

Tax wedge on labour income in Croatia and the European Union

*Preface to the special issue of
Financial Theory and Practice*

IVICA URBAN, PhD*

Preliminary communication**

JEL: H21, H24, J38

doi: 10.3326/fintp.40.2.1

* This work has been supported in part by the Croatian Science Foundation under project number UIP-2014-09-4096. The author would like to thank two anonymous referees for their useful comments and suggestions.

** Received: March 14, 2016

Accepted: April 29, 2016

Abstract

This article is a preface to a special issue of Financial Theory and Practice, which is devoted to the comparison of tax wedge on labour income in Croatia and other EU countries. The articles in this issue have arisen from the students' research project, undertaken in 2015. This Preface outlines the motivation behind the research project, explains the most important methodological issues, and reviews the literature on the measurement of tax wedge in Croatia.

Keywords: tax burden, personal income tax, social insurance contributions, family benefits, microsimulation, Croatia, EU

1 INTRODUCTION

This volume of Financial Theory and Practice (FTP) represents a collection of papers dealing with the tax burden on labour income that arose from a students' research project. Namely, in 2015 four students from the Department of Mathematics (Faculty of Science, University of Zagreb) participated in a research project with the main goal to compare the Croatian tax burden on labour income for different hypothetical units with that in other EU countries. Previous studies dealing with tax burden indicators for Croatia mainly focus on the tax wedge of a "single average worker", and compare it with the tax wedge in OECD countries. All of them repeatedly conclude that Croatia belongs to the group of countries with a moderate tax wedge.¹

In light of that, the main research issue addressed within this students' research project was to inspect whether the conclusion that Croatian tax burden was moderately high holds in the case of other hypothetical units as well, such as singles with different levels of gross wage, or singles and couples with children. To do so, all students were given the following tasks: (a) to analyse the systems of labour income taxation in Croatia and four selected EU countries; (b) to build a microsimulation model for hypothetical units across selected countries, which calculates the amounts of personal income tax (PIT), social insurance contributions (SICs), other taxes on labour, and cash family benefits; (c) to compute the *tax burden indicators*, such as the net average tax wedge and net personal average tax rate, according to the Taxing Wages methodology (OECD, 2014); and (d) to compare tax burdens across the selected countries.

All students' works were expertly mentored by Katarina Ott (Chief Editor of the FTP) and Ivica Urban (Guest Editor of this volume), both lecturers of Public Sector Economics at the Faculty of Science. Following the research plan, students wrote their graduation papers, which were successfully defended in the summer of 2015. Satisfied with the quality of papers and aware of the recurring importance of the

¹ "Single average worker" is the abbreviation for the most often used hypothetical unit – a single person without children, whose gross wage equals the average gross wage in the country of residence. "Tax wedge" denotes the ratio between total taxes on labour and total labour cost. Refer to section 3 for precise definitions used in OECD (2014) and in this volume.

topic, in late 2015 the mentors decided to prepare these papers for proposal for publication in a special issue of FTP. Since graduation papers and journal papers do not share the same structure or content, the authors tailored the papers according to scientific journal requirements. In this process, some sections were shortened and left out, while some were added. Such edited versions were subject to the same strict criteria as regular contributed journal submissions and therefore went through the standard reviewing procedure (blind review/two reviewers). The papers significantly benefited from the reviewing process and their final versions are presented in this volume.

In line with the aforementioned main research goal, each paper analyses Croatia and four other EU countries, which differ across the papers. Thus, the analysis embraces a total of 17 countries. Papers are organised in a similar fashion. After the introduction and methodology sections, section three contains detailed information on tax-benefit instruments of each selected country – SICs, PITs, family cash benefits, etc. These data are primarily based on OECD's Taxing Wages (OECD, 2014) and EUROMOD Country Reports.² Given all the elements needed to assess income taxation, the third section of the papers presents the country's tax burden indicators (net average tax wedge and net personal average tax rate) compared across two dimensions: first, for different hypothetical units per country, and second, across all analysed countries per household type. It is important to note that the calculations follow the methodology determined by OECD (2014), in which the data relate to 2013. Therefore, Croatian tax burden indicators arise from the 2013 taxation scheme no matter the amendments that followed in subsequent years.

This Preface serves as an overture to the results given in the four papers. It reviews several recent studies on tax burden comparisons, which cover Croatia (section 2). Then, it explains how the sample of countries is selected, and details the methodological issues concerning the calculation of tax burden indicators (section 3). Special attention is given to indicators based on "compulsory payments", which cover both tax and non-tax compulsory payments (section 4).

2 STUDIES OF TAX WEDGE: THE CASE OF CROATIA

The tax wedge is continuously in the focus of both academic researchers and policy makers in Croatia, particularly in the context of competitiveness and investment attraction strategies. This section briefly reviews relevant studies that measured the tax wedge for Croatia. Its purpose is to acquaint the reader with basic and most interesting findings.

Blažić (2006) calculates the tax wedge and its components for the single average worker in Croatia in 2005 and compares it with that in OECD countries. With a tax wedge of 39.1%, Croatia stood somewhere in the middle of the scale com-

² EUROMOD Country Reports used in this volume are available at: <https://www.euromod.ac.uk/using-euromod/country-reports/f3-g2>.

posed of OECD countries. She concludes that PIT accounts for a relatively small share of the total tax wedge, while, on the other hand, employee SICs are among the highest within the observed countries. Croatia shares common characteristic with other European ex-socialist countries, in which the importance of PITs is relatively low and the relevance of SICs in the tax wedge is relatively high.

Šeparović (2009) calculates the Croatian tax wedge in 2007 for three single workers without children, who earn a gross wage equal to 67%, 100% and 167% of average gross wage, and compares the results with OECD countries. Using the cluster and discriminant analysis, the author investigates the relationship between the level of tax wedge and unemployment rate. She confirms the results of preceding researches (e.g., Dolenc and Vodopivec, 2005), that a higher tax wedge is related with higher unemployment rates. Croatia is classified as a member of the group of countries with a high tax wedge and a high unemployment rate.

Urban (2009) computes the tax wedge for a wide range of gross wages for a single worker without children in Croatia in 2008. He also calculates the marginal tax wedge in Croatia, revealing that even for a modestly high gross wage (equal to 3 average gross wages), the marginal tax wedge reaches 60%, and increases further to more than 65% for high gross wages.

The research by Grdović Gnip and Tomić (2010) is the most comprehensive in this group. Its methodology is similar to Šeparović's (2009), but the authors add several more features to the analysis. Besides the unemployment rate and tax wedge, the list of variables also includes the employment rate and EPL index of labour market rigidity. Croatia falls into the cluster group of countries with a high tax wedge, low employment rate, high unemployment rate and high labour market rigidity. However, the analysis has revealed some interesting results, namely, that certain countries achieve high employment rates despite high tax wedges (e.g., Scandinavian countries, Germany, Austria, Latvia).

Blažić and Trošelj (2012) report on a debatable practice regarding the application of the Taxing Wages methodology when it comes to the measurement of tax burden indicators for Croatia. To explain this problematic application, it is necessary to briefly explain the Taxing Wages methodology and pension SIC system in Croatia.

According to OECD (2014), tax burden indicators do not include “non-tax compulsory payments”, which are typically related to contributions to social security schemes outside the general government sector. Namely, the *tax* burden should cover only the payments to various levels of government, and do not include those amounts paid to non-government entities, such as private insurance schemes. Several years ago, OECD started to publish *compulsory burden indicators*, whereby “compulsory” means that the burden includes both tax and non-tax compulsory payments. This alternative method acknowledges that all mandatory payments – whether to government or to non-government bodies – constitute the burden for

the employee and the employer.³ Nevertheless, in its basic publication, *Taxing Wages*, OECD presents *tax burden* indicators.

Following a major reform in 2002, the Croatian pension insurance system introduced two compulsory pillars: the 1st pillar (“intergenerational solidarity”) pertains to the general government scheme, while the 2nd pillar (“individual capitalised accounts”) relates to private pension funds. As Urban and Bezeredi (2015) explain: “Two parallel contributory schemes are created: (a) scheme A, whereby persons participate in the 1st pillar only, and (b) scheme B, whereby persons participate both in the 1st and the 2nd pillar. Persons who were aged above 50 (below 40) in January 2002 are automatically involved into scheme A (B), while people aged between 40 and 50 could choose whether to become members of scheme A or B. People in scheme A pay contributions to the 1st pillar only [pension insurance contributions A, or shortly PCA]. Correspondingly, people in scheme A receive pension from the 1st pillar only [...]. People in scheme B pay contributions both to the 1st pillar [PCB1] and to the 2nd pillar [PCB2].”

The rates for PCA, PCB1 and PCB2 are 20%, 15% and 5% of gross wage, respectively.⁴ Thus, the overall rate of pension insurance contributions is the same for people in schemes A and B, and equals 20%. In terms of OECD methodology, PCA and PCB1 are tax payments, and therefore should be included in the calculation of tax burden indicators. On the other hand, PCB2 represents a non-tax compulsory payment; it pertains to compulsory burden indicators, but not to tax burden indicators.

Thus, one can calculate two sets of tax burden indicators for Croatia: one for persons in scheme A and another for those in scheme B, where the indicators will be significantly lower for the latter group. Blažić and Trošelj (2012) show that all up-to-date measurements of tax burden indicators for Croatia have assumed that the (overall) rate of pension insurance contributions is 20%. This may lead to two conclusions: (a) researchers have considered only persons pertaining to scheme A; or (b) researchers were considering persons pertaining to scheme B, but have erroneously included PCB2 in taxes; however, the exact assumptions are not explicitly stated.

To which group – A or B – should the hypothetical taxpayer belong? Blažić and Trošelj (2012) argue that group B should be taken into consideration. Namely, OECD methodology implies that *younger adult* persons should be considered in calculations. For example, single persons without children, as one of the main hypothetical taxpayer units, are better represented among younger population; furthermore, children are assumed to be under 12 years of age, which implies that the parents are relatively young. Blažić and Trošelj (2012) calculate several tax burden and

³ Tax burden indicators are available in OECD (2016c). Compulsory burden indicators are available in OECD (2016b; item “B4. Non-tax compulsory payments”).

⁴ All the mentioned pension contributions are employee SICs. Employer SICs include general health SIC, occupational health SIC and employment SIC, whose rates in 2013 are 13%, 0.5% and 1.7%, respectively.

compulsory indicators for the year 2010 and compare Croatia's results with those in OECD countries; they consider the single average worker pertaining to scheme B. Since the rate of PCB2 is relatively high, the discrepancies in country ranking according to tax burden and compulsory indicators are shown to be significant.

Čok et al. (2013) analyse the tax wedge in the so-called Alps-Adriatic region: Austria, Croatia, Hungary, Italy and Slovenia. They focus on six hypothetical single workers without children. The first one is the single average worker. The remaining five earn yearly gross wages of 10, 20, 30, 50 and 100 thousands EUR, respectively. Notice that Čok et al. (2013) combine two different approaches in choosing hypothetical units' gross wages, which can be referred to as the "relative" and "absolute". The "relative" approach considers each country's average-based wages (e.g., 67%, 100% or some other percentage of AGW); this approach is used to define the "single average worker" (and various other hypothetical units in Taxing Wages; see table 2). On the other hand, the "absolute" approach uses equal amounts of gross wage in each country; this is the case for units 2 to 6 in Čok et al. (2013).

Čok et al. (2013) show that the ranking of countries can change significantly depending on the choice of reference gross wage in the calculation of the tax wedge. Thus, when the "relative" approach is considered, the lower-wage countries (Croatia, Hungary and Slovenia) have a lower tax wedge than higher-wage countries (Italy and Austria). However, when the tax burden is examined according to the "absolute" approach, it is the other way around – Italy and Austria are shown to have a lower tax wedge at all gross wage levels than Croatia, Hungary and Slovenia.⁵

Deskari-Škrbić and Šimović (2014) analyse recent developments in the Croatian tax system. They conclude that, in comparison with countries that have a similar GDP per capita, Croatia has excessive overall tax burden. Being aware of the relatively high tax burden on labour income, the Croatian government has decreased the rate of general health SIC, from 15% to 13% (in May 2012); however, thanks to a significant fall in revenue and a rising deficit, the old rate was reintroduced only 23 months later. The authors also discuss the change in PIT law from March 2012, and conclude that its impact is dubious; the same can be said about the frequent changes in the SICs law. Deskari-Škrbić and Šimović (2014) also compare the tax wedge for single average workers in Croatia and EU countries, showing that the Croatian tax wedge is relatively high.⁶ Furthermore, they compute the tax wedge in Croatia for a large range of gross wages and different time periods from 2011 to 2015. In conclusion, the authors state that the tax policy in Croatia suffers from frequent changes, lack of coordination between different government bodies, and inadequacy of policy measures.⁷

⁵ For Croatia, Čok et al. (2013) assume that hypothetical units belong to "group A", i.e. they pay PCA.

⁶ Deskari-Škrbić and Šimović (2014) are aware of the suggestions proposed by Blažić and Trošelj (2012). Effectively, they analyse the worker from "group A" (who pays PCA).

⁷ Also, see Šimović and Deskari-Škrbić (2015) for a detailed analysis of the tax wedge in Croatia, for the period 2010-2015.

3 THE SAMPLE OF COUNTRIES AND METHODOLOGY

3.1 SELECTED COUNTRIES

As noted in section one, each author's country sample includes Croatia and four other EU countries, making a total of five countries per paper. Thus, the overall number of countries covered in the sample across all four papers is 17. As mentioned earlier, the *Taxing Wages* publication is the main reference when assessing tax burden indicators. Issued by the OECD, this publication covers only OECD members. Since the research project puts EU in the focus, it was necessary to choose among those EU countries that were also members of the OECD. Therefore, non-OECD EU members excluded from the analysis are Bulgaria, Cyprus, Latvia, Lithuania, Malta and Romania, while OECD and EU members that did not enter the project sample are Denmark, Finland, Luxembourg, Sweden and the United Kingdom.

Countries are chosen with regard to the loosely defined criterion of geographical closeness to Croatia and their list is presented in table 1.⁸

TABLE 1

Countries included in the sample

	Included
Beketić	(Croatia), the Czech Republic, France, Portugal, Slovenia
Cundić	(Croatia), Ireland, Italy, the Netherlands, Spain
Gabrilo	(Croatia), Belgium, Estonia, Germany, the Slovak Republic
Onorato	(Croatia), Austria, Greece, Hungary, Poland
	Not included
OECD	Denmark, Finland, Luxembourg, Sweden, United Kingdom
non-OECD	Bulgaria, Cyprus, Latvia, Lithuania, Malta, Romania

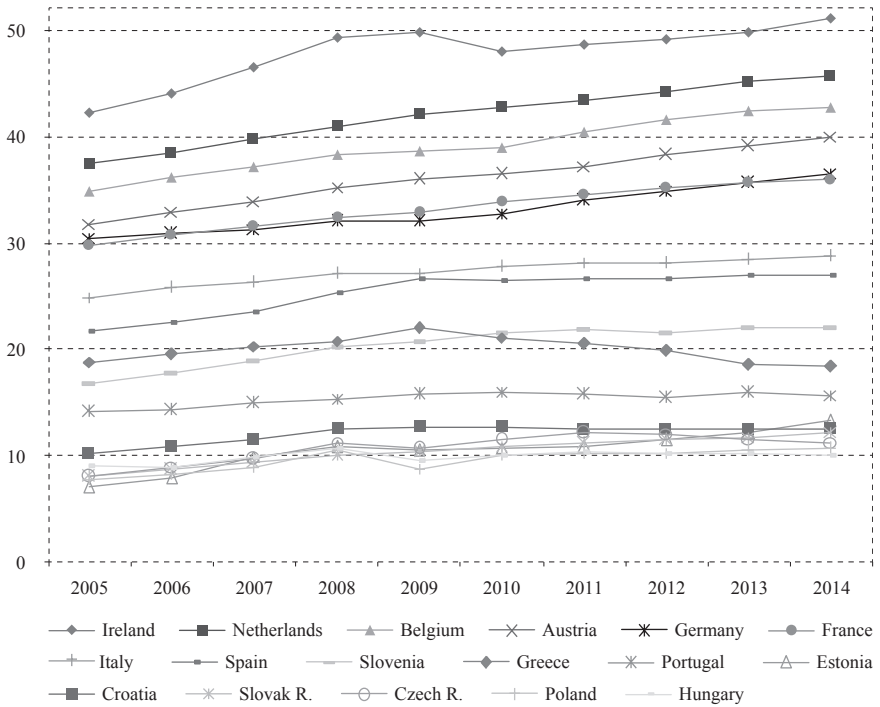
Source: Author's systematisation.

It is obvious that selected countries significantly differ by the level of economic development. Such differences can be simply shown by comparing the annual average gross wages from 2005 to 2014 for sample countries (figure 1). The countries can be divided into three groups: high-, middle- and low-wage countries. The high-wage group consists of old EU member states: Ireland, the Netherlands, Belgium, Austria, Germany and France. The middle-wage group comprises economically "less successful" old EU member states: Italy, Spain, Greece and Portugal, plus Slovenia. The low-wage group contains several "new" EU member states: Estonia, Croatia, the Slovak Republic, the Czech Republic, Poland and Hungary. All three groups experienced an increase of the gross wage in 2014 with respect to 2005, by 22%, 16% and 40%, respectively. Note that, for diversity reasons, each author's sample includes at least one high-wage country (table 1).

⁸ However, the selection was not done systematically. Since various Croatian analysts tend to compare Croatia with Ireland, the latter country has been substituted for one of the less distant (e.g., Luxembourg). The objection could be made that instead of, e.g., Portugal, one of the Scandinavian countries could have been selected.

FIGURE 1

Nominal average annual gross wage in selected countries for the period 2005-2014
(in thousands of EUR)



Source: Author's calculation based on OECD (2016a) (for OECD countries) and CBS (2016) (for Croatia).

3.2 METHODOLOGICAL FRAMEWORK FOR THE CALCULATION OF TAX WEDGE INDICATORS

As noted in section one, when assessing the tax burden indicators the authors follow the methodology described in the Taxing Wages publication (OECD, 2014). This subsection provides a non-exhaustive explanation of the most important issues which relate to the definition of hypothetical units, obtaining the average gross wage for hypothetical workers, and the definition of tax- vs. non-tax payments.

All calculations in this volume are done for eight OECD-defined hypothetical units, presented in table 2. The labour income of hypothetical adult members is defined in reference to the tailor-made definition of the *average gross wage* (AGW) which does not capture all workers in one economy, but only those in certain sectors. For Croatia, AGW equals 12 times the weighted average monthly wage of workers employed in sectors B to N, according to NACE Rev. 2.⁹ Two studies (Gabrilo and Onorato) introduce additional hypothetical units, whose gross wage range extends to 400% of AGW.

⁹ CBS (2016) publishes average gross wages across different sectors for workers employed by legal entities. AGW is obtained as a weighted average of gross wages across sectors B to N, where the number of workers per sector is used as a weight.

TABLE 2

Hypothetical units and their characteristics

Abbreviation	Adult members	Number of dependent children	Spouse I's gross wage (% AGW)	Spouse II's gross wage (% AGW)
A-67-NC	Single	0	2/3 x 100	–
A-100-NC	Single	0	100	–
A-167-NC	Single	0	5/3 x 100	–
A-67-2C	Single	2	2/3 x 100	–
2A-100/0-2C	Couple	2	100	out of work
2A-100/33-2C	Couple	2	100	1/3 x 100
2A-100/67-2C	Couple	2	100	2/3 x 100
2A-100/33-NC	Couple	0	100	1/3 x 100

Notes: AGW – average gross wage, according to Taxing Wages methodology; in abbreviations, “A” stands for “adults”, “C” for children and “NC” for “no children”.

Source: Author's systematisation.

Although Taxing Wages (OECD, 2014) presents various tax burden indicators, the papers in this volume focus on the two main measures: the *net average tax wedge* and the *net average tax rate*.¹⁰ The net average tax wedge is a ratio between *total net tax* and *total labour cost*. The net average tax rate is the ratio between *net employee tax* and the gross wage.¹¹

Croatia also imposes a local government surtax (*prirezi*), calculated as a percentage of PIT obligation. The rates vary across cities and municipalities in the range from 0 to 18%. The surtax rate used in all calculations across all the papers of the volume is set to 12%, which closely corresponds to the average surtax rate on the national level. Regarding the family benefits, “child benefit” is taken into account for Croatia; it is a means-tested benefit for families with children.

As noted in section 2, Blažić and Trošelj (2012) have cautioned the researchers to properly apply the Taxing Wages methodology regarding the coverage of tax- and non-tax compulsory payments. Since the main reference in the research is Taxing Wages, all papers in this volume concentrate on *tax* burden indicators. Thus, PCB2 is not included in the tax burden for Croatia. It was also noted that OECD now calculates the compulsory burden indicators. One of these indicators is the *net average compulsory wedge*, which is a counterpart of the net average tax wedge.¹²

¹⁰ The names of these indicators are slightly changed in comparison to the original names used in Taxing Wages. Thus, “*net average tax wedge*” is a synonym for OECD's “average tax wedge”, while the term “net average tax rate” refers to OECD-s “net *personal* average tax rate”.

¹¹ *Total labour cost* is the sum of gross wage, employer SICs and payroll taxes. *Total net tax* is the sum of all SICs, payroll taxes and PIT, minus cash family benefits. *Net employee tax* is the sum of employee SICs and PIT, minus cash family benefits.

¹² The term “net average compulsory wedge” used in this paper denotes OECD's indicator “average compulsory payment wedge”; see OECD (2015).

4 THE COMPARISON OF NET AVERAGE TAX AND COMPULSORY WEDGES

Blažić and Trošelj (2012) investigate the differences between several tax and compulsory burden indicators for a single average worker, comparing Croatia and OECD countries in 2010. In a fashion similar to Blažić and Trošelj's (2012), this section calculates the net average tax wedge and net average compulsory wedge for three different hypothetical units defined in table 2. Calculations and comparisons, shown in table 3, are carried out for countries analysed in this volume referring to the year 2014, but for Croatia results for the years 2013 and 2015 are added.¹³

TABLE 3

Net average tax wedge and net average compulsory wedge, 2014

	A-100-NC				A-167-NC				2A-100/67-2C			
	NATW		NACW		NATW		NACW		NATW		NACW	
	%	R	%	R	%	R	%	R	%	R	%	R
Austria	49.4	2	49.4	4	52.0	4	52.0	5	41.9	5	41.9	6
Belgium	55.6	1	55.6	1	60.8	1	60.8	1	48.4	1	48.4	1
Czech Rep.	42.6	7	42.6	9	45.0	10	45.0	12	35.5	11	35.5	14
Estonia	40.0	13	41.2	11	40.9	14	42.1	15	36.7	10	37.8	9
France	48.4	5	48.4	7	54.3	2	54.3	4	43.7	2	43.7	4
Germany	49.3	3	49.3	5	51.3	5	51.3	6	42.2	4	42.2	5
Greece	40.4	12	40.4	15	48.0	7	48.0	8	41.4	6	41.4	7
Hungary	49.0	4	49.0	6	49.0	6	49.0	7	40.4	7	40.4	8
Ireland	28.2	17	28.2	17	39.6	16	39.6	17	20.3	17	20.3	17
Italy	48.2	6	51.0	3	53.8	3	56.3	2	42.4	3	45.4	3
Netherlands	37.7	14	51.6	2	43.1	13	56.1	3	31.0	15	45.7	2
Poland	35.6	16	40.6	14	36.2	17	41.2	16	32.6	14	37.7	10
Portugal	41.2	9	41.2	12	47.5	8	47.5	9	36.8	9	36.8	13
Slovak Rep.	41.2	10	43.2	8	43.3	12	45.3	11	35.4	12	37.6	12
Slovenia	42.5	8	42.5	10	46.3	9	46.3	10	34.5	13	34.5	15
Spain	40.7	11	40.7	13	45.0	11	45.0	13	37.6	8	37.6	11
Croatia (2014)	36.1	15	40.4	16	40.2	15	44.5	14	30.1	16	34.4	16
Croatia (2013)	35.2		39.5		39.4		43.7		29.2		33.5	
Croatia (2015)	35.3		39.6		39.8		44.1		29.4		33.7	

Notes: NATW – net average tax wedge, NACW – net average compulsory wedge, “%” – average wedge as a percentage of total labour cost, “R” – rank.

Source: OECD (2016b), OECD (2016c) and author's calculation.

Before making a cross-country comparison, let us first focus on Croatian results. The average wedges increase between 2013 and 2014 due to the rise of general health SIC rate from 13% to 15%. However, the wedges decrease in 2015 due to the changes in PIT. Average wedges are roughly the same in 2013 and 2015, at least for A-100-NC and 2A-100/67-2C household types. The difference between the net average tax wedge and the net average compulsory wedge in all observed years and for all hypothetical units is about 4.3 percentage points.

¹³ The year 2014 is chosen for this analysis due to the availability of information on the OECD website (see footnote 2); compulsory burden indicators for 2013 are not presented.

According to the net average tax wedge, Croatia's tax wedge is one of the lowest among selected countries. For A-100-NC and A-167-NC, only Ireland and Poland have lower wedges; for 2A-100/67-2C, only Ireland has a lower tax wedge. Turning to the net average compulsory wedge, Croatia's ranking only slightly changes. For A-100-NC, only Ireland ranks below Croatia, with Poland moving two positions up. For 2A-100/67-2C the rank of Croatia (and Ireland) does not change. Regarding A-167-NC, Croatia moves two positions up, leaving Ireland, Poland and Estonia behind.

Concentrating on percentages rather than ranks, the differences between the two measures of average wedge are more pronounced. Thus, according to net average compulsory wedge, Croatia is much closer to its neighbours on the scale, such as Estonia, the Czech Republic, Greece, Portugal and Spain.

5 ACKNOWLEDGEMENT

As the Guest Editor of this special issue, I would like to thank the authors for accepting the challenge of adapting their student papers into research papers available for publication. The special value of projects like this lies in encouraging young authors to gain initial experience in scientific and expert writing, and I believe that we have succeeded in this.¹⁴

I am grateful to the reviewers for their patient reading and plentiful and precious advice, both expert and technical.

I also thank Slavko Bezeredi for comments on the earlier versions of the papers. Many thanks also go to Snježana Đurđek for translation and proofreading services and to Marina Nekić for the technical editing of the articles.

¹⁴ Three of the four papers – in their earlier versions – contained supplementary analyses. Beketić analyses the tax wedge effects of the hypothetical replacement of the current three-bracket PIT with a single-rate PIT in Croatia. Gabrilo calculates the tax wedge in Croatia for hypothetical persons from different EU countries, in a situation in which these persons “move” to Croatia, but keep the same gross wage (in absolute terms) as in their country of origin. Cundić analysed the evolution of tax burden on labour income in Croatia in the period between 2008 and 2015 by taking into consideration all the changes in PIT rates, brackets, and personal allowances, as well as some changes in SIC rates that occurred in the observed period. Although these supplemental analyses were interesting and useful, the Editor has decided to exclude them from the final versions of the papers, presented in this volume. This was done to retain the focus of the papers on the main topic and to keep them relatively compact in terms of length. However, the authors will be encouraged to pursue their investigations and publish the results on some other occasion.

REFERENCES

1. Blažić, H. and Trošelj, I., 2012. Međunarodna usporedba poreznog opterećenja radne snage: utjecaj nove metodologije na položaj Hrvatske. In: L. Božina, M. Gonan-Božac and D. Učkar, eds. *Financije i menadžment u globalnoj ekonomiji*. Pula: Sveučilište Jurja Dobrile u Puli, Odjel za ekonomiju i turizam, pp. 185-204.
2. Blažić, H., 2006. *Usporedni porezni sustavi – oporezivanje dohotka i dobiti*. Rijeka: Sveučilište u Rijeci.
3. CBS, 2016. *Statistika u nizu: Zaposlenost i plaće (Statistics in line: Employment and wages)*. [online] Available at: <http://www.dzs.hr/Hrv_Eng/Pokazatelj/MSI_ZAPOSLTENOST_I_PLACE.xlsx>.
4. Čok, M. [et al.], 2013. Taxation of wages in the Alps-Adriatic region. *Financial Theory and Practice*, 37(3), pp. 259-277.
5. Deskar-Škrbić, M. and Šimović, H., 2014. Porezna politika Milanovićeve vlade od 2012. do 2014. *Političke analize*, 5(20), pp. 22-32.
6. Dolenc, P. and Vodopivec, M., 2005. The tax wedge in Slovenia: international comparison and policy recommendations. *Financial Theory and Practice*, 29(3), pp. 229-243.
7. Grdović Gnip, A. and Tomić, I., 2010. How hard does the tax bite hurt? Croatian vs. European worker. *Financial Theory and Practice*, 34(2), pp. 109-142.
8. OECD, 2014. *Taxing Wages 2014*. Paris: OECD.
9. OECD, 2015. *Non-tax compulsory payments as an additional burden on labour income*. [online] Available at: <http://www.oecd.org/tax/tax-policy/Non-tax-compulsory-payments_2014.pdf>.
10. OECD, 2016a. *OECD.Stat: Average annual wages*. [online] Available at: <https://stats.oecd.org/Index.aspx?DataSetCode=AV_AN_WAGE>.
11. OECD, 2016b. *OECD Tax Database*. [online] Available at: <<http://www.oecd.org/tax/tax-policy/tax-database.htm>>.
12. OECD, 2016c. *Taxing Wages: comparative tax burden indicators*. [online] Available at: <<http://www.oecd.org/ctp/tax-policy/taxing-wages-comparative-tax-burden-indicators.htm>>.
13. Šeparović, A., 2009. The Influence of the Tax Wedge on Unemployment in OECD Countries in Comparison with Croatia. *Financial Theory and Practice*, 33(4), pp. 463-477.
14. Šimović, H. and Deskar-Škrbić, M., 2015. Učinak promjena poreznih stopa na porezno opterećenje rada u Hrvatskoj. *EFZG Working Paper Series/EFZG Serija članaka u nastajanju*, (13), pp. 1-17.
15. Urban, I., 2009. The tax burden on labour in Croatia. *Newsletter*, No. 47. [online] Available at: <<http://www.ijf.hr/eng/newsletter/47.pdf>>.