system should contribute to the redistribution of income	0.819**	0.378
Q3 Communal charge and tax on holiday houses will not be abolished	- 1.476***	0.413
D1: Work status:		
Fixed-term contract	-0.225	0.262
Unemployed	-0.647**	0.276
Pensioners	-0.322	0.210
Students	0.167	0.366
Housewives	-0.814	0.515
Constant	0.657	0.553
Log pseudolikelihood	-155.479	
Wald chi-squared	25.03***	

**Table 6** Binomial probit regression model for real estate tax introduction (Q1)

Source: Authors, based on survey responses

Notes: \*  $p < 0,1$ ; \*\*  $p < 0,05$ ; \*\*\*  $p < 0,01$

Q2: RF=tax system should not contribute to the redistribution of income

Q3: RF= Communal charge and tax on holiday houses will be abolished

D1 – Work status: RF= Permanent employment

As indicated by both correlation results and regression results (and in accordance with the hypotheses/expectations), acceptance of the introduction of a real estate tax is positively influenced by positive attitude towards income redistribution and negatively influenced by scepticism about the abolition of communal charges and the abolition of the tax on holiday houses. Furthermore, the only important demographic characteristic is work status. Thus not only does current income matter, but expected income matters even more. As expected, people that lack permanent employment are generally reluctant to accept the introduction of new real estate taxes. The only exception is student population that obviously expects (relatively) higher incomes in the near future. However, only unemployed people displayed statistical significance, which once again matches expectations.

## 5. Conclusion

Instead of a classical local tax on real estate as a main source of local government revenue, Croatia burdens real estate with local user charges (communal charges) and a tax on holiday houses, while simultaneously making extensive use of personal income tax surcharges as a main source of local tax revenues. A detailed proposal to introduce a local real estate tax was made in 2012, and included the removal of communal charges and the tax on holiday houses, as well as the future removal of the personal income tax surtax. However, the tax had not been introduced as of the end of 2014 and will not be introduced until further notice.

As expected, support for the introduction of the real estate tax in Croatia is stronger among experts than the general public. However, strong support is lacking even among experts, especially among faculty of economics' members from departments of finance and accounting. Support among experts for this tax and for the shift from income to property taxation is, regardless of their profession, negatively influenced by support for lower taxation (including both the official tax burden and the "hidden" tax burden in the form of tax compliance costs) and positively influenced by attitudes in favour of tax equity and of property being an indicator of adequate ability to pay, as well as the necessity of capital (income) taxation.

Interestingly, despite legislators explicitly announcing the removal of the existing real estate user charge (communal charge) as well as the tax on holiday houses (and in the future the local surtax) even some experts claim the communal charge should remain local revenue, and moreover this should apply especially to the tax on holiday houses and the local personal income surtax. Thus there is no doubt that the general public does not believe these taxes/charges will be withdrawn as a result of the introduction of the real estate tax, and fears an ultimate increase in the real estate tax burden. This fear is one reason for the rejection of this tax by some taxpayers, leading to the establishment of a statistically significant and moderately negative correlation. The public opinion binomial probit regression model of the introduction of the real estate tax confirms this negative relationship as well as the positive relationship with attitude to income redistribution and relevance of work status.

## Appendix

Latent constructs	Composite reliability	AVE
Capital income taxation (PIT)	0.907	0.766
Local taxation: Shift from PIT surtax to real estate tax	0.826	0.703
Lower taxation costs	0.761	0.615
Property taxation	0.776	0.634

**Table A1.** Internal consistency reliability and convergent validity

Source: Authors, based on survey responses

	Capital income taxation (PIT)	Equity (over efficiency)	Local taxation: Shift from PIT surtax to real estate tax	Lower taxation costs	Property taxation
Capital income taxation (PIT)	<b>0.875</b>				
Equity (over efficiency)	0.167	<b>Single-item</b>			
Local taxation: Shift from PIT surtax to real estate tax	0.348	0.099	<b>0.839</b>		
Lower taxation costs	-0.068	0.224	-0.142	<b>0.784</b>	
Property taxation	0.444	0.024	0.520	-0.059	<b>0.796</b>

**Table A2.** Fornell-Larcker criterion

Source: Authors, based on survey responses

Note: Bold numbers are square root of AVE

	Capital income taxation (PIT)	Local taxation: Shift from PIT surtax to real estate tax	Lower taxation costs	Property taxation
Administrative and compliance costs of taxation	0.023	-0.103	<b>0.749</b>	0.036
Capital gains	<b>0.916</b>	0.321	-0.029	0.365
Dividends	<b>0.913</b>	0.334	-0.048	0.369
Interest	<b>0.792</b>	0.257	-0.104	0.433
Introduction of proposed real estate tax	0.310	<b>0.872</b>	-0.170	0.451
Net wealth tax	0.432	0.383	-0.006	<b>0.820</b>
Property as ability to pay indicator	0.269	0.449	-0.092	<b>0.773</b>
Shift from income to property taxation	0.272	<b>0.804</b>	-0.057	0.421
Tax ratio/burden	-0.121	-0.118	<b>0.818</b>	-0.117

**Table A3.** Combined loadings and cross-loadings

Source: Authors, based on survey responses

Note: Bold numbers are outer loadings

## Notes

1. It is traditionally considered as efficient and the “second best” solution of taxing the “missing part” of income - imputed rent on owner-occupied housing (EC, 2012: 16; Norregaard, 2013: 16; Oates, 1999...), which is in accordance with the logic of the comprehensive income concept, and thereby also reduces the efficiency loss generated by other parts of the tax system related to owner-occupied housing (non-taxation of imputed interest and capital gains and possible deduction of mortgage interest). However, this could discourage the use of capital in a housing market
2. Although area-based assessments/charges as the existing alternative to real estate tax have lower administrative costs, “local governments are not likely to move to a higher intensity of property tax use with this approach” (Bahl and Martinez-Vasquez, 2007: 15). Area-based assessments may avoid problems of instability, but they “rarely raise significant revenue, for arbitrary levies are politically acceptable only when they remain at nominal levels” (Malme and Youngman, 2004:2).
3. Besides classical understanding of equity as progressivity (in relation to income), there is a question of appropriateness of using property, as an additional indicator of the ability to pay principle. The comprehensive personal net-wealth tax is a much better solution. Real estate tax is the “second best” solution, but the fact that introduction of net-wealth tax is almost impossible for (post)transition and developing countries (and still very complicated for developed countries), makes it much more attractive.
4. It was first delayed until 2015, and then until 2016. The current ruling coalition does not want to announce its introduction in the election year; however the renewed EC recommendation in favor of the tax could probably change this.
5. It should be noted that the huge resistance to this tax may be motivated by secondary objectives. Croatia is affected by a distortion of relative prices of real estate. Moreover, prices are adjusting either too slowly or not at all to existing market conditions (Posedel and Vízek 2011). The proposed real estate tax could impact the adjustment speed and decrease real estate prices, which is not in the interest of property owners.
6. Property taxes by themselves will always decrease the value of the taxed property, but if the local public expenditures create more benefits for property owners than the cost of taxation, the net effect of a tax and expenditure increase would be an increase in the value of the taxed property. Evidence on this subject usually suggests a decline in the value of a property (Carroll and Yinger, 1994).
7. It was based mostly on NTA survey, whose results were presented in Lim et al. (2013).

8. 1 – completely/strongly disagree, 2 – mostly disagree, 3 – neither agree nor disagree, 4 – mostly agree, 5 – completely/strongly agree
9. For the communal charge: median 4 and mode 5; for the tax on holiday houses: median 4,5 and mode 5; and for the surtax: median 5 and mode 5
10. Complete list of expert opinion survey questions/statements is presented in Šimović et al., 2014 (Appendix).
11. These questions had to be answered with simple answer of “No”, “Unsure” or “Yes”. The “Unsure” answer is also included in the correlation analysis, except for Q3/Q4 when only the exception of this answer led to a significant correlation.
12. It is interesting that other demographic variables such as education, income, residence ownership, region and sex, despite expressing statistical significance in the tests of their different individual relationships with Q1, are not significant in the regression model.



## References

- Ahmad, E., Brosio, G., Pöschl, C. (2014.), Local Property Taxation and Benefits in Developing Countries-overcoming political resistance?, *LSE Asia Research Centre Working Paper*, No 65.
- Arnold, J. (2008.), Do Tax Structures Affect Aggregate Economic Growth?: Empirical Evidence from a Panel of OECD Countries, *OECD Economics Department Working Papers*, No. 643.
- Arnold, J.M., Brys, B., Heady, C., Johansson, A., Schwellnus, C., Vartia, L. (2011.), Tax Policy for Economic Recovery and Growth, *Economic Journal*, 121(550), p. F59–F80, doi: 10.1111/j.1468-0297.2010.02415.x.
- Ashworth, J., Heyndels, B. (1997.), Politicians' Preferences on Local Tax Rates: An Empirical Analysis, *European Journal of Political Economy*, 13(3), p. 479-502.
- Bahl, R., Martinez-Vasquez, J. (2007.), The Property Tax in Developing Countries. Current Practice and Prospects, *Lincoln Institute of Land Policy Working Paper*, WP07RB1.
- Bahl R., Bird, R. (2008.), Subnational Taxes in Developing Countries: The Way Forward, *Public Budgeting & Finance*, 28(4), p. 1–25, DOI: 10.1111/j.1540-5850.2008.00914.x.
- Bahl, R. (2013.), A Retrospective on Taxation in Developing Countries: Will the Weakest Link be Strengthened?, *International Center for public Policy Working Paper*, p. 13-18.
- Bird, R. (2011.), Subnational taxation in Developing Countries: A Review of the Literature, *Journal of International Commerce, Economics and Policy*, 2(1), p. 1-23, DOI: 10.1142/S1793993311000269.
- Bird, R. M. & Slack, E., (eds) (2004.), *International Handbook of Land and Property Taxation*, Cheltenham, UK: Edward Elgar
- Blažić, H., Grdinić, M. (2012.), Porez na imovinu u EU, In: Z. Prohaska et al. (Eds.) *Financijska tržišta i institucije Republike Hrvatske u procesu uključivanja u Europsku uniju*, Rijeka: Ekonomski fakultet, p. 71-91
- Blažić, H., Šimović, H., Štambuk, A. (2014.), Mjesto socijalne politike u poreznoj politici RH: Anketna poreznih stručnjaka, *Revija za socijalnu politiku*, 21(3), p. 327-360. doi: 10.3935/rsp.v21i3.1216.
- Brannon, G.M. (1995.), What will the "NTA Opinions" have to do with Federal Tax policy – 1995-6., *National Tax Journal*, 48(1), p. 149-154.
- Cabral, M., Hoxby, C. (2012.), The Hated Property Tax: Salience, Tax Rates, and Tax Revolts, *NBER Working Paper*, 18514.
- Carroll, R.J., Yinger, J. (1994.), Is the Property Tax a Benefit Tax? The Case of Rental Housing, *National Tax Journal*, 47(2), p. 295-316.

Chin, W. W. (1998.), The partial least squares approach to structural equation modelling, In G. A. Marcoulides (Eds.), *Modern methods for business research*, Mahwah, New Jersey: Lawrence Erlbaum Associates, p. 295–336.

Coda Moscarola, F., Columbino, U., Figari, F., Locatelli, M. (2015.), Shifting Taxes from Labour to Property. A Simulation under Labour Market Equilibrium. *IZA Discussion Paper*, No. 8832.

Cole, R. L., Kincaid, J. (2006.), Public Opinion on U.S. Federal and Intergovernmental Issues in 2006: Continuity and Change, *Publius*, 36(3), p. 443-459, doi: 10.1093/publius/pjj024.

European Commission (2012.), Possible reforms of real estate taxation: criteria for successful policies, *European Economy Occasional Papers*, No. 119.

European Commission (2014a.), *Taxation trends in the European Union*, 2014 edition, Luxembourg: European Commission

European Commission (2014b.), *Tax Reforms in EU Member States 2014*, Luxembourg: European Commission

Fatur, T., Žiković, S. (2009.), Porez na imovinu u Republici Hrvatskoj – Stvarnost ili mit. *Računovodstvo, revizija i financije*, 11, p. 112-120.

Fornell, C., Larcker, D. F. (1981.), Structural equation models with unobservable variables and measurement error: Algebra and statistics, *Journal of marketing research*, 18(3), p. 382-388.

Garnier, G., György, E., Heineken, K., Mathé, M., Puglisi, L., Ruà, S., Skonieczna, A., Van Mierlo, A. (2014.), A wind of change? Reforms of Tax Systems since the launch of Europe 2020, *EC Taxation paper*, No 49.

Grégoire, Y., Fisher, R. J. (2006.), The effects of relationship quality on customer retaliation, *Marketing Letters*, 17(1), p. 31-46.

Hair Jr, J. F., Hult, G. T. M., Ringle, C., Sarstedt, M. (2013.), *A primer on partial least squares structural equation modeling (PLS-SEM)* (Thousand Oaks: SAGE).

Hammar, H., Jagers, C.J., Nordblom, K. (2008.), Attitudes towards Tax Levels: A Multi-Tax Comparison, *Fiscal Studies*, 29(4), p. 523-543.

Henseler, J., Ringle, C. M., Sinkovics, R. R. (2009.), The use of partial least squares path modeling in international marketing, *Advances in international marketing*, 20, p. 277-319.

Hills, J. (2013.), Safeguarding social equity during fiscal consolidation: Which tax bases to use?, In: S. Princen, Mourre, G. (Eds.), *The role of tax policy in times of fiscal consolidation*, Brussels: European Commission, European Economy, Economic Papers 502, August 2013, p.80-93.

IMF (2013) *Fiscal monitor: Taxing Times*, Washington D.C.: IMF

Johansson, Å., Heady, C., Arnold, J.M., Brys, B., Vartia, L. et al. (2008.), Taxation and Economic Growth, *OECD Economics Department Working Papers*, No. 620.

Kesner-Škreb, M. (2009.), What should one know about immovable property taxation in Croatia? *Newsletter*, No. 46, <http://www.ijf.hr/eng/newsletter/46.pdf>

Kesner-Škreb, M. (2012.), Much ado about nothing – three questions about immovable property taxation in Croatia. *Newsletter*, No. 66, <http://www.ijf.hr/upload/files/file/ENG/newsletter/66.pdf>

Kordić, G., Podborkić, R. (2010.), Oporezivanje imovine: hrvatska praksa i europska iskustva, *Ekonomska misao i praksa*, 19(1), p. 105-120.

Kukić, N., Švaljek, S. (2012.), Porez na nekretnine: osnovne značajke i rasprava o uvođenju u Hrvatskoj, *Privredna kretanja i ekonomska politika*, 22(32), p. 49-90.

Lim, D., Slemrod, J., Wilking, E. (2013.), Expert and public attitudes towards tax policy: 2013, 1994, and 1934, *National Tax Journal*, 66(4), p. 775-806.

McCluskey, W.J., Plimmer, F. (2011.), The Creation of Fiscal Space for the Property Tax: The Case of Central and Eastern Europe, *International Journal of Strategic Property Management*, 15 (2), p.123-138.

Malme, J., Youngman, J. (2004.), The Property Tax in a new Environment: Lessons from International Tax Reform Efforts, *International Studies Program of the Andrew Young School of Policy Studies - Working Paper*, No. 04-49.

Ministarstvo financija (2012.), Nacrt prijedloga Zakona o porezu na nekretnine, <http://www.mfin.hr/adminmax/docs/ZAKON%20O%20POREZU%20NA%20NEKRETNINE%20%20s%20obraz%20%20211112x.pdf>

Ministarstvo financija (2013.), Iskaz o procjeni učinaka propisa za prijedlog zakona o porezu na nekretnine, <http://www.mfin.hr/adminmax/docs/OBRAZAC%20ISKAZA%20O%20PROCJENI%20UCINAKA%20PROPISA%20za%20Nacrt%20prijedloga%20zakona%20o%20porezu%20na%20nekretninex.pdf>

Mitrović, D., Žibrik, N. (2012.), Development and enforcement of a market based massed valuation system for real property in Slovenia, In: Gayer, C., Mourre, G. (Eds.), *Property taxation and enhanced tax administration in challenging times*, Bruxelles: European Commission, European Economy, Economic Papers, No 463., p. 46-50.

National Public Radio/Kaiser Family Foundation/Kennedy School of Government (2003.), National Survey of Americans' Views on Taxes <http://kaiserfamilyfoundation.files.wordpress.com/2003/03/3340-t-survey-of-americans-views-on-taxes.pdf>.

- Norregaard, J. (2013.), Taxing Immovable Property. Revenue Potential and Implementation Challenges, *IMF Working Paper*, 13/129.
- Oates, W. E. (1999.), Local Property Taxation: An Assessment, *Land Lines: Newsletter of the Lincoln Institute of Land Policy*, 11 (3), p.1-3.
- OECD (2010.), Tax Policy Reform and Economic Growth, *OECD Tax Policy Study*, No. 20.
- Posedel, P., Vizek, M. (2011.), Are house prices characterised by threshold effects? Evidence from developed and post-transition countries, *Czech Journal of Economics and Finance (Finance a uver)*, 61(6), p. 584-600.
- Rašić Bakarić, I. (2014.), Osnovne značajke poreza na nekretnine: njegova primjena u Hrvatskoj i ostalim zemljama članicama Europske unije, *Ekonomski pregleđ*, 65(5), p. 385-415.
- Ringle, C. M., Wende, S., Becker, J.M. (2014.), *Smartpls 3* (Hamburg: SmartPLS).
- Šimović, H., Blažić, H., Štambuk, A. (2014.), Perspectives of tax reforms in Croatia: expert opinion survey, *Financial Theory and Practice*, 38(4), p. 405-439, doi: dx.doi.org/10.3326/fintp.38.4.2
- Šimović, J. (1989.), *Porezni sistem i porezna politika općina u Jugoslaviji*, Zagreb: Institut za javne financije
- Slemrod, J. (1995.), Professional opinions about tax policy: 1994 and 1934, *National Tax Journal*, 48(1), p. 121-147.
- Vlada RH (2011.), *Program Vlade Republike Hrvatske za mandat 2011.-2015*, <https://vlada.gov.hr/UserDocsImages//novosti/Arhiva//Program%20Vlade%202011-2015.pdf>.
- Vlahović Žuvela, E. (2014.), Porez na imovinu tek 2020., Interview with minister Boris Lalovac, *Banka*, 20(5), p. 16-26.
- Xing, J. (2011.), Does tax structure affect economic growth? Empirical evidence from OECD countries, *Oxford University for Business Taxation Working Paper*, No. 11/20
- Xing, J., (2012.), Tax structure and growth: How robust is the empirical evidence?, *Economics Letters*, 117(1), p. 379-382.

**Bojana Olgic Drazenovic, PhD, Assistant Professor**  
University of Rijeka, Faculty of Economics and Business  
e-mail: bojana.olgic.drazenovic@efri.hr

## THE IMPACT OF INTRODUCTION OF THE FINANCIAL TRANSACTION TAX IN CROATIA<sup>86</sup>

### ABSTRACT

Financial sector was the trigger of the recent crisis due to harmful effects of excessive risk-taking. At the same time, its high profitability, low taxation and state support resulted in high moral hazard of financial institutions and different national approaches for financial sector taxation. Therefore, nine European Union countries have agreed to adopt a unified FTT along with enhanced cooperation which should come into force during 2018. The main benefits of implementation of FTT is to generate significant fiscal revenues, to properly share the cost of the crisis with the financial sector, and to reduce the possibility of a new crisis. Adverse effects primary include the declining effectiveness of pricing mechanism. FTT is a policy tool that can raise a substantial amount of revenue and reduce the size of financial trading in relation to the economy's level of productive activity. The aim of this paper is to investigate the possibilities of introduction of FTT in the European Union, with special reference to the question of the potential application in the Republic of Croatia. Preliminary analysis suggests the conclusion that the economic and fiscal effects of the introduction of FTT in Croatia could not justify the cost of its implementation. Due to the underdeveloped, illiquid and highly concentrated capital market, introduction of the new tax burden might discourage potential investors. Furthermore, tax base for the Croatian capital market is very narrow, because there is no trading in derivatives, which in the initial proposal made up the largest part of the tax base in securities trading.

**Key words:** financial transaction tax, public revenues, financial crises, Croatia

### 1. Introduction

Taxation of the financial sector is a current issue with regard to current negative economic and financial trends in the world, but also considering the fiscal significance of this repercussion on financial and economic developments. The financial market collapse of 2007 has pointed out the shortcomings in the regulatory and supervisory framework of the financial system and the tendency of financial institutions to speculative behaviour and excessive risk taking. The public interest was particularly focused on reforming the financial sector to ensure fair contribution to public finances and to provide fair and long-term growth. Therefore, in addition to im-

---

<sup>86</sup> This work has been supported by the Croatian Science Foundation under the project number IP-2013-11-8174.

provement of supervisory and regulatory structures and new legislation aiming to strengthen the European Monetary Union, the European Commission (EC) and some Member States have prompted the question of introduction of the Financial Transaction Tax (FTT). tax on financial transactions implies an indirect form of tax payable when undertaking defined forms of financial transactions (purchase and / or sale of securities). FTT is an expression of the EU's overall efforts to address some of the causes and effects of financial crises, but also an attempt to make the financial sector pay its fair share for its role in the outbreak of the financial crises.

After continuous postponement of its implementation, some EU states have maintained their existing taxes while others, including France and Italy, independently introduced new ones (in 2012 and 2013 respectively). The first formal initiative for the unification of levying the financial transaction came with the EC proposal in September 2011. Due to the lack of unanimous Member States' support for this initiative, eleven European Union countries (EU) have agreed to establish the common financial transaction tax (FTT) under the procedure of enhanced cooperation.<sup>87</sup> Discussions on this proposal are still ongoing in the Council. In parallel, the proposal to use some of its proceeds as an own resource to the EU budget has been abandoned. Presently, FTT legislation has been tabled by the EC and 9 EU countries have agreed to enact an FTT during 2018, namely Austria, Belgium, France, Germany, Greece, Italy, Portugal, Finland, and Spain<sup>88</sup>. However, taking into account the previous changes in the agenda, implementation delays are likely. However, there is a lack of quantitative analysis of potential positive and negative consequences of the introduction of unified European FTT, and it is possible to perceive the need to for a comprehensive assessment of various impacts of the FTT on wider economy (including tax revenues).

This paper analyses the possibilities of implementation of FTT in the EU, with special reference to the question of the potential application in the Republic of Croatia. It will assess the impact and effects of a hypothetical implementation of FTT in Croatia, which include revenue estimates and the impact on the domestic capital market performance. Although the Croatian Ministry of Finance announced in 2016 that it did not plan to participate in the implementation of EU FTTs, we hope that this paper will contribute to the interest of the scientific community for participation in

---

87 The EC initially proposed FTT to be implemented by all 27 Member States. However, following intense discussions in the Council, it was found that unanimity would not be reached on this proposal in the foreseeable future. Enhanced cooperation is when a group of at least 9 Member States decide to move ahead with an initiative proposed by the Commission, once it proves impossible to reach unified agreement on it within a reasonable period. It is only relevant to policy areas which require unanimity, and it aims to overcome the situation whereby certain Member States are prevented from advancing and withdrew in March 2016, and Belgium's ongoing participation is doubtful.

88 Slovenia finally rejected the introduction of FTT in 2016 because the current proposal involves a too narrow tax base. Current projections show that Slovenian state budget would only receive EUR 3 mil of increased tax revenues, but the cost of tax collection would amount to EUR .. Also, Estonia formally withdrew in March 2016, and Belgium's ongoing participation is doubtful.

researching new opportunities that would contribute to financial stability and crisis prevention. The main hypothesis is that, given the underdeveloped and illiquid Croatian capital market and the inability to generate substantial tax revenues, it is not opportune to introduce FTT into the Croatian tax system.

The remainder of the paper is organised as follows: The introductory remarks provide an insight into the subject and the research problem, followed by the design issues of the proposed European FTTs. The next section reviews the estimated effects of FTTs on revenues and economic efficiency in the EU. Prior to the conclusion, the authors conducted a preliminary analysis of the effects on the growth of tax revenues as well as the level of Croatian GDP. The impact of FTTs has also been perceived in terms of the financial system, especially for the domestic capital market. The last section offers conclusion.

## 2. Literature review

In general, financial transaction tax represents a turnover tax which covers transactions with different types of financial instruments. The well-known pioneers of introducing the FTT on securities markets are Keynes (1936) and Tobin (1978). The idea was first endorsed by J. M. Keynes in the work "General theory of employment, interest and money". He argued that speculation based on psychology drives market prices rendering them unable to allocate capital efficiently. Under his strong influence, J. Tobin originally proposed the idea of FTT on foreign exchange markets. His idea was to impose a specific tax model on financial markets that would "throw some sand in the wheels of speculation". The aim was to penalise speculators engaged in short-term trading and hence reduce instability in stock markets. Tobin's tax would be charged on all spot currency conversions that would alleviate the consequences of short-term, speculative activities on foreign exchange markets.

A significant theoretical contribution to the consideration of fiscal burden on short-term financial transactions was also provided by Stiglitz (1989) and Summers and Summers (1989). Their work suggest that introduction of new tax form would curb speculation trading. Westerhoff and Dieci (2006) and Bechetti *et al.* (2013) argue that FTT should strengthen the stability of financial markets by downscaling the noise trading and herding effects. A general FTT with a low and uniform tax rate will most probably reduce excessive liquidity in financial markets and, hence, mitigate the instability of asset prices (Schulmeister, 2010).

Contrary to these findings, some authors argue that a reduction in transaction costs is associated with a decline in stock return volatility (Umlauf, 1993; Jones and Seguin, 1997; Aliber *et. al.*, 2003). In the light of disadvantages of FTT, literature points to lower market liquidity and higher capital acquisition costs. Matheson (2011) argues that it could lead to a reduction in trading for all categories which would result in higher market volatility. The impact of FTTs on trading volume and market liquidity

suggests that a narrowly based transaction tax would provide a strong incentive for traders to migrate to foreign markets and, furthermore, a reduction in trading volume would widen the bid-ask spread while decreasing market liquidity (Wang and Yau, 2012). The most fundamental assumptions of critics suggest that market efficiency would be reduced by introducing a new tax burden. Additionally, it would increase the capital cost depressing investment and, consequently, hindering economic growth. Findings for volatility change suggest either mixed or absent effect of FTT, while impact on returns is relatively straightforward and negative.<sup>89</sup> In the case of emerging countries, Baltagi (2006) proved that introduction of FTT will raise transaction costs as well as market volatility.

However, most of the mentioned deficiencies can be counteracted by adequate design and implementation of the FTT. By combining FTT with existing tax burdens on capital gains or other forms of capital income, it is possible to significantly reduce the share of speculative trading. Thus, the key decision when designing a tax model is to determine the adequate tax rate. It must be set at a sufficiently low level to have no impact on the market distortion while at the same time ensuring sufficient revenue in state budgets.

The importance of the issue is particularly emphasised by the fact that in the last two decades the share of speculative trading has significantly increased. The growing trend of these processes is particularly enhanced by the development of information technology and the introduction of high-frequency trading. The global economic and financial crisis has again prompted a debate among economists, governments, organizations and the public about the most adequate fiscal burden for the financial sector. Different national solutions underlined the need for fiscal consolidation within a single European market.

### 3. Key features of the unified European FTT

The European Commission (EC) put forward a proposal for a financial transaction tax (FTT) on 14 February 2013 *inter alia* to (London Economics 20131):

- avoid distortions of competition between financial instruments, actors and market places;
- ensure the proper functioning of the internal market for transactions in financial instruments.

The original proposal for FTT took a “triple A” approach, i.e., the tax should apply to all markets (such as regulated markets or over-the-counter transactions), all instruments (shares, bonds, derivatives, etc.), and all financial sector actors (banks, shadow banks, asset managers, etc.). The base of the tax is very wide, covering transactions carried out by financial institutions on all financial instruments and markets when at least one

---

<sup>89</sup> Comprehensive empirical literature review was given by Šramko (2015) .



party to the transaction is located in the EU. Nevertheless, according to the last proposal from February 2013 (EC, 2013), FTT would apply to the purchase of equity or derivatives for exchange-based transactions, but also to over-the-counter transactions. Tax rates are set very low, for basic financial instruments at 0.1% of the value of buying and selling transaction (except the primary market for shares and bonds), whereas the tax rates of 0.01% of nominal contract value are defined for derivative products (Olgić Draženović *et al.* 2016: 1067).

The tax combines a residence principle with an issuance principle, according to which any transaction involving a buyer or seller resident in the FTT-zone would be liable. Hence, all transactions by financial institutions based in the EU as well as by those based outside the EU are to be taxed as long as the transaction takes place in the FTT region. Taxing gross transactions on secondary financial markets at relatively low rates would prevent disruptions, ensure system stability and generate substantial public revenues. Furthermore, the proposal of the single European FTT leaves out of its scope traditional bank lending, deposit taking, currency trading, investment banking activities and the transactions carried out by the central banks of participating nations and the European Central Bank, with the European Financial Stability Facility and the European Stability Mechanism, and transactions with the EU institutions. FTT is aimed at financial transactions made by financial institutions on their own behalf or on behalf of their clients. Financial institutions are all entities that make more than 50% of their annual turnover through financial transactions, namely: investment companies, regulated markets, credit institutions, insurance and reinsurance companies, collective investment companies, financial leasing companies, with the exception of transactions carried out by central securities depositories and central banks. This implies that the scope of FTT is primarily limited to financial industry, while it excludes the impact on daily citizens' and small and medium enterprises' transactions.

This initiative was also considered the first tangible step toward taxing such transactions at the global level. It contributed to the international debate on financial sector taxation in general and to the development of a FTT at the global level specifically. FTT can be viewed as a supplementing regulatory tool for limiting undesirable market behaviour and preventing future instabilities. FTT will help create economic disincentives for speculative transactions as means to stabilise capital markets and reduce the frequency of crises. Also, there is an issue significant importance of FTT in the political sense and as a matter of economic justice.

#### **4. Analysis of the revenue potential for European FTT**

Taxing gross transactions on secondary financial markets at relatively low rates in general would prevent crises in the future and ensure safer and more stable financial markets. Besides reducing speculative behaviour of market participants and decreasing risk by disincentive to high

frequency trading<sup>90</sup>, FTT should reduce the fragmentation of internal market and direct the financial sector towards long-term activities rather than being focused on the fees from short-term investments<sup>91</sup>. It will also make the finance fit for the purpose of long-term financing of small and medium-sized enterprises instead of being focused on the fees they get from short-term investments (Griffith-Jones and Persaud, 2015).

However, one of the main arguments for the introduction of the unified European FTT is revenue raising which could be used for the achievement of policy goals, particularly at the supranational level. Matheson (2011) argues that collecting levies on exchange-based transactions in general would be easy and inexpensive to administer. Additionally, FTTs are meant to discourage financial transactions that do not enhance efficiency of the financial market and, consequently, to curb excess volatility observed in financial markets (Šranko, 2015). Davilla (2014) has paid attention to welfare implications of taxing financial transaction. The revenues that could be raised are in fact quite significant, despite deceptively low tax rates.

The European Commission considers various scenarios differing in the rate of relocation and evasion, the elasticity, and the tax rate. For shares and bonds, the turnover reduction is set at 10% or 15%, for derivatives trading at 70% to 90% depending on the scenario considered. Estimation of the macroeconomic effects of introduction of FTT using Dynamic Stochastic General Equilibrium Model is done by Lendvai (2010). The initial version of the European Commission model calculated a long-run loss of GDP of -0.53% from the FTT. In the updated model by the same authors of the study (Lendvai *et al.*, 2013) a far lower estimate of the negative effect on growth was given, equal to only -0.2%. New estimations consider that only 15% investments by credit institutions in the EU are funded via the stock market (10%) or by debt securities (5%), while the rest of the external funding of European companies is done by bank loans and retained profits. Research findings point to lowering financial market volatility. Also, FTT would cause significant reduction in high frequency trading, which represents 40% of EU financial transactions. This would imply a significant breakthrough for financial stability and growth without any costs to the real economy. Furthermore, primary markets would be excluded, as would financial transactions that do not involve financial institutions. If we take into account these additional effects, the net impact on long-term GDP would be only -0.1%.

---

90 There is a remarkable discrepancy between the levels of financial transactions and the levels of the “underlying” transactions in the “real world”. Trading in derivatives markets has expanded much more than trading in spot markets. Consequently, derivatives trading in Europe was already in 2006 84 times higher than nominal GDP, whereas spot trading was “only” 12 times higher (Schulmeister, 2010: 5).

91 It is estimated that 70% of the profitability of banks comes from short-term clients and as a result, they do not invest in their long-term clients (Griffith-Jones and Persaud, 2015)

According to Griffith-Jones and Persaud (2012), the introduction of FTT could bring even more benefits to the European financial system, considering its contribution to reducing the risk of future crises. They estimated a positive effect on growth of 0.25% GDP. Table 1 below is an estimate of the effect on revenues and turnover, using the elasticity measures of the proposal for a 0.1% tax on equity and bond transactions alike. The table shows that, at this tax rate, reductions in equity volumes would be modest and the taxes raised still significant and the effect on turnover would be greater in the bond markets, but because of their size, the tax take would still be highly significant.

<i>Countries</i>	<b>Current turnover, \$ millions</b>		<b>Assumed max. loss of turnover (3) (4)</b>		<b>FTT revenues</b>		
	<b>Equities (1)</b>	<b>Bonds (2)</b>	<b>Equities</b>	<b>Bonds</b>	<b>Equities</b>	<b>Bonds</b>	<b>Equities &amp; Bonds</b>
<b>Argentina</b>	2,567	52,920	8%	33%	2	36	38
<b>Australia</b>	1,013,594	811,188	8%	33%	933	547	1,480
<b>Brazil</b>	859,258	763,560	8%	33%	791	515	1,306
<b>Brazil</b>	1,395,994	1,143,072	8%	33%	1,285	771	2,056
<b>China</b>	8,068,722	1,781,892	8%	33%	7,425	1,203	8,627
<b>France/ Netherlands/ Belgium</b>	2,010,284	3,847,284	16%	42%	1,691	2,230	3,921
<b>Germany</b>	1,467,487	2,032,884	16%	42%	1,234	1,179	2,413
<b>Hong Kong</b>	1,488,664	75,600	13%	42%	1,302	44	1,346
<b>India</b>	1,059,712	369,684	8%	33%	978	249	1,227
<b>Italy</b>	972,649	1,663,200	16%	33%	818	964	1,782
<b>Japan</b>	3,980,240	8,070,300	16%	42%	3,348	4,679	8,026
<b>South Africa</b>	251,365	91,476	6%	33%	236	62	298
<b>South Korea</b>	1,596,275	690,228	5%	33%	1,520	466	1,986
<b>Spain</b>	1,351,791	1,108,296	16%	42%	1,137	643	1,779
<b>Switzerland</b>	785,234	505,008	11%	42%	696	293	989
<b>Taiwan</b>	894,685	9,072	6%	33%	844	6	850
<b>UK</b>	2,505,677	3,031,560	7%	42%	2,335	1,758	4,092
<b>US</b>	27,540,235	23,566,032	16%	42%	23,163	13,662	36,825
<b>G20</b>	52,724,059	47,915,280	10%	37%	45,757	28,321	74,078
<b>Less countries with FTT</b>	40,517,508	42,747,264	9%	26%	34,303	24,968	59,271
<b>Euro-6</b>	5,802,211	8,651,664	16%	42%	4,062	5,016	9,896
<b>Emerging</b>	12,732,584	3,758,832	7%	33%	11,796	2,537	14,332

<b>Assumptions</b>	<b>Equities</b>	<b>Bonds</b>
FTT rate	<b>0.10%</b>	0.10%
Elasticity	<b>-0.6</b>	-0.6
<b>Current transaction costs in most liquid markets</b>		
Institutional	<b>0.20%</b>	0.04%
Retail	<b>0.50%</b>	0.18%
Average	<b>0.30%</b>	0.07%
<b>Current transaction costs in less liquid markets</b>		
Institutional	<b>0.45%</b>	0.09%
Retail	<b>1.13%</b>	0.18%
Average	<b>0.67%</b>	0.11%

**Table 1.** Revenue matrix – the FTT calculator

Schulmeister's (2010) findings implied that the main consequence of the FTT would be the reduction of excessive liquidity stemming from transactions which are very short-term oriented and that can be destabilising at the same time. A small financial transaction tax would dampen the fluctuations of exchange rates, stock prices and commodity prices in the short run as well as in the long run. At the same time, such a tax would yield substantial revenues and this would help governments consolidate their fiscal stance. It would affect the (relative) profitability of different types of activities within the financial sector. Financing, insurance and risk transformation would practically remain unaffected by a FTT whereas short-term trading would become more costly (derivatives transactions in particular).

The size of this reduction effect depends on the tax rate, pre-tax transaction costs and the leverage in the case of derivatives instruments. Most of these revenues would stem from derivatives trading at EUREX. Tax revenues from spot transactions of stocks and bonds would be small (less than 0.1% of GDP even at a tax rate of 0.1%). In Europe, tax revenues at a rate of 0.01% are estimated to range between 0.59% and 0.78% of GDP.<sup>92</sup>

Effects on the financial system could be wide-ranging and difficult to assess. However, some include cascade effects, sectoral shifts, geographical shifts, the possible impact on the ISE and on selected financial markets such as sale and repurchase agreement markets and sovereign debt markets. For financial intermediaries, introduction of FTT could lead to lower volumes of transactions and less liquid markets. The proposal may mean that intermediaries also face costs due to the administrative burden of collecting the tax (ESRI, 2012).

<sup>92</sup> For the estimation of FTT revenues for the world economy as a whole as well as for the main regions, see Schulmeister (2010); Table 10: Hypothetical transaction tax receipts in the global economy In % of GDP, p. 52.

## 5. Analysis and estimation of the introduction of FTTs in Croatia

The Croatian financial system is bank-oriented and therefore, development of the financial sector is mainly determined by trends in the banking sector. By the structure of its financial institutions, it is still underdeveloped and not diversified enough. Banks are the most important financial institutions and bank loans represent the most important source of exterior financing of the economy. The main characteristic of the Croatian bank market is high market concentration, foreign ownership of the banks, high spread of interest margins, and prevalence of universal banking. The banks are statutorily authorised to offer a wide range of financial services. The non-deposit sector is relatively small and not diversified enough and it mainly consists of financial institutions like pension funds, insurance companies, investment funds, and brokerage houses in the money and capital market (Prohaska and Olgic Drazenovic, 2005: 26).

The Croatian capital market can be defined as underdeveloped, narrow and of low liquidity. It is characterised by low standards of corporate governance, inadequate application of accounting standards and concentrated ownership structure in the medium-sized and large companies. In addition, corporate governance, reporting to the investment public and the role of supervisory boards are not developed to the extent that would upgrade investors' confidence in the domestic capital market. The structure of financial markets is visible in Table 2, presenting the relative relevance of different types of financial instruments. It is evident that bank loans are prevalent, however, not to the extent in which the banks' assets dominate the total assets of the financial system. The reason is that the banks in their equity portfolios also have large portfolios of shares and bonds.

Financing in the Republic of Croatia		Amount			% of total amount		
		2002	2009	2015	2002	2009	2015
Bank loans (cons.)		92,292.9.1	252,428.3	253,132.3	71	60	55
Market capitalisation	Shares	28,325.6	135,368.2	128,137.1	22	32	28
	Bonds	8,996.4	36,255.8	78,993.8	7	9	17
	Structured products	-	-	1,724.2	-	-	
Total		129,614.9	424,052.3	460,263.2	100	100	100

Table 2: Financial Market Structure (mil. HRK)

Although the Croatian stock market has existed for more than twenty years and developed solid infrastructure as well as a modern legal framework, very low liquidity still places it in the emerging market category. By 2007, Croatian companies, financial institutions and government were increasingly financed by issuing securities which resulted in the improvement of institutional investors' development and strong growth of domestic capital market. However, almost a decade later, one can tell that activities in the domestic capital market are significantly reduced

and, in addition, traditional bank financing becomes even more significant. Although the pension system reform created a great demand for shares and debt securities, the ongoing problem is lack of high-quality financial instruments and their low liquidity.

Croatian institutional investors do not invest significant funds in non-domestic capital markets. Most investments are structured extremely conservatively and focus on long-term government bonds and, to a lesser extent, in domestic equities. For all these reasons, the introduction of FTT in Croatian regulatory framework would not be opportune, because the realised costs would exceed the benefits from the introduction of a new tax burden. Furthermore, taking into account the stability of financial institutions, along with the regulatory measures of the Croatian National Bank, state interventions in the financial sector have not been necessary after the emergence of financial crises.

According to Griffith-Jones and Persaud, FTTs' revenue matrix, total revenues for Croatia as an emerging country would be USD 0,507 mil.. Given the fact that in the Croatian capital market trading the use of derivatives has not yet been widespread and that speculative trading is of minor importance, the main reason (raising revenues) for the introduction of FTT is unacceptable for the Croatian capital market. Preliminary analysis of the possibilities of FTT in Croatia, according to this proposal, leads to the conclusion that Croatian capital market is not developed enough to generate substantial tax revenues. This simplified approximation of FTT revenues does not take into account the possible impacts on liquidity, cost of capital and market efficiency, by which results would be much worse.

Countries	Current turnover, \$ millions		Assumed max. turnover loss (3) (4)		FTT revenues		
	Equities (1)	Bonds (2)	Equities	Bonds	Equities	Bonds	Equities & bonds
Croatia	446	99	7%	33%	0.415	0.092	0.507

Table 3: Revenue matrix – the FTT calculator for Croatian capital market

It can thus be concluded that relatively small amounts of tax revenue would be generated by taxing transactions in the Croatian capital market. Additionally, the taxation of turnover in securities on the Zagreb Stock Exchange would be insufficiently effective, especially with taking into account the essential administrative costs involved in the collection of the tax. This form of taxation would thus be insufficiently productive. On the other hand, non-taxation of financial transactions in Croatia would impose a fiscal burden for domestic financial institutions when transactions take place in the Member States of the FTT jurisdiction or when trading in financial instruments is issued in these countries. Such a provision would cause an outflow of tax revenue outside Croatian borders (Milevoj, 2013: 34).

## 6. Conclusions

In the light of the financial market collapse of 2007, policy makers are looking for ways to tackle the systemic risk in the global financial system in order to achieve financial stability. This has caused frequent calls for unified taxation of financial transactions in the European Union. The main premise for the planned introduction of FTT recommended by the European Commission is that the financial sector has benefited most from the globalisation and liberalisation, but is still one of the most undertaxed industries. At the same time, it has been excessively publicly subsidised in the recent crises. European FTT should be levied at minimum tax rates and harmonised with different existing taxes on financial transactions. An undeniable advantage of introducing the FTT is in limiting speculative and high-frequency trading and disruptions, which should lead to the improvement of system stability. Moreover, it will ensure and generate substantial public revenues. It would thus raise the transaction costs and to certain extent discourage investment and increase asset price volatility. However, there is no consensus about macro-economic well-being considering GDP growth and tax revenues. The latest amendments of the personal income tax in the Republic of Croatia have further extended the tax base for capital gains, which regulates the taxation of dividends, interests and capital taxation.

## References:

- Aliber R. C., Bhagwan C., Shu Y. (2003.), Some evidence that a Tobin tax on foreign exchange transactions might increase volatility, *European Finance Review*, Vol. 7, No. 3, p. 481–510, doi: <http://dx.doi.org/10.2139/ssrn.311700>.
- Becchetti, L., Ferrari, M., Trenta, U. (2013.), The impact of French Tobin tax, CEIS Research paper 266, Rome: Centre for Economic and International Studies, doi: <http://dx.doi.org/10.2139/ssrn.2226983>.
- Burman, L. E. *et al.* (2016.), Financial Transaction Taxes in Theory and Practice, *National Tax Journal*, Vol. 69, No. 1, p.171-214, doi: [dx.doi.org/10.17310/ntj.2016.1.06](http://dx.doi.org/10.17310/ntj.2016.1.06).
- Davila, E. (2014.), Optimal Financial Transaction Taxes, Society for Economic Dynamics, 2014 Meeting Paper No. 114.
- ESRI (2012.), The EU financial transactions tax proposal: a preliminary evaluation, available at: <https://www.esri.ie/pubs/BKMNEXT217.pdf>
- European Commission (2013.), Impact assessment: Proposal for a Council Directive Implementing Enhanced Cooperation in the Area of Financial Transaction Tax, Analysis of Policy, Options and Impacts, WD28, EC.
- Griffith Jones, S., Persaud, A. (2013.), The Financial Transaction Tax, available at: [http://ec.europa.eu/taxation\\_customs/resources/documents/taxation/swd\\_2013\\_28\\_en.pdf](http://ec.europa.eu/taxation_customs/resources/documents/taxation/swd_2013_28_en.pdf)
- London Economics (2013.), The Impact of a Financial Transaction Tax on Corporate and Sovereign Debt, Report prepared for the International Regulatory Strategy Group, City of London, <https://www.cityoflondon.gov.uk/business/economic-research-and-information/research-publications/Documents/research-2013/Impact-of-FTT-on-corporate-and-sovereign-debt-Final-PDF.pdf>
- Jones, C., Seguin, P. (1997.), Transactions Costs and Price Volatility: Evidence from Commission Deregulation, *American Economic Review*, Vol. 87, p. 728–37.
- Keynes, J. M. (1936.), *The General Theory of Employment, Interest and Money*, Harcourt Brace, New York, NY.
- Lendvai, J., Raciborski, R., Vogel, L. (2013.), Macroeconomic effects of an equity transaction tax in a general-equilibrium model, *Journal of Economic Dynamics and Control*, Vol. 37, No. 2, p. 466-482, doi: <https://doi.org/10.1016/j.jedc.2012.09.010>.
- Matheson, T. (2011.), Taxing Financial Transaction: Issues and Evidence, International Monetary Fund Working Paper 11/54.
- Milevoj, M. (2013.), Zajednički porez na financijske transakcije u Europskoj uniji: što je na raspolaganju Republici Hrvatskoj?, *Porezni vjesnik*, Vol. 22, No. 10, pp. 29-36.



Olgić Draženović, B., Maradin, D., Buterin, V. (2016.), Tax -framework of Croatian financial system, 5th International Scientific Symposium "Economy of Eastern Croatia – Vision and Growth", Mašek Tonković, A. (ur.), Osijek, Sveučilište Josipa Jurja Strossmayera u Osijeku, Ekonomski fakultet Osijek, p. 1060-1068.

Prohaska, Z., Olgić Draženović, B. (2005.), Consolidated Supervision of Financial Institutions and Financial Market in the Republic of Croatia, *Zbornik radova Ekonomskog fakulteta u Rijeci: časopis za ekonomsku teoriju i praksu*, Sveučilište u Rijeci, Ekonomski fakultet, Rijeka, Vol. 22, No. 2, p. 25-41.

Schulmeister, S. (2010.), Asset Price Fluctuations, Financial Crises and the Stabilizing Effects of a General Transaction Tax, *SUERF - The European Money and Finance*.

Spahn, P. (2002.), On the Feasibility of a Tax on Foreign Exchange Transactions, Report to the Federal Ministry for Economic and Development (Bonn).

Šramko, F. (2015.), The impact on securities transaction tax on market quality: Evidence from France and Italy, *International Journal of Economic Sciences*, Vol. 4, No 3, p. 52-93, doi: 10.20472/ES.2015.4.3.004

Stiglitz, J. E. (1989.), Using tax policy to curb speculative short-term trading, *Journal of Financial Services Research*, No. 3, p. 101-15, doi: 10.1007/BF00122795

Summers, L., Summers, V. (1989.), When Financial Markets Work Too Well: A Cautious Case For a Securities Transactions Tax, *Journal of Financial Services Research*, Vol. 3, p. 261-286.

Tobin, J. (1978.), A Proposal for International Monetary Reform, *Eastern Economic Journal*, Vol. 4, No. 3–4, p.153–59.

Umlauf, S. (1993.), Transaction Taxes and the Behavior of the Swedish Stock Market, *Journal of Financial Economics*, Vol. 33, p. 227–240.

Wang, G., Yau, J. (2012.), Would a Financial Transaction Tax Affect Financial Market Activity? Insights from Futures Markets, Policy Analysis, July 2012.

Westerhoff F., Dieci R. (2006.), The effectiveness of Keynes–Tobin transaction taxes when heterogenous agents can trade in different markets: a behavioral finance approach, *Journal of Economic Dynamics and Control*, Vol. 30, p. 293–322, doi: <https://doi.org/10.1016/j.jedc.2004.12.004>.

[www.cnb.hr](http://www.cnb.hr)

[www.zse.hr](http://www.zse.hr)

Zator, M. (2014.), Transaction costs and volatility on Warsaw Stock Exchange: implications for financial transaction tax, *Bank i Kredyt*, Vol. 45, No. 4, p. 349-372.

**Lejla Lazovic-Pita, PhD**

University of Sarajevo, School of Economics and Business

e-mail: lejla.lazovic@efsa.unsa.ba

## **INCOME, PERSONAL INCOME TAX AND TRANSITION: THE CASE OF BOSNIA AND HERZEGOVINA<sup>93</sup>**

### **ABSTRACT**

Every personal income tax reform in all countries – developed or transitional – is analysed through the ‘sacred trinity of tax specialists’ (Cnossen and Bird, 1990), namely efficiency, equity and simplicity/compliance. In this paper, we will briefly focus on efficiency and equity trade-off, in developed countries first, and then in selected transition countries. From the comprehensive analysis conducted in developed countries, we can clearly see that efficiency principle has been given priority over equity principle in terms of PIT in the past thirty years. A similar pattern is visible in most analysed transition countries. Based upon the experiences of the developed and transition countries, we can make some suggestions regarding personal income tax in Bosnia and Herzegovina (B&H).

**Key words:** income distribution, flat tax, progressive tax, transition

### **1. Introduction**

Developed and transition countries can organise their personal income tax (PIT) system in various forms. In theory, discussions regarding income *versus* consumption as a tax base started more than three centuries ago. Hence, PIT reforms are always in the focus of academic discussions. Nowadays, these discussions evolve around progressive *versus* single or ‘flat tax’, bearing in mind the differences from theoretical to empirical models. Since as early as 1994, when Estonia introduced the so-called ‘flat tax’, this topic has been in the focus of academic disputes. In order to identify the basis for any discussion, it is important to firstly define what income is, since definition of income sets sound theoretical grounds for the introduction of personal income tax. Furthermore, one of the major issues that still remain open is the ever-so popular application of the ‘flat tax’ in (ex) transition countries. This issue will be analysed in

---

93 This is a reprint of a conference paper published in: Ott, K; Blažić, H. and Šimović H. (eds), 2014, Tax reforms: Experiences and Perspectives, Conference Proceedings, Institute of Public Finance, Zagreb, Croatia, p.157-178, [http://www.ijf.hr/upload/files/file/knjige/tax\\_reform\\_proceedings.pdf](http://www.ijf.hr/upload/files/file/knjige/tax_reform_proceedings.pdf), which is also synthesis from doctoral dissertation „Income, personal income tax and transition: the special case of Bosnia and Herzegovina“ published by BERG-Verlag Bamberg

This work has been supported by the Croatian Science Foundation under the project number IP-2013-11-8174.

detail following the practice of (ex) transition countries that have joined the European Union (EU) in comparison with the case of B&H. Hence, the motivation of this paper is to show that 'flat tax' is currently an adequate model of personal income taxation in B&H bearing in mind the time of transition. In order to prove such a statement, theoretical and empirical comparative analysis will be used.

## 2. Definition of income and personal income tax

Since the first introduction of personal income tax, definition of the tax base i.e. income is of crucial importance. Income can be defined in a number of ways, from a narrower to a broader definition (Blazic, 2006). The most important aspect of income is the regularity of income flow. Other aspects include treatment of income from saving as well as (possible) return on saving. The most comprehensive definition of income relates to the definition given by Schanz-Haig-Simons (SHS). According to SHS, definition of income is "market value of consumption plus any changes in net wealth measured on accrual basis" (OECD, 2006: 48-49). This definition accords best with economic ability to pay (Goode, 1964) and the formation of income so that taxation should be levied according to an individual's ability to pay (in relation to the benefit principle). If individuals earn the same amount of income, they should pay the same amount in taxes. Moreover, individuals with higher income should be charged higher taxes. These two principles are called the principles of horizontal and vertical equity respectively. However, every personal tax system includes personal characteristics of the taxpayer. The equation (1) shows the basis for SHS calculation of income.  $Y$  is income,  $C$  consumption and  $\Delta W_i$  is changes in net wealth on accrual basis, at the beginning of period  $i$ , interest  $r$  is predictable and  $E_i$  are all receipts from income, transfers, wages, etc. (Blažić, 2006: 18). The left side of the equation shows SHS income (from the consumption side), while the right side shows the practical basis of its calculation.

$$C_i + \Delta W_i = E_i + rW_{i-1} \quad (1)$$

Apart from SHS definition of income, in theory (and scarcely in practice), consumption can also be a tax base. In the theory of fiscal doctrine distinguished classical/liberal theorists considered that consumption is appropriate as a tax base (e.g. Hobbes, 1651, Ricardo, 1817, J. S. Mill, 1865, Marshall, 1927, Pigou, 1928, in Musgrave, 1998). (Mill, 1865) actually developed the modern basis for consumption-based doctrine (Musgrave, 1998: 23). He favoured consumption over income taxation and considered that saving should not be taxed twice. I. Fisher considered that the tax base should be the difference between income and saving. In his definition of consumption/expenditure tax, N. Kaldor considered that people should be taxed on what they take out of the common pool, not on what they put into it. He argued that consumption is a better measure of ability to pay than income. Pechman (1980, 1984) most recently considered a case of consumption-based income tax. A major

disadvantage of income as a tax base in relation to consumption is the aforementioned problem of (economic) double taxation of saving. Under SHS definition, income includes both consumption and saving which are then taxed. Therefore, SHS definition of income taxes all income, i.e. regardless of its source, which means that income coming as a return on saving is also taxed. This problem could be solved by either deducting saving from the tax base prior to taxation or by excluding the return on saving from the tax base (since income was previously taxed). The problem of regarding double taxation of saving has been identified very early (Pigou, 1928 in Musgrave, 1998). However, consumption tax has a major disadvantage: it is impractical to apply, which was theoretically rightfully assumed by Mill, Marshall, Pigou. In addition, consumption tax was empirically scarcely applied (India and Sri Lanka in the 1960's and 1970's). Consumption as a tax base can be described using previous formulae as synthetic income deducted by individual's saving<sup>94</sup> (Blažič, 2006, p. 34):

$$C_i = E_i + rW_i - \Delta W_i \quad (2)$$

Alternatively, differences between income and consumption tax regarding the treatment of saving could be shown through a budget constraint with an income tax.

$$(1-t)M = PX \quad (3)$$

Where  $t$  is income tax rate,  $M$  income allocated to consumption (after saving and borrowing),  $P$  is price and  $X$  quantity (amount) of goods. If we invert this to get

$$M = \left(\frac{1}{1-t}\right)PX = (1+T)PX \quad (4)$$

where  $T = \frac{t}{1-t}$ , this shows that an income tax at rate  $t$  is equivalent to consumption tax  $T$  at rate  $\frac{t}{1-t}$ . Again, the real issue regarding PIT and/or consumption tax is the treatment of income from saving. A standard income tax will tax the income from saving (SHS definition) and will not be equivalent to consumption tax. However, an income tax that does not tax income from saving is equivalent to consumption tax. Moreover, from the relationship between income and consumption tax, if income tax rate  $t$  increases linearly, consumption tax rate  $T$  will increase hyperbolically. This fact is significant in discussing income versus consumption tax rates.

Regarding the definition of PIT, the definition of income already gives answers to the type of personal income tax applied. If income from saving (and return on saving) is taxed, comprehensive taxation is applied – SHS definition of income is considered bearing in mind differences from the theoretical grounds (i.e. taxation of wealth, inheritance, etc). This is especially true for countries which apply comprehensive income tax with progressive rates (i.e. PIT with multiple tax brackets) – all EU-5 countries and most OECD countries. Some countries (mostly Nordic countries) ap-

---

94 Capital gains have to be excluded. If imputed income is also excluded, this is called a cash-flow tax.

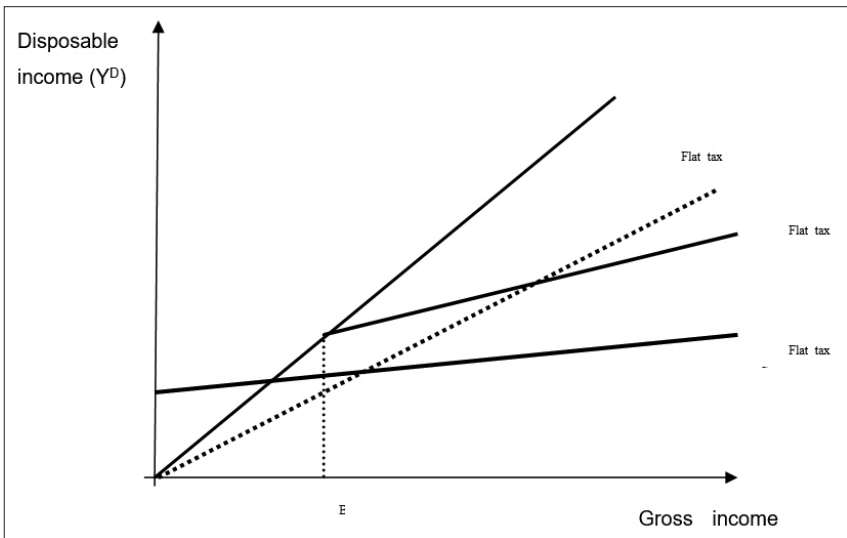
ply dual income tax (OECD, 2006). If income from saving is not subject to tax, consumption type or expenditure tax is applied. Hall-Rabushka's 'flat tax' (1985, 2007) is nowadays the most popular representative of this type. Moreover, most (ex) USSR or transition countries mostly apply 'flat tax' which in terms of the number of tax rates implies only one marginal tax rate (above a certain threshold). (OECD, 2006) in the explanation of personal income taxation in OECD, members used a term 'semi' for all three types of income tax. This is mainly due to the fact that none of the (OECD) countries actually apply the theoretical model fully in practice.

Hall-Rabushka's 'flat tax' was proposed in the USA (in 1985) as an alternative model of personal and corporate income taxation. The focus of 'flat tax' revolves, *inter alia*, around the single tax rate with (in practice with or without) personal allowance and the fact that saving is untaxed. Significant contribution of the 'flat tax' model was the abolishment of all types of deductions, exclusions and other loopholes present in PIT systems. Hall and Rabushka also suggested that tax rates on both personal and corporate income should be equalised. In this paper we only deal with personal income, and not corporate income. Although discussions in the USA in the 1980's led to the conclusion that progressive PIT was inefficient, unequal and too complicated at the time, the final decision was that progressive comprehensive PIT (federal tax) should be reformed rather than replaced by the 'flat tax'. Hall-Rabushka's ideas of switching from progressive to 'flat tax' were done under the assumption of revenue-neutrality. Moreover, 'flat tax' was not applied in the USA, but less than ten years after its proposal transition (mostly ex-USSR) countries applied it in various forms. Due to significant differences in 'flat tax' application in transition countries, not only in terms of different tax rates, but also in terms of little theoretical aspects being applied in practice, (Blazic, 2006) rightfully asks "what was left from the 'flat tax' apart from a single tax rate??" Empirical data show little similarities between Hall-Rabushka's ideas of 'flat tax' and its practical application. Nowadays, it is considered that the number of PIT rates is the only parametre regarding PIT reforms. Hence, if only one PIT rate is applied, it is considered as the 'flat tax' in comparison to multiple tax brackets and progressive PIT. 'Flat tax' in its variety of forms is best summarised by (OECD, 2006, p. 85) in Graph 1. The following characteristics of 'flat tax' are important:

- Single rate, no basic tax allowance. All (positive) income is taxed at a flat rate (flat tax A).
- Single rate, with a basic tax allowance. All (positive) income above a basic allowance (BA) is taxed at a flat rate (flat tax B).
- All (positive) payments to employees above a basic allowance are taxed at a flat rate (similar to flat tax B). Additionally, the same flat tax rate is levied on all business income (incorporated and unincorporated business income). The base of the business tax is value added, which is calculated on a cash-flow basis, minus the payments to employees. This is equivalent to a consumption

tax with a basic allowance and is often referred to as the Hall- Rabushka's flat tax proposal. Consequently, the income from saving and investments is not taxed under this flat tax proposal.

- Single rate, with a non-wastable tax credit (basic income). This non-wastable tax credit is of equal value to all individuals, regardless of their income levels (thus, it is in practice a negative income tax at low-income levels). This is often called the “basic income flat tax”, where the basic income (BI) is supposed to replace all social security benefits. In addition, a flat tax rate is levied on personal income. This is equivalent to the Atkinson (1995) flat tax proposal (Flat tax C).



**Graph 1.** Types of the flat tax model  
*Source:* OECD, 2006: 87

Graph 1 explains several important points. Firstly, flat tax in practice, contrary to theoretical suggestions, can be based on income or consumption. Depending on the existence of personal allowance, personal income tax can either be progressive or proportional. All transition countries analysed in this paper apply either type A or type B ‘flat tax’ – and it will be considered in such a manner. Moreover, there are other theorists who gave their interpretations of variations of the ‘flat tax’ model. (McLure, 1992; Atkinson, 1995; Rose, 1999; Bradford, 2003) gave their theoretical and practical suggestions regarding the application of the ‘flat tax’. In addition, Hall-Rabushka’s ‘flat tax’ is empirically applied when PIT and CIT rates are equalised regardless of other theoretical suggestions.

Every PIT reform, regardless of progressive or a single - ‘flat’ PIT rates being applied, is usually analysed through the ‘sacred trinity of tax specialists’, i.e. efficiency, equity and simplicity/compliance and the everlasting trade-off between efficiency and equity. Feldstein 1995, 2008; Ventura, 1999; Saez, 2001; Slemrod and Traxler, 2010 analyse aspects

of efficiency and/or efficiency-equity trade-off of personal income tax in developed countries using various methods. Efficiency can mean a number of things. In this paper it will relate to the fact that 'flat tax' in comparison to progressive PIT reduces deadweight loss induced by PIT and that 'flat tax' acts as an incentive in terms of labour demand measured using labour tax wedge in the selected transition countries. Redistributive (equity) function of PIT (progressive or 'flat') is at least in theory its most important function (Musgrave, 1998). However, in this paper we will see that both developed and transition countries face great inequalities. The causes of such inequalities will be carefully analysed. Compliance/simplicity usually relates to prevention of tax avoidance/evasion. The significance of an adequate and successful tax reform heavily depends on satisfaction of the three tax principles.

Hall-Rabushka's 'flat tax' model provided theoretical explanations regarding the satisfaction of the given three principles in practice. The major issue in theory and practice is whether 'flat' or progressive PIT is an adequate system of PIT in terms of satisfaction of the three tax principles. Theoretical grounds for 'flat tax' vs. progressive income tax were given in (Davies and Hoy, 2002) and (Keen *et al.*, 2006). Empirical testing and modelling relies on micro and macro simulation models. Simulation models are explained in detail in (Peichl, 2008). Simulation models are usually derived either from annual tax slips (provided by national tax administration) or from income household surveys (provided by national statistics office). They are tools designed to answer 'what if' questions about different policy reform options. Simulation modelling mostly based upon EUROMOD has been excessively used in most European countries (including transition countries). For most European countries (e.g. the United Kingdom – (Teather, 2005), Germany – (Peichl, 2008), Switzerland – (OECD, 2006), the Netherlands – (Jacobs *et al.*, 2007), France – (Cremer *et al.*, 2010)) switching from current progressive PIT to 'flat tax' would increase efficiency at the expense of increasing inequality, especially in those economies where there is a significant presence of the 'middle class' (e.g. Germany, Nordic countries, Paulus and Peichl, 2008, p. 14). For transition countries that have joined the EU applying both 'flat' and progressive PIT, conclusions are diverse (e.g. Estonia with 'flat tax' versus Slovenia with progressive PIT, (Paulus *et al.*, 2009)). For the countries in the region, simulation analysis as a policy tool aimed at different micro and macroeconomic issues has also been conducted (e.g. Čok for Slovenia 2004, Urban for Croatia, 2010, Randjelovic and Zarkovic-Rakic, for Serbia, 2011). There are no clear-cut conclusions from the simulation modelling in various countries nor do they provide clear answers to the success of PIT system of either progressive or 'flat' tax. The additional answer might be given by looking at other macroeconomic parameters and linking those to decisions regarding 'flat' *versus* progressive PIT. Since all transition economies are trying to 'catch up' with the best practices of the developed countries, but tend to come from different circumstances, adequate tax system as a parametre of the entire economy needs special focus.

### 3. Transition versus developed countries

What has been happening to PIT in developed (i.e. OECD/EU) countries in the past thirty years will most certainly affect transition countries and their emerging PIT systems. Tax base under SHS or consumption base is an important parametre in terms of treatment of income from saving. However, theory and empirical insights in developed countries tend to focus on discussion related to single-flat or multiple-progressive PIT rates in current income distribution (before and after tax), especially in terms of its effects on satisfaction of the three tax principles. Hence, in order to evaluate the effects of PIT reforms in the selected transition countries, we have to firstly look at the PIT developments in OECD countries in the past thirty years (due to data availability).

In most OECD countries, globalisation under neoliberal economic thought has seriously affected tax systems of OECD countries meaning that developed countries have also gone through the transition process. In fact, China's four modernisations and opening to the outside world in 1978 is the milestone of the new age which is in developed countries marked as the 'Big Bang' (Harvey, 2005). New/old (neo)liberal economic thought has had significant consequences on tax systems of developed countries, namely PIT. If we look at the history of fiscal doctrine, we can see that in terms of PIT, 'Big Bang' and ideology switch from Keynesianism (interventionism) to neoliberalism has caused the greatest distortions in terms of satisfaction of the three tax principles. In addition, ideas behind the 1980's 'flat tax' could be traced back to liberal/classical economists and three per cent proportional income tax in times of A. Smith (Auerbach and Feldstein, 1985:16). However, since economic circumstances change all the time, PIT rates vary from progressive to 'flat' and *vice versa*. Therefore, we can say that in developed countries PIT has gone through a series of 'ideological adjustments' from proportional/liberal to progressive/Keynes to current flattened progressive PIT/neoliberal ideology, i.e. transition. Prior to the 1980's, Keynesian policy of progressive PIT, contrary to Keynes's initial ideas, caused over-progressiveness of PIT which in turn led to underreporting, lack of simplicity/compliance in terms of tax codes and, ultimately, tax underreporting/evasion. The current third phase dominated by the neoliberal economic thought with globalisation (Harvey, 2005) brought ideas of PIT base broadening, reduction of PIT rates and the abolishment of fiscal drag and bracket creep – progressive PIT was/is flattened. This means that neoliberal economic thought has put the efficiency principle in terms of minimising deadweight loss caused by taxation (with the reduction of labour tax wedge, OECD, 2013) ahead of equity principle in personal income taxation in developed countries. Reduction in top PIT rates (OECD, 2014) in the past thirty years from the highest 93 per cent to 60 per cent on average (i.e. PIT flattening) has opened possibilities for greater income/capital/wealth accumulation of the wealthiest members of society (top 1 per cent). Atkinson *et al.* (2009) analyse the trends in top incomes focusing on the past thirty years in developed countries. In addition,



Davies *et al.* (2011), Matthews (2011), Piketty and Zucman (2013), and OECD (2014) indicate significant determinants of capital accretion coming not necessarily from income, but capital and business income. In addition to their analysis, globalisation and opening up of the former Soviet countries together with China has 'added value' and given the opportunity to the highest earners (i.e. investors) in developed countries to accumulate income/capital/wealth to a greater extent since opening up of the new markets has meant that cheaper factors of production are now available resulting in higher profits, hence capital accretion. Therefore, the reduction of top PIT rates has given the opportunity to most top-earners in developed countries to initially accumulate income/capital/wealth and opening of the new (transition) markets has furthered this opportunity for investment and even greater income/capital/wealth accumulation. The result of this process was greater inequality. According to OECD (2014, apart from globalisation together with technological advances, especially in the IT industry, 'financialisation', i.e. financial sector developments bringing high-income earners from such a sector together was also a reason for greater inequality. However, financial sector developments are a consequence of the globalisation process led by deregulation where capital was given the opportunity to move freely between countries around the world. What seems to be very significant is that the final factor affecting greater inequality determined by OECD (2014 is the aforementioned halving of top progressive PIT rates in the past thirty years. This seems to be the principal reason behind income/capital/wealth accumulation in most of the developed countries (Atkinson *et al.* 2009: 66-68). As a result of such trends, in the past thirty years the share of PIT revenues in total revenues in OECD countries has declined by significant five per cent. On the other hand, in the same period, the share of value added tax (VAT) revenues to total revenues has increased by approximately ten per cent (OECD revenue statistics). This clear shift from direct to indirect taxes has *per se* caused greater inequality bearing in mind the regressive effects of indirect taxes. Both OECD and the EU Commission (OECD, 2010; Garnier *et al.*, 2013) are still supporting further PIT tax rate cuts and base broadening as a labour demand incentive due to high labour tax wedge in OECD/EU countries. Hence, in the past thirty years, there has been a growing inequality in developed (OECD) countries. Also, in theory, if we take equation (4) in a switch from income to consumption-based taxation, consumption-based tax rates should be significantly higher than income-based tax rates bringing more inequality into income distribution.

Bearing in mind the previous discussion, what position can transition countries take under such circumstances and how can they organise their tax system? A transition country in terms of this paper will relate to "an European economy which is changing from a centrally planned or a socialist economy<sup>95</sup> to a free market or market oriented" (Feige, 1994). Thus, it is an economy which is moving towards developed (OECD/EU-5)

---

95 This term refers to ex -Yugoslav states.

countries. A common measure which determines developed *versus* transition countries is the UN's HDI index (HDI index higher than 0.9 determines developed countries, United Nations Development Programme). Transition is a challenging period that most certainly brings economic inefficiency, inequality and lack of compliance. Since the beginning of the transition process at the end of the 1980's, many influential authors (for example Tanzi, 1991; Ebrill and Havrylyshyn, 1999; Keen *et al.*, 2006) have been analysing different aspects of tax reforms. For most of these countries, ten policies within the Washington Consensus (Rodrik, 2002; Williamson, 2004) were milestones for undertaking overall reforms (three out of ten related to tax reforms). However, due to different circumstances under which the transition process emerged in these countries, there is no clear-cut answer to whether the transition process is over even when a transition country joins the European Union (EU).

Therefore, the logical question that arises is the appropriateness of the PIT (progressive or flat) system within the transition process. In this paper we will try to evaluate to what extent 'flat tax' follows a longer transition process, especially in terms of leading privatisation process. In fact, conversion of property from public to private (i.e. privatisation) is the basic precondition for a successful transition process. In addition, it is an opportunity for a quick income/capital/wealth accumulation, so the data from the initial years of the transition process are scarce, insufficient and unreliable, mainly due to high evasion. In terms of organising PIT, transition countries have applied both progressive and 'flat tax'. We could conclude from the aforementioned discussion that developed countries put efficiency principle (together with compliance and simplicity) ahead of equity principle – due to growing inequality. Transition countries should in their path towards developed countries follow suit, efficiency principle should be put before equity principle. Theoretically, 'flat tax' satisfies this scenario better than progressive PIT. Empirically, in most transition countries, the results are not easily drawn. All data are likely to be highly skewed in the first years of transition crisis, mainly due to poor national statistics, underreporting and high tax evasion. In the prior analysis in developed countries, it has been clearly stated that progressive PIT has been 'flattened' primarily due to requirements of globalisation. So, why should transition countries apply progressive PIT if the transition process is: inequitable; i.e. does not bring greater PIT revenues to total revenues (Table 2); creates greater labour tax wedge and acts as a disincentive to labour demand; and further complicates the PIT system – distorts the principle of compliance/simplicity? To answer all these questions, we will briefly analyse the aspects of transition and then examine the case of Slovakia since it moved from progressive to 'flat' tax and again to progressive PIT in 2013. Bulgaria, on the other hand, is planning to keep the 'flat tax' for the next ten years (Peichl, 2013). Based upon the experiences of Slovakia and Bulgaria, we will try to draw suggestions for the case of B&H.

Apart from basic macroeconomic parametres such as GDP *per capita*, inflation and unemployment rate (World Economic Outlook, Database

April 2014), a commonly used parametre determining the speed and success of transition process are EBRD transition indicators (EBRD, 2013). Together with Life in Transition survey (2006, 2010) as a qualitative measure, these indicators can hint the relationship between transition process led by privatisation and economic growth (e.g. Krkoska and Teksoz, 2005). However, these indicators, since they relate to broad measures, say little regarding the success or adequacy of tax system reforms. In addition, in the first years of the transition process led by privatisation in most transition countries (four to six years), transition countries most certainly face a decline in GDP, rise in unemployment and inflation, and most significantly a decline in tax revenues and an increase in public expenditures (Tanzi, 1991). This final scenario requires comprehensive tax reform. As a result of tax reforms that were undertaken in the transition countries, we can easily conclude that all transition countries heavily rely on indirect taxes rather than direct taxes in total revenues/GDP. In addition, transition countries in terms of organising their entire economic/tax system are somewhere between developed and developing countries. (Tanzi, 1991:179-180) indicated that PIT is “hardly the most important element of taxation in developing countries”, but it is a significant element of taxation in developed countries. Hence, low, but growing share of PIT revenues could also indicate the significance of the transition process. Additionally, what seems to determine the size of the share of PIT revenues to total revenues are, *inter alia*, the number and size of tax rates as well as the overall model (e.g. Anglo-Saxon, Continental, Nordic or Mediterranean<sup>96</sup>) of tax reforms undertaken by a specific transition country. Following prior discussion regarding the shift from direct (PIT) to indirect (VAT) taxes in developed countries with a side-effect of higher income inequality, Tables 1 and 2 show the share of VAT and PIT revenues to total revenues in the selected transition countries. Although authors (e.g. Aiginger and Leoni, 2009) state that transition countries in terms of baseline inequality scenario grouped using Esping-Andersen’s classification do not fit into any of the three/four groups but rather form a group of their own, the countries were selected using the following criteria: Estonia as a Baltic State representative applying ‘flat tax’, but historically close to Nordic model; Slovakia as a Visegrad representative applying ‘flat tax’, but switching towards progressive PIT – historically linked to the Continental model; Croatia as a Western Balkans country applying progressive PIT – again close to the Continental model with some aspects in terms of income stratification similar to the Mediterranean model; Bulgaria was chosen as a country which is planning to keep the ‘flat tax’ in the next ten years (Peichl, 2013) close to the Mediterranean model (Aiginger and Leoni, 2009, p. 15). This grouping is only an

---

96 This classification is similar to Esping-Andersen’s (1990) classification in Paulus and Peichl (2008, p. 11) regarding the inequality in the baseline scenario in the Western European countries. It should be noted that Esping-Andersen’s classification into three groups based upon de-commodification index is created using public expenditures rather than revenues. This classification has been given in order to stratify society and hence identify/create/maintain the ‘middle class’ in each group.

assumption in terms of each transition country searching its 'role' model among developed (EU-5) countries in the entire fiscal policy (both public expenditures and public revenues – hence PIT reforms and its effects on pre-tax income inequality).

Country	Estonia	Slovakia	Croatia	Bulgaria	B&H
1995	26.5	20.8	...	22.5	...
2000	27.2	20.4	...	26.4	...
2001	27.0	21.9	...	27.4	...
2002	27.0	21.2	31.3	25.6	...
2003	26.5	22.7	31.5	27.8	...
2004	25.1	24.7	31.0	30.3	...
2005	28.3	25.1	31.3	32.7	...
2006	29.6	25.5	31.1	34.9	30.0
2007	28.2	23.0	29.8	31.1	27.4
2008	24.9	23.6	30.7	33.8	28.8
2009	24.8	23.3	28.9	31.1	27.5
2010	25.7	22.6	30.5	33.3	27.1
2011	26.0	23.9	30.7	32.0	27.0

Table 1. Share of VAT revenues to total revenues in selected transition countries, 1995-2011

Country	Estonia	Slovakia	Croatia	Bulgaria	FB&H <sup>a</sup>	RS
1995	23.3	8.9	...	13.5	...	...
2000	22.1	9.9	...	12.7	...	...
2001	21.5	10.6	...	11.4	...	...
2002	20.7	9.9	8.7	11.2	...	...
2003	21.0	9.8	8.1	10.2	3.9	6.1
2004	20.5	8.5	8.1	9.5	3.8	6.9
2005	18.2	8.4	7.6	8.7	3.8	6.7
2006	18.2	8.6	7.8	8.4	3.8	6.5
2007	18.5	8.7	7.8	9.5	3.9	4.5
2008	19.5	9.4	8.0	9.0	4.5	5.2
2009	16.0	8.4	8.1	10.2	4.3	4.2
2010	15.9	8.2	7.5	10.9	4.1	4.4
2011	16.1	8.8	7.5	10.5	4.4	6.8

Table 2. Share of PIT revenues to total revenues in selected transition countries, 1995-2011

Source: Taxation trends in the EU, 2013 for Estonia and Slovakia; for Croatia: Croatian Ministry of Finance, Consolidated General Government; for B&H: Directorate for Economic Planning, Council of Ministers of B&H – Annual Economic Report, Central Bank of B&H, Annual Report 2012, Tables 31, 32 and 33, authors' calculation

Notes: <sup>a</sup> Data for B&H in Table 2 in 2003-2009 represents the share of wage tax to total revenues; afterwards, the share of PIT to total revenues.

From Table 1, we can easily conclude that all selected transition countries heavily depend on indirect taxes, namely VAT which solely (excluding customs, excise and other indirect taxes) takes almost a third of all tax revenues. Table 2 shows a significantly lower share of PIT revenues

in total revenues in all selected transition countries. PIT rates varied from 'flat' 10 per cent in B&H to the highest progressive 45 per cent (in 2003) in Croatia (currently 40 per cent the highest). Interestingly, Croatia as the only analysed country applying progressive PIT does not collect more revenues from PIT (as a share of total revenues) in comparison to other selected transition countries applying 'flat tax' (even significantly less than Estonia). B&H with two different PIT laws in each entity shows a significant share of PIT revenues in total revenues prior and during 'flat tax' introduction. A partial reason behind a decline in the share of PIT revenues in total revenues in RS in 2007 lies in the fact that in 2007, total revenues in RS significantly increased due to an increase in indirect tax revenues – VAT was introduced in B&H in 2006. Other reasons were annual changes in PIT rates and/or personal allowances in RS (abolishment and reintroduction). Again, from Tables 1 and 2, it is clear that all countries suffered a decline in total revenues primarily due to effects of the financial crisis in 2008 and have altered VAT since (an increase in Slovakia and Croatia) and PIT rates (a decline in Estonia, RS entity). Since there is no significant deviation in terms of PIT revenues to total revenues in the case of Croatia compared to other selected 'flat tax' transition countries, another question remains: is Croatian progressive PIT a better option than the 'flat tax' in terms of more equitable redistribution, but with an obvious trade-off in terms of simplicity? (Urban, 2010; Čok *et al.*, 2012) give answers regarding horizontal and vertical redistribution issues in Croatia (and in comparison to Slovenia). Similar to conclusions of other transition countries (Paulus and Peichl, 2008), pre-fiscal income inequality together with the existence and the size of 'middle class' seem to be the main reasons behind differences in redistributive effects and hence the significance of progressive PIT application. So, what is the significance of the transition process in determining income inequality? (Paulus, 2004:219) does not find transition process to be a major factor affecting pre-tax income inequality (using Gini coefficients) in the selected transition countries (Estonia, Hungary, Poland, the Czech Republic and Slovenia). However, it should have some importance especially in Western Balkans countries due to slow and mostly delayed privatisation process and traditionally low tax morale.

Hence, the main reasons accompanied with the transition process in Western Balkans countries, primarily B&H, are lack of institutional framework, high tax evasion, lack of fiscal transparency, shadow economy, corruption, bribery, etc. Moreover, significant changes in income distribution occur during the period of transition, especially in terms of increasing gap between the poor and the rich (or the first and last income bracket bearing in mind high levels of underreporting). In addition, the size of average income in the period 1995-2010 in the selected transition countries is very low and usually at approximately 20 per cent of those in EU-5 (UNECE database, in US\$, current exchange rate, own calculation). Hence, most 'average incomes' earned in transition countries would be taxed (in some countries, such as B&H, even exempt) in the first income bracket, which in turn indicates that these transition countries should apply the

first income tax bracket of EU-15 – hence ‘flat tax’. However, this does not mean that in the selected transition countries there are no tendencies towards creation of top incomes (see below). (Rutkowski, 1996) gives a detailed explanation regarding the effects of the first years of the transition process (1987-1993) in terms of changes in income structure in Central and Eastern European countries. He reaches a conclusion that, in the initial transition process, there is inevitable loss throughout income distribution, i.e. in real decile wages. However, the 9<sup>th</sup> decile (highly paid workers) have been less affected by transition than low-paid workers (Rutkowski, 1996: 12-13). Regarding incentives to move towards progressive PIT and bringing more equality into income distribution in the observed period, due to ‘fading’ middle class in the transition process, (Rutkowski, 1996: 42-43) concludes for the analysed period that, if economy under-utilises its human and physical resources, sacrificing equity in order to promote efficiency may prove beneficial, especially in terms of upgrading skills and increasing productivity. Popular demands for enhancing equity (e.g., by introducing progressive PIT) might “imply a lower labour supply (through a substitution effect), a lower rate of human capital accumulation and, therefore, a lower rate of productivity and output growth, or may contribute to the rise in unemployment among low-skilled workers. In the context of economic transition, however, the economic benefits of a wider earnings distribution outweigh its social costs.” (Rutkowski, 1996, pp. 42-43)

In the context of economic transition, however, the economic benefit of a wider earnings distribution outweighs its social costs” (Rutkowski, 1996: 42-43). In addition, we need to bear in mind the fact that in most transition countries, high labour tax wedge mostly taken by high SSC is in fact a major obstacle in terms of labour demand (Kovtun *et al.*, 2014). However, the question that still remains is: have transition countries since 1993 achieved better redistribution through progressive PIT than those applying ‘flat tax’? This is a very difficult question that cannot be explicitly answered.

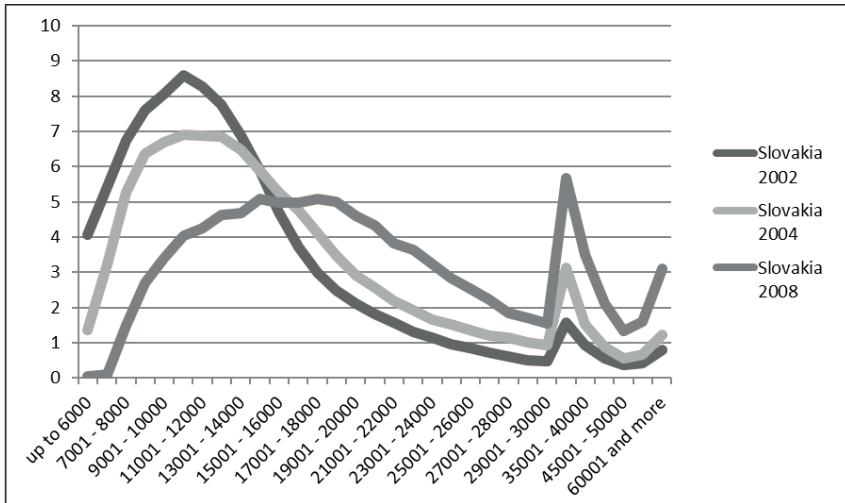
Brook and Leibfritz (2005) conducted an analysis regarding the success of Slovak comprehensive (reforms in PIT, CIT and VAT) and revenue neutral tax reform in 2004 when Slovakia, *inter alia*, switched from progressive PIT to ‘flat tax’. Slovakia halved its progressive PIT rates by introducing 19 per cent ‘flat tax’ and therefore abolished previous six income tax brackets. Basic/personal/family allowances increased benefiting primarily those low-income earners. Labour tax wedge for a single earner at 67 per cent of average earnings (low-income earner) decreased from more than 40 per cent in 2002 (prior to reform) to approximately 35 per cent in 2010 (OECD, 2013<sup>97</sup>). Although this decrease is significant, it is still above OECD and EU-5 average tax wedge for low-wage labour

---

97 For data regarding labour tax wedge in OECD/developed countries as well as Estonia for the single earner at 67 per cent of average earnings see: OECD, Taxing wages, 2013; for Croatian data (using OECD methodology) see: Grdovic-Gnip and Tomic, 2010; for B&H case see: Betcherman and Arandarenko (2008), Kreso and Lazovic-Pita (2011).

(Brook and Leibfritz, 2005). Simplicity increased, not only due to a decline in PIT rates, but also other labour-related laws (Brook and Leibfritz, 2005). Although efficiency increased, also in terms of workers switching from informal to formal sector, equity or fairness meant, similarly to prior analysis, that some groups gained and other lost. Introduction of a single VAT rate (compared to prior standard and reduced VAT rate) brought higher fiscal burden and hence higher inequality. In terms of PIT, high basic/personal allowance is a factor through which some degree of progressivity was achieved (equity). However, the move from progressive PIT to 'flat tax' most certainly resulted in inequality and income/capital/wealth accretion. This tendency is visible to some extent in Table 3 which shows interdecile ratio of gross earnings in Slovakia. The ratio is increasing over time, which indicates growing inequality in pre-tax income distribution.

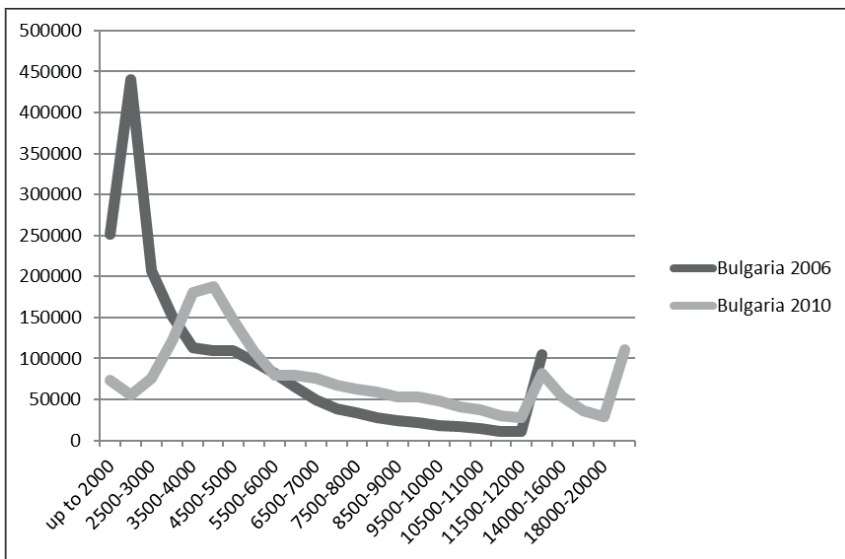
In the ten years of 'flat tax' application, there has been a growth in the final income tax bracket which gave basis for income/capital/wealth to be accumulated (Graph 2). In 2013, due to primarily political change in Slovakia, progressive PIT was introduced for the top 1 per cent earners at the rate of 25 per cent. The success of such a measure is too early to evaluate. In the case of Bulgaria, which is planning to keep the 'flat tax' for the next ten years, there are certain differences compared to the Slovak case. This primarily relates to overall Bulgarian macroeconomic performance and hence low levels of pre-tax income (World Economic Outlook database, April 2014, UNECE database). Labour tax wedge for a single earner at 67 per cent of average earnings (Bulgarian Statistical Office) decreased from 36 per cent in 2002 (prior to reform) to 32 per cent in 2010 (after the reform) which in turn should have increased efficiency. A peculiarity of Bulgarian 'flat tax' is abolishment of basic/personal allowance (flat tax A, Graph 1) which causes greater inequality than 'flat tax' with personal allowance (e.g. Estonian case since 1994, Slovak case 2003- 2013 – flat tax B, Graph 1). In addition, Bulgarian case also shows an increase in interdecile ratio (Table 3). In fact, comparison of the Bulgarian ninth decile of gross and net monthly earnings is also increasing indicating income/capital/wealth accumulation (Structure of Earnings in Bulgaria, 2006, 2010). Furthermore, Graph 3, similar to Slovakian case, shows an increase in the upper end of gross income distribution.



**Graph 2:** The share of full-time employees in per cent by bands of average gross nominal monthly earnings in Slovak crown in 2002, 2004 and 2008, NACE classification, full and part-time employed

*N.B. Data for 2002, 2004 and 2008 are taken from the Statistical Office of Slovakia. It shows the share of full-time employees in % by bands of average gross nominal monthly earnings in Slovak crown (koruna). The graphs are presented in national currency due to the fact that Slovak crown changed its exchange rate in 2002 from 42,7 crown for 1 euro, to 40,02 koruna for 1 euro in 2004, to 31,3 koruna to 1 euro in 2008 (ECB, annual exchange rate, 2012).*

Source: Slovakian Statistical Office, own interpretation



**Graph 3:** Bulgarian gross monthly income distribution according to NACE classification in 2006 and 2010, in Bulgarian lev, % of full and part-time employed

Source: Bulgarian Statistics Office, <http://www.nsi.bg/otrasal-publikaciaen.php? n=378&otr=51>, Structure of Earnings 2006 & 2010, p. 332, p. 334, own interpretation, 1 euro = 1,9558 Bulgarian Lev (since 2006), source: ECB, Statistical Data Warehouse



Decile ratio (D9/D1) of gross earnings	2002	2006	2010
Estonia	5.89	4.55	4.01
Slovakia	3.25	3.51	3.65
Croatia <sup>a</sup>	3.64 (1998)	4.01 (2000)	4.09 (2002)
Bulgaria <sup>b</sup>	...	4.14	4.55
FB&H <sup>c</sup>		3.2136 (2008)	3.63

**Table 3:** Decile ratio (D9/D1) of gross earnings, full time employees

Source: OECD statistics; Structure of Earnings in Bulgaria 2006, 2010; Nestic, 2005:63; Federal Statistical Office, Statistical Yearbook, 2009, 2011

<sup>a</sup>Croatian net income was taken from the Household Budget Survey data.

<sup>b</sup>Bulgarian gross monthly earnings are considered.

No data are available for RS, and for FB&H net monthly earnings are the basis for calculation (net income was the basis for wage tax calculation until 2008; although the base changed since 2009; in 2010 net income was taken again so that data would be comparable).

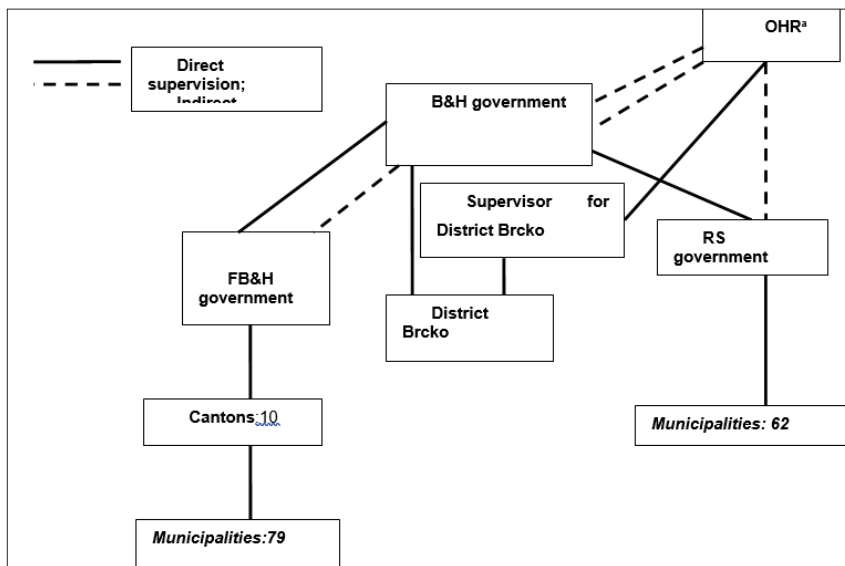
In terms of comparison with B&H, an important point needs to be emphasised: unlike any other transition country, B&H entered this period completely war-torn with divided markets between two entities: Federation of B&H (FB&H) and Republika Srpska (RS).

### 3.1. Personal income taxation in transition: The case of Bosnia and Herzegovina

#### 3.1.1. Constitutional structure of B&H

As a former Yugoslav republic, B&H gained its independence in March 1992 through referendum. However, due to a devastating war in B&H (from 1992 to 1995), B&H entered transition as late as 1996. B&H's current fiscal structure is determined by the B&H Constitution, i.e. the Dayton Peace Agreement (formally The General Framework Agreement for Peace in Bosnia and Herzegovina) which was signed in December 1995. Bearing in mind that B&H's GDP declined by 80 per cent in 1992, B&H's pre-war macroeconomic performance was/is difficult to reach. Hence, the expected decline in GDP *per capita*, rise in inflation and unemployment which was expected in all transition countries at the beginning of the transition process in B&H occurred under the worst possible circumstances. In B&H, all macroeconomic indicators followed the trends of those in other transition countries except the rise in inflation. Due to significant human, capital and infrastructural losses, up until 2000, B&H's economy heavily depended on international aid i.e. B&H was an aid-driven economy. However, since 2000, one would expect that B&H had finished its reconstruction process and that it is trying to make progress in the transition process. However, this was/is not the case, primarily due to unfinished privatisation, lack of political will for reasons of divided markets and weak institutional and legal system. Dayton Peace Agreement left the legacy of two entities organised as an asymmetric federation (Graph 4). Under such challenging circumstances, the fiscal system

and the tax system within are decentralised at entity's levels in the area of direct taxes and SSC and centralised at the level of B&H (since 2003) in the area of indirect taxes.



**Graph 4:** Constitutional structure of B&H

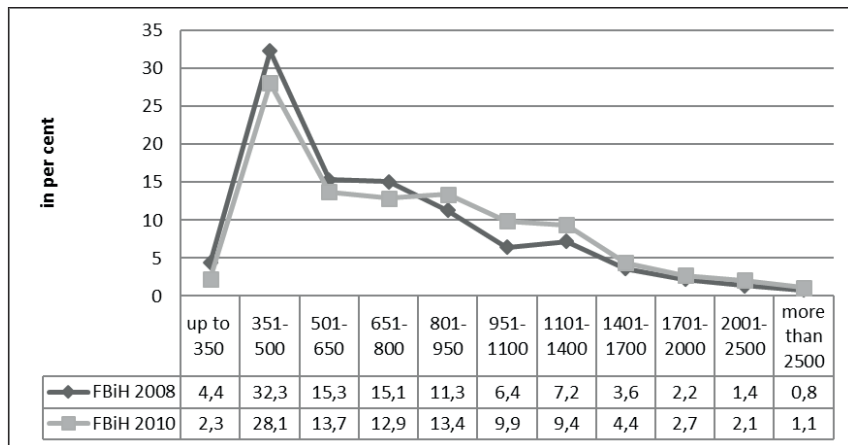
Source: Kreso, 2005, Association of Municipalities and Cities in FB&H and RS, own interpretation

*Under Article 10 of the Dayton Agreement, OHR stands for "Office of High Representative" which oversees the civilian implementation of the Dayton Agreement. Principal Deputy High Representative serves the role of District Brcko Supervisor; since 1999, the number of municipalities in FB&H and RS decreased (from 84 to 79 in FB&H and from 63 to 62 in RS).*

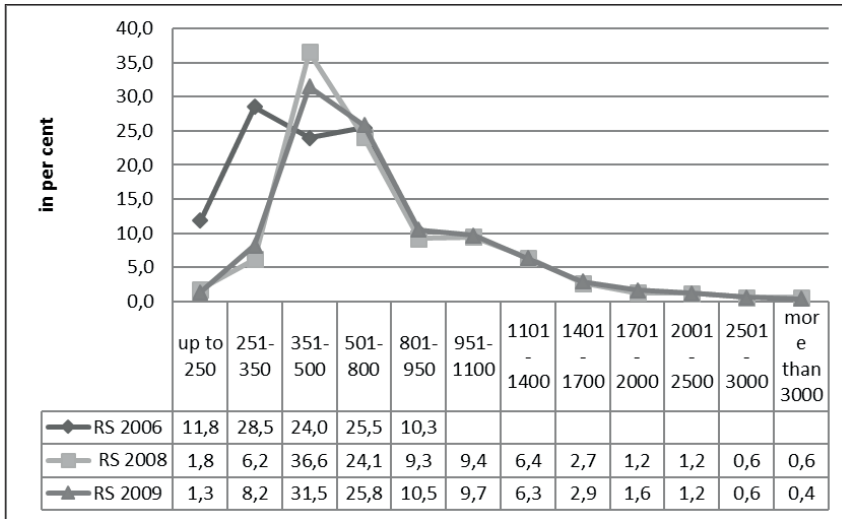
Both B&H entities have been passing laws and made constant changes in the area of PIT in the past nineteen years. FB&H has since 1996 applied 'schedular' wage tax at the net wage with flat rates decreasing from 15 per cent to 5 per cent in the period 1996-2008. Additional cantonal annual tax on total income existed and tax rates varied at the level of ten FB&H cantons from zero to twenty per cent. The system was quite inefficient bearing in mind that simple change of residency (which was the basis for income tax payments) would result in tax avoidance. In the period 2005-2008, these revenues took on average as little as 0.13 per cent of total revenues (Ministry of Finance FB&H, own calculation). A new law was passed in 2008 and in 2009 synthetic personal income tax was introduced at a flat rate of 10 per cent above a certain threshold – basic/personal allowance. Unlike the case of Slovakia, we cannot say that neither B&H nor entities applied comprehensive tax reform separately due to the fact that laws were passed separately and inconsistently. SSC rates have been decreasing, but are still very high causing a high labour tax wedge especially in FB&H for low-income earners (Betcherman and Arandarenko, 2008; Kreso and Lazovic-Pita, 2011). In fact, a switch towards 'flat tax' in FB&H insignificantly lowered labour tax wedge (0.5 per

cent) for a low-income earner at 67 per cent of average income (without fringe benefits) since the wage/income tax rate increased from 5 to 10 per cent (bearing in mind that the base changed from net to gross income). In FB&H, contrary to the practice of other selected transition countries, a switch towards 10 per cent 'flat tax' failed to bring more efficiency in terms of significantly lower labour tax wedge and/or labour demand incentives.

The RS has been changing legal provisions regarding tax rates, personal allowances (abolishing and reintroducing them) and SSC rates almost annually (especially after 2010), so the effect on labour tax wedge has been mostly affected by these changes in legal provisions without any pattern. However, in all analysed years, labour tax wedge for a low-income earner in RS is significantly lower than in FB&H primarily due to lower SSC rates (33 per cent and 41.5 per cent respectively). The RS currently applies 'flat' 10 per cent PIT rate with reintroduced basic/personal allowance in 2014. The situation of 'organised mess' resulting in the unfinished transition process in B&H obviously reflects on the tax system, namely PIT. Long, inefficient and unfinished transition process heavily affects B&H's economy reflecting in low levels of efficiency, high pre-tax income inequality and severe poverty. All this and high costs of entering the labour markets in terms of high labour tax wedge induced by high SSC cause high levels of unemployment, high informal/shadow economy and high tax evasion due to lack of institutional framework. In comparison to Slovakia and Bulgaria, net income distribution (due to its base of wage tax calculation until 2009) in FB&H and RS in terms of switching towards 'flat tax' did the following (Graph 5 & 6):



**Graph 5:** Net income distributions according to NACE classification in 2008 (prior to reform) and 2010 (after the reform) in the Federation of B&H, in BAM, full and part-time employed  
*Source:* FB&H Statistical Office, Statistical Yearbook 2009, 2011, own interpretation



**Graph 6:** Net income distributions according to NACE classification in 2006 and 2008 and 2009 in Republika Srpska, in BAM, full and part-time employed

Source: RS Statistical Office, own interpretation

*N.B. These years were chosen because of the occurrence of major changes in PIT tax legislation*

Both graphs indicate that after-tax income distribution in FB&H and RS is not moving to the right as quickly as it occurred in Bulgaria and Slovakia – especially in the upper tail of distribution. An explanation to this problem can primarily be found in low GDP *per capita*, slow after-war growth and the effects of global financial crisis. Other explanations include legal ability to avoid and evade taxes, cash remunerations and ‘envelope salaries’ which are (in FB&H) ‘induced’ by exclusion of fringe benefits, divided markets, lack of political will to speed up the process of B&H integration to the EU, high levels of corruption, bribery, and the fact that B&H has a high share of shadow economy (on average 33.6 per cent, Schneider, 2012: 61). Moreover, unlike cases of Slovakia and Bulgaria, both FB&H and RS switched from ‘schedular’ PIT to synthetic, where the base has been changed together with rates. Hence, it is the only country of those analysed where switching to ‘flat tax’ meant changing the overall PIT system. If we look at the PIT rates, they remain quite low compared to other transition countries but, in the case of FB&H, the increase from 5 per cent wage tax to 10 per cent PIT was substantial. In FB&H cantonal annual tax on total income resulted in insignificant revenues (as a percent of total revenues). The interdecile ratio in Table 3 shows certain tendencies of growing inequality in FB&H. In addition, the fact that both tax administrations (FB&H and RS) do not audit individual taxpayers serves as a motive to avoid/evade taxes through underreporting. Almost 95 per cent of reported income in both entities is earned through employer-employee mechanism. With tax reforms and a switch towards synthetic PIT, PIT is monthly paid in advance by employers resulting in better control of paid taxes. However, annual comprehensive income is

an individual/employee's (self-employee's) obligation which then serves as a motive for high underreporting, hence tax evasion through the loose system of non-individual auditing/control. This tendency is also visible in the Bulgarian case where interdecile ratio of annual earnings is greater than interdecile ratio of monthly earnings (Bulgarian Statistics Office). Additional explanation is that annual earnings include "irregular bonuses, which are more significant part in the earnings of highly-paid employees" (Bulgarian Structure of Earnings, 2006: 34). A similar assumption is valid for the case of B&H. Thus, in such a system, introducing progressive income tax just to serve a few individuals would only make PIT system more complicated, with little or no impact on redistribution mainly due to high tax evasion and informal economy. Similar scenarios are present in other Western Balkans states, where progressive PIT was replaced by 'flat' since underreporting/evasion occurred. FYR Macedonia's case can serve as an example. Prior to 'flat tax' reform, 98 per cent of all taxpayers paid income tax in the lowest income bracket, so even with progressive PIT, Macedonia already had in substance a flat tax before this reform (Murphy, 2008).

#### 4. Conclusion

The aim of this paper is to link three important economic parameters: income, personal income tax and transition. It started with the problems of defining income in terms of comprehensiveness of income. Since PIT is only a levy on income, this problem followed suit. Developed (OECD) countries nowadays have three PIT systems: progressive (comprehensive) PIT, dual income tax and 'flat' or proportional tax. The motivation of this paper was to show that, under macroeconomic circumstances, 'flat tax' is the best solution for PIT in the two entities of B&H. Progressive income tax can be introduced, similarly to the case of Slovakia, once the society as a whole becomes wealthier and when the transition process comes to an end. A country such as B&H requires a comprehensive PIT reform including greater involvement and significance of government institutions in all macroeconomic fields. Shifts in income distribution are the results of overall reforms, not only PIT reforms. In selected transition countries, a move towards upper end of distribution as well as the growth of 'middle class' workers in total distribution are of great significance. Application of the 'flat tax' in transition countries can be therefore observed as an intermediate phase in the wider transition process. A move from 'flat tax' to progressive income tax in transition countries can occur, similar to the case of Slovakia, when the top 1 per cent of the wealthiest members of the society becomes visible.

## References

- Aiginger K., Leoni Th. (2009.), *Typologies of Social Models in Europe*, Austrian Institute of Economic Research WIFO
- Arandarenko, M., Betcherman. (2008.), *Labor Costs and Labor Taxes in the Western Balkans*, World Bank, [http://siteresources.worldbank.org/INTECAREGTOPHEANUT/Resources/Betcherman&Arandarenko-labor\\_taxes\\_western\\_balkans.pdf](http://siteresources.worldbank.org/INTECAREGTOPHEANUT/Resources/Betcherman&Arandarenko-labor_taxes_western_balkans.pdf)
- Association of Municipalities and Cities in FB&H and RS. [www.sogfbih.ba](http://www.sogfbih.ba), [www.alvrs.com](http://www.alvrs.com) pdf
- Atkinson, A., B., Piketty, T., Saez, E. (2009.), *Top Incomes in the Long Run of History*, NBER Working Paper No. 15408
- Atkinson. A. B., (1995.), *Public Economics In Action: The Basic Income/ Flat Tax Proposal*, Oxford University Press
- Auerbach, A., Feldstein M. (Ed.) (1985.), *Handbook of Public Economics*, Volume I, Elsevier
- B&H Directorate for Economic Planning. Annual economic trends. [www.dep.gov.ba](http://www.dep.gov.ba)
- Bernardi. L. et al. (2005.) *Tax systems and tax reforms in new EU members*. Routledge Series in the Modern World Economy
- Blažić, H. (2006.), *Usporedni porezni sustavi - oporezivanje dohotka i dobiti*, Ekonomski fakultet u Rijeci. Rijeka
- Bradford. D. (2003.), *The X Tax in the World Economy*, CEPS WP. No. 93., <http://www.princeton.edu/~ceps/workingpapers/93bradford.pdf>
- Brook, A. M., Leibfritz, W. (2005.), *Slovakia's Introduction Of a Flat Tax as Part of Wider Economic Reforms*, OECD, Economics Department Working Papers No. 448
- Bulgarian Statistics Office. <http://www.nsi.bg/otrasal-publikaciaen.php?n=378&otr=51> pdf
- Central Bank of B&H, Annual Report, 2012, [www.cbbh.ba](http://www.cbbh.ba) pdf
- Crossen S., Bird, R. (1990.), *The personal income tax: Phoenix from the ashes?*, Elsevier Sc. Publication, Amsterdam, 1990
- Čok, M. (2004.), *Redistributivni učinci poreza na dohodak u Sloveniji*, Financial theory and practice, Institute of Public Finance Zagreb
- Čok, M., Urban, I., Verbic, M. (2012.), *Income redistribution through taxes and social benefits: the case of Slovenia and Croatia*, MPRA paper
- Cremer et al. (2010.), *Income Tax Reform in France: A Case Study*. Finanzarchiv/Public finance analysis vol. 66. no. 2
- Croatian Ministry of Finance, [www.mfin.hr](http://www.mfin.hr) pdf

- Davies, J., B., Hoy, M. (2002.), *Flat Rates Taxes and Inequality Measurement*, *Journal of Public Economics*, 84(1), p. 33-46.
- Davies, J.,B., Sandström, S., Shorrocks, A., B., Wolff, E., N., (2011.), *The Level and Distribution of Global Household Wealth*, *The Economic Journal* 121, p. 223-254.
- Davis, J.,B., (2004.), *Microsimulation, CGE and macro modelling for transition and developing economies*, WIDER Discussion Papers // World Institute for Development Economics (UNU-WIDER), No. 2004/08, ISBN 9291906263
- Directorate for Economic Planning, B&H Council of Ministers, Annual Economic Report, 2005-2011, [www.dep.gov.ba](http://www.dep.gov.ba)
- EBRD, 2006, 2010, Life in transition survey, <http://www.ebrd.com/pages/research/economics/data/lits.shtml>
- EBRD, 2013, Transition indicators, <http://www.ebrd.com/pages/research/economics/data/macro.shtml>
- Ebrill, L., Havrylyshyn, O. (1999.), *Tax reform in the Baltics, Russia and other countries of the Former Soviet Union*. IMF WP no. 182. Washington
- ECB. Statistical Data Warehouse. <http://sdw.ecb.europa.eu/pdf>
- European Commission (2013): Taxation trends in the EU, 2013 ed, annex A, [http://ec.europa.eu/taxation\\_customs/taxation/gen\\_info/economic\\_analysis/tax\\_structures/index\\_en.htm](http://ec.europa.eu/taxation_customs/taxation/gen_info/economic_analysis/tax_structures/index_en.htm) pdf
- FB&H Statistical Office, Statistical Yearbook 2006-2011, [www.fzs.ba](http://www.fzs.ba)
- Federal Decree on the other emoluments, Official Gazette of FB&H no. 34/04. 56/04. 68/05. 33/06. 75/07
- Feige, E. L. (1994.), *The transition to a market economy in Russia: property rights, mass privatisation and stabilization*, Routledge, NY
- Feldstein M. (1995.), *Effect of Marginal Tax Rates on Taxable Income: A Panel Study of the 1986 Tax Reform Act*, *Journal of Political Economy*. access via: <http://nrs.harvard.edu/urn-3:HUL.InstRepos:2766676>
- Feldstein, M. (2008.), *Effects of taxes on economic behaviour*, *National tax journal* 61, access via: <http://nrs.harvard.edu/urn-3:HUL.InstRepos:2943922>
- Garnier, G., et al. (2013.), *Recent Reforms of Tax Systems in the EU: Good and Bad News*, EU Commission WP, no. 39
- Goode. R. (1964.), *The individual income tax*, Studies of government finance, The Brookings Institution, Washington D.C.
- Grdović Gnip, A. Tomic, I. (2010.), *How Hard Does the Tax Bite Hurt? Croatian vs. European Worker*, [www.ijf.hr/eng/FTP/2010/2/gnip-tomic.pdf](http://www.ijf.hr/eng/FTP/2010/2/gnip-tomic.pdf)
- Hall R. E., Rabushka A. (2007.), *The flat tax*, Hoover institution press, Stanford, <http://www.hoover.org/publications/books/8329>

- Harvey, D. (2005.), *A brief history of Neoliberalism*, Oxford University Press
- Jacobs, B. et al. (2007.), *Analyzing a Flat Income Tax in the Netherlands*, Tinbergen Institute
- Kaldor, N. (1955.), *An expenditure tax*, Routledge Library Editions-Economics, reprinted in 2003
- Keen M., Kim Y., Varsano R. (2006.), *The Flat Taxes: Principles and Evidence*, IMF working paper 06/218
- Kovtun, D. et al. (2014.), *Boosting Job Growth in the Western Balkans*, IMF Working paper 16/14
- Kreso, S., Lazovic-Pita, L. (2011.) *Labour Tax Burden in the "Flat Tax" Western Balkan States: A Comparison*, OET Conference, Pula 2011
- Kreso, S. (2005.), *Fiscal decentralization in B&H*, Cannakale, Turkey
- Krkoska, L., Teksoz, U. (2005.), *Accuracy of growth forecasts for transition countries: Assessing ten years of EBRD forecasting*, EBRD Working paper
- Matthews, S. (2011.), *Trends in Top Incomes and their Tax Policy Implications*, OECD Taxation Working Papers, No. 4, OECD Publishing, <http://dx.doi.org/10.1787/5kg3h0v004jf-en>
- Mitra P., Stern N. (2003.), *Tax systems in transition*, Word Bank Working Paper
- Murphy, L. (2008.), *Macedonia Makes Early Headway After Flat Tax Debut*, <http://www.imf.org/external/pubs/ft/survey/so/2008/car043008a.htm>
- Musgrave, R. (1998.), *Kratka povijest fiskalne doctrine*, IJF, Zagreb
- Nestić, D. (2005.), *Income Distribution In Croatia: What Do the Household Budget Survey Data Tell Us?*, IJF, <http://www.ijf.hr/eng/FTP/2005/1/niestic.pdf>
- OECD (1991.), *Tax role of tax reform in Central and Eastern European Economies*, OECD, Paris
- OECD (2006.), *Fundamental Reform of Personal Income Tax*, Tax Policy Studies, OECD no. 13
- OECD (2010.), *Choosing a Broad Base - Low Rate Approach to Taxation*, OECD Tax Policy Studies, No. 19, OECD Publishing
- OECD (2013), *Taxing Wages*, 2013 edition
- OECD (2014.), *Top Incomes and Taxation in OECD Countries: Was the crisis a game changer?* <http://www.oecd.org/els/soc/OECD2014-FocusOnTopIncomes.pdf>
- OECD statistics, [https://stats.oecd.org/Index.aspx?DataSetCode=DEC\\_I](https://stats.oecd.org/Index.aspx?DataSetCode=DEC_I) pdf



Official Gazette of B&H, No. 4. 2003

Paulus *et al.* (2009.), *The Effects of Taxes and Benefits on Income Distribution in the Enlarged EU*, ISER, Essex

Paulus, A., Peichl, A. (2008.), *Effects of flat tax reforms in Western Europe on income Distribution and Work incentives*, IZA discussion paper 3721, IZA, Bonn

Pechman J. A. (Ed.) (1980.), *What should be taxed: Income or Expenditure?*, The Brookings Institution, Washington D.C.

Pechman J. A. (Ed.) (1984.), *Options for Tax Reform*, The Brookings Institution, Washington D.C.

Peichl, A. (2008.), *Could the World be Flat? Simulating Flat Tax Reforms in Western Europe*, PhD thesis, Koeln, <http://kups.ub.uni-koeln.de/2347/>

Peichl, A. (2013.), *Slovakia has abolished its flat tax rate, but other Eastern and Central European countries are likely to continue with the policy*, <http://blogs.lse.ac.uk/europpblog/2013/03/18/slovakia-abandon-flat-tax/>

Pestieau, P. (Ed) (1992.), *Tax reform in Countries in Transition: Central Policy Issues, Public Finance in a World of Transition*, Proceedings of the 47<sup>th</sup> Congress of the International Institute of Public Finance, St. Petersburg, vol. 47

Piketty, Th., Zucman, G. (2013.), *Capital is Back: Wealth-Income Ratios in Rich Countries 1700-2010*, <http://piketty.pse.ens.fr/files/PikettyZucman2013WP.pdf>

PIT Law FB&H, Official Gazette of FB&H, 10/08

PIT Law, Official Gazette of RS no. 91/06. 120/08. 01/10. 01/11

Randeljović, S., Žarković-Rakić. J. (2011.), *Improving work incentives in Serbia: evaluation of a tax policy reform using SRMOD*, [http://microsimulation.org/IJM/V6\\_1/7\\_IJM\\_6\\_1\\_Randelovic\\_Rakic.pdf](http://microsimulation.org/IJM/V6_1/7_IJM_6_1_Randelovic_Rakic.pdf)

Republika Srpska Statistical Office, Statistical Yearbook, 2013 [www.rzs.rs.ba](http://www.rzs.rs.ba) pdf

Rodrik, D. (2002.), *After Neoliberalism What?* <http://www.sss.ias.edu/files/pdfs/Rodrik/Commentary/after-neoliberalism-what.pdf>

Rose M. (Ed.) (1999.), *Tax reforms for countries in transition to market economies*, Lucius & Lucius, Stuttgart

Rose. M. (Ed.) (1991.), *Konsumorientierte Neuordnung des Steuersystems*, Springer Verlag

Rutkowski, J. (1996.), *Changes in the Wage Structure during Economic Transition in Central and Eastern Europe*, WB elibrary

Saez, E. (2001.), *Optimal observability in a linear income tax*, Review of Economic Studies

Schneider, F. (2012.), *The Shadow Economy and Work in the Shadow: What Do We (Not) Know?* IZA DP No. 6423

Slemrod J., Traxler Ch. (2010.), *Optimal observability in a linear income tax*, Economic letters, Elsevier

Slovak Republic Statistical Office, <http://portal.statistics.sk/showdoc.do?docid=359>

Sonin K. (2013.) *The end of economic transition*, *Economics in Transition*, vol. 21. issue 1

Structure of Earnings in Bulgaria 2010, <http://www.nsi.bg/en/content/6397/%D0%BF%D1%83%D0%B1%D0%BB%D0%B8%D0%BA%D0%B0%D1%86%D0%B8%D1%8F/structure-earnings-2010.pdf>

Structure of Earnings in Bulgaria, 2006, <http://www.nsi.bg/en/t/6388/%D0%BF%D1%83%D0%B1%D0%BB%D0%B8%D0%BA%D0%B0%D1%86%D0%B8%D1%8F/structure-earnings-2006.pdf>

Svejnar, J. (2001.), *Transition Economies: Performance and Challenges*, WP 415

Tanzi, V. (1991.) *Public finance in developing countries*, Edward Elgar, Aldershot

Teather, R. (2005.), *A Flat Tax for the UK — A Practical Reality*. Briefing (Adam Smith Institute: London)

Tiiu P., Tafenau, E. (Ed.) (2004.), *Modelling the Economies of the Baltic Sea Region*, Paulus, A. Income Inequality and Its Decomposition: The Case of Estonia

UNECE Statistical Database, 2013. <http://w3.unece.org/pxweb/> pdf

Urban, I. (2010.), *Redistributive effects of direct taxes and social benefits in Croatia*, PhD thesis, Ljubljana, <http://www.cek.ef.uni-lj.si/doktor/urban.pdf>

Ventura, G. (1999.), *Flat tax reform: A quantitative exploration*, *Journal of Economic Dynamics & Control* 23, Elsevier

Williamson, J. (2004.), *A Short History of the Washington Consensus*, <http://www.iie.com/publications/papers/williamson0904-2.pdf>

World Economic Outlook. April 2014 database. <http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx> pdf

**Saša Drezgić, PhD, Associate Professor**

University of Rijeka, Faculty of Economics and Business

e-mail: sasa.drezgic@efri.hr

**Davor Vašiček, PhD, Full Professor**

University of Rijeka, Faculty of Economics and Business

e-mail: davor.vasicek@efri.hr

## CONTEMPORARY GOVERNMENT ACCOUNTING AND FISCAL CONSOLIDATION<sup>98</sup>

### ABSTRACT

The paper covers the latest improvements of government accounting methodology that resulted from the implementation of the European System of Accounts 2010 (ESA 2010) and Government Finance Statistics Manual 2014 (GFSM 2014). The main research question is how the changes of government accounting principles and classification affect wider fiscal consolidation efforts particularly emphasised within the EU member states. Based on thorough analysis of the new methodology, the objective of the paper is to provide policy recommendations on the introduction of these changes into national accounting systems in the context of achieving the objectives of fiscal consolidation and stability of public finances.

**Key words:** government accounting, ESA 2010, GFSM 2014, fiscal consolidation, public finances

### 1. Introduction

Numerous changes and improvements within the framework of government accounting presented by the European System of Accounts 2010 (ESA 2010) and Government Finance Statistics Manual 2014 (GFSM 2014) provided a basis for a much more accurate presentation of the government's fiscal indicators as well as new possibilities to improve fiscal discipline and, at the same time, induce positive economic growth effects from underlying fiscal activity.

In this regard, strengthened by the detrimental economic and fiscal effects of the last global economic crisis, most of the economies focused on consolidation of their public finances. However, this practice, even during the crisis, had a clear effect on significant reduction of public investment level and, thus, economic growth in the short- and long-term period. Therefore, the goal is to continue fiscal consolidation without jeopardising the goals of economic prosperity.

---

<sup>98</sup> This work has been supported in part by the Croatian Science Foundation under project number IP-2013- 11-8174 and in part by the University of Rijeka under project number 13.02.1.2.02

There are at least several major fields where governments can benefit from understanding and implementing international accounting and financial reporting systems. These are the issues of national accounting system used (cash or full accrual standard), use of alternative financing models (such as concessions, public-private partnerships or operational leases), definition of general government and classification of the institutional sector, valuation of investment and infrastructure assets, use of creative accounting. This paper briefly discusses these potentials from the aspect of avoiding trade off between fiscal consolidation efforts and the burden of public investment financing.

After the introduction, the second section discusses the relationship between fiscal consolidation and government accounting. The third section presents open issues within contemporary government accounting that affect fiscal position and fiscal consolidation results. The conclusion offers several policy recommendations.

## 2. Fiscal consolidation and government accounting

Economic and financial crises have intensified the search for the necessary tools for attaining fiscal and macroeconomic stability. Fiscal rules have been a widely debated tool for coping with potentially reckless government behaviour. However, there is no unison agreement on the validity of their use. This is particularly the case for EU member states where there are considerations that such rules substantially curbed growth of capital accumulation, and thus, economic growth.

One of the major instruments in preventing excessive government spending was strengthening fiscal institutions through improvements of the methodology of statistical and financial reporting. The focus of these improvements has been on improving the quality and comprehensiveness of fiscal reports and determination of fiscal position. However, very few studies point to the fact that implementation of contemporary methodology can enable both better reporting and more favourable fiscal position, i.e. results of fiscal consolidation. In terms of relevance of fiscal consolidation, there are several important issues that need to be discussed due to their potentially significant impact on the fiscal position, and therefore, fiscal consolidation needs:

1. National accounting basis used, cash or accrual,
2. Use of alternative financing models – such as concessions, public-private partnerships or leases,
3. Definition of general government and classification of the institutional sector,
4. Valuation of investment and infrastructure assets,
5. Creative accounting.

There are many issues related to application of cash accounting supporting the need for the introduction of accrual accounting. Under cash accounting, transactions are recorded only when cash is received or paid. Recording under accrual framework means that flows are recorded at the time economic value is created, exchanged, transferred, or extinguished. However, the framework also encompasses the traditional cash-based reporting (GFSM 2014). The main issue related to the use of cash accounting was deferral of cash disbursements or bringing forward cash receipts as means of artificially inflating financial balances of fiscally weak governments. In addition, governments that follow cash accounting do not keep comprehensive and updated records of the value of their assets and liabilities. One of the issues is the potential ability to transfer assets or incur liabilities to third parties without disclosing their financial implications for the government and taxpayers. In other words, cash accounting has serious issues related to lack of transparency and opens significant space for moral hazard of the tempted government.

Cavanagh *et al.* (2016) associate four major innovations with the application of accrual accounting:

- The recognition of economic events in flow reports at the time at which they occur, as well as when the related cash receipts and payments change hands. These economic events may directly generate a corresponding or simultaneous cash flow, but in many cases – such as depreciation, revaluations, or impairment – they do not. Such an approach provides much better credibility to future fiscal projections and real costs of government activity;
- The recording of all stocks of assets and liabilities in balance sheets. Governments that use cash accounting account only for their cash holdings on the assets side, and debt on the liability side of their balance sheets. These are often valued at „book value“ or the value depending on the market price at the point of their acquisition or issuance. Under accrual accounting, government recognises all assets and liabilities including financial assets, non-financial assets and liabilities other than debt securities and bonds. These stocks are usually recorded at their current market value, their value in use, or some approximation, and are regularly revalued to ensure that the balance sheet reflects the government’s true financial position,
- Enhanced monitoring of liabilities and contingent liabilities. Liabilities such as employee entitlements, environmental obligations, insurance claim obligations, expected losses under guarantee schemes which are not typically recognised in a cash accounting environment receive much more attention once recognised under accrual accounting system;
- The consolidation of all entities under government control. Cash accounts typically only cover budgetary central government (central government ministries and agencies). Accrual-based

international accounting standards call for financial statements which consolidate all entities under government control (such as extra-budgetary funds, arms-length agencies, and public corporations).

Bearing in mind the previously stated main features of cash and accounting system, it is worth mentioning that cash accounting is very useful and necessary to control for the actual fiscal obligations resulting from regular government activities. This is particularly important for fiscally weak governments which struggle with their payments. Cash accounting defines their short-term and medium-term borrowing activities. Therefore, in the short term, manipulating with fiscal indicators, that falls directly within cash accounting, governments reduce fiscal costs of excessive borrowing. They do not provide true information to the market and government borrowing is therefore less costly. In addition, by overspending, the government creates a fiscal illusion which benefits their political option.

An important feature of accrual accounting, contrary to cash accounting, is depreciation of capital installation over its service life. In cash accounting, new capital expenditures are fully charged to the current budget. Under strict fiscal rules, the government benefits significantly due to the fact that deficits under accrual accounting appear to be much smaller. Over time, however, the depreciation of current and past capital investment could be larger than current capital expenditure, therefore worsening the deficit (see Mintz and Smart, 2008).

Both accounting approaches obviously present an obstacle for short-term and long-term optimal investment policies under the fiscal rules engagement. The main question is how to devise a model which would prevent weak governments to overspend by manipulating fiscal data and, at the same time, would not curb the necessary high level of public investment efforts. In other words, the issue is how to optimise trade-off between government consumption and investment. In theory and in practice of some governments, long-term financing should be related only to public capital investment. In that sense, Mintz and Smart (2008) propose a division of operational and capital budget. The operational budget would be accrued revenues and current expenses associated with programmes. They associate capital budget with assets and liabilities held by the government. Assets would be tangible and intangible and liabilities would include debt and other contingency claims on the government. Such an approach could enable more sustainable financing of public investment by differentiating types of government assets where infrastructure (or public capital which can be financed by user fees or evaluated by market prices) would be financed under capital budget and other types of government spending (such as non-market capital investment or other operational costs such as financing education – human capital investment) could be financed under operational budget. Thus, the capital budget could be self-sustainable based on the market value of underlying assets and user fees generated. Operational budget would be constrained by future government revenues. Of course, in terms of

risk control, even in capital budget, some sort of golden rule could be applied, i.e. only a portion of capital expense could be financed by borrowing. Another development of new accounting methodologies comes in extended possibilities of using alternative financing models. Both GFSM 2014 and ESA 2010 coupled with the Manual on Government Deficit and Debt (EU, 2016), provide extensive possibilities of financing public needs by engaging private capital. The main feature of such alternative models of financing, which mainly refer to concessions, public-private partnerships and operational leases, is that they do not affect public debt and also have substantially lower impact on public deficit than in the case of traditional financing options like borrowing. Another, even more important feature of alternative models, provided that the contracts between public and private entities are harmonised with the ESA 2010 propositions, is that uncertainty and risk are mainly transferred to the private sector. This means that public sector payments within the term of the contract are transparent, predictable and stable, which creates much more space for other public projects. Realisation of public investment through alternative financing models significantly reduces opportunity costs of financing public investment. Even a slight increase in public debt and deficit can jeopardise macroeconomic stability. On the other hand, short and long-term growth effects of public investment financed by private capital additionally decrease the public debt-GDP ratio.

Understanding the definition of general government and classification of the institutional sector can additionally improve the government's fiscal position without decreasing the level of government services. In this case, the government is motivated to leave public companies out of the general government financial reporting and, at the same time, provide desirable public services. ESA 2010 introduces qualitative criteria for the classification of economic units:

When the unit sells only to the government, and does not compete with private producers to sell this output to the government, the unit is to be classified within general government; or

- When the government has a single supplier in a certain type of goods and services and this single supplier sells less than 50% of its output to non-government units and does not compete with private producers to obtain its contract with the government, the unit is to be classified within the general government; or
- When a producer has no incentive to adjust supply in order to undertake a viable profit-making activity, to be able to operate in market conditions and to meet its financial obligations, the unit is to be classified within the general government.

Since GFSM 2014 and ESA 2010 base their classification on the evaluation of market activity of a particular entity, governments that favour more competitive markets can reap the benefits of a lower level of government debt and deficit as well as better quality and lower price of provision of public goods and services. The accounting system in this case pushes

the governments towards better regulation of public goods and services which should be provided (produced) by the private sector (market).

Valuation of infrastructure assets and investment is important for the fiscal position, at least in terms of the following questions (Irwin, 2008):

- Do the reported values of infrastructure assets approximate the present value of cash flows they are expected to generate?
- Are the present values of guarantees and long-term purchase commitments reported?
- Are infrastructure assets and liabilities of public enterprises included in reported assets and liabilities?
- How well do modern standards deal with the problem of uncertainty and bias?

The main question in this regard, bearing in mind different types of assets in relation to the market or non-market feature, is what technique should be used in the valuation of public assets. There are basically two main possibilities – fair or market value or value based on acquisition (replacement) costs.

Fair value is based on approximating the present value of user fees minus cash operating costs. In that sense, the price at which the asset would change owner should roughly equal the expected net present value of the future operating cash flows. Replacement costs equal the present value of future operating cash flows only if user fees are set to cover the cost. Estimates of depreciated replacement costs will exclude the value of any supernormal profit that the government expects to receive from user fees set higher than full costs (likewise, it is possible that the government would sell assets below replacement costs). However, measures of fair value will not entail any effect of the asset on the government's tax revenues (Irwin, 2008, p.284). Usually, governments have weak tools and potentials to evaluate assets. In that regard, a move towards more comprehensive accounting systems such as full accrual accounting and financing options that require the use of a full financial model such as public-private partnerships could significantly improve potentials for setting more accurate and favourable fiscal position.

Finally, the definition of creative accounting does not imply positive phenomena despite the fact that it can temporarily reduce government costs of public investment finance. Historical evidence provide many examples of long-term detrimental effects of such activities. True costs of government activities have unavoidable real effects. Even accrual accounting provides many opportunities to avoid the presentation of true fiscal position.

Relevancy and credibility of accounting information in presenting activities and degree of fulfilment of goals are affected by different accounting manipulations. These manipulations present the accounting situation differently from the reality in a specific reporting period. Basically, account-



ing manipulations are made by deliberate „distorting“, covering up or unclear presentation of documents related to government activities or time lag (anticipation or postponement) in financial reporting. The accounting system is the most comprehensive basis for preparation of information for the needs of internal and external users. Due to that fact, unreliable and incomplete accounting information may have serious consequences. Due to problems in recent history, with established practice of „creative accounting“ shaken by international financial markets, respectable accounting organisations and auditing companies have undertaken significant efforts towards restoring accounting credibility. The key question here is prevention of the use of accounting for purposes of manipulations and frauds.

Regardless of the sector of economy, accounting manipulations by their nature always result in a certain distance from the standards of quality of accounting information presented in financial reports. However, in relation to the private sector, accounting manipulations in the public sector have to be observed in the context of their non-profit character and different terms and goals of their activity compared with the private sector.

### **3. Reflections on government accounting methodology**

As elaborated above, contemporary literature points out the efforts towards implementation of the accrual concept within national systems of government accounting; setting connections between inputs, goals, and purpose of the activities and results of government agencies, and matching accounting goals and financial reporting with the budget. Implicitly, accrual concept does not provide comprehensive and actual information on total costs of government activities. On the other hand, the key advantage of application of the accrual principle is the possibility of monitoring and management of total assets, debts and public expenditures. Consequently, the application of this concept increases transparency, comprehensiveness and reliability of accounting information and allows the possibility for application of indicators for evaluation of success and effectiveness of activities of government entities. This also enables performance evaluation and raising the level of public management responsibility (Diamond, 2002).

It is worth noting that international financial reporting standards are converging in time towards better quality and higher level of comprehensiveness. Thus, the GFSM 2014 has updated the internationally recognised guidelines for compiling statistics required for fiscal analysis that had been established by the GFSM 2001. The revised guidelines are harmonised with the updates in other macroeconomic statistical manuals and guides such as the System of National Accounts 2008 (2008 SNA), and others. Also, the revised manuals and guidelines address important international economic developments in recent years and take into account improved recording and methodological treatments of various types of events. The development of International Public Sector Account-

ing Standards and continued efforts to harmonise statistical reporting and financial reporting have led to additional changes incorporated in the GFSM 2014 (GFSM 2014, p. 2).

However, there are many points of divergence when it comes to the principal international financial reporting standards for the public sector – IPSAS, GFSM 2014, and ESA 2010. Consolidation of financial statements which defines general government is provided within IPSAS 35. A controlled entity is defined as an entity controlled by another entity, the controlling entity. The controlling entity shall assess whether it controls the other entity. Control is based on whether an investor has 1) power over the other entity; 2) exposure, or rights, to variable benefits from its involvement with the other entity; and 3) the ability to use its power over the other entity to affect the nature or amount of the benefits. The entity's benefits from its involvement with the entity being assessed for control can be financial, non-financial or both. Financial benefits include returns on investment such as dividends or similar distributions. Non-financial benefits include advantages arising from scarce resources that are not measured in financial terms and economic benefits received directly by service recipients of the entity. Non-financial benefits can occur when the activities of another entity are in agreement with the objectives of the entity and support the entity in achieving its objectives.

On the other hand, GFSM 2014 and ESA 2010 base the limitations of the government on the nature of their economic activity. There are clear rules which define that all public sector entities primarily engaged in market activity belong to the private sector and all public sector entities that primarily engage in „non-market“ activities belong to the general government sector. Such an approach can create substantial differences regarding the fiscal position of governments bearing in mind that in many countries there are large public companies that heavily invest and are engaged in substantial borrowing operations.

Additional important difference between GFSM 2014 and IPSAS refers to the valuation of the public capital. According to the GFSM 2014 (IMF, 2014), economic flows as well as assets, liabilities, and net worth are valued at current market prices in the GFS framework. While current market prices are readily available for assets and liabilities that are traded in active markets, valuation according to market-value equivalents is used for valuing assets and liabilities that are not traded in markets, or are traded infrequently. IPSAS 16 and 17 deal with the valuation of properties. Investment property shall be recognised as an asset when, and only when:

- It is likely that the future economic benefits or service potential that are associated with the investment property will flow to the entity.
- The cost or fair value of the investment property can be measured reliably.

It is further defined that investment property shall be measured initially at its cost. Transaction costs shall be included in this initial measurement. Where an investment is acquired through a non-exchange transaction at no cost, or for a nominal charge, its cost shall be measured at its fair value as on the date of acquisition. After recognition, an entity shall choose as its accounting policy either the fair value model or the cost model:

- Fair value model: Investment property is measured at fair value, and changes in fair value are recognised in surplus or deficit for the period in which it arises. Cost model: Investment property is measured at depreciated cost, minus any accumulated impairment losses. Fair value of the investment property shall still be disclosed.

If an entity uses the fair value model but, when a particular property is acquired, there is clear evidence that the entity will not be able to determine fair value on a continuous basis, the cost model is used for that property — and it shall continue to be used until disposal of the property. In that case, the residual value of the investment property shall be assumed to be zero.

Depreciation is charged systematically over the asset's useful life. The depreciation method must reflect the pattern in which the asset's future economic benefits or service potential is expected to be consumed by the entity. The residual value must be reviewed at least annually and shall equal the amount the entity would receive currently if the asset were already of the age and condition expected at the end of its useful life. If an operation of an item of property, plant and equipment (for example, an aircraft) requires regular major inspections, when each major inspection is performed, its cost is recognised in the carrying amount of the asset as a replacement, if the recognition criteria are satisfied.

The carrying amount of an item of property, plant and equipment must be de-recognised:

- On disposal
- When no future economic benefits or service potential is expected from its use or disposal

The gain or loss arising from the derecognition of an item of property, plant and equipment shall be included in surplus or deficit when the item is derecognised. Gains shall not be classified as revenue; the gain or loss arising from the derecognition of an item of property, plant and equipment must be determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.

Based on previous stipulations of GFS and IPSAS, it is possible to conclude that, in terms of valuation, modern accrual accounting has two weaknesses. Firstly, it ignores tax effect of investment in public capital. Secondly, it treats assets that create future user fees no differently from assets that do not.

The budget accounting system is featured by a high level of normativism that subjects all entities of general government to unified and uniform accounting procedures. In this way, according to the regulations on budgetary accounting, the procedures on bookkeeping, bookkeeping statement and data processing, the content of budgetary plan, recording of revenues and expenditures, evaluation of balance positions, revaluation, financial reporting and other areas are related with budgetary accounting.

Implementation of regulations thus determines unique budgetary procedures and introduces data processing uniformity. Such an approach means that the possibility of application of different accounting policies in recording financial elements of financial reports is eliminated. For this reason, the space for legal accounting manipulations is almost entirely eliminated. However, the fact that the regulation cannot cover all possible business activities and financial transactions and cannot prescribe unified accounting procedures and methods of measurement and evaluation – there is certain space for accounting manipulations that can be conditionally regarded as legal.

Therefore, it can be determined that, on the one hand, the purpose of the legal framework primarily is to determine the rules and procedures and prevent manipulations with accounting information. On the other hand, if there is a lack of comprehensiveness and clarity, there are possibilities for different interpretation and procedures which can lead to manipulations with accounting information.

- Despite the application of more complex accounting concepts (accrual) and IPSAS, we can list accounting procedures which could have a significant effect on the reality of presentation of financial reporting elements (debt and deficit): Time arrears of revenues (recording of unpaid revenues – anticipation of future revenues);
- Recording of claims and other property that cannot be paid or the real value of these items is reduced (there is no test on property reduction);
- Unreal valuation (overestimation/underestimation of value) of long-term property;
- Time arrears of expenditures (postponement of recording of liabilities);
- The lack of recording of expenditures and debts (interests, exchange rate differences, contractual obligations...);
- Treatment of out-balance statements: recording of indirect indebtedness, guarantees, public-private partnerships, long-term contracts on the operative lease, etc.;
- The lack of comprehensive consolidation by the principle of economic unity;

- The lack of revalorisation procedures;
- Recording of changes in the value and quantity of property and liabilities directly to the burden in benefit/cost of capital, past the account of revenues and costs, etc.

#### 4. Conclusion

The paper covers the interconnection of fiscal rules and government accounting from the aspect of their effects at the level of public investment and determination of the fiscal position, i.e. presentation of fiscal reports. Although the international accounting authorities improve and develop accounting standards dealing with possible undesirable accounting practices, there is still much space for improvement. This paper identified some of the problems, but also pointed to some possibilities that governments can use to improve their fiscal position through the implementation of the latest methodological improvements in the field of government accounting.

However, it has to be noted that transition of accrual accounting system and other improvements of accounting standards is relatively slow. Some of the reasons are insufficient educational efforts and human resource capacity within government institutions. It seems that, also in this field, lower level of human capital curbs fiscal consolidation efforts and potential economic growth effects through higher public capital accumulation.

## References:

IMF (2014.), Government finance statistics manual 2014, Washington D.C., <https://www.imf.org/external/Pubs/FT/GFS/Manual/2014/gfsfinal.pdf>

Diamond, J. (2002.), Performance Budgeting: Is Accrual Accounting Required?, W/P/o2/240/IMF, Washington

EU (2013.), European system of accounts ESA 2010, Luxembourg: Publications Office of the European Union, <http://ec.europa.eu/eurostat/documents/3859598/5925693/KS-02-13-269-EN.PDF/44cd9d01-bc64-40e5-bd40-d17df0c69334>

Deloitte (2017.), IPSAS in your pocket 2017, <https://www.iasplus.com/en/publications/public-sector/ipsas-in-your-pocket-2017>

EU (2016.), Manual on Government Deficit and Debt Implementation of ESA 2010, Luxembourg: Publications Office of the European Union, 2016, <http://ec.europa.eu/eurostat/documents/3859598/7203647/KS-GQ-16-001-EN-N.pdf/5cfae6dd-29d8-4487-80ac-37f76cd1f012>

Mintz, J. M., Smart, M. (2008.), Incentives for Public Investment Under Fiscal Rules, Fiscal Policy, Stabilisation and Growth, Prudence or Abstinence?, Perry G.E. *et al.* (eds.), The World Bank, Washington D.C., p.225-258.

Irwin, T. (2008.), Accrual Accounting, Long Term Fiscal Projections, and Infrastructure Investment, Fiscal Policy, Stabilisation and Growth, Prudence or Abstinence?, Perry G.E. *et al.* (eds.), The World Bank, Washington D.C., p. 273-296.

Cavanagh, J., Flynn, S., Moretti, D. (2016.), Implementing Accrual Accounting in the Public Sector, Technical notes and manuals, Fiscal Affairs Department, IMF

## Postignuća/Achievement

### Published papers

#### Journal papers

Blažić, H., Šimović, H., Štambuk, A., (2014): Mjesto socijalne politike u poreznoj politici RH: anketa poreznih stručnjaka, *Revija za socijalnu politiku*, 21 (3), p.327-360, <http://www.rsp.hr/ojs2/index.php/rsp/article/viewFile/1216/1274>

Deskar-Škrbić, M., Šimović, H., Čorić, T., (2014): The effects of fiscal policy in a small open transition economy: the case of Croatia, *Acta Oeconomica*, 64 (S1) p. 133–152.

Grdinić, M. (2014): Higher Education as a Means of Achieving Economic Growth and Development – A Comparative Analysis of Selected EU and former Soviet Union Countries, *International Public Administration Review*, 12 (4), p. 93-110, <http://www.fu.uni-lj.si/fileadmin/usr-files/MRJU/MRJU-2014-04.pdf>

Grdović Gnip, A. (2014): The power of fiscal multipliers in Croatia, *Financial Theory & Practice*, 38 (2), p.173-219, [http://fintp.ijf.hr/upload/files/ftp/2014/2/grdovic\\_gnip.pdf](http://fintp.ijf.hr/upload/files/ftp/2014/2/grdovic_gnip.pdf)

Kotnik, Ž., Klun, M., Škulj, D., (2014): The effect of taxation on greenhouse gas emission, *Transylvanian Review of Administrative Sciences*, No. 43 E/2014, p.168-185, <http://rtsa.ro/tras/index.php/tras/article/view/407>

Šimović, H., (2014): Političari režu da ne boli, ali to jako šteti, *Banka: finansijsko-poslovni mjesečnik*, 20(6), p.28-36, <http://www.banka.hr/komentar-i-analize/politiciari-rezu-da-ne-boli-ali-to-jako-steti-51011>

Šimović, H., Blažić, H., Štambuk, A. (2014): Perspectives of tax reforms in Croatia: expert opinion survey, *Financial Theory & Practice*, 38(4), p. 405-439, [http://www.fintp.hr/upload/files/ftp/2014/4/simovic\\_blazic\\_stambuk.pdf](http://www.fintp.hr/upload/files/ftp/2014/4/simovic_blazic_stambuk.pdf)

Šimović, H., Čorić, T. i Deskar-Škrbić, M. (2014): Mogućnosti i ograničenja fiskalne politike u Hrvatskoj, *Ekonomski pregled*, 65(6), p. 541-575, <http://hrcak.srce.hr/file/196254>

Žiković, S., Tomas Žiković, I., Grdinić, M. (2014): A VECM approach to detangling growth, exports, imports and FDI knot in selected CEE countries, *Croatian Operational Research Review*, 5(2), p.142-152, <http://hrcak.srce.hr/ojs/index.php/corr/issue/view/125>

Lazovic-Pita, Lejla, Štambuk, Ana: „Professional opinions and attitudes about tax policy in Bosnia and Herzegovina with the special focus on the Federation of Bosnia and Herzegovina”. *The South East European*

Journal of Economics and Business, 10 (2015), 2; 29-44, <http://journal.efsa.unsa.ba/index.php/see/article/view/332/80>

Grdović Gnip, Ana (2015): Empirical assessment of stabilization effects of fiscal policy in Croatia, *Romanian Journal of Economic Forecasting* (1582-6163) 1 (2015); 47-69, <https://ideas.repec.org/a/rjr/romjef/vy-2015i1p47-69.html>

Blažić, H., Šimović, H., Štambuk, A. (2016): Introduction of a local real estate tax in Croatia: a survey of expert and public opinion, *Lex Localis*, Vol 14, No 1, <http://pub.lex-localis.info/index.php/LexLocalis/article/view/14.1.53-74%282016%29>

Klun, M., Štambuk, A. (2015) Tax experts' opinion on the tax system in Slovenia, *eJournal of Tax Research*, Vol 13, No 3, <https://www.business.unsw.edu.au/research/research-journals/atax-journal/current-issue>

Lazović-Pita, L., (2015): Efficiency and Progressivity Measures of the Flat Tax with a Special Focus on Bosnia and Herzegovina, *Mednarodna revija za javno upravo/ International Public Administration Review*, Vol 13, No 3–4, <http://www.fu.uni-lj.si/fileadmin/usr-files/MRJU/MRJU-IPAR-2015-3-4-December.pdf>

Šimović, H., Deskar-Škrbić, M. (2015): Učinak promjena poreznih stopa na porezno opterećenje rada u Hrvatskoj, *EFZG serija članaka u nastajanju*, 15-13 <http://econpapers.repec.org/paper/zagwpaper/1513.htm>

Grdinić, M. Klun, M., Kotnik, Ž. (2015): Environmental Taxation: New Evidence for Energy Taxes, *Mednarodna revija za javno upravo/ International Public Administration Review*, Vol 13, No 3–4, <http://www.fu.uni-lj.si/fileadmin/usr-files/MRJU/MRJU-IPAR-2015-3-4-December.pdf>

Čorić, T., Šimović, H., Deskar-Škrbić, M., (2015): Monetary and fiscal policy mix in a small open economy: the case of Croatia, *Economic Research/Ekonomska Istraživanja*, Issue 1, Vol. 28, 407-421, <http://www.tandfonline.com/doi/full/10.1080/1331677X.2015.1059073>

Šimović, H., Blažić, H. & Štambuk, A. (2016), Income vs. Consumption-based concept of direct taxation: eternal debate in Croatia. *Ekonomski prehled*, 67(3), 185-205; <http://hrcak.srce.hr/file/239189>; <https://bib.irb.hr/prikazi-rad?&rad=829963>

Lazović – Pita Lejla, Štambuk Ana (2016). What are the Opinions of Tax Administration Officials Regarding Tax Policy Reforms in Bosnia and Herzegovina? *Journal of Advanced Research in Law and Economics*, (Volume VII, Winter), 8(22), p. 2106-2120– 2120, May 2017; DOI: 10.14505/jarle.v7.8(22).22., <http://journals.aserspublishing.eu/jarle/issue/archive>.

Grdinić, M., Drezgic, S., Blažić, H. (2017): An Empirical Analysis of the Relationship between Tax Structures and Economic Growth in CEE Countries, *Ekonomický Časopis*, 65, 5, p.426-447, [https://www.sav.sk/index.php?lang=en&doc=journal-list&part=list\\_articles&journal\\_issue\\_no=11114150#abstract\\_13822](https://www.sav.sk/index.php?lang=en&doc=journal-list&part=list_articles&journal_issue_no=11114150#abstract_13822)



Deskari-Škrbić, M.; Šimović, H. (2017): The effectiveness of fiscal spending in Croatia, Slovenia and Serbia: the role of trade openness and public debt level. *Post-Communist Economies*, 29, 3; 336-358, <http://bib.irb.hr/prikazi-rad?rad=879295>

Blažić, H.; Štanbuk, A.; Šimović, H.; Lazović-Pita, L. & Klun, M. (2017). What tax experts in former socialist countries think about tax policy: the cases of Slovenia, Croatia and Bosnia and Herzegovina?, *Economic Systems*, 41, 4, p. 667–693, <https://bib.irb.hr/prikazi-rad?rad=879300>

Deskari-Škrbić, Milan; Šimović, Hrvoje; Buljan, Antonija (2017). Fiscal Multiplier Determinants in the CESEE Region. *Journal of Management and Financial Sciences*, X, 29, p. 11-26

Kotnik, Ž., Klun, M., Škulj, D. (2017). Performance budgeting model in the environmental perspective: tackling waste pollution. *Administratie si Management Public*, (29), p.141-150, [http://www.ramp.ase.ro/en/\\_data/files/articole/2017/29-09.pdf](http://www.ramp.ase.ro/en/_data/files/articole/2017/29-09.pdf)

Klopčič, J., Klun, M. (2017). Analysis of the Relationship of Professionals towards the Vertical Equity of the Slovenian Tax System and Its Comparison with Croatia, Bosnia and Herzegovina and the USA. *International Public Administration Review*, 15(3-4), 145–165, <http://uprava.fu.uni-lj.si/index.php/IPAR/article/view/351>

Drezgić, S.; Grdinić, M.; Blažić, H. (2018). Impact of Local Government Revenue Structure on Income Growth and Employment in Croatia. *Lex Localis – Journal of self-government*, Vol. 16, No. 2, p. 395 – 411., <http://pub.lex-localis.info/index.php/LexLocalis/article/view/16.2.395-411%282018%29>

Deskari-Škrbić, M.; Drezgić, S.; Šimović, H. (2018): Tax Policy and Labour Market in Croatia: Effects of Tax Wedge on Employment; *Economic Research-Ekonomska Istraživanja* (forthcoming) (DOI:10.1080/1331677X.2018.1456359)

Olgjić Draženović, B., Buterin, V., Buterin, D. (2018.): Strukturne reforme zemalja CEE-a u tranzicijskom razdoblju – pouke i zaključci, *Zbornik Veleučilišta u Rijeci/Journal of the Polytechnic of Rijeka*, 6 (1), str. 127-142, [file:///D:/Users/Korisnik/Downloads/STRUKTURNE\\_REFORME\\_ZEMALJA\\_CEE\\_A\\_U\\_TRANZICIJSKOM\\_RAZDOBLJU\\_\\_\\_POUKE\\_I\\_ZAKLJUCCI\\_final.pdf](file:///D:/Users/Korisnik/Downloads/STRUKTURNE_REFORME_ZEMALJA_CEE_A_U_TRANZICIJSKOM_RAZDOBLJU___POUKE_I_ZAKLJUCCI_final.pdf)

Baljak, B., Blažić, H., Štanbuk, A., Tomas Žiković, I., Zaninović, V. (2018.): Treba li oporezivati kupnju nekretnina u Hrvatskoj? – stav stanovništva, *Zbornik Veleučilišta u Rijeci/Journal of the Polytechnic of Rijeka*, 6 (1), str. 23-28, [file:///D:/Users/Korisnik/Downloads/TREBA\\_LI\\_OPOREZIVATI\\_KUPNJU\\_NEKRETNINA\\_U\\_HRVATSKOJ\\_final.pdf](file:///D:/Users/Korisnik/Downloads/TREBA_LI_OPOREZIVATI_KUPNJU_NEKRETNINA_U_HRVATSKOJ_final.pdf)

## Book chapters

Klun, M., Kotnik, Ž., (2014): Ukrepi davčne politike za spodbujanje gospodarske rasti (Tax policy measures for encouraging economic growth), p. 39-52 u *Ekonomika in menedžment v javnem sektorju v razmerah gospodarske krize*, *Ekonomika in menedžment v javnem sektorju v razmerah gospodarske krize*, Univerza v Ljubljani, Fakulteta za upravo, Setnikar-Cankar, S., Stare, J., Pevcin, P. (ur.)

Olgjić Draženović, B., Preni, V., (2014): Razvoj tržišta kapitala u post-tranzicijskim državama EU, p.45-65 u *Financije nakon krize: forenzika, etika i održivost*, Sveučilište u Splitu, Ekonomski fakultet, Ćurak, M., Kundid, A., Visković, J. (ur.), ISBN 978-953-281-061-5, <https://bib.irb.hr/prikazi-rad?&rad=700561>

Olgjić Draženović, Bojana, Prohaska, Zdenko i Suljić, Stella (2015): "Financial non-deposit intermediation institutions in the Republic of Croatia", *Economic Policy Today: Political Rhetoric or a True Reform* (ur. Krtalić, Sandra ; Drejerska, Nina), Pula : Juraj Dobrila University of Pula, Faculty of Economics and Tourism, p. 209-233., <https://bib.irb.hr/prikazi-rad?&rad=700565>

Olgjić Draženović, Bojana, Grdinić, Maja, Blažić, Helena (2016) Porez na financijske transakcije, *Aktualni problemi i izazovi razvoja financijskog sustava*, Sveučilište u Zagrebu, Ekonomski fakultet Zagreb, Alen Stojanović, Hrvoje Šimović (ur.), p. 103-120., ISBN 978-953-346-024-6, <https://bib.irb.hr/prikazi-rad?&rad=807529>

Šimović, H., Deskar-Škrbić, M., (2016) Učinak promjena poreznih stopa na porezno opterećenje rada u Hrvatskoj, *Aktualni problemi i izazovi razvoja financijskog sustava*, Sveučilište u Zagrebu, Ekonomski fakultet Zagreb, Alen Stojanović, Hrvoje Šimović (ur.), p.83-102, <http://bib.irb.hr/prikazi-rad?&rad=809783>

Grdović Gnip, Ana, 2016, *Balancing between direct and indirect taxes*, u: *The EU Economic Environment Post-Crisis: Policies, Institutions and Mechanisms*, Benazić, M.; Božina Beroš, M.; Gimigliano, G.; Novak, A.; Učkar, D. (ur.), Pula: Sveučilište Jurja Dobrile, 35-46.

Blažić, Helena; Šimović, Hrvoje; Štambuk, Ana, 2016, *Area Based versus Value Based Recurrent Taxation of Immovable Property*, u: *The EU Economic Environment Post-Crisis: Policies, Institutions and Mechanisms*, Benazić, M.; Božina Beroš, M.; Gimigliano, G.; Novak, A.; Učkar, D. (ur.), Pula: Sveučilište Jurja Dobrile, 47-58.

Grdinić, Maja; Korenić, Tomislav; Blažić, Helena (2017): Uloga ekoloških poreza u politici zaštite okoliša država članica Europske unije, u: *Financije na prekretnici: Imamo li snage za iskorak? In memoriam prof. dr. sc. Ivo Sever*, Blažić, H; Dimitrić, M; Pečarić, M. (ur.), Rijeka: Sveučilište u Rijeci, [https://www.efri.uniri.hr/hr/volume\\_35\\_no\\_1\\_2017\\_volumen\\_35\\_svezak\\_1\\_2017/741/119](https://www.efri.uniri.hr/hr/volume_35_no_1_2017_volumen_35_svezak_1_2017/741/119)

Olgić Draženović, Bojana (2017): Oporezivanje financijskog sektora u zemljama Europske unije, u: *Financije na prekretnici: Imamo li snage za iskorak?* *In memoriam* prof. dr. sc. Ivo Sever, Blažić, H; Dimitrić, M; Pečarić, M. (ur.), Rijeka: Sveučilište u Rijeci, [https://www.efri.uniri.hr/hr/volume\\_35\\_no\\_1\\_2017\\_volumen\\_35\\_svezak\\_1\\_2017/741/119](https://www.efri.uniri.hr/hr/volume_35_no_1_2017_volumen_35_svezak_1_2017/741/119)

## Conference Proceedings Papers

Šimović, H., Blažić, H., Štambuk, A. (2014): Perspectives of tax reforms in Croatia: expert opinion survey, In: Ott, K; Blažić, H. and Šimović H. (eds), *Tax reforms: Experiences and Perspectives*, Conference Proceedings, Institute of Public Finance, Zagreb, Croatia, p.121-148, [http://www.ijf.hr/upload/files/file/knjige/tax\\_reform\\_proceedings.pdf](http://www.ijf.hr/upload/files/file/knjige/tax_reform_proceedings.pdf)

Lazović-Pita, L., (2014): Income, personal income tax and transition: case of Bosnia and Herzegovina, In: Ott, K; Blažić, H. and Šimović H. (eds), *Tax reforms: Experiences and Perspectives*, Conference Proceedings, Institute of Public Finance, Zagreb, Croatia, p.157-178, [http://www.ijf.hr/upload/files/file/knjige/tax\\_reform\\_proceedings.pdf](http://www.ijf.hr/upload/files/file/knjige/tax_reform_proceedings.pdf)

Klun, M., (2014): Slovenian experiences and lessons from tax reforms. In: Ott, K; Blažić, H. and Šimović H. (eds), *Tax reforms: Experiences and Perspectives*, Conference Proceedings, Institute of Public Finance, Zagreb, Croatia, p.149-156, [http://www.ijf.hr/upload/files/file/knjige/tax\\_reform\\_proceedings.pdf](http://www.ijf.hr/upload/files/file/knjige/tax_reform_proceedings.pdf)

Kotnik, Žiga, Klun, Maja (2015): Government size and its impact on air pollution. u: Vranešević, Tihomir (ur.). *M-Sphere: book of papers: selected papers presented at 4th International M-Sphere Conference for Multidisciplinary in Science and Business*, Dubrovnik, 22nd-24th October 2015. Zagreb: Accent, 2015, str. 343-345. [https://issuu.com/tvranes/docs/2015\\_m-sphere\\_book\\_of\\_papers](https://issuu.com/tvranes/docs/2015_m-sphere_book_of_papers)

Klun, Maja; Štambuk, Ana. (2015): Davčni strokovnjaki in njihovo mnenje o davčni politiki v Sloveniji. u: Aristovnik, Aleksander (ur.). *Slovenski javni sektor na razpotju strateških sprememb: zbornik prispevkov*. V Ljubljani: Fakulteta za upravo, 2015. [COBISS.SI-ID 4668590] <http://cobiss6.izum.si/scripts/cobiss?ukaz=DISP&id=0825555315785896&rec=2&sid=1> <http://bib.irb.hr/prikazi-rad?&rad=805296>

Dumičić, M., Pečarić, M., (2016): Značaj makroprudencijalne politike u sklopu ekonomske politike, *Ekonomija/Economics*, 22(2), p.265-280, [http://www.rifin.com/images/stories/2016/03/casopis\\_ekonomija\\_broj\\_22\\_2\\_knjizni\\_blok\\_za\\_web\\_final2.pdf](http://www.rifin.com/images/stories/2016/03/casopis_ekonomija_broj_22_2_knjizni_blok_za_web_final2.pdf)

Kotnik, Ž., Klun, M., (2016): Environmental instruments as a way to reduce ambient pollution, *Economics and Business* eISSN: 1339-9373, cdISSN: 1339-2778, 10.18638/gv.2016.4.1.77, str. 31-33

Klun, M., Stare, J., Štambuk, A., (2015) Citizens and experts: How different is their opinion on the tax system in Slovenia, *International Journal*

of Applied Business and Economic Research, Vol. 14, No. 2 (2016): 591-601, <http://serialsjournals.com/serialjournalmanager/pdf/1462531136.pdf>

Šimović, H. (2016), Interaction of Fiscal and Monetary Policy in Croatia: Between Scylla and Charybdis. Proceedings of the 2nd International Conference *European Fiscal Dialog 2016: Fiscal and Monetary Policy: between Scylla and Charybdis?* NEWTON College, Prague, May 20, 2016., pp. 139-144. ISBN: 978-80-87325-09-4.

Kotnik, Žiga; Klun, Maja, (2016), A performance budgeting model in the environmental perspective, The 5th Advanced Research in Scientific Areas, November, 7. - 11. 2016, [www.arsa-conf.com](http://www.arsa-conf.com)

Olgić Draženović, Bojana; Maradin, Dario; Buterin, Vesna. Tax Framework of Croatian Financial system, 5th International Scientific Symposium "Economy of Eastern Croatia - Vision and Growth", Proceedings, Mašek Tonković, Anka (ur.). Osijek: Sveučilište Josipa Jurja Strossmayera u Osijeku, Ekonomski fakultet Osijek, 2016. 1060-1068, <http://www.efos.unios.hr/gospodarstvo-istocne-hrvatske/zbornici-radova/>

Grdinić, Maja, Štambuk, Ana, Tomljanović, Marko (2017): The impact of tax incentives for research and development on economic growth – example of Eastern Croatia/ Učinak poreznih poticaja za istraživanje i razvoj na ekonomski rast – primjer Istočne Hrvatske, 6th International Scientific Symposium "Economy of Eastern Croatia - Vision and Growth", Proceedings, Mašek Tonković, Anka (ur.). Osijek: Sveučilište Josipa Jurja Strossmayera u Osijeku, Ekonomski fakultet Osijek, 2017. 808-816, <https://www.dropbox.com/s/gpkdqlirbhv9hqx/Zbornik%202017.pdf?dl=0>

Štambuk, Ana; Blažić, Helena (2017) Eastern Croatian taxpayers' perceptions of the tax system/Percepcije istočnohrvatskih poreznih obveznika o poreznom sustavu, 6th International Scientific Symposium "Economy of Eastern Croatia - Vision and Growth", Proceedings, Mašek Tonković, Anka (ur.). Osijek: Sveučilište Josipa Jurja Strossmayera u Osijeku, Ekonomski fakultet Osijek, 2017, 1152-1161, <https://www.dropbox.com/s/gpkdqlirbhv9hqx/Zbornik%202017.pdf?dl=0>

Olgić Draženović, Bojana; Blažić, Helena; Maradin, Dario (2017): Estimation of economic Implications of FTT on the Croatian financial system / Procjena ekonomskih implikacija uvođenja FTT-a na hrvatski financijski sustav, 6th International Scientific Symposium "Economy of Eastern Croatia - Vision and Growth", Proceedings, Mašek Tonković, Anka (ur.). Osijek: Sveučilište Josipa Jurja Strossmayera u Osijeku, Ekonomski fakultet Osijek, 2017, 1088-1096, <https://www.dropbox.com/s/gpkdqlirbhv9hqx/Zbornik%202017.pdf?dl=0>

Olgić Draženović, Bojana (2017). Financial Transaction Tax in EU: Estimation of Economic Implications. Economic and Social Development, in Cingula, M.; Przygoda, M.; Detelj, K. (eds.): 23rd International Scientific Conference on Economic and Social Development, Book of Proceed-

ings, Varaždin: Varaždin Development and Entrepreneurship Agency, p. 221-227. <https://www.esd-conference.com/past-conferences>

Grdinić, Maja; Drezgić, Saša; Stanković, Jelena (2017). Tax Structure and Economic Growth Recommendations and reforms in CEE countries. Economic and Social Development, in Cingula, M.; Przygoda, M.; Detelj, K. (eds.): 23rd International Scientific Conference on Economic and Social Development, Book of Proceedings, Varaždin: Varaždin Development and Entrepreneurship Agency, p. 2-9. <https://www.esd-conference.com/past-conferences>

Kotnik, Ž., Klun, M., Grdinić, M. (2018): Performance budgeting in the field of environment with an emphasis on eco taxes: the case of Slovenia and Croatia/ Planiranje proračuna na temelju mjerenja ostvarenih rezultata u području okoliša s posebnim naglaskom na ekološke poreze: slučaj Slovenije i Hrvatske, 7th International Scientific Symposium "Economy of Eastern Croatia - Vision and Growth", Proceedings, Mašek Tonković, Anka (ur.). Osijek: Sveučilište Josipa Jurja Strossmayera u Osijeku, Ekonomski fakultet Osijek, 2018 (forthcoming)

Čegar, S., Denona Bogović, N., Drezgić, S. (2018.): Structural characteristics of the economy of the city of Vukovar in terms of effectiveness of state aids/ Strukturna obilježja gospodarstva grada Vukovara s aspekta učinkovitosti državnih potpora, 7th International Scientific Symposium "Economy of Eastern Croatia - Vision and Growth", Proceedings, Mašek Tonković, Anka (ur.). Osijek: Sveučilište Josipa Jurja Strossmayera u Osijeku, Ekonomski fakultet Osijek, 2018 (forthcoming)

ISBN 978-953-7813-40-6