Tax Reforms: Experiences and Perspectives

Conference Proceedings

Institute of Public Finance

TAX REFORMS:
EXPERIENCES AND PERSPECTIVES

CONFERENCE PROCEEDINGS

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FOREWORD

HELENA BLAŽIĆ, KATARINA OTT AND HRVOJE ŠIMOVIĆ

EDITORS

This year has marked the 20th anniversary of the Croatian tax reform. To celebrate this occasion, Institute of Public Finance, Zagreb; Faculty of Economics, University of Zagreb and Faculty of Economics, University of Rijeka have organized the international scientific conference *Tax Reforms: Experiences and Perspectives*.

Croatian 1994 tax reform introduced completely new and modern „interest-adjusted" consumption-based tax system of direct taxation. New personal income tax and corporate income tax were introduced as well as nine new excise taxes, followed by the VAT in 1998. Such a consumption-based system of personal and corporate taxation was the subject of numerous debates and confrontations of tax policy makers, academics as well as tax practitioners. With its second biggest tax reform in 2001 Croatia has abandoned interest-adjusted consumption-based tax system by reforming its personal and corporate income tax again in the direction of income-based system, introducing in effect hybrid system with income-based as well as consumption-based elements. This hybrid approach has remained in effect until today, with the slight occasional income-based or consumption-based changes.

The basic conference aim was to compare experiences and draw lessons from tax reforms in different countries, particularly region countries and former transition economies that are now members of the EU. The conference was opened by the eminent keynote speakers - Gaëtan J. A. Nicodème (Head of the "Economic analysis, evaluation & impact assessment support" Unit– European Commission, General Directorate for Taxation and Customs Union), Sijbren Cnossen (Maastricht University and Erasmus University, Rotterdam) and Michael Keen (IMF, Washington).

This basic conference aim was further analysed at the particular conference sessions. The prevailing topics were related to the broad tax reform issues in the region countries and new EU members. Furthermore, tax efficiency and equity, tax compliance and administration, tax avoidance and evasion were analysed. Substantial number of topics was dealing with macroeconomic aspects of tax reforms, particular in the times of crises, optimal tax structure as well as consumption versus labour tax burden. In accordance with authors' preferences and limitations some of the articles presented at the conference are not present in this volume. However, the readers can see the scope of articles and topics in the program at pp. 289-291.

These conference proceedings have been edited in appreciation of participating researchers' effort to contribute to the qualitative research of tax reforms in different countries. Most of them come from the (post)transition countries, with the similar problems concerning not only taxation, but also general, issues. We really do hope that the variety of tax topics will help researchers, students, experts and general public to get the insight into the complex problems of tax systems and policies of (post)transition countries. We also hope that the experience of other countries could be helpful in the everlasting search for the appropriate solutions in developing the efficient and equitable tax system.

TIME TO STOP AVOIDING THE TAX AVOIDANCE ISSUE IN CROATIA? A PROPOSAL BASED ON RECENT DEVELOPMENTS IN THE EUROPEAN UNION

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ABSTRACT

The paper takes a tax policy perspective in analysing the approach to tax avoidance in Croatia and expounding its existing shortcomings. It is argued that Croatia is yet to develop a coherent legislative framework suitable for curbing tax avoidance in an equitable, efficient and simple way. One instrument that has hitherto been ignored is the general anti-avoidance rule (GAAR), keystone of anti-avoidance policy in other countries. Authors propose the introduction of a specific GAAR – based on recent developments in the European Union (EU) – in Croatian tax legislation. This proposal is supported by multiple tax policy arguments. Special emphasis is placed on the requirements of legal certainty, a traditional weak spot of Croatian tax system. The proposal is put in the context of persistent quest for sustainable public finance system in times of crisis.

Keywords: tax avoidance, tax abuse, general anti-avoidance rule, GAAR, EU tax law, wholly artificial arrangements, tax policy

1 INTRODUCTION

> "The avoidance of taxes is the only intellectual pursuit that still carries any reward."
> (J.M. Keynes)[1]

Ever since its comprehensive reform in 1994 the Croatian tax system has exhibited distinct lack of coherent approach to tax avoidance. While global trends have been followed in introducing numerous targeted anti-avoidance rules (TAARs), there is a gaping absence of statutory provisions which are able to curb more complex tax avoidance schemes. Legislative instruments that fit this purpose are the so-called general anti-avoidance rules (GAARs), recently on the rise in a number of countries (Ernst & Young, 2013), largely due to growing concerns about wealthy individuals and multinational corporations (MNCs) not paying their "fair share" in the financing of public services. Tax avoidance currently ranks high on the tax policy agenda worldwide, as evidenced by the G8 and G20 meetings of 2013 and other

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[1] As cited in Perrou (2006).

developments at the regional and international level (e.g. OECD's project on tax base erosion and profit shifting).

The institutions of the European Union (EU) have also taken the initiative in this area, stressing the need for a uniform anti-avoidance approach in all of the EU member states. One of its envisaged cornerstones is the "EU GAAR", as proposed by the European Commission (EC) in its non-binding recommendation of 2012. The proposal is based on the anti-avoidance approach developed by the EU judiciary in the past, which has had severe influence on member states' national legislation. Due to the lack of EU institutions' competence in tax matters, the proposal's effects are contingent on the national tax policy choices of each member state.

This paper takes on tax policy perspective in expounding that the time has come for the introduction of a GAAR – modelled after the EC's proposal – in Croatian tax system. Arguments go beyond traditional examination of GAAR's influence on efficiency and equity, paramount tax policy objectives. GAAR's potential in recovering public revenues lost to tax avoidance activities and in narrowing the tax gap via improvement of tax compliance levels is highly important in the era of fiscal consolidation. Therefore, its introduction gives a strong signal to the country creditors that the government is acting responsibly in imposing and collecting taxes, which is a prerequisite for sustainable public finance system. Given that Croatian public finances are currently undergoing the surveillance procedure by the EU institutions, this point deserves a special merit. Furthermore, it is argued that the introduction of an "EU-style GAAR" could have positive effects on legal certainty – value of particular concern for the all stakeholders in Croatia – particularly if it is accompanied with the adoption of other instruments enhancing the relationship between the tax authorities and taxpayers, e.g. advance rulings.

The paper is organised as follows. After the introduction, section two highlights the importance of tax avoidance issue for tax policy and the role of a GAAR in that context. Section three analyses the added complexity of anti-avoidance policy in member states of the EU. It also introduces the EC proposal on uniform EU GAAR and makes a brief overview of experiences with GAARs in selected crisis stricken member states (Spain, Italy and Portugal). Section four deals with anti-avoidance approach in Croatia hitherto and provides authors' proposal for the introduction of a GAAR in Croatian tax system. Fifth section contains the summary of main findings.

2 ANTI-AVOIDANCE TAX POLICY AND THE ROLE OF A GAAR

Tax policy is the art of making numerous decisions about tax structure and tax design. From a normative perspective, these decisions and their effects are typically evaluated using three criteria: equity, efficiency and administrability (Avi Yonah, 2006). In simple terms, tax policymakers must, simultaneously, strive in making the tax system as equitable (fair), economically efficient and easy-to-administer as possible. It is well established in the theory of public finance that the attainment of these goals is influenced by the reality of taxpayers' behavioural responses to taxation (Slemrod and Yithzaki, 2002). In every country there is a certain percentage of taxpayers who do not comply with their obligations prescribed in the tax statutes. Tax compliance is a complex subject that cannot be explained using only the economics-of-crime approach, i.e. considering factors such as penalty schedule and probability of detection (Alm, 2012). Other factors, like tax morale and social norms, also have an influence on the tax compliance level (Torgler and Schaltegger, 2006). While expounding the possible underlying causes of tax non-compliance goes beyond the scope of this paper, their understanding is of vital importance in the tax policy-making (Tooma, 2008)[2].

2.1 THE ELUSIVE CONCEPT OF TAX AVOIDANCE AND THE IMPORTANCE OF "LINE DRAWING"

Two general types of tax non-compliance must be distinguished: 1) tax evasion and 2) tax avoidance. This dichotomy is discernible from the legal perspective. Whereas tax evasion denotes behaviour that is illegal, i.e. contrary to the letter of the tax law, tax avoidance stands for behaviour that is legal, i.e. in accordance with the letter of the tax law, but frustrates the underlying purpose of the relevant legal rules[3]. It is far easier to detect tax evasion, within the broad spectrum of illegal actions taxpayers take with the goal of reducing their tax liability. Typical examples include income underreporting, fraudulent invoicing for VAT purposes, undervaluation of property value etc. (Alm, 2012). In contrast, characterising a behaviour as tax avoidance poses a serious challenge for the tax administration and the taxpayers themselves. This is a natural consequence of the inherent vagueness and ambiguity of the notion of tax avoidance, particularly if compared to notions such as "tax planning", "tax mitigation", or "tax minimization". As the goal of this paper is to provide a proposal to policymakers to combat tax avoidance using legislative instruments – more specifically a GAAR – it is useful to start with an attempt to elucidate the concept of tax avoidance.

One has to note first that taxpayers can make a variety of choices and decisions which directly influence their tax liability. In fact, one of the general design features of tax systems is the dependency of tax liability upon the "economic reality that has previously been regulated, classified or characterised by other branches of law (commerce or other private law)" (Ruiz Almendral, 2005). Therefore, taxpayers are generally free to choose the legal form of their economic activities, which may profoundly affect the amount of tax due. Classic examples include the choice of financing business activity with debt or equity or the option of undertaking a business activity in a corporate form. Tax planning is the umbrella term used to describe a vast array of legal activities aimed at reducing or deferring the tax liability, i.e. optimizing the tax position of a person. Tax avoidance is, in comparison, equated with those tax planning activities which are in some way considered "illegitimate" or "unacceptable" (Russo, 2007). For the sake of clarity the term tax planning (or tax mitigation) is used below only in respect of those activities that are acceptable and permissible from the tax policymakers' perspective (Atkinson, 2012).

[2] For a comprehensive survey of tax non-compliance reasons and patterns see Andreoni, Erard and Feinstein (1998).
[3] This general depiction of evasion and avoidance can be viewed as an oversimplification, particularly from the tax lawyers' standpoint. For a more nuanced discussion about the evasion/avoidance dichotomy see Uckmar (1983).

Admittedly, attempts of producing a precise definition of tax avoidance do not only represent a challenging task – it is asserted that the term "does not have a limiting and definite meaning" (Barker, 2009) – but also bear little significance for the tax policy. The focus should instead be on drawing the line between (acceptable) tax planning and (unacceptable) tax avoidance. Two aspects need to be emphasized against this backdrop: firstly, the issue of criteria that ought to be employed in the line-drawing, and secondly, the issue of institutional competence in the development of these criteria. The former usually entails the consideration of the purpose of a taxpayer's legal arrangements, which may be established on a subjective or objective basis (Zimmer, 2002). Accordingly, activities conducted with the sole or main purpose of gaining a tax benefit, contrary to the underlying intent of the applicable law, are deemed to have crossed the borderline of tax avoidance (Cooper, 2001). The latter aspect pertains to the role of the legislative and judiciary branch of government in establishing and developing anti-avoidance doctrines. While in some countries – particularly those of common law legal systems (e.g. USA) – the judiciary has taken an "activist" approach with remarkable degree of freedom and creativity in delimiting the notion of tax avoidance (Brown, 2012), in other countries – not limited only to those of civil law legal systems (e.g. Belgium, Germany, Sweden) – the role of judiciary is restricted, principally on the basis of constitutional limitations to the power of taxation (Zimmer, 2002; Vanistaendel, 1996). This is an important point for the tax policymakers, as the decision to curb tax avoidance with legislative instruments is heavily influenced by the extent and efficacy of judicial intervention in this area (Arnold, 2008).

Irrespective of the approach and instruments used for its delimitation, there are various persuasive arguments why tax avoidance needs to be recognized as an important tax policy issue. First and foremost, tax avoidance behaviour undermines the attainment of the main normative criteria used to evaluate the tax policy. Fairness is endangered because tax avoidance narrows the tax base and changes the relative shares of tax burden among taxpayers (Tax Law Review Committee, 1997), presumably – due to the inequality of avoidance opportunities – at the detriment of lower income groups (Hillman, 2009). From the standpoint of economic efficiency, tax avoidance is considered to be "socially wasteful in that it results in distorted choices made on a basis other than the marginal social cost and benefit of an economic activity" (Hyman, 2011). Furthermore, proliferation of avoidance schemes adds to the complexity of the tax legislation, as legislators try to close specific loopholes (Tax Law Review Committee, 1997), which inevitably increases the compliance and administrative costs of taxation.

Moreover, in the post-crisis era of fiscal consolidation, other negative effects of tax avoidance seem to play a more important role in the policymaking process. One direct macroeconomic effect of tax avoidance is the revenue loss for the government (Tooma, 2008), which is of special concern for the countries simultaneously faced with daunting budget deficits and public debt limits. Accordingly, strengthened anti-avoidance measures form one part of the wider tax base-broadening strategy employed for the revenue side of the fiscal consolidation (International Monetary Fund, 2013). Finally, the fact that the public outrage at tax avoidance, widely perceived as a prerogative of MNCs and wealthy individuals, has been picked up by the politicians (Freedman, 2012) cannot be underestimated. Anti-avoidance currently ranks high on the agenda of multilateral organizations – notably G20, OECD and the EU – encouraging higher degree of inter-governmental coordination necessary to restrain the avoidance schemes that exploit deficiencies of the international tax regime (Ernst & Young, 2013).

2.2 GAAR AS A POLICY TOOL IN COMBATING TAX AVOIDANCE

Legislative anti-avoidance instruments can be divided into two groups: targeted anti-avoidance rules (TAARs) and general anti-avoidance rules (GAARs). Tax systems of many countries contain both (Ernst & Young, 2013). Main difference lies in their scope of application, i.e. the type of behaviour they are targeted at. While TAARs are aimed at curbing specific tax avoidance techniques, e.g. abusive transfer pricing or debt financing, GAARs can be applied on a much broader scale, forming a sort of "catch all" anti-avoidance tool (Ostwal and Vijaraghavan, 2010). Fundamental role of a GAAR is to draw a statutory line between acceptable tax planning and unacceptable tax avoidance, by providing the tax administration and the courts a set of parameters they can take into account when deciding on the acceptability of a taxpayers' tax reduction behaviour (Brown, 2012).

Although GAARs vary in form in different countries, some common design features can be identified. Firstly, a GAAR can be applied only if a taxpayer's arrangement – a term that is usually defined very broadly (Atkinson, 2012) – results in a tax benefit (e.g. exclusion of a certain item of income from the tax base) that wouldn't arise absent of the arrangement itself (Cooper, 2001).

More importantly, application of a GAAR depends on the sought purpose of the taxpayer's arrangement. It is applied if the purpose of the arrangement was to obtain the tax benefit, thus invoking conclusion that tax avoidance is a purpose based notion (Cooper, 2001). Even though ascertaining the taxpayer's purpose, an inherently mental element of the arrangement, may appear complicated, some objective conditions (e.g. the commercial substance of the arrangement) can act as meaningful proxies, as demonstrated by many existing GAARs (Ernst & Young, 2013). Obvious problem in this regard is that "tax purpose" of an arrangement can hardly be discerned from its commercial purpose. From the taxpayers' perspective, tax benefits maximize their total net return, which provides sound commercial reason to the arrangement (Cooper, 2001). From the policymakers' perspective, as demonstrated above, it is imperative to draw the line between tax planning and tax avoidance behaviour, and taxpayer's purpose criterion seems ill-suited to achieve this goal (Atkinson, 2012). After all, a number of tax motivated activities are encouraged and supported by the policymakers, and the widespread use of tax expenditures demonstrates the importance of the so-called regulatory function of taxation (Avi Yonah, 2006). What then defines a tax motivated activity as tax avoidance, to be confronted with a GAAR, is the compatibility of its results (i.e. tax benefits obtained) with the purpose of the pertinent tax law, i.e. underlying tax policy goals (Arnold, 2008; Cooper, 2001). In other words, constitutive element of a tax avoidance scheme is the abuse of (tax) law (Ruiz Almendral, 2005), which is recognized in the GAARs of most countries (Arnold, 2008). Further difficulty in making the application of a GAAR dependent on the taxpayer's purpose lies in the relative weight assigned to other possible purposes of the taxpayer's arrangement. While there is no common standard (Atkinson, 2013), the existence of a significant non-tax purpose usually excludes the application of a GAAR (Cooper, 2001)[4].

If abovementioned conditions for its application in respect of particular taxpayer's arrangement are satisfied, GAAR gives to the tax administration the power to cancel or otherwise disallow the tax benefits obtained (Ernst & Young, 2013). Moreover, many GAARs empower the tax administration to reconstruct the arrangement on the basis of the determined economic reality and to subsequently impose tax on the basis of the reconstructed arrangement (Prebble and Prebble, 2010). While it is clear that the conferral of such broad powers to the administrative bodies poses some serious issues of its own (Cooper, 2001), this is an inevitable element of a GAAR. In any case, the policymakers should make sure that other design features of a GAAR are formed in a way that enables sufficient guidance for the administrators to apply it correctly. One of the technical solutions that serve this purpose is the setting up of a special advisory body, the so-called GAAR panel, with the task of protecting taxpayers' interests and giving advice to the tax administration (Ernst & Young, 2013).

2.3 GAAR AND THE BALANCE OF POLICY OBJECTIVES: PROBLEM OF LEGAL CERTAINTY

Integrating the standard design features described above, a GAAR is primarily a line-drawing mechanism used for tax avoidance delimitation. In addition, it enables the cancellation of tax benefits obtained via taxpayers' arrangements qualified as avoidance schemes *ex post*, upon the tax authorities' initiative and subject to judiciary review. In this fashion a GAAR can promote the attainment of tax equity and efficiency. Potential effects of a GAAR on equity and efficiency can be analysed using the economic analysis on optimal trade-off between rules and standards in tax law (Weisbach, 2002). Against this backdrop a GAAR can be characterised as an anti-avoidance standard, which – as comprehensively discussed by Weisbach (2002) – reduces the elasticity of taxable income and can enhance the efficiency of the tax system. Moreover, a consequence of an increased efficiency is that the redistribution of income becomes cheaper, leading to more progressivity, i.e. to an increase of the vertical equity of the tax system (Weisbach, 2002).

The most accentuated disadvantage of a GAAR is its supposedly negative impact on the values of the rule of law, above all on the legal certainty. Legal certainty is not only a paramount rule of law value in modern liberal democracies, but also – in a more narrow tax context – one of the main principles of taxation, endorsed already in the work of Adam Smith (Tooma, 2008). In general, legal certainty entails the guarantee of the state that the individuals ought to foresee the legal consequences of their and other social subjects' behaviour (Zolo, 2007). Thus their behaviour should be governed by law, i.e. by legal rules that meet certain criteria, and in such a way that provides adequate guidance (Atkinson, 2012). Applied to taxation, legal certainty

[4] Using the comparative approach, Arnold (2008) observes that GAARs in different countries employ different tests of taxpayers' purpose, namely "sole or dominant purpose test", "main, primary or principal purpose test" and "one of the main purposes test".

requires that the taxpayers are able to determine the tax implications of their activities *ex ante* (Atkinson, 2012).

In this context a standard criticism has been asserted that a GAAR offends the requirement of legal certainty, due to its inability to draw a bright line between tax avoidance and tax planning (Prebble and Prebble, 2010). It is argued that a GAAR cannot provide sufficient guidance to the taxpayers in arranging their affairs, while concurrently giving broad discretionary powers to the tax authorities to target numerous taxpayers' activities. As Cooper (2001) notices, however, the argument is rarely developed beyond these general assumptions. Even if one takes the argument as self-evident, there remains the question of whether some alternative solutions to the tax avoidance issue would provide more satisfactory results. One obvious alternative is the increasing reliance on TAARs, more specific and thus more certain rules. TAARs are desirable as a policy weapon against some widespread and well-known avoidance schemes – transfer pricing inevitably springs to mind – but they are not a feasible long-term solution (Cooper, 2001). Taxpayers and their advisors can circumvent a TAAR more easily and as policymakers try to plug an identified statutory loophole with yet another TAAR, a vicious circle of increasing complexity of tax law is created (Thurony, 2003), that only produces more uncertainty (Freedman, 2004). Furthermore, it is argued that the very fact that policymakers opt for the introduction of a GAAR indicates their awareness of the inherent unpredictability of taxpayers' avoidance structures (Prebble and Prebble, 2010).

Criticism of a GAAR founded on the "certainty argument" may be considered misguided from two aspects. Firstly, certainty is neither the primary aim nor a yardstick of a GAAR (Freedman, 2004). There are other policy objectives (e.g. equity, efficiency, revenue recovery) it aims to achieve and which need be used in its evaluation. In order to effectively achieve these objectives a GAAR must necessarily be constructed vaguely, at least to some extent (Prebble and Prebble, 2010). Secondly, legal certainty is not a sole virtue that must be respected by the tax policymakers. In fact, it is in direct conflict with the requirements of equity and efficiency (Zimmer, 2002). Thus the true challenge for the policymakers is to find the appropriate balance between these competing objectives, providing appropriate guidance for the taxpayers' behaviour on the one hand and the tax administration with effective tool to restrain manifold avoidance schemes on the other.

Regardless of the stated inappropriateness of using legal certainty as a benchmark for evaluating a GAAR, some authors have challenged the standard claim that the introduction of a GAAR reduces certainty. The starting point of the counterargument is Ronald Dworkin's (1978) theory about the dichotomy between rules and principles. Against this backdrop, Avery Jones (1996) and Braithwhite (2002) have advocated the use of more general principles rather than specific rules in anti-avoidance legislation. Principles are useful in determining what the rule means, i.e. in the interpretation of tax law (Avery Jones, 1996), and the combination of principles – such as a GAAR – and specific rules helps to build the integrated system of tax law, thus promoting a greater certainty (Braithwhite, 2002). Freedman (2004) has further developed the argument for using a GAAR as a general tax law principle, with the aim of providing a sensible regulatory framework in deciding which behaviour is acceptable and which is not. This argument, stemming from the legal philosophy, can be reconciled with the economic analysis of the effects of general standards and specific rules, which provides the starting basis for Weisbach's (2002) above-mentioned analysis of anti-avoidance doctrines' efficiency.

3 ANTI-AVOIDANCE POLICY IN THE EU CONTEXT

For countries that are member states of the EU policing against tax avoidance has an extra dimension (Prebble and Prebble, 2008). Namely, the requirements of the EU law, i.e. special body of law stemming from the international treaties signed by the EU member states, must be observed in the design of national anti-avoidance policy. It should first be emphasised that – due to the lack of competence conferred by the member states to the EU institutions in this area – at the moment there are no EU taxes and there is no genuine EU tax policy (Terra and Wattel, 2012). On the other hand, principle of supremacy of EU law over member states' national legislation puts significant restrictions before the national tax policymakers (Pistone, 2008).

This adds yet another layer of complexity in the anti-avoidance area. Comparative overview of EU member states' anti-avoidance legislation confirms the well-established view that the approach to tax avoidance is unique in every country (Edgar, 2008), and reveals that no general European-wide principles may be extracted from the national level (De Monès et al., 2010). In contrast, the requirements of EU law have a harmonizing effect, by setting the limitations national anti-avoidance rules need to be aligned with. Naturally, the limitations apply only if a transaction or an arrangement is carried in the EU context, i.e. is covered by the provisions of EU law. Court of Justice of the European Union (CJEU), as the only institution competent for the interpretation of EU law, has in numerous cases decided on the compatibility of the national anti-avoidance rules and EU law, resulting in the development of an implicit concept of tax avoidance applicable in the EU context (Weber, 2005).

3.1 DELIMITATION OF TAX AVOIDANCE IN THE CASE-LAW OF CJEU

CJEU's reasoning in "tax avoidance cases" is derived from the prohibition of abuse of law, a newly recognized general principle of EU law. Put simply, taxpayers cannot rely on the provisions of EU law if their behaviour constitutes the abuse of pertinent law. As CJEU has very early recognized the acceptability of tax planning activities which entail the use of EU internal market benefits (Schön, 2008), the line had to be drawn between abusive practices, i.e. tax avoidance behaviour and legitimate tax planning. Two landmark decisions of the CJEU serve this purpose.

Decision in the *Halifax* case (CJEU, 2006a) clarified that two elements constitute an abusive behaviour. Firstly, the transactions gave rise to tax advantage contrary to the purpose of pertinent rules of EU law (the "objective element"). Secondly, the essential aim of the transactions was to obtain a tax advantage (the "subjective element"). Since *Halifax* case was about the abuse of provisions of EU VAT Directive, the question lingered whether the same or similar test could be applied in the tax areas largely unharmonised on the EU level, such as direct taxes. *Cadbury Schweppes* decision (CJEU 2006b) plays a key role in this regard. In that case the compatibility of national anti-avoidance rules (namely, CFC rules) with the EU freedom of establishment was tested. CJEU clarified that market freedoms can be restricted using the tax avoidance argument only in cases of "wholly artificial arrangements". CJEU has planted the seed for the development of this influential doctrine as early as 1998 in its *ICI* decision (Schön, 2013). After *Cadbury Schweppes* it has become clear that a two-pronged test needs to be used in defining wholly artificial arrangements (Lampreave, 2012). The test is very similar to that applied in *Halifax*. Subjective prong consists of the analysis of the taxpayer's purpose, with special emphasis on the search for valid business purpose of the arrangement, other than acquiring of the tax benefit. Objective prong involves the analysis of the economic reality of the arrangement, where the lack of economic substance exposes the artificiality of the arrangement.

Subsequent case law of the CJEU seems to confirm the view - subject to some ambiguities - that a single anti-abuse theory underlies decisions in *Halifax* and *Cadbury Schweppes* cases (Jimenez, 2012). From the tax policy perspective, it is essential to note that CJEU's approach in tax avoidance cases shares features remarkably similar to those found in statutory GAARs. More specifically, the decisive criteria CJEU uses in delimiting the notion of tax avoidance are: 1) the purpose of the EU law relied upon by the economic operator (objective element), 2) the intent of the economic operator of obtaining tax benefits via pertinent EU law abuse (subjective element) and 3) the relative weight assigned to the "tax saving intent" and to other, commercial (business) aims of the transaction(s) concerned. Hence it is argued that the CJEU has developed a fully-fledged GAAR applicable in the EU context (Sinfield, 2011). While hitherto the compatibility of member states' GAARs with the "EU GAAR" hasn't been tested before the CJEU, there is an abundant case law concerning various national TAARs (Ruiz Almendral, 2013), confirming the view that national anti-avoidance rules need to follow the boundaries laid down by the EU law. This "negative integration" of member states' tax systems[5] is problematic from the tax policy standpoint, since CJEU is not the institution whose task is to model tax policy (Dahlberg, 2007).

3.2 MOVING TOWARDS UNIFORM STATUTORY GAAR IN THE EU: COMMISSION'S RECOMMENDATION ON AGGRESSIVE TAX PLANNING

In December 2012 European Commission (EC) issued the Recommendation on Aggressive Tax Planning, a non-binding act addressed to the EU member states, sketching the outline of the harmonized EU approach towards the most aggressive types of tax avoidance behaviour. One of its most ambitious points is the proposal for the adoption of a uniform GAAR in all member states, to be applied equally in purely domestic, intra-EU and third-country situations (Lyons, 2013). The wording of the proposed EU GAAR is based on the anti-avoidance case law of the

[5] About the dichotomy between positive and negative integration of EU member states' tax systems see Terra and Wattel, 2012, pp. 36-39.

CJEU. The "wholly artificial arrangements" doctrine, as delineated in *Cadbury Schweppes*, is of particular influence, as the application of the proposed GAAR is restricted only to artificial arrangements – i.e. arrangements lacking commercial substance – or artificial series of arrangements set up with the essential purpose of tax avoidance and leading to tax benefit (EC, 2012). The Recommendation also contains an exemplary, non-exhaustive list of arrangements lacking commercial substance, and provides definitions of other terms used in the wording of the proposed GAAR; namely, definitions of "an arrangement", "essential purpose of tax avoidance" and "tax benefit" are contained. When the conditions for the application of the proposed GAAR are met, tax authorities are to treat artificial arrangements by reference to their economic substance, i.e. they are granted the power of re-characterisation.

It is apparent that the EC is well aware of the shortages of negative integration approach in the tax avoidance area. Legal certainty and competitiveness at the internal market can be truly enhanced only via positive integration, i.e. via codification of harmonized rules at the EU level (Sinfield, 2011). In this context, lack of competence in regulating tax matters by the EU institutions poses a familiar obstacle. On the other hand, "soft law" mechanisms, such as the abovementioned EC Recommendation, could have a higher chance of success in the changed economic environment. Latest economic crisis and ensuing EU sovereign debt crisis has demonstrated that the flaws of member states' national tax systems may become an EU-wide problem. Member states seeking financial assistance by the EU institutions have been faced with obligations relating to the improvement of tax potential through higher compliance levels, including the more serious approach to tax evasion and tax avoidance (Lyons, 2013). This is best evidenced by the tax reforms in Greece – a country that epitomises the Eurozone crisis – of 2013. Among other measures aimed at combating tax non-compliance, a GAAR has been introduced in the Greek tax system for the first time (Stathis, 2014). The wording of the new rule – effective as of January 1st 2014 – is overwhelmingly reminiscent of the uniform EU GAAR proposed by the EC, with the existence of artificial arrangements being the main condition for its application.

3.3 GAARS IN SELECTED CRISIS-STRICKEN EU MEMBER STATES

A number of EU member states have opted for the introduction of a GAAR as an instrument to curb tax avoidance some time before the full development of an EU GAAR in the CJEU's case law. Some of these countries have since been deeply affected by the economic crisis, entailing the necessity of tax policy reconsiderations. The depiction of different GAARs introduced in Spain, Italy and Portugal can provide useful insights for tax policymakers in Croatia, a new EU member state with similar legal tradition and comparable levels of factors influencing tax compliance, e.g. tax morale (McGee and Tyler, 2006). All three countries in consideration have introduced a GAAR in their tax system long before the beginning of the crisis in 2008, with the aim of achieving equitable allocation of tax burden and increasing the collection of tax revenues. While Italy has developed a strong judicial GAAR accompanied by statutory TAARs, Spain and Portugal have introduced a statutory GAAR. A strong influence of the EU law – and

CJEU's anti-avoidance approach in particular – is notable in all three countries. Even in areas not harmonised by the EU legislation – such as direct taxation – many features have been subject to judicial assessment and therefore indirectly harmonized (Ruiz Almendral, 2005).

Spanish tax system contains a GAAR, applicable in cases of conflicts in the application of tax rules, and TAARs, intended to prevent specific transactions or application of different tax treatment sought by the parties (Clifford Chance, 2013). As the previous provision was hardly ever used during forty years, a new GAAR was enacted by the General Tax Code of 2003 – replacing previous GAARs which have been in use since 1963 – with the aim to revitalise its use by the tax administration and the courts by defining tax avoidance in a clearer manner (Ruiz Almendral, 2005). A "conflict in the application of tax rules" – term that actually denotes tax avoidance (Soler Roch, 2004) – arises where: 1) the taxpayer avoids the taxable event or reduces the taxable basis or tax payable through transaction which is highly artificial or not typical for achieving the result obtained or 2) the transaction achieves material legal or economic effects or benefits that differ from those that would have resulted from a non-artificial transaction.

The application of a GAAR requires the Spanish tax authorities to make evident that an abuse of law has occurred. This is achieved via taxpayer's behaviour comparison with the intention of verifying whether the businesses or transactions are genuine or artificial. Spanish General Tax Code sets out an administrative requirement for the GAAR's application. A special report on tax abuse – which is binding on the tax auditor (De Monès et al., 2010) – needs to be issued by the special advisory committee comprising of two representatives from the central government and two representatives of the acting tax administration. The taxpayer is given 15 days to present a case, and the committee then issues its findings (Tooma, 2008). The Spanish tax authorities and courts apply tax law in broad terms, instead of specifically applying GAAR. In cases of applying provisions on GAAR, tax authorities are required to produce a report justifying the application of GAAR to the transaction. The consequence of application of GAAR to a conflict in the application of tax regulations is elimination of tax benefits and charging interest for late payment. In case of shams, penalties may apply too. From the tax policy perspective, tendencies in Spain favour the reliance on an increased number of TAARs rather than a broad use of the GAAR (Clifford Chance, 2013).

There are two main anti-avoidance tools in Italian legislation. Alongside various TAARs, a rule introduced in 1997 (Article 37bis of the Decree No. 600/1973) allows the tax authorities to disregard transactions lacking a valid economic purpose, aimed at circumventing obligations or providing unduly tax reductions (De Monès et al., 2010). This rule is widely applied, but in fact is not a GAAR since it is limited to the specific list of transactions. Hence, it can be concluded that it falls between a GAAR and a TAAR. Through strict implementation of the principle of legality and through broadening the scope of rule contained in Art. 37bis, Italian case law has evolved as if it contained a GAAR. Since 2005 Italian courts have taken a flexible anti-avoidance approach, allowing the tax authorities to declare tax benefits derived from certain transactions ineffective. The Italian Supreme Court played the crucial role, asserting that the absence of explicit anti-avoidance provisions does not prevent tax authorities or the courts to declare taxpayers' transactions void and collect taxes, based upon the application of civil law doctrines such as the doctrine of abuse of law (Cordeiro Guerra and Mastellone, 2009). This new development – amounting to the creation of a GAAR by the judiciary – is defended by the Supreme Court on the grounds of ability to pay principle, enshrined in Article 53 of the Italian Constitution (Garbarino, 2012), but is also influenced by the anti-abuse doctrine of the CJEU (Soler Roch, 2012).

Consequently, Italian tax authorities are now more open to applying the rule contained in Art. 37-bis or the more general abuse of law principle in their efforts to curb tax avoidance schemes (Ernst & Young, 2013). A transaction is considered abusive if it is aimed at avoiding taxes, if any tax benefit or saving is a dominant reason for carrying it out or if there are no clear economic reasons for entering it. In practice, GAAR is mostly used in cases of misapplication of tax provisions in transactions which are not fraudulent, but aimed at obtaining a tax benefit. The burden of proof falls on the Italian tax authorities, i.e. they have to demonstrate the tax advantage derived from the transaction and the elements proving that it is abusive. In contrast, taxpayers may provide clear and significant business reasons to justify the transaction. In case of re-characterization of an abusive transaction by the tax authorities, tax rates that would have been applied had the abusive transaction not been entered into will be applied. According to the Supreme Court, penalties or criminal sanctions are not applicable to transactions deemed as abusive (Clifford Chance, 2013).

The Portuguese GAAR sets out that any transaction implemented by artificial or fraudulent means or by abusing legal forms and wholly or mainly aimed at reducing, avoiding or postponing taxes that would be payable as result of transactions with the same economic purpose or to obtain tax advantages that would not be achieved without the use of these means, is ineffective for tax purposes. Taxation should proceed in accordance with the rules that would have applied in the absence thereof. The tax advantages intended to be achieved by this transaction may not arise (Santiago, Salema and Carvalho Nunes, 2011). This rule was introduced in the Portuguese legal system in 1999, under influence of other European countries, along with the introduction of TAARs, e.g. on transfer pricing and thin capitalization. Although the GAAR had not been applied for over a decade, a number of cases where it was applied recently considerably increased. The aim of these rules was to guarantee compliance with the principles of equality in financing public expenditures. The GAAR has proven to be difficult to apply as the burden of proof falls on the tax authorities, thus weakening the preventative character of the rule. The tax authorities have instead mostly applied TAARs, where the burden of proof falls upon the taxpayer (Fernandes Ferreira, Respício Gonçalves, Bordalo e Sá, 2011).

4 ANTI-AVOIDANCE POLICY IN CROATIA: A PROPOSAL

During the transition era of the 1990s a new tax system suitable for the market-oriented economy had to be created in Croatia (Arbutina et al., 2014). Therefore, it is not surprising that tax evasion was perceived as the more important tax policy issue than tax avoidance. Over the years various interventions in the tax statutes have been made with the aim of curbing some recognised tax avoidance techniques. The importance of legislative instruments in this area should be emphasized, as Croatia has both a civil law legal system with strong adherence to the constitutional principle of legality and the long tradition of literal interpretation of the law by the courts (Aviani and Đerđa 2012). Against this backdrop, dynamics of changes to the anti-avoidance legislative framework reveal that Croatia lacks a coherent anti-avoidance policy (Prebble, 2005). In comparison to other countries, Croatian approach to this important tax policy issue is both underdeveloped and fragmented.

4.1 EXISTING ANTI-AVOIDANCE LEGISLATIVE FRAMEWORK IN CROATIA

The obligation to pay taxes in Croatia, similarly to other countries, stems from the constitutional principle of ability to pay. Namely, the Art. 51 of the Constitution lays down that every person should participate in the defrayment of public expenses in accordance with his or her economic capacity. The Constitution further stipulates that the tax system should be based upon the principles of equality and equity, establishing the paramount objectives of Croatian tax policy. These constitutional principles are reflected in manifold statutory provisions. For example, Art. 9 of the General Tax Act (GTA) obliges the parties of the tax relationship to act in good faith, i.e. to conduct themselves conscientiously and fairly in accordance with the law. Tax avoidance behaviour undermines the attainment of both dimensions of equity. Horizontal equity is endangered since the share of tax burden borne by two taxpayers with equal economic faculty differs depending on their usage of tax planning schemes. Vertical equity is endangered since tax avoidance schemes – particularly the most notorious corporate tax shelters revolving around international tax arbitrage – are largely a privilege of the high income earners, lowering the effective tax system's progressivity. Consequently, anti-avoidance legislative instruments in Croatia – including a GAAR – can be justified by this constitutional principle, similarly to the approach taken by the judiciary in Italy (see Section 3.3.).

Croatian tax legislation does not contain a GAAR (Rogić Lugarić and Bogovac, 2012). However, certain provisions which follow the same underlying objectives as a GAAR – even if lacking its breadth – can be found. Of special importance is the provision found in Art. 10(1) GTA, effectively codifying the substance-over-form principle in the process of determining tax facts. This provision – labelled as "economic approach principle"– sets out that "(T)ax facts shall be determined according to their economic essence". Additionally, Art 10(2) GTA provides that "(I)f the revenue, income, profit or other assessable benefit was acquired without a legal basis, the tax authority shall determine the tax liability in accordance with a special law regulating certain types of taxes". The implementation of this principle allows the tax administration to tax profit incurred even by a criminal act, with the basic idea to tax the underlying economic substance, while the general character of a legal action that led to the profit is irrelevant for tax law (Rogić Lugarić and Bogovac, 2012). Hence, some consider it to be a potentially powerful anti-avoidance rule, comparable to a GAAR (KPMG, 2013). Even though the intent of these provisions corresponds to the one of a GAAR, they are extremely vague and do not provide further instructions for application to the tax authorities. Therefore, it is not surprising that – while the provisions on economic approach principle have been in force since 2001 – their anti-avoidance potential has hitherto not been recognized by the tax authorities.

By similar token, an anti-avoidance rule aimed at preventing the abuse of legal form, i.e. codification of the sham doctrine, is found in Art. 11 GTA: “If a sham transaction conceals another legal transaction, the basis of the assessment of tax liability shall be that concealed legal transaction." On the basis of this provision tax authorities can requalify the transaction and neglect the form contracting parties have chosen for the transaction. The transaction will therefore be considered to have been concluded in the legal form which corresponds with the real intention of contracting parties (Šimović et al, 2010). While it is contended that this provision is seldom applied by the tax authorities, some authors argue that it should gain more importance in the future, especially with regards to transactions that involve real estate purchases via business shares sales (Kapetanović, 2010; Prebble and Prebble, 2008).

Additionally, various TAARs can be found in Croatian tax legislation, mostly related to corporate income taxation. For instance, a rule targeted at thin capitalization as well as a rule setting the higher rate of withholding tax on certain payments made to residents of expressly listed tax haven countries are contained in the Corporate Income Tax Act (CITA). From the tax policy perspective it is very interesting that some of the most controversial changes of tax legislation of late – including the new TAARs – seemingly reflected the awareness that tax avoidance needs to be restrained. Yet, no one single theory underlying the anti-avoidance approach in tax legislation can be identified.

Abuse of law doctrine – deeply rooted in Croatian civil law – was used to justify the GTA amendments of 2012, laying down the special procedure for “piercing the corporate veil” in tax matters (Žunić Kovačević and Gadžo, 2013). The amendments provoked intense reactions of the business community as shareholders, board members and executive directors of a company – as well as persons associated with them – can be declared to be liable for company's tax debt by the tax authorities, under condition that the abuse of rights or power leading to company’s inability to pay the tax debt is established. On the other hand, one distinctive TAAR was included in the CITA amendments of 2012 that introduced a tax benefit for reinvestment of company profits. Namely, the corporate income tax base can be reduced for the amount of company's capital increase made for investment and development purposes. From the outset, policymakers have recognized the tax avoidance potential of this benefit (Jozipović, 2013) and introduced a TAAR, which stipulates that the entitlement to reduce the corporate income tax will not be granted if it is obvious that the intention of the company’s capital increase was tax evasion or tax avoidance. Examination of taxpayer's purpose as a condition for the application of anti-avoidance rule is what makes this specific TAAR similar to GAARs found in other tax systems.

The wording of the abovementioned TAAR is to some extent comparable to that of the TAARs applicable in the context of three EU direct tax directives. Provisions of Merger Directive (European Council, 1990a, hereinafter: MD), Parent-Subsidiary Directive (European Council, 1990b, hereinafter: PSD) and Interest-Royalties Directive (European Council, 2003, hereinafter: IRD) have been implemented in Croatian legislation – mostly in CITA and in the Ordinance on Corporate Income Taxation – during the process of accession to the EU. It appears that Croatian legislator opted for uniform anti-avoidance approach in the tax directives context, even if the wording of different TAARs is not identical. Consequently, the benefits of the MD, PSD and IRD are to be denied if the principal purpose or one of the principal purposes of the pertinent transaction/arrangement is tax evasion or tax avoidance. It can be concluded that the harmonization of Croatian tax law with the EU law requirements brought about some important changes to the approach in design of anti-avoidance legislation. More specifically, the taxpayer's purpose as the subjective element of the transaction – previously not acknowledged in the delimitation of tax avoidance – is now a recognized constitutive element of tax avoidance, albeit in a limited number of TAARs. The indubitable influence of the EU law on the Croatian anti-avoidance law provides a point of departure for future policy choices in this area.

4.2 PROPOSAL FOR THE INTRODUCTION OF THE EU GAAR IN CROATIA: PRINCIPLE OF LEGAL CERTAINTY AS A STARTING POINT

The preceding overview of Croatian anti-avoidance legislation may lead to conclusion that the introduction of a GAAR was considered to be unnecessary by the policymakers and the policy choice was to rely on TAARs as key anti-avoidance tools. In our view this would be misleading. A more detailed analysis of legislative dynamics in this area reveals that Croatian tax policymakers do not have a coherent anti-avoidance approach. What is particularly worrying is the absence of uniform criteria used in the all-important line-drawing process, i.e. in delimiting tax avoidance notion (see section 2.2.). As demonstrated above, in some cases – e.g. when applying the GTA provisions on sham transactions and in “piercing the corporate veil” cases – the abuse of law or abuse of rights by the taxpayer is the defining element of tax avoidance. Here the purpose of the taxpayer’s transaction/arrangement – be it tax saving or any other commercially justified purpose – is rendered unimportant. In other cases – e.g. when applying TAAR concerned with the tax benefit for reinvested profits or TAARs implementing the provisions of EU direct tax directives – taxpayer’s purpose is the essential element.

As described above (see section 3.1.) the CJEU regards both the objective criteria, i.e. abuse of pertinent law, and the subjective criteria, i.e. taxpayer’s purpose, as constitutive elements of tax avoidance. Therefore, the reconciliation of differing criteria in delimiting tax avoidance in Croatia is possible if viewed in the light of EU law requirements. In fact, Croatian tax authorities and courts are already obliged to adhere to the CJEU’s notion of tax avoidance whenever applying national anti-avoidance rules on transactions/arrangements that are covered by the provisions of EU law. More leeway is allowed only with regards to strictly national and third-country (non-EU member states) situations.

That is where the shortcomings of delineating tax avoidance notion in a clear and consistent way could have serious consequences. For example, it is very unclear how the Croatian tax authorities will determine tax avoidance intent with regards to the tax benefit for reinvested profits, as no further instructions for the application of this TAAR were given in tax legislation or in the tax authorities' non-binding opinions. Furthermore, the role of abuse of law principle in future developments of anti-avoidance legislation remains uncertain. Will the policymakers rely on this principle in introducing new anti-avoidance rules, following the pattern of the provisions on piercing the corporate veil in tax matters? In this context the utter absence of debate between the stakeholders – including the Ministry of Finance as the key player in the development of Croatian tax policy (Arbutina et al., 2014) – about the desired anti-avoidance approach, e.g. about the GAAR – TAARs dilemma, also needs to be stressed. It follows that the taxpayers in Croatia are not able to determine the tax implications of their activities in advance, i.e. that the requirements of legal certainty have not been met (see section 2.3.). This is confirmed by the findings of one recent study, stressing that the defects of legal certainty in tax matters are perceived in the Croatian business community as the main tax obstacle to inbound foreign investments (Rogić Lugarić and Bogovac, 2012).

In our view Croatian tax system provides a perfect example how the introduction of a GAAR can actually enhance legal certainty, contrary to the standard argument that a GAAR defeats this rule of law value. Frequent changes in the anti-avoidance legislation – primarily the introduction of the new TAARs – mirror the general problem of Croatian tax system ever since its comprehensive reform in 1994: instability of legislative framework (Bejaković, 2009; Žunić Kovačević, 2012). As the line between acceptable tax planning and unacceptable tax avoidance has not been properly drawn – nor in the tax statutes nor by the judiciary – anti-avoidance tax policy in Croatia has hitherto worked to the detriment of legal certainty. A GAAR – even if inherently vague to some extent – can draw this missing line in a meaningful way, providing the appropriate guidelines to the tax authorities and courts, which traditionally rely on the literal interpretation of the law, overlooking the underlying policy objectives. An analysis of the implications of the reformed GAAR in Spain – country with comparable legal tradition and the attitude of courts to tax law interpretation – is in line with these conclusions (Ruiz Almendral, 2005).

It must be noted that the design features of a GAAR are decisive for the evaluation of its potential influence on legal certainty. Against this backdrop, we share the view that Croatian GAAR should be modelled after the proposal made by the European Commission in 2012 (see section 3.2.). As examined above, some anti-avoidance provisions that are already in place in Croatian tax system share certain common features with the proposed EU GAAR. But the main advantage of introducing the EU GAAR – observed through the lens of legal certainty – is that that its wording – based upon the EU law as interpreted by the CJEU – provides very detailed guidelines on the delimitation of tax avoidance behaviour to the tax authorities, courts and the taxpayers themselves. Likewise, CJEU can be relied upon to clarify the inevitable ambiguities that will appear in the future practice (Clifford Chance, 2013). Moreover, legal certainty could be enhanced via some instruments accompanying a GAAR. Establishment of a specialized GAAR panel (for Spanish model see section 3.3.), introduction of advance rulings issued by the tax authorities on the taxpayer's request (Žunić Kovačević, 2013) and a broader use of the tax authorities' public opinions clarifying the practices in the GAAR application could serve this purpose.

The EU GAAR in Croatian tax system should be underpinned by TAARs - some already in force - addressing some distinctive tax avoidance techniques, but reflecting the same general concept of tax avoidance as defined by a GAAR. Whenever a TAAR is applicable, the tax authorities should not have the option of invoking a GAAR – in line with the *lex specialis* doctrine – thus enhancing legal certainty. Usage of a GAAR as a last resort is also confirmed in comparative surveys (Clifford Chance, 2013). Another legislative instrument worth considering in the future development of coherent anti-avoidance policy in Croatia is the introduction of rules requiring that taxpayers disclose the usage of specific tax shelters to the tax authorities, which are proving to be efficacious in the USA (Kaye, 2012).

4.3 PROSPECTS OF EU GAAR IN THE ATTAINMENT OF OTHER POLICY OBJECTIVES

It has been argued above that anti-avoidance tax policy is about finding the right balance in attaining multiple objectives (see section 2.3.). Hence, legal certainty is not the only objective policymakers ought to be concerned with when deciding on the introduction of a GAAR. The principle of tax equity – as stipulated by the Constitution – marks the paramount objective of Croatian tax policy. As tax avoidance behaviour undermines the attainment of equity – as well as inflicting economically wasteful social costs – developing the coherent anti-avoidance approach needs to rank high on the Croatian tax policymakers' agenda.

While the above analysis points out the inadequacies of existing anti-avoidance legislative framework, there is a lack of empirical evidence on the actual extent of tax avoidance in Croatia, which could provide impetus for reforms. On the other hand, some conclusions can be inferred by analysing the factors commonly associated with tax evasion and avoidance (International Tax Compact, 2010). It seems that most of these factors – e.g. low tax morale, large informal sector of economy, high corruption, frequent changes of tax legislation etc. – are present in Croatia. Moreover, the nature and the extent of tax expenditures in Croatian tax system – necessarily leading to the avoidance opportunities (Tyson, 2014) – opens wide scope for the abusive taxpayers' behaviour. Admittedly, this has been recognized by the policymakers at least to some extent, as shown by some of the more recent changes in the tax legislation. For example, the introduction of the provisions on tax benefit provided for the reinvestment of corporate profits was accompanied by a special anti-avoidance rule. Moreover, other measures aimed at tax non-compliance were also introduced, e.g. establishment of the special tax administration unit focusing on large taxpayers, relaxation of tax secrecy provisions allowing the publication of tax debtors' blacklists etc. While this clearly reflects tax gap narrowing policy, it was most likely motivated by the objectives much more mundane than the objectives of tax equity and tax efficiency.

More specifically, tax reforms in Croatia ever since the outburst of latest economic crisis – which is showing no signs of waning – were driven by the ensuing pressures of fiscal consolidation (Arbutina et al., 2014). Very soon after its accession to the EU, Croatia – failing to meet the fiscal targets set out in the EU legislation – entered the excessive deficit procedure (EDP), with its public finances placed under monitoring by the EU institutions. Whereas there seems to be an agreement in the tax community that there is no space for the further increase of the overall tax burden – especially considering the heavy tax burden on consumption and labour – the potential fiscal effects of the policy aimed at enhancing tax compliance have been largely overlooked. Experiences of other crisis-stricken EU member states (e.g. Greece, Ireland, Portugal, Cyprus) demonstrate that one of the conditions for the EU financial assistance is the development of a strategic approach in fixing structural deficiencies of the national tax system, including the approach to tax compliance (Lyons, 2013). In this context, improvement of anti-avoidance legislation can send a strong signal both to the EU institutions and to the financial markets that Croatia is dedicated to follow fiscally responsible tax gap narrowing policy.

All of the abovementioned policy objectives could be promoted by the introduction of the EU GAAR in Croatian tax legislation, similarly to the recent legislative changes in Greece (see section 3.2.). Even if this specific GAAR proposed by the EC is criticised by some authors for its lack of flexibility in combating tax avoidance (Faulhaber, 2010), in our view it would still provide solid foundation for curbing those types of taxpayers' activities that are blatantly abusive. Since the tax authorities would be provided with a clear set of guidelines – aligned with the CJEU's case law – on the GAAR's application, there would be no justification to shy away from invoking this rule in practice and to rely solely on its deterrent effect. Tax authorities' power to tax pertinent transactions/arrangements with regards to their economic substance clearly promotes the attainment of tax equity and tax efficiency; it safeguards taxation in accordance with the taxpayers' activities which are economically rational, disregarding the complex strokes of an accountant's or a tax lawyer's pen. Additionally, the development of a coherent anti-avoidance framework – with the GAAR as its keystone – can have significant revenue effects, mostly due to its positive influence on the overall tax compliance.

One final policy objective that can be attained by the introduction of EU GAAR in Croatia is its potential in improving tax competitiveness. Its introduction would entail that the same anti-avoidance approach is to be followed by the Croatian tax authorities and courts irrespective of the context – i.e. national, EU or third country context – in which an arrangement is undertaken. In this respect Croatia would have simpler and more attractive anti-avoidance framework if compared to other EU member states countries that have developed complex anti-avoidance strategies over the years (for an Italian example see chapter 3.3.). This is a point that deserves special merit in times when countries are increasingly relying on their tax systems' features to attract foreign inbound investments.

5 CONCLUSION

The approach to tax avoidance is currently high at the tax policy agenda throughout the world and is probably here to stay. At least until satisfactory solutions are found for some of the most notorious avoidance schemes that exploit the shortcomings of international tax rules and the lack of cooperation between different tax authorities. In the meantime many countries have opted for the introduction of various legislative instruments with the aim of curbing tax avoidance and protecting their tax base from further erosion. Global trends point out that GAARs are perceived as keystones of anti-avoidance legislation, particularly in countries where tax authorities and courts traditionally refrain from taking the proactive approach in combating taxpayers' abusive behaviour. While it must be conceded that GAAR is not a "magic bullet" for a multifaceted phenomenon like tax avoidance, the necessity for legislative measures aimed at curtailing it cannot be negated (Zimmer, 2002; Tax Law Review Committee, 1997). Main function of a GAAR is that it draws a line between acceptable tax planning and unacceptable tax avoidance, thus having a potential of achieving multiple tax policy objectives.

Analysis presented in this paper displays that Croatia lacks genuine and coherent anti-avoidance policy. Hitherto the policymakers have not recognized the potential of a GAAR in attaining multiple desired tax policy objectives. We share the view that the time is right for the introduction of a GAAR modelled after the EU GAAR endorsed by the European Commission. Several policy arguments are provided in support of this view. Firstly, promoting legal certainty, along with the constitutional principle of tax equity, should be one of the main objectives of Croatian tax policy in the time to come, Introduction of the EU GAAR in Croatian tax legislation could improve legal certainty, primarily since copious case law of the CJEU can provide detailed guidelines on the application of a GAAR to all parties of the tax relationship. Additionally, other policy objectives – i.e. tax equity, tax efficiency, revenue collection, tax competitiveness – could also be attained with the suggested legislative changes. A point that deserves special merit in the light of the enduring macroeconomic problems in Croatia is the significance of a coherent anti-avoidance framework on the tax gap narrowing policy and hence for the construction of a sustainable public finance system. The experiences of other crisis-stricken EU member states point out that the adoption of a GAAR (or its strengthening) provides a standard policy choice in this context.

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EVASION OF SOCIAL SECURITY CONTRIBUTIONS: EXAMPLE OF CROATIA AND BOSNIA AND HERZEGOVINA

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ABSTRACT

Avoidance and evasion are present in every fiscal system and lately they have become a serious global problem. Similar to developed countries, transition countries such as Croatia and Bosnia and Herzegovina (B&H) are also challenged with this problem. During transition process both of these countries are confronted with social, political and administrative difficulties in establishing efficient fiscal system, hence social security contributions' system (SSC). This paper will try to highlight current problems regarding avoidance and evasion in Croatia and B&H for SSC. In regards to contributions paid to pension funds, Pearson's coefficient calculated for Croatia and B&H (FB&H and RS separately) shows high level of correlation between SSC revenues and average pensions, i.e. in Croatia (r ≥ 0,88) and in B&H (r ≥ 0,95). This is a very important issue bearing in mind inadequate effort these countries are pursuing in order to prevent and/or punish those who legally or illegally evade paying SSC.

Keywords: avoidance, evasion, fiscal system of Croatia and Bosnia and Herzegovina, social security contributions

1 INTRODUCTION

Avoidance and evasion has been identified as early as the introduction of taxes per se. Most economic literature generally defines problems related to tax avoidance and evasion and not SSC, but the logic behind avoidance and/or evasion is virtually the same in both cases. However, Baumann, Friehe and Jansen (2009:164) state a significant difference between tax evasion and SSC evasion in terms of potential future claims of SSC. Furthermore, they state that „if these benefits are income-related, this link may discourage contribution evasion, an observation which is to our knowledge mostly neglected to this day" (p. 164). The history of fiscal doctrine pays significant attention to the issues of tax avoidance and evasion. Since Smith's (1776) fourth maxim defined tax evasion as well as methods under which evasion could be prevented, the economic theory has early identified the skewness that avoidance and evasion impose on tax structures and hence fiscal system.

Fiscal theory defines tax avoidance/evasion but not SSC evasion. So we need to firstly define SSC. OECD (2009) defines SSC as: "Social contributions are actual or imputed payments to social insurance schemes to make provision for social insurance benefits. They may be made by employers on behalf of their employees or by employees, self-employed or non-employed persons on their own behalf. The contributions may be compulsory or voluntary and the schemes may be funded or unfunded. Compulsory SSCs paid to general government or to social security funds under the effective control of government form an important part of government revenue and, although they are not treated so in the system of national accounts, many analysts (including the OECD's Tax Directorate) consider the payments as being analogous to a tax on income and so part of a country's overall tax burden. They are important not only in the sense that they form a significant share of government revenue but because they also reflect part of the costs of doing business. In many developing countries high social contributions coupled with low social benefits are often cited as a reason for a large informal economy".

OECD classification of taxes classifies SSC as those paid by employers, employees, self-employed and unallocable (OECD, 2013). SSC could be paid for pension funds, health funds, unemployment funds, sickness funds, disability funds, etc. Moreover, in this paper we will only briefly focus on pension funds in terms of correlation of SSC funds and SSC pension benefits[1].

SSC are sometimes classified as taxes especially if they are directly deductible, together with personal income tax (PIT) from the gross income. If they are voluntarily paid, usually to private funds, then they differ from taxes significantly. In developed countries, namely, European Union countries (EU), significance of SSC are considerable. Aging population together with increasing globalisation puts additional pressure on SSC funds as hence the size of SSC revenues in broader concept of entire fiscal system (Carone et al., 2007). Since this is a significant issue in developed EU countries, this issue is even greater in transition countries. Not only are these countries facing similar problems regarding aging population and effects of globalisation, but also inherited problems of previous command/socialist[2] system. Hence, the significance of adequate reform of SSC for those countries is even greater. These include, inter alia, number of parameters directly affecting the probability, the motives and the size of SSC evasion. In addition, Bejaković (2002) clearly states authors who dealt with factors affecting increase/decrease in evasion of both taxes and SSC (2002:320-321).

Bailey and Turner (2001) give a broad and interesting insight into the issue of SSC avoidance and evasion. SSC avoidance and evasion occurs twofold; from the perspective of not paying or underpaying of SSC by employee and/or by employer. There are number of ways under which SSC avoidance and evasion occur. Bailey and Turner (1997) analyse the SSC avoidance from the perspective of employee when he/she takes a job which is not covered by SSC. In addition, employees can decide to leave the workforce in order to avoid paying SSC. In order to undertake such measures, employer's formal classification of work and payment needs to be constructed accordingly so that those workers will not be classified as employees. SSC evasion occurs when employers deliberately fail to register a worker as an employee, when workers

[1] It is important to highlight the difference between SSC benefits and SSC transfers (OECD, 2009, National accounts at glance).
[2] Command economies in this paper refer to former USSR countries and countries part of the communist bloc. Former Yugoslavia is considered a socialist economy primarily due to differences in political governance under J.B. Tito.

are hired informally, when workers are hired as contractors rather than employees. In terms of payments, similar to tax evasion issues, these relate to underpayment or by delinquent payment (Bailey and Turner, 2001). These issues are especially present in analysed transition countries. In addition, public companies, i.e. those companies which have not been privatised yet are usually those with highest SSC arrears. In transition countries, waiting for privatisation process to end can cause that surplus employees will not be sacked but rather given a (legal) option for an early retirement. Hence, SSC arrears accumulate in such process since the process is run inefficiently.

In addition, according to Bailey and Turner (1997:3) in order for SSC evasion to occur, three conditions are required involving employees, employers, and the government:

1) „employees must either prefer non-payment of contributions or be reluctant to report non-payment to authorities;
2) employers must wish to evade or place a low priority on making SSC relative to other expenses;
3) government enforcement must tolerate evasion or be inadequate to prevent it".

Hence, there is a three way vicious circle of SSC evasion: employees-employers-government interrelationship. So the aim of this paper is to attempt to clearly identify current problems regarding SSC avoidance and evasion in B&H and Croatia with a special focus on pension contributions since they take majority of SSC.

The paper is divided into three sections. After the introduction, the section theoretical aspects of avoidance and evasion-literature review gives brief overview of the relevant literature. The second section describes the Yugoslav SSC system with special emphasis on SSC in B&H and in the Republic of Croatia. In this section comparative analysis in B&H and Croatia with special emphasis on pensioners/contributions ratio in B&H and Croatia, Pearson's coefficient for pension in B&H and Croatia and values of covered wage bill in B&H and Croatia is given. The third section describes suggestions for successful prevention of SSC avoidance and evasion that must be taken to improve effectiveness in B&H and Croatia. The paper finishes with conclusion and some policy recommendations for B&H and Croatia.

2 THEORETICAL ASPECTS OF AVOIDANCE AND EVASION: LITERATURE REVIEW

It is of great importance to firstly define difference between avoidance and evasion. Most economic literature clearly states that the major difference between avoidance and evasion is in legal treatment of each concept. Hence, Holmes (1916 in Slemrod and Yitzhaki, 2002:1428) defines the distinction between avoidance and evasion as: „when the law draws a line a case is on one side of it or the other, and if on the safe side is none the worse legally that a party has availed himself to the full of what the law permits. When an act is condemned as evasion, what is meant is that it is on the wrong side of line...".

Furthermore, avoidance is defined as an attempt of one's tax liability to be reduced without altering one's consumption basket. Hence, these are known as shifts along a given budget set. There are a few examples of tax avoidance. They include transactions such as income shifting, tax arbitrage, reorganisation or retiming of transactions. All these transactions are in line with the legal provisions of the specific tax and hence are defined as tax avoidance. Models regarding evasion are somewhat different. Slemrod and Yitzhaki (2002) have noted that issues regarding avoidance and evasion have only recently become a subject of interest in economic theory. Moreover, the categories affecting tax avoidance and evasion have been observed separately without a common framework. However, in 1972, Allingham and Sandmo (A-S) have developed a theoretical tax evasion model addressed as a gamble. A-S model explains taxpayer's inclination for tax evasion defined through probability of being caught and his/hers risk aversion. The model has been further developed regarding tax understatement and/or income understatement depending on penalties (for more details regarding developments of the A-S model see, Slemrod and Yitzhaki, 2002). There are number of factors affecting avoidance and evasion (Alm, Jackson and McKee, 1992). Dimensions of avoidance have already been mentioned. Determinants of evasion have been identified through three (econometric) approaches: cross-sectional analysis, time-series analysis and controlled experiments. Apart from those, there are laboratory experiments. Each group has its pros and cons. What seems to be relevant to note here is the fact that all theoretical modelling and latter econometric calculations have been pursued in developed countries, namely USA. Economic theory related to topics of tax avoidance and evasion in developed countries has 'boomed' since 1980's. Both quantitative and qualitative (morale, ethics, etc.) measures have been interlinked with issues of tax avoidance and evasion. Quantitative measures rely on quality data (see Slemrod and Yitzhaki, 2002:1440-1442) whereas qualitative (non-economic) perspectives of tax evasion have been investigated in Roth, Scholz and Witte (1989).

On one side, the behaviour of a taxpayer has been simulated and on the other the response of the tax administration. Audit and hence the competence of the tax administration seems to be of crucial importance in this process. In addition, it is of great importance for every economic analysis (both theoretical and empirical) that tax administration collects quality data. Recent work regarding tax evasion in developed countries states that tax administration and tax policy should be analysed in conjunction rather than separately which was previously done. Myles et al. (2013) using agent-based modelling in the example of the United Kingdom (UK) analyses the aforementioned link between tax administration and tax policy. In order to examine the extent of tax compliance through measures of tax avoidance and/or evasion, reliability of data is stated as a key milestone. Moreover, modelling requires (apart from its dependence on data availability) the use of experiments and computer-based simulation for testing purposes. Myles et al. (2013) give detailed insights into methods which can be applied in developed countries, namely UK.

However, for transition/developing countries, data availability seems to be the major obstacle for any serious analysis. In addition, transition countries face other problems related to the issues of avoidance/evasion. These namely relate to high shadow economy, no clear direction of tax policy application, tax administration's inefficiency, low tax morale, weak legal system in terms of penalties, corrupted tax officials, etc.

In some economic literature there are differences between estimates of the domestic component of tax evasion and tax avoidance and international component. According to Fuest and Riedel (2009:51) domestic component include tax evasion which occurs due to the domestic shadow economy. Therefore, international component includes tax revenue losses due to profit shifting by corporations and offshore holdings of financial assets by private individuals.

3 SOCIAL SECURITY CONTRIBUTIONS IN CROATIA AND BOSNIA AND HERZEGOVINA

3.1 BRIEF OVERVIEW OF THE YUGOSLAV SSC SYSTEM

Since both analysed countries come from the same background, it is important to explain historical heritage of SSC system. In former Yugoslavia, SSC were firstly treated as taxes (Tomljanović, 1990:130). The Yugoslav legal system makes a slight differentiation between taxes and SSC in 1957 stating that SSC have a characteristic of compensations with direct benefit. However, fiscal system reforms in 1964, 1974 and 1985-86, have been changing the share of SSC and personal income tax revenues to total revenues. The share had a downward trend since 1978 when it amounted 41.8 per cent of total revenues to 36.2 per cent in 1984 (Tomljanović, 1990:122).

In the Yugoslav SSC system, another category of SSC existed: (local[3]) self-contribution. It could have been paid in money terms or in kind. It amounted to 33.2 per cent and 32.6 per cent in 1986 and 1987 respectively of total revenues collected from persons (Tomljanović, 1990:132). From the previous analysis, one can easily conclude that SSC were one of the most significant sources of revenues in the Yugoslav fiscal system.

Concerning tax avoidance and evasion, Yugoslav SSC system was organised in such manner there were little or no motives to avoid/evade paying SSC. Paying SSC was employers' obligation and companies belonged to the government and later employees. The government on the other hand had an airtight centralised system of payments called Social accounting service (SDK). SDK was domestic a payment system which had a full authority over all domestic payments including controlling (international payments were done through the banking system). It also kept records on tax and contribution payments so in fact it was a major institution of enforcement for SSC/tax payments (Tesche, 2005:297). In fact, SSC/tax payments had priority in transfers over other payments. However, if taxes/SSC were not paid, SDK had the authority to block the account of the taxpayer meaning that no other financial transactions could be done. This is very significant since at the time, tax administration has had little responsibility over tax collection. Moreover, tax administration was quite decentralised and it had a great deal of autonomy over direct taxes since Federal level (Yugoslavia) relied mainly on indirect taxes (Tesche, 2005:297). With the dissolution of Yugoslavia, this system was abandoned in every country and transferred to commercial banks which at first opened up space for significant tax/SSC evasion (see later).

[3] For more details regarding the local aspect of self-contribution, see Tomljanović (1990:130-132).

3.2 SSC IN BOSNIA AND HERZEGOVINA AND IN THE REPUBLIC OF CROATIA

Even though B&H gained its independence from Yugoslavia in 1992, we can begin our discussion regarding SSC in 1995 due to devastating war in B&H in the period 1992-1995. Hence, B&H, unlike any other transition country entered transition period war-torn with significant human, capital and infrastructural losses. Current B&H Constitution is based upon The General Framework Agreement for Peace in Bosnia and Herzegovina or commonly known as the Dayton agreement. B&H is administratively divided into two entities called the Republika Srpska (RS) and Federation of B&H (FB&H). In 1999, Brčko District (BD) was established, but in this paper it will not be analysed as it is irrelevant in terms of size (the size of a municipality). Fiscal system, unlike monetary system of B&H, was not specifically defined under the Dayton Agreement. As a result, each entity can pass laws in the area of fiscal policy, hence SSC policy. Since B&H's fiscal policy has gone through number of partial reforms in the past eighteen years, so did SSC system. However, SSC system did not go through systematic reform especially in terms of three-pillar pension contributions system – hence current Bismarckian type. SSC together with all direct taxes is currently under entities supervision. Hence, in this paper SSC system will be analysed separately for RS and FB&H[4].

Since we defined possibilities of tax (hence SSC) avoidance, we will focus on SSC evasion. In theory it is known that SSC evasion occurs in two cases: when income is being underreported and when income is not registered, i.e. it has been earned in shadow economy. Brook and Leibfritz (2005:9) state that another way under which SSC evasion can occur especially for those self-employed is to convert employment income into capital income.

Arandarenko and Betcherman (2008) gave a comprehensive analysis of labour market insights in five Western Balkan states (Albania, B&H, Montenegro, Macedonia and Serbia). They have analysed total labour tax burden and gave a brief analysis of SSC systems in those countries. They state that SSC system in all aforementioned countries is Bismarckian type where SSC are closely linked with social benefits. Former Yugoslav countries (Western Balkan countries excluding Albania) suffered significant losses due to rise in unemployment, low wages, widespread non-compliance and high rates of inflation on one side and the rising number of pensioners on the other. In B&H, after 1995 and current political framework of B&H, SSC funds at entities' levels were/are insufficient to cover social benefits and, even though they are classified as extra-budgetary funds, they receive additional payments from the entity's budgets in order to cover total social benefits. Self-employed persons and farmers were (and still are) largely excluded from the SSC system, with symbolic contributions and only basic entitlements. The consequence of war in B&H has left a legacy of high health expenditures with direct reflection onto health contributions. War also caused 'employment gaps' in terms of time breaks in employment status which directly reflected in the pension system. In addition, until 2000 B&H's economy heavily depended on International aid/assistance especially for reconstruction and development of basic infrastructure. War and low levels of GDP and GNI (World Bank) together with transition process induced by privatisation brought higher

[4] Indirect taxes are since 2004 centralised at the level of B&H.

unemployment (World Bank) and early retirement programs which heavily burdened pension funds. In addition, public companies which are not privatised yet accumulate(d) tax/SSC arrears. In the area of direct taxes and hence SSC which are under entities supervision, these amounts (28. 02. 2014) are staggering and in FB&H they have amounted to approx. 1.4 billion BAM and in RS to 1.093 billion BAM. An open question that remains is how much of the accumulated tax and SSC arrears are payable due to the fact that the greatest debtors are public companies on the brink of bankruptcy. In addition, these figures from the Tax administration of FB&H and RS are from registered economic activities.

Additionally, there is a significant amount of underreported income created in the shadow economy which in B&H amounts on average 33.6 per cent of GDP and in Croatia 32.1 (Schneider, 2012:61). Overall, even data in table 1 shows significant share of SSC revenues to total revenues in two B&H entities there is a high and growing number of SSC beneficiaries, namely pensioners. Similar trend can be seen in Croatia in table 3.

TABLE 1

Share of SSC revenues to total revenues in RS and FB&H, in per cent

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011
RS	30.27	35.23	34.34	37.62	35.30	41.32	44.73	46.01	42.69
FB&H	35.15	36.75	36.98	35.62	38.40	42.29	45.10	44.41	44.50

Source: CBBH (2013:209-210), own calculation.

Table 1 shows variations in SSC revenues to total revenues in both entities. No clear cut conclusions could be drawn due to the fact that in the period 2003-2011 there were numerous legal changes in SSC laws in both entities (table 2). In addition, both entities show a significant rise in SSC revenues to total revenues from 2007. A partial explanation could be given through the analysis of general government wage bill calculated using the World Bank methodology. High share of those employed in public sector and the size and amount of their wages partially explains this rise. If we take the share of general government wages to GDP calculated *as the remuneration, in cash or in kind, payable to a general government employee in return for work done. In addition to wages and salaries, compensation of employees includes social insurance contributions made by a general government unit on behalf of its employees* (% of GDP, World Bank, 2011) we will see that from 2007 this share on average was 12 per cent in B&H and in Croatia 9.86 per cent.

In order to empirically discuss possible reasons for SSC avoidance/evasion in B&H, we have to start with the legal framework. In B&H there are three different laws regulating SSC, in each entity and BD. We will focus on two laws in each entity. Similar to personal income tax, residency as well as income earned in each entity seems to be the major criterion for SSC payments. In RS SSC are paid for four types of funds: pension, health, unemployment and child protection fund. SSC are paid only by employer.

In FB&H, there are three types of funds: pension, health and unemployment fund. SSC are paid by both employer and employee. Since 2001 rates have varied and are summarised in table 2.

Due to significantly higher SSC rates and hence higher tax wedge in FB&H than RS, employees/employers could have a motive to register in RS rather than in FB&H. Furthermore, additional possible motive for SSC avoidance/evasion could be constant changes and legal amendments in SSC and personal income tax (PIT) laws which are creating a tax labyrinth for taxpayers. For example, legal changes in PIT laws in RS since 2010, included (yearly) changes in PIT rate(s), personal allowances (abolition and reintroduction of personal allowance) and other standard allowances (changes in the amount of allowance for supporting members of family) and other allowances (hot meal allowance, voluntary pension allowance, etc.). Why is this significant for SSC? Both SSC laws state that SSC are not paid on other payments and reimbursements from paid work which is also not subject to PIT payments.

Legal (tax) labyrinth also exists in the unclear system of penalties where each SSC law gives a broad span of penalties. On one side, both entity laws do not define penalties for underreporting which in turn stimulates envelope salaries or ‘grey pay’. On the other side, audit in FB&H and RS is done by tax administration. Theory and practice suggest that the most important part of combating avoidance/evasion is done through system of tax administration’s audit. For the case of B&H, one has to bear in mind an important fact: In the Yugoslav system of centralised payments where SSC and tax payments had priority over other payments in SDK, evasion was more difficult to occur. Hence, tax administration had little or no obligations to undertake comprehensive measures to tackle avoidance/evasion. However, in B&H with the new system of payments through commercial banks introduced in 2001 this system was decentralised with an option for (especially growing number of private companies) to open multiple bank accounts. So even if the worker was registered, companies could, due to a problem of growing illiquidity, easily evade paying SSC and/or create SSC arrears and/or simply not pay PIT and SSC. It took three years to establish a new system of payments of Single Registry of Legal Entities’ Transaction Accounts in CBB&H in order to get some sort of insight. However, first data regarding the amount of registered PIT/SSC arrears occurred in 2013/2014. This is primarily due to the fact that registration, control and payments of SSC in FB&H and RS were decentralised and divided between the Tax administration of each entity and Pension/health/Unemployment funds. In 2009, with the adoption of Law on tax administration in RS (together with the Rulebook on registration, control and payments of contributions to single registry, Official Gazette of RS, no. 110/09), all functions were transferred from Pension/health/Unemployment funds to a single tax administration’s registry. In FB&H the equivalent legislation relates to the Law on single system of registration, control and payments of contributions (Official Gazette of FB&H, no. 420/09, again with the equivalent Rulebook) with the implementation in the second half of 2011 (18 months implementation period). Again, central registry has been created in the tax administration of FB&H. This way SSC evasion could now be easily tracked/prevented since the system is unformed with PIT/CIT payments but with obvious significant arrears which were determined in 2013/2014.

Table 2

Changes in SSC legal provisions in RS and FB&H (2001-2013)

B&H	2001-2006	2007	2008	2009	2010	2011 (1st Feb. 2011 in RS)	2012	2013
RS	SSC total: 42%	SSC total: 42%	SSC total: 42%	SSC total: 30.6%	SSC total: 30.6%	SSC total: 33%	SSC total: 33%	SSC total: 33%
	Pension: 24%	Pension: 24%	Pension: 24%	Pension: 17%	Pension: 17%	Pension: 18%	Pension: 18%	Pension: 18.5%
	Health: 15%	Health: 15%	Health: 15%	Health: 11.5%	Health: 11.5%	Health: 12.5%	Health: 12.5%	Health: 12%
	Unemployment: 1%	Unemployment: 1%	Unemployment: 1%	Unemployment: 0.7%	Unemployment: 0.7%	Unemployment: 1%	Unemployment: 1%	Unemployment: 1%
	Child protection: 2%	Child protection: 2%	Child protection: 2%	Child protection: 1.4%	Child protection: 1.4%	Child protection: 1.5%	Child protection: 1.5%	Child protection: 1.5%
FB&H	SSC total: 43.5%; employee: 32%; employer: (11.5%)	SSC total: 43.5%; employee: 32%; employer: (11.5%)	SSC total: 43.5%; employee: 32%; employer: (11.5%)	SSC total: 41.5%; employee: 31%; employer: (10.5%)	SSC total: 41.5%; employee: 31%; employer: (10.5%)	SSC total: 41.5%; employee: 31%; employer: (10.5%)	SSC total: 41.5%; employee: 31%; employer: (10.5%)	SSC total: 41.5%; employee: 31%; employer: (10.5%)
	Pension: 17%; (7%)	Pension: 17%; (7%)	Pension: 17%; (7%)	Pension: 17%; (6%);	Pension: 17%; (6%);	Pension: 17%; (6%);	Pension: 17%; (6%);	Pension: 17%; (6%);
	Health: 13%; (4*%);	Health: 13%; (4*%);	Health: 13%; (4*%)	Health: 12.5%; (4*%);	Health: 12.5%; (4*%);	Health: 12.5%; (4*%);	Health: 12.5%; (4*%);	Health: 12.5%; (4*%);
	Unemployment: 2%; (0.5%);	Unemployment: 2%; (0.5%);	Unemployment: 2%; (0.5%)	Unemployment: 1.5%; (0.5%)	Unemployment: 1.5%; (0.5%)	Unemployment: 1.5%; (0.5%)	Unemployment: 1.5%; (0.5%)	Unemployment: 1.5%; (0.5%)

** In the period 1998-2001, health funds received 5% and unemployment fund 1% from employee.*

Source: Own interpretation based upon Arandarenko and Betcherman (2008:45); Tax administration of RS and FB&H – legal provisions.

Furthermore, complicated legal system regarding minimum wages is another obstacle for greater tax compliance. SSC system in RS, similar to cases in FB&H and other Western Balkan states has a peculiar mandatory minimum basis for SSC which can be higher than minimum wages. Sometimes they differ depending on sectors and branches where businesses are registered. Hence, they are sometimes regulated by branch Collective agreements which further complicate legal system. For example, FB&H defines minimum hourly wage explicitly whereas RS defines minimum monthly wage (again apart from textile industry). In RS in the period 2001-2006 minimum basis for SSC amounted to 50 per cent of average wage in the entire economy in the previous month. In FB&H in the same period and nowadays, a specific document regulated this area. It was regulated implicitly through General Collective Agreement which defined base as (minimum) hourly wage.

Another factor affecting SSC system in RS are fringe benefits, namely hot meal allowance which is paid monthly, annual holiday pay and travel expenses paid on a daily basis. In RS hot meal allowance was non-taxable, but with tax reforms since 2008 since the tax base changed from net to gross, it included hot meal allowance into taxable base. Hence, SSC are paid on such base. Still, annual holiday pay and travel allowance is non-taxable. In FB&H, since 2001, very little has changed in this area. In fact, monthly hot meal allowance is set to minimum of 20% of average wage, up to 2% of average wage per day worked and it can reach non-taxable maximum of 44% of average wage. However, again, this depends on sectors and branches. The initial document from which the information was taken was aimed at those employed in public sector, and not private sector. However, private sector applies such legal provisions. Annual holiday pay is non-taxable as well as travel expenses which are all regulated by specific documents (Arandarenko and Betcherman, 2008:48, Tax administration of RS and FB&H). Another important point that needs to be highlighted here is the fact that in both RS and FB&H there is no maximum cap for payments of SSC which is contrary to practice of EU countries. Since hot meal allowance amounts to almost a half of average net monthly wage in some industries in B&H (e.g. textile, manufacturing, retail), it further stimulates envelope salaries since the worker takes home higher wage than the reported wage. In addition, (under)reported net monthly wage in such industries is usually the minimum SSC base.

Both the Republic of Croatia and B&H base their SSC system on a Bismarckian type, where SSCs are closely linked with social benefits. However, B&H did not undertake comprehensive pension reform like Croatia. Croatian pension reform, according to Bejaković (2004:65) “the first reform of the pension system took place in 1998, when Parliament enacted the Law on Pension Insurance (OG 102/98). This reform is known as the “small pension reform” and this law aimed to reduce the annual pension deficit. The second pension reform, called “the great reform” was adopted in two acts: the Mandatory and Voluntary Pension Funds Act (OG 49/99) and Act on Pension Insurance Companies and Benefit Payment Based on Individual Fully-Funded Retirement Savings (OG 106/99). This reformed pension system has three pillars:

1) a mandatory pay-as-you-go public pension system;
2) a mandatory individual capitalised saving system;

3) a voluntary saving system based on capitalisation for those who want even more insurance, against the risks of old age, disability and death. The insurance operates according to the same principles as the second pillar with one exception – the insured person decided on the amount of the contribution s/he makes. In addition to private pension companies, these third pillar funds may be established by trade unions and employers".

Today in Croatia pension contribution rate is 20 percent. Some categories of insured persons (younger than 40, and those between age 40 and 50 who opted for the mixes system) the contribution rate for the first pillar is 15 percent of the gross wage, while 5 percent is diverted to the second pillar. Due to the effects of the global financial crisis since 2008, the budgetary policy of the Republic of Croatia has tried to eliminate negative pressures from the economy which are reflected in budget revenue and expenditure. In 2012, the Republic of Croatia amended the legal framework to ensure the implementation of reforms aimed primarily at creation of better entrepreneurial climate. Therefore, in 2012 there was a decrease in the compulsory health insurance contribution rate (from 15% to 13%), reduction in certain non-tax contributions and entrepreneurs were given the opportunity to lower their tax base for reinvested profit. In 2013, insufficient budget revenues caused the compulsory health insurance contribution rate to increase again to 15%. Several reforms and other activities were implemented in Croatia in order to strengthen the quality of public finance. Here the most prominent are changes in income taxation, value added tax and the contribution system. Moreover, significant measures were implemented to combat tax evasion such as improved collection of tax debts, separation of active and inactive taxpayers, the possibility of reprogramming and pre-bankruptcy settlement as well as outdated debt write-off and the prevention of salary payment with no contributions paid.

Table 3 shows the total revenue from social security contributions in the budget of the Republic of Croatia in the period 2003-2011.

TABLE 3

Share of SSC revenues to total revenues in period 2003-2011, in per cent

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011
Share of SSC revenues (%)	36.70	36.60	36.50	35.60	34.30	35.20	36.30	36.00	36.10

Source: Annual report of Ministry of Finance of the Republic of Croatia, 2003-2011., own calculation.

In addition to taxes, revenue from SSCs are the most significant category of the state budget revenue. During the period 2003-2011 their share in the total state budget revenue was largest in 2003 with 36.70% and lowest in 2007 with 34.30%.

As the social contributions revenue trends depend on the labour market trends, the year-on-year drop was the result of negative trends on the labour market (Annual report of Ministry of Finance, 2011:37). Due to reforms aimed at creating a better entrepreneurial climate, lower revenue from SSCs is expected pursuant to amendments to the Contributions Act decreasing the compulsory health insurance rate by two percentage points - from 15% to 13%. The amendment sought to ensure discharging taxes on gross costs of labour and create conditions for new investments and an increased competitiveness of the domestic economy in the Republic of Croatia. Amendments to the Contributions Act (OG 22/12), along with a reduction of the health insurance rate, brought into force the Regulation on the payment of contributions based on salary, salary income, or the monthly basis for the calculation of contributions based on labour relations. This Regulation prevents salary payment with no contributions paid while simultaneously contributing to strengthening fiscal discipline and improving collection of revenue from SSCs (Ministry of Finance of RC, 2012:29).

Kuliš (2001) and Madžarević-Šujster (1997) dealt with the issue of contribution rate movement and the determination of the base and contributors. Madžarević-Šujster (1997) explained that with regard to the form and scope of evasion of contribution payment in Croatia, people tend to present a lower tax base, pay salaries through student contracts or in cash thus enabling employers to evade payment of tax and surtax. Some additional problems today are an increased number of fixed-term and part-time workers and people working temporary, odd and seasonal jobs. This significantly reduces the base of pension insurance contributions because ever more workers do not have secure jobs. Such secure full-time jobs with a permanent contract and regular salary payments are the base for the calculation of contributions diverted to pensions.

After a series of implemented reforms and adopted legal forms, amendments to acts in Croatia are very frequent which enables employers to legally use the opportunity not to fully pay taxes and contributions. Gross wage/salary is the base for insurance and paying contributions for insured persons, i.e. employees, whereby it cannot be lower than the minimum wage determined in the Minimum Wage Act (OG 39/13) and the Minimum Wage Regulation (OG 156/12) and amounting to HRK 3,017.61 in the period from 1 January 2014 to 31 December 2014, while in 2009 from 1 January to 31 May it was HRK 2,727.00 and from 1 June to 31 December 2009 HRK 2,814.00. However, if the employee did not work the entire month (sick leave, unpaid leave, etc.), the employer is exempt from paying minimum wage, but in that case has to calculate contributions according to the lowest monthly base amounting to HRK 2,779.35. The Order on the base for calculating contributions for compulsory insurance for 2014 (OG 157/13) determines the highest monthly base at HRK 47,646.00 and the highest annual base at HRK 571,752.00. In order to prevent tax avoidance Tax Administration by its regulations determines the size of penalty regarding SSC. Therefore, the Social Security Contribution Act (OG 144/12) provides penalty provisions and fines for both employers and insured persons not paying contributions. For employers the fines range from HRK 5,000.00 to 100,000.00, and for insured persons they range from HRK 5,000.00 to 50,000.00.

In addition to these results of the reform, one of the more important steps is the provision of 1 January 2014 which refers to the report on paid salaries, second income, dividends and shares in profit as well as income from property rights, that is income serving as a base for tax and surtax calculations which must be made by the payer on behalf of the tax payer. All of these should be reported on a single form – unique form for tax, surtax and contributions – on the day that a certain income is paid, meaning the day that the income tax, surtax and contributions are calculated.

Following the reform Croatia has achieved a lot through a different system of pension contribution collection by the Tax Administration, prolonged accounting period for calculating pensions and the development of a funded pension insurance system (Bejaković, 2002:341).

3.3 COMPARATIVE ANALYSIS OF PENSION CONTRIBUTIONS AND SSC COMPLIANCE IN BOSNIA AND HERZEGOVINA AND CROATIA

As a result of everything previously said, B&H (FB&H and RS to lesser extent) has high labour tax burden where majority is taken by high SSC calculated using OECD methodology (Arandarenko and Betcherman, 2008:50; Kreso and Lazovic-Pita, 2011). This is especially a worrying fact bearing in mind high levels of unemployment, since high labour costs act as a disincentive for labour demand (Kovtun et al., 2014). In Croatia, Grdović-Gnip and Tomić (2010:133) examines that "Croatia belong to a group of countries with higher tax burden, higher employment protection legislation index and higher unemployment rate (lower employment rate)". So, both countries face similar problems. Furthermore, B&H has to follow the case of Croatia to some extent, but both countries, due to growing number of beneficiaries have to take steps for further SSC reforms in all areas – health, pension, social security funds. Aforementioned high tax wedge for those employed together with the fact that number of pensioners has reached the number of those employed is troublesome (table 4). Again, there are no indications regarding pension reform in B&H (three-pillars) which furthers SSC payments/benefits unsustainability.

TABLE 4

Pensioners/contributors ratio in B&H and Croatia

Year	FB&H	RS	Croatia
1988*	0.31		0.34
2002	0.73	0.78	0.77
2003	0.75	0.78	0.76
2004	0.77	0.80	0.76
2005	0.79	0.79	0.76
2006	0.81	0.80	0.75
2007	0.79	0.78	0.74
2008	0.80	0.81	0.74
2009	0.81	0.85	0.78
2010	0.84	0.93	0.84
2011	0.85	0.97	0.86

**Data for B&H and Croatia in 1988: Statistical Yearbook of Yugoslavia, 1989.*

Source: Pension and Disability Funds of RS and FB&H; RS Agency of Statistics, Institute for statistics of FB&H, Statistical Yearbook of the Republic of Croatia 2012, own calculation.

From table 4 we can see that pensioners/contributors ratio in B&H (FB&H and RS) has been increasing. Similar scenario happened in other transition countries. For example, in Slovenia, according to Stanovnik (2004:5) a rapid deterioration of the pensioners/contributors ratio in 1990 was 0.43 and in 1997 0.59. The consequences of this shows that flow of active population into the shadow economy occurred simultaneously with the early exit from the labour force, mostly through early retirement and disability pensioning. For the case of Croatia, the scenario is similar apart from years 2006-2008. This table also lead to the conclusion that the pensioners/contributions ratio remained stable in Croatia in the period 2002-2005, while it suffered a fall in 2005. Especially worrying fact is that this ratio in both countries peaked in 2011. In addition, there is obviously high correlation between SSC contributions and pension benefits in B&H and Croatia (table 5) which puts additional pressure regarding the necessity of serious reforms in this area as well as prevention of SSC evasion.

TABLE 5

Pearson's coefficient for pensions in B&H and Croatia

Pearson's coefficient 2005-2011	Old age pension payment	Disability pension payment	Family pension payment
RS	0.947*	0.939	0.953
FB&H	0.964	0.989	0.991
Croatia	0.884	0.972	0.912

**Correlation is significant at the 0.01 level (2-tailed).*

Source: Central bank of B&H (SSC contributions); RS Agency for statistics, annual report 2012, p. 142, FB&H Pension and Disability Insurance Fund, Statistical Yearbook of the Republic of Croatia 2012, own calculation.

This table 5 leads us to the conclusion that in the period 2005-2011 FB&H recorded the strongest Pearson's coefficient for pension in relation to old age pension payment. Similar scenario is in terms of disability pension payment and family pension payment. According to Mitchell (1997) the system is unfair if the system allows high privileged pensions with no contributions paid and if paying contributions is not a precondition for exercising pension rights. Therefore, to combat evasion of contributions it is extremely important to design appropriate measures to be implemented and ensure compliance.

Additionally, Fultz and Stanovnik (2004:12) indicate that there are five measures of SSC compliance: the covered wage bill; the effective contribution rate; the contribution gap; contribution debt (arrears); and/or the ratio of the covered wage bill to the actual wage bill. We will analyse the share of covered wage bill to GDP in FB&H and RS and Republic of Croatia using the same methodology (Stanovnik, 2004:5). The covered wage bill is the hypothetical amount of wages that would generate the current amount of SSC at SSC rates (Stanovnik, 2004:5). The measure usually exceeds 50 per cent of GDP in developed countries (Fultz and Stanovnik, 2004:12). According to Stanovnik (2004:5) "a low value of the covered wage bill does not necessarily mean that the actual wage bill of an economy is low. It can signify low compliance in the formal sector, as well as a large informal economy". Table 6 presents values of covered wage bill to GDP in FB&H and RS and for the Republic of Croatia.

TABLE 6

The covered wage bill in B&H and Croatia (as % of GDP)

	FB&H	RS
2003	32.4	29.3
2009	42.6	54.7
2010	43.3	58.5
	Croatia	
2002	40.8	
2003	32.2	
2012	33.4	

Source: Fultz and Stanovnik (2004:47, 97), Statistical yearbook of the Republic of Croatia 2013, Central bank of B&H, Federal statistical office, Statistical office of Republika Srpska, own calculations. Years chosen based upon legal changes in SSC in two analysed countries.

In case of FB&H and RS this ratio was 32.4 and 29.3 per cent of GDP respectively in 2003. However, in 2009 when SSC rates were lowered in both entities, the share peaked to 42.6 per cent in FB&H and 54.7 per cent in RS. Partial explanation could be found in the fact since SSC revenues are insufficient to cover all SSC benefits received, both SSC funds are directly supplemented though the entity's budget. With an indirect tax reform in 2006 in B&H, entities were entitled to significantly higher (absolute) amount of revenues which they then directed into SSC funds. In addition, due to high public spending in B&H especially on public administration on all government levels, entities were 'competing' in terms of higher salaries that were given out to public clerks, so a 'circle' was created in terms of revenues collected and then spent on public administration's wages and benefits.

For the case of Croatia, in 2002, Croatian share was overstated at 40.8 per cent (Bejaković, 2004:97). After the 2002 reform, SSC contributions in 2003 amounted to 20% including pension insurance and health insurance contributions as opposed to 2002 when the pension insurance contributions amounted to 10.75% and the health insurance contributions were at a 9% rate. The covered wage bill (as % of GDP) therefore decreased in 2003 by 8.6 percentage points, whereas in 2012 it increased to 33.4 per cent due to the decrease in contribution rate. Based on this table we can conclude that both B&H and Republic of Croatia have relatively high values of the covered wage bill as percentage of GDP.

4 SUGGESTIONS FOR SUCCESSFUL PREVENTION OF SSC AVOIDANCE/EVASION

Croatia and B&H suffer from a serious loss of budget revenues, as well as low efficiency of theirs tax system because of overall tax evasion and avoidance including SSC. For a more efficient taxation these countries need to fight against tax evasion and avoidance. Pension reforms undertaken by B&H and Croatia imposed upon the system of contribution collection is quite demanding bearing in mind aforementioned circumstances.

According to McGillivray (2001:14) in combating evasion social security schemes need:

1) the right to inspect employer records and unfettered access to ancillary information such as an employer's bank estimates, income tax returns etc., from which estimates of the number of employees and the wage bill can be made and compared with social security registrations and contributions paid. Confidentiality should not be invoked in order to conceal or abet evasion of social security contribution obligations;
2) the right to assess and collect contributions due and unpaid and assess enforceable penalties with social security debts having priority over other creditors, the possibility of attachment employers' assets, etc.

Armed with statutory authority social security organizations can take a number of steps to enforce compliance. These steps can be that social security organizations can streamline administrative procedures by simplifying contribution regulations and reporting and remitting procedures, they can strengthen enforcement through focused and timely inspections, they can initiate and enforce punitive but realistic administrative penalties for evasion, they can undertake public relations campaigns to encourage compliance, report regularly to workers on contributions paid by them and on their behalf so that workers can verify that their contributions have been properly remitted and recorded and etc. Bailey and Turner (2001:385) examines that contribution evasion can be reduced by changes in:
1) the incentives inherent in the design of social security systems;
2) employer, worker and governmental attitudes toward compliance;
3) administrative procedures that improve the efficiency of contribution collection by government or reduce the cost to workers and employers of compliance and
4) macroeconomic policies that maintain low inflation and provide for low unemployment with stable growth.

According to Madžarević-Šujster (2002:140) "the real cure for reducing tax evasion is to address the cause of grey economy rather than prevent its negative consequences." Similar to Baliey and Turner (2001), authors Kaufmann and Kaliberda (1996) also examined and agreed that the factors influencing the decision to enter the grey zone are the relationship between political repression and freedom, the legal system and the institutional law enforcement mechanism, the degree of administrative control, the official tax burden (taxes, double taxation, constant changes of the tax system) as well as macroeconomic instability and a disrupted payment system.

The reasons why contributions are not paid in the Republic of Croatia are incomplete laws and their frequent amendments. In B&H, lack of institutional framework together with legal possibilities to avoid/evade paying SSC and generally low tax/SSC morale are main reasons for SSC evasion. Bejaković (2002:338) for the case of Croatia, which can also be applied in B&H considers that measures needed for improvement are the following: review of legal provisions, systematic and decisive stop to the practice of allowing exceptions or exemptions from contribution payment, more modern and efficient collection of contributions and better record keeping for payment amounts and delays in payment as well as paid pensions, assessment of contribution burden and possible changes to the pension amount, improvement of the statistical supervision of the pension system, punitive measures discouraging non-payment and enacting penalties on contribution evaders. Although Croatia has done much to improve the system of social security contributions and pensions, better efficiency can be ensured only by fully implementing those measures.

5 CONCLUSION

Most economic literature generally defines problems related to tax avoidance and evasion but not social security contributions. Evasion of social security contributions is generally illegal in B&H and Croatia. Both analysed countries come from the same background, former Yugoslav social security contributions system. Concerning tax avoidance and evasion, Yugoslav SSC system was organised in such manner there were little or no motives to avoid/evade paying SSC. Paying SSC was employers' obligation and companies belonged to the government and later employees. After dissolution of Yugoslavia, this system was abandoned in every country and transferred to commercial banks. It opened a space for significant social security contribution evasion.

In theory it is known that SSC evasion occurs in two cases: when income is being underreported and when income is not registered, i.e. it has been earned in shadow economy. Since B&H's fiscal policy has gone through number of partial reforms in the past eighteen years, so did SSC system. However, SSC system did not go through systematic reform especially in terms of three-pillar pension contributions system – hence current Bismarckian type as SSC system of the Republic of Croatia. SSC together with all direct taxes is currently under entities supervision in B&H, while in Croatia SSC is under supervision of Tax Administration.

If we compare pensioners/contributors ratio in B&H and Croatia we can conclude that pensioners/contributors ratio has been increasing since 2002. In addition, there is also a high correlation between SSC and pensions in B&H and Croatia which puts another pressure regarding the necessity of serious reforms in this area, i.e. in Croatia ($r \geq 0,88$) and in B&H ($r \geq 0,95$). In this paper we also analyse the share of covered wage bill to GDP in FB&H and RS and Republic of Croatia using the same methodology as (Stanovnik, 2004). In case of FB&H and RS this ratio was 32.4 and 29.3 per cent of GDP in 2003 while in Croatia was 32.2.

Croatia and B&H suffer from a serious loss of budget revenues, as well as low efficiency of their tax system because of overall tax evasion and avoidance including SSC. To improve their efficiency both countries, especially social security funds can streamline administrative procedures by simplifying contribution regulations and reporting and remitting procedures for employer. Social security funds in both countries also need to strengthen enforcement through focused and timely inspections which must be fairer and transparent and take rigorous penalties for evasion for employer who does not paying SSC for his workers. Except that governments of both countries can undertake public relations campaigns to encourage compliance and make it more transparent to citizens. Governments of both countries need to improve legal regulations with certain stability regarding social security contributions, especially pension funds.

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Legislative proposal for controlled foreign companies regime in Poland from an international perspective

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Abstract

Tackling corporate profit shifting requires appropriate anti-avoidance measures. This article reviews one of these measures, namely controlled foreign companies (corporations) regime. It was implemented in many countries all over the world, and in some of these countries even as early as in the 1960-ties. The need of its introduction has also been expressed on many occasions *by Polish legislator. The article is composed of three sections. The first points out the reasons for implementation of the analyzed regime. The second describes the controlled foreign corporation legislation in the USA and selected European Union Member States. The last section is devoted to a bill on taxing controlled foreign companies in Poland.*

Keywords: controlled foreign company, tax avoidance, Poland

1 Introduction

Corporate income tax avoidance is a common phenomenon all over the word. It usually takes the form of profit shifting between companies operating in countries imposing relatively high corporate income tax rates and those located in tax havens and causes an immense loss of tax revenue. With the spread of multinational companies, counteracting this phenomenon is becoming a more and more burning issue for public administration of the former transition economies.

Among the anti-avoidance measures applied by different countries the controlled foreign company (corporation) legislation is considered to be one of the most popular and most effective. The CFC regulations empower a country to impose taxation on income derived by foreign entities controlled by resident taxpayers (usually corporations but in some countries also individuals). They are intended to counter tax avoidance by discouraging migration of the passive income to the non-resident companies. Adoption of such regulations was recommended by the OECD in its report "*Harmful Tax Competition: An Emerging Global Issue*" in 1998. They are also included in the draft of the *Directive on a Common Consolidated Corporate Tax Base* proposed by the European Commission.

Controlled foreign companies regime, first applied in the United States has been implemented in many OECD countries and such European Union Member States as, for example: France, Germany, Italy or United Kingdom. Since 1 January 2015 CFC rules are also going to be a part of the Polish tax legislation. According to the new regulations taxpayers are obliged to declare in their yearly tax returns the income of the foreign companies controlled by them which have their registered office or principal place of management in certain tax havens or other statutory defined territories. This income will be under certain conditions subject to personal income or corporate income taxation.

The basic aim of this article is to evaluate the legislative proposal for CFC regime in Poland. To achieve this objective the article overviews CFC regulations already in place in the USA and selected European Union Member States. Moreover, it addresses motives behind the proposal for the implementation of CFC rules in Poland and provides arguments both in favour and against their adoption.

2 RAISON D'ÊTRE OF CONTROLLED FOREIGN COMPANIES REGULATIONS

Preferential taxation offered by tax havens contributes to significant decrease in public revenue in countries imposing high effective income tax rates. This decrease of revenue is the result of tax avoidance schemes involving the shifting of profit between capital-related companies located in different tax jurisdictions. The shifting of profit is also accompanied by its retention in tax havens.

In spite of numerous attempts made to estimate the scale of this revenue loss, it is not precisely known. Many of these estimations concern tax avoidance strategies of American enterprises. One of the authors analysing the discussed issue is J. G. Gravelle. In his publication he gives an insight into the potential magnitude of the revenue loss due to profit shifting and points out for example that eliminating this phenomenon would make it possible to lower the maximum rate of the corporate income tax in the USA from 35% to 28% or would feed the American budget with an additional revenue of about 14 billion USD a year (2013, p. 17).

The review of publications devoted to the problem of profit shifting to tax havens is included in the 2013 study of the OECD (*Addressing Base Erosion,* p. 61-67). The study refers to analyses applying different methods and using different data sources in order to assess the scale of the phenomenon, including the analyses taking into account the differences in effective tax rates imposed on international enterprises in particular jurisdictions or statistical data coming from tax returns. For example, the research conducted by the *Citizens of Tax Justice* in cooperation from the *Institute on Taxation and Economic Policy* in the USA in 280 large American enterprises chosen from the *Fortune 500* list shows that the effective tax rate for these enterprises in 2008-2010 was only 18.5% (McIntyre et al, 2011:3).

More insight into the scale of this phenomenon may come also from the analysis of foreign direct investment in tax havens and foreign direct investment located by residents of tax havens. The aforementioned study of the OECD includes information that the share of foreign direct investment received by three jurisdictions regarded as tax havens – Barbados, Bermuda and the British Virgin Islands – in the total value of foreign direct investment in 2010 was higher than in the case of Germany or Japan. A similar situation was reported with respect to foreign direct investment coming from these jurisdictions. The British Virgin Islands were second in the ranking of the greatest investors in China, after Hong Kong and before the USA. Bermuda ranked third, as one of the largest investors in Chile, and Mauritius ranked first – as the leading investor in India (*Addressing Base Erosion,* p. 17). Hence, it appears interesting to ask if the phenomenon of profit shifting to tax havens concerns also Polish enterprises and if it does – to what extent?

The data published by the Ministry of the Economy of the Republic of Poland show that the most foreign direct investment come to Poland from the Member States of the European Union (*Bezpośrednie inwestycje zagraniczne w Polsce*, 2014:12). In 2007-2012 the most important investors in Poland were residents from Germany, France, Italy and Sweden. Polish foreign direct investment were also located mostly in other EU Member States (*Polskie inwestycje bezpośrednie za granicą* 2014:12). However, the geographic structure of the location of the Polish foreign direct investments is different. In 2012, Polish enterprises invested the most in the Netherlands, France and Cyprus (table 1). In 2007-2011, other popular investment locations for Polish enterprises were also Switzerland and Luxemburg. In 2012, however, much of the Polish capital was withdrawn from these two countries: 647.1 million euro and 715.7 million euro respectively.

TABLE 1

Polish foreign direct investment in selected countries in 2012

Country	Foreign direct investment (in millions of euro)
Netherlands	574.2
France	329.3
Cyprus	296.9
Germany	223.7
USA	221.7
Hungary	206.9
Norway	161.1
Russia	149.2
Austria	137.9
Belgium	123.8

Source: (Polskie inwestycje bezpośrednie za granicą, online).

A significant part of the Polish capital invested in Switzerland, Luxemburg and Cyprus were cash flows (*Projekt z dnia 30 kwietnia 2013 r.,* 2013:13). Some large Polish enterprises operate within holdings, whose companies are registered in these countries. According to the Polish National Bank (NBP), in 2011, passive income of enterprises from the investments in Luxemburg, Switzerland and Cyprus equaled 300.3 million euro, 116.8 million euro and 410.5 million euro respectively. In the case of Switzerland, Luxemburg, the Netherlands and Belgium, it is difficult to talk about Polish foreign investment in the traditional sense, i.e. involving, for example, takeovers of foreign enterprises or purchase of a significant number of shares.

Companies registered in these countries invest resources also in other jurisdictions, but statistics are limited to the record of the first transaction only, ignoring the issues of the target location of the investment. The high position of Cyprus in the ranking of countries most often chosen by Polish investors is due to good conditions for businesses which this country offers to foreign investors, mostly in the form of preferential tax conditions. Foreign entities investing in Cyprus often locate there only the registered offices of holding companies.

The scale of the phenomenon of shifting profit to tax havens and retaining it there depends to some extent on the tax residence law of a given country and the applied methods of avoiding double taxation of foreign income. In Poland, the Personal Income Tax Act and the Corporate Income Tax Act bring legal distinction between the unlimited and limited tax liability (*Ustawa z dnia 26 lipca 1991 r.; Ustawa z dnia 15 lutego 1992 r.*). Pursuant to Article 3 of the first of these acts, natural persons, if they are residents on the Polish territory, are subject to tax liability on the total of their income, regardless of the location of the source of this income. At the same time, a resident on the Polish territory is defined as a natural person (individual) meeting one of the following conditions:

– having the centre of his/her personal or economic interest (the centre of vital interests) on the territory of the Republic of Poland, or
– having been residing on the territory of the Republic of Poland for more than 183 days in a fiscal year.

At the same time, natural persons who are not domiciled in Poland, are subject to the tax liability only on income generated on the Polish territory.

Relevant regulations concerning legal persons are included in Article 3 of the Act on Corporate Income Tax, according to which taxpayers who have the registered office or the management board on the territory of Poland, are subject to tax liability on the total of their income, regardless where it comes from. At the same time, taxpayers who do not meet this condition are subject to tax liability only on income earned on the territory of Poland.

Most countries, including Poland, apply the territorial principle which is conducive to the phenomenon of retaining income in tax havens (*Evolution of Territorial,* online). The territorial principle means that a subsidiary located in a different country than its shareholder (whether a natural or a legal person) is treated as a non-resident in the country of location of this shareholder, the consequence of which is a deferral of the payment of tax on the profit earned by this subsidiary. The profit of the subsidiary is taxed in the country of tax residence of the shareholder only if it is paid in the form of a dividend or comes from the sale of the subsidiary's assets due to its liquidation.

The institution of controlled foreign company is a breach of this territorial principle. It makes it possible to tax income earned in tax havens, also when it is not distributed in the form of dividends. Therefore, the CFC is an important instrument to limit the scale of tax avoidance. The proposal to introduce the CFC in Poland is just one of many measures which over the last years have been taken by the Ministry of Finance in order to counteract the erosion of the tax base in income taxes. Other measures include inter alia: the modification of double taxation agreements (for example, the removal of the tax sparing clause in the agreements with Cyprus, Luxemburg, the Czech Republic, Malta, Singapore, Malaysia or the adjustment of agreements with Switzerland, Canada, and Austria to the current OECD standard). Moreover, the Ministry of Finance is considering the introduction of the General Anti-Abuse Rule (*GAAR*) (from 1 January 2015).

The implementation of the institution of controlled foreign company may contribute to increasing public revenue through limiting the scale of tax avoidance. However, it must be noted that anti-avoidance regulations are taken into account by investors when assessing the investment climate of a given country. This means that the implementation of the CFC may lower the relative attractiveness of Poland for foreign investors.

3 CONTROLLED FOREIGN COMPANY TAXATION: ANALYSIS OF LEGISLATION IN THE USA AND SELECTED EUROPEAN UNION MEMBER STATES

The institution of controlled foreign company is very common. So far, it has not been introduced only by such countries as: Belgium, Bulgaria, Chile, Colombia, Croatia, Cyprus, Czech Republic, Ecuador, Gibraltar, Hong Kong, India, Ireland, Luxembourg, Malaysia, Mauritius, Philippines, Poland, Romania, Russia, Saudi Arabia, Singapore, Slovakia, Switzerland, Taiwan, Thailand, Ukraine, Vietnam (*Guide to Controlled Foreign Company*, 2014:71). Some countries use instruments to counteract tax avoidance other than the CFC, which – however – also make it possible to impose taxes on some categories of income earned by companies related to domestic entities but located in tax havens. Among these countries there are: Austria, Latvia, Malta, the Netherlands and Slovenia.

In the countries which implemented the discussed institution there are significant differences with respect to basic elements of its construction, including: the definition of control, the category of the income subject to taxation or tax exemptions. In most countries, the income of a controlled foreign company is added only to the income of legal persons. In some, however, for example in Germany, Sweden or the USA, the income of CFCs is ascribed also to appropriate individuals and is taxed in their countries of residence.

In the relevant literature, there are two CFC concepts – the one which takes into account the category of income of the company and the one which takes into account the scope of its activity (Lang et al, 2004, p. 137). In the case of the first one, called the transactional approach, only passive sources of income are subject to taxation, the list of which includes for example: dividends, interests on loans or license fees. In the case of the other – the entity approach – the institution of the CFC refers to specific entities, usually running economic activities in the scope defined by the tax law.

In most countries, the institution of controlled foreign company refers to all entities and tax is imposed on income regardless of its source. The exceptions include: Hungary, Spain, Germany and the USA. In these countries, tax is imposed on specified categories of a CFC's income.

TABLE 2

The dates of the introduction of CFC regulations in selected countries

Country	**Date of entry**
United States	1962
Canada, Germany	1972
Japan	1978
France	1980
United Kingdom	1984
New Zealand	1988
Australia, Norway, Sweden	1990
Denmark, Finland, Indonesia, Portugal, Spain	1995
Hungary, Mexico, South Africa, South Korea	1997
Argentina	1999
Estonia, Italy, Israel, Lithuania	2000

Source: (Arnold, McIntyre, 2002:89).

A number of countries have developed lists of tax havens or countries using harmful tax competition and taxed the income of controlled foreign companies if they are located in the listed jurisdictions – this approach is called locational approach (Miller and Oats, 2009:277). As part of this concept, in some countries the institution of controlled foreign company refers only to the shareholders of companies located in jurisdictions offering preferential tax conditions, which is called the designated-jurisdiction approach (Russo, 2007:213). In other countries, the CFC rules are applied only if the effective tax rate in a company's country of residence, imposed on the income of this company, is lower than the effective tax rate of an analogous company in the country of residence of the company's shareholder – which is called the effective-tax-rate approach. Most of the countries which implemented the institution of controlled foreign company introduced the first of these solutions. The regulations existing in these countries usually specify what provisions of the tax law are regarded as preferential. Among the exceptions are Denmark, France, Spain, Germany and the USA, where the institution of CFC is applied regardless of the country of location of controlled foreign company.

The institution of controlled foreign corporation was first introduced by the United States of America (table 2). The relevant regulations are included in Subpart F (sections 951–965) of the *Internal Revenue Code* (online). A foreign company is regarded as controlled by American shareholders if the sum of their direct or indirect shares in the company's capital or voting rights, on any day of a fiscal year, exceeds 50%. When the sum of these shares is calculated, only these US shareholders are taken into account whose direct or indirect share in the voting rights of the corporation is not less than 10%. At the same time, the share must exceed quoted thresholds for the period of minimum 30 days in a fiscal year. Statutory specified categories of a CFC's income are added to the domestic income of the taxpayer and then taxed. These categories include:

- statutory defined insurance income,
- foreign base company income, which covers: foreign personal holding company income (inter alia: interests, dividends, rents, royalties, gains and notional principal contract income); foreign base company sales income; foreign base company services income; foreign base company oil related income,
- income from countries subject to international boycotts,
- illegal bribes, kickbacks, or other payments unlawful under the *Foreign Corrupt Practices Act* (online),
- income from countries where the U.S. has severed diplomatic relations.

The law envisages a number of exemptions from taxation. These concern, for example, foreign base company income or insurance income, if its amount is lower than 5% of the total income or than 1 million USD (*de minimis* rule). At the same time, if this sum constitutes more than 70% of a CFC's income, the part of the total income of the corporation attributable to the shareholder must be declared and taxed in the USA (full-inclusion rule). Another example of the income exempt from taxation is the one in the case of which the effective tax rate imposed in the country of residence of the CFC equals over 90% of the maximum corporate income tax rate in USA. Also, some categories of income of a foreign personal holding company are exempt from taxation.

The German CFC rules follow closely the US regulations (Peters, 2012: 6). In Germany, the provisions concerning controlled foreign companies are included in Articles 7−14 of the *Foreign Tax Act (Außensteuergesetz,* online*)*. Pursuant to the content of this Act, the discussed institution is applicable in the following cases:

- taxpayers (natural and legal persons) subject to unlimited tax liability, having at least 50% of direct or indirect shares in the capital or voting rights of a foreign company, or
- taxpayers (natural or legal persons) subject to unlimited tax liability, having direct or indirect shares in the capital or voting rights of a foreign company in the amount of at least 1%, if the company runs a statutory specified financial activity, including management of some assets.

The conditions are considered met also if the taxpayer is a partner in a partnership which is a partner in another partnership, if the latter owns shares in the capital or voting rights of a foreign company in the aforementioned amounts. Taxpayers owning shares in a controlled foreign corporation are obliged to pay tax on the passive income of the company, if in the company's country of residence this income is taxed by an effective tax rate lower than 25%. The *Foreign Tax Act* mentions ten categories of income which are regarded as active and these are not added to the income of a taxpayer. Among them are: income derived from agriculture and forestry, exploitation of natural resources, energy generation, manufacturing of goods, trading and services, banking, insurance, leasing of certain movable and immovable assets and licensing.

In France, the institution of CFC is defined in Article 209 B of the *General Tax Code (Code général des impôts,* online). An enterprise is regarded as a CFC if an entity subject to corporate income tax owns directly or indirectly more than 50% shares in the capital or voting rights of this enterprise. An anti-abuse provision reduces this threshold to 5% for each direct or indirect French shareholder when more than 50% of the shares in the foreign entity are owned by other French entities or entities that are considered nominees of the French shareholder (*Guide to Controlled Foreign Company*, 2014:20). The income of a CFC is added to other income of this entity, if the effective income tax rate in the CFC's country of residence is at least 50% lower than the effective income tax rate in France. Moreover, these regulations are only applied, if the income of a foreign company is not earned from industrial or commercial activity run in the jurisdiction where it is located. There are, however, exceptions to this rule. This exemption does not apply to companies which run an industrial or commercial activity in the jurisdiction where they are located, but – at the same time – earn more than 20% of their income from financial activity or from the trading of intangible assets. If a company presents the tax authorities with the evidence that it is not located on a foreign territory only for tax reasons, its income may be exempt from tax in France.

In the United Kingdom, the CFC institution is applied when enterprises having registered offices in this country control a foreign company, i.e. own direct or indirect shares in its capital or voting rights in the amount sufficient to manage the company's issues. The definition of control also includes 40% ownership if no other non-UK resident has a 55% interest in the corporation (Harris, 2013:119). Since 1 January 2013 the country has had new rules for the taxation of controlled foreign company. The current regulations for CFCs are contained in Part 9A, *Taxation (International and Other Provisions) Act* 2010 (*Controlled Foreign Companies,* online). The changes concern especially the scope of taxable income of a CFC; it is specified with the use of the so-called "gateway test", which enables to determine if and in relation to which income of a given CFC the profit shifting to another country for tax reasons has taken place. The gateway test consists of two elements: "pre-gateway test" and "main gateway test". The first test enables companies to answer the question whether or not the specific parts of main gateway test require consideration. The second consists of five parts related to the following profit categories:

- profits attributable to UK significant people functions,
- non trading finance profits,
- trading finance profits,
- profit from captive insurance business,
- profit that is within the scope of the CFC charge because the CFC is the subject of a solo consolidation waiver, or because there are arrangements that have broadly equivalent regulatory effect.

Taxation is imposed only on profits falling into one of these categories.

The legislator allowed for numerous exemptions. They apply mostly to controlled foreign companies located in some tax jurisdictions, if the profits of these CFCs do not exceed the amount of 500 000 GBP and the income from the activity other than commercial does not exceed the amount of 50 000 GBP, to CFCs meeting certain requirements and providing financial services within capital groups or to newly founded CFCs in the period of 12 months from the date of their classification as CFCs. Moreover, the income of a CFC is exempt from tax provided that the tax it pays in its country of residence equals at least 75% of the tax which it would have to pay, if it was a resident of the United Kingdom.

4 TAXATION OF CONTROLLED FOREIGN COMPANIES IN POLAND: OVERVIEW OF THE BILL PROVISIONS

Pursuant to the provisions of the bill sent to the lower chamber of the Polish Parliament (*Sejm*) on April 14, 2014, controlled foreign company is defined as a company with the registered office or the management board on a territory or in a country using harmful tax competition or on the territory of any foreign country, if Poland (or the European Union) has no international agreement with it (in particular, a double taxation agreement) on the basis of which it is possible to obtain tax information from this country (*Projekt ustawy o zmianie ustawy,* 2014). A CFC is also any foreign company in the case of which the following conditions are jointly met:

- for the period of minimum 30 days incessantly, the taxpayer owns, directly or indirectly, at least 25% of shares in the capital or 25% of the voting rights in the control or decision-making organs, or 25% of the shares involving the right to participate in profits,
- at least 50% of the company's revenues earned in a fiscal year comes from passive sources of revenue, i.e. dividends and other income from shares in profits, from the sale of shares (stock), debts, interests and proceeds from loans, deposits and guarantees, as well as from copyrights, industrial property rights, including the sale of these rights and the execution of rights from financial instruments,
- at least one type of the company's passive income is subject to taxation in the country where the company has its registered office or management board with the income tax rate lower than minimum 25% of the rate existing in Poland, or if the company is exempt or excluded from income tax in this country, unless the company's income is subject to exemption from tax in the country where the company has its registered office or management board under the provisions of the *Directive on the Common Taxation System Applicable to Parent Companies and Subsidiaries of Different Member States*.

The legislator assumed that the taxable income is the income earned by a company proportionally attributable to the period in which the company has had the CFC status, in such share which corresponds with the shares owned by its Polish shareholder (the taxpayer) and involving the right to participate in profits, after deducting the dividend obtained by the taxpayer and the amounts earned from the sale of shares in the CFC. If the obtained dividends or the amounts earned from the sale of the shares are not deducted in the fiscal year in which they are obtained, they should be deducted from the taxpayer's income in consecutive five fiscal years. If it is impossible to determine the share of the taxpayer in the profits of a CFC, in order to add the appropriate part of the company's income to the income of the taxpayer, the share in the capital or the voting rights should be taken into account.

The income of a CFC is defined as the surplus of the sum of revenues over the costs of obtaining them (business expenses). Most of this income is determined as of the date being the last day of the CFC's fiscal year. If the CFC has no specified fiscal year or the year exceeds the period of consecutive 12 months, it is assumed that the fiscal year of the CFC is the same as the fiscal year of the taxpayer. Other than in the case of domestic entities, a CFC may not deduct from its income losses incurred in previous years.

Special regulations are envisaged for the situation when the share of the taxpayer in the controlled foreign company is indirect. In that case, the share of the taxpayer in the CFC is reduced by the share owned in this CFC by a subsidiary, if the subsidiary added to the tax basis the income of this CFC basing on the regulations on the CFC existing in the country in which the subsidiary is subject to taxation.

The bill includes also exemptions from the taxation of CFCs if the following conditions are met:

- the CFC runs a real business activity on the territory of a country which is not an EU Member or does not belong to the European Economic Area, in which it is subject to taxation on the entirety of its income and the income does not exceed 10% of the revenues earned from the real business activity. This exemption is to be applied only if there is a legal basis for obtaining tax information from the tax authorities of the country in which the foreign controlled company is subject to taxation on the entirety of its income, or
- the CFC subject to taxation on the entirety of its income in an EU Member State or a country belonging to the European Economic Area runs in this country a real business activity, or
- in a fiscal year, the revenues of the CFC do not exceed the amount equalling 250 000 euro, converted into the Polish currency at the average exchange rate published by the National Bank of Poland (NBP), valid on the last day of the fiscal year preceding a given fiscal year.

The Legislator proposed conditions the meeting of which may be sufficient evidence that a company conducts a real business activity and should be entitled to the aforementioned exemption. The conditions include in particular:

- the performing by the company in the jurisdiction in which it is registered actual activities related to the conducted business activity and the fact that the company has at its disposal equipped premises and qualified personnel,
- the company does not create structures which are not justified from the business perspective,
- the proportionality between the scope of the company's activity and the premises, the premises' and the personnel,
- the concluding of agreements which correspond to the economic reality, are economically justified and not obviously in contrast with the general business interests of the company,

– the independent performance by the company of basic business functions, using its own resources, including resident managers.

The income of a CFC is added to the income of the taxpayer and is taxed with an appropriate corporate or personal income tax rate. In the case of the first of these, the appropriate rate is 19%. In the case of the personal income tax, the existing tax rates are presented in table 3.

TABLE 3

The personal income tax rates in Poland in 2014

Taxable income		Tax rate
Over	**Up to**	
–	85,528 PLN (20,417.28 EUR)	18% minus personal allowance 556.02 PLN (132.73 EUR)
85,528 PLN (20,417.28 EUR)	–	14,839.02 PLN (3,542.38 EUR) + 32% if the surplus over 85.528 PLN (20,417.28 EUR)

Average euro exchange rate as of 22.04.2014 published by NBP (1 EUR = 4.189 PLN).

Source: (Ustawa z dnia 26 lipca 1991 r., art. 27).

In the light of the scheduled legal changes, earning income from shares in controlled foreign companies will involve a number of record keeping requirements. Taxpayers are obliged to keep a register of companies in which they own shares. The register is to include information enabling to determine the income of a given company. On request of the tax authorities the taxpayer must provide them with insight into the register, within 7 days from the date of receipt of the request. Should the taxpayer fail to make the register available to the tax authorities, the authorities will independently estimate the amount of the company's income. By the end of the ninth month of the year falling after the CFC's fiscal year, the taxpayers owning shares in the company are required to submit evidence of the amount of the company's income. By this time, they should also pay the amount of the tax due.

5 CONCLUSION

The implementation of the CFC regime requires precise determination of the circumstances in which it is applied. As it is used in many countries, the Polish legislator does not have to design national legislation following only the American example. Although, it must be emphasized that it is the American institution of controlled foreign corporation which has the longest history and was the prototype on which other countries which implemented the CFC modelled their regulations, including many countries of the European Union. The Polish legislator suggested the combination of two existing approaches. The CFC regulations are to apply not only to shareholders of companies located in countries which use harmful tax competition, the list of which will be attached to the proposed act, but also to shareholders of companies which have their registered offices or management boards in the country in which at least one of the company's passive income is taxed with the income tax rate significantly lower than in the residence country of the shareholder.

The institution of controlled foreign companies proposed by the Polish legislator is with many respects different from the regulations existing in such countries as the USA, Germany, France or Great Britain. The legislator envisaged a lower threshold for the level of control of the company by a Polish shareholder than it is the case in the aforementioned countries. Moreover, other than, for example, in the USA or Germany, all the income of the corporation is to be taxed – not only the passive one. Also, the scope of exemptions from tax for controlled foreign companies is clearly more limited than in the case of the USA and Great Britain.

The draft of the Polish bill has been subject to public consultation, which exposed some of its weaknesses. One of them is shifting onto the taxpayer the burden of proof with respect to the circumstances entitling to exemption from tax. Moreover, it has been emphasized that the act may significantly limit the freedom of running a business activity on an international scale. The provisions obliging the taxpayer to verify the share of passive income in the total income of a CFC and analyse the level of the tax rate imposed on each category of passive income earned by a CFC is regarded as too complicated a solution, which will result in imposing on taxpayers excessive compliance burden.

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CAN THE EFFICIENCY OF THE CROATIAN TAX AUTHORITIES BE IMPROVED?

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JEL CLASSIFICATION: H11, H83

ABSTRACT

The goals of this article were to determine whether the efficiency of tax authorities in Croatia improved in the period 1997-2012 and to identify how the efficiency can be improved in the future. We argue that the administrative costs of taxation in Croatia, as a percentage of GDP, decreased slightly during the past fifteen years, but the costs in Croatia remain above average for EU countries. Since in the analysed period expenses for telephone, mail and transportation services were high in absolute terms, and the steepest growth has been in IT expenses, leases and rentals and intellectual and personal services, special attention should be given to analysing and reducing these costs. The main problem related to the research of administrative costs in the longer period in Croatia is lack of relevant data, so Croatian tax authorities should collect more data and release it to the public.

Key words: administrative costs, taxation, Croatia

1 INTRODUCTION AND LITERATURE REVIEW

The process of collecting taxes is far from cost-free. Indeed, the process involves certain costs that the literature typically divides into administrative costs (ACs) and compliance costs (CCs) (see, for example, Sandford, Godwin and Hardwick, 1989). This paper focuses on ACs, which include public-sector costs related to the enforcement (administration) of existing tax legislation, including proposals for changes to that legislation that are proposed by the relevant public revenue collection authorities (for more information, see Sanford, 1995 and 1995a; and Sandford, Godwin and Hardwick, 1989:3). A practical definition of ACs is also provided in Allers (1994:33), which describes ACs as public-sector costs that either would not exist in the absence of a tax or would disappear if a particular tax were abolished.

There has been widespread research into this topic worldwide.[1] Based on an analysis of 60 studies on ACs and CCs since 1980, Evans (2003) concludes that in countries where ACs have been explored, the costs rarely exceed 1% of the tax revenues that are collected by the administration; ACs impose a smaller burden (in both absolute and relative terms) on the public sector than do CCs (for more details, see Evans, 2003:72). The most prominent organisation that explores ACs is the Organisation for Economic Co-operation and

[1] For example, see Sandford, Godwin and Hardwick (1989); Sandford (1995); Evans, Pope and Hasseldine (2001); Lignier and Evans (2012); and OECD (2004, 2006, 2009, 2011 and 2013).

Development (OECD), which has released five publications with internationally comparable data on the tax systems and tax administrations of 52 countries (i.e., all of the OECD, EU and G20 countries) (OECD, 2004, 2006, 2009, 2011 and 2013). According to the most recent OECD publication (2013), there are stark differences in AC-to-GDP ratios among the observed countries during the period 2004-2011; but still in one-third of those countries, the ratio ranged between 0.15% and 0.25%. A relatively low share of ACs in the GDP (below 0.12%) is primarily observed in countries with low tax burdens and in countries where major taxes are not always administered by the national government (e.g., Chile, Estonia, Mexico and the USA). A continuous downward trend in this ratio is observed in a small number of countries, including Australia, Denmark, France, Lithuania, Malaysia, Mexico, the Netherlands, Norway, Russia and the UK, but no explanation is offered as to the cause of this phenomenon.

In Croatia, the issue of ACs was first explored by Ott and Bajo (2000), who found that in the five-year period between 1995 and 1999, ACs accounted for approximately 0.55% of GDP; given their size, these costs left substantial room for savings. The authors emphasised the importance of determining the ACs for each type of tax; however, they argued that this determination was impossible because there was no record of ACs by type of tax, and the allocation of overheads (general costs) to individual tax types posed a special problem. Bratić and Pitarević (2004) found that ACs continued to account for an average of 0.55% of GDP during the period 1997-2001, but the accuracy and relevance of the data (which were difficult to access) poses a serious challenge for research.[2] Blažić (2004) showed that the total taxation costs in Croatia accounted for 3.13% of GDP from June 2001 to June 2002, of which ACs and CCs accounted for 0.47% and 2.66% of GDP, respectively. More recently, Bratić and Šimović (2010) analyse the cost effectiveness of tax administration in Croatia during the period 2000-2007 in comparison with OECD member countries, concluding that Croatia's Tax Administration (TA) belongs to the group of average-efficient tax administrations, but that overall, Croatia's total tax authorities, including the TA, Customs Administration (CA) and Financial Police (FP), represent the worst performance.

The goals of this article were to determine whether the efficiency of tax authorities in Croatia improved in the period 1997-2012 and to identify how the efficiency can be improved in the future. We argue that the primary problem is a lack of relevant information for examining ACs in Croatia over a longer period of time. As a percentage of GDP, the total ACs of taxation in Croatia has fallen slightly over the past fifteen years but remains above the average for EU member states. The OECD (2013:178) indicates that the efficiency/effectiveness of tax authorities is usually assessed as the 'cost-to-collection' ratio (calculated as the percentage share of ACs in the revenues that are collected by a country's tax administration). Assuming other variables remain constant, a decline in this indicator over time suggests a fall in relative costs (i.e., an efficiency improvement) and/or a rise in collected tax revenues (i.e., an effectiveness improvement). However, according to the OECD (2013), this indicator should be

[2] Researchers in other transitional countries have been faced with both the unavailability and poor quality of data for analysis. For example, for exploring ACs in the Czech Republic, Vitek and Pubal (2002) argue that data are only available at the aggregate level, which is often inadequate for calculating ACs and CCs for particular types of taxes.

interpreted with caution, as several factors that are unconnected with tax authorities' efficiency/effectiveness can have an influence. Other authors also emphasise the need for caution in cross-country comparisons of ACs using the 'cost-to-collection' ratio (see Sandford, 1995:405; Sandford, 2000; Evans, 2006; and OECD, 2013). For example, Sandford (2000:119-123) notes that cross-country comparisons based on the 'cost-to-collection' ratio are difficult for the following reasons:

- Data collection from different countries does not typically use a standardised methodology, as there are differences in how ACs are defined and in the types of revenues that are collected by tax authorities; for example, some tax authorities collect social contributions and customs duties, whereas others do not.
- A country's demographic, political, social, economic and legal circumstances can have a strong influence on the cost-to-collection ratio because of:
  - differences in tax structure (e.g., the value added tax (VAT) registration threshold is low in some countries but high in others, and collecting taxes from a large number of small taxpayers results in high ACs);
  - differences in taxpayer structure (e.g., the larger the number of self-employed taxpayers, the higher the ACs);
  - differences in tax rates (e.g., countries with large total tax revenues as a percentage of GDP have heavy tax burdens and are associated with lower 'cost-to-collection' ratios than countries with similar taxes but lower tax burdens);
  - changes in revenues that are not associated with changes in tax rates (e.g., unusual economic growth rates or inflation); and
  - several other factors that can influence the ratio, such as the introduction of new taxes.

Both Sandford (2000:123) and the OECD (2013) emphasise the potential maximum tax revenues that can be collected by tax authorities as an extremely important factor, especially in international comparisons. Thus, countries with similar cost-to-collection ratios can be completely different in terms of efficiency, which is measured as the ratio between collected and potential maximum tax revenues. Therefore, the OECD (2013:179-182) notes that the ratio between costs and GDP (calculated as the percentage share of ACs in GDP) is more appropriate for international comparisons of tax authorities' efficiency. However, this indicator should also be used with caution, as several factors that are unrelated to tax authorities' efficiency can influence the ratio between costs and GDP (e.g., large investments in new technologies, costs arising from a new tax or frequent GDP revisions).

Despite all of these deficiencies, ACs are calculated and compared to establish differences among countries. These differences, to the extent that they can be associated with the efficiency of tax administrations, are then analysed and explored for each individual country (Sandford, 2000:137). Therefore, we explain the research methodology for ACs in Croatia, and then we compare ACs between Croatia and the EU. Finally, we present conclusions about how to improve the efficiency of the Croatian tax authorities.

2 METHODOLOGY AND DATA

As noted above, ACs in Croatia include the costs of three institutions that are responsible for collecting taxes and customs duties: the TA, CA and FP.[3] ACs are primarily financed from the state budget and, to a lesser extent, from these three institutions' own revenues. Ott and Bajo (2000) note that for a more complete analysis of Croatia's ACs, the total ACs should also include the costs of the institution that actually collects and maintains records of tax and customs duties; before 2001, this institution was the Payment Operations Institute, and since 2002, the institution has been the Financial Agency (FINA). Ott and Bajo (2000) also suggest including in the analysis the costs of the courts that decide tax and customs cases.[4]

Regrettably, data on the costs of FINA and the courts could not be obtained, as these data are not publicly available. A right of access to the information was unsuccessful with the Ministry of Justice and FINA because 1) they responded that they were not in possession of the requested data; and 2) they promised to submit the data at a later date (but never did). According to FINA reports, the Treasury System Support Centre performs certain activities on behalf of the TA on a contract basis, but the centre invoices the Ministry of Finance (MF) instead of the TA[5] for those services. Therefore, the services that FINA provides on behalf of the TA and the costs of these services should be further investigated, as they are not produced by the TA but should be included in the ACs. However, these costs are currently reported within the MF's budget and are not clearly separated from other costs.

Sandford (2000:117) and Evans (2006:2-3) indicate additional costs that should be included in the ACs, such as parliamentary costs related to the enactment of tax legislation and the costs of interest-free loans in the private sector when there is no obligation for a taxpayer to pay tax to the government at the time when a taxable business transaction occurs (e.g., the VAT is payable only at the end of an accounting period). Although the costs mentioned by Sandford and Evans are not addressed in this research, future explorations of these costs in the Croatian context would be useful.

[3] The FP existed from 28 December 1992 to 31 December 2001 before being abolished. The FP did not operate from 1 January 2002 to 31 December 2005, and the agency was reinstituted from 1 January 2006 to 6 March 2012 before being abolished again.

[4] The costs of courts imply the costs of administrative courts that are the first to adjudicate individual tax and customs disputes (in Zagreb, Split, Rijeka and Osijek) and the costs of the High Administrative Court in Zagreb, which is the second to adjudicate these disputes (on appeals against first-instance decisions). The General Tax Act prescribes legal remedies in tax proceedings (Articles 159 through 171 of the General Tax Act, Croatian version, NN 147/08, 18/11, 78/12, 136/12 and 73/13).

[5] FINA performs the following revenue-related activities, the analytical records of which are maintained by the TA: 1) supporting the system of recording and allowing public revenues, and 2) conducting other activities on behalf of the TA, such as assessment activities, recording, supervision, collection and enforcement of certain local revenues on behalf of the local government units (for more information, see FINA, 2012).

This article uses reports from the MF, TA and CA.[6] According to the economic classification that is used in Croatia's state budget, ACs include operational costs/expenses (for employees, spent materials and IT services), costs/expenses for the procurement of capital assets (e.g., buildings and office equipment) and expenses for financial assets and loan repayments (usually, the repayment of the principal of received loans). However, these reports are often inadequate to make the necessary analyses. Thus, determining the ACs for each tax is impossible because the costs are not monitored according to type of tax. Additionally, because the TA collects taxes on behalf of some local government units charging a fee in the amount of 5% of collected revenues for, we wish to know the number of local government units for which the TA collects taxes. However, the TA has not responded to our inquiry.

Nonetheless, this is the first research for Croatia in which the collection costs of social contributions are included in the ACs for 2001 and 2002. Until 2001, social contributions were collected by separate institutions (i.e., the Croatian Pension Insurance Agency), the Croatian Health Insurance Institute and the Croatian Employment Service, which had the status of extra-budgetary funds. The costs of these institutions (along with revenues from social contributions) were not reported in the state budget. Researchers have not been able to include the costs that are generated by these institutions in ACs, as the available data do not clearly indicate how much of these costs are related to the collection of social contributions versus the payment of various benefits (e.g., pensions, sickness benefits and health protection). Thus, previous studies do not include the costs of these institutions in the total ACs, and for the same reason, the revenues from collected social contributions are not included in the total revenues that are collected by tax authorities.[7]

Although the TA performed some activities related to social contributions[8] even before 2001, in July 2001, TA took over all of Croatia's operations related to social contributions, including assessment, record-keeping, collection, supervision and enforcement of contributions, as well as the management of misdemeanour proceedings (Tax Administration Act, NN 67/01). Consequently, the TA budget (and thus the ACs) has included costs from pension-insurance contributions since 1 July 2001 and unemployment and health-insurance contributions since 1 January 2002. At the same time, revenues from social contributions are included in the total revenues that are collected by tax authorities.

[6] This article uses Annual reports on the execution of the state budget of the Republic of Croatia for the period 2000-2012 (Ministry of Finance, 2000-2012); information on TA expenditures in relation to the budget financial plan for the period 1995-2006 (Tax Administration, 1995-2006); Revenue and expenditure statements, receipts and outlays of the TA for the period 2002-2012 (Tax Administration, 2002-2012); Reports on the number of employees, total annual revenues and total annual costs of the CA for the period 1997-2012 (Customs Administration, 1997-2012); and Revenue and expenditure statements, receipts and outlays of the CA for the period 2005-2012 (Customs Administration, 2005-2012).

[7] However, because of the inclusion of costs related to social contributions in our study, the total ACs during the periods before and after 2001/2002 are not fully comparable.

[8] One example is the supervision of the correctness and timeliness of the calculation and payment of contributions (see the Tax Administration Act, NN 71/99).

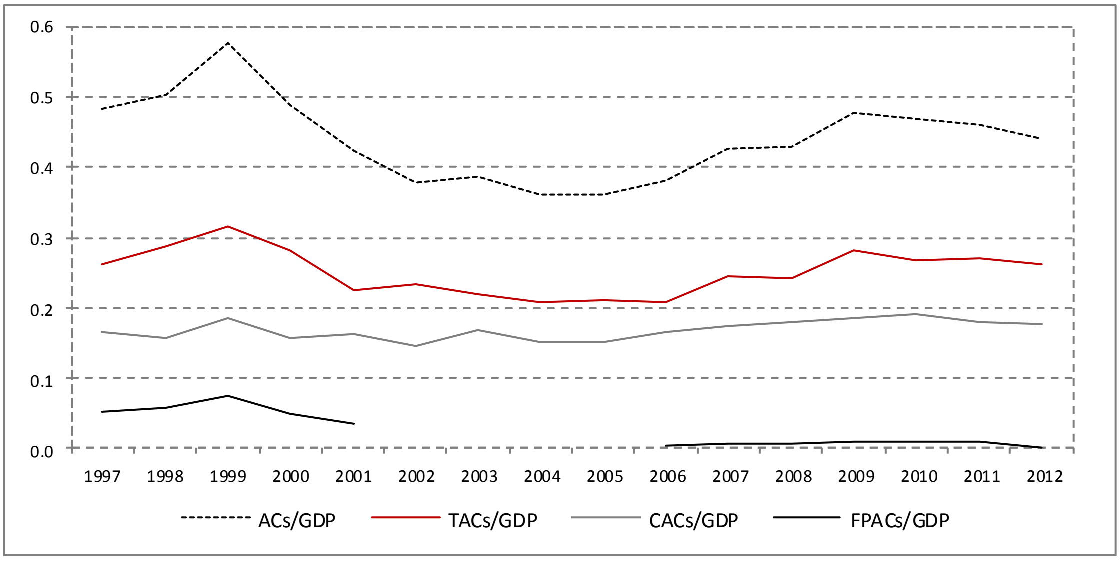
Below, we analyse key indicators of the Croatian tax authorities' (in)efficiency compared to the average indicators for EU member states. Then, we suggest what costs should be reduced by the Croatian tax authorities.

3 ANALYSIS OF ACS IN CROATIA IN THE PERIOD 1997-2012

As shown in Figure 1, the total ACs in Croatia dropped by approximately 10% in the period 1997-2012 (from 0.48% to 0.44% of GDP). The largest AC-to-GDP ratio was recorded in 1999 (0.58%).

FIGURE 1

ACs in Croatia, percentage of GDP, 1997-2012



TACs: Tax Administration's costs; CACs: Customs Administration's costs; FPACs: Financial Police administration's costs.

Source: Ministry of Finance (2000-2012); Tax Administration (1995-2006; 2002-2012); Customs Administration (1997-2012; 2005-2012).

The sharpest decreases in ACs were observed in 2000 and 2001, when a rise in GDP coincided with a decline in ACs in absolute terms. From 2005 to 2010, AC-to-GDP ratio increased again but fell slightly after 2010 as the economic situation in Croatia deteriorated. As a result, in 2012, Croatia spent 0.44% of its GDP on administering tax and customs legislation. To establish whether the total ACs in Croatia are high, despite all of the constraints and deficiencies (i.e., differences in scope and methodology), we compare Croatia's ACs with the EU average.

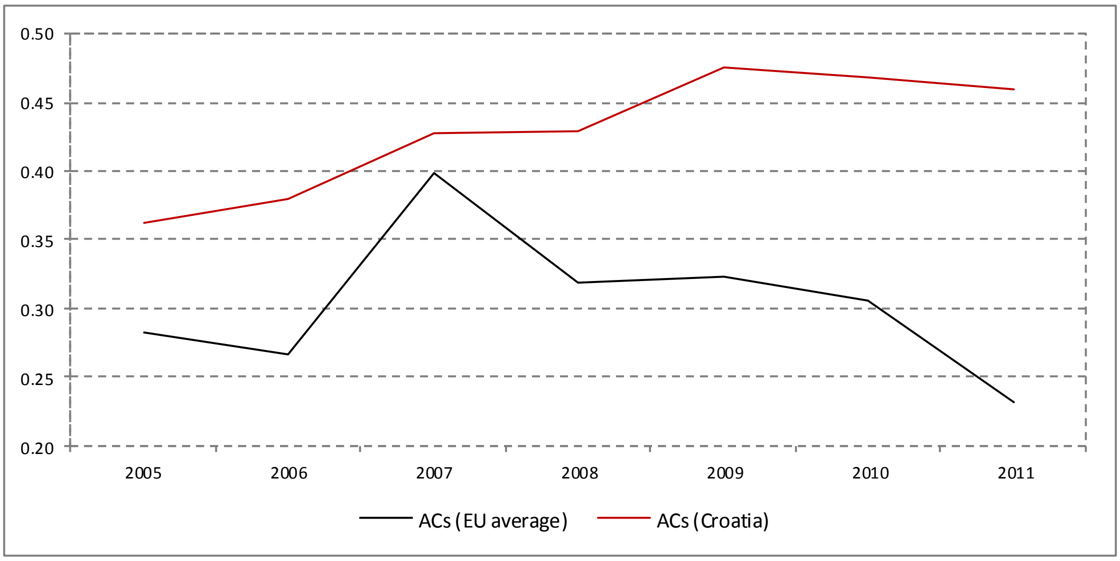
As shown in Figure 2, Croatia's ACs exceeded the EU average[9] in the period 2005-2011. Annex 2 features ACs as percentages of GDP for individual EU member states in the period 2005-2012. The AC data for the period until 2005 were not available for all EU member states, and the available data for the period after 2005 do not clearly show the actual composition of ACs for each country. Interestingly, in 2007, Croatia's ACs were close to the EU average, but they

[9] Note that the number of EU member states changed in that period, as Bulgaria and Romania joined the EU in 2007.

increased after 2007 (to 0.46% of GDP in 2011) as the EU's average ACs fell markedly (to 0.23% of GDP in 2011).

FIGURE 2

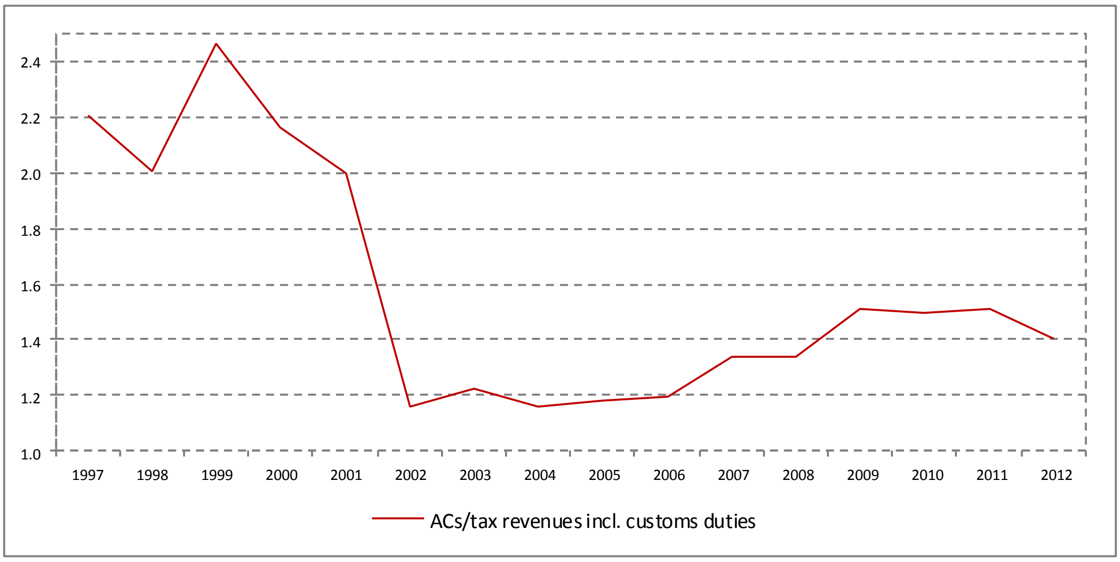
A comparison of ACs between Croatia and the EU, percentage of GDP, 2005-2011



Sources: OECD (2013); Ministry of Finance (2000-2012); Tax Administration (1995-2006; 2002-2012); Customs Administration (1997-2012; 2005-2012).

FIGURE 3

*ACs in Croatia as percentage of collected tax revenues, 1997-2012**



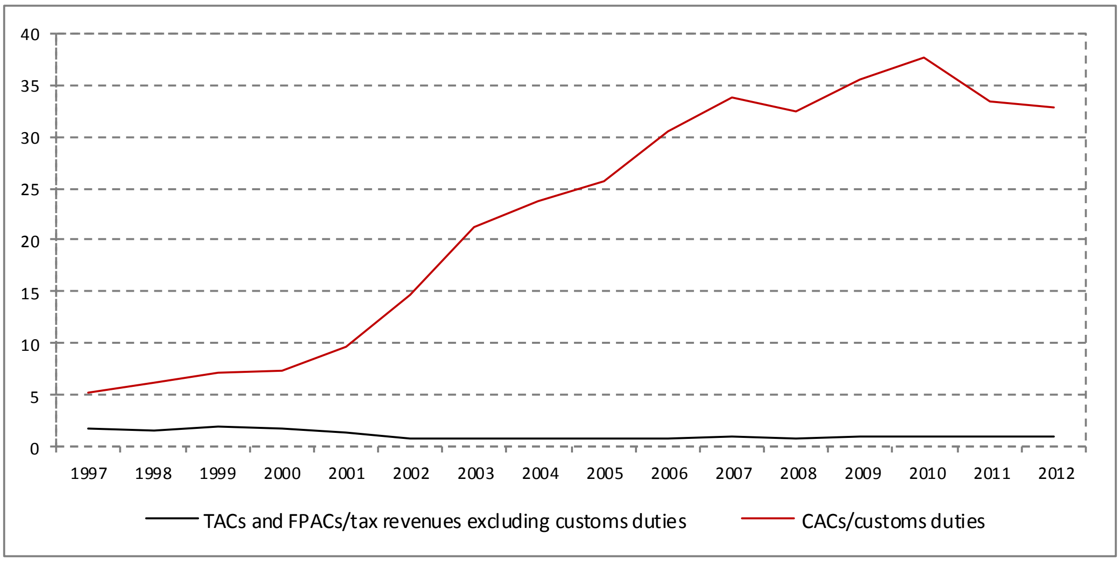
** For the purposes of this analysis, 'collected tax revenues' are the tax revenues of the state budget.*

Sources: Ministry of Finance (2000-2012); Tax Administration (1995-2006; 2002-2012); Customs Administration (1997-2012; 2005-2012).

The percentage share of ACs in Croatia's total tax and customs revenues declined sharply in 2001 and 2002 (from 2.2% in 2000 to 1.2% in 2002, see Figure 3). Simply put, the cost of collecting 100 HRK in tax and customs revenues in 2002 was 1.2 HRK. The most important cause of the slumps in ACs in 2001 and 2002 was the previously explained inclusion of social contributions in tax revenues. Social contributions constitute the second most abundant source of tax revenues after the VAT. In the period 2000-2012, social contributions accounted for approximately 34% of the total tax revenues at the general government level (Ministry of Finance, 2000-2012). Additionally, the GDP increased during this period, ACs decreased in absolute terms and the FP was abolished. After 2002, ACs increased slightly, reaching 1.4% of collected tax revenues in 2012.

FIGURE 4

ACs by institution (TA, CA and FP), percentage of collected revenues, 1997-2012



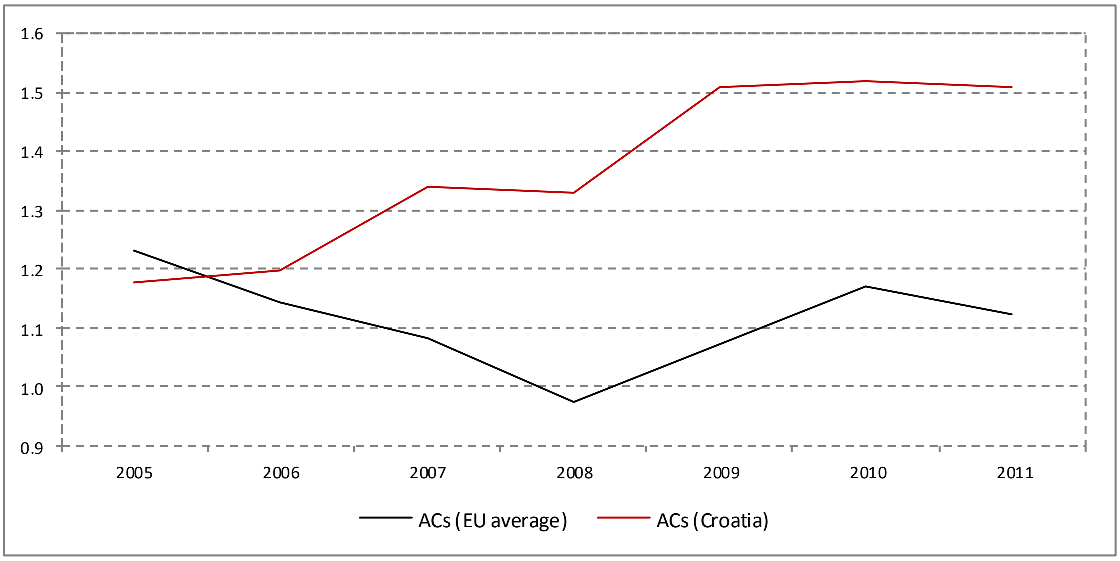
TACs: Tax Administration's costs; CACs: Customs Administration's costs; FPACs: Financial Police administration's costs.

Sources: Ministry of Finance (2000-2012); Tax Administration (1995-2006; 2002-2012); Customs Administration (1997-2012; 2005-2012).

Figure 4 shows that the growing share of ACs in the total collected tax revenues is primarily due to an increase in CA costs (CACs). Specifically, whereas CACs increased, customs duties declined over the observed period. CACs accounted for 5% of customs duties in 1997 and for as much as 33% in 2012 (a six-fold increase), which means that the cost of collecting 100 HRK in customs duties in 2012 was 33 HRK. Figure 5 compares Croatia with the EU average.

FIGURE 5

ACs in Croatia and the EU, percentage of collected revenues, 2005-2011

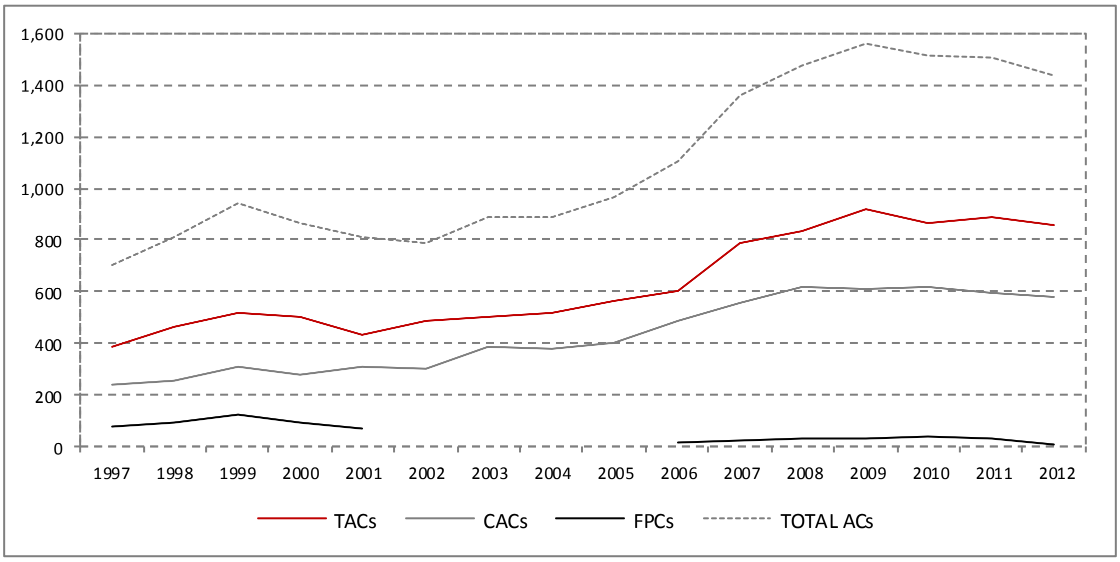


Sources: OECD (2013); Ministry of Finance (2000-2012); Tax Administration (1995-2006; 2002-2012); Customs Administration (1997-2012; 2005-2012).

In 2005, ACs in Croatia accounted for 1.2% of collected revenues, which was almost equal to the EU average. However, a reversal of this trend occurred after 2005 when ACs in Croatia steadily increased to approximately 1.5% of collected revenues in 2011. At the same time, the average EU ACs decreased to 1.1% of collected revenues in 2011. Below, we examine the causes of the increase in ACs in Croatia after 2005.

FIGURE 6

ACs by institution, in million HRK, 1997-2012



TACs: Tax Administration's costs; CACs: Customs Administration's costs; FPACs: Financial Police administration's costs.

Sources: Ministry of Finance (2000-2012); Tax Administration (1995-2006; 2002-2012); Customs Administration (1997-2012; 2005-2012).

From 1997 to 2012, the total ACs more than doubled in absolute terms (going up from approximately HRK 700 million to slightly more than HRK 1.4 billion). From 1997 to 2009, TACs and CACs generally increased in absolute terms, with the exception of the years 2000, 2001 and 2002. TACs and CACs declined slightly after 2009 (Figure 6). In the period 2004-2012, ACs rose by approximately 60% (from HRK 900 million to approximately HRK 1.4 billion). For the entire period 1997-2012, TACs accounted for 50-60% of the total ACs, while the remaining ACs were primarily CACs (the Financial Police administration costs (FPACs) were almost negligible).
Examining whether there is a correlation between ACs and tax changes in Croatia would be interesting; one could determine whether the total ACs rose during years when the most radical changes in the national tax system occurred. One can assume that every change in tax law leads to a rise in ACs, as there is for example a need for new employees to manage a more complex system. Annex 1 shows major changes in the most important types of taxes (personal income tax, corporate income tax, VAT and social contributions) in Croatia in the period 1997-2012. But as it can be seen the tax changes are commonplace in Croatia (tax rates and/or tax bases are changed nearly annually) it would be very hard to establish a correlation between tax changes and the total ACs.[10] Thus, the need to collect cost data by the type of tax should be strongly emphasised in the next period, maybe correlation between tax changes related to certain type of tax and administrative costs related to that tax could be determined.

Below is a detailed analysis of staff and service expenses. An analysis of financial statements for the period 2004-2012 shows that staff and services were the largest expenses, accounting for the bulk of the total ACs (approximately 90%). These expenses increased steadily over the studied period (staff expenses increased by 46%, from HRK 631 million to HRK 921 million, and service expenses increased by more than 300%, from HRK 96 million to HRK 426 million).

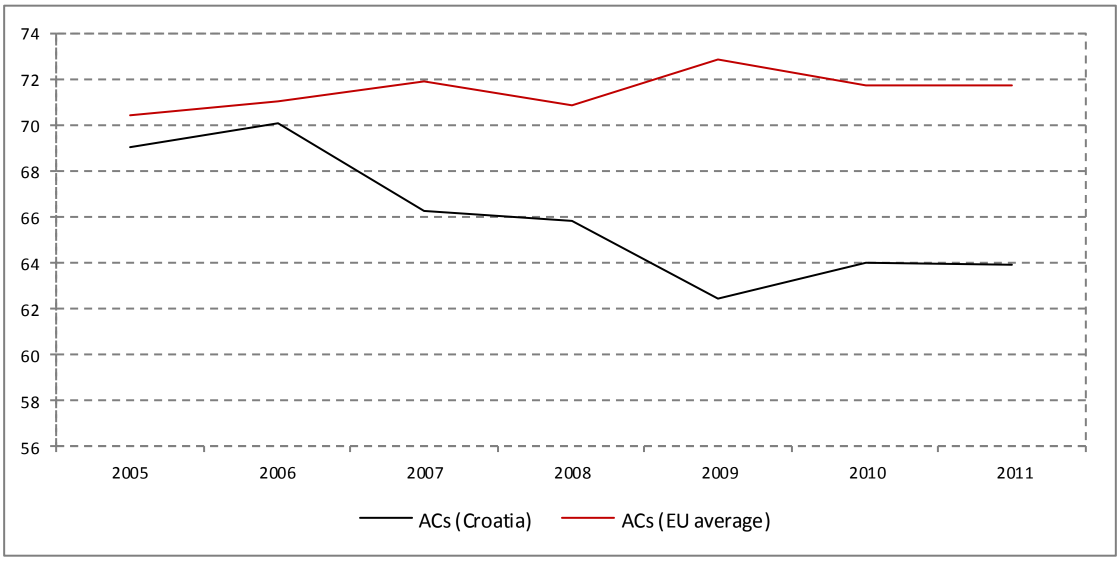
According to the available data, in the period 2005-2011 (the EU data before 2005 are missing), the share of staff expenses in ACs in Croatia[11] was slightly below the average of EU member states. In the period 2005-2011, the EU average was approximately 70% of the total ACs. In a review of previous studies, Sanford (2000:118) shows that staff expenses represent the largest costs and typically account for approximately three-quarters of the total ACs.

[10] The year 1999 is perhaps an exception, as ACs rose markedly after one of the most radical tax changes (which occurred in 1998)—the introduction of the VAT.

[11] Staff expenses in Croatia include salaries, payroll contributions and other staff expenses (i.e., transportation allowances, fieldwork and separation allowances and compensation for professional development and business travel).

FIGURE 7

Staff expenses in Croatia and the EU, percentage of ACs, 1997-2011



Sources: OECD (2013); Ministry of Finance (2000-2012); Tax Administration (1995-2006; 2002-2012); Customs Administration (1997-2012; 2005-2012).

TABLE 1

Service expenses, 2004-2012, in million HRK

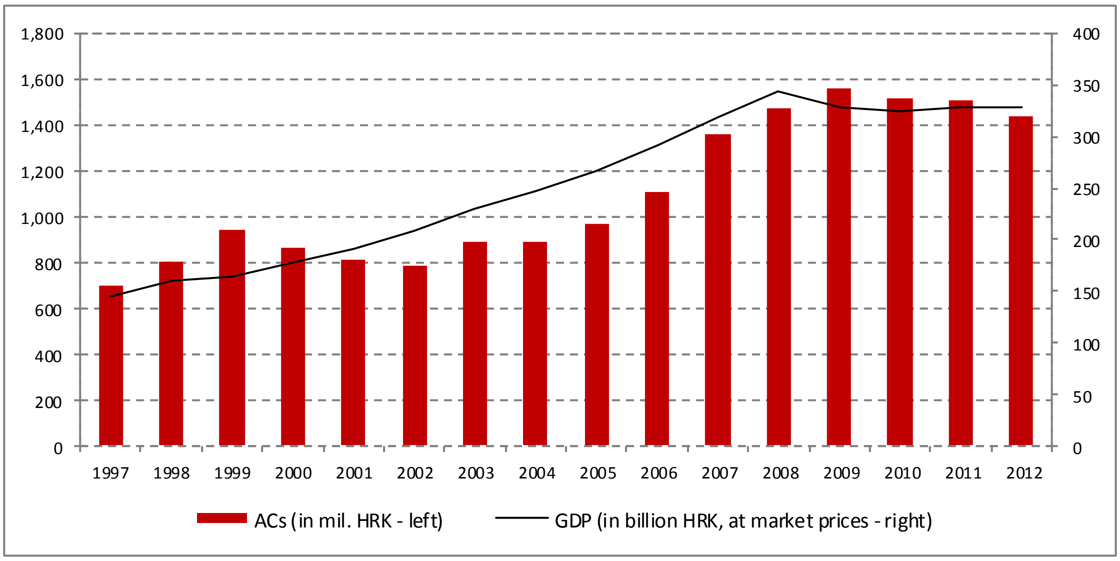
Expenses:	2004	2005	2006	2007	2008	2009	2010	2011	2012
Telephone, mail and transportation services	48.4	100.8	76.9	84.8	92.7	119.1	99.5	84.3	75.8
Current and investment maintenance services	10.4	13.4	20.8	28.2	30.7	30.6	44.9	12.9	27.6
Utility services	15.2	20.5	20.7	23.4	26.3	28.3	28.4	8.6	8.5
Leases and rentals	6.9	9.3	13.7	17.6	18.6	19.0	23.5	28.6	29.3
Intellectual and personal services	2.2	2.6	4.7	13.0	26.1	77.3	33.5	17.3	21.1
IT services	2.8	5.3	5.2	116.4	149.1	149.4	155.7	213.9	213.9
Other services	10.2	12.7	24.9	32.7	26.0	22.3	24.4	43.2	43.4
Total	96.3	164.8	166.9	316.1	369.4	446.1	409.9	408.8	419.7

Source: *Ministry of Finance (2000-2012).*

As shown in Table 1, among service expenses, expenses for IT services grew the fastest (by approximately 7,000%, from HRK 3 million to approximately HRK 214 million). Leasing and rental expenses also increased sharply (by approximately 300%, from HRK 7 million to HRK 30 million), as did intellectual and personal-service expenses (by approximately 1,000%, from HRK 2 million to HRK 21 million). Expenses for telephone, mail and transportation services were also high in absolute terms during the observed period, as they constituted an average of approximately HRK 90 million annually. Consequently, both the TA and CA should pay special attention to analysing these expenses and should examine whether and to what extent these expenses should be reduced.

FIGURE 8

ACs and GDP developments in Croatia, 1997-2012



Source: Ministry of Finance (2000-2012).

Finally, although tax changes are commonplace in Croatia (see Annex 1), Figure 8 suggests that the increase in ACs in Croatia during the period 2002-2012 was primarily due to economic growth (GDP movements); the TA, CA and FP simply spend more money during periods of economic growth, whereas they spend less during periods of economic downturn.

4 CONCLUSIONS

The goals of this article were to determine whether the efficiency of tax authorities in Croatia improved in the period 1997-2012 and to identify how the efficiency can be improved in the future. The key indicator of the analysis (ACs as a percentage of GDP) declined during the observed period but remained above the average of EU member states. Therefore, the TA and CA should intensify their efforts to reduce ACs. The tax authorities should aim to collect the maximum revenue at a minimum cost within the existing taxation framework (Sandford, Godwin and Hardwick, 1989:203). The first action that the tax authorities can do is to perform a thorough analysis of ACs to establish whether ACs can be reduced. According to the present analysis, the steepest growth has been in IT expenses, leases and rentals and intellectual and personal services. In absolute terms, expenses for telephone, mail and transportation services for the whole period were also high. Consequently, both the TA and CA should pay special attention to analysing these expenses to determine whether and to what extent these expenses can be reduced.

In the period 2002-2012, ACs in Croatia were primarily correlated with economic growth (GDP movements), as the TA, CA and FP spend more money when the economy is strong and less in times of economic downturn.

As with previous studies (e.g., Ott and Bajo, 2000; Bratić and Pitarević, 2004; Vitek and Pubal, 2002), this research was constrained by the unavailability of public data. Due to inadequate data, ACs cannot be separated into individual types of taxes, which is a situation that should be improved in the future. That information would help the TA and CA to establish which taxes are the most expensive to administer and to find appropriate measures to reduce the underlying costs.

Efforts should be made to establish the costs that are generated by FINA, the institution that collects and maintains tax records on behalf of the TA and CA, the costs of courts that adjudicate tax and customs cases, parliamentary costs related to enacting tax legislation, and the costs of interest-free loans to the private sector when there is no obligation for a taxpayer to pay tax to the government at the time when a taxable transaction occurs (e.g., in the case of the VAT, which is payable only at the end of an accounting period).

ANNEX 1

Basic changes in personal income tax, corporate income tax, the VAT and social contributions, 1997-2012

	Change	
	Tax bases	**Tax rates**
1997	*PIT* – the PA increases from HRK 700 to HRK 800; – tax relief for CDWV is introduced	*PIT* – rates of 25% and 35% are replaced by rates of 20% and 35% *CIT* – the general rate is increased from 25% to 35%
1998	The *VAT* is introduced (at a general rate of 22%)	*SOC.C* – the total rate of the pension insurance contribution is reduced from 25.5% to 21.5%; – the total rate of the health insurance contribution is increased from 14% to 18%; – the child benefit and water contributions are abolished
1999.	*PIT* – PA increases to HRK 1,000	*VAT* – a zero rate is introduced for some products
2000	*VAT* – the list of products that are taxed at a zero rate is expanded *PIT* – the PA increases to HRK 1,250 *CIT* – investment incentives are introduced	*SOC.C* – the total pension insurance contribution rate is reduced from 21.5% to 19.5%; – the total health insurance contribution rate is reduced from 18% to 16%
2001	*VAT* – the list of products that are taxed at a zero rate is expanded	*PIT* – rates of 20% and 35% are replaced by rates of 15%, 25% and 35%
	PIT – four new types of tax relief are introduced (the employment incentive, education and training incentive, deduction of insurance premiums paid by taxpayers to domestic insurance companies and incentive for self– employed individuals in ASSCs and in the City of Vukovar who determine their income as the difference between receipts and outlays on the basis of business books)	*CIT* – the general rate is reduced to 20%
	CIT – a tax on dividends for non– resident legal entities is introduced; – tax relief for ASSCs and investment incentives is changed; – incentives for the City of Vukovar, employment incentives and disabled persons' incentives are introduced	
2002	*PIT* – an incentive for HMAs is introduced *CIT* – incentives for HMAs are introduced	*SOC.C* – a special contribution for insurance against accidents at work and occupational diseases is introduced (0.47%)
2003	*PIT* – the tax brackets are changed; – PA is increased to HRK 1,500; – two new types of tax relief are introduced (the research and development incentive and health care and housing allowance)	*PIT* – rates of 15%, 25% and 35% are replaced by rates of 15%, 25%, 35% and 45%

	Change	
	Tax bases	**Tax rates**
	CIT – an R&D incentive and education and professional development incentive are introduced	*SOC.C* – the total pension insurance contribution rate is increased from 19.5% to 20%; – the total health insurance contribution rate is reduced from 16.47% to 15.5%
	SOC.C – pension insurance contributions on salaries and health insurance contributions from salaries are abolished	
2005	*PIT* – the tax brackets are changed; – the PA is increased to HRK 1,600	
	CIT – the tax on dividends for non– resident legal entities is lifted; – tax relief for companies that are engaged in shipping activities is introduced	
	SOC.C – a special contribution for the employment of disabled persons is introduced	
2006	*VAT* – the list of products that are taxed at a zero rate is reduced	*VAT* – a new 10% rate is introduced
2007	*VAT* – the list of products that are taxed at a 10% rate is expanded	
	PIT – a new form of tax relief is introduced (a deduction from the lump– sum amount of tax on income from crafts and agriculture in the ASSCs, HMAs, City of Vukovar and islands of the first group)	
	CIT – incentives for disabled persons and employment incentives are abolished; – three forms of tax relief are changed (the investment incentive, R&D incentive and education and professional development incentive)	
2008	*PIT* – the PA is increased to HRK 1,800	
2009		*VAT* – the general rate is increased to 23%
2010	*PIT* – the tax brackets are changed; a new form of tax relief is introduced (a voluntary pension insurance premium paid by employers on behalf of their employees)	*PIT* – rates of 15%, 25%, 35% and 45% are replaced by rates of 12%, 25% and 40%
2011	*PIT* – two types of tax relief are abolished (insurance premiums paid by taxpayers to domestic insurance companies and the health care and housing allowance)	
2012	*VAT* – the list of products that are taxed at a 10% rate is expanded	*VAT* – the general rate is increased to 25%

	Change	
	Tax bases	**Tax rates**
	PIT – the PA is increased to HRK 2,200; the tax brackets are changed	
	CIT – a tax on dividends and profit shares of non– resident legal entities is introduced; – investment incentives are replaced by a similar type of relief (investment incentive and incentive for the promotion of investment environments)	
		SOC.C – the health insurance contribution rate is reduced from 15% to 13%

Source: Zakon o porezu na dodanu vrijednost, Zakon o porezu na dobit, Zakon o porezu na dohodak, Zakon o doprinosima.

Abbreviations:

ASSC – Areas of special state concern

CDWV – Croatian Disabled Homeland War Veterans

CIT – Corporate income tax

SOC.C – Social contributions

HMA – Hill and mountain areas

PA – Personal allowance (other than the personal allowance for pensioners)

PIT – Personal income tax

VAT – Value added tax

ANNEX 2

ACs in some EU member states, percentage of GDP, 2005-2012

	Administrative costs of tax administration/gross domestic product percentage*							Significant factors affecting cross-country comparisons of ratios
	2005	2006	2007	2008	2009	2010	2011	
Greece	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Croatia	0.36	0.38	0.43	0.43	0.48	0.47	0.45	Tax Administration, Customs Administration, Financial Police
Hungary	0.30	0.33	0.40	0.39	0.40	0.42	0.38	
Malta	n.a.	n.a.	n.a.	n.a.	n.a.	0.41	0.36	
Belgium	0.38	0.36	0.34	0.34	0.35	0.33	0.35	
Netherlands	0.42	0.41	0.39	0.35	0.37	0.35	0.33	
Slovenia	n.a.	n.a.	0.26	0.27	0.28	0.29	0.29	
Germany	0.30	0.29	0.28	0.28	0.29	0.29	0.28	
Portugal	0.26	0.25	0.25	0.25	0.27	0.27	0.26	
Poland	0.31	0.29	0.28	0.24	0.23	0.27	0.25	
Cyprus**	n.a.	n.a.	n.a	0.18	0.19	0.25	0.25	
Ireland	0.24	0.24	0.24	0.27	0.29	0.26	0.25	Costs include customs duties
UK	n.a.	n.a.	0.34	0.28	0.29	0.27	0.24	
EU average	0.28	0.27	0.40	0.32	0.32	0.31	0.23	
Romania	n.a.	n.a.	0.25	0.23	0.20	0.13	0.23	
France	0.26	0.25	0.24	0.23	0.24	0.23	0.23	
Bulgaria	0.33	0.25	0.21	0.22	0.24	0.24	0.23	
Latvia	n.a.	n.a.	0.35	0.36	0.34	0.29	0.23	
Luxembourg	0.25	0.22	0.22	0.23	0.25	0.23	0.22	
Finland	0.21	0.21	0.20	0.21	0.23	0.21	0.21	
Denmark	0.37	0.30	0.29	0.30	0.31	0.21	0.20	

	Administrative costs of tax administration/gross domestic product percentage*							Significant factors affecting cross-country comparisons of ratios
	2005	2006	2007	2008	2009	2010	2011	
Czech Rep.	0.22	0.22	0.20	0.19	0.20	0.19	0.20	
Slovak Rep.	0.22	0.20	0.17	n.a.	n.a.	0.18	0.18	
Italy[2]	0.27	0.26	0.29	0.19	0.21	0.19	0.17	Some major costs not included
Sweden	0.19	0.19	0.19	0.18	0.18	0.18	0.17	Costs exclude debt collection
Lithuania	n.a.	n.a.	0.23	0.22	0.21	0.17	0.16	
Austria	n.a.	n.a.	0.15	0.19	0.20	0.16	0.15	
Spain	n.a.	n.a.	0.13	0.13	0.13	0.13	0.13	Costs include customs duties
Estonia	n.a.	n.a.	3.69	1.91	1.86	1.82	0.11	

** GDP at market prices in millions of national currency units.*

*** Cyprus: Data revised to detect errors that were detected in the original data. Payments made on behalf of the Inland revenue department and VAT by other government departments are not reflected in these specific years.*

Italy: Calculations up to 2009 are based on cost data that were provided for tax-related functions of the revenue body (Agenzia Entrate), tax-related work of the separate tax police body (Guardia di Financia), and separate tax debt collection functions (Equitalia); data are not provided for subsequent years.

Source: OECD, 2013.

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TAX REFORM IN SERBIA: EXPERIENCES AND PERSPECTIVES

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ABSTRACT

The first major wave of tax reforms came in early 2000s. Serbian state finances had to be brought in line with the requirements of the newly formed state in which all competences were transferred from the Federal to the Republic level of government in Yugoslavia. Serbian tax policy and tax administration have been subject to reforms, ever since. Over the last several years the main driver of reforms is the international economic crisis and its heavy impact on the Serbian economy. The Serbian budget deficit averaged over 6.6 percent over the previous three years and is expected to reach over 7 percent in 2014. Tax revenues have been slumping as the economy went through a double-dip recession. Political turbulences over the last decade led to frequent changes in the top management of both, the ministry of finance and the tax administration. Strategic long-term approaches have often given way to short-term measures designed for quick wins disregarding undesired long-term effects. While on the tax policy side, the authors analyze how the tax system has evolved around the newly established value-added tax after 2005. The authors also look at structural and organizational reforms of the Serbian tax administration during the last decade, and check against external standards (EU acquis chapter 16 and fiscal blueprints). Research is backed by data from the representative taxpayer surveys 2012 and 2013, respectively, which have both been commissioned by GIZ. The main conclusion of the paper consists of lessons learnt from the Serbian reform process which seem applicable also for similar contexts.

Keywords: tax system, tax reform, tax administration, tax policy, transformation of institutions

[1] Disclaimer: The views expressed in this paper are the sole responsibility of the authors and do not necessarily reflect those of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH nor those of the German Federal Ministry for Economic Cooperation and Development (BMZ).

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"We have learned a great deal about taxation and development over the last half-century. However, we still have much to learn. Even the best research answers to particular questions have usually turned out to be extremely difficult to apply in practice."

Richard M. Bird (2012)

1 INTRODUCTION

Serbia as a late comer in the transition process from socialism to a modern, market-based economy shared similar problems as other post-socialist countries. Citizens in post-socialist countries have not been used to pay taxes explicitly (Kornai, 1990), therefore establishing a functioning and efficient tax system was one of the most complex and serious tasks during the transformation process (Edwards, 1992). Even in the more recent history, tax reforms are still ongoing. Thus during the last decade, many tax reform approaches have been observed across the transition and developing countries, e.g. in Eastern Europe, South America, South-East Asia, and Africa. It appears, that not too many have been successful in the sense of installing a tax system that fits the needs and habits of the particular country (i.e. its tax culture, Nerré 2008), and which, most importantly, ensured sufficient revenues for the government. Therefore, all three elements have to be considered during a reform process: tax policy, tax administration, and tax culture.

This paper focuses on the "tax reform experiment" (Martinez-Vazquez and McNab, 2000) in Serbia as a transition economy which had emerged from a socialist, planned system of economy. It is important to stress from the beginning that the principles and practices of tax systems under planned socialism have largely determined the path of tax reform during the transition period. Also, the experience of other transition economies shows that the legacy from the socialism era produced different negative consequences for the performance and reform of tax administrations (Martinez-Vazquez and McNab, 1997). In addition, experience from other countries' transition shows that the major mistake in tax reform was focusing primarily on modernizing tax policies and relegating tax administration (TA) reform for later. This was mainly due to the time required for these efforts to take effect and it was, and still is, measured in years. The results have been a decreasing level of tax collections and an increasing level of tax evasion (Martinez-Vazquez and McNab, 1997).

The authors analyze tax reforms in Serbia since the start of the transition in 2001 with an emphasis of reforms after the introduction of the VAT (in 2005). The paper starts with a brief overview of historic developments and their impact on the current situation in the tax system. Furthermore, we look at more recent structural and organizational reforms of the Serbian tax administration and check against external standards (EU *acquis* chapter 16 and EU fiscal blueprints). In the fifth part of the paper, the authors analyze the success of tax system reforms in Serbia through the level of tax evasion. Finally, the last part is dedicated to deriving lessons learnt.

2 HISTORY OF THE TAX SYSTEM AND TAX CULTURE IN SERBIA

Both the tax system and tax culture in Serbia have been heavily influenced by the socialist era. Generally speaking, the starting position for TA reforms in transition countries is different than in developed countries. In the most cases these countries have a worse starting position for reforming TA because the legacy from planned socialism produced numerous negative consequences on TA, such as a tradition of political interventions, negotiated taxes, public distrust in government institutions, etc. (Martinez-Vazquez and McNab, 1997). Beside the planned socialism legacy, the major mistake in tax reform was focusing primarily on modernizing tax policies, leaving TA and taxpayer issues on a second place. One of the most difficult situations was in the countries created after the breakup of Yugoslavia (Grabowski, 2005) where Serbia belongs as well. The new independent Serbian state needed to build numerous institutions from scratch, and among them, to establish a modern tax system in order to regularly service its obligations toward citizens. This has proven to be a very difficult task for Serbia, and it still remains on the government's agenda.

The prevailing Serbian tax culture has been impacted by similar developments like Serbia itself – and those date back far more than just the socialist period. In the sphere of taxation it is worth to start with the influence of the Turkish Osman Empire and creation of a joint state with other southern Slavic nations. Long years after the bloody fights of liberation from the Turkish occupation in 1804 and 1815, the chaotic, unfair and severe Turkish tax system still prevailed in Serbia (Nerré, 2006). In 1835, Serbia installed its first own tax system. It consisted of a single poll tax, the "*gradjanski danak*", which did of course not consider the ability to pay principle. Some years later, the hard burden was relaxed by introducing a lump-sum tax graduated according to income and property. In addition to the *gradjanski danak* only two small discriminating taxes, the gypsy tax and the bachelor's tax, remained from the Turkish tax system. Not until 1884 the *gradjanski danak* was replaced with a real system of non-personal direct taxation of income and property. Still, a poll tax was kept up. Turnover tax was intended to supplement local business tax which was subject to widespread tax evasion already in the 19th century. Ogris (1929) claimed that the Serbian officials were poorly trained and thus were not able to enforce the new and more complicated tax system efficiently. Therefore, revenues fell short the tax potential.

With the birth of the Yugoslavian Monarchy in 1918, six extremely different tax systems were in existence, and their harmonization was direly needed. In 1919, Macedonia and Montenegro came within the purview of the Serbian tax laws, first. Further, the Serbian sales tax was done away with in 1920. The former Serbian *trošarina*, i.e. excise taxes, were introduced for the whole of Yugoslavia. Still, the total harmonization of all sub tax systems took six draft tax codes until realization in 1928 (Nerré, 2006). For reasons of simplification, the former Serbian personal income tax (PIT) was abolished. Initially, it had been planned to be the pillar of the Yugoslav tax system, but parliament's finance committee turned these plans down because they thought that neither the country was ready for a sophisticated PIT, nor the TA capable of administering it. This might have been true after the war, but in 1928 the administrative capabilities had developed quite a lot. Anyhow, the revenue shortfalls due to the abstention from PIT were meant to be compensated by progressive surcharges on other taxes. Despite the expectations, tax revenues were very small, only 12% of total government expenditure was covered by tax revenues.[3] The characteristic feature of the new tax system was the system of non-personal income taxation. From 1929 to 1937 direct taxes accounted for only 25% of overall tax revenues. The remaining 75% were raised via indirect and intangible means of taxation (Nerré, 2006). All in all, tax evasion was widespread.

In the former Yugoslav countries, including Serbia, the state-owned enterprises were under strong protection of the government. The central bank provided loans to banks, which funded companies that are favored but not profitable. In the context of fiscal policy, a lack of fiscal discipline and implementation of soft budget constrains toward these companies resulted also in a lower level of tax collection (Murphy, 2006). In the early nineties, Serbia introduced a single tax system across the entire territory (including autonomous provinces). This tax system was based on the sales tax and a western-style comprehensive income tax scheme. Due to the economic crisis in that period, progressive income tax was not implemented, though, and was finally in 1995 replaced by a simpler income tax scheme (scheduler taxation).

3 SIZE AND STRUCTURE OF TAX REVENUE SYSTEM IN SERBIA

The Serbian tax system has been improved continuously since the start of the transition in 2000. Total revenue expressed as a percentage of GDP has risen from 33% in 2000 to 42% in 2012, although according to different sources a high level of tax evasion is still present. Social security contributions were always the main source of tax revenues, but the situation with the retail sales tax (today VAT) and excises has been changing over time. Nevertheless, these three categories of revenues (social contributions, VAT and excises) make the main sources of revenues for the Serbian government. Revenues from the sales tax have increased significantly since 2000. It is important to stress, though, that until 2001 the sales tax was a shared revenue (distributed among federal, central and local governments). VAT replaced the general sales tax in 2005 and its revenue has a marginally decreasing trend since its introduction. Another important source of revenues is the PIT which accounts for about 5% of GDP in 2012. Revenues from this sort of tax increased around 2 percentage points since 2000 (from 3.2% in 2000 to 4.9% in 2012). The revenues collected from taxes still have a very high share in total revenue, 89% in 2000 and 87% in 2012. Table 1 shows total revenue structure in Serbia from 2000 to 2012, expressed as a % of GDP.

[3] Borrowing was (mainly) the source of financing of the remaining amount of public expenditures.

TABLE 1

Total revenue and structure of tax revenues in Serbia since 2000, as a % of GDP

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total revenue	33.3	36.1	40.9	41.9	42.7	42.9	44.1	43.9	42.9	41.9	42.2	40.5	42.0
Tax revenues	29.9	33.0	37.6	37.8	38.8	37.9	38.5	38.2	37.6	36.8	36.7	35.3	36.6
Personal income tax	3.2	4.3	5.4	6.2	5.5	5.6	6.0	5.1	5.1	4.9	4.8	4.7	4.9
Social security contributions	10.3	10.0	10.0	10.2	11.1	11.2	11.8	11.9	11.7	11.7	11.2	10.8	11.3
Corporate income tax	0.3	0.4	0.4	0.5	0.5	0.6	0.9	1.3	1.5	1.1	1.1	1.2	1.6
VAT/Retail sales tax	5.9	9.4	11.2	11.1	11.5	12.8	11.5	11.7	11.3	10.9	11.1	10.7	11.0
Excises	2.8	3.4	4.6	5.1	5.3	4.2	4.4	4.3	4.1	5.0	5.3	5.3	5.4
Taxes on international trade	2.2	1.9	2.5	2.5	2.5	2.3	2.3	2.5	2.4	1.8	1.5	1.2	1.1
Other taxes	5.3	3.6	3.6	2.2	2.5	1.2	1.5	1.4	1.4	1.4	1.6	1.4	1.3
Non-tax revenues	3.4	3.1	3.4	3.5	3.5	4.5	5.1	5.2	5.3	5.1	5.5	5.3	5.4
Capital revenues	0.0	0.0	0.0	0.6	0.4	0.5	0.5	0.5	0.0	0.0	0.1	0.0	0.0

Source: Ministry of Finance, Republic of Serbia, 2013.

For a comparison, tables 2 and 3 show total revenue and the structure of tax revenues in the European Union. Table 2 gives data for the EU 27 and table 3 provides data for the "new" EU member states which are summarized as EU 12. The figures are also presented as a % of GDP.

TABLE 2

Total revenue and structure of tax revenues in EU 27 as a % of GDP

EU 27	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total revenue	45.2[4]	44.6	43.9	44.0	43.8	44.2	44.7	44.6	44.6	44.1	44.1	44.6	45.4
Taxes	27.1	26.4	26.0	25.8	25.9	26.2	26.8	26.9	26.5	25.4	25.5	26.0	26.5
Indirect taxes	13.1	12.8	12.9	13.0	13.0	13.1	13.2	13.1	12.7	12.6	12.9	13.1	13.3
Direct taxes	13.8	13.4	12.8	12.4	12.5	12.8	13.4	13.6	13.3	12.4	12.3	12.6	13.0
Capital taxes	0.2	0.2	0.2	0.4	0.3	0.3	0.2	0.2	0.5	0.3	0.2	0.3	0.2
Social contributions	13.9	13.8	13.7	13.9	13.8	13.7	13.5	13.3	13.6	14.1	13.9	13.9	14.0
Other sales taxes	2.2	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.6	2.6	2.6	2.6
Other current revenue	1.7	1.9	1.7	1.6	1.6	1.6	1.7	1.7	1.9	1.9	1.8	1.8	1.8
Capital revenue	0.2	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.3	0.5

Source: Government Finance Statistics, Eurostat[5], 2013.

[4] The figures show amount as a % of GDP.
[5] Data extracted 16/12/2013.

Data shows that total revenues are about 45% of GDP on average. Nearly half of that number is comprised of revenues collected by taxes. In EU 27 the collection of indirect and direct taxes, resp., is at about the same level of around 13% of GDP (excluding the social contributions). Capital taxes[6], other sales taxes (non-VAT) and capital revenues make up a small percentage of total revenues, only. The structure of revenues in Serbia is similar to that of the EU, with a few exceptions. Tax revenues amount to almost 85% of the total revenues in the EU – which is similar to the Serbian case.

TABLE 3

Total revenue and structure of tax revenues in EU 12 as a % of GDP

EU 12[7]	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total revenue	37.8	37.0	37.2	37.6	37.4	38.0	38.3	38.8	38.2	38.4	38.3	39.0	38.5
Taxes	21.1	20.8	20.8	21.3	21.4	21.7	22.1	23.0	22.4	21.0	20.7	20.7	21.0
Indirect taxes	13.0	12.7	12.6	13.2	13.4	13.7	13.7	13.8	13.3	13.0	13.2	13.3	13.4
Direct taxes	8.1	8.1	8.1	8.1	7.9	7.8	8.3	9.2	9.0	8.0	7.4	7.3	7.5
Capital taxes	0.1	0.1	0.1	0.2	0.4	0.5	0.3	0.4	0.4	0.3	0.3	0.3	0.3
Social contributions	11.5	11.3	11.3	11.1	11.0	11.0	10.8	10.8	10.9	11.4	11.1	11.1	11.1
Other Sales Taxes	2.4	2.3	2.5	2.5	2.5	2.4	2.2	2.3	2.4	2.4	2.4	2.4	2.3
Other current revenue	2.6	2.8	2.5	2.4	2.5	2.3	2.4	2.0	2.2	2.5	2.6	2.4	2.5
Capital revenue	0.5	0.2	0.3	0.8	0.5	0.9	0.9	0.8	0.6	0.9	1.5	2.4	1.5

Source: Government Finance Statistics, Authors' calculations[8].

Finally it is worth looking at the experience of most developed countries of the world, as organized within the OECD. Most OECD countries rely on three main sources of tax revenues: personal and corporate income taxes, social security contributions and taxes on goods and services. The share of consumption taxes in total revenues has declined, with the mix of taxes on goods and services changing noticeably towards greater use of general consumption taxes (mainly VAT) and away from taxes on specific goods and services. The share of property taxes and environment-related taxes has been fairly constant and small over time.

4 TAX SYSTEM REFORMS IN SERBIA

After the elections in 2000 the new Serbian government decided to launch the first wave of tax reform (2001-2003). The old tax system in Serbia was non-transparent, unstable, non-uniform and unfair.[9] The 2001 tax reform encompassed several major measures that enabled the

[6] According to a European Commission definition, capital taxes include taxes on business income in a broad sense: not only taxes on profits but also taxes and levies that could be regarded as a prerequisite for earning profit, such as the real estate tax or the motor vehicle tax paid by enterprises.

[7] EU-12 New Member States: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia.

[8] Data extracted 16/12/2013.

[9] 230 different taxes, fees, contributions and charges had been introduced by laws and regulations, then several dozens of earmarked duties used to exist aimed at financing extra-budgetary expenditures, numerous tax reliefs

creation of a market-oriented tax system (Popović, 2003). First, the sales tax was consolidated with three earmarked surtaxes, the number of rates was reduced to one, while the list of exemptions was significantly shortened. Second, nine earmarked duties were consolidated with the excise on oil derivatives into a single excise tax on oil derivative, while several earmarked duties on cigarettes and alcoholic beverages were also consolidated with the respective excises. The rates were set as specific, the only *ad valorem* rate being retained in case of the excise on luxuries. Third, two earmarked levies were consolidated into a single tax on financial transactions, while two earmarked levies on the payroll were consolidated into a single tax on the payroll fund. Fourth, the earmarked levies on motor vehicles, mobile telephones, boats, aircraft and weapons were transformed into respective taxes on the use of these goods. Fifth, a new Corporate Income Tax Law was adopted, replacing 1-6 years tax holiday for newly-established companies, with a 10% investment tax credit and abolishing deductions for profits reinvestment in fixed assets, government bonds and shares and special tax credit for foreign investment. Sixth, a new Personal Income Tax Law was adopted, retaining a scheduler system, followed by a complementary annual income tax for incomes exceeding certain highly set thresholds. Seventh, the rates of the compulsory social security contributions (pension, health and unemployment) were significantly reduced (from 26.6% to 16.3% – for both employers and employees), but the base was broadened. Eighth, the tax on immovable property was redesigned in a sense that progressive rates were introduced if the value of property exceeded a certain threshold: the basic tax rate was actually retained (0.4%).

The new tax system in Serbia, established in early 2001, relied on corporate income tax, PIT, sales tax, excises, tax on financial transactions, payroll tax, social security contributions, tax on property and tax on inheritance and gifts (tax on the transfer of title of property and taxes on the use, keeping and carrying of goods). Over time, several changes in tax policy have been introduced (Popović, 2003). Some of them just reflect the fact that the government was to a certain extent giving in to the pressures from business circles to enlarge the list of tax reliefs (sales tax, corporate income tax), or reconsidering the rationale for preserving a levy (financial transactions tax). The others were either result of a longer-term strategy of reforms (adoption of new Tax Procedure and Tax Administration Law), or consequence of the realization of pre-electoral promises (introduction of nonrecurring tax on extra income and extra property, realized by the use of special opportunities).

A very important moment in the tax reform process in Serbia was the creation of the Serbian TA. The Tax Procedure and Tax Administration Law that became effective as of 1 January 2003 introduced a radically new concept on how the taxes should be administered. The law integrated the entire collection and audit procedures under the auspices of the TA. The

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and special taxation regimes had become effective during nineties; etc. Also, tax legislation was subject to extremely frequent changes, often reflecting significant wanderings of the tax policy. The standard sales tax rate on certain domestically manufactured goods was halved by the Government decree; two-thirds of the taxpayers subject to the tax on business income were actually taxed on a lump-sum basis etc. Horizontal equity was disrupted by numerous exemptions from the general taxation regime, having been implemented by laws or by the Government's decrees. Certain members of *nomenklatura* were engaged in the contraband activities of wide scope (oil derivatives, cigarettes, alcoholic beverages), as well as in other forms of gray activities (street foreign currency market, etc.), with the informal approval from the authorities (Popović, 2003).

previous fiscal functions of the Agency for Calculation and Payment (ZOP) and of the organizations for compulsory social insurance were abolished. Each and every taxpayer was given a tax identification number (TIN). In addition, a Large Taxpayers Office (LTO) has been created in Belgrade and new audit procedures have been developed – both for large and other taxpayers.[10] Currently, the LTO comprised 106 employees and has to manage the 426 largest taxpayers. The generated revenues for 2013 represent 62% of national tax revenues as well as 44% of nation-wide collected social security contributions.

One of the basic models for measuring efficiency of a tax administration has been developed by the European Union (EU). The Fiscal Blueprints (FB), developed in 1999, prescribe clear criteria on EU best practice. They shall enable TA to measure its own efficiency and "serve as a tool for candidate countries for accession to the EU to enhance their administrative capacity in adopting, applying and enforcing the *acquis communautaire* (community legislation) in preparation for membership" (European Commission 2007, p. 9). The FB are organized according to a logical structure in five groups. The first group (framework, structures and basis) consists of three blueprints covering the overall framework of the tax administration and its structure as well as highlighting the horizontal issue of tax legislation. Currently the Serbian Tax Administration's (STA) organizational structure is not in line with good practice. The organizational structure has to be streamlined and reporting lines have to be improved. Regarding Chapter 16 *acquis*, both the VAT and Excise Laws need to be amendment in order to be aligned with the EU acquis. The second group (human and behavioral issues) consists of two blueprints covering horizontal personnel issues. The STA has not developed a Strategy for Human resource management as a precondition for effective management of human resources, yet. Furthermore, the allocation of staff needs an improvement. The third group (systems and functioning) consists of four blueprints covering the key operational systems and functions of the tax administration. The STA has undertaken numerous activities in order to improve key business processes, like audit and collection. However, there is a lot of space for improvement, especially with regard to the enforced collection, writing off uncollectible debt, new audit methods and techniques, introduction of e-audit, etc. The fourth group (taxpayer services) consists of three blueprints covering taxpayer-oriented concepts and services covering the taxpayers' rights and obligations, the system for taxpayers' management and voluntary compliance. The STA has introduced some significant improvements in the area of e-filing (VAT, withholding tax and social insurance contributions, excises) in March 2014. However, there is still no organizational unit dealing with taxpayer services. Also, taxpayer registration is still considered as a part of audit and not part of services, which is not in line with good practices. The fifth group (support) consists of two blueprints covering support functions and tools. The support functions (Information Technology, Budget process, Communication, HR) should support the main function of the STA. Currently, the STA's main functions are not properly supported by the support function, especially with the IT platform. Still, IT does not provide enough support to collection and audit in decision making process.

[10] However, due to the delays caused by too much extended procedure of the appointments of officials in the TA, the first field and office audits in accordance with the new Law started only in mid-June of 2003.

In order to streamline modernization efforts, the STA has just very recently established a Project Management Office (PMO). The PMO has become the department that defines and maintains the standards and processes related to project management within the organization. It has three divisions which represents key pillars of every tax administration: audit, collection, services and support functions (human resources, organizational structure, etc.). Also, as a part of the overall modernization governance structure, a modernization steering committee will be established. It will consist of the director general of STA, the head of PMO and a high representative of the MoF. In this way, it will be ensured that modernization efforts are coordinated in order to produce best results.

The second very important milestone for Serbia and tax reform was the introduction of VAT, starting from 2005. The first proposal of the VAT Law was generally designed in accordance with the EU model. Namely, the tax is of the consumption type, based on the invoice method and destination principle. It was discussed about the standard rate of VAT and at the end decided to be 18% (instead of 20%), while a number of items become a subject of a lower (8%) rate. In the period of economic crises, Serbia changed both the standard VAT rate (to 20%, in 2012) and the reduced VAT rate (to 10%, in 2013). However, annex H to the EU 6th VAT Directive, implies that Serbia should make further harmonization efforts in the following years when actually starts the process of accession to the EU. Also, during the reform period a strict implementation of two laws happened – the Tobacco Law and the Excise Tax Law were amended in mid-2003 to incorporate the long-term excise tax strategy. The Agency for Tobacco has been established in order to coordinate the licensing activities and anti-smuggling campaigns of the Customs Administration, the Tax Administration, trade inspections and police.

For the time being, the overall EU accession process puts additional reform pressure on Serbia. It does that in a very concrete way through the *acquis* and the FB. The success of the reforms over the last 13 years can be evaluated by taking a look at the tax revenues – and reasons for their shortfalls.

5 MEASURING SUCCESS OF TAX SYSTEM REFORMS IN SERBIA THROUGH LEVEL OF TAX EVASION: SCALE, STRUCTURE AND DETERMINANTS

Tax evasion is an illegal activity. It can be defined as the forgone revenue from the overall sum of all taxable money income unreported with the intention to evade tax (Feige, 1990). Every government tries to keep tax evasion as low as possible. Nevertheless, tax evasion is a widespread problem in all countries[11], especially in transition countries because of the weak and not fully functioning institutions. It is due to inadequate organizational structure to capture tax evasion, lack of sufficiently trained personnel to detect sophisticated tax evasion techniques, inadequate training, and insufficient resources to retain skilled personnel (Martinez-Vazquez and McNab, 1997). Tax evasion has an important effect on the whole economy through direct (budget deficits and investment in public goods) and indirect (welfare

[11] See OECD (2014) for recent data.

loses due to shift to economic activities where taxes can be evaded) consequences. Tax evasion also harms doing business environment, by putting fully-compliant taxpayers in relatively worse position, compared to those who tend to evade taxes. A high level of tax evasion reduces government's ability to provide adequate public goods (Torgler, 2004) as well as to implement important reforms. Surveys of taxpayers in countries such as Australia, the Netherlands, Sweden and US showed that about one quarter of respondents actually admits to deliberately under responding income on their tax returns (Hasseldine and Li, 1999). This also holds true for Serbia (GIZ Survey 2012, 2013).

Of course, in a global economy, tax evasion is not a one-dimensional problem, at all. Thus, in September 2013, G20 leaders called the OECD to develop a roadmap showing how developing countries can overcome problems with tax evasion. In 2013 alone, around 1300 tax information exchange agreements have been signed to battle international tax evasion (OECD, 2014).

All countries realize that a high level of the shadow economy is a big threat for their economies and for their sustainable development. The level of tax evasion corresponds to the extent of the shadow economy, but not entirely. The total level of tax evasion is smaller than the total size of the shadow economy. In order to estimate the level of tax evasion, the size of the shadow economy needs to be adjusted. This can be achieved by excluding the value of non-taxable activities from estimates on the size of the shadow economy. In that sense, here the term shadow economy is used to 'refer to the value of economic activity that would be taxable were it reported to the tax authorities' (Brooks, 2001). Accordingly, the level of shadow economy will be interpreted as a proxy to measure the level of tax evasion.

5.1 SCALE OF SHADOW ECONOMY AND TAX EVASION IN SERBIA

In many transition countries, the shadow economy is a major obstacle to the development of a strong corporate sector and the creation of a functioning market economy. This is the case in Serbia as well. According to Krstić et al. (2013), the share of the shadow economy in Serbia's GDP contracted from 33.2% in 2001 to 30.1% in 2010 (according to the MIMIC method[12]), but it remains very high. When compared with data for other countries, Serbia's levels were higher than the averages for the selected countries from Central and Eastern Europe. Only Bulgaria had a larger shadow economy than Serbia.

Estimating the shadow economy takes a broader concept than the tax gap, as it encompasses all taxable economic activities that take place informally. The tax gap is mainly caused by tax evasion, which is why these two terms are often seen as identical. Having carried out a detailed analysis of tax rates, volumes of consumption, etc., the authors of the same study were able to estimate the VAT gap at 2.5% of GDP and the tax gap for personal income tax and social security contributions stood at about 5% of GDP. When these estimates are extrapolated

[12] The MIMIC method used by Krstić et al. is a modelling-based approach. They covered Serbia and ten other Central and Eastern European countries between 2001 and 2010. The MIMIC method has a broad coverage, since it covers all institutional sectors and all forms of the shadow economy.

of tax gaps to all taxes, the authors found that 10% is an approximation of the overall tax gap in Serbia (Krstić et al., 2013).

According to the World Bank Survey on Conditions for Doing Business (2012), 28% of all business entities in Serbia claimed that their own enterprise was engaged in shadow economy. These enterprises and entrepreneurs employed workers informally and/or made payments in cash although they were VAT-payers. Almost 85.3% of the business entities surveyed stated that unfair competition caused by informal business was present in their industry. The results of the Survey also show that entrepreneurs, new start-ups, businesses in construction and those based in Central Serbia are more likely to engage in the shadow economy (Krstić et al., 2013). In addition to this, the study emphasized that business entities in the construction sector were almost twice as likely to operate informally as those in services, while entities in the trade sector were nearly two times less likely to do so.

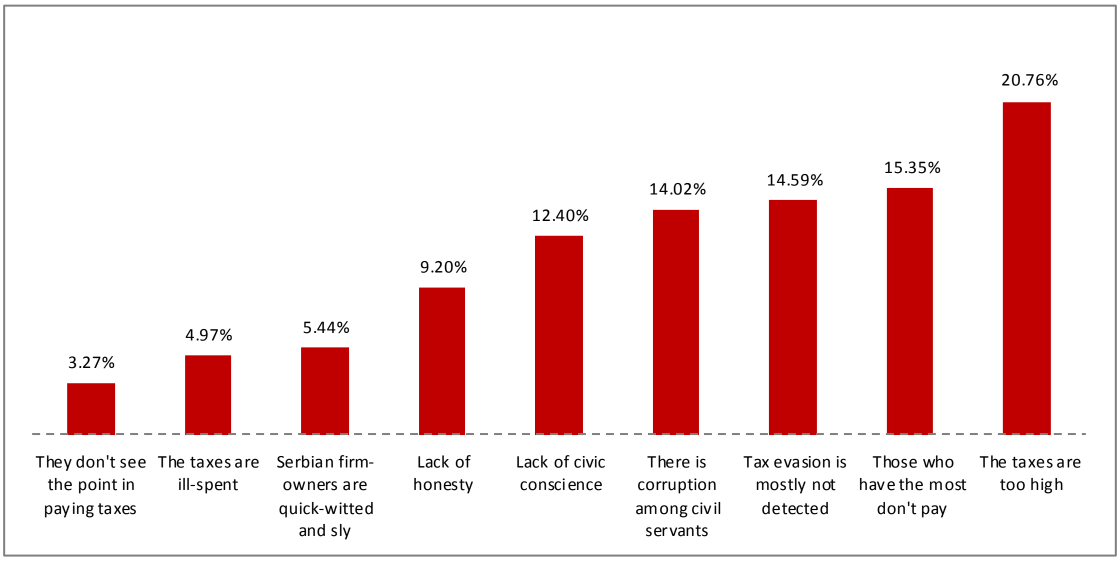
5.2 DRIVERS OF TAX EVASION

As mentioned before, one of the reasons for enterprises to operate in the informal economy was that benefits of such mode of operations outweighed the costs associated with moving to the formal economy. Higher economic development leads to a higher level of the formal economy and, as a result, a lower level of the shadow economy. The situation in transition countries is mostly characterized with a low level of economic development and a high level of the shadow economy. The TA is usually undeveloped and not able to operate efficiently, so low levels of effectiveness and efficiency are the main institutional characteristics in transition countries. The weakness of institutions in these countries and a high level of the shadow economy are serious obstacles for the budget revenues. As explained in the introduction part of chapter 4, during the planned socialism period 'resources for production of public goods were channeled primarily from state-owned enterprises to government budget' (Trasberg, 2004). In that context, TA as an institution was not so important because taxes were collected from a few big state-owned enterprises. On the other side, there was a low number of taxpayers (state-owned enterprises) and a high scope of discretion of tax administrators. (Grabowski and Tomalak, 2005). Planned socialism period was characterized with soft budget constraints toward these enterprises. In that context, taxes were not collected on the basis of tax rules and regulation but on the basis of negotiation between governments and enterprises (Gandullia, 2004). According to Trasberg, the post-communist legacy in transition countries produced mutual mistrust between taxpayers and the tax authorities, which materialized in the absence of a tradition of voluntary compliance with tax liabilities – a heavy tax-cultural heritage (Nerré, 2001).

However, there may be a variety of reasons why revenue levels and tax compliance rates are still low which are likely to differ depending on the context considered. This is why blueprints or one-fits-all tax strategies provide only limited guidance to the specific problems that Serbia faces. Given that any effort to increase tax compliance is costly and that resources on the side of the tax administration are limited, it is therefore essential to focus on the most important barriers towards greater revenue mobilization and tax compliance. This is where the representative Serbian Taxpayer survey carried out by GIZ tries to bring light into the dark. **Error! Reference source not found.**1 sums up several perceived reasons why firms evade taxes, most noticeably high tax rates (20.76%), the distribution of tax burden/fairness (15.35%) and lack of detection (14.59%). Other reasons are less important; in particular, firm managers apparently understand the point of paying taxes. These reasons essentially reflect priorities from the point of view of taxpayers about what needs to be done to increase tax compliance – i.e. cut tax rates, increase the fairness of the system, and last but not least increase the (perceived) probability of audit. As for the tax rates it can be stated, though, that they seem to be fairly in line with other countries of the region and not particularly high.

FIGURE 1

Reasons for not paying taxes in Serbia



Source: GIZ Survey[13], 2012.

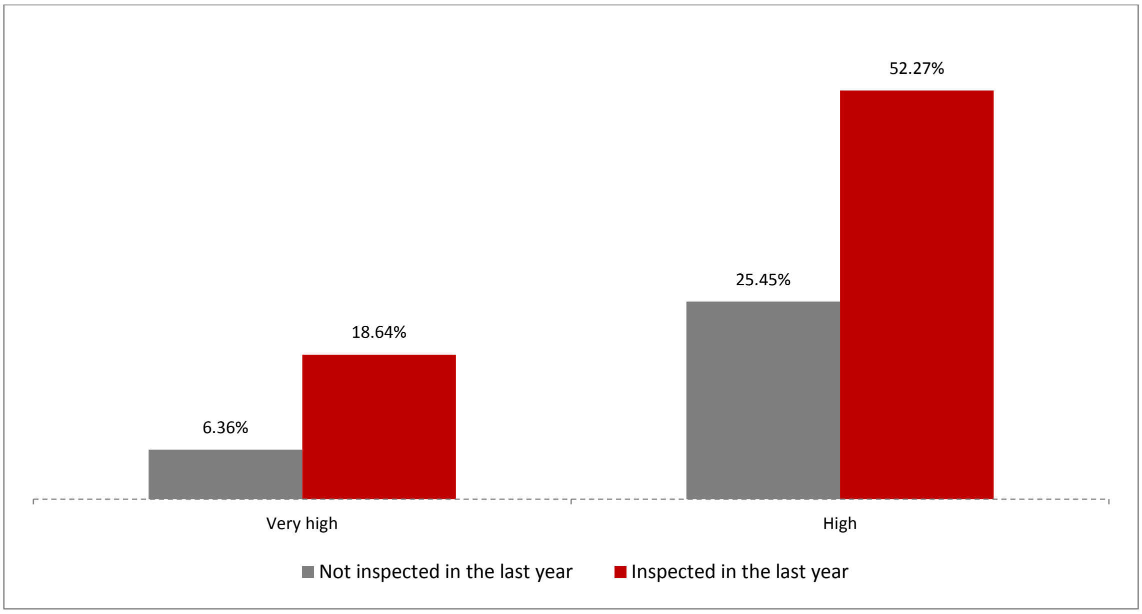
Corruption and bribery potentially undermine public revenue generation, both through reduced tax collection as taxpayers may seek to reduce their tax obligation through the payment of bribes. According to the GIZ Survey, 15.46% of the respondents indicate that they have heard of instances where other firms made unofficial payments or gifts to tax officials. However, the share of firms that refused to answer or said "don't know" accounts for 19.4% of total responses, which shows the obvious: the question is sensitive, even though sophisticated methods to ease an honest answer have been used in the survey (see Kundt/Misch/Nerré, 2013). Nevertheless, nearly half of the firms (49.76%) believe that corruption is a major or very severe obstacle for their current operations. The number decreases with firm size (micro: 51.83%; small: 47.09%; medium: 40.9%), and the difference between micro and medium firms is statistically significant.

[13] The survey contains questions that help measuring the extent of tax evasion of income taxes and payroll tax and complements other evidence. The sample was representative across all micro, small and medium business entities registered at the Serbian Business Register (2011). The survey has up to now been carried out twice (2012, 2013).

In the terms of its influence on tax evasion, the importance of inspections and audits has somewhat declined. Even if inspections and audits are carried out on a recurrent basis, the perceptions of their likelihood are crucial for whether this deters firms to evade taxes, or not. Conversely, even infrequent audits may deter firms from tax non-compliance if they perceive these audits to be carried out frequently. Almost sixty percent (58.64%) of the respondents think that the chance of being carefully audited by STA in 2013 is 'Very high' or 'high'. However, the results strongly depend on the audit history of the firms. 70.91% of the firms that have been audited in the last year answered 'Very high' or 'High', while only 31.81% of the firms that were not inspected have the same perception.

FIGURE 2

Perceived probability of inspection

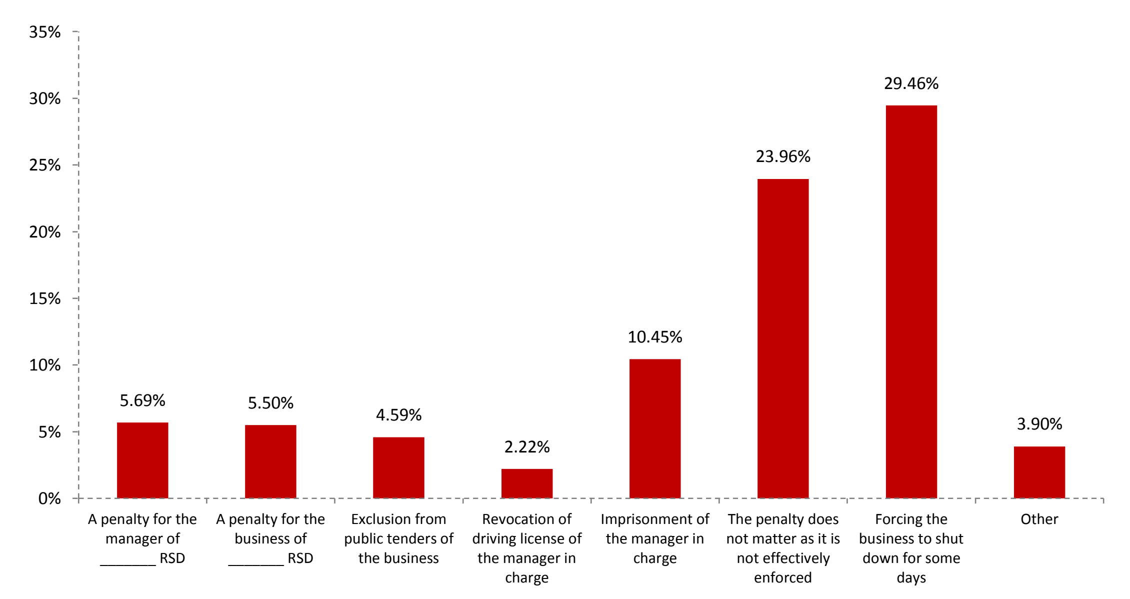


Source: GIZ Survey, 2012.

Furthermore, penalties are another deterrent for potential tax evaders. Again, the perception of their severity rather than their actual severity is critical. The perceived severity of penalties associated with different taxes and contributions is strongest for the VAT in Serbia: 28.67% of the respondents believe that fines for not meeting VAT obligations are the most severe. The majority (58.53%) states that all penalties are equally severe. The least severe according to 12.56% of the respondents are penalties for not paying unemployment contributions. However, when it comes to the enforcement of penalties, 23.96% of the firms say that VAT fraud cannot be deterred because penalties are not effectively enforced. In addition, a significant share of respondents thinks that a deterring penalty would be the temporary and compulsory closure of tax-evading firms. Figure 3 shows what penalty as stated in the law would deter VAT non-compliance most effectively according to the GIZ survey.

FIGURE 3

Perceived effectiveness of penalties for VAT non-compliance



Source: GIZ Survey, 2012.

5.3 EFFECTIVE ANTI-EVASION POLICY MIX

An adequate organizational state structure will increase the specialization of tax administrators and an adequate management state structure will increase the professional skills and readiness of tax administrators to bear with taxpayers. Increasing knowledge, professional skills, and specialization of tax administrators will increase their autonomy. Increasing autonomy of tax administrators results in a lower level of tax evasion. There is no unique answer how to position the TA in the overall government structure. For transition countries, it has been argued that TA should be part of the Ministry of Finance. The main argument for such decision was fear of political influence on the TA. Actually, it has been assumed that there is a link between the level of independency of TA on the one side and the level of democratization in the political system on the other side (Ott, 1998). In that sense, a higher level of independency may be allowed only if there is a higher level of democratization in political system.

Beside a strong enforcement strategy (tax audit and penalties), focus on taxpayer services is an additional element to increase the level of tax compliance. Treating taxpayers as clients, not as criminals whose main aim is to avoid paying taxes, will produce a positive effect on the level of tax compliance. In addition to that, a client-oriented internet web site is additional important element to increase the level of communication between taxpayers and TA. In that sense, the education of taxpayers using innovative means (TV shows, social media etc.) is essential for increasing the level of knowledge, awareness, and willingness of taxpayers to comply with their obligations. Also, establishing an adequate organizational state structure, without adequate management state structure, and the other way around, will produce weak institutions for collecting taxes.

Evasion costs are higher when the time between an act of evasion and its detection is shorter. Shorter time length can be achieved only with highly educated and autonomous tax administrators able to detect tax evasion. The more trained and specialized staff will be able to provide better information than less skilled employees. According to that, there is a positive correlation between capability of tax administrators on one side and evasion costs on the other side. In addition, establishing a taxpayer-oriented approach, besides enforcement strategy, will have a positive influence on the level of collected taxes. Last but not least, in the context of reform of TA, focus should be on the following organizational and management state structure: clear positioning of TA within the overall government structure, level of TA autonomy, internal organizational structure within the TA, the setup of Large Taxpayer Units (organization - state structure) and the setup of modern human resource management within the TA, including the focus on taxpayers (Gill, 2003).

In order to fight against grey economy in a more systematic way, the MoF has recently decided to establish a group to fight against grey economy. The group consists of representatives of STA and MoF. The main goal is to identify the most risky industries, to do the profile of industries, and to define an action plan. According to the available data, the Group has done a segmentation of taxpayers according to the tax compliance criteria with possible initiatives how to mitigate the tax compliance risks. Bearing in mind that an efficient fight against the grey economy requires cooperation among different government institutions, there will be a need in the future to expand this group with representatives of other institutions (customs, police, etc.).

6 CONCLUSION AND LESSONS LEARNT

Tax policy and tax administration are the most important part of every tax system reform. Both of them should be reformed in the same time in order to increase levels of tax collection. Reforming tax policy is worthless if the TA stays unreformed. To implement tax policies properly an effective tax administration is necessary. In that context, transition countries are confronted with difficult tasks. Planned socialism legacy produced inadequate tax policies on one side and weak tax administrations on the other side. Radical reforms are required in both areas. Transition countries did not have time to gradually reform tax systems, because the financial system was 'ailing'. Radical changes were the only option. However, transition countries mainly decided to reform tax policy while reforming tax administration was not the priority. In retrospective, this can be called a major mistake. Reasons for such decisions are broad and explainable but not reasonable. Namely, reforming tax policies required less time and energy than reforming tax administration. Tax policy reform is a necessary short term process, while tax administration reform is a necessary long term process. Even the benefits from adopting a modern and effective tax policy, without tax administration reform, are possible on short term basis, in the long term run these benefits will be neutralized. Furthermore, the output of the whole process will be negative. Instead to increase levels of compliance, the country will be confronted with an increasing level of tax evasion and lack of money in the state budget. In order to avoid this situation, parallel process of reforming tax policies and tax administration is necessary. Even more, it can be claimed that tax policies are only as good as the tax administration is.

In transition countries, the TA is – at least in the beginning of the reform process – undeveloped and not able to operate efficiently. As a result, a high level of tax evasion is present. In addition, there is lack of transparency in TA activities and enterprises did not know what other companies in similar circumstance paid. Actually, planned socialism legacy produced weak institutions for collecting taxes unprepared to bear with tax evaders on one side and with lack of focus on taxpayers on the other side.

Low tax morale and fierce tax resistance have been prevalent not only during the days of the Republic, when this was apparently due to bad taxation techniques. Containing tax evasion and increasing public revenue levels in the face of pressing and essential spending needs remains a primary concern of the Serbian government.

To sum up, the situation in Serbia could be described as follows: (1) STA is on its way to acquire the necessary capacities to carry out the functions of a modern TA. (2) Frequent political changes have also led to very high turnover of STA top and middle management resulting in both, (3) no clear-cut reform strategy over the last years and (4) a lack of ownership for the TA reform process. (5) Capacities at the MoF for drafting tax laws – in the sense if the organizational set up and a sufficient number of employees – are still lacking. (6) As a heritage of the socialist time taxpayers do not really understand why to pay taxes and distrust the government per se.

Lessons learnt for countries in transition include: (1) Capacity development of the TA should be of highest priority. (2) Political stability is desirable, or at least the professionalization of tax administration management functions. (3) Try to achieve a credible commitment by all stakeholders involved to follow a medium-term reform strategy. (4) Secure ownership of the reform process – possibly through the establishment of a PMO or a similar strong unit within the TA. (5) Ensure also the necessary capacities for drafting tax laws – ideally in cooperation with the TA (legal sector). (6) Invest in taxpayer education measures – not only a website, but modern and innovative approaches to bring the topic of taxes closer to citizens (like TV shows, public events etc.).

All in all, everything is about people. On the one side the right amount of the right people has to be at the right place. And on the other hand, taxpayers have to be convinced that paying taxes makes a lot more sense than refraining from complying with the tax laws. For transition countries, reforming their tax systems is about reforming their societies. But it is also about stability of the reform environment and about sustainability. These processes are never easy – and take a significant amount of time. The Serbian case clearly illustrates that.

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TAX REFORMS: EXPERIENCES AND PERSPECTIVES THE CASE OF REPUBLIC OF MACEDONIA

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JEL CLASSIFICATION: H20, H21, H24, H25

ABSTRACT

Tax reforms in Republic of Macedonia started in 1993 and were connected with political, economic and cultural changes in the early years of the state independence and at the beginning of transition period. The next crucial reforms took place in 2000 and in 2006 and they have been driven by the commitment gradually to harmonize with the EU law and by the desire to improve further the economic environment. The main objective of the paper is to provide an overall review of the major Macedonian tax reforms undertaken in the last few years and the crucial reforms` benefits. Principal conclusions are that the determination of the government for euro-atlantics integrations and efficient and competitive tax environment encouraged successful tax reforms in Republic of Macedonia as a gradual process of adaptation, although a lot has to be done in future.

Keywords: tax system, flat tax, simplicity, efficiency, tax administration, tax modernization

1 INTRODUCTION

Republic of Macedonia had faced a number of challenges and difficulties since declaring its independence (September 8th 1991, Independency Day of Macedonia), pursuing a political and economic reform aimed to build a democratic society and open market economy. One of the most important challenges was the need of new tax policies, which would replace those inherited from socialist regime, designed to promote economic growth through the expansion of private enterprises.

In view of the role of taxation as one of the key elements for successful global economic reforms, the task of designing a new tax system and reforming the tax administration gained high priority on Government's agenda of post-independence Republic of Macedonia. The main objectives of the first tax reform of 1993 were to create a modern tax system, consistent with an open market economy, to be: (a) efficient in ensuring stable and optimal amount of public revenue for financing the supply of public goods; (b) internationally comparable and competitive; (c) simple for application and "difficult" for evasion; and (d) flexible, in terms of immediate reaction to changing economic conditions. These objectives were to be achieved through wide implementation of the *neutrality principle* in the domain of taxation, to the contrary of the former tax system, which relied heavily upon built-in non-neutrality's, and followed, rather unsuccessfully, the philosophy of fiscal *interventionism* (Pendovska, 2004).

The new fiscal system is based on market principles, private property, competitiveness, modernization of the system and orientated toward convergence to the European Union. The new tax system from 1993/94 introduced the following types of taxes, typical to modern tax systems: income taxes (corporate income tax and personal income tax), consumption taxes (VAT, excises, custom duties etc.) and property taxes (property tax, tax on inheritance and gift, tax on real estate turnover). New important principle was the repeal of the higher number of contributions and their replacement with taxes. Only the contributions for social funds were kept i.e. the contributions for health, pension and disabled insurance. It was promoted also the principle of transferring the tax burden from direct to indirect taxes, which meant reduction of the income taxes and increasing the consumption taxes. In this function it was also the introduction of the Value Added Tax (VAT), from 1st of April 2000, replacing the previous Turnover Tax.

2 LEGAL FRAMEWORK OF THE CURRENT MACEDONIAN TAX SYSTEM

As previously mentioned, the main taxes, now, applicable in the Republic of Macedonia are: personal income tax, profit tax, property taxes, VAT, excises, and customs. The current Macedonian tax system is a centralized system in terms of collection of fiscal and quasi-fiscal levies, the last, radio and TV fee.

2.1 PERSONAL INCOME TAX

The Law on Personal Income Tax (Off. Gaz. RM no. 80/93 as amended no. 80/93, 70/94, 71/96, 28/97, 8/01, 50/01, 52/01, 2/02, 44/02, 96/04, 120/05, 52/06, 139/05, 160/07, 159/08, 20/09, 139/09, 171/2010, 135/2011, 166/2012, 187/2013 and 13/2014) regulates the tax liability of natural persons, or of individuals. The revenues made by the citizens, in country and abroad, are being taxed with the Personal Income Tax (hereinafter: PIT). PIT is paid annually for the sum of the net revenue from all sources, except for the revenues that are tax exempt by this Law. A taxpayer for the PIT is:

- Resident of Republic of Macedonia - a citizen who makes revenue in country and abroad (world income principle);
- Non-resident of Republic of Macedonia - a citizen who makes revenue on the territory of the Republic;
- Sole proprietor;
- Citizen who performs agricultural, handicraft activity and a person who provides services or free activities, that is not considered being a merchant (notary, lawyers, executors, professors, artists, priests etc.);
- Citizen who performs activities unregistered and makes revenues that are subject to taxation.

An individual is a resident of the RM if he or she has a permanent or temporary residence in the RM. An individual is considered to be resident in the RM if he or she is present in the RM either continuously or with interruptions for 183 or more days in any 12-month period. Taxable income is computed in a way that all income – except tax-exempt income – is aggregated, and then personal allowance is deducted as well as social security contributions and other taxes, and a flat tax rate is applied.

Generally, the following types of income received by individuals are subject to personal income tax:

- Personal earnings (salaries and allowances arising from employment, performance based remuneration (for example, bonuses) and fringe benefits; pensions; income realized by members of management and supervisory boards of enterprises; income realized by officials, members of parliament, advisers and similar high-level persons; income realized by professional sportsmen; sick-leave allowances; annual leave allowances; allowances for judges and jury members, forensic experts and receivers not employed by the respective institutions or enterprises; compensation and remuneration paid to the members of the Macedonian Academy of Sciences and Arts; salaries earned and paid abroad based on employment contracts with Macedonian employers; income derived from rendering services under contracts with entities and individuals on a temporary or occasional basis);
- Self-employment income (income from the following types of activities: business activities; professional and other intellectual services; agricultural activities; other activities with the objective of realizing revenues);
- Income from property and property rights (income earned through the lease or sublease of land, residential or business premises, garages, leisure and recreational premises, equipment, transportation vehicles and other types of property);
- Income from copyrights and industrial property rights (payments received for the use of, or the right to use, such items);
- Investment income (dividends and other income realized through participations in the profit of legal entities and non-corporate entities; interest on loans granted to legal entities and individuals; interest on bonds or other securities. Interest on time savings and other deposits are exempt from taxation to the date of the accession of the Republic of Macedonia to the European Union.);
- Capital gains (income realized through sales of shares of capital and real estate. Capital gains realized from the sale of securities are not taxable from 1 January 2013 to 31 December 2015);
- Gains from games of chance and other prize games (each amount of gain exceeding MKD 5,000 from games of chance and other prize games);
- Other revenues (any income that is not specifically mentioned in the Personal Income Tax Law as being exempt from tax is other income, of which 65% is taxable. Other income includes income realized by acquiring securities and equity shares without consideration if the income is not taxed under the law on property taxes. For such

income, the basis for the calculation of the tax is 100% of the market value on the day of the acquisition).

Certain payments decrease an individual's taxable income, including mandatory health insurance, pension and disability contributions, as well as voluntary contributions up to certain thresholds, made on behalf of the taxpayer. There is a statutory personal tax allowance which is deductible from the tax base when calculating personal income tax on salaries. The amount of personal allowance fixed by PIT Law for 2014 is MKD 84,000 (approximately EUR 1,460), on an annual basis. Deductions for donations made to certain qualifying institutions are also allowed up to an amount of MKD 24,000 (approximately EUR 400) if certain conditions are met. There are also statutory deductions for particular types of non-employment income (such as income from immovable property, royalties, etc.) determined either as a fixed percentage of the gross income or at the level of the actual expenses incurred, if these are properly evidenced by documents. The statutory deductions vary in a range of 25% to 60% depending on the type of income received.

Exempt income generally includes the following types of income:

- interest on demand deposits, term deposits and current accounts, as well as interest under securities issued by the Republic of Macedonia or local self-government;
- disability pensions;
- scholarships granted by government bodies and registered non-for profit organizations;
- per diem allowances for business trips within the approved limits;
- specific type of rewards;
- compensation for a period of unemployment;
- children allowances;
- certain types of income received on the basis of insurance contracts; and
- certain types of compensation provided under the Labour Relationships Law of the Republic of Macedonia.

In addition, salaries of employees at a taxpayer operating in a technological industrial developing zone are exempt from PIT for a period of 10 years after the commencement of activities in the zone. Thirty per cent of the capital gains from the sale of immovable property, securities and equity participations are exempt from personal income tax, i.e. PIT is due on 70% of the realized gain.

The personal income tax liability is determined on a calendar year basis. The deadline for the submission of an annual personal income tax return is 15 March of the following calendar year. Individuals who derive only income from employment (with the exception of those individuals who receive employment income from abroad or from diplomatic or consular offices in Macedonia) and/or pensions, or agriculture income are not obliged to file an annual personal income tax return. The annual personal income tax liability is ultimately determined by a decision of the respective tax office based on the annual personal income tax return submitted by the individual. The tax office should issue the decision for the determination of the annual personal income tax liability within 60 days from the date of the filing of the tax return.

2.2 CORPORATE INCOME TAX

All legal persons conducting registered activities in Macedonia are liable for profit tax. Similarly to the *Personal Income Tax Law,* a distinction has been made between resident and non-resident taxpayers. Accordingly, residency of companies is to be determined under the "place of incorporation and registered seat" criteria. Under the Law on Profit Tax (Off. Gaz. RM no. 80/93 as amended no. 33/95, 43/95, 71/96, 28/98, 11/01, 2/02, 44/02, 51/03, 120/05, 139/06, 160/07, 122/08, 159/08, 85/10, 47/2011, 135/2011, 79/2013 and 13/2014) taxpayer of CIT is:

- Legal entity (entity) – Resident of Republic of Macedonia that gains profit by performing activity in the country and abroad.
- Taxpayer of the Corporate Income Tax is also a permanent establishment of non-resident for the profit realized by performing activity on the territory of the Republic of Macedonia.

Legal entity is a Macedonian resident for tax purposes if it is established or has headquarters on the territory of the Republic of Macedonia.

The generally accepted concept is that resident companies should be taxed on their worldwide income (i.e. the gross income realized from their regular business activities in domestic and foreign countries). Since April 2011, the tax base is defined as a sum of the taxable expenses (or payments subject to income tax) and the underestimated revenues. The first category, and that is “taxable expenses” refers to those expenses that are not excluded from taxation which actually form the tax base. By definition, it is considered that taxable expenses are not primarily connected with the firm’s regular business activities and therefore are subject to income tax. The second category, “underestimated revenues”, refers to the transactions between connected legal and individual entities. The difference between the gross earnings book value and the tax on taxable expenses and underestimated revenues is subject of additional tax only in the case of distribution of the earnings (in a form of dividends or other forms of income distribution), when a withholding tax of 10% is applied. If the difference is negative, then a loss after taxes is generated, and in that case tax entities have a legal right to carry it forward in the next 5 (five) years.

Some of the major taxable items include (the list is not all inclusive):

- Expenses not related with the taxpayer’s business activities;
- Payments for employment-related expenses, such as: food and transportation, business trip expenses, use of a private vehicle for business purposes, severance payments, retirement allowance etc. exceeding prescribed limits;
- Monthly personal allowances for executive and non-executive directors in the amount exceeding fifty per cent of the monthly average salary, as well as the total amount of the insurance premiums;

- Voluntary pension contributions exceeding four average monthly salaries per employee on an annual basis;
- Donations exceeding 5% and sponsorships exceeding 3% of total revenues;
- Hidden distributions of profits which include providing goods or services at prices below arm's length to shareholders or parties related to them, including lower interest rates on loans granted, unjustified shortages, etc.;
- Interest expenses on loans falling under the thin capitalisation rules (refer below for more details);
- Withholding tax, borne as a cost by a Macedonian taxpayer;
- 90% of entertainment expenses.

Additionally, write-off and impairment of receivables (except in the case of banks, saving houses or insurance companies) are generally not recognized for tax purposes, i.e. generally considered as non-deductable expense and subject to 10% tax. Write-off and impairment of receivables are tax deductable in case they are accrued as the result of a court decision or if the receivables are duly reported in the course of a bankruptcy or liquidation procedure.

There are 2 basic measures involved in protecting the tax base from tax planning activities and income shifting: the *thin capitalization rules* and the *transfer pricing rules*. These measures were not fully developed in the previous versions of the Law. According to the latest version, the thin capitalization rules regulate the treatment of interest payments for the purpose of taxation. Generally, interest payment on loans borrowed for the purpose of the regular finance activities are treated as a non-taxable expense, and therefore are not included in the tax base. On the other hand, interest payments that are not part of the regular business activities are considered as a taxable item and consequently, are included within the tax base. More precisely, the group of taxable interest payments is consisted of the following items: 1. interest expenses on delayed payments; 2. interest payments on loans from connected legal entities that are not considered as banks or other financial institutions, above the normal market interest rate; and 3. interest payments on loans from non-resident stockholders that hold minimum of 25% of the corporate equity, if the loan exceeds 3 times above the capital participation of the individual stockholder (as debt-to-equity ratio of 3:1). Rules that regulate the transfer of the profit between connected entities are based on the principle of the arm's length prices. According to this principle, only the transfer prices that are comparable to the competitive domestic and foreign market prices are recognized for the purpose of taxation. Any difference between the transfer prices and the competitive market prices must be included within the tax base.

If there is a decision for distribution of the profit after the calculation of the CIT (or the tax on taxable expenses and underestimated revenues), then corporations are obligated to withhold the tax on capital income. According to the tax rules, every form of income distribution from a domestic legal entity to any other domestic legal entity is free from taxation (zero rate withholding tax on the transfer of the profit). Resident legal entities are obligated to apply withholding tax on capital income only in the case of distribution of the profit to foreign legal and individual entities and domestic individual entities. Revenues on which there is withholding tax are from:

- dividends;
- an interest of resident;
- interest of non-resident who has permanent establishment in the Republic of Macedonia, if the interest is at the expense of the permanent establishment;
- royalties paid by a resident;
- royalties paid by non-resident with permanent establishment in the Republic of Macedonia, if the royalties is at the expense of the permanent establishment;
- entertainment or sports activities that are performed in the Republic of Macedonia;
- conducting management, consulting, financial services, research and development services, if the revenue is paid by a resident or is at the expense of the permanent establishment in the Republic of Macedonia;
- insurance premiums for insurance or reinsurance of risks in the Republic of Macedonia;
- telecommunication services between the Republic of Macedonia and a foreign country; and
- rental property in the Republic of Macedonia.

The withholding tax rate of the revenues gained by the foreign legal entity since 2008 and onwards is 10%. If the recipient of the revenues is a resident of a country with which the Republic of Macedonia has signed an Agreement for avoiding double taxation regarding the taxes of income and capital, the taxation and the applied tax rate cannot be higher than the tax rate applied for the revenue determined in the Agreement.

Resident taxpayers have the right to credit tax paid aboard in accordance with the provisions of the respective double tax treaties up to the tax determined by applying the domestic tax rate of 10%.

The taxation year is identical with the calendar year, and companies must submit their annual corporate income tax return due to February 28th of the following year. All entities operating in Macedonia must make 12 advance payments of corporate profit tax by the 15th day following the end of each month. If, at the end of the taxation year, it is determined that the total of the advance payments exceeds the tax due for the year, the excess may be credited against future tax obligations or alternatively refunded.

2.2.1 THE FLAT TAX SYSTEM IN THE REPUBLIC OF MACEDONIA

The Government of Macedonia introduced a number of supply-side policy measures at the end of 2006 aiming to reduce the tax burden and improve the business environment. The main pillars of the tax system reform were the elimination of the progressive system of personal income tax, the reduction and unification of the statutory rates for the personal income and corporate taxes, and introduction of zero tax rate on reinvested profits. The so called flat tax refers to personal income and corporate profits being taxed at one marginal rate (12% in 2007 and 10% in 2008 onwards). The Macedonian system of flat taxation was introduced in 2006 by amending the Law on Personal Income Tax from January 31 2006 and the Law on Profit Tax also from January 31 2006. Specifically, with the amendments to the Law on Personal Income Tax the three existing tax rates of the income tax, from 15% for income up to 360 000 MKD, 18% of income from 360 00 to 720 000 MKD 54 000 +18% of the share of income from 360 000 to 720 000 MKD, and for income above 720 000-118 800 +24% of the portion of income over 720 000 MKD, were replaced with a single rate of 12% in 2007 with its reduction at 10% in 2008. The rate of profit tax of 15% was replaced with 12% in 2007, decreased to 10% in 2008.

Along with the general tax rate reductions, came more incentives in favour of the free economic zones, i.e. so-called technological -industrial zones. Companies that invest in these zones will be completely exempt from paying profit tax for the first ten years, and with regard to income tax, the user of the zone is exempt of paying PIT for salaries of the employees in period of 10 years, from the start of performing of the activity in the zone, i.e. from the first month in which the user will perform the payments of salaries, regardless of the number of employees. Such tax policy was welcomed by the IMF and a number of independent experts, but not by the EU because the move means forgoing tax legislation in Macedonia from the EU law – acquis.

Desperate for foreign direct investment inflows, burdened with high unemployment and willing to provide impetus for vigorous restructuring, the Government of Macedonia decided to design competitive tax system. Positive experiences from other countries (Estonia, Lithuania, Latvia, Russia, and Slovak Republic) that have already introduced the flat tax system gave strong justifications for the tax reforms.

The Macedonian government that introduced the Flat tax (that is re-elected for the fourth time continuously) intended to illustrate and demonstrate that tax players (the state budget and financial institutions appetite) will be satisfied and tax payers will be complacent with reduced tax rates. Flat tax has insured this.

Additional strength that inspired Macedonian authorities to engage in adventure of reduction of the tax rates was, also, the requirement for decreasing the tax evasion and grey economy, that were almost a key trade mark of Macedonia, not only Macedonian but in all other ex federation' states. At this moment, Macedonia has new trade mark that can be called EPS, meaning *Everybody Pays Taxes*. Surely, the flatting of tax rates of income taxes, the lowest tax rate in Europe of 10%, made it accurate. Macedonia, also, endorsed the rule: "High taxes, low growth and *vice versa*, low taxes, higher economic growth". With the introduction of the flat tax model Macedonia became a leader in Europe amongst countries with lowest taxes, along with Kyrgyzstan and Kazakhstan (Pendovska and Dzafce, 2009).

The flat tax system adopted in Macedonia is the so-called proportional model with single tax rate and many non-standard deductions. The tax base is the individual income or the legal entity profits. The main feature of the system is a single tax rate for personal income tax and for profit tax amounting to 10% (Article 12 of the Law on Personal Income Tax and Article 28 of the Law on Profit Tax). Namely, earned income, business income and capital gains are taxed at a flat rate of 10% regardless of the amount of income that is earned or profits generated.

2.3 VALUE ADDED TAX

Generally, VAT (*Law on Value Added Tax*, Off. Gaz. RM no. 44/99 as amended no. 59/99, 86/99, 11/00, 8/01, 21/03, 19/04, 33/06, 45/06, 101/06, 114/07, 103/08, 114/09, 133/0995/2010, 102/2010, 24/2011, 135/2011, 155/12 and 12/14) is due on the supply of goods and services in the country sold/carried out from the taxpayer in the course of his economic activities. “Supply” refers to goods or services provided in exchange for consideration. However, certain transactions carried out for no consideration are also considered to be supplies, for example, private use of business assets.

The following transactions are generally subject to Macedonian VAT:

- supplies of goods or services whose place of supply is in Macedonia; and
- import of goods into Macedonia.
- VAT can be charged only by VAT registered persons. An obligation to register for the purpose of the Value Added Tax has the taxpayers that:
- in the previous calendar year made a total turnover higher than MKD2.000.000;
- during the calendar year makes a total turnover over MKD2.000.000;
- start to perform an economic activity, if they anticipate they will make a turnover over MKD2.000.000.
- the taxpayer can register for VAT purposes on voluntary bases if:
- in the previous calendar year made a turnover less than MKD2.000.000 on an annual level;
- start to perform an economic activity, but due to the amount of the assumed turnover are not obliged to VAT registration, which means they anticipate future turnover less than MKD2.000.000.

Taxpayer of the Value Added Tax (VAT) is a person who permanently or periodically performs an economic activity, regard-less of the goals and outcomes of that activity. Taxpayers of VAT can be legal entities and physical persons, as well as association of entities that realize income within the framework of their economic activity. Taxpayer of VAT can also be legally independent entities who are closely associated in ownership, organization and management - associated VAT entities.

The taxation with Value Added Tax is made on the turnover of goods and services which is done with compensation in the country by the taxpayer in the framework of his economic activity and the import of goods. Tax base for the Value Added Tax is the total amount of the received compensation, or the amount that should be received for the turnover, where the Value Added Tax is not included. To this compensation belongs everything that the recipient gives in order to receive the good or to use the service (VAT does not belong to the compensation).

- For turnover in the country - tax base is the total amount of the compensation received or the amount that should be received for the turnover, in which the VAT is not included.

- When taking goods which are part of the company's assets for the taxpayer's personal needs or of his employees, for the turnover of goods without compensation towards the owners of equities, members and their close persons, as well as withholding goods from the taxpayer by termination of the economic activity - the purchase price or if it does not exist, the cost at the moment of the turnover.
- When using goods that are part of the company's assets for the taxpayer's personal needs or of his employees, when providing services without compensation for taxpayer's personal needs and his employees or to the owners of equity, members and their close persons - the expenditures for the provided services.
- When the compensation for the turnover of good or service consists completely or partially in the turnover of other good or service - the market price of the received good or received service.
- For the turnover made by an auction - the final achieved price.
- For the turnover of used goods (motor vehicles, art and collectibles and antiquities) - the difference between the sales and the purchase price, if for the transportation to the taxpayer the tax is not owed.
- For importing goods - the tax base is the value of the imported good determined according to the customs regulations.

VAT is calculated according to proportional tax rates, as follows: general tax rate of 18% and preferential tax rate of 5%. A reduced VAT rate of 5% applies mainly to supply of the following goods and services:

- food products for human consumption;
- agricultural equipment and mechanization, seeds and planting materials for production of agricultural crops, fertilizers and materials for plant protection;
- drinking water provided from public systems;
- publications, except for publications mostly related to advertising and publications with pornographic content;
- pharmaceuticals and medical devices;
- machines and software for automatic processing of data and their units (computers);
- solar heating systems and their components;
- transportation of passengers and their luggage;
- medical equipment and other devices for the purpose to facilitate or treat a disability for the personal use of disabled persons;
- communal and waste disposal services;
- hotel accommodation services;
- supply of new apartments for residential purposes sold within five years after they are constructed (subject to reduced VAT rate until 1 January 2016).

The period for which the VAT is calculated and paid is a tax period which depending on the turnover made, it might be:

- calendar month - in case the total turnover in the previous calendar year exceeded the amount of MKD25 million;

- calendar quarter - if the total turnover in the previous calendar year did not exceed the amount of MKD25 million;
- calendar year - for the voluntarily registered taxpayers and if the total turnover in the previous calendar year did not exceed the amount of MKD2.000.000.

From 1st of July 2014 the possibility for VAT tax period to be a calendar year will be abolished, as the status of the all annual VAT taxpayers will be changed to quarterly VAT taxpayers.

If the previous tax in a certain tax period is higher than the amount of the tax which is calculated for the turnover, the difference is refunded to the taxpayer upon his request stated in the VAT tax return. If the taxpayer does not make a VAT refund request, the difference is transferred as an advance payment in the next taxation period. The deadline for tax refund is 30 days, after the day of submitting the tax return.

The tax exemptions and incentives for VAT may be:

- in the country without a right of deduction of the previous tax;
- in the country with a right of deduction of the previous tax;
- on imports;
- for special entities by VAT refund;
- for donations given in the public activities; and
- direct tax exemption on the turnover of goods and services for the purpose of implementation of projects funded by foreign donors.

2.4 PROPERTY TAXES

Along with the process of decentralization in the Republic of Macedonia, from 01.07.2005, property taxes (Property Tax, Tax on inheritance and gift, Tax on real estate turnover) are local taxes i.e. their administration is performed by the municipalities, as units of the local self-government and the City of Skopje, as a separate unit of the local self-government (*Law on Property Taxes*, Off. Gaz. RM no. 61/2004 as amended no. 92/2007, 102/2008, 35/11, 53/11, 84/12 and 188/2013).

2.4.1 PROPERTY TAX

Owners of immovable property situated in Macedonia are liable to property tax.

The tax is levied on the market value of the property on an annual basis, at a rate which ranges from 0.10% to 0.20%. This rate is determined by the municipality where the property is situated.

The person liable for the property tax is the owner (legal entity or an individual) of the immovable property, or the user of the property if a limited right to use the property was granted. The person using the property is liable for the property tax on immovable property owned by the Macedonian State.

The property tax is not paid for:

- Buildings and land owned by the state and used by the state and local government bodies;
- Buildings and land used for educational, cultural, scientific, social, health, humanitarian and sports purposes, excluding buildings respectfully parts of buildings and land that are exploited or are leased;
- Buildings and land owned by the Macedonian Orthodox Church and other religious institutions or used for non-religious procedures or living by other official personnel, except those used for business purposes;
- Business buildings in agriculture;
- Business buildings and premises used for doing business, except for administrative buildings;
- Buildings of public enterprises and institutions founded by the Parliament of the Republic of Macedonia, Government of RM, municipalities and the City of Skopje;
- Buildings and land of foreign diplomatic and consular representatives and international organizations' offices, if owned by them, on the condition of reciprocity;
- Residential buildings in the rural areas in the mountainous regions determined by the Government of RM;
- Damp (accumulations) for water supply, irrigation or production of power, as well as facilities built for the protection of land, waters, and air;
- Construction land;
- Facilities by companies used for engagement, professional rehabilitation and employment of invalids;
- Infrastructure facilities as: roads, railroads, ports, airports, and facilities which are their accompanying part if not used for revenue making purposes;
- Land owned by the State that is not used for economic exploitation or is leased such as: streets, parks, national parks, forests that are not used for revenue making purposes;
- Water areas that are not used for economic purposes;
- Land used for exploitation area in the mine industry and for geological research, and,
- Agricultural land that is used for agricultural production.

A taxpayer that owns a residential building or an apartment that he/she and their family use for living has a right of 50% decrease of the property tax.

2.4.2 TAX ON INHERITANCE AND GIFT

Certain individuals` inheriting property (movable and immovable) is subject to inheritance tax. A liability to Macedonian inheritance, estate and gift tax depends not only on the Macedonian tax residence position of the deceased/donor and of the beneficiary, but also on the Macedonian location of real estate and assets when the deceased/donor is not resident in Republic of Macedonia.

Inheritance and gift tax is paid for immovable property and for the right to usufruct and the usage of immovable property which the inheritors, i.e. the receivers of gifts inherit, i.e. receive on the basis of the law on inheritance, i.e. the gift agreement. Inheritance and gift tax shall be paid for cash, monetary claims, securities and other movable property if the market value of the inheritance, i.e. the gift agreement is higher than the amount of an annual average salary in the Republic of Macedonia for the previous year, according to the data from the state statistics office. The value of all gifts of the same type, received during one calendar year shall be considered one tax base.

Taxpayer of inheritance and gift tax shall be a natural person and legal entity – resident in the Republic of Macedonia that inherits property, as well as a natural person and legal entity that receive property as a gift, in the country and abroad. A taxpayer of inheritance and gift tax shall be a foreign natural person and legal entity – non- resident, for the immovable and the movable property it inherits, i.e. receives as a gift in the Republic of Macedonia.

Base for the inheritance and gift tax shall be the market value of the inherited, i.e. the property received as a gift, at the moment the tax obligation arises, reduced by the debts and the costs that are borne by the property which is the subject of taxation.

The tax rates depend on the relationship of the beneficiary to the testator or donor. Beneficiaries who are first degree relatives are not taxable. A gift tax is levied on donated property, as well as on property transferred without consideration. No gift tax is levied on property donated to spouses and immediate family members. The rate depends on the order of succession.

The inheritance and gift tax rates are in the following range:

- 2% to 3% for property inherited by/donated to brothers, sisters and their children;
- 4% to 5% for inheritance/gifts (donations) between unrelated persons.

The tax rate is determined by the municipality where the property is located.

2.4.3 TAX ON REAL ESTATE TURNOVER

The tax for the transfer of immovable property ranges from 2% to 4% and is levied on the market value of the property.

The tax rate is determined by the respective municipality where the immovable property is located.

Transfer tax is due by the seller of the property unless otherwise agreed between the parties.

Certain transfers of immovable properties are exempt from taxation including the transfer of an immovable property where contributed in kind for equity of a company, and the first sale of a residential apartment provided that the supply was subject to VAT.

2.4.4 FISCAL DECENTRALIZATION AND FINANCING LOCAL SELF-GOVERNMENT UNITS

The fiscal decentralization process in the Republic of Macedonia was stimulated by:

- The pressure of the Ohrid Framework Agreement, 2001 (which ended an armed conflict imposing local government's reorganization as a crucial requirement);
- Ratification of the European Charter on local self-government (Article 8, concerning a higher degree of local fiscal autonomy);
- Stabilization and Association Agreement (2001) and European Partnership (2004);
- The Government's categorical commitment to the European Union integration and the local democracy as its most important value.

For that purpose, a wide variety of legal acts were enacted. These provided the units of local self-government new powers and a higher financial autonomy. In addition, they redefined the relations between central and local government.

After the establishment of the normative preconditions, in July 2005, after the local elections, the process of fiscal decentralization began. The decentralization was envisaged in several phases, in order to circumvent the potential risk of the process of delegating responsibilities and adequate fiscal resources from central to local government for the fiscal and macroeconomic stability of the national economy.

The two-phased approach was envisaged by the Law on Financing Local Self-Government Units (Off. Gaz. RM no. 61/2004 as amended no. 96/2004, 67/2007, 156/2009 and 47/2011). Its provisions envisaged transition from lower to higher phase of fiscal decentralization, once the municipality has fulfilled certain legal conditions. An additional reason for the phased or asymmetric transfer of fiscal authority from central to local government was the diverse level of administrative, technical and financial capacity of the local authorities. The accepted model of decentralization was intended to give equal opportunities to all municipalities and to prepare them gradually for their new, expanded powers and fiscal empowerments.

The basic and most important benefit of the fiscal decentralization is the new system of financing local self-government with the following features:

- Autonomous local budget process;
- System of hard local budgets;
- Wide range of sources for financing local self- government. Beside the traditional revenues from local property taxes, the system includes shared revenues from the personal income tax and value added tax, as well as five types of dotations/grants/donations from central government; and
- Various possibilities for successful local financial management through a new system of accountability and control.

Macedonian municipalities have a variety of responsibilities, as: communal services; full school budget management (elementary and high schools) including payment of salaries; management and financing of social institutions or institutions for social protection and childcare; institutional and financial support for the cultural institutions and management of public health institutions (primary health care) through participation in the boards of directors of these institutions.

According the Law, municipality's proper revenues come from local taxes, local fees and user charges, revenues from property (rents, interests, dividends from enterprises owned by the municipality, revenues from sales of assets), fines, self-contribution, debt through bonds and credits from commercial banks, and donations. Apart from the own revenues, the municipalities had been assigned with four types of fiscal transfers (earmarked grant, capital grant, VAT grant and grant for delegated competences). The transfer was envisaged, in the place of the earmarked grant, for the second phase of fiscal decentralization. Earmarked grant is intended for financing a concrete activity in elementary and secondary education, social protection, fire protection and culture, or in order to cover the maintenance and facility management costs in these areas, but only for the purpose for which it is granted. Capital grant is a grant intended for financing municipal capital investment project. Shared revenues come from personal income tax (3.0% of the personal income tax from salaries of natural persons, collected in the municipality where they are registered with a permanent domicile and residence) and from VAT (4.5% of the total amount collected by the central government is transferred to the municipalities, in accordance to a well-defined methodology, taking into account the criteria of population, territory and settlement).

In the subsequent years of the second stage of fiscal decentralization, the Macedonian authorities responded to the demands of the local self-government units and implemented several legal acts that increased revenues from taxes and utilities fees. Hence, in 2008 the amendments on the Law on Property Tax abolished the tax exemption for business building and premises. These provided an opportunity for a significant increase of municipal revenues from this source; amendments on the Law on Communal Fees that determine larger amount of utility tax for street lighting were introduced; amendments on the Law on mineral resources which provide the right of the municipality to allocate 78% of contribution for exploitation of mineral raw materials obtained with Act on Concession were introduced; the new Law on Environment envisaged additional sources of revenues for municipalities; amendments were enacted on the Law on Value Added Tax which reduced the VAT rate from 18% to 5% for local services related to maintenance of public cleanness and waste disposal and, thus, created conditions for financial consolidation of local public enterprises delivering these services. Furthermore, in early 2011 new Law on Construction Land was introduced and the municipalities obtained the right to manage the state-owned undeveloped land which remains in state ownership. The revenues from the sale of land are divided - 20% belong to the central budget, while 80% belong to the local budgets (Maksimovska and Neshovska, 2012).

3 INSTITUTIONS

Macedonian Public Revenue Office (further in the text: PRO) is beyond doubt a very efficient young government institution (operates fully since 1994) that along with several other administrative bodies has been on the front run of reforming the entire government structure in line with the principles of the Macedonian Constitution (1991) and the newly enacted laws adopted in sovereign independent Macedonia. As noted above, reforming the old tax system which was inconsistent with an open market economy and democratic political system in RM was of high priority, and was substantially completed by the end of 1993 when several major tax laws have been adopted in Parliament (Pendovska, 2011). One of these laws enabled the establishment of a specialized state agency responsible for implementing the reformed tax legislation having a crucial role in insuring sufficient and constant flow of public revenue in the state budget.

PRO was created by the Law on Public Revenue Office and is operational since January of 1994 (Law on Public Revenue Office, Off. Gazette of RM, no. 80/93). In the beginning, it was something of a successor of the former State revenue office thus taking over its entire personal in addition to the staff of the so-called Office of Social Accounting coming from its inspection unit. The governing law on PRO today was enacted in 04.03.2014 (Law on Public Revenue Office, Off. Gazette of RM, no. 43/2014). The Law presents major piece of legislation and legal framework that regulates all relevant issues concerning the status of PRP, the scope of authority, internal organizational structure, the relevant procedures and management, as well as the powers and responsibilities regarding collection of taxes, maintaining data base of various information and protection of personal data of taxpayers, internal audit, inspections, investigations etc. The second major legislative source relevant for the operation of the PRO is the Law on Tax Procedure enacted in 2006 (Off. Gazette of RM, no. 13/06 as amended no.88/08, 159/08, 105/09, 133/09, 145/2010, 171/2010, 53/2011, 39/2012, 84/2012 and 187/2013). The Law represents a code of all procedural rules being put together in a single statute, thus derogating all previous rules scattered in various tax laws, with regard to determination and collection of taxes. Only the collection of local taxes (taxation of property) is regulated by different provisions.

PRO is a public administration organ with legal personality status, which operates within the Ministry of Finance. PRO is run by Director appointed for a 4 year term by Executive Power/ the Government of RM. The Director may be revoked under conditions proscribed in the Law (article 10 of the Law on PRO). One may conclude that the organization is partially independent, since apart from the fact that it is a legal person and its staff has status of tax officials different from the general status of government officials, it is very closely tied to government: firstly, through the appointment and removal of the Director and secondly, the fact that it situated within the structure of the MF.

The year 2009 marked a period of *radical changes in the organizational structure of the PRO,* thus enabling that the operations were conducted on three different levels: the amendments to the Law on PRO enabled that one level is the General Department, the Department for large tax payers; secondly, five regional departments and on local level 72 units within the regional departments were established in all local communities. It operates as highly centralized administration within the entire territory of Macedonia and carries out its functions upon the principle of functionality.

PRO is responsible for implementation of the tax policy, determination and collection of taxes and social security contributions from employees and similar fiscal levies. It secures finances for timely and efficient fulfillment of government policies; gives assistance to taxpayers; conducts surveillance of the entire tax system thus proposing changes for its improvement; is engaged in international cooperation with pier organizations; is engaged in giving legal assistance regarding cross-border tax cases to similar offices in other jurisdictions. But, first and for most PRO is in charge of collecting the following taxes and related levies: personal income tax; profit tax; value added tax; mandatory social contributions and other levies if proscribed by law. Apart from the previously mentioned it is worth noting that inspections aimed at combating tax evasion and tax fraud are one of the core functions of the office, especially given the relatively substantial portion of gray-economy in Macedonia in the overall economy. PRO is in charge of calculating and refunding excess taxes to tax payers, most notably to businesses and companies concerning the tax credit mechanism of our value added tax.

The general mission of the Macedonian PRO is to secure high quality services for the tax payers, by simplifying the procedures for payment of taxes as well as efficient and fair collection of taxes and other public revenues. The modernization process has been in place for the past 5 years with its final objective to create an institution that can present a role model for the entire public sector in Republic of Macedonia.

4 TENDENCIES: FACTS AND FIGURES

Macedonian tax reforms in recent years have been driven by the commitment gradually to harmonize with the EU and by the desire to improve further the environment for doing business. Thus, recent tax reforms can be seen as a continuation of efforts to improve efficiency in the allocation of real capital, to enhance productivity and promote innovation and investment, to strengthen the competitive position of firms and encourage foreign direct investments. Furthermore, the efforts to implement a modern tax administration were fairly successful. The Macedonian PRO has been engaged in permanent improvement of its administrative capacity; implementation of modern technologies, elevating the qualitative standards in the procedures, thus coming closer to the standards and practices of the EU member-countries.

4.1 LATEST TRENDS: RESULTS AND SETBACKS

In the last few years in Republic of Macedonia have been undertaken the following tax reforms:

Personal income tax

- Law on Personal Income Tax was amended, postponing the application of taxation on capital gains from the sale of securities until 2016 and delaying the application of taxation of interest on deposits until accession.

Corporate tax

- introduction of zero tax rate on reinvested profits
- simplified tax regime for small and micro businesses- Trade Companies classified as small and micro traders and legal entities residents of Republic of Macedonia, leading accounting and preparing annual accounts in accordance with the Law on Trade Companies (not performing bank, financial, insurance, and activities from the area of games of chance and prize games) which will realize total income at all bases up to 3 million MKD per year, are exempted from payment of annual tax on total income. Trade Companies classified as small and micro traders and legal entities residents of Republic of Macedonia, leading accounting and preparing annual accounts in accordance with the Law on Trade Companies (not performing bank, financial, insurance, and activities from the area of games of chance and prize games), whose total income is from 3.000.001 to 6.000.000 MKD per year, are entitled to choose to pay either annual tax on total income of 1% or Corporate Income Tax of 10%.
- tax incentives for investing in Technological- Industrial Development Zones (TIDZs)
    - The user of the zone is exempt of paying Personal Income Tax for salaries of the employees in period of 10 years, from the start of performing of the activity in the zone, i.e. from the first month in which the user will perform the payments of salaries, regardless of the number of employees.
- The user of the zone is exempt of paying Corporate Income Tax in a period of 10 years, if in a period of 2 years after the year of receiving the Decision for start of performing, under the conditions determined by the Law, starts with performing of the activity in the area.
    - Withholding Tax – The users of TIDZ which are performing payments of incomes to foreign legal person in Republic of Macedonia or abroad, are obliged in the same time of the payment of the income to withhold and pay the tax in amount of 10%, unless if it is otherwise regulated by the International agreements for avoiding of double taxation.
        - The user of the zone is exempt from VAT on trade of goods and services in TIDZ (except trade intended for final consumption) and for import of goods in TIDZ (under condition the goods are not intended for final consumption).
- effort to improve the fiscal discipline of the legal entities by implementation of Law on fiscal discipline (Off. Gazette of RM, no. 82/13 as amended no. 43/14).

Value added tax

- No tax rates changes (general tax rate of 18% and preferential tax rate of 5%)
- In 2010 increase of total turnover for obligatory registration for VAT from MKD 1.300.000 up to MKD 2.000.000
- In 2011 and 2012 the most important VAT amendments are related to the preferential VAT rate. Thus, as an anti-crisis measure, the first sale of residential buildings/ apartments that are sold within the first 5 years of completion of the construction will be taxable with the 5% tax rate until the end of 2015; three more categories of goods/services will be subject to the 5% preferential VAT rate (raw oil for food production, commercial facilities` services – hotels, motels etc.-, for the import of personal computers, PC components, software and thermal solar systems), exemption from VAT on imports, shipments with a value of up to EUR 22 and on tickets for public events.
  - Starting from 2013 mandatory use of e-tax for the VAT taxpayers
  - In November 2013 new Draft-Version of the Law on VAT prepared with the GIZ technical support ensuring that the supply of goods and services would be taxed in one place, will establish an information system to change the information, will apply an electronic filing of tax returns, and one of the novelties in the law will be the commitment to exempt from VAT the sale of real estates. Part of the new VAT legal provisions will apply automatically, immediately after RM will join EU

Excise

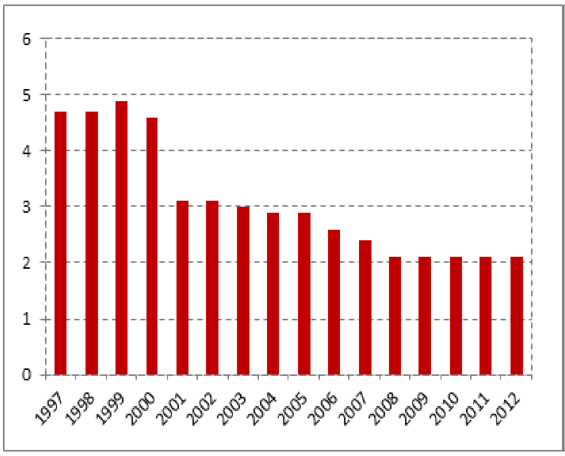
- the Law on Excise Tax was amended: it increases the excise duty on alcoholic beverages, while the increase for cigarettes and tobacco will be gradually applied over ten years.

Today, after summarizing the results of such policy there is compelling evidence that it revolutionized the tax system and provided economic stimulus for the far-from-vibrant private sector in Macedonia (Maksimovska, Stojkov and Neshovska, 2013).

- The greatest benefit from the flat rate system is the introduction of tax simplicity, replacing the complexity of tax calculations that taxpayers have to go through.
- It also fosters the administering and audits performed by the Tax Administrations decreasing the compliance costs. Cutting the tax rates and broadening the tax base hinders the incentives for tax evasion. In return, the fiscal discipline of taxpayers increases as seen by the improved collection of taxes that makes the flat tax system more efficient.
- As a consequence, tax revenues grow which was exactly the case with the Macedonian corporate income tax where the rate of revenue growth was over 60% comparing to the planned one in the first half of 2008.
- Despite the replacement of three progressive tax rates with uniform, and reduced rate, the personal income tax also demonstrated satisfactory performance in terms of revenue mobilization.

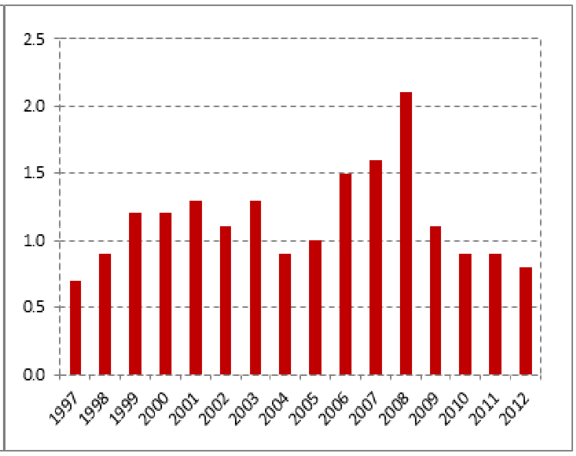
GRAPH 1

Personal income tax revenue, 1997-2012 (as a percent of GDP)



GRAPH 2

Corporate income tax revenue, 1997-2012 (as a percent of GDP)

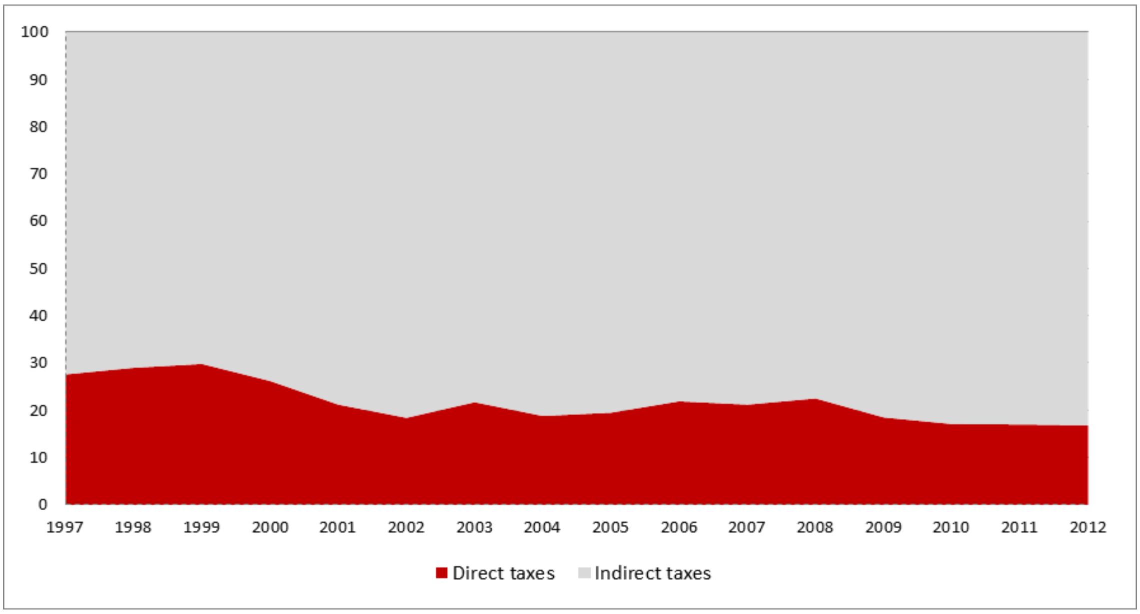


Source: Authors calculation based on dates from Ministry of finance and Public Revenue office of Republic of Macedonia.

Tax structure in Macedonian total budget is very diverse. In Graph 3 it is notable that in the last 15 years income taxes participate less in total budget revenues which means release of income taxation and move toward higher consumption taxation.

GRAPH 3

Tax structure in Macedonia, 1997-2012 (in percent of total taxes)

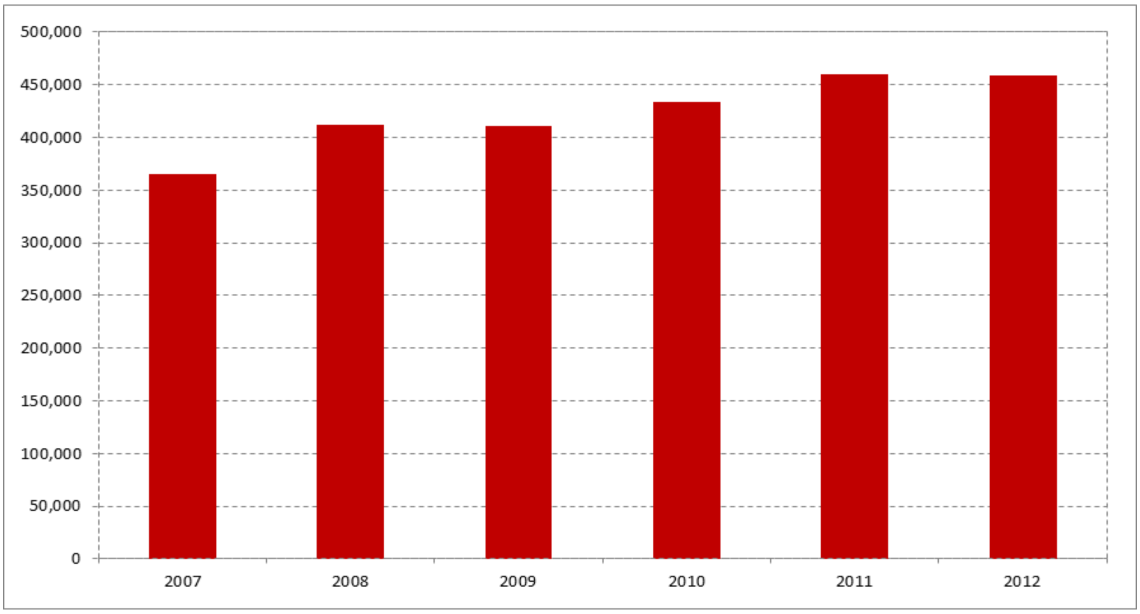


Source: Ministry of finance of Republic of Macedonia.

There is increase of GDP not only in absolute but also in relative amount. Republic of Macedonia was not surrounded of the world financial crises but still has a higher GDP despite low tax rates.

GRAPH 4

Macedonian GDP, 2007-2012 (in million denars)

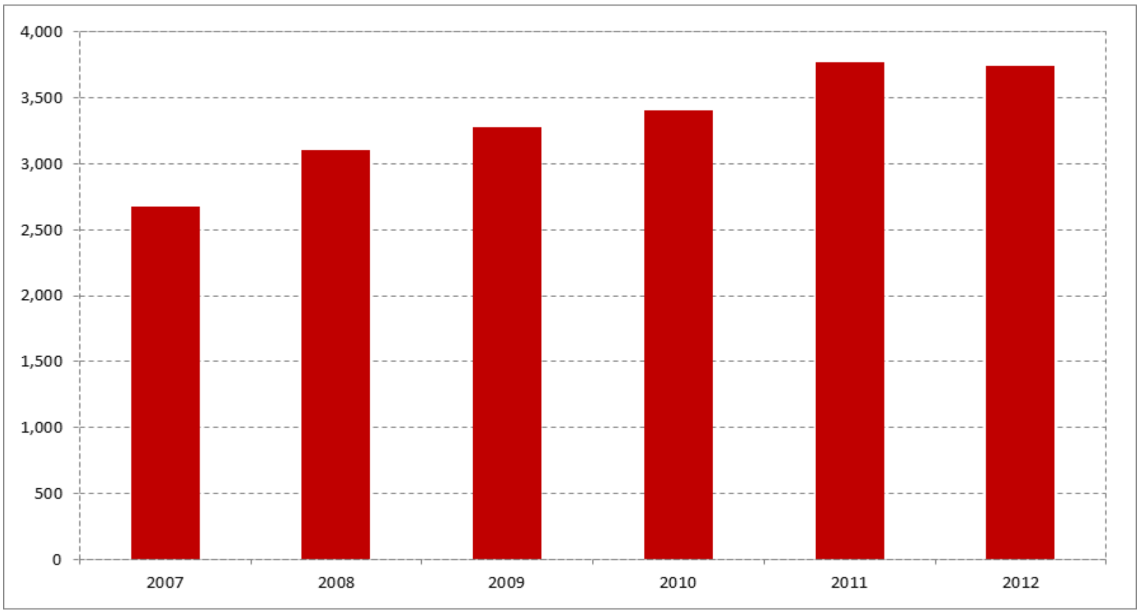


Source: State Statistical Office of Republic of Macedonia.

The forecasted effects from the theory (as a direct benefit in the first few years of the flat tax introduction) undoubtedly occurred in Republic of Macedonia. It is evident the FDI increased in the period 2007-2008 (the first two years of the introduction of flat tax), but in 2009-2010 came to a relative decline of FDI, primary affected by the financial and economic crisis. However, FDI are now higher than in 2007 indicating justification of the introduction of the flat tax as a device to attract FDI.

GRAPH 5

FDI, 2007-2012 (in million EUR)



Source: State Statistical Office of Republic of Macedonia.

4.2 MACEDONIAN TAXATION IN THE EUROPEAN COMMISSION COUNTRY REPORTS

On October 16th 2013 European Council adopted the 2013 European Commission report (SWD (2013) 413 final) which for the fifth successive time recommends that the Council opens negotiations on membership with the Republic of Macedonia. In all MK Progress Reports, Chapter 16: Taxation, European Commission has given the following recommendations:

- As regards **indirect taxation**, some of the reduced VAT rates (5%) are not in line with the acquis. Some rates for excise remain lower than the minimum required by the acquis.
- In the area of **direct taxation**, the alignment with the relevant Directives (the Parent-Subsidiary Directive, the Merger Directive and the Interest and Royalties Directive) has yet to be addressed. The Law on special zones for technological and industrial development needs to be aligned with the EU Code of Conduct for Business Taxation.
- As regards **administrative cooperation and mutual assistance**, electronic data exchange between the public revenue office and the financial police intensified. A double taxation agreement with Luxembourg was ratified, bringing the number of agreements concluded with EU Member States to 24. These agreements do not cover debt recovery or the automatic exchange of information.
- In the field of **operational capacity and computerization**, voluntary compliance and enforced collection improved and electronic services were extended. Mandatory registration of cash payments was further extended. Electronic submission of VAT and profit tax returns was made compulsory. While the processing of VAT refunds improved, substantial efforts are required to reduce delays and build up a good track record of compliance with legal deadlines. A forensic laboratory has been set up to fight high-risk tax fraud, but is not yet operational. The action plan for reducing the informal economy was updated. However, the fight against tax evasion and the informal economy remains a challenge. Operational capacity and IT infrastructure, in particular, need to be improved.

The main conclusion is that there was some progress during the reporting period. Further efforts are required to align the direct and indirect tax legislation with the acquis and to achieve and maintain a good track record for processing VAT refunds within legal deadlines. The fight against tax fraud and tax evasion and efforts to combat the grey economy need to be further intensified. On the whole, preparations in the area of taxation are moderately advanced.

5 CONCLUSION

Tax reforms in Republic of Macedonia started in 1993 and were connected with political, economic and cultural changes in the early years of the state independence and at the beginning of transition period. The main objectives of the first major tax reform of 1993 were to create a modern tax system, consistent with an open market economy, to be efficient; internationally comparable and competitive; simple for application and "difficult" for evasion; and flexible. The next crucial reforms took place in 2000 when VAT was introduced, replacing the previous Turnover Tax, and in 2006 with the introduction of the flat tax (refers to personal income and corporate profits being taxed at one marginal rate - 12% in 2007 and 10% in 2008 onwards). The main taxes, now, applicable in the Republic of Macedonia are: personal income tax, profit tax, property taxes, VAT and excises.

Today, 7 years later, after summarizing the first results of flat tax policy there is compelling evidence that it revolutionized the tax system and provided economic stimulus for the far-from-vibrant private sector in Macedonia.

- The greatest benefit from the flat rate system is the introduction of tax simplicity, replacing the complexity of tax calculations that taxpayers have to go through.
- It also fosters the administering and audits performed by the Tax Administrations decreasing the compliance costs. Cutting the tax rates and broadening the tax base hinders the incentives for tax evasion. In return, the fiscal discipline of taxpayers increases as seen by the improved collection of taxes that makes the flat tax system more efficient.
- As a consequence, tax revenues grow which was exactly the case with the Macedonian corporate income tax where the rate of revenue growth was over 60% comparing to the planned one in the first half of 2008.
- Despite the replacement of three progressive tax rates with uniform, and reduced rate, the personal income tax also demonstrated satisfactory performance in terms of revenue mobilization.
- Furthermore, the financial crisis that caused increasing of tax rates exceed in Republic of Macedonia without introduction of higher tax rates. In other words, the flat tax in Republic of Macedonia has withstood the “winds” of the financial crisis without the need of leaning toward tax rates increase. Republic of Macedonia is a model in the region that encouraged some countries (Bulgaria, Serbia and Hungary) to introduced flat tax systems.

Macedonian tax reforms in recent years have been driven by the commitment gradually to harmonize with the EU law and by the desire to improve further the environment for doing business. Thus, recent tax reforms can be seen as a continuation of efforts to improve efficiency in the allocation of real capital, to enhance productivity and promote innovation and investment, to strengthen the competitive position of firms and encourage foreign direct investments. Additionally, the efforts to implement a modern tax administration were fairly successful. The Macedonian Public Revenue Office, also, has been engaged in permanent improvement of its administrative capacity; implementation of modern technologies, elevating the qualitative standards in the procedures, thus coming closer to the standards and practices of the EU member-countries.

The 2013 European Commission report (which, for the fifth successive time, recommends that the Council opens negotiations on membership with the Republic of Macedonia) suggests that further harmonization efforts have to be done under the European Commission`s eyes wide open, particularly in the field of VAT and excises rates and exemptions.

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PERSPECTIVES OF TAX REFORMS IN CROATIA: EXPERT OPINION SURVEY*

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ABSTRACT

In order to shape tax reform it is necessary to objectively assess current situation and perspectives of 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 the broad expert opinion survey about Croatian tax system. Most interesting results suggest maintenance/(re)introduction of different tax incentives and reduced VAT rates, rejection of flat tax as well as decrease in number of tax brackets, increase in alcohol and tobacco duties, introduction of financial activities tax, further shift from income to consumption, decrease of tax share in GDP and belief in behavioral responsiveness of tax decreases/exemptions, but equity principle also. The last three economic views/values are important predictors of other tax attitudes.

Keywords: opinion survey, tax reform, tax system, tax policy, Croatia

1 INTRODUCTION

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

The purpose of our research, similar as in the US survey, was to find out what tax experts think about the overall current situation and problems in the field of Croatian tax system and what they expect from the tax policy in the future. Since the similar research has never been performed in Croatia, the analysis is especially directed towards income versus consumption as the tax base, which influenced all Croatian tax reforms. Besides that, there are some other motives to conduct such research. Croatia has witnessed two relatively turbulent decades and some very influential tax reforms. Above all, we started the research in order to establish the attitudes of tax experts almost 20 years after the fundamental tax reform in 1994, when the

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consumption-based taxation (interest-adjusted personal and corporate income tax) was introduced. Furthermore, besides Greece, Croatia is the only EU country that is still in (5 year) recession with no positive expectation even in 2014. The decline in economic activity causes additional political instability and many tax system changes as well as changes in attitudes on tax system and policy respectively.

Similar to the US survey, our survey encompass three sectors of experts: government, private and academic. The results are assessed using the percentage of negative/positive answers of 61% as sing of consensus and analysing that consensus degree in more detail.

We also wanted to analyse possible influence on specific values and economic views on the tax system/policy attitudes using binomial probit regression.

After the Introduction, the second part of the paper gives the short overview of Croatian tax reforms, with special emphasis on the changes related to main taxation concepts of direct taxation (income versus consumption). In the third part tax survey is analysed giving overview of the attitudes with 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 behavioural responsiveness as well as incidence) influence experts' policy opinions.

2 TAX REFORMS IN CROATIA

In 2014, Croatia will mark twenty years since the first big tax reform took place, setting up foundations of the current tax system in a great scope. The tax system from 1994 was in the limelight of the numerous debates both Croatian and international tax literature.[1] At that time, Croatia was the only country consistently implementing consumption-based taxation – interest-adjusted personal and corporate income tax[2] (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). Besides corporate income tax, Croatia introduced "synthetic" personal income tax that in some elements still departed from the interest-adjusted income tax (the treatment of incomes from real estate) but included "protective

[1] For the literature overview of the debates and arguments about 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 the consumption-based taxation, especially ACE tax see Blažić (2006: 67-68). For the contributions to the debate, and especially Croatian ACE model 1994-2000 see Schmidt et al. (1996), Rose and Wiswesser (1998), Keen and King (2002) and Klemm (2007) and Blažić (2008).

[2] 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 some part of the non-corporate sector (partnerships with "trader status" and even the 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).

interest" for the business income (self-employed) also. In 1994 new excise taxes were introduced also, and the number of retail sales tax rates was gradually reduced in order to prepare the introduction of the value added tax (VAT). Although the first VAT law was enacted in 1995, it entered into force in 1998.

TABLE 1

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

Period and system	Basic changes
1994-2000 Consumption-based system (interest-adjusted PIT and CIT)	**1994** – Non-taxation of capital income (exception: property income) – ACE (at CIT and PIT for business income)
2001-2004 Mostly income-based system (with some elements of consumption-based systems: savings and interest-adjusted PIT and CIT)	**2001** – Introduction of capital income taxation (dividends and part of interest) – Abolishment of ACE and introduction of numerous incentives (tax holidays) **Elements of consumption concept: interest-adjusted income tax** – Non taxation of most interest (bank saving and deposit accounts, securities) and capital gains from financial assets – Some dual income tax elements retained (linear taxation of most capital/property income by the way of final withholding tax) **Elements of consumption concept: saving-adjusted income tax and cash-flow tax** – Not only compulsory, but also voluntary pension as well as life insurance contributions deductible (and later taxable) – Immediate write-off and enhanced accelerated depreciation
2005-2013 Hybrid system – elements of income-based and consumption-based taxation (interest-adjusted and saving-adjusted)	**2005 „Mini" tax reform** – Abolishment of dividend taxation – Abolishment of immediate write–off and enhanced accelerated depreciation (the accelerated depreciation in the form of doubled depreciation rates from before (2007) remains) – Modifications of CIT incentives **2010** – Abolishment of deductibility for voluntary pension insurance and life insurance premiums (from saving-adjusted to interest-adjusted model) **2012** – Reintroduction of dividend taxation (towards income concept, but not systematically) – Non-taxation of reinvested profit

Source: Authors.

However, Croatia has relatively quickly abandoned interest-adjusted personal and corporate income tax by its second great tax reform from 2001, which followed after parliamentary elections and change of ruling party. 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. Besides introduction of the General Tax Act, there were no substantial changes in other tax forms. It could be said that this tax reform has shaped present characteristics of the Croatian tax system in such a substantial way that it also reveals *modus operandi* of the tax system and policy, which are changed with every change of the ruling party.[3] So, the "mini" tax reform at the beginning of 2005 abolished the taxation of dividends again (which was reintroduced in 2012 again), but did not bring back ACE as the basic element of consumption-based taxation at the entire business (corporate and personal – self-employed) level. Current Croatian tax system is the 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 of the actual ruling party.

Overview of tax reforms in Croatia with special emphasis on the changes in the direction to consumption/income concept is presented in Table 1.

3 2013 EXPERT OPINION SURVEY ABOUT TAX POLICY IN CROATIA

3.1 SURVEY METHODOLOGY

Opinion/attitude surveys, either rather general[4] or more specific[5] have also been applied to taxation research. Croatian survey is mostly based on the latest US NTA expert opinion survey (Lim et al., 2013; DeGroat, 2013), which has its longstanding history (Walker, 1935; Slemrod, 1994; Brannon, 1995). However, a lot of modifications should have been made, with the majority of new questions introduced as well as a lot of questions either omitted or changed. In the end, the final Croatian questionnaire has around 20% resemblance with the original survey, mainly regarding last set of questions about general tax issues, experts' values and beliefs about economics (economic models). 92 questions (i.e. statements) encompass general questions, the ones concerning basic types of taxes and specific questions about the most topical tax policy elements in Croatia. The basic yes/no/other question methodology has also been changed by using Likert items (5 levels). After the pilot (a couple of academic colleagues and tax practitioners) some questions were omitted/clarified.

[3] In contrast to the tax reform from 1994, tax reform from 2001 caused not nearly as much debates. Although it was shown that this reform caused significant decrease in tax burden, it remained questionable whether the results of tax system changes were the original intent of tax policy creators (Švaljek, 2005).

[4] For instance for US: Behrens (1973), Fisher (1985), IRS (1993), McCabe and Stream (2006), Campbell (20099, Lim et al. (20139, for Israel: Dornstein (19879, for Austria: Kirchler (1999), for Australia: Murphy (2004), for Sweden: Hammar et al. (2008).

[5] For instance for cigarette taxes Green and Gerken (1989), for local tax rates Ashworth and Heyndels (1997), for flat tax and sales taxes McGowan (2000), for estate tax and flat tax Fleischman and Hutchison (2001), for the income tax Eicher et al. (2001), Hasseldine and Hite (2003), for environmental taxes Thalmann (2003), Kallbekken and Saelen (2011), for tax deductibility of mortgages Van der Heijden et al. (2007), for the tax compliance and morale Torgler and Schneider (2005, 2007), Alm et al. (2006), Eicher and Stuhldreher (2007), Randlane (2012), for the estate tax Birney et al. (2006), Fatemi et al. (2008), for CO_2 tax Löfgren and Nordblom (2010), for minimum corporate tax rates Osterloh and Heinemann (2013).

The survey was performed between May and July 2013. The call was sent by e-mail to 1,000 addresses at the beginning of May, and the reminder in the mid of July. Most answers were gathered by web page, just a few by post (in a written way). Out of 1,000 targeted population experts, 304 responded, so the sample could be regarded as representative.

In accordance with the relevant mentioned surveys (Walker, 1935; Slemrod, 1994; Lim et al., 2013), the targeted population were tax experts, divided in the following three groups: academics, government sector and private sector.[6] Academics include professors and researchers at economic faculties and institutes that devote at least part of their scientific and teaching work to the tax system and policy. Government sector consists of Tax Administration (employees of sectors inside Central office, heads of Regional and Local offices) and local and regional government units (heads of finance departments of those units). Private sector entails mostly tax advisors, but also some private business schools professors as well as employees in tax accounting, advising and publishing companies.

As in similar surveys, 92 survey questions could be thematically divided into couple 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 (without neutral response) are taken as threshold for consensus (Lim et al., 2013). Since 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%[7]. Table A2 in Appendix entails detailed data for the degree of consensus for all 92 survey statements/questions.

Even 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 achieved only 64 statements or only 70%. 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 consensus degree has been expected. It is interesting that somewhat broader consensus was reached inside the academic and government sector in contrast to the private one. Unfortunately, there is 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 the higher percentage of consensus is to be expected. We hope that the further development of the Croatian society would result in the higher level of legal certainty and tax

[6] Table A1 in Appendix entails detailed information about respondents’ structure.
[7] 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.

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.

TABLE 2

Degree of consensus (number of questions, without neutral response)

Degree of consensus	Total		Academic		Government		Private	
	No	Yes	No	Yes	No	Yes	No	Yes
61-74%	7	22	7	28	8	25	11	25
75-100%	5	30	6	30	6	32	9	23
Total 61-100%	12	52	13	58	14	57	20	48
Total (No and Yes)								
Total 61-74%	29		35		33		36	
Total 75-100%	35		36		38		32	
Total 61-100%	64		71		71		68	
Percentage of total answers between 61-100%	69.9%		77.2%		77.2%		73.9%	

Source: Table A2.

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

3.3 SPECIAL TAX ISSUES

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

Concerning property taxation, only half of statements reached the satisfying degree of consensus (61%). The main question related to the introduction of real estate tax reached no satisfying consensus ("only" 59% of answers in favour). The biggest opponent is the academic community, while private and government sector have reached consensus in favour of that tax. The consensus is also reached for the real estate tax being local tax, for the maintenance of local surcharge as well as real estate transfer tax and for property being necessary additional indicator of ability to pay. Furthermore, the respondents have different ideas of tax burden of real estate tax for business and citizens. Overall consensus is reached for the statement that citizens do not have to pay higher rates in comparison to business, but not for the statement that business should pay higher rates in comparison to citizens. Naturally, academia and government sector have supported the latter statement (62% and 65% in favour), in contrast to the private sector (68% against).

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

Most personal income tax statements, especially those about progressivity, reached the consensus. Most of the respondents agree that lowest (but not also highest) marginal rate should be additionally reduced, that flat tax should not be introduced, that there is no need to further reduce number of tax brackets 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 the capital income taxation in general. Although the consensus is reached concerning dividends and financial capital gains taxation, there is no such consensus for interest on saving and securities – maybe respondents are here most directly personally involved and some of them act “selfish” instead of “professionally”. Concerning different tax treatment of labour and capital incomes, the private sector was the only one not having achieved the consensus against lower taxation of capital incomes. Concerning additional arguments in favour of lower dividend taxation, on the one hand, there are significant differences between academic and private sector on the one hand (accepting it) and on the other, the government. 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 consumption-based (interest-adjusted) system of direct taxation in Croatia in general and especially interest-adjusted personal income tax, whose basic elements remained in force even after the 2001, higher inclination of experts to this concept could have been expected. The only such inclination element is seen in the area of interest on saving (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[8]). Some “modified element” of consumption-based taxation - hybrid system between income and consumption concept – lower taxation of capital incomes (instead of their non-taxation) – the case of dual income tax, which is entering strongly into Croatian tax system, has, again, reached no support.[9] It seems that experts strongly advocate classical comprehensive income taxation. One could than expect that to get the (positive) consensus about taxing all sources of income could be achieved in the same way (regarding Q27 as control question) as it has, however, only been achieved in the government sector. This may not be the case owing to the fact that this question is (could be) related to currently taxable (mostly labour) incomes in Croatia and a

[8] 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.

[9] There is, of course, negative correlation between advocating capital incomes taxation (Q24, 25 and 26) and their lower taxation than labour 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 ($r_s = -0.304$).

very topical issue 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 Croatian Ministry of Finance to tax all labour incomes in a same way to get additional budgetary revenues was (for the time being) rejected.

Similar to the previous case, it is hard to make comparison with the US survey, especially concerning capital income taxation where the US system is strongly advanced due to the development of the financial system. Similar conclusion could be drawn regarding numerous tax allowances/deductions that exist in the US personal income tax system. However, some mutual characteristics could be found - affinity to stronger personal income tax progressivity as well as disagreements about taxation of capital income, in US especially at the capital gains level. Moreover, there is a general conclusion about inclination to stronger comprehensive taxation, but still some attitudes regarding capital income, property and inheritance and gifts could not completely support such an attitude.

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 abolishment of maximum base (ceiling). Furthermore, there is a strong disagreement here between private sector (against abolishment) and government sector (in favour of abolishment). Most of the respondents consider the first pillar contributions (intergenerational solidarity) too high suggesting them to be lowered. Although there is no general consensus, private sector and academia support the increase of the second pillar (individual capitalized saving accounts) contributions.

There is consensus for almost all statements in the field of corporate income tax. Most respondents consider that it should boost economic activity, and thus different incentives would be retained or (re)introduced (different tax holidays and investment allowances). Especially pronounced is high degree of support (91%) for R&D and educational incentives (see also for instance Hodžić, 2012; Šimurina, Bürgler, 2012; Švaljek, 2012). High degree of consensus is achieved for reintroduction of ACE, favouring consumption-based taxation at the corporate level (in contrast to personal level). The experience of Belgium proves that such system is still (for the time being[10]) compatible with the EU requirements. Namely, one of the stated reasons for its withdrawal in Croatia was its uniqueness in comparison to other EU countries (which was only partially true due to some already existing elements of ACE in Austria and Italy at that time). Interesting and relatively unexpected, no consensus has been reached for the lowering of CIT rate. It is especially interesting that private sector is the only opponent, having reached the consensus against rate lowering. They are probably aware of the relatively low effective rate due to a numerous incentives. No comparison of the US and Croatian survey is possible, since the questions completely differ.

Experts are mostly against aiming to the only one (standard) VAT rate and, respectively, against abolishment of the reduced rates. So, there is consensus reached for maintaining

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

reduced rates for basic foodstuff as well as their extension to all food. Such an attitude could be explained by the already mentioned relatively high inclination of experts towards vertical equity. Huge majority (97%; even 100% for 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.

There is a high degree of consensus for most statements in the field of excise taxes. Most people think that different excise taxes on energy and electricity should “not be raised” / “be lowered”. In contrast, most people do 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 the 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, the consensus was reached for introducing excise taxes on “junk food”, where the Croatian experts differ from the US experts, who do not support such special taxes.

3.4 GENERAL TAX ISSUES, EXPERTS' VALUES AND ECONOMIC MODEL

Last twenty survey statements relate to general attitudes about 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, overall consensus hasn’t been reached for three statements, although even here some partial consensus exists.

For many questions the degree of consensus is high (over 75%). Most respondents solve the traditional “equity-efficiency trade-off” in favour of equity. This attitude is expected taking into consideration previous survey parts about particular taxes. It could be explained by historical inheritance and general justice awareness that generally prevails in Croatia, but maybe also by some recent tax policy tendencies due to the economic crisis. 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 EU financial transaction tax introduction, as it is the case in the US survey. On the other hand, there is a consensus about financial activities tax. One of the reasons for the different inclination to those financial sector taxes could be the concern of the experts about incidence of the former tax.

Furthermore, there is a consensus concerning some views about economic effects. Most people think that lower marginal income tax rates increase work effort and reduce leisure (81%) and that such a change would increase tax base so that revenue lost could be compensated (65%). The majority also think that non taxation of interest encourages saving (78%) and respectively non taxation of financial capital gains encourages investment and promotes economic growth (65%)[11]. The bulk of those reasoning are close to those in the US survey.

While the US experts consider consumption taxes regressive, Croatian experts (except academics) have reached no regressivity consensus. This might be the case because the other groups do not completely understand the term. However, experts from both countries have reached the consensus that CIT is shifted mostly to consumers and employees.

Regional tax investments incentives efficiency in Croatia (city of Vukovar and areas of special national concern) is one of the questions where no general consensus was achieved. The consensus about them not being efficient has been reached only in the academic community (68%), while the percentage of negative answers in 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 serial binomial probit regression. As in the case of consensus degree, only positive and negative answers (without the neutral one) are observed. Similar as in relevant research (Lim et al., 2013), the analysis is aimed in two directions. First part analyses tax expert's attitudes related to some value judgments (values) in the area of taxation, where two questions (Q75 and Q91) are used as predictors (independent variables). The second part of the analysis encompasses particular economic views related to the behavioural responsiveness and tax incidence, whose predictors (independent variables) are tested over five questions (Q84, Q85, Q86, Q79 and Q80). In both cases, the regression also includes demographic characteristics (employment-sector, age and education level) as independent variables, but they are not particularly analysed.

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 have been 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 role in the economy to the professional attitudes about tax system and policy. Owing to the fact that Q75 and Q91 that somehow express different views in tax policy, they have been 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 the positive answer to Q75 could be regarded as having more

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

(neo)liberal economic views i.e. advocating smaller role of government in the economy. On the other hand, those that claim equity principle is more important than efficiency one (compared to those that have answered negatively) support greater role of equity i.e. higher state intervention regarding redistributive issues. Concerning consumption-based taxation it could be expected for the former group to be more in favour of it and for the latter group to be against it. Table 3 presents the results of binomial probit regression for variables Q75 and Q91 reflecting values in the field of taxation.

TABLE 3

Binomial probit regression results for values

Question/statement	Q75[a]	Q91[b]	χ^2
Q01 Croatia should introduce 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 („flat tax“) along with maintaining personal exemption.	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 for 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 Financial transaction tax should be introduced.	-0.167 (0.342)	0.752** (0.360)	15.518 [0.030]
Q74 Financial activities tax should be introduced.	-0.486 (0.482)	1.378*** (0.386)	65.922 [0.000]

Question/statement	**Q75[a]**	**Q91[b]**	**χ^2**
Q76 General government should be financed less from taxes and more from different non-tax revenues (with emphasis of different user charges).	0.955*** (0.328)	0.327 (0.364)	12.132 [0.096]
Q81Para-fiscal levies should be reduced.	0.893** (0.447)	0.288 (0.526)	19.890 [0.006]

Notes: Robust standard errors are in parenthesis. The p-values of the χ^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.

Source: authors' calculation.

Presented results imply relatively consistent attitudes of Croatian tax experts. For the most observed models, the experts with neoliberal economic views have mostly different considerations than the experts that advocate greater equity in taxation. Furthermore, Q91 is also more significant predictor than the Q75 - that could imply the equity principle being dominant value to shape tax attitudes for most of the experts.[12]

More neoliberal tax experts i.e. those who positively answered to Q75 are more inclined to reduce 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 ability to pay principle. That is why they are neither inclined to taxation of interest income nor other capital incomes[13] following consumption-based (interest-adjusted) taxation concept.

Tax experts inclined to greater role of vertical equity (those that reacted positively to Q91) are, expectedly, more inclined to real estate tax introduction (as additional indicator of ability to pay) as well as to taxation of capital incomes such as dividends and capital gains.[14] Not unexpectedly, they are also in favour of financial transaction tax and especially financial activities tax (as additional ability to pay tax on "under-taxed" banking sector). Needless to say, they are against the flat tax that due to the indirect progressivity jeopardizes traditional equity understanding of ability to pay principle.

[12] 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, 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).
[13] However, there is no statistical significance established for other capital incomes.
[14] There is also a positive influence on interest taxation, but without statistical significance.

4.2 ECONOMIC VIEWS

In order to establish prevalence of specific economic views in taxation, statements/questions that relate to taxpayers' behaviour and tax incidence are used as independent variables (predictors). For the taxpayers' behavioural response questions/statements QP84, QP85 and QP86 are used and for the tax incidence additional two questions/statements (Q97 and Q80) are used. Table 4 presents the results of binomial probit regression for the stated variables.

Results relating to tax incidence show relatively consistent attitude of tax experts. On the other hand, there are some inconsistencies concerning behavioural responses that are already pointed out at the degree of consensus analysis.

Among behavioural 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 have answered negatively) are more inclined to exempt the reinvested profits from taxation, to maintain different tax incentives and to reduce para-fiscal levies. Moreover, they are not inclined to abolish reduced VAT rates. This approach in favour 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 (cost)-effectiveness approach. Although the critics might say that interventionist approach is a matter of history and definitely incompatible with modern tax reform proposals, it has is still been popular, especially in the tax practice of developing countries and (post)transition economies. The recent economic and financial crisis, especially at its beginning, made them worth considering again. Furthermore, the respondents that reacted positively to Q86 are in favour both of real estate tax and net wealth tax, which could be easier to explain by traditional "interventionist" approach than by the newest reform tendencies in favour 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 less important predictor. The experts that answered this question positively (compared to those that have answered negatively) are, logically, neither in favour of capital gains taxation nor dividend taxation and financial activities tax. Since 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 is broadened to dividend taxation (as well as interest taxation, where the relationship is also negative, but not statistically significant). Furthermore, those interested in reducing tax burden and tax distortions in financial markets are, logically again, not in favour of 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 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.

Not only did the Q84 ("Non taxation of interest encourages saving") showed all the controversy of the interest taxation attitude, but the results of the survey in general showed the same controversy, too. Although there is a negative influence presented concerning interest taxation need (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 do not need additional explanation. Regardless of statistical insignificance of other relationships, it is interesting that some of them are of different direction in comparison with Q85, which implies a lot of disagreements but also inconsistencies among tax experts.

Regardless of the stated inconsistent statements/questions, Q85 and Q86 turned out to be significant predictors, which led to the expected direction at the most of the tested models i.e. imply similar attitude of the tax experts towards 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 savings turned out to be the weakest predictor (Lim et al., 2013: 791-793).

Economic incidence results show relatively consistent attitudes of tax experts.[15] Q79 ("Tax burden should be shifted from personal and corporate income to consumption") turned out to be the most important predictor. The experts who positively answered that question (compared to those that have answered negatively) are, expectedly, not in favour of capital income taxation in general (dividends, interest and capital gains) but are for flat tax introduction, only one (standard) VAT rate as well as for the reduction of 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 surprisingly that the experts that favour general non-taxation of capital incomes, flat tax and only one VAT rate are again 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 level (Table 1).

Q80 ("Tax burden should be shifted from personal and corporate income to property") turned out to be important predictor also. The experts that answered this question positively (compared to those that have answered negatively) are, logically- for 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 both in favour of capital income taxation (interest, dividends and capital gains) and taxing all income sources in the same way (classical

[15] In contrast to behavioural 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.

comprehensive S-H-S income). Not surprisingly they are also for the proposed financial transaction tax.

Although both predictors (Q79 and Q80) point to the experts attitude relatively precisely, neither of them turned out to be significant (and positive) for the Q40 (ACE tax). It is about the instrument that was crucial for the consumption–based interest-adjusted corporate income taxation in Croatia implemented in the 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, has not been in effect since 2001 i.e. 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).

Table 4

Binomial probit regression results for economic views

Question/statement	**Behavioral Responsiveness**			**Incidence**		**χ^2**
	Q84[a]	**Q85[b]**	**Q86[c]**	**Q79[d]**	**Q80[e]**	
Q01 Croatia should introduce 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 („flat tax“) along with maintaining personal exemption.	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]
Q27 All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing for lower withholding tax to be final).	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 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 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]

Question/statement	Behavioral Responsiveness			Incidence		χ^2
	Q84[a]	Q85[b]	Q86[c]	Q79[d]	Q80[e]	
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 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 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]
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]
Q81Para-fiscal levies should be reduced.		0.051 (0.862)	1.562*** (0.581)	0.309 (0.663)	0.545 (0.515)	163.172 [0]

Notes: Robust standard errors are in parenthesis. The p-values of the χ^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.

Source: authors' calculation.

5 Conclusion

It might be disappointing, but the fact that there is no high and broad consensus of Croatian tax experts is not unexpected although the technique which was applied (elimination of neutral answers, yes or no answers only) implies as high consensus as possible.

However, relatively high consensus degree for some specific questions enables 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), rejection of flat tax as well as decrease in number of tax brackets. Concerning consumption taxation the most interesting results are in favor of maintenance and even broadening of reduced VAT rates as well as increase in alcohol and tobacco duties. Although experts support financial sector taxation in general, consensus is reached not for financial transaction tax, but for financial activities tax. Concerning general tax issues, as expected, further shift from income to consumption as well as decrease of tax share in GDP is advocated. Experts showed remarkable belief in behavioural responsiveness of tax decreases/exemptions, but, on the other hand, in solving the traditional equity-efficiency trade-off in favour of equity.

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

The most important differences between the Croatian and the US survey could be found in the field of tax equity, which is much more pronounced in Croatia.

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

APPENDIX

TABLE A1

Demographics and sample information

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

Source: authors-survey.

TABLE A2

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

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

	Statement / question	Total		Academic		Government		Private	
		No	Yes	No	Yes	No	Yes	No	Yes
Personal income tax									
14	Highest PIT rate should be reduced further (recently reduced from 45% to 40%).	52	48	49	51	57	43	48	52
15	Lowest PIT rate should be reduced further (recently reduced from 15% to 12%).	34	**66**	36	**64**	29	**71**	46	54
16	Instead of more PIT rates only one rate should be introduced („flat tax“) along with maintaining personal exemption.	**69**	31	**63**	37	**72**	28	**79**	21
17	Number of tax brackets should be increased (currently three).	47	53	41	59	49	51	**70**	30
18	Number of tax brackets should be decreased (currently three).	**81**	19	**77**	23	**83**	17	**86**	14
19	Tax deductions/allowances for health costs should be reintroduced.	27	**73**	23	**77**	27	**73**	46	54
20	Tax deductions/allowances for owner-occupied housing should be reintroduced.	30	**70**	23	**77**	35	**65**	48	52
21	Tax deductions/allowances for life insurance should be reintroduced.	40	60	34	**66**	47	53	39	**61**
22	Tax deductions/allowances for voluntary pension insurance should be reintroduced.	35	**65**	29	**71**	42	58	32	**68**
23	Tax deductions/allowances for additional and private health insurance should be reintroduced.	35	**65**	30	**70**	38	**62**	36	**64**
24	Inside PIT dividends should be taxed.	27	**73**	35	**65**	14	**86**	38	**63**
25	Inside PIT financial capital gains should be taxed.	23	**77**	34	**66**	13	**87**	29	**71**
26	Inside PIT interest on saving and securities should be taxed.	54	46	60	40	46	54	55	45
27	All sources of income inside PIT should be taxed in the same way (at statutory rates, without allowing for lower withholding tax to be final).	43	57	42	58	36	**64**	55	45
28	Capital incomes should be taxed at lower rates than labor incomes.	**70**	30	**61**	39	**80**	20	57	43
29	Dividends should be taxed lower than other incomes (due to the economic double taxation of dividends).	43	57	28	**72**	**61**	39	38	**62**

	Statement / question	Total		Academic		Government		Private	
		No	Yes	No	Yes	No	Yes	No	Yes
Corporate income tax									
30	CIT (general) rate should be reduced.	46	54	41	59	48	52	**64**	36
31	CIT burden for SMEs should be reduced.	21	**79**	21	**79**	17	**83**	36	**64**
32	Reinvested profits should be exempt from taxation.	12	**88**	7	**93**	12	**88**	25	**75**
33	Tax incentives for areas of special national concern should be maintained.	32	**68**	29	**71**	35	**65**	15	**85**
34	Tax incentives for mountain areas should be maintained.	32	**68**	34	**66**	31	**69**	15	**85**
35	Tax incentives for free trade zones should be maintained.	31	**69**	27	**73**	32	**68**	28	**72**
36	Tax incentives for city of Vukovar should be maintained.	23	**77**	23	**77**	21	**79**	16	**84**
37	Tax incentives (state aid) for R&D should be maintained.	9	**91**	8	**92**	8	**92**	17	**83**
38	Tax incentives (state aid) for education of employees should be maintained.	9	**91**	6	**94**	10	**90**	14	**86**
39	Tax incentives for investment should be maintained.	11	**89**	9	**91**	12	**88**	13	**88**
40	Protective interest (allowance for corporate equity - ACE) should be reintroduced.	25	**75**	27	**73**	24	**76**	26	**74**
41	Accelerated depreciation (double depreciation rates) should be maintained.	26	**74**	20	**80**	28	**72**	39	**61**
VAT									
42	Only one/standard VAT rate should be aimed at (reduced rates should be narrowed/eliminated).	**64**	36	**65**	35	**63**	37	**62**	38
43	In transitional period (after accessing EU) Croatia should have tried to maintain zero rate of VAT for some goods and services having a social purpose.	25	**75**	28	**72**	18	**82**	36	**64**
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 reduced VAT rate.	13	**87**	17	**83**	8	**92**	20	**80**
46	Special scheme for VAT for farmers should be introduced.	25	**75**	20	**80**	27	**73**	26	**74**

	Statement / question	Total		Academic		Government		Private	
		No	Yes	No	Yes	No	Yes	No	Yes
47	Standard/general VAT rate should be increased.	**97**	3	**97**	3	**98**	2	**100**	0
48	Increase of standard/general VAT rate is better than the introduction of "crises tax".	**62**	38	**67**	33	**63**	37	37	**63**
49	Instead of reduced VAT rates for some "basic" foodstuffs the reduced VAT rate for the all foodstuffs (and water) should be introduced.	36	**64**	39	**61**	35	**65**	41	59
50	Reduced VAT rate for newspapers and periodicals should not be applied for "yellow press".	27	**73**	26	**74**	25	**75**	36	**64**
51	Reduced VAT rate should be higher for scientific journals than for daily press.	60	40	58	42	58	42	**78**	22
52	VAT revenues should be partially directed to local government.	40	60	43	57	35	**65**	55	45
Excise duties									
53	Special tax on "junk food" should be introduced.	34	**66**	29	**71**	34	**66**	47	53
54	Excise taxes on mineral oil and petroleum products should be decreased.	27	**73**	33	**67**	21	**79**	32	**68**
55	Excise duties on natural gas should be increased.	**91**	9	**91**	9	**91**	9	**89**	11
56	Excise duties on electricity should be increased.	**94**	6	**90**	10	**98**	2	**95**	5
57	Excise duties on alcohol should be increased.	18	**82**	18	**82**	18	**82**	18	**82**
58	Excise duties on wine should be introduced.	60	40	58	42	59	41	**71**	29
59	Excise duties on tobacco and tobacco products should be increased.	15	**85**	11	**89**	15	**85**	24	**76**
60	Croatia has enough excise duties.	7	**93**	6	**94**	9	**91**	5	**95**
61	Excise duties should be levied for luxury products.	20	**80**	19	**81**	16	**84**	42	58
62	Excise duties should be levied for cars and other vehicles.	36	**64**	32	**68**	37	**63**	45	55
63	Excise duties should be levied for aircrafts and vessels.	22	**78**	24	**76**	15	**85**	40	60
64	Excise duties should be levied for liability and comprehensive road vehicle insurance premiums.	59	41	55	45	60	40	**81**	19

	Statement / question	Total		Academic		Government		Private	
		No	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**
65	Excise duties should be levied for coffee.	55	45	50	50	58	42	55	45
66	Excise duties should be levied for non-alcoholic beverages.	**68**	32	**65**	35	**74**	26	**65**	35
Social contributions									
67	Ceiling for pension insurance contributions should be abolished.	43	57	44	56	37	**63**	**70**	30
68	Minimum assessment base for pension insurance contributions should be abolished.	**72**	28	**70**	30	**72**	28	**76**	24
69	Rates for compulsory pension insurance contributions for intergenerational solidarity (I. pillar) should be decreased.	39	**61**	39	**61**	41	59	33	**67**
70	Rates for compulsory pension insurance contributions for individual capitalized savings accounts (II. pillar) should be increased.	40	60	34	**66**	48	52	33	**67**
71	Health insurance contributions should be decreased.	41	59	40	60	44	56	30	**70**
72	Small business personal income taxpayers are in 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	Financial transaction tax should be introduced.	44	56	50	50	36	**64**	53	47
74	Financial activities tax should be introduced.	23	**77**	33	**67**	6	**94**	53	47
75	Entire tax burden (the level of taxes relative the GDP) should be reduced.	15	**85**	17	**83**	15	**85**	5	**95**
76	General government should be financed less from taxes and more from different non-tax revenues (with emphasis of different user charges).	35	**65**	33	**67**	38	**62**	37	**63**
77	The entire level of public revenues (and public expenditures) relative to GDP should be lowered.	18	**82**	23	**77**	16	**84**	9	**91**
78	Tax structure should be changed.	8	**92**	11	**89**	8	**93**	0	**100**
79	Tax burden should be shifted from personal and corporate income to consumption.	33	**67**	31	**69**	34	**66**	35	**65**

	Statement / question	Total		Academic		Government		Private	
		No	Yes	No	Yes	No	Yes	No	Yes
80	Tax burden should be shifted from personal and corporate income to property.	48	52	47	53	45	55	**71**	29
81	Para-fiscal levies should be reduced.	5	**95**	7	**93**	3	**97**	4	**96**
82	Lower marginal income tax rates reduce leisure and increase work effort.	19	**81**	18	**82**	18	**82**	21	**79**
83	Lower marginal income tax rates increase work effort and taxable income generally so much as to raise revenue.	35	**65**	34	**66**	37	**63**	31	**69**
84	Non taxation of interest encourages saving.	22	**78**	22	**78**	24	**76**	14	**86**
85	Non taxation of financial capital gains encourages investment and promotes economic growth.	35	**65**	34	**66**	37	**63**	24	**76**
86	Different government tax reductions (reliefs, incentives) promote economic growth.	21	**79**	19	**81**	24	**76**	17	**83**
87	VAT is regressive.	40	60	33	**67**	42	58	59	41
88	CIT is mostly shifted on to consumers and employees.	26	**74**	23	**77**	28	**72**	33	**67**
89	Regional tax incentives (city of Vukovar, areas of special national concern) are efficient concerning investment attraction.	59	41	**68**	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 tax system significantly simpler).	6	**94**	9	**91**	5	**95**	5	**95**
91	The equity principle should be prior to efficiency principle in creating tax policy.	13	**87**	15	**85**	6	**94**	40	60
92	Penalties for tax evasion should be increased.	13	**87**	11	**89**	12	**88**	29	**71**

Note: Answers above 61% are bolded.

Source: authors – the survey.

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SLOVENIAN EXPERIENCES AND LESSON FROM TAX REFORMS*

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JEL CLASSIFICATION: H2, H3

ABSTRACT

Budget constrains push several changes in fiscal policy and Slovenia is not an exemption. Several debates and policy changes were focused on fiscal golden rule, decrease of social transfers and tax reforms. Followed the tax policy priorities put forward by the European Commission and taking into consideration the reduction of budget deficit Slovenia made several changes in tax system in the last three years. In the paper we present tax changes in Slovenia, discuss how they are in accordance with EC recommendations (shifting taxation away from labour, broadening tax bases, reducing corporate tax debt bias and improving tax compliance) and regarding fairness, neutrality and redistribution. We also present research results of professionals' opinion about tax policy in Slovenia. A survey among different professionals (academics, tax advisors and employees at ministry of finance) was concluded in January 2014. The research results show the opinion about different statements connected with tax policy in the country. We tried to find out if there are differences between professionals' opinion and where they disagree at most. We focused on those statements which are in connection with actual tax changes in last years (i.e. Are they in accordance with professionals' opinion). 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.

Keywords: tax reforms, tax policy, Annual Growth Survey, professionals' opinion, Slovenia

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 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 last three years shows that the majority of 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

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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 should 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). The same is true of recommendations for Slovenia for the years 2011–2013. Regardless of the recommendations for Slovenia, in the last three years the country has begun to implement a number of changes, including in the field of taxation, which do not necessarily comply with the recommendations of the 2012 Annual Growth Survey.

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

2 TAX REFORMS IN SLOVENIA AND COMPARISON WITH 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 reform 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 seen several important stages in the tax system development. The largest 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 saw 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 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 the 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 tax system reform in Slovenia took place in 2004-2006. Most of the changes were implemented in 2005, later 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 was soon reintroduced with stricter restrictions. Due to 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 for 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, the 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 in particular with those in other EU member states, 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 and 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 of 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 and Jovanović, 2012).

A different trend emerges after 2009. A more detailed review of the changes in each member state in 2012 and 2013 shows that the majority of 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, an 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 a 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 a 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 are a total of 92 statements, which the participants evaluated with grades out of five. The survey 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 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 can be seen below.

TABLE 1

Respondent structure

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

Below, we want 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 the 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 agreement 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 biggest difference is apparent when it comes to the matter of the highest tax rate, which the government employees see as reasonable, while the respondents in the private sector disagree with it in particular.

TABLE 2

The average evaluation of statements connected to personal income tax

	Academics	**The general government sector**	**Tax consultants**	**Total**
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 the multiple personal income tax rates, a single tax rate should be introduced and personal allowances preserved.	2,333	1,950	2,611	2,192
The 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

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.

TABLE 3

The average evaluation of statements connected to corporate income tax

	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
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

It is evident that the recommendations for the transfer of the tax burden from labour and capital to consumption do not enjoy much support in the professional public. 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.

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 professional public has a similar opinion, disagreeing with increasing the burden on consumption, but also disagreeing with lowering taxes for companies and disapproving of 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 are of the opinion 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.

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INCOME, PERSONAL INCOME TAX AND TRANSITION: CASE OF BOSNIA AND HERZEGOVINA*

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JEL CLASSIFICATION: H24, H26, J31

ABSTRACT

Every personal income tax reform in all countries – developed or transitional is analysed through 'sacred trinity of tax specialist' (Cnossen and Bird, 1990), namely efficiency, equity and simplicity/compliance. In this paper, we will briefly focus on efficiency and equity trade-off firstly in developed countries and then in selected transition countries. From the comprehensive analysis done in developed countries, we can clearly see that efficiency principle is given priority over equity principle in terms of PIT in the past thirty years. Similar pattern can be seen in most analysed transition countries. Based upon the experiences of the developed and transition countries, we can draw some suggestions regarding personal income tax in Bosnia and Herzegovina (B&H).

Keywords: 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 differences from theoretical to empirical models. Since as early as 1994, when Estonia introduced the so called 'flat tax', this topic has been in 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 gives sound theoretical grounds for introduction of personal income tax. Furthermore, one of the major questions that still remain open is ever-so popular application of the 'flat tax' in (ex) transition countries. This issue will be analysed in detail following the practice of (ex) transition countries that have joined European Union (EU) in comparison to 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 statement, theoretical and empirical comparative analysis will be used.

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2 DEFINITION OF INCOME AND PERSONAL INCOME TAX

Since the first introduction of the personal income tax, definition of the tax base i.e. income is of crucial importance. Income can be defined in number of ways, from narrower to a broader definition (Blazic, 2006). 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 definition given by Schanz-Haig-Simons (SHS). According to SHS definition 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 formation of income so that taxation should be levied according to an individual's ability to pay (in relation to 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 basis for SHS calculation of income. *Y* is income*, C* consumption and ΔW_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 (Blazic, 2006:18). The left side of equation shows SHS income (from the consumption side) while the right side shows the practical basis of its calculation.

$$C_i + \Delta W_i = E_i + rW_i \,. \tag{1}$$

Apart from SHS definition of income, in theory (and scarcely in practice) consumption can also be a tax base. In theory of fiscal doctrine distinguished classical/liberal theorists considered that consumption is appropriate as a tax base (e.g. Hobbes, 1651, Ricardo, 1817, Mill, 1865, Marshall, 1927, Pigou, 1928, in Musgrave, 1998). (Mill, 1865) actually developed modern basis for consumption-base 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. N. Kaldor in his definition of consumption/expenditure tax 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. One 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 one major disadvantage: it is impractical to apply which was theoretically rightfully assumed by Mill, Marshall and 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[1] (Blazic, 2006:34):

$$C_i = E_i + rW_i - \Delta W_i \tag{2}$$

Alternatively, differences between income and consumption tax in regards to treatment of saving could be shown through a budget constraint with an income tax,

$$(1-t)M = PX \tag{3}$$

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

$$M = (\frac{1}{1-t})PX = (1+T)PX \tag{4}$$

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.

In regards to definition of PIT, definition of income already gives answers to the type of personal income tax applied. If income from saving (and return on saving) is taxed then 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 EU15 countries and most OECD countries. Some countries (mostly Nordic countries) apply 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 number of tax rates implies only one marginal tax rate (above a certain threshold). (OECD, 2006) in the explanation of the personal income taxation in OECD members used a term 'semi' for all three types of income

[1] Capital gains have to be excluded. Moreover, if imputed income is also excluded than this is called a cash-flow tax.

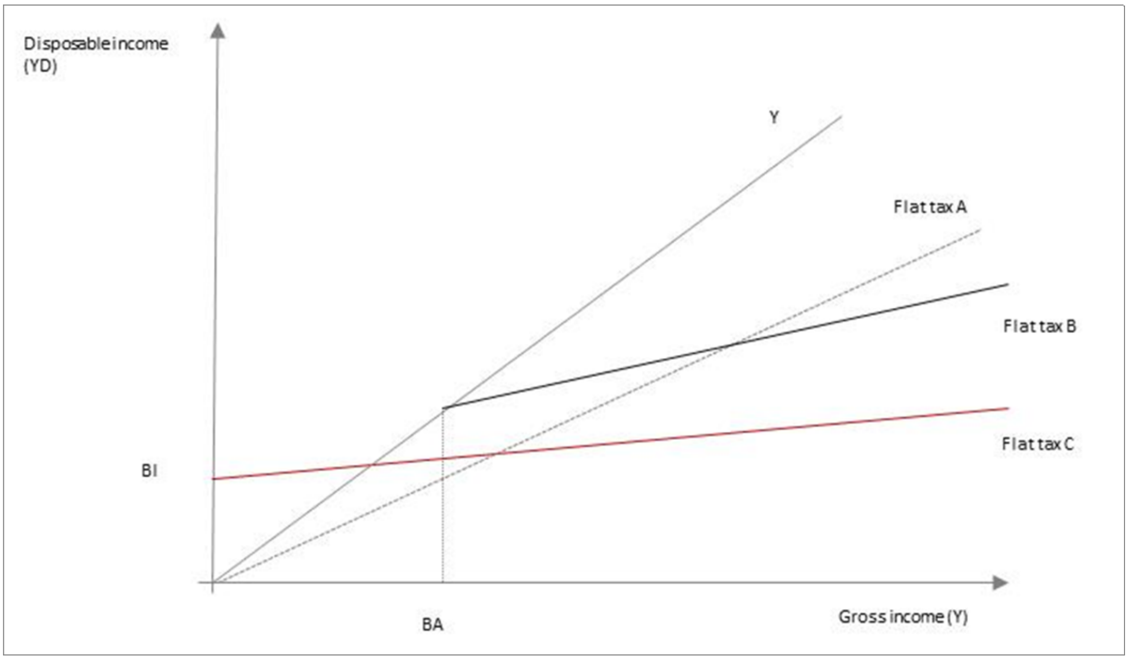
tax. This is mainly due to the fact that none of the (OECD) countries actually apply theoretical model fully in practice.

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 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. Even though discussions in the USA in the 1980's led to conclusion that progressive PIT at the time was inefficient, unequal and too complicated, 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 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 has, apart from a single tax rate, left from the 'flat tax'?" Empirical data shows 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 parameter 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, 2006:85) in graph 1. 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). In addition, 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, less 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 the 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 manner. Moreover, in theory there are other authors which gave their interpretations of variations of the 'flat tax' model. (McLure, 1992, Atkinson, 1995, Rose, 1999, Bradford, 2003) gave their both theoretical and practical suggestions regarding the application of the 'flat tax'. In addition, empirically Hall-Rabushka's 'flat tax' is being applied when PIT and CIT rates are being 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 specialist', 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) using various methods analyse aspects of efficiency and/or efficiency-equity trade-off of personal income tax in developed countries. Efficiency can mean 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 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 gave theoretical explanations regarding the satisfaction of the given three principles in practice. The major question in theory and practice is whether 'flat' or progressive PIT is an adequate system of PIT in terms of satisfaction of 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 model relies on accurate data of the whole set taxpayers (i.e. annual tax slips) in one year (or multiple years). They are tools which are 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), Netherlands – (Jacobs B 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, 2008:14)). 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 countries in the region, simulation analysis as a policy tool aimed at different micro and macroeconomic issues have also been done (e.g., Cok 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 give clear answers to the success of PIT system of either progressive or 'flat' tax. The additional answer might be given by looking 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 one parameter of 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 parameter in terms of treatment of income from saving. However, theory and empirics 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 three tax principles. Hence, in order to evaluate the effects of PIT reforms in selected transition countries, we have to firstly look at the PIT developments in OECD countries in the past thirty years (due to availability of data).

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 transition process. In fact, China's four modernisations and opening up 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 three tax principles. In addition, ideas behind 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, so do PIT rates vary from progressive to 'flat' and vice versa. So, we can say that in developed countries PIT has gone through series of 'ideological adjustments' from proportional/liberal to progressive/Keynes to current flattened progressive PIT/neoliberal ideology, i.e. transition. Prior to 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 finally tax underreporting/evasion. 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 highest 93 per cent to 60 per cent on average (i.e. PIT flattening) has opened up 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 opportunity to 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. Hence, 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. Greater inequality as a result of this process occurred. (OECD, 2014) states that apart from globalisation together with technological advances especially in IT industry, 'financialisation', i.e. financial sector developments together bringing high income earners from such sector was also a reason for greater inequality. However, financial sector developments are a consequence of globalisation process led by deregulation where capital was given the opportunity to freely move between countries around the world.

What seems to be very significant is that final factor affecting greater inequality determined by (OECD, 2014) is aforementioned halving 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 to total revenues in OECD countries has fallen by significant five per cent. On the other hand, in the same period, share of value added tax (VAT) revenues to total revenues has increased by approx. ten per cent (OECD revenue statistics). This clear shift from direct to indirect taxes has per se caused greater inequality bearing in mind regressive effects of indirect taxes. Both OECD and 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. In addition 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 previous discussion, what position can transition countries take under such circumstances and how can they organise their tax system? Transition country in terms of this paper will relate to "an European economy which is changing from a centrally planned or a socialist economy[2] to a free market or market oriented" (Feige, 1994). So, it is an economy which is moving towards developed (OECD/EU15) countries. Common measure which determines developed versus transition countries is UN's HDI index (HDI index higher than 0.9 determines developed countries, United Nations Development Programme). Transition is a challenging period and it most certainly brings economic inefficiency, inequality and lack of compliance. Since the beginning of transition process at the end of 1980's, many influential authors (Tanzi, Svejnar, Sonin, Mitra, Stern, Ebrill, Havrylyshyn, Keen, Bernardi) have been analysing different aspects of tax reforms. For most of these countries, ten policies within 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 transition process has arisen from in these countries, there is no clear cut answer to whether transition process is over even when a transition country joins the European Union (EU).

So 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 the greater transition process especially in terms of leading privatisation process. In fact, conversion of property from public to private (i.e. privatisation) is the basic assumption of 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'. From the aforementioned discussion we could conclude

[2] This term refers to ex Yugoslav states.

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 we can only implicate on certain tendencies due to other transition related issues that distort this scenario – primarily, underreporting together with high tax evasion and lack of quality long-term statistics. 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; it 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 PIT system – distorts the principle of compliance/simplicity? In order to answer all these questions, we will briefly analyse aspects of transition and then examine the case of Slovak Republic 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 experiences of Slovak Republic and Bulgaria we will try to draw suggestions for the case of B&H.

Apart from basic macroeconomic parameters such as GDP per capita, inflation and unemployment rate (World Economic Outlook, Database April 2014), a commonly used parameter 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 transition process led by privatisation in most transition countries (four to six years), transition countries most certainly face a fall in GDP, rise in unemployment and inflation and most significantly a fall 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 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 significant element of taxation in developed countries. Hence, low but growing share of PIT revenues could also indicate the significance of 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[3]) of tax reforms undertaken by a specific

[3] This classification is similar to Esping-Andersen's (1990) classification in Paulus and Peichl (2008:11) 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

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 selected transition countries. Even though 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, countries were selected using following criteria: Estonia as a Baltic State representative applying 'flat tax' but historically close to Nordic model; Slovak Republic as a Visegrad representative applying 'flat tax' but switching towards progressive PIT – historically linked to Continental model; Croatia as a Western Balkan country applying progressive PIT – again close to Continental model with some aspects in terms of income stratification similar to 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 Mediterranean model (Aiginger and Leoni, 2009:15). This grouping is only an assumption in terms of each transition country searching its 'role' model among developed (EU15) countries in entire fiscal policy (both public expenditures and public revenues – hence PIT reforms and its effects on pre-tax income inequality).

TABLE 1

Share of VAT revenues to total revenues in selected transition countries, 1995-2011

Country	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Estonia	26.5	27.2	27.0	27.0	26.5	25.1	28.3	29.6	28.2	24.9	24.8	25.7	26.0
Slovak R.	20.8	20.4	21.9	21.2	22.7	24.7	25.1	25.5	23.0	23.6	23.3	22.6	23.9
Croatia	-	-	-	31.3	31.5	31.0	31.3	31.1	29.8	30.7	28.9	30.5	30.7
Bulgaria	22.5	26.4	27.4	25.6	27.8	30.3	32.7	34.9	31.1	33.8	31.1	33.3	32.0
B&H	-	-	-	-	-	-	-	30.0	27.4	28.8	27.5	27.1	27.0

TABLE 2

Share of PIT revenues to total revenues in selected transition countries, 1995-2011

Country	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Estonia	23.3	22.1	21.5	20.7	21.0	20.5	18.2	18.2	18.5	19.5	16.0	15.9	16.1
Slovak R.	8.9	9.9	10.6	9.9	9.8	8.5	8.4	8.6	8.7	9.4	8.4	8.2	8.8
Croatia	-	-	-	8.7	8.1	8.1	7.6	7.8	7.8	8.0	8.1	7.5	7.5
Bulgaria	13.5	12.7	11.4	11.2	10.2	9.5	8.7	8.4	9.5	9.0	10.2	10.9	10.5
FB&H[a]	-	-	-	-	3.9	3.8	3.8	3.8	3.9	4.5	4.3	4.1	4.4
RS	-	-	-	-	6.1	6.9	6.7	6.5	4.5	5.2	4.2	4.4	6.8

[a] Data for B&H in table 2 in 2003-2009 represents share of wage tax to total revenues; afterwards, the share of PIT to total revenues.

Source: Taxation trends in the EU, 2013 for Estonia and Slovak Republic; 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, own calculation.

than revenues. This classification has been given in order to stratify society and hence identify/create/maintain the 'middle class' in each group.

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 significantly lower share of PIT revenues to total revenues in all selected transition countries. PIT rates which varied from 'flat' 10 per cent in B&H to highest progressive 45 per cent (in 2003) in Croatia (currently 40 per cent 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 show significant share of PIT revenues to total revenues prior and during 'flat tax' introduction. Partial reason behind a fall in share of PIT revenues to 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 yearly 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 fall in total revenues primarily due to effects of the financial crisis in 2008 and have since altered VAT (an increase in Slovak Republic and Croatia) and PIT rates (a fall in Estonia, entity RS). Since there is no significant deviation in terms of PIT revenues to total revenues in case of Croatia compared to other selected 'flat tax' transition countries, the other question remains: is Croatian progressive PIT is 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; Cok, Urban and Verbic, 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 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 selected transition countries (Estonia, Hungary, Poland, the Czech Republic and Slovenia). However, it should have some importance especially in Western Balkan countries due to slow and mostly delayed privatisation process and traditionally low tax morale.

Hence, main reasons accompanied with transition process in Western Balkan states, primarily B&H are lack of institutional framework, high tax evasion, lack of fiscal transparency, shadow economy, corruption, bribery, etc. Moreover, during the period of transition significant changes in income distribution occur, especially in terms of increasing gap between the poor and the rich (or first and last income bracket bearing in mind high levels of underreporting). In addition, selected transition countries' the size of average income in the period 1995-2010 is very low and usually at approx. 20 per cent of those in EU15 (UNECE database, in US$, current exchange rate, own calculation). Hence, most 'average incomes' earned in transition countries would be taxed (for some such as B&H even exempted) in the first income bracket which in turn indicates that those transition countries should apply the first income tax bracket of those EU15 – hence 'flat tax'. However, this does not mean that in selected transition countries there are no tendencies in creation of top incomes (see later). (Rutkowski, 1996) gives a detailed explanation regarding the effects of the first years of transition process (1987-1993) in terms of changes in income structure in Central and Eastern European countries. He comes to a conclusion that in the initial transition process, there is inevitable loss throughout income distribution, i.e. in real decile wages. However, the 9th decile (high paid workers) have been less affected by transition than low paid workers (Rutkowski, 1996:12-13). For the observed period regarding incentives to move towards progressive PIT and bringing more equality into income distribution due to 'fading' middle class in transition process, (Rutkowski, 1996:42-43) concludes for the analysed period that if economy under-utilizes its human and physical resources, then sacrificing equity in order to promote efficiency may prove beneficial especially in terms of upgrading skills and increased productivity. Popular demands for enhancing equity such as progressive PIT might "further lower labour supply 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 benefit of a wider earnings distribution outweighs its social costs" (Rutkowski, 1996:42-43). In addition, we have to bear in mind the fact that in most transition countries, high labour tax wedge mostly taken by high SSC is in fact major obstacle in terms of labour demand (Kovtun et al., 2014). But the question that still remains is have transition countries since 1993 achieved better redistribution though progressive PIT than those applying 'flat tax'? This is a very difficult question and it cannot be explicitly answered.

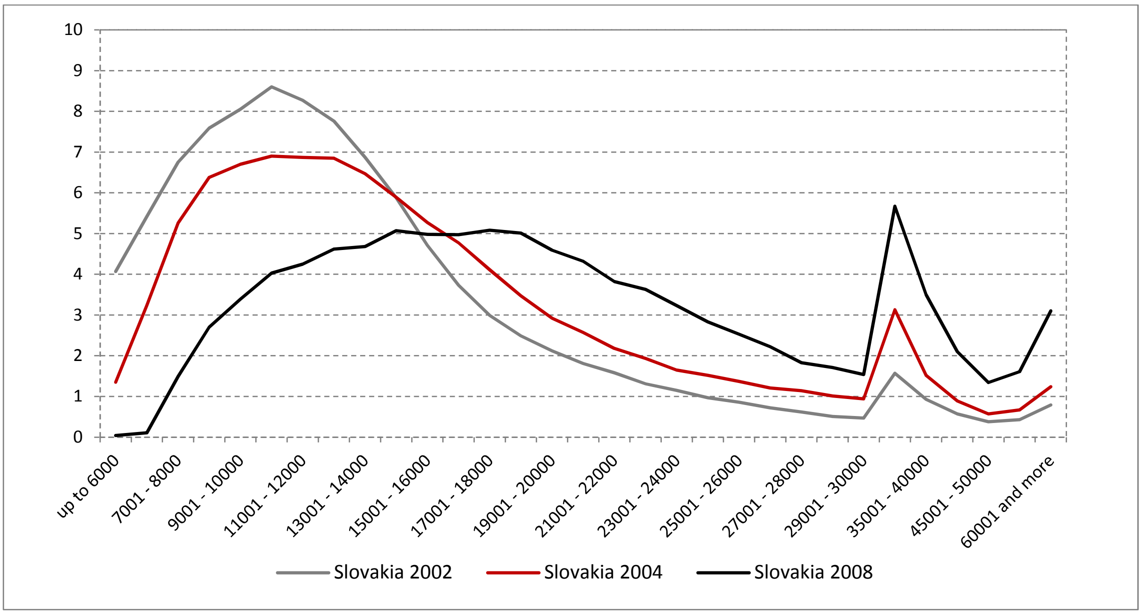
Brook and Leibfritz (2005) gave an analysis regarding the success of Slovak comprehensive (reforms in PIT, CIT and VAT) and revenue neutral tax reform in 2004 when Slovak Republic, inter alia, switched from progressive PIT to 'flat tax'. Slovak Republic halved its progressive PIT rates by introducing 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 approx. 35 per cent in 2010 (OECD, Taxing wages, 2013[4]). Even though this decrease is significant, it is still above OECD and EU15 average tax wedge for low-wage labour (Brook and Leibfritz, 2005). Simplicity increased due to not only a fall in PIT rates but also other labour related laws (ibid). Even though efficiency increased also in terms of workers switching from informal to formal sector, equity or fairness meant, similar to prior analysis that some groups gained and other lost. Introduction of 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, in the move from progressive PIT to 'flat tax' inequality and income/capital/wealth accretion most certainly occurred. This tendency could be seen to some extent in table 3 which

[4] 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).

shows interdecile ratio of gross earnings in Slovak Republic. The ratio is increasing over time which indicates growing inequality in pre-tax income distribution.

GRAPH 2

The share of full-time employees in per cent by bands of average gross nominal monthly earnings in Slovak Koruna in 2002, 2004 and 2008, NACE classification, full and part-time employed



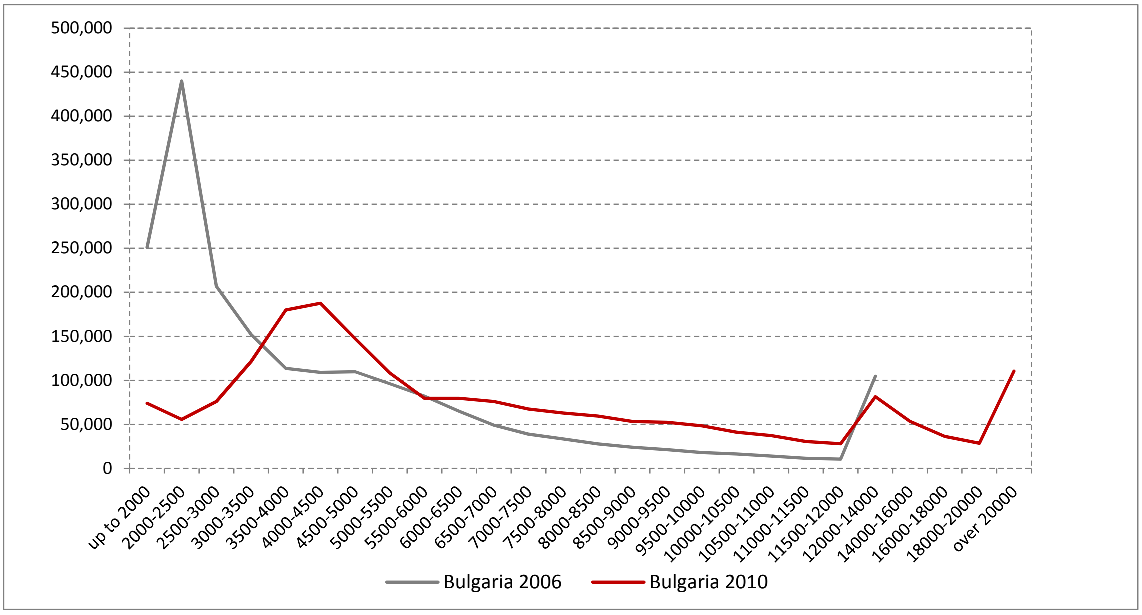
N.B. Data for 2002, 2004 and 2008 is taken from Statistical office of Slovak Republic. It shows share of full-time employees in % by bands of average gross nominal monthly earnings in Slovak Koruna. The graphs are shown in national currency due to the fact that Slovak Koruna changed its exchange rate in 2002 from 42,7 Koruna 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.

In 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 Slovak Republic, progressive PIT was introduced for the top 1 per cent earners at the rate of 25 per cent. The success of such 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 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. Peculiarity of Bulgarian ‘flat tax’ is abolishment of the basic/personal allowance (flat tax A, graph 1) which causes greater inequality than ‘flat tax’ with the 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 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, Structure Of Earnings 2006 & 2010, p. 332, p. 334, own interpretation, 1Euro= 1,9558 Bulgarian lev (since 2006), source: ECB, Statistical Data Warehouse.

TABLE 3

Decile ratio (D9/D1) of gross earnings, full time employees

Decile ratio (D9/D1) of gross earnings	**2002**	**2006**	**2010**
Estonia	5.89	4.55	4.01
Slovak republic	3.25	3.51	3.65
Croatia[a]	3.64 (1998)	4.01 (2000)	4.09 (2002)
Bulgaria[b]	-	4.14	4.55
FB&H[c]		3.2136 (2008)	3.63

[a] *Croatia net income was taken from the Household budget survey data.*

[b] *Bulgarian gross monthly earnings are considered.*

[c] *For RS no data is available and for FB&H net monthly earnings are the basis for calculation (net income was the basis for wage tax calculation until 2008; even though the base changed since 2009, in 2010 net income was taken again so that data would be comparable).*

Source: OECD statistics; Structure of Earnings in Bulgaria 2006, 2010; Nestic (2005:63); Federal statistical office, statistical yearbook, 2009, 2011.

In terms of comparison with B&H, an important point needs to be emphasized: 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: CASE OF BOSNIA AND HERZEGOVINA

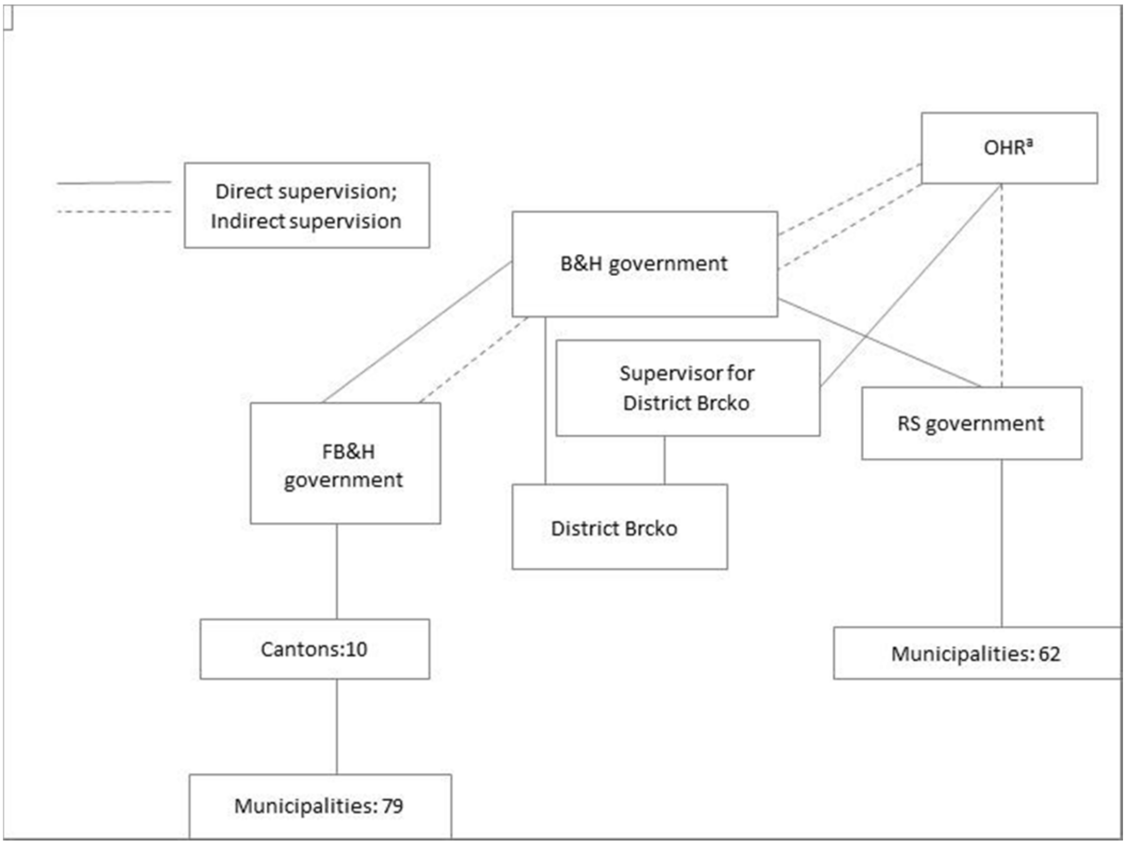
3.1.1 CONSTITUTIONAL STRUCTURE OF BOSNIA AND HERZEGOVINA

B&H gained as a former Yugoslav Republic 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 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 fell by 80 per cent in 1992, B&H pre-war macroeconomic performance was/is difficult to reach. Hence, expected fall in GDP per capita, rise in inflation and unemployment which was expected in all transition countries at the beginning of transition process, in B&H occurred under worst possible circumstances. In B&H, all macroeconomic indicators followed the trends of those other transition countries except the rise in inflation. Due to significant human, capital and infrastructural losses, up until 2000, B&H economy heavily depended on international aid i.e. B&H was an aid-driven economy. However, since 2000, one would expect that B&H has finished its reconstruction process and that it is trying to make progress in transition process. However, this was/is not the case primarily due to unfinished privatisation, lack of political will induced by 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, fiscal system and tax system within is 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.

Both B&H entities in the area of PIT have been passing laws and have made constant changes in the past nineteen years. FB&H had since 1996 applied 'cedular' 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). In 2008 new law was passed and in 2009 synthetic personal income tax at a flat rate of 10 per cent above a certain threshold – basic/personal allowance was introduced. Unlike Slovak Republics' case we cannot say that neither B&H nor entities separately applied comprehensive tax reform 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' did not bring more efficiency in terms of significantly lower labour tax wedge and/or labour demand incentives.

GRAPH 4

Constitutional structure of B&H



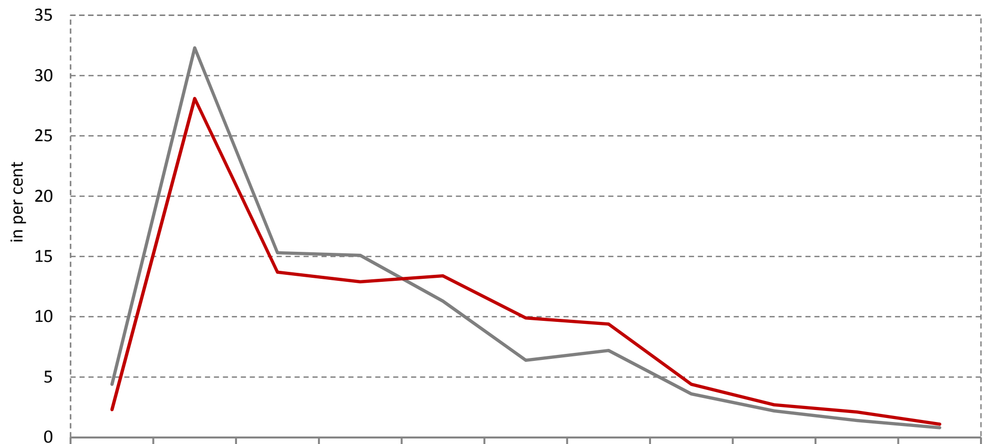
[a] Under Article 10 of the Dayton Agreement, OHR stands for "Office of High Representative" which oversees the civilian implementation of the Dayton agreement. Principal Deputy High Representative serves the role of District Brcko Supervisor; since 1999, the number of municipalities in FB&H and RS decreased (from 84 to 79 in FB&H and from 63 to 62 in RS).

Source: Kreso, 2005, Association of municipalities and cities in FB&H and RS, own interpretation.

RS has been changing legal provisions regarding tax rates, personal allowances (abolishing and reintroducing) 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). Currently RS applies 'flat' 10 per cent PIT rate with reintroduced basic/personal allowance in 2014. The situation of 'organised mess' resulting in unfinished transition process in B&H obviously reflects on tax system, namely PIT. Long, inefficient and unfinished transition process heavily affects B&H 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 Slovak Republic and Bulgaria, net (due to its base of wage tax calculation until 2009) income distribution 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 Federation of B&H, in BAM, full and part-time employed

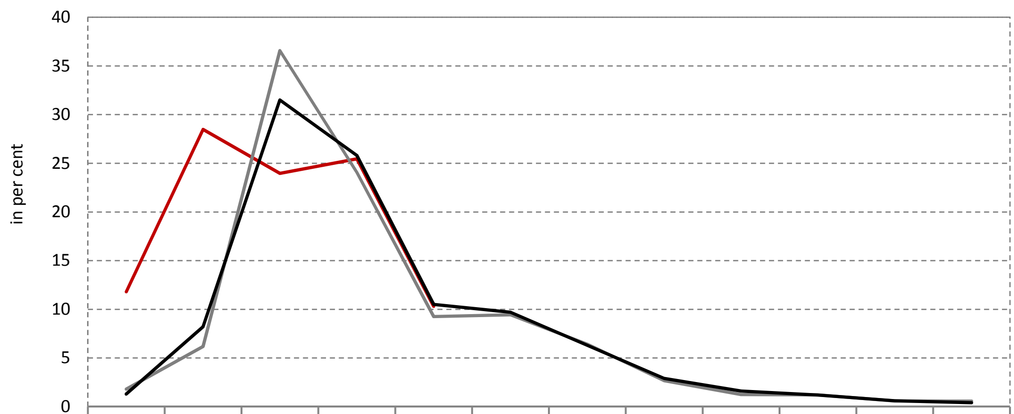


	up to 350	351-500	501-650	651-800	801-950	951-1100	1101-1400	1401-1700	1701-2000	2001-2500	more than 2500
FBiH 2008	4.4	32.3	15.3	15.1	11.3	6.4	7.2	3.6	2.2	1.4	0.8
FBiH 2010	2.3	28.1	13.7	12.9	13.4	9.9	9.4	4.4	2.7	2.1	1.1

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



	up to 250	251-350	351-500	501-800	801-950	951-1100	1101-1400	1401-1700	1701-2000	2001-2500	2501-3000	more than 3000
RS 2006	11.8	28.5	24.0	25.5	10.3							
RS 2008	1.8	6.2	36.6	24.1	9.3	9.4	6.4	2.7	1.2	1.2	0.6	0.6
RS 2009	1.3	8.2	31.5	25.8	10.5	9.7	6.3	2.9	1.6	1.2	0.6	0.4

N.B. these years were chosen since major changes in PIT tax legislation occurred.
Source: RS statistical office, own interpretation.

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 Slovak Republic – especially in the upper tail of distribution. Explanation to this problem could be firstly found in low GDP per capita, slow after-war growth and after 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 EU, high levels of corruption, bribery, and the fact that B&H has high share of shadow economy (on average 33.6 per cent, Schneider, 2012:61). Moreover, unlike cases of Slovak Republic and Bulgaria, both FB&H and RS switched from 'cedular' PIT to synthetic where the base has been changed together with rates. Hence, it is the only country out of those analysed where switching towards 'flat tax' meant changing overall PIT system. If we look at the PIT rates they remain quite low comparing 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). Interdecile ratio in table 3 gives certain tendencies of growing inequality in FB&H. In addition, the fact that both tax administrations (FB&H and RS) do not audit individual tax payers 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 a tax reforms and a switch towards synthetic PIT, PIT is monthly paid in advance by employer causing better control of paid taxes. However, annual comprehensive income is an individual/employee (self-employee) obligation which then through loose system of non- individual auditing/control serves as a motive for high underreporting, hence tax evasion. 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 high-paid employees" (Bulgarian Structure of Earnings, 2006, p. 34). Similar can be assumed in the case of B&H. So, in such system, introducing progressive income tax just to serve a few individuals would only make PIT system more complicated with little or none impact on redistribution mainly due to high tax evasion and informal economy. Similar scenarios are present in other Western Balkan states, where progressive PIT was replaced by 'flat' since underreporting/evasion occurred. FYR Macedonian 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 the macroeconomic circumstances, 'flat tax' is the best solution for PIT in B&H's two entities. Progressive income tax can be introduced, similar to the case of Slovak Republic, once the society as a whole gets wealthier and when transition process comes to an end. A country such as B&H requires comprehensive PIT reform including greater involvement and significance of government institutions in all macroeconomic fields. Shifts in income distribution are 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 Slovak case, when top 1 per cent of the wealthiest members of the society become visible.

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REFORM OF LABOUR TAXES IN LATVIA 2011-2013

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JEL CLASSIFICATION: H23, H24, E24

ABSTRACT

The paper analyses motives and results of the labour tax reform undertaken by the Latvian government in 2011-2013 with a special focus on the low-wage sector of employment. The reform was developed with a goal to overcome negative effects on the labour market caused by a deep economic crisis in 2008-2010 as well as to cope with an increase in a labour tax burden during a consolidation.

In 2008-2010, Latvia was seriously affected by the global economic crisis and during these years real gross domestic product (GDP) declined by 21 percent. Labour market conditions became worse rapidly and at the beginning of 2010, the unemployment rate reached 21.5 percent of the economically active population.

For the period of 2011-2016, the reform provides for a reduction in the rates of personal income tax (PIT) and social security contributions (SSC) as well as for an increase in PIT allowances.

Taking into account the changes made in labour tax laws, authors based themselves on forecasts of an average wage and, by applying the Eurostat methodology, calculated the tax wedge in different groups of employees depending on income level and on the number of their dependents. The analysis of results shows that the impact of the reform varies greatly and it is more beneficial for employees with dependants and for low-wage earners.

Keywords: tax reform, personal income tax, social security contributions, tax wedge, tax allowance

1 INTRODUCTION

Labour taxation (PIT and SSC) are being in the centre of Latvia's tax debate for many years. There are numerous reasons for that. From the side of the business community, attention is primarily drawn to the role of labour taxation at the cost of employment and its impact on competitiveness, especially within the Baltic region, that includes Latvia, Lithuania and Estonia. Labour taxes play also a significant role in ensuring revenue for the basic budgets of state and local governments and for the special state social security budget. At the same time, labour taxation is used also as an instrument of redistribution, aiming to encourage higher labour market participation and employment, reducing poverty and curbing the existing income inequality. Informal employment and labour tax evasion is another issue, where an appropriate and fair tax regime could bring positive changes. All these issues have manifested themselves recently due to a deep economic crisis.

As Latvia returned to economic growth and public finances were set in order that provides an opportunity to carry out tax reforms also with (at least short-term) negative fiscal impact, the first choice was labour taxes.

The aim of this paper is to analyse the reasons and results of the labour tax reform undertaken by the Latvian government in 2011-2013 with a special focus on the low-wage sector of employment. The research methodology is based on the analysis of statistical data with special attention to the indicators characterising employment, wages, household incomes and the general government budget, and a scientific research based on studies of economic and scientific literature, reports of the government and international organizations. Authors calculated tax wedge indicators. Main sources of data used are the Central Statistical Bureau of Latvia, Eurostat and the Ministry of Finance of Latvia.

Section 2 of the paper analyses the impact of the economic crisis of 2008-2010 on the labour market, public finances and income distribution, identifying challenges to be solved by means of forthcoming reforms. In Section 3 theoretical interrelation between taxes and employment are being viewed. Section 4 of the paper analyses the first results of implemented reforms, and Section 5 contains conclusions on the achievements and drawbacks of the reforms, as well provides recommendation for further work.

It is noteworthy to mention that since 1994 Latvia has a flat income tax system, in which some progressivity has been achieved through the PIT basic allowance (non-taxable minimum) and the PIT allowance for dependants.

2 THE ECONOMIC CRISIS IN LATVIA AND ITS IMPACT ON THE LABOUR MARKET AND ON THE WEALTH OF THE POPULATION

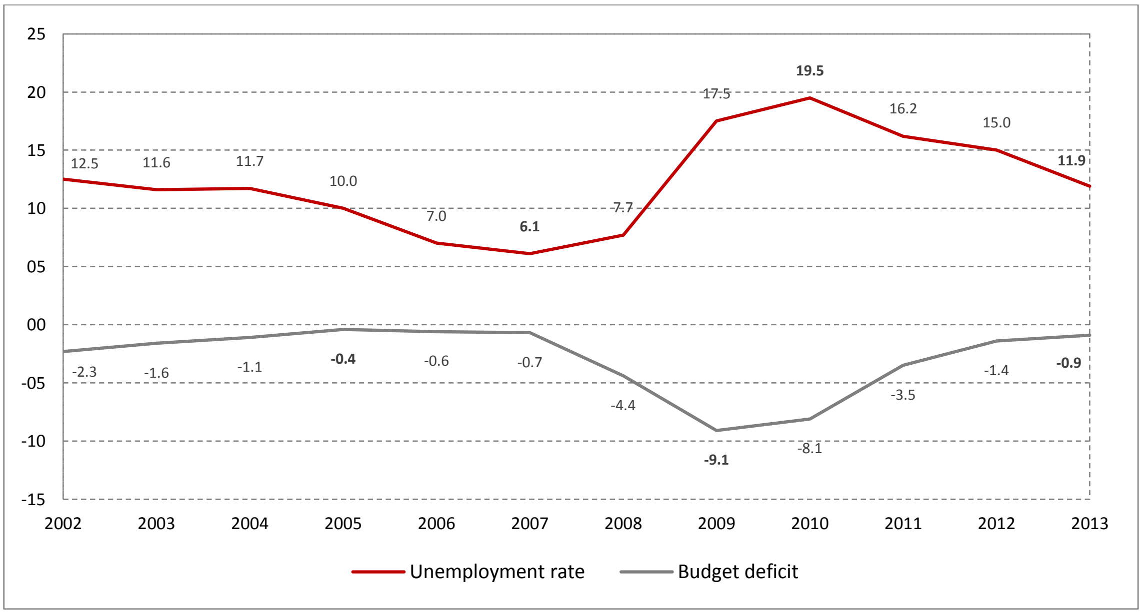
2.1 DEVELOPMENT OF GROSS DOMESTIC PRODUCT, EMPLOYMENT AND WAGES

In the years 2008-2010, Latvia was seriously affected by an economic downturn. The global liquidity and confidence crisis, which started after Lehman Brothers' bankruptcy, led to short-term liquidity problems and, consequently, to the takeover of one of the largest domestic banks of Latvia by the government in late 2008, what deepened the already growing problems faced by public sector finances. In addition, at that time Latvia clearly faced both a cyclical and a structural crisis as during the preceding boom years the economy accumulated imbalances in the real goods sector, as well as in the labour and financial markets and was growing way above its potential level in an unsustainable growth path (Kasjanovs, 2011). During these three years real GDP declined by 21 percent.

The crisis had a significant impact on employment in Latvia. The labour market conditions became worse rapidly and at the beginning of 2010 the unemployment rate reached 21.3 percent of the economically active population (in 2010 – 19.5 percent as can be seen in Figure 1).

FIGURE 1

Unemployment rate and the state budget deficit in Latvia, % of GDP



Source: Central Statistical Bureau of Latvia.

TABLE 1

Employment by sectors

	Structure (%) 2010	**Changes in the number of employees (%) 2010/2008**
Primary sectors	9.8	0.0
Manufacturing	14.3	-21.6
Electricity, gas and water supplies	1.9	-16.1
Construction	7.0	-47.6
Trade, hotels and restaurants	19.3	-16.1
Transport and communications	9.9	-12.2
Public services	21.8	-11.5
Other activities	16.1	-5.3

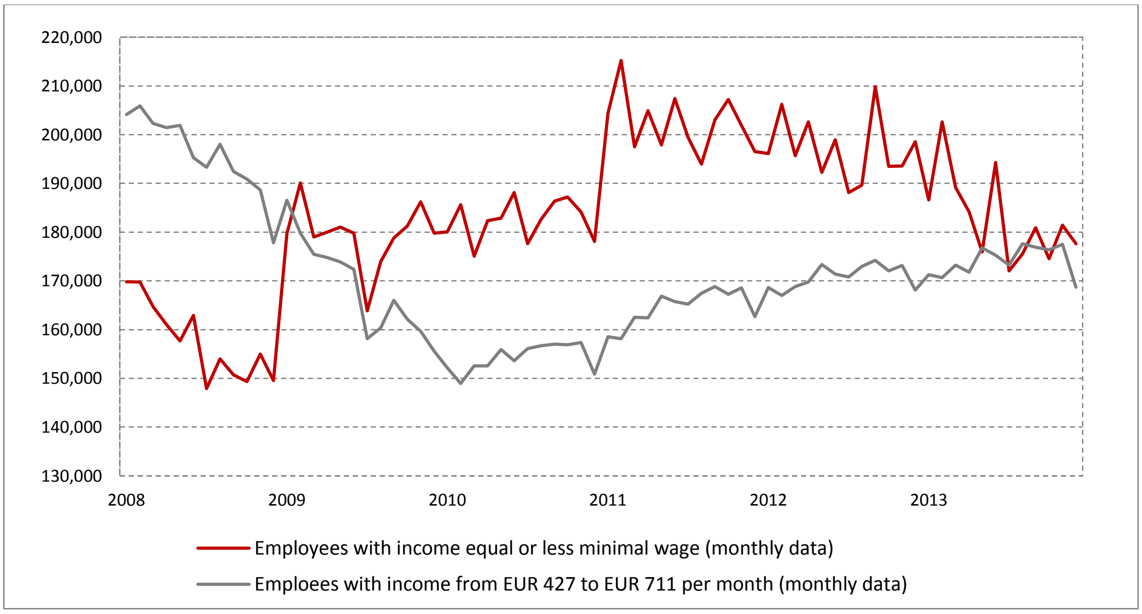
Source: Ministry of Economics of Latvia, 2011.

The crisis caused enormous changes in the structure of economic sectors and for example, employment in the construction sector almost halved (see Table 1). In the first phase of recovery, job matching (Beveridge curve) was indicative of the flexible and effective labour market in Latvia (Zasova, 2011). However, taking into account an extent of the problem, there was a substantial risk of increase in structural unemployment because of possible 'mismatch' between skills and the requirements of new job opportunities if such high unemployment rate remains for a longer period of time. Long-term unemployment causes economic costs due to worsening in skills and employability of those people out of the workforce. An increase in discouraged jobseekers stimulates also outward migration that according to estimates during 2009-2010 reached 70 thousand people (Hazans, 2011), what in view of existing negative natural growth of population in Latvia, potentially harms long-term growth prospects of the country.

High unemployment and the policy of internal devaluation (e.g. cutting wages in the public sector) soon reflected in the decrease of labour income. In 2009, an average wage, compared to the previous year, decreased by 3.9 percent, but in 2010 – by 3.5 percent. Furthermore, a share of minimum wage earners increased substantially up to 30 percent of total employment, but the share and number of those employees with income close to an average wage (an interval from 427 to 711 euro per month) decreased (see Figure 2). The latter could be one of the indicators of increased underreporting, and it also undeniably shows a real increase in the share of low-wage workers in total employment.

FIGURE 2

Changes in the number of employees by the level of income



Source: Central Statistical Bureau of Latvia.

Latvia responded to the crisis by maintaining its currency peg and by an adjustment through internal devaluation and front-loaded consolidation, which included cutting public expenditures. The main rationale behind choosing such a policy choice – when a country needs to address underlying structural inefficiencies in the economy, internal devaluation is preferable to exchange rate devaluation, which offers only temporary relief from cost pressures while avoiding long overdue reforms (Aslund, 2011).

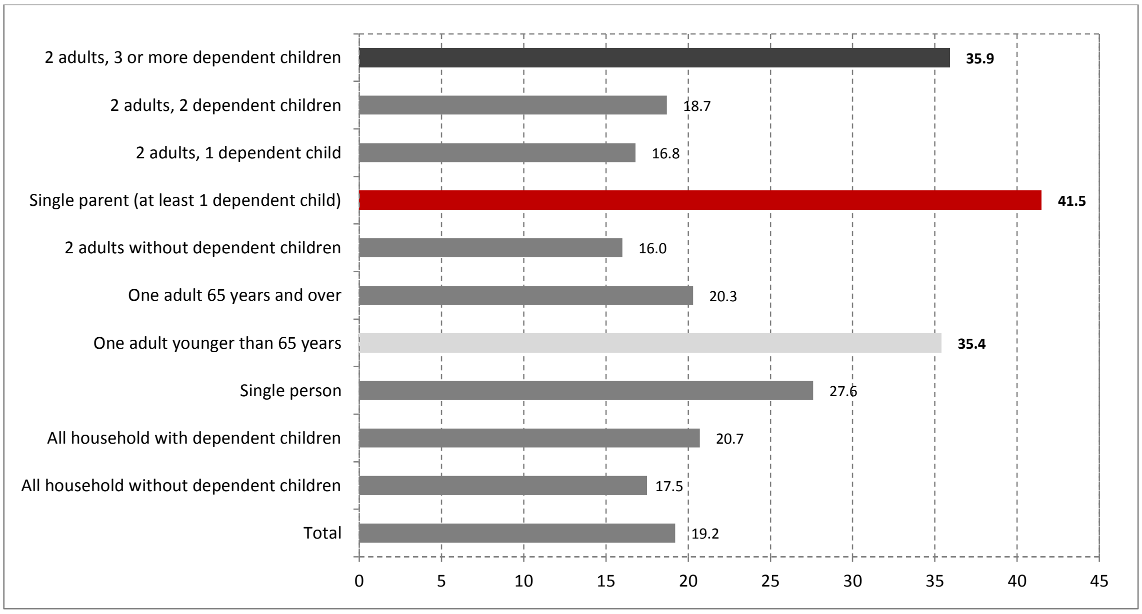
2.2 GROWTH OF INCOME INEQUALITY AND POVERTY TRAPS

In 2007, wages and salaries were the main source of subsistence for 76.6 percent of households, and this share decreased to 64.4 percent in 2010. At the same time a share of social transfers in the total income of households increased from 17.9 percent in 2007 to 31.9 percent in 2010 (Central Statistical Bureau of Latvia, 2010). If weakness in the labour market lasts for a longer time period, it heightens concerns about a long-term dependency on benefits and creates risks of poverty traps (World Bank, 2013).

In 2012, according to the data of the Central Statistical Bureau of Latvia (CSB), poverty rates by a household type show that families with dependent children, especially with 3 and more, and single-parent families, are at the highest risk of poverty (see Figure 3). If before 2008, at-risk-of-poverty rate for people at the retirement age was twice as high as for children, then after the crisis, at-risk-of-poverty rate for children was two and even three times higher than for people at the retirement age. This was a result of increased unemployment and decreased labour income at the time when pensions where clearly taken out from consolidation measures due to a corresponding decision of the Constitutional Court.

FIGURE 3

At-risk-of-poverty rate by a household type in 2012, %*



** The proportion of population (as percentage) whose equivalent disposable income is below 60% of gross national disposable income equivalent median.*

Source: CBS.

Income inequality is another issue that was revealed by the crisis. There are different theoretical views on this issue, but the recent empirical evidence and works of development economists create broad international consensus that a better distribution of income would strengthen aggregate demand, investment and growth. This, in turn, would accelerate job creation, including in high-productivity activities that offer better remuneration and social benefits, thereby further reducing inequality (UNCTAD, 2012). Tax and transfer systems reduce overall income inequality in all countries. On average across the OECD, three quarters of a reduction in equality is due to transfers, the rest – due to direct household taxation (OECD, 2012).

In 2009, the Gini coefficient of equivalised disposable income amounting to 37.5 percent in Latvia was the highest in the European Union (according to the Eurostat data in 2009 the EU-27 average – was 30.5 percent), showing a necessity and possibilities for improving tax-benefit policies.

Labour market institutions such as taxes and benefit systems may cause additional problems to employment growth or provide wrong incentives especially for low-wage workers. One such indicator is the unemployment trap that measures the proportion of gross earning taxed away (by higher taxes and withdrawal of benefits) when shifting from unemployment to employment. Other is the low-wage trap that measures the proportion of gross earnings taxed away (by higher taxes and withdrawal of benefits) when gross earnings increase (for the unemployment trap the Eurostat uses earnings amounting to 67 percent of an average wage, for the low-wage trap – a wage increase from 33 percent to 67 percent of an average wage).

In 2010, the unemployment trap in Latvia was 90.06 or above the EU-27 average – 74.74 while the low-wage trap was 33.00 or significantly lower than the EU-27 average – 47.46 (the Eurostat data). From the standpoint of taxes, this outcome could be explained by the flat-rate personal income tax system with a low non-taxable threshold.

2.3 CHANGES IN LABOUR TAXES DURING THE BUDGET CONSOLIDATION PERIOD

The crisis had a significant impact on public finances. In 2004-2008 total due to high consumption-based economic growth, tax revenue in percentage of GDP increased from 27.8 percent to 31.3 percent. This upward trend was interrupted in 2009 due to rapid worsening of economic situation. In 2010 tax-to-GDP ratio came down to its lowest value since 1995 – 27.4 percent of GDP, and total tax revenue in 2010 decreased by 2169 mn. euro compared to 2008, leading to unsustainable levels of the budget deficit.

As a result of loss in budget revenue, the government had to introduce major fiscal consolidation measures that in total amounted to16 percent of GDP (as can be seen in Table 2: 9.53 percent in 2009, 3.97 percent in 2010 and 2.26 percent in 2011).

TABLE 2

Consolidation measures in 2009-2011

Consolidation Measures	2009		2010		2011	
	Mn. euro	% of GDP	Mn. euro	% of GDP	Mn. euro	% of GDP
Revenue, *of which:*	**529.2**	**2.85**	**374.4**	**2.06**	**322.0**	**1.59**
Value added tax	411.2	2.21	-	-	120.2	0.59
Personal income tax	-124.2	-0.67	219.4	1.21	-78.3	-0.39
Social security contributions[a]	49.8	0.27	52.2	0.29	175.2	0.86
Excise duties	155.5	0.84	17.2	0.09	29.9	0.15
Real estate tax	-	-	43.0	0.24	8.6	0.04
Corporate income tax	-8.3	-0.04	-	-	1.6	0.01
Other taxes	-	-	0.1	0.00	27.0	0.13

Non-tax revenue	45.2	0.24	42.5	0.23	37.7	0.19
Expenditure, ***of which:***	**1,243.3**	**6.69**	**348.0**	**1.91**	**136.4**	**0.67**
Current expenditure (remuneration; goods and services)	566.1	3.04	204.2	1.10	43.6	0.23
Interest payments	43.4	0.23	-0.3	0.00	0.2	0.00
Subsidies, grants and social support	549.8	2.96	76.2	0.41	89.6	0.48
International collaboration	1.2	0.01	0.4	0.00	-	-
Payments to the EU budget	8.5	0.05	-	-	-	-
Capital expenditure	74.3	0.40	67.5	0.36	3.0	0.02
TOTAL	**1,772.5**	**9.53**	**722.4**	**3.97**	**458.4**	**2.26**

[a] *Excluding contributions to the state funded pension scheme.*

Source: Ministry of Finance of Latvia.

Main consolidation measures took place on expenditure side, but changes in taxation were also significant as tax rates and bases were increased almost in all tax categories (see Table 3). Although the largest increase in taxes was attributed to consumption and property taxation, which are less obstructive to growth, labour taxation was increased as well.

TABLE 3

Major changes in tax rates during the consolidation period

	2008	2009	2010	2011
Value added tax general rate (%)	18	**21**	**22**	22
Reduced rate	5	**10**	10	**12**
Personal income tax general rate (%)	25	**23**	**26**	**25**
Tax rate for economic activities	15	15	**26**	**25**
Tax rate on income from capital (such as dividends and interests)	-	-	**10**	10
Tax rate on capital gain	-	-	**15**	15
Basic allowance, *euro per month*	114	**From Jan. 128 From Jul. 50**	50	**64**
Allowance for dependents, *euro per month*	**80**	**90**	90	**100**
Social security contributions rate (%), of which:	33.09	33.09	33.09	**35.09**
Employer rate	24.09	24.09	24.09	24.09
Employee rate	9	9	9	**11**
Real estate tax rate (land and commercial buildings), %	1	1	**1.5**	1.5
Rates for residential housing (depending on cadastral value), % less than 56 915 euro 56 915 -106 715 euro exceeding 106 715 euro	**-**	**-**	 **0.1** **0.2** **0.3**	 **0.2** **0.4** **0.6**

Source: Ministry of Finance of Latvia.

Before 2008, there was a goal to reduce a tax burden on labour for low-income households through an increase of PIT allowances. The first consolidation package adopted at the end of 2008 also provided for cutting the PIT rate by 2 percentage points to 23 percent as a fiscal stimulus to counteract the crisis.

As the crisis and shortage of tax revenue proved to be much more severe than it was initially anticipated, this policy was soon reversed and the PIT rate was increased to 26 percent in 2010. Moreover, the basic allowance that was increased to 128 euros per month at the beginning of 2009 was significantly reduced to 50 euros per month already in the second half of 2009 (for comparison – in 2009 an average monthly gross salary was 655 euros). At the same time, an allowance for dependents was not changed and remained 90 euros per month.

When comparing labour taxation in the Baltic region, where all countries use flat income taxes, and its impact on labour costs, Latvia at the end of the crisis showed the highest PIT burden especially for the wages below the average what resulted from higher PIT rate and lower basic allowance. While in Latvia the PIT rate and the basic allowance have changed almost each year during the period of 2009-2011 (see Table 3), in Estonia the PIT rate and allowances were changed only once in 2008 and since then stay at the same level (the PIT rate was decreased from 22 percent in 2007 to 21 percent in 2008 as well as the basic allowance increased from 128 euros per month in 2007 to 144 euros per month in 2008 (the allowance for child is applied at the same amount as the basic allowance, only starting from the second child)). The same situation for Lithuania where the PIT rate and basic allowances have stayed stabile since 2009 (a labour tax system in Lithuania was reformed in 2009, when the PIT rate was reduced from 24 percent in 2008 to 15 percent in 2009, the basic allowance was increased from 93 euros per month in 2008 to 136 euros per month in 2009 (in Lithuania the basic allowance is applied according to income level), the allowance for child was increased – 29 euros per month for first child and 58 euros per month for second and subsequent children (previously – 14 euros per month for each child) and a health insurance contribution's rate was introduced at the level of 9 percent).

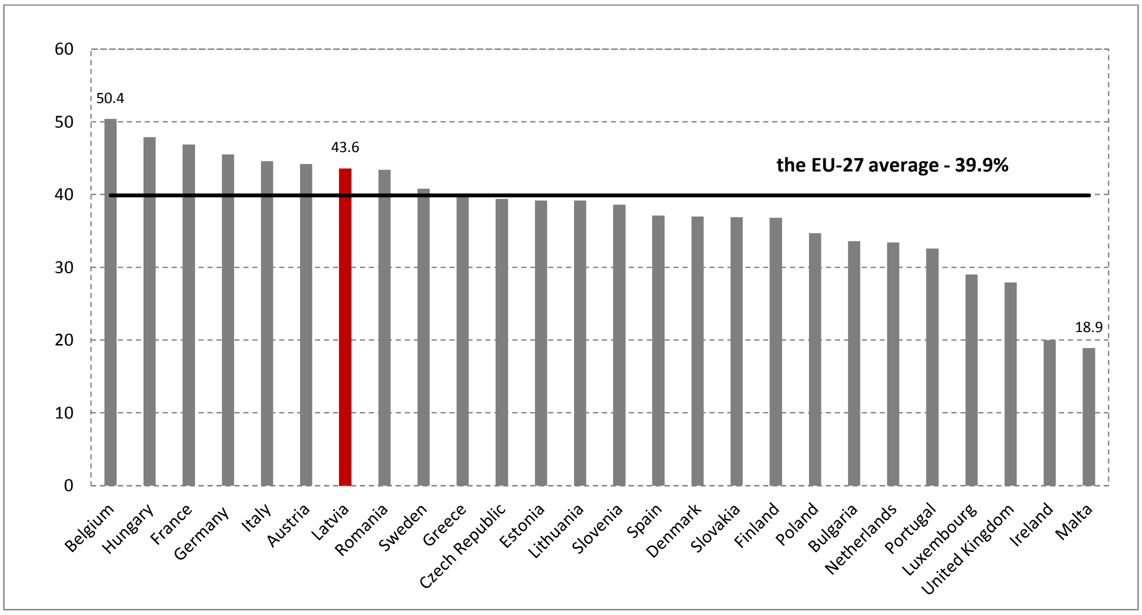
Labour costs are influenced not only by PIT, but also by social security contributions. The highest total SSC rate in 2010 was observable in Lithuania – 40.7 percent (of which the employer rate – 31.7 percent and the employee rate 9%), while in Latvia it was the lowest– 33.09 percent (of which the employer rate – 24.09% and the employee rate – 9%). In Estonia the total SSC rate in 2010 was 38.0 percent (of which the employer rate – 34.4% and the employee rate – 2.8%, which was the lowest among the Baltic States).

As result of changes in PIT the tax wedge for low-wage earners increased in Latvia and in 2012 was one of the highest in the EU and higher than in other Baltic States – Lithuania and Estonia (see Figure 4).

Tax wedge is an important issue also for the whole euro area given that the tax burden on labour in the euro area Member States is among the highest in the world, negatively affecting growth and employment. The average tax wedge in the EA18 exceeds the tax wedge in the EU by around 3 points and is much higher than in the US and Japan. Within the euro area, 11 countries particularly face a challenge with regard to a high tax burden on labour. As reflected in the Country Specific Recommendation (CSRs), these countries are: Austria, Belgium, Estonia, France, Germany, Italy, Latvia, Luxembourg, the Netherlands, Portugal and Spain (European Union Economic Policy Committee, 2014).

FIGURE 4

Tax wedge in the EU in 2012, in %*



**Tax wedges for a single worker with 67 % of average earnings, no dependants.*

Source: Eurostat.

Differences in a tax burden on labour from neighbouring countries, providing quite similar overall economic conditions, gave reasons to worry about cost competitiveness of Latvian companies and possibilities to increase investments in the projects with high labour intensity.

2.4 A RATIONALE OF THE LABOUR TAXES REFORM

Summarizing the consequences of the 2008-2010 crisis on the labour market and on the tax policy, there is a group of accumulated issues that need to be dealt with.

Weaknesses of the labour market:

- high unemployment, especially long-term unemployment, with all associated economic and social costs;
- emigration of discouraged jobseekers;
- decreased participation rates.

Labour market institutions:

- high unemployment trap;
- increased dependency on benefits;
- high tax wedge for low-wage earners.

Barriers to economic development and growth:

- role of taxes in regional cost competitiveness and job creation;
- income inequality and a risk of poverty.

Labour taxes may affect all these issues, however, in different intensity, although their role as a source of revenue for the budget financing should also be taken into account.

3 THEORETICAL CONSIDERATIONS ON THE IMPACT OF LABOUR TAXES ON EMPLOYMENT

Taxation of labour income can influence employment level in economy due to its effect on both unemployment level and the amount of labour force. Labour taxation drives a wedge between the total labour costs faced by employers and the real consumption wage received by employees. This will generally affect both labour demand and labour supply decisions (OECD, 2011).

In the perfectly competitive labour market, taxation would have no impact on unemployment as the real wage would adjust so that market would clear (OECD, 2011). Higher taxation would reduce voluntary supply of labour if net wages would be below the level acceptable to some individuals (thus increasing inactive population, but not affecting unemployment). In practice, however, taxation affects unemployment levels, though indirectly by alleviating or exacerbating non-tax distortions created by other labour market institutions – specifically by out-of-work benefits and wage setting institutions (OECD, 2011).

The effect of taxation on labour supply will vary among different population groups. Individuals will respond differently to a change in the real consumption wage depending on their individual preferences and family characteristics. Taxes will affect decisions on participation, numbers of hours worked, but also on the amount of an effort which an individual is willing to put into its work, including long-term decisions on occupation and education. Taxes will also influence a decision to engage in tax avoidance or evasion (including working in the informal sector). Taxes could bias the forms of compensation (OECD, 2011).

The demand for labour is affected by the ratio of tax wedge that is passed over to an employer.

The tax wedge is a measure of difference between labour costs of an employer and the corresponding net take-home pay of an employee – which is calculated by expressing the sum of personal income tax, employee plus employer social security contributions together with any payroll tax, subtracting benefits as percentage of labour costs. Employer social security contributions and – in some countries – payroll taxes are added to gross wage earnings of employees in order to determine the measure of total labour costs (OECD, 2008).

The more elastic the labour supply (and/or demand) curve is, the more harmful the tax wedge for employment becomes. In case of standard, convex, aggregate labour supply (and demand) curves, the high tax wedge particularly affects the earners of relatively low wages. Since one of the main factors explaining real wage differential is a skill level, one can argue that the negative impact on employment caused by the tax wedge would be most severe for low-skilled workers (World Bank, 2005). The situation in the low-wage segment of employment is made even more complex by other labour market institutions – such as minimum wage and social benefits creating, for example unemployment, inactivity and low-wage traps.

Empirical evidence suggests that low-income workers, single parents, second earners and older workers are relatively responsive to changes in taxation of labour income, particularly at the participation margin. In addition, taxable income elasticities suggest that higher-income individuals are more responsive to taxes than middle-income and lower-income workers (OECD, 2011).

Consequently, there is a need to design a tax policy targeting individual employment groups at different income levels and family characteristics in order to address the most pressing issues efficiently with minimum fiscal costs.

A high tax burden on labour runs counter to the objective of boosting economic activity and increasing employment, in particular against the background of very high levels of unemployment. In particular the interaction between a high tax burden on labour and benefit systems may create unemployment or inactivity traps for groups with high responsiveness to the wage level such as low skilled and low-income earners. However, it should be underlined that the tax wedge is not the only factor explaining the level of unemployment. In many EU Member States there is a need for further structural reforms in order to ensure proper functioning of the labour markets, which should accompany measures to address the tax wedge in order to increase their employment effect (European Union, Economic Policy Committee, 2014).

4 THE LABOUR TAX REFORMS

4.1 CHRONOLOGY AND GOALS OF REFORMS

Latvia's economy returned to growth at the end of 2010 (in the third quarter of 2010, GDP growth rate for the first time in nine consecutive quarters has been positive - 2.9 percent), however budget consolidation continued also in 2011, as there was a necessity to decrease further the budget deficit and improve sustainability of public finances. As regards labour taxes, the government decided to adopt the following tax changes for 2011:

- to reduce the PIT rate from 26 percent to 25 percent
- to increase the basic allowance of PIT from 50 euros to 64 euros per month
- to increase the allowance for dependants of PIT from 90 euros to 100 euros per month
- to increase the SSC rate from 33.09 percent to 35.09 percent (an increase was fully implemented through the increased employee rate – from 9 percent to 11 percent).

The goal of the government reform was to increase revenue of the state special social security budget, but at the same time to provide a relief for low-wage earners as the tax burden increased only for those whose earnings were close to or above the average wage.

This reform helped to increase revenue and to improve sustainability of the social security system, but the tax wedge for low-wage earners was not affected.

Next post-crisis labour tax reform was adopted in 2012 and it included:

- decrease in the PIT rate from 25 percent to 24 percent in 2013 and further decrease in the rate to 22 percent in 2014 and to 20 percent in 2015
- increase in the allowance for dependants of PIT from the mid of 2013 from 100 to 114 euros per month.

The goal of this reform primarily was focused on decreasing the labour costs of Latvian enterprises as well as increasing their competitiveness in the region and thereby stimulating increase in overall economic activity and employment growth (Ministry of Finance of Latvia, 2012). This time, the labour tax reform did not provide any special measures for low-skilled jobseekers.

Decrease in the PIT rate have started in 2013, but taking into account the fiscal costs for further steps of the adopted reform and the reform's ignorance towards other labour market and growth problems such as unemployment traps or income inequality, Minister of Finance and Minister of Welfare initiated discussions on changes in the adopted reform.

Taking into account Latvia's flat income tax, the main instrument to influence low-wage workers is tax reliefs – the basic allowance and an allowance for dependants. Change in the tax rate is more beneficial to better paid workers. It is possible to reduce the tax wedge to the EU average solely through the basic allowance if it was increased approximately to 140 euros per month (Šņucins, 2012).

Latvia received similar opinions also from the European Commission (EC) and the International Monetary Fund (IMF). In 2013, the EC through country-specific recommendations indicated a need for appropriate calibration of the tax policy in order to stimulate employment for low-skilled people in Latvia (European Commission, 2013). The IMF pointed out that while some reduction in the tax wedge on labour would be desirable, untargeted cuts in the statutory PIT rate are not first-best from an efficiency or equity perspective (IMF, 2013).

Taking into account these views and debates between the government and its social partners (employers' organisations and trade unions), an agreement was reached that a reduction of income inequality and support to employees with children (dependants) should be equally important goals of the labour tax reform alongside with a reduction of labour costs.

Thus, the reform has been significantly adjusted as from 2014, the social insurance contributions rate has been reduced by one percentage point, the PIT basic allowance and allowance for dependents has been increased. Also it planned that as from 2015, the PIT rate will be decreased from 24% to 23% and from 2016 to 22% (see Table 4).

TABLE 4

Tax reform in Latvia in 2014-2016

	2013	2014	2015	2016
PIT rate (%)	**24**	**24**	**23**	**22**
Basic allowance, euro per month	64	**75**	75	75
Allowance for dependents, *euro per month*	114*	**165**	165	165
SSC rate (%), of which:	**35.09**	**34.09**	**34.09**	**34.09**
Employer rate	24.09	23.59	23.59	23.59
Employee rate	11	10.50	10.50	10.50

** As from 1 July 2013.*

Source: Ministry of Finance of Latvia.

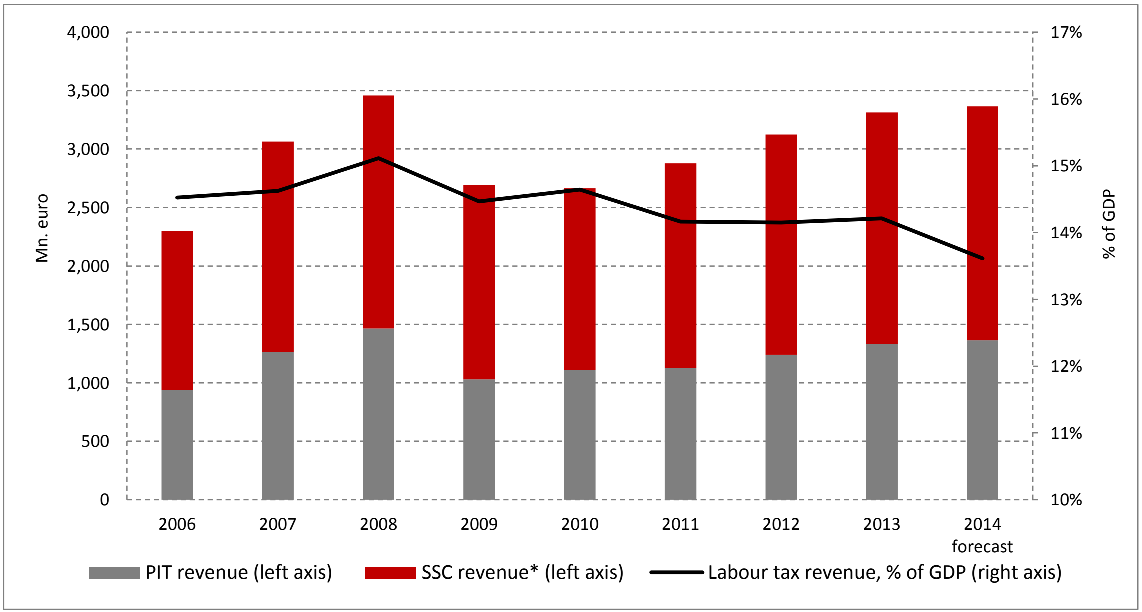
4.2 EVALUATION OF THE REFORMS

Since 2010, economic situation in Latvia has markedly improved, showing stable GDP growth above 4 percent in a year, decrease in the unemployment rate and wage increase along with productivity. However, still it is too early to estimate the macroeconomic impact of reforms as it takes time to influence economic agents through such comparatively mild instruments.

Revenues from PIT and SSC have increased broadly along with an economic development – employment and wage increase (see Figure 5). With decrease of a tax burden, the share of labour taxes in GDP become stable despite the growing tax base – higher employment, wages, improved reporting. This indicates that a comparatively large amount of resources (approximately 2 percent of GDP) was given by the government in favour of households and businesses.

FIGURE 5

PIT and SSC revenue in 2008-2014, mn euro and % of GDP



Source: Ministry of Finance of Latvia.

The analysis of results shows that the impact of the reform varies greatly among different groups of employees. It was more beneficial for families with children and for low-income earners. According to the data of Central Statistical Bureau of Latvia (collected on February 2014), 24.7 percent of employees earn the minimum monthly salary that since January 2014 amounts to 320 euros per month, 27.8 percent earn from 300 to 500 euros per month, but only 6.5 percent earn above 1 500 euros.

For example, due to the reform in 2014 an employee earning a gross wage of 450 euros per month and having two children, in 2014 will get approximately by 7.6 percent higher wage than in 2013. At the same time, an employee with a gross wage of 1 500 euros per month and having two children, in 2014 will get additionally approximately by 3.0 percent higher wage than in 2013 (see Table 5).

TABLE 5

Increase of employees' income in 2014, % in comparison with the previous year (%)

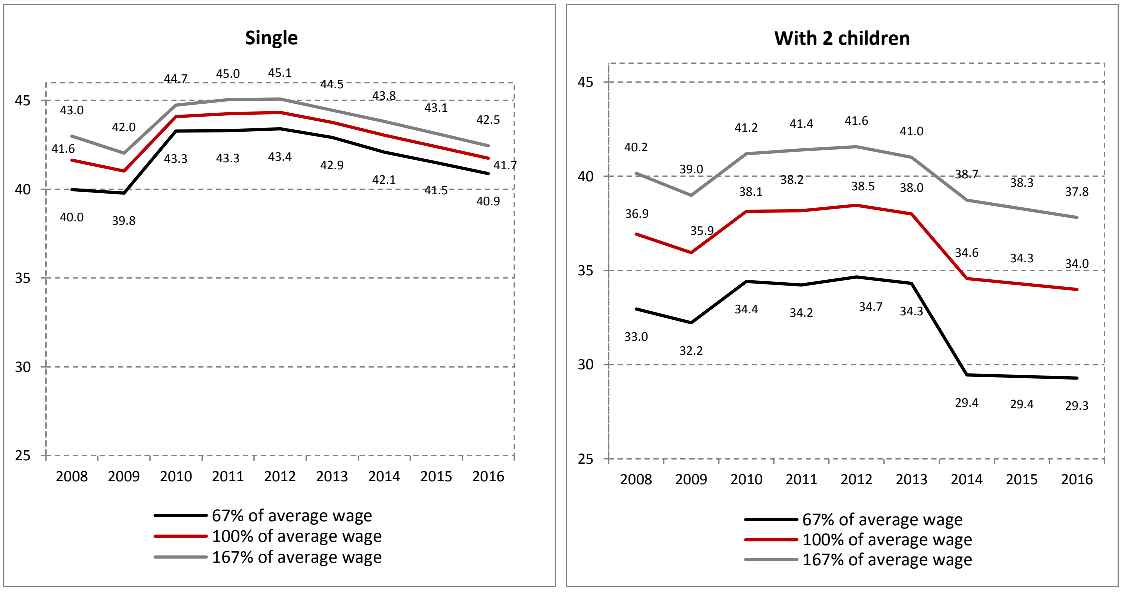
Gross wage, *euro per month*	**Number of dependents**					
	0	**1**	**2**	**3**	**4**	**5**
320	1.7	6.2	0.6	0.6	0.6	0.6
350	1.6	5.8	2.1	0.6	0.6	0.6
400	1.5	5.2	5.1	0.6	0.6	0.6
450	1.4	4.8	7.6	0.6	0.6	0.6
500	1.3	4.4	7.1	2.8	0.6	0.6
550	1.2	4.1	6.6	4.9	0.6	0.6
600	1.2	3.8	6.2	6.7	1.2	0.6
650	1.1	3.6	5.8	7.8	3.1	0.6
700	1.1	3.4	5.5	7.4	4.7	0.6
750	1.0	3.2	5.2	7.0	6.2	1.8
800	1.0	3.1	4.9	6.7	7.5	3.3
850	1.0	2.9	4.7	6.4	7.9	4.7
900	1.0	2.8	4.5	6.1	7.5	5.9
950	0.9	2.7	4.3	5.8	7.2	7.0
1,000	0.9	2.6	4.2	5.6	6.9	8.0
1,100	0.9	2.4	3.9	5.2	6.4	7.6
1,200	0.9	2.3	3.6	4.8	6.0	7.1
1,300	0.8	2.2	3.4	4.5	5.6	6.7
1,400	0.8	2.0	3.2	4.3	5.3	6.3
1,500	0.8	1.9	3.0	4.1	5.0	6.0
2,000	0.7	1.6	2.4	3.2	4.0	4.8

Source: Author's calculation, based on implemented changes in taxes.

However, as can be seen from the area marked with a grey colour in Table 5, in some cases, when an employee has a low wage and two or more dependents, the expected benefit is lower than for an employee with the same gross wage, but with one dependent or without dependents. This is explained by the fact that the total amount of available tax allowance is higher than their gross wage. For example, for an employee with a gross wage of 350 euros per month and having three children, the total calculated allowance will amount to 570 euros per month (the basic allowance of 75 euros per month + the allowance for dependants of 165 euros per month, multiplied by 3).

FIGURE 6

The tax wedge in Latvia



Source: Author's calculation, based on forecasts and applying the Eurostat methodology.

FIGURE 7

*The tax wedge in the Baltic States and the EU-27**

** The EU-27 average tax wedges for a single worker with 67 % of an average wage (the tax wedge in 2012 is used for the period of 2013-2016).*

Source: Author's calculation, based on forecasts and applying the Eurostat methodology.

As can be observable in Figure 6, the implemented and adopted tax changes will reduce the tax wedge in 2016 for all wage categories, especially for employees with children. However, they do not increase the existing small progressivity of labour taxation for single persons in Latvia. This means that the impact of reforms on other outlined goals such as a reduction of income inequality could be evaluated as negligible.

Due to changes adopted in 2016, the tax wedge in Latvia for low-wage earners will be near to other Baltic States and to the EU-27 average, reaching one of the goals of the reform (see Figure 7).

5 CONCLUSIONS

In the years 2008-2010, **Latvia was seriously affected by an economic downturn** and real GDP declined by 21 percent. Labour market conditions became worse rapidly and at the beginning of 2010, the unemployment rate reached 21.5 percent of the economically active population.

High unemployment and the policy of internal devaluation soon reflected in **a decrease of labour income**. In 2009, an average wage, compared to the previous year, decreased by 3.9 percent, but in 2010 – by 3.5 percent. In 2007, wages and salaries were the main source of subsistence for 68.3 percent of households, this share decreased to 53.2 percent in 2010.

As result of increased unemployment and decreased labour income, **families with dependent children, especially with 3 and more, and single-parent families, are at the highest risk of poverty**.

Income inequality is another issue that was revealed by the crisis. In 2012, the Gini coefficient of equivalised disposable income in Latvia was the highest in the EU, showing a necessity and possibilities for improving tax-benefit policies.

As a result of loss in budget revenue, the government had to introduce the **major fiscal consolidation measures** that in total amounted to 16 percent of GDP. The main consolidation measures took place on expenditure side, but changes in taxation were also significant because tax rates and bases were increased almost in all tax categories.

As result of such changes in labour taxes, **the tax wedge in Latvia for low-wage earners in 2012 was 43.6 percent or was one of the highest in the EU** (EU-27 average – 39.9 percent) and was higher than in other Baltic States – Lithuania (39.2 percent) and Estonia (39.2 percent).

Already in 2011 the Latvian government started the labour tax reform by reducing the PIT rate by 1 percentage point, increasing the basic allowance as well as the allowance for dependants, but at the same time employee SSC rate was increased by 2 percentage points. The goal of this reform was to increase revenue of the state special social security budget, but at the same time, to provide a relief for low-wage earners as a tax burden was increased only for those whose earnings were near to or above an average wage.

Next post-crisis labour tax reform was adopted in 2012 and it provided for a further reduction in the PIT rate and the allowance for dependants increasing from the mid of 2013. A reduction of the PIT rate was started in 2013, but taking into account the fiscal costs for further steps of the adopted reform and the reform's ignorance towards other labour market and growth problems such as unemployment traps or income inequality, **at the end of 2013** the government decided to leave the PIT rate unchanged in 2014 and to start its reduction from 24 percent to 23 percent in 2015 and to 22 percent in 2016. Also from 2014, an allowance for dependents and the basic allowance were increased as well as the SSC rate was reduced by one percentage point for both employers and employees by 0.5 percentage points.

The analysis of results shows that the impact of the reform varies greatly among different groups of employees. It is more beneficial for those with dependants and for low-wage earners. It is forecasted that in 2016, the tax wedge in Latvia for low-wage earners will be near to other Baltic States and to the EU-27 average. However, progressivity of labour taxes will remain low.

In order to achieve all outlined goals of the reform, it is necessary to widen a scope of the reform, using more targeted tax allowances and providing more coordination with non-tax instruments.

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IN PURSUIT OF TAX PROGRESSIVITY: LESSONS FROM VAT RATE STRUCTURE ADJUSTMENT IN POLAND*

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JEL CLASSIFICATION: D12, H23, H24, K34

ABSTRACT

In 2011, in the aftermath of economic crisis, Poland increased VAT rates. Despite already large VAT gap further rate differentiation was used to address distributional concerns and protect the most vulnerable households. We find that the changes in the VAT rate structure only slightly improved the overall progressivity of the VAT and the tax system as a whole. They did so at a very high cost to the budget. While providing only minimal relief to the poor taxation of food products at a super reduced rate greatly subsidized the richer households. With a small change to the income tax structure the government could have secured more progressivity at a lower cost in terms of revenue foregone.

Keywords: Value added tax, household consumption, income distribution, tax progressivity, VAT reduced rates, Polish tax reform experience

1 INTRODUCTION

The primary objective of a tax is to raise revenue. This is not new. Taxes have been used for this very purpose for centuries. Their real potential, however, for good or bad, reaches further than that. While filling state coffers with much needed revenue taxes take away a portion of income from individuals' enjoyment. Therefore, they affect, explicitly or not, taxpayers' income distribution and, what follows, their economic behavior. Depending on their design taxes may be a powerful instrument in achieving different policy objectives – from regulatory, through developmental, to reducing inequalities in a society. Although pursuing multiple objectives through taxation is often challenging, fairness, along with efficiency and simplicity of taxation, is widely recognized as a desirable characteristic of a modern tax system (OECD 2010, IMF, 2013), or – more colloquially – a litmus test of its genuine quality.

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Views expressed are solely the authors'; they cannot be attributed to the institutions they work for or are affiliated with.

Distributional impact of taxes remains one of the most debated issues in economic literature. It also lies at the heart of policy making decision and heats up public discussion whenever a tax change is being considered. Interestingly, all actors usually agree that taxes should be fair. Yet, fairness comes in many shades and is difficult to define. It is commonly accepted, however, that taxes should treat equally people with similar characteristics and take into account their ability to pay. The latter calls for taxes to recognize individual situation of taxpayers and impose a higher burden on those better off while making those with lower income contribute less.

Assuring tax progressivity by no means is a trivial exercise. First, taxes are not the only fiscal instrument affecting financial standing of taxpayers or households. They are complemented with various government transfers that have the effect of negative taxes and directly affect income redistribution. Second, there is a variety of taxes in any given tax system and their capacity for pursuing income redistribution objective may widely vary. Finally, comprehensive approach to policy formulation is seldom observed and piecemeal reforms prevail in practice. In such a setting existing privileges and short term interests become more pronounced and make it difficult to properly address equity concerns, including by offsetting lack of progressivity in one tax against thorough adjustments in another tax or taxes. Ad hoc and scattered compensating measures may fall short of achieving desired goals.

Pursuing distributional objectives through a Value Added Tax (VAT) seems to be especially challenging. Unlike income or property taxes a VAT does not take into account personal characteristics of those taxed. As a broad based consumption tax applied at a uniform rate it falls equally on all consumers of goods and services regardless of their disposable income and ability to pay taxes. Therefore, by its design VAT is a regressive tax and appears to be ill suited to pursue distributional objectives. Measuring its incidence against consumption or lifetime income, what renders VAT a proportional or even mildly progressive tax, does not seem to be appealing enough to policymakers. Many countries resort thus to using reduced rates and exemptions with a view to attaining more progressivity in the tax system. Indeed, when these are applied to goods and services disproportionately consumed by the poor they have the potential to make VAT a less regressive or even slightly progressive tax. Nevertheless, such a choice comes at a high price – significant loss of efficiency, complicated administration and compliance, let alone compromised revenue productivity. A uniform VAT rate allows securing more revenue that can be used for financing various social programs. Keen (2013a) argues that even very crudely targeted spending measures better serve the interests of the poor than VAT reduced rates.

It is not surprising then that economists advocate for a broad based and single-rate VAT, where its efficiency and revenue productivity is well preserved and distributional impact left for other fiscal measures to address. There is a merit to favoring efficiency over equity in case of VAT. The former is difficult to correct whereas the latter may be compensated with other measures. Hence, this has been the general advice, very much promoted by the IMF, OECD and others, to abolish reduced rates and broaden the VAT base. The redistributive impact of such a shift, if necessary, may be mitigated through more efficient and better targeted measures, e.g. through income tax adjustments or cash transfers.

So far, however, the move towards a broad-based and uniform VAT has been limited. Countries, even if desperate for additional tax revenue, rarely choose to unitize their VAT rates. They seem to prefer general rate increases rather than their convergence. This is at least the experience of most of the EU countries that undertook fiscal consolidation measures in response to the recent financial crisis.

Large and growing deficits left a number of countries see significant tax increases. Although these were implemented through a vast array of taxes the degree of reliance on VAT in securing additional revenue stands out. Only in the European Union 18 member states increased their VAT rates to the levels not seen before. In many cases these hikes were applied across all rates and the run to close the gap between the standard and reduced rates, if not an adoption of a single-rated VAT, was much less visible.

The choice of VAT for pursuing revenue objectives is not surprising. Being a consumption tax it was seen – as the economic theory predicts – as less detrimental to growth. This feature could not have been ignored in times of economic slowdown. By increasing VAT countries were able to avoid hikes in income taxation thus making more resources, including savings and labor, available for productive activity. Such a policy echoed the widely advocated shift of the tax burden from income to consumption taxes. But it only echoed. To achieve better results in terms of efficiency countries could have chosen to abolish VAT preferences in the first place and only then, if still needed, turn to general rates' increases. They did not for the fear of equity loss. Clearly, the perceived regressivity of VAT took its toll. A unique opportunity to improve efficiency of VAT was lost.

The Polish experience with VAT rates' adjustment is not different. The recent crisis forced the government to seek additional revenue, including through VAT increases. While both standard and reduced rates were raised in 2011 by one percentage point, the rate on most of food products was lowered. By doing this the government aimed to protect the poor and attain more progressivity in the tax system. Mitigating the impact of VAT increases by no means was a new approach. In the past when VAT reduced rates on Internet provision services and building materials were abolished the government also provided for compensating measures – income tax allowance and cash rebate, respectively.

To the best of our knowledge the incidence of the recent VAT rates' adjustments in Poland has not been subject to a rigorous analysis yet. However, there is no shortage of Polish literature analyzing the redistributive effects of indirect taxes (see for example: Nagel and Neneman, 1995, Radziukiewicz, 2011, Dobrowolska and Starzynska, 2011). Amongst the foreign academics, perhaps the first insights into the Polish VAT rate structure and its implications were provided by Cnossen (1998). Only recently, with Poland's accession to the EU the coverage of the equity aspects of VAT in Poland is improving. Many academics (e.g. Borselli et al., 2012) and various European institutions (e.g. European Commission, 2011) embarked on analyzing the structure, performance and redistributive impact of the Polish VAT, mostly as part of broader and comparative studies. With this paper we add to this growing body of literature.

The objective of this paper is to evaluate the distributional impact of 2011 changes to VAT rate structure in Poland. The assessment of what tax increases were necessary to meet budget constraints goes beyond the scope of our analysis. We take those increases for granted and try to assess only their redistributive effects. To do that we use data from household budget survey and estimate the impact of VAT for households across the income distribution for the actual reform and a reform without the lowered taxation of food – to assess whether the reform was successful in achieving distributional objectives or perhaps there were better alternatives to mitigate the impact of general VAT increases. In our analysis we measure VAT incidence in two ways: 1) relative to consumption which we take as a proxy for life-time income and 2) against annual income. We use gross rather than disposable income in order to contrast it with the burden of income taxes. Such an approach offers a benefit of comparing the VAT and income tax incidence and assessing how these two interact. After all, it is the overall tax burden that matters for households, not necessarily VAT alone.

The paper is divided into three parts. First, we briefly review theoretical aspects of VAT distributional impact, focusing on the rationale and effects of rate differentiation. Then, we describe the basic structure and performance of the Polish VAT and explain in greater details the analyzed VAT reform. Finally, we take a closer look at the Polish experience with VAT rates' adjustment and evaluate how it changed the VAT incidence.

2 VAT AND EQUITY

VAT is one of the most popular taxes. In one or another form it has now been implemented worldwide by an overwhelming majority of countries. A few more are currently contemplating its adoption, e.g. Malaysia, The Bahamas, Timor-Leste or The Gulf countries. Having been introduced in France it hastily spread to other European countries and for long now it has been one of a few prerequisites for the EU membership. The actual causes and consequences of the spread of VAT have been little investigated empirically (Keen and Lockwood, 2010). Yet, countries find it a good replacement to their often obscure and less efficient production, trade or retail sales taxes. Once introduced VAT becomes an inherent part of the tax systems[1].

VAT owes its remarkable popularity to its design. Many features are undeniably appealing. By taxing domestic consumption VAT raises significant amounts of revenue in an efficient and stable manner[2]. On average it raises 7 percent of GDP in high income countries and 5 percent of GDP in low-income countries with an upward trend (Keen, 2013b). It serves as an effective replacement of trade taxes being now successively curtailed due to regional integration and

[1] There are only a few instances where it was abolished, e.g. Malta, Vietnam, Grenada, and these happened mostly due to poor planning and implementation, rather than VAT design per se (Grandcolas, 2005). Most of these countries have now reintroduced VAT.

[2] Although VAT revenue exhibits a pattern of pro-cyclicality (see Ebeke and Vazquez, 2014) its fluctuations are less pronounced than income taxes.

progressing trade liberalization. Most importantly, however, VAT raises revenue without hampering investment and savings. It is also fairly simple to understand and comply with. If well designed it has most attributes of a "good" tax.

Although there are plenty of reasons to praise VAT its distributional impact invariably raises a lot of concerns amongst policymakers.[3] Over the years the VAT has gained a reputation as a regressive tax and this perception seems nowhere close to fade away. It does persist, at least at policymaker's level, and results in various attempts to make VAT a more progressive tax. Rate differentiation, along with exemptions, is used to this effect. At surface the policy argument seems to be straightforward – the poorer households may consume more and their total VAT payments represent a smaller share of their incomes. Yet, the richer households also benefit from reduced rates, in absolute terms even more – all at the cost of foregone revenue, efficiency loss and increased complexity.

There are only a handful of countries where VAT concessions are hardly used, New Zealand and Australia being commonly cited as flagship examples. These are countries with relatively new VATs and they managed to rely on economic and administrative logic rather than cultivate historic and compromised solutions (Cnossen, 2003). This is the experience of most of the EU member states, where VAT concessions continue to be widespread. Apart from a few notable exceptions, including Bulgaria and Denmark, most of the European countries heavily rely on them. The list of items commonly subject to reduced rates, including a zero-rate, is lengthy and encompasses food products, medicines, housing, books and newspapers, and many others, not excluding clothing, energy products, and even alcoholic beverages.

Addressing distributional concerns is not the exclusive reason for adoption of reduced VAT rates. They are also used, rightly or wrongly, to change relative prices of goods and services and steer consumption in the direction conforming to other policy objectives. For example, lower taxation of labor intensive services in the EU, e.g. hairdressers, window cleaning or repair services, was meant to increase demand for these services, mostly self-supplied at home rather than procured in the market, and thus boost employment (Copenhagen Economics, 2007). Norway used VAT rate differentiation to promote healthier diets (Gustavsen and Rickertsen, 2013). Many countries tax merit goods and services, e.g. medicines, textbooks, sport and cultural services, at a lower level (or exempt them) to encourage their consumption as being in public interest and benefiting the whole society. Similarly, rate differentiation is used to correct externalities by way of applying reduced rates to energy saving appliances (OECD, 2010). The justification for VAT reduced rates is also offered on administrative grounds. Some countries, e.g. France, the Netherlands, and Poland, tax construction services related to renovation and maintenance of private dwellings at a reduced rate, and others, e.g. Iceland, effectively zero-rate them through reimbursement of VAT paid on such services, with a view,

[3] The other Achilles heel of VAT is the need for refunds of excess credits. In many countries, especially developing ones, where the tax administration capacity is low, this feature of VAT raises a lot of concerns.

at least partially, to counteract tax evasion in the construction sector. In 2013 Romania reduced its VAT rate on bakery products on the very same grounds – to tackle tax evasion[4].

Whatever the justification, reduced rates affect actual VAT distribution, above and beyond intended levels. Merit goods, even though cheaper, may still be unaffordable to the poor and enjoyed mostly by those better off. Low income households are also less likely to buy hybrid or electric cars, environment friendly but relatively more expensive even if taxed lower. The same is true for services, including labor intensive services, consumption of which increases as household disposable income rises. Tackling evasion through VAT, however peculiar such an approach is, also affects distribution, in all the likelihood benefiting more the rich, usually buying in supermarkets, than the poor who tend to rely on greenmarkets and small shops, by VAT design not subject to taxation.

The focal point of the discussion on horizontal equity of VAT is obviously a question on who bears the burden of this tax. As we already mentioned in the introduction to this paper the modern canon of fairness requires taxes to take into account the taxpayers' ability to pay, hence implying that the share of income taken in taxes increases as income rises. Even though such a statement may be difficult to defend on efficiency grounds this is a strong political expectation: taxes should be progressive or at least not regressive. Measuring progressivity of VAT is challenging, though. The notion of income redistribution would imply that VAT incidence should be tested against income. Yet, the VAT's base is consumption and not income. Should VAT incidence be assessed against consumption, as the nature of the tax implies, or income, as the incidence theory suggests? Below we briefly review conceptual arguments for using both of these.

In theory a uniform and comprehensive VAT tax imposes a flat burden on all consumption expenditure (Tait, 1988). In this sense VAT is proportional – all taxpayers give up an equal share of their consumption to pay the tax. This is true regardless of their personal characteristics, consumption preferences or even source of income used to finance their spending. Whether they are rich or poor, single or with dependants, healthy or disabled they forego a fixed percentage of their private spending to meet VAT liability. The same holds true whether they buy staple food or lavish meals in expensive restaurants, rely on private cars or use public transport, rent or buy a house, etc. Under a broad-based and uniform VAT, all taxpayers – as long as they spend – are equally burdened with VAT. Nevertheless, in practice achieving proportional distribution is hardly possible for even under a well-designed VAT a portion of spending escapes taxation. This happens for administrative reasons, e.g. exemption of small traders as a result of the VAT threshold. Such a design benefits mostly low income households as they are more likely to buy from non-taxed small businesses. They are also more likely to buy from individuals (e.g. used goods) and informal businesses. This, in turn, implies that a theoretical VAT is slightly progressive.

[4] The Romanian Authorities are currently looking to apply the same reduction to meat products to counteract fictitious imports and tax evasion in the meat industry (see news by Bazavan, 2013).

The actual distribution of VAT payments is, nevertheless, very sensitive to the rate structure and exemptions built into the VAT and to the patterns of consumer preferences (Ebril et al., 2001). Relative to consumption the use of preferences may make VAT a progressive tax. In such a setting the share of VAT payment rises with the level of consumption as better off households spend more on fully taxed goods and services than those less affluent, where their spending on lightly taxed or zero-rated basic products, e.g. food, constitutes a large proportion of their consumption.

An intuitive approach to measurement of distributional impact of any tax, including a VAT, would be to use income. Early empirical studies, including by Musgrave et al. (1974) or Pechman (1985), favored annual incidence approach, similar to one used for income tax evaluation. Such an approach renders VAT a regressive tax. This is inevitable. As poorer households save little and consume higher shares of their current income VAT accounts for larger proportion of their earnings than VAT paid by the rich.

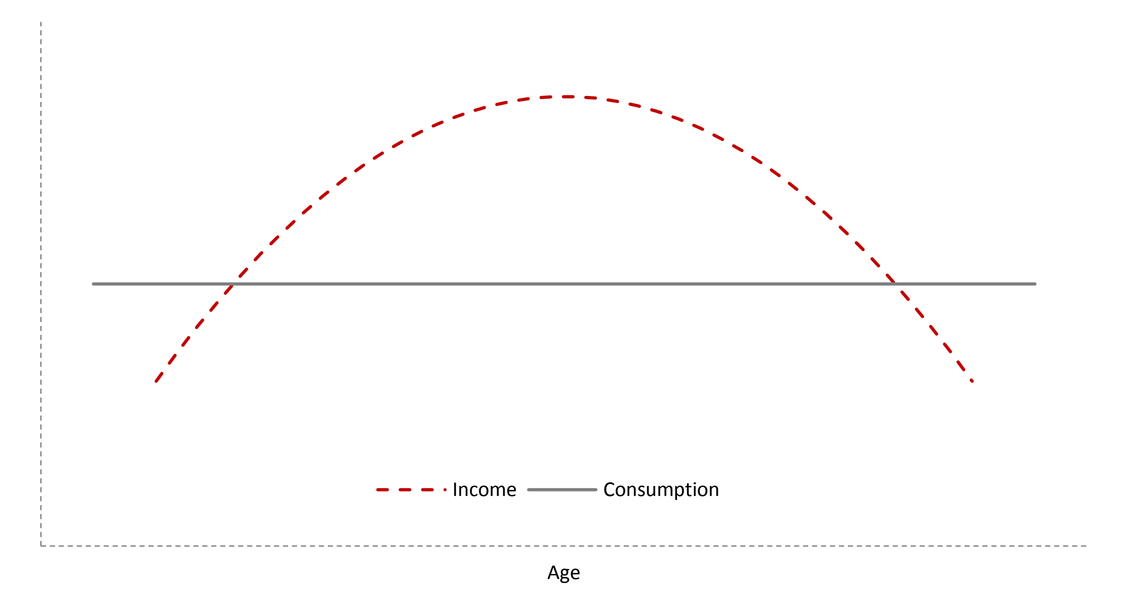
Some argue, however, that measurement of VAT incidence against annual income is misleading (Gaspersen and Metcalf, 1994; Metcalf 1997, Creedy, 1998). This is because, in line with permanent income hypothesis and life-cycle considerations (Friedman, 1957), income levels tend to vary over time, with young and old households earning low incomes and middle age households disproportionally higher, i.e. high enough to pay back past borrowing and save for future consumption. In anticipation of future changes in income levels households prefer to smooth their consumption so it is higher than income in early years of a lifetime cycle, lower in the middle and again higher at the end. Figure 1, borrowed from Metcalf (1997), in a stylized way shows this interdependence over the lifetime of a typical worker.

Over the lifetime all income is consumed which renders any consumption tax, including VAT, a proportional tax (Gaspersen and Metcalf, 1994; Athreya and Reilly, 2009). When rate differentiation is used the incidence of VAT shifts towards the richer as they tend to consume more goods and services taxed at a standard rate. Using lifetime incidence Decoster et al. (2010) find that actual VATs in a number of European countries are slightly progressive. The same approach has been used in a number of individual VAT studies. For example, Arsic and Altiparmakov (2013) show that Serbian VAT is proportional. The same results may be found in Slintakova and Klazar (2010) for Czech Republic, and in Braz and Correia da Cunha (2009) for Portugal.

Proponents of lifetime approach argue that measuring VAT incidence at any given point in the life-cycle renders blurred results. In lifetime sense neither young nor old households are poor nor are high-earners rich at their peak. Since consumption fluctuates less from year to year than income it is a better measure of household well-being than total annual income and constitutes a good proxy for its lifetime income (Poterba, 1989). This reinforces the logic, mentioned above, that incidence of consumption taxes should be measured against their base – consumption.

FIGURE 1

Annual Income versus Annual Consumption



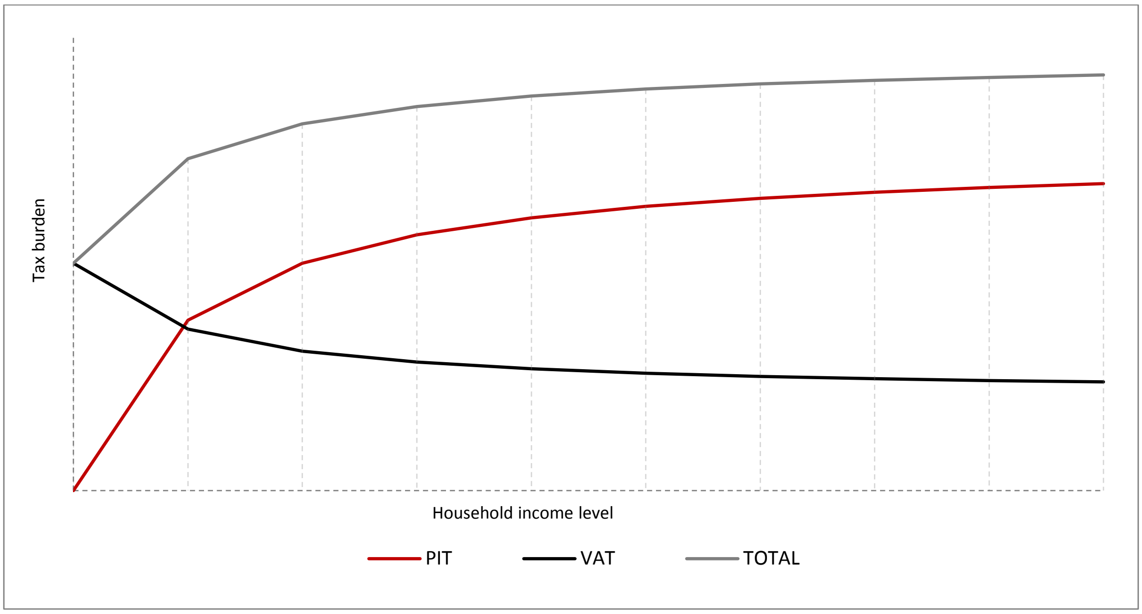
Source: Metcalf (1997).

Unfortunately enough, lifetime income or consumption incidence is not appealing enough to policymakers. Perception of VAT as a regressive tax continues to stem from their liking to measure VAT incidence against annual income. The usual arguments in favor of such an approach may not be easily rejected. Indeed, not all households use up all their lifetime income and much of it is passed on to the next generations as bequests. In welfare states, not all households rely exclusively on their own income and later on their savings – a system of benefits and state funded pensions plays a significant role. Also, households' size and composition change over time and it is hardly possible to have a household that follows the lifecycle of an earning individual. Finally and most importantly, political economy argument takes its toll. The lifetime approach has a long horizon which is not attractive to policymakers and taxpayers themselves. It hinges on an assumption that incomes of younger households are doomed to grow and exceed their needs in the middle age allowing for savings used towards the end of the life cycle. This is too optimistic to convince currently poor households, with low skills, productivity and thus little potential for increased future earnings. Expecting policymakers to explain to the poor that it is fair they forego higher share of their income in VAT payments now as they will pay less in the future is somewhat illusive. It is not difficult to argue that the poor need help when they face life hurdles. And governments do it – either through transfers from the budget or taxation. Interestingly, in defining beneficiaries of social programs, e.g. family allowances, housing benefits, etc., countries tend to rely on annual income test. Income taxes are also annual – tax scale is applicable to annual income and most of the allowances and credits apply annual ceilings. Examples where carry-forward or carry-back are used to smooth personal income over years are scarce.

The use of annual incidence of VAT, which – as we noted above – renders VAT a regressive tax, seem to be still relevant for policymaking decisions. However, by no means should it justify injecting progressivity through this tax. As we already mentioned, VAT, as an in rem and not personal consumption tax, is ill suited to pursue progressivity. Fortunately enough, VAT is not the only element of the tax system and its distributional impact should not be analyzed in isolation. If one is concerned about fairness of taxation as a whole then the overall impact of taxes on income distribution should be looked at. An income tax, whose incidence is usually measured on annual basis, is an obvious candidate. Inherent regressivity of a broad-based and single-rated VAT may be mitigated by progressive personal income taxes. We show this correlation in a stylized way in Figure 2.

FIGURE 2

Stylized correlation of PIT and VAT incidence



Source: Authors.

All other things being equal both taxpayers and the government are indifferent to the form in which taxes are raised. What is important is the change in disposable income as a consequence of overall taxation. As income level rises a smaller proportion of income is taken in VAT but this is counterbalanced by higher shares of personal income tax, making the tax system progressive. As argued in Atkinson and Stiglitz (1976) as long as a country can flexibly choose the rate structure under the personal income tax, then it has no reason to choose differential tax rates on the consumption of different goods and services.[5] Similar case was made by Cnossen (1982) reflecting that "whatever meager progressivity that may be achieved by a differentiated sales tax rate structure can be attained far better through a small change in the

[5] In addition, progressivity of the tax system may be further enhanced by well-designed property taxes and government transfers.

income tax". Such argumentation implies that income tax is an effective instrument of redistribution, which may not necessarily be true (Bird, 1987), as many poor stay outside of income taxes and the truly rich derive their wealth from non-wage income usually escaping progressive taxation. Yet, the same may be true for VAT – the poor, with no or little income, either do not participate in monetized economy, buy from informal or small businesses and thus pay little or no VAT. In turn, the rich may avoid part of VAT burden by coining their private consumption as business inputs (e.g. cars, accommodation, computer equipment and software, etc.) or exploit cross-country rate differentiations and partly consume in lower-taxed jurisdictions (e.g. tourism, wellness and beauty, high tech devices, etc.). After all, in case of extremely rich, both income and consumption taxes fail to take a fair share of their annual incomes.

Although, we give due credit to the imperfections of income taxes in addressing distributional concerns, we concede that it is a better way of attaining progressivity in the tax system, than using rate differentiation under the VAT. The major reason for avoiding non-uniform rate structure is poor targeting and the concomitant unnecessary revenue loss, let alone complexities and costliness of VAT compliance and administration. If a specific good is taxed at a lower rate, say, fruit and vegetables, bakery products or children's clothing, such a good becomes more affordable to the poor and they pay less in VAT. But the more affluent households also benefit from this measure, even more in absolute terms. This translates into significant revenue loss and higher taxes elsewhere. In order to alleviate the plight of the poor governments accept to give even higher tax relief to rich taxpayers, the ones perfectly capable of paying taxes – and odd and costly manner of injecting progressivity into the tax system. Adoption of reduced rates could yield equitable results only if applied to goods and services whose absolute consumption falls as the income rises. Given the convergence of consumption patterns across all income levels, there are not many obvious candidates. Staple food, like rice, potatoes or flour may potentially conform to such a pattern.

Also, efforts required for a proper delineation between standard and lower taxed goods (e.g., children and adult clothing) drive up compliance and administration costs. Equity gains, once again, are likely to be outweighed by the increased administration costs resulting from cost of interpretation, classification rules, issuance of advanced rulings, complex filing, audits, disputes, etc.[6]

[6] Only in 2013 in Poland the tax administration issued over 2,000 advanced rulings regarding application of the VAT rate Inquiries for interpretation or clarification included application of a proper VAT rate to take-away meals, furniture assembling, certain construction services performed in dwellings, drinks with addition of coffee, latex gloves, magazine and CD/DVD bundles, etc. Data received from Ministry of Finance, Poland

3 REDISTRIBUTIVE IMPACT OF VAT IN POLAND

3.1 VAT STRUCTURE AND REFORM OVERVIEW

After reviewing theoretical considerations on redistributive effects of VAT we turn now to incidence analysis of the Polish VAT. Our focus will be on the distributional impact of the 2011 adjustments to the VAT rate structure. It is natural to begin with a brief overview of VAT structure and performance. Then we present details of the VAT reform and follow with our findings.

VAT is the main source of revenue for Poland, accounting for almost 44 percent of total tax collections. In 2011 it raised PLN 120.8 billion (USD 40.8 billion[7]) which totaled to 8.1 percent of GDP, around the average for the EU member states. The revenue performance, measured as a ratio of actual and theoretical VAT collections[8], at only 45 percent in 2011 was one of the lowest in the EU, though (EU, 2013). One of the reasons for the relatively wide VAT gap is the rate structure[9]. Borselli et al. (2012) estimates that more than 40 percent of final consumption is subject to reduced rates, bringing down the effective VAT to less than 15 percent, only two-thirds of the standard rate of 23 percent.

Data from annual tax expenditure budgets prepared by the Polish Ministry of Finance confirms the generosity of the VAT (MF, 2013). In 2011 they amounted to PLN41.1 billion (or USD13.9 billion), i.e. 2.7 percent of GDP and 34 percent of actual VAT collections[10]. The highest contributor to the overall value of tax expenditures in the VAT were residential construction services, food products and medicines. Among the food products the most costly were meat, dairy and bakery, totaling respectively to PLN2.9 billion (USD 1 billion), PLN1.7 billion (USD0.6 billion) and PLN1.1 billion (USD0.4 billion).

Unlike revenue performance, the stability of rates had for long been a signature feature of the Polish VAT, putting it at the forefront of the EU member states (see EC, 2014). Since its adoption in mid 1993 the VAT in Poland had been imposed at the standard rate of 22 percent. A number of goods and services, including certain food products, clothing and accessories for children, energy products for households' consumption, telecommunication services and construction materials were taxed at a lower 7 percent rate. In 2000 a second reduced rate of 3 percent was adopted to encompass so far exempted basic food products. Upon accession to the EU the list of goods and services subject to reduced rates as well as to exemptions was further revised. In spite of such reshuffling the main rates, however, remained unchanged.

[7] All PLN values cited in this paper were converted into USD at PLN/USD exchange rate at 2.96 (average for 2011).
[8] Assumes total final consumption taxed at standard VAT rate and perfect tax compliance (no evasion).
[9] The other important reasons are exemptions and tax compliance. The recent European Commission study on VAT compliance gap found that in 2011 Poland lost 15 percent of their VAT due (theoretical tax liability of VAT as legislated) due to imperfect tax compliance (EC, 2013).
[10] The actual cost of revenue foregone may be in fact higher since – in line with the adopted benchmark – only such VAT concession were considered to be a tax expenditure that deviates from the standard VAT design as provided in the EU VAT Directive. Hence, for example most of exemptions granted to services provided in public interest (e.g. public bodies, postal, broadcasting or social services) and financial, including insurance, services were not seen as VAT concessions and thus not estimated.

Only in 2011 Poland, faced with the need to constrain public debt, decided to increase VAT rates. The VAT rates adjustments were twofold. The standard and reduced rates rose by 1 percentage point – from 22 to 23 percent and from 7 to 8 percent respectively. The VAT increases coincided with an expiry of pre-accession derogatory regime. The concessional zero-rate on books and periodicals (not newspapers) and 3 percent rate on certain unprocessed food items, as being below the EU minimum of 5 percent required by the VAT Directive was doomed for increases. The government, rather than use the reduced rate already in place decided to introduce a new one – a super reduced rate of 5 percent. Most of food products, previously subject to the higher reduced rate (now at 8 percent) were moved to the new lower 5 percent rate.

Interestingly, the government, even though faced with the need to collect more tax revenue, did not decide to rely on only one reduced rate, let alone abolishing them altogether. Adoption of the super reduced rate of 5 percent, compromising VAT revenue productivity, contradicted the objective of general VAT increases. Such a policy choice was geared to address equity concerns and improve progressivity of VAT. As stated in the justification to the bill introducing new rates it was the Government's desire to alleviate the impact of VAT increases on the poorer households via lower taxation of food which "constitutes significant part of spending by less affluent part of the society" (PRM, 2010). The Government chose to achieve this explicitly by way of rate differentiation, a 3 pp. lower taxation of food. No corresponding measures on the revenue side were proposed and adopted.

Such a policy was not conceptually different from the approach taken in the past when a few reduced rates were abolished. Let us only mention two examples here.

In 2004 the reduced rate on telecommunication services, including Internet access provision was abolished and in 2008 the reduced rate on construction materials was phased out. Both these changes were necessitated by the EU VAT harmonization. They were viewed as having an adverse impact on households' purchasing power. In order to alleviate the impact of these tax increases two different compensating measures were adopted. In 2005 taxpayers got the right to deduct from their taxable income expenses born on Internet access services up the limit of PLN760 (USD 257) per year. As a compensation for VAT increases on construction materials a special rebate mechanism was adopted. Households were entitled to claim a difference between the old and the new VAT rate, i.e. 12.3 percent of their spending on construction materials which were previously taxed at the reduced rate. This rebate was paid in cash and capped at PLN18, 219.96 (USD 6,155) over a period of five years.

Clearly the recent adjustments to the VAT structure reveal a common pattern. In every case it was an explicit government desire to correct distributional impact of VAT rates' changes. What differed was the choice of measures in achieving that. Table 1 summarizes the VAT changes and the corresponding compensating measures.

TABLE 1

Summary of VAT rate changes and compensating measures in Poland

Year	VAT rate change	Compensating measure
2011	Standard and reduced rate increased by 1 p.p. (from 22 and 7 to 23 and 8 percent)	VAT rate on food products lowered by 3 p.p. (from 8 to 5 percent)
2008	Repealing of reduced rate on construction materials	Cash rebate equal to 12.3 percent of spending on construction materials
2004	Repealing of reduced rate on Internet access services	Income tax allowance

Source: Polish legislation (available at www.orka.sejm.gov.pl).

In what follows we analyze the 2011 adjustments to the VAT rate structure only. For simplicity we call it a "reform" though such a policy measure falls short of a genuine tax reform. As the other changes to VAT rates, listed in Table 1, it appears to be merely a one-off adjustment mitigating the effects of VAT increases, triggered either by revenue needs or solely the ongoing tax harmonization.

3.2 DATA AND METHODOLOGY

We take a very simple approach to our analysis. First, using data from 2011 household budget survey, compiled by the Central Statistical Office of Poland (Główny Urząd Statystyczny - GUS), we estimate VAT burden for households at different income levels.

The data set we obtained presents monthly consumption expenditure compiled from 37584 representative households on quarterly rotation basis. As any other household budget survey it excludes spending on purchases of residential property, formally treated as investment spending. Although this category includes spending on newly built houses and apartments, which are subject to VAT in Poland, it does not critically impact our analysis for the 2011 VAT reform that entailed changes in taxation of food products and a few merit goods. Nevertheless it understates the VAT burden falling mostly on the rich and not the poor who usually self-build.

The detailed information on consumption spending allows us to assign VAT rate applicable to a given expenditure item. In cases where it was not readily apparent what rate (or exemption) should be used we made necessary assumptions and apportionment. For example, data on bread consumption does not allow for immediate distinction between fresh bread, defined as bread to be consumed within 14 days and taxed at 5 percent, and non-perishable bread with expiration date longer than 14 days, taxed at 8 percent. An important caveat has to be made here. Since the household budget survey does not allow us to establish where all the goods and services were procured from we assume that all non-exempt items are taxable. This does not necessarily have to be true, as part of the spending, especially on grocery, takes place at small establishments and greenmarkets, not to mention informal businesses, and as such is exempt. For the lack of data we did not make an attempt to correct those values and acknowledge that such an approach may overstate the actual VAT burden for the poorer households, as they are more likely to buy from non-taxed suppliers. In cases where consumption items are exempt from VAT, e.g. healthcare services, we assume that VAT paid on inputs is passed through to consumers in the final price of the exempt good or service. To derive the amount of VAT, for simplicity, we assume that taxable inputs constitute 40 percent of the final price and they all carry VAT at standard rate.[11]

Then, for a given level of household income, we calculate income tax liability only to compare it with VAT payments and assess the distributional impact of the combined burden of the two general taxes in Poland. Such an approach is motivated by a belief that this is the overall tax burden that matters for taxpayers. Naturally, the two general taxes – PIT and VAT – are not the only taxes falling on households. There are other, including property taxes and excise taxes, but these are ignored. The analysis of the progressivity is also limited to the tax system only and all government transfers aimed at helping the poor, e.g. family benefit, unemployment benefits, disability benefits, are not taken into account. For income tax calculation we use a simple micro simulation technique, a similar approach to the one used by OECD for estimates of the tax burden in Taxing Wages (OECD, 2013a). The estimates are done in reverse order though. Since incomes reported in the household budget survey are net amounts, we calculate the gross (pre-tax) income that would be necessary to earn, the difference being income tax. Two important assumptions are made. First, all incomes received by household is labor income taxed at progressive rates. Second, social security and health contributions are treated as taxes and form part of a tax wedge. This approach is not different from OECD Taxing Wages (OECD, 2013b) database and the European Commission and Eurostat's Taxation Trends publications (EU, 2013).

Expenditures for each consumption category were made available to us by deciles of available monthly disposable income. Both data on expenditure and income are reported for one person. To arrive at household income and expenditure we use the modified OECD's equivalent scale, which attributes a weight of 1 to the first household member, 0.5 to the remaining members over 14 years old and 0.3 to each child (below 14 years old).

Both calculations for VAT and PIT tax burden are performed for a number of different households: 1) single adult household, 2) a married couple with two children, 3) a married couple with one child and 4) a single parent household – one adult and one child. It is assumed that all the adults work and children do not.

In calculation of income tax we arbitrary make a choice where election is needed. In this regard we assume that each wage earner has only one job and lives and works in the same city. They work throughout the whole year and have no sick or maternity/paternity absence, nor do they benefit from any other social support. If there are children in a household the earning parent(s) live with them and have the right to benefit from the child tax credit. A lone-

[11] The rigorous approach would dictate to use supply-use (or input-output) tables to approximate for the value of input VAT.

parent allowance, but not family cash allowance[12], is included in the calculation where applicable. If there are two working adults in a household they are deemed a married couple and are taxed jointly. Unless specifically indicated, no tax allowances and further deductions are used. All income is earned in Poland and does not escape taxation.

To evaluate the distributional impact of the reform we compare two rate structures – the actual and a potential one; one the government could have chosen in absence of equity concerns. The actual structure, as implemented in 2011, operates a standard rate of 23 percent, reduced rate of 8 percent and super reduced rate of 5 percent, applicable to food products and a few merit goods (actual scenario). The potential rate structure operates only two rates –23 percent and reduced 8 percent, implying that the government chooses not to "improve" VAT incidence (base scenario). VAT exempt consumption is kept constant in our calculations.

We use the same consumption dataset for both scenarios. Our analysis is therefore static and it does not take into account any behavioral response to changes in the level of taxation. Also, a full pass-through of VAT burden in consumer prices is assumed.

3.3 FINDINGS

The 2011 VAT rate structure adjustment only slightly improved progressivity of VAT – both measured against life-time and annual income. It did so at a very high cost to the budget. While providing only minimal relief to the poor it greatly subsidized richer households.

In base scenario, i.e. without lowering the tax rate on food, the average VAT rate amounts to 17.8 percent. Lower taxation of food brought this rate down to 17.2 percent and benefited mostly the poor – the lowest income decile gained 0.84 and the highest 0.38 percentage points. In this sense the reform was progressive. However, the reform did not change significantly the overall VAT incidence measured against consumption (as a proxy for lifetime income). As we show in Figure 3 the actual reform only slightly tipped the balance of VAT burden towards the richer households – the ninth income decile paid 1 pp. more in VAT than the first one. In the base scenario this difference would be only 0.6 pp.[13]

Annual income incidence analysis renders similar results. In line with expectations our calculations confirm that the Polish VAT is regressive and the 2011 reform only slightly improved its redistribution. Adoption of 5 percent rate brought down the VAT burden by 1.2 pp for the first income decile and by 0.2 pp for the last one. Although the balance tips to the poorest the VAT remained a regressive tax. In Figure 4 we show the shift in the overall burden

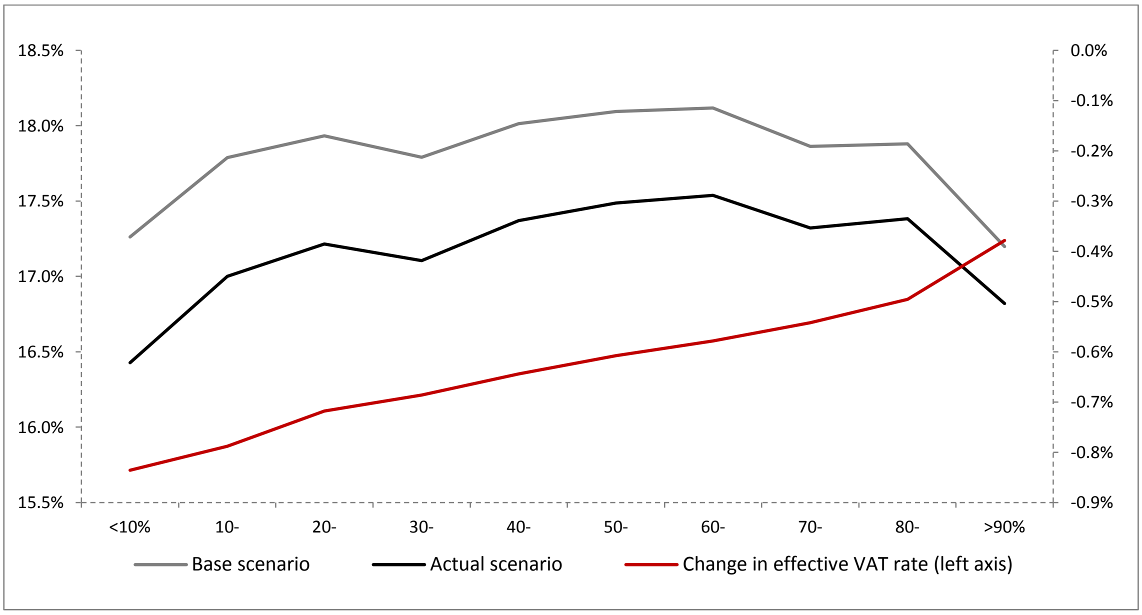
[12] Family cash allowance is a social subsidy available to families with children, having very low income per family member. It is not a tax measure.

[13] Interdecile comparisons between first and last income decile may blur the results due to the pronounced impact of exemptions. The highest income decile consumes disproportionally more exempt services (i.e. health, recreation, culture), thus benefiting more than the poorer households. Bearing in mind that our analysis regards reduced rates we do not consider any changes in exemptions and keep it constant in our calculations.

of VAT measured against gross income. We do not plot results for the first income decile for presentational purposes only. We will include it in further analysis and discussion.

FIGURE 3

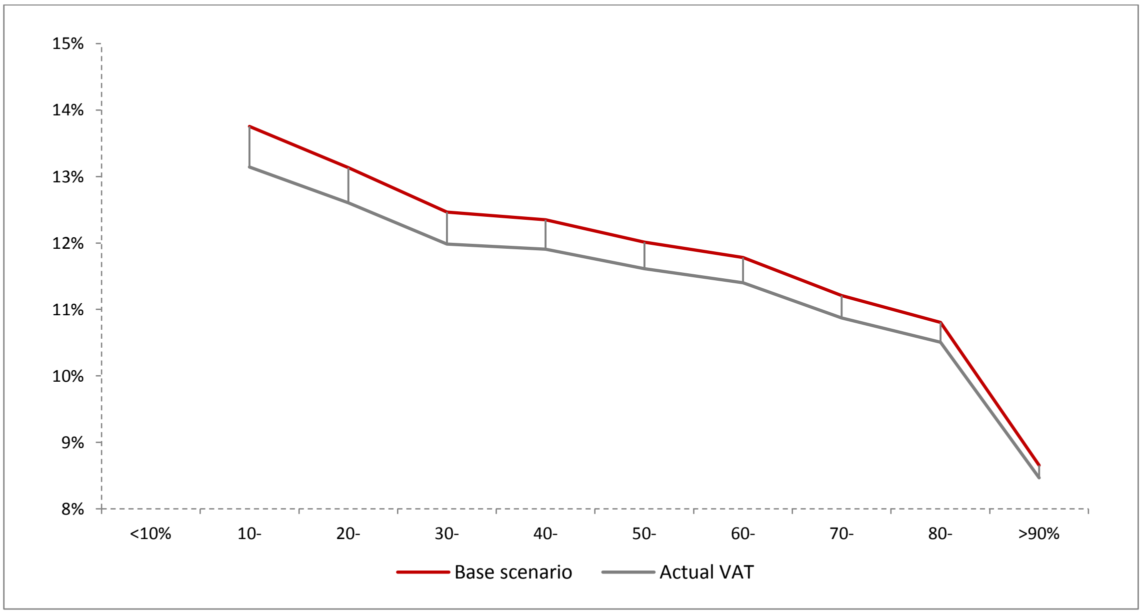
VAT distribution measured against consumption



Source: 2011 Household Budget Survey, GUS; Authors' calculations.

FIGURE 4

*VAT distribution measured against gross income**



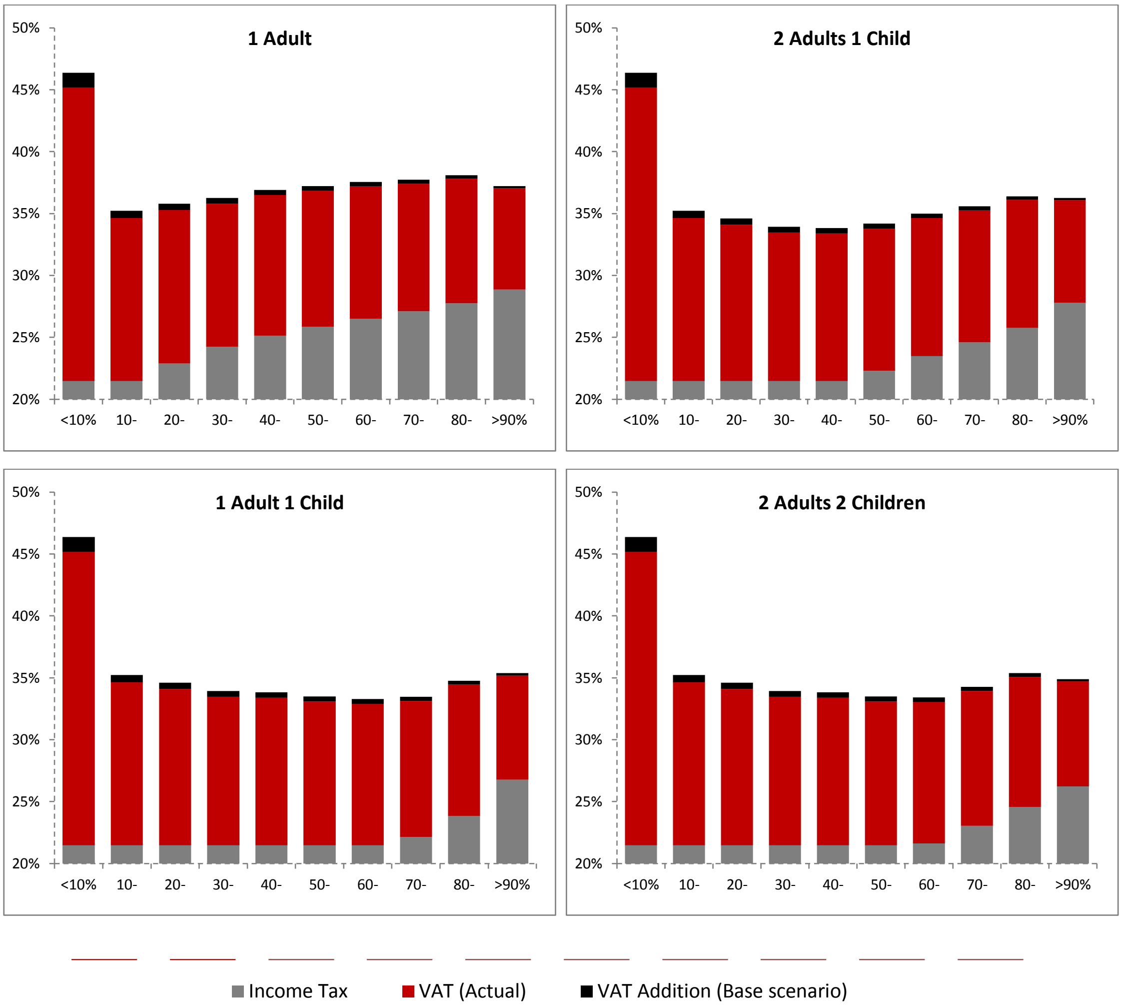
** Gross income of a household composed of two working adults and two children below 14 years old.*

Source: 2011 Household Budget Survey, GUS; Authors' calculations.

As argued earlier, VAT is just another tax paid by households, and should be analyzed together with their income tax payments. Our calculations show that distribution of the overall tax wedge, i.e. ratio of tax payments and gross income, to a large extent hinges on income tax burden. This implies that in an annual perspective VAT regressivity is counterbalanced by income taxes, especially for the richer part of society (last five income deciles). Since the income tax provides for a number of family related tax preferences - joint taxation of spouses, joint taxation of single parents and their not working children (lone-parent allowance) and child tax credits – the degree to which VAT burden is corrected by income taxation depends on household composition. In Figure 5 we present income tax and VAT distribution for four classes of households: a single adult, single parent with a child, a married couple with two children, and a married couple with one child. In addition, as we did before, we plot in the effect of 2011 VAT reform as a hypothetical addition to the actual tax burden.

FIGURE 5

Overall tax wedge faced by different classes of households



Source: 2011 Household Budget Survey, GUS; Authors' calculations.

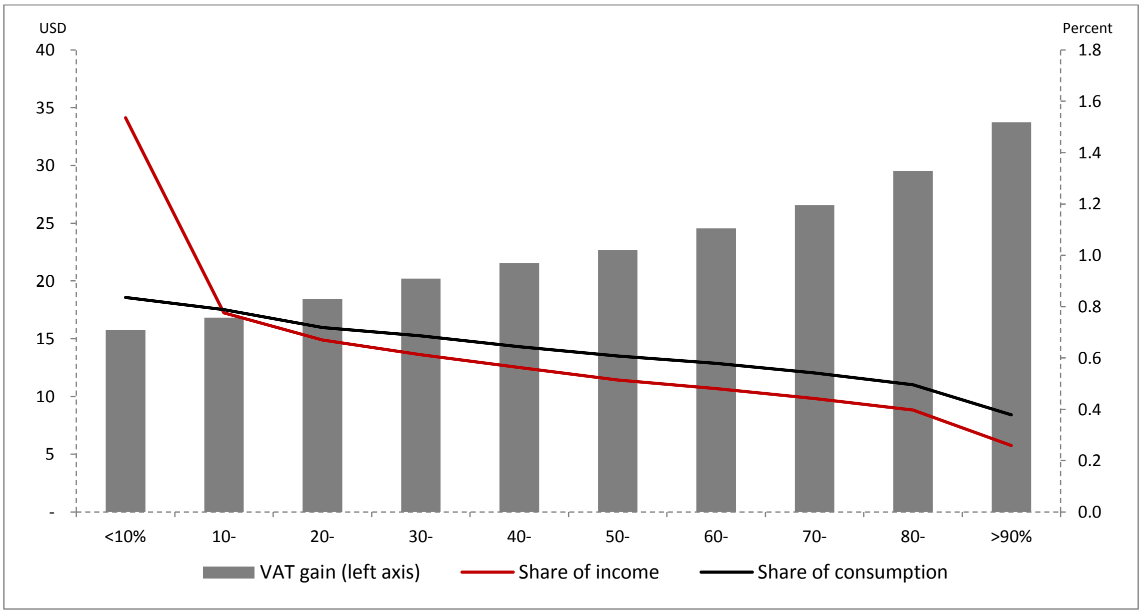
As one may see in Figure 5, VAT disproportionally burdens households in the first income decile, regardless of their composition. These results are not surprising, given their consumption, as reported in the household budget survey, exceeding almost twice their income. There are two important remarks to make. First, as noted in literature (e.g. Arsic and Altiparmakov, 2013), data for this group is often subject to measurement errors, implying that actual income may be higher. Second, as we already noted, a significant portion of consumption spending by the poorest households is not subject to VAT, implying that their actual VAT payments may be lower than our calculations indicate.

Finally, bearing in mind that the objective of this paper is to evaluate the 2011 VAT reform, we should note that regardless of the class of a household the gain from 5 percent VAT rate did not significantly alter the tax burden they face. As one may judge from Figure 5 a small adjustment to the income tax structure would yield better results in terms of tax distribution than lowering VAT on food consumption.

Whatever the addition to VAT progressivity through lower VAT rates it is clear from our analysis that they benefited all households across income levels. The 2011 reform aggravated this. In absolute terms (dollar value) most benefits of the reform accrue to the rich households. On average the lowest income decile saved in VAT payments PLN47.24 (USD15.96) per annum, whereas the highest income decile gained more than twice this amount – PLN101.23 (USD34.20). We show the results in Figure 6 below.

FIGURE 6

Gains from 2011 VAT Reform



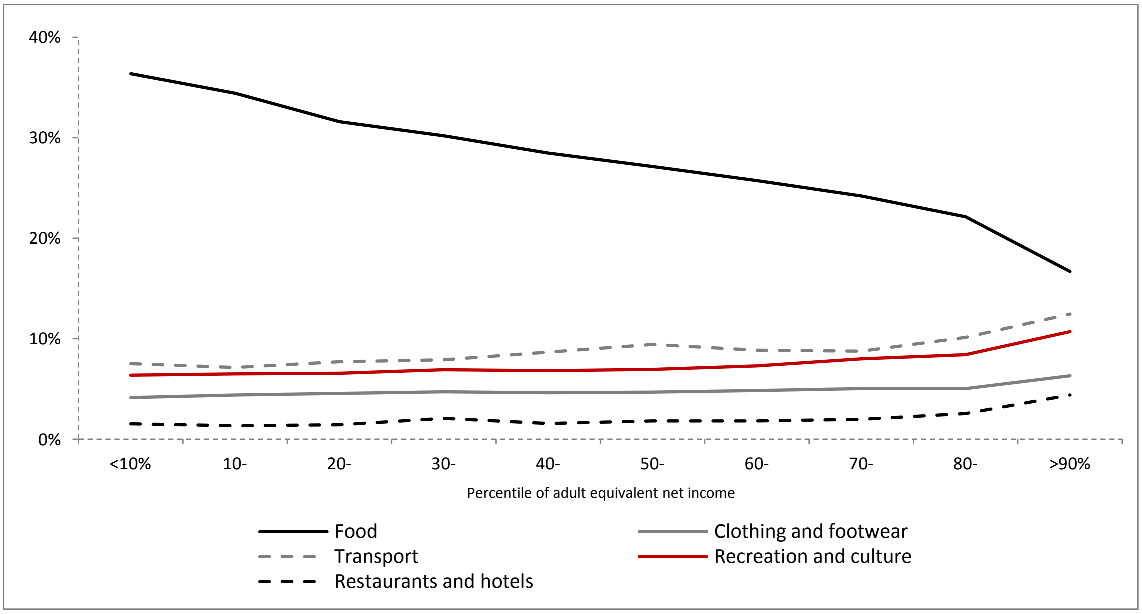
Source: Household budget survey 2011, GUS; Authors' calculations.

The cost of the reform, what we estimate to be at around PLN 2.6 billion (USD 0.9 billion) or 0.2 percent of GDP, brought down the VAT revenue by 3.2 percent, as compared with the base scenario. Most of the revenue the government decided to forego to help the poor, accrued to higher income households. The poorer part of society (first three income deciles) benefited 22 percent and the richer (last three income deciles) 39 percent of the total revenue foregone. Bearing in mind that those poorer households procure their food products from non-taxed suppliers (greenmarkets, small traders or informal businesses) more often than the richer ones, their benefits from the reform are even smaller than what our calculations indicate.

The consumption patterns provide valuable insights into this. In Poland they do not deviate from what economic theory predicts. Total consumption of households increases as their disposable income rises. In line with this the basket of goods and services procured changes - the share of spending on food and other essentials (e.g. energy, cold water) declines and expenditure on durable goods, e.g. means of transport and various services, including tourism, recreation, restaurant, culture, education, rises. In Figure 7 we show changes in consumption of chosen classes of goods and services

FIGURE 7

Share of consumption for selected classes of goods and services



Source: 2011 Household Budget Survey, GUS, Authors' calculations.

In absolute terms, with only a few exceptions, food spending increases. It merely represents a lower share of their incomes and total consumption basket. The lowest income decile spent PLN171.22 (USD57.85) monthly for food and non-alcoholic drinks, which represented 36.4 percent of total consumption, whereas the highest decile spent more than twice this amount – PLN371.65 (USD125.56) accounting for only 16.7 percent of total spending. The interdecile ratio of absolute spending is not uniform for all food items. The sharpest increase in consumption may be observed, amongst other, for fish, tropical fruit, fruit juices, mineral water, chocolate and butter. Fairly constant spending regards bread, milk and certain vegetables. There are only a few items where spending declined, potatoes and sugar being the most prominent ones. This makes any efforts to improve progressivity of taxation through VAT reduced rates doomed to be ineffective, at least it terms of revenue loss.

4 Conclusions

Polish society is not an egalitarian one. Nevertheless, income inequality is smaller than in many other OECD countries. With after tax Gini coefficient at 0.3 in 2010 equity issues, as it seems, should not be a major concern. Yet, Poland in 2011, while increasing VAT by 1 percentage point, as part of it fiscal consolidation effort, decided to lower its rate on food and a few merit goods – from 8 to 5 percent – to ease the tax burden for the poor. No other mitigating measures, neither through income tax nor on the spending side, were adopted.

We find that the 2011 VAT reform only slightly improved distribution of VAT and the overall progressivity of the tax system. It did so at a very high cost to the budget. While providing only minimal relief to the poor it greatly subsidized richer households. The three last income deciles gained as much as 39 percent of total benefits of the reform which – in terms of revenue forgone – we estimated for PLN 2.6 billion (USD 0.9 billion) or 0.2 percent of GDP. The three first income deciles benefited only 22 percent of this amount with all the likelihood for this number to be even lower as poorer households more often than richer buy from non-taxed suppliers, including greenmarkets, small traders and informal businesses.

The attempt to alleviate the plight of the poor does not seem to have been necessary. Measured against consumption, as a proxy for lifetime income, VAT would be anyway mildly progressive and the reform hardly changed that. When looked at its annual incidence – an approach favored by policymakers - VAT without further rate reduction on food would have imposed higher burden on the poorer part of the society. Again, the rate adjustment did not change this regressive property of the VAT. Importantly enough, a closer look at the overall tax burden faced by households, both income tax and VAT, reveals that the regressive nature of VAT to a large extent is counterbalanced by progressive income tax. With a small change to the income tax structure the government could have secured more progressivity at a lower cost in terms of revenue foregone.

The Polish experience with VAT rate structure adjustment confirms that any efforts to pursue progressivity through reduced rates are doomed to be ineffective. There are several reasons for that but consumption patterns are the underlying one, especially in case of food. In line with economic theory spending on food declines as income increases. It declines as a share of income but not in absolute terms. In such a setting the richer by definition benefit more at high cost of revenue forgone and efficiency loss. There are only a few inferior food products whose consumption declines as income rises. The Polish household budget survey reveals only two – potato and sugar.

Although consumption patterns differ with income, consumption per se does not constitute a good basis for addressing distributional concerns. This renders VAT the least suited tax to pursue progressivity, which inherently relates to income and personal characteristic of taxpayers. Reliance on a broad-based and single-rated VAT for revenue regeneration and use of progressive income taxes may yield far better results. As noted in Keen (2003a) “even poorly targeted spending may be a better way to support the poor than a reduced rate.”

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THE ROLE OF TAX POLICY IN FISCAL RECOVERY OF THE EU

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JEL CLASSIFICATION: H24, H25, H71, E62

ABSTRACT

The aim of this paper is to explore how tax policy measures, implemented during the period of recession, influenced tax revenues and tax orientation of the EU member states. The sample contains the fifteen core European Union (EU) countries as well as thirteen Central and Eastern European (CEE) which joined recently. We elaborate on differences between the new and the old member states due to differences in their tax systems. This paper provides an in depth comparative analysis of tax policy measures taken in order to ensure sustainability of government financing in the period of recession. Using panel model over the period 2003 – 2012 we test the influence of three major tax forms (personal and corporate income tax and value added tax). We find that the overall increase in the tax burden, aiming at increasing tax revenues, should be based on the income and not the consumption taxation.

Keywords: tax policy, tax reforms, recession, fiscal recovery, European Union

1 INTRODUCTION

In this paper we discuss and analyze the effects tax policies have on fiscal recovery of the European Union (EU). Overall, we consider the EU economies as a whole but elaborate on the differences that exist between the new (EU13) and the old member states (EU15) because of heterogeneous levels of development and policy across the EU.

Among the EU countries there are numerous differences related to tax structure and tax burden per capita resulting with different roles of tax policies in fiscal systems of EU countries. Those differences are particularly evident between old and new member states. Tax systems of the EU15 member states are older, more inert, stabile, but relatively complex and comprehensive. On the contrary, the tax systems of the EU13 member states are younger and generally much simpler, but not necessarily more efficient. In terms of the tax structure, most EU15 member states raise roughly equal shares of tax revenues from direct taxes, indirect taxes, and social contributions, while the EU13 member states often display a substantially lower share of direct taxes in total tax revenues.

In order to precisely define those differences we will take into consideration reforms taken in three major tax forms (personal and corporate income tax) and value added tax as well as other relevant measures related to tax policy. Different characteristics of the tax systems resulted with different tax policy responses and reform measures taken in order to mitigate the effects of the recession on government budgets. This paper provides an in depth comparative analysis of tax policy measures taken in order to ensure the sustainability of government financing in the period of recession.

The paper tests the hypothesis of the efficiency of these measures for tax revenue collection but also strives to evaluate their role in fiscal recovery of the EU. For the sake of the analysis several indicators of tax revenue will be calculated and compared between EU member states in order to identify tax policy measures (and countries) that proved to be efficient in the period of the recession.

The remainder of the paper is organized as follows. Section 2 summarizes the extant literature on the determinants of tax policy in the EU; Section 3 presents comparative evidence on taxation trends and highlights examples in which tax policy is used to hasten fiscal recovery of the EU. In Section 4 we discuss the data used; summarize the empirical strategy and discuss the results. Section 5 gives some concluding recommendations.

2 LITERATURE REVIEW

The new financial crisis has put once again tax policy in the limelight. So many authors have been rethinking the role of the fiscal policy. Feldstein (2009) argues that good tax policy can contribute to ending the recession and Auerbach (2012) presents arguments which confirm that fiscal policy may be especially effective in recession.

The issue of tax cuts or tax increases is very politically charged, and connected with the role of government and different views about inequality. Empirical studies about effects of tax or fiscal policy on fiscal recovery are few such as Kneller et al. (1999), Crossley (2009) or Tcherneva (2011).

Studies which examine the determinants and economic outcomes of large fiscal adjustments are many, e.g. Alesina and Perotti (1995), Giavazzi, Jappelli and Pagano (2000), Mountford and Uhlig (2008), Romer and Romer (2010), Alesina and Ardagna (2013). We use Romer and Romer (2010) paper on the impact of tax changes on economic activity as a starting point of our investigation because they manage to measure effects of tax changes, which is extremely complicated. Tax changes can occur for many reasons and some of them are legislative[1] and some occurring automatically[2]. It is also very difficult to isolate factors that give rise to tax changes from other developments in economy.

We also explore how orientation of the tax system[3] influence fiscal recovery of the EU member states and elaborate differences between tax measures taken during the recession period. A related literature looks at advantages and disadvantages of consumption based proposals and income-based models as well as different variants of the basic models and their combinations, for example studies by Hall and Rabushka (1985), McLure (1991), Wieswesser (1999), Rose (1999), Keen and King (2002), Auerbach (2006), Blažić (2008) and Cnossen (2012).

[1] Some legislated tax changes are passed for instance to reduce an inherited budget deficit or because the economy is weak, or because of the war or some natural disaster government spending is rising.
[2] They can occur because the tax base varies with the overall level of income, or because of inflation etc.
[3] By the tax orientation is meant consumption-based or income-based tax models.

Finally, research also focuses on answering the question if more tax coordination among the EU member states can precipitate fiscal recovery of the EU. As economic integration within the EU moves forward, the interactions between the tax systems of the Member States are of growing importance (Cnossen, 2002:3). Thus, tax systems influence economic activities and tax competition, especially under capital income taxation, has become a serious problem. Sørensen (2001) concludes that we will probably in the future need more tax coordination than the EU Commission is currently willing to press for.

3 THE ROLE OF TAX POLICY IN THE EU

Taxes are the most important and abundant public revenue and along with social contributions finance public expenditures. Primary goal of tax policy is fiscal, but if appropriate form or type of taxation is chosen, different non fiscal goals can also be achieved. But it depends from government will taxes be used, and in which extent for achieving goals of economic policy. Every tax form is not suitable for achieving specifics goals, but if the tax form is adequate and the tax burden is proper, expected effects can be achieved. So what matters for these decisions is not only the level of taxes, but also the way in which different tax instruments are designed and combined to generate revenues.

The goal of every modern tax system is to be as efficient as possible. But this is difficult to achieve because of unforeseen incentives and externalities associated with tax policy choices. Therefore, it is not sufficient to know if taxes are regressive or progressive, but also how they affect the fiscal system. For instance, if we raise the standard Value added tax (VAT) rate that leads to regressive effect of consumption taxes, that will make up a larger share of the budges of poor households compared to rich. But that negative effect can be mitigated by using progressive tax rates of personal income tax (PIT), or transfer payments for poor. One way to tackle regressive effects of consumption taxes is also by inducing the reduced VAT rates, for instance to staples.[4]

The incidence of taxes depend on the fact how individuals and firms respond to a change in relative prices. And then of course it is not the same if somebody else, and not the tax payer, bears the tax burden. Then the achieved effect could be quite different than expected, which depends on elasticity. Thus, the effects of taxation on income distribution are connected with equity and economic growth. If we simplified very complex analysis of determinates income-based and consumption-based tax models or their variants we can deduce that if tax system is more income oriented it is easier to achieve non fiscal goals.

Tax systems of the EU member states are quite different and were largely introduced when economies were relatively closed.[5] Because of that fact they can be an obstacle for integration and can also influence investment and financial decisions. Although we can see some approximation of tax policies in reality countries will never abandon their fiscal sovereignty.

[4] Goods and services subject to reduced or 0% VAT rate are similar in the EU15 and the EU13 and connected with exemption of foods, drugs, newspapers, etc.

[5] Those are primarily the tax systems of the EU15.

We can divide the EU member states into two samples. One is consistent with so called old European member states or EU15[6] and the other from new member states (NMS) or EU13[7]. The tax systems of EU15 member states have been developed through centuries and are relatively inert and less adept to changes. On the other hand, the EU13 member states must completely change their tax systems due to the transition process and accession and in general have more homogeneous tax systems.[8] The tax systems in the EU new member states are, compared to the EU15, more transparent and less complicated, but that does not necessary mean they are more efficient. The difference between them is also visible in shares of revenues from different type of taxes. Namely, EU15 member states raise roughly equal shares of revenues from direct taxes, indirect taxes, and social contributions while the EU13 member states display a lower share of direct taxes in total.[9]

Among the old EU member states interesting differences still exist. For instance the Nordic countries[10] have large tax burden in sphere of direct taxes, while Greece and Portugal use more indirect taxes. Denmark finances the majority of the social safety net with direct taxes and not like in other old member states through social contributions system. In Germany and France there is a considerable burden from social contributions. Overall, tax-to-GDP ratios are generally significantly higher in the EU15 member states than in the EU13 member states.

Some EU13 economies adopted flat tax rate system and collect less revenue from direct taxes, because of lower direct tax rates.[11] In general the overall tax levels are lower in the EU13 member states, but in some cases this does not apply to labor taxation, in Hungary and the Czech Republic the implicit tax rate are well above the EU average. Croatia, which gained accession to the European Union in 2013, shares some above mentioned characteristics of other EU13 tax systems, but has some idiosyncrasies. One of them is the large share of consumption taxes in total taxes and tax treatment of capital income which is in general a little more favorable than in other transition countries. In addition, tax systems in the EU13 are relatively unstable as these economies made changes in response to the recent economic crises.

The recent financial and fiscal crises have resulted in a contraction of public spending including transfers and raising taxes, particularly on top income brackets, among most EU member countries.

The value of total general government tax receipts in % of GDP have changed in the EU member countries with differing pace. The financial crisis has undoubtedly negatively

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[6] Belgium, Germany, France, Luxemburg and Netherlands were the funding members of the EU in year 1957 and the others (Denmark, Ireland, Greece, Spain, Cyprus, Hungary, Malta, Austria, Portugal, Finland, Sweden and United Kingdom) entered into membership later.

[7] In year 2004 the EU entered Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia, and Slovakia. In year 2007 the EU entered Bulgaria and Romania, and Croatia gained accession in 2013.

[8] Transition economies have departed from pure income-based or consumption-based orientation of tax systems.

[9] This not the case in Malta.

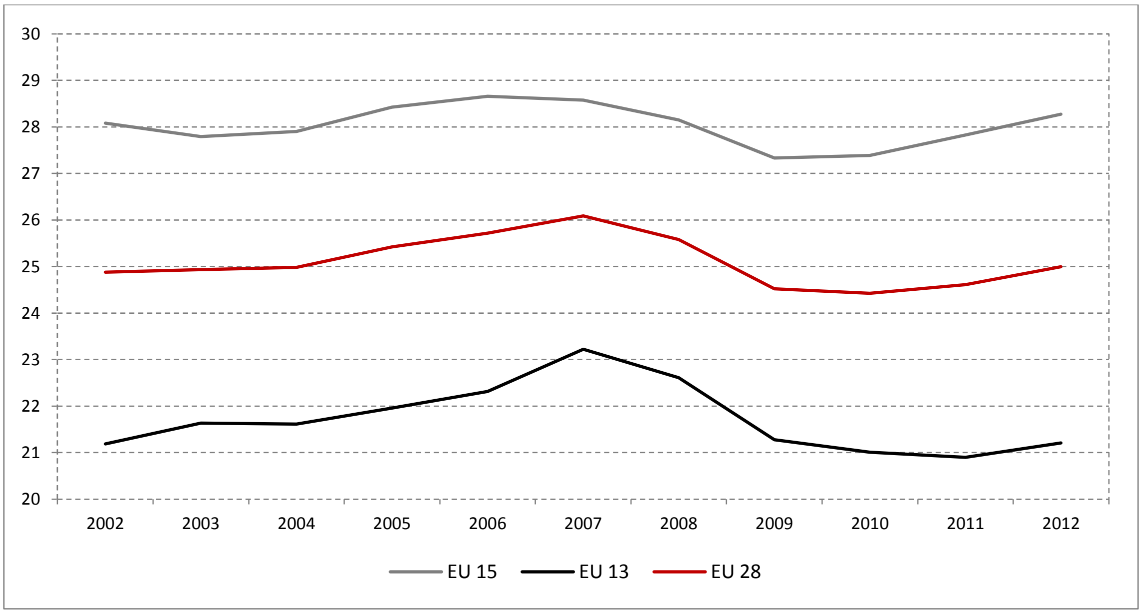
[10] Denmark, Sweden and Finland.

[11] In 2011 the lowest shares of direct taxes (Eurostat, 2013) were in Lithuania (only 17 % of the total, markedly down from 31 % in 2008), Bulgaria (18.9 % of the total), Hungary (18.7 %) and Slovakia (19.1 %).

influenced the tax receipts in most member states. The new EU members have been particularly vulnerable to these effects.

FIGURE 1

Average total general government tax receipts in % of GDP from 2002 to 2012



Source: Authors according to the Eurostat data.

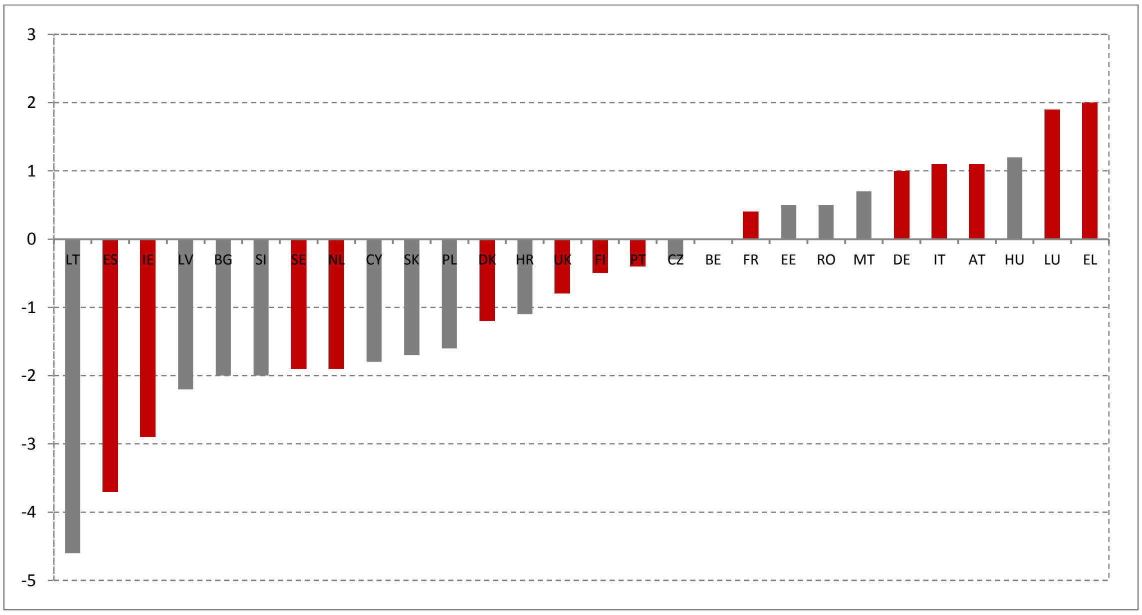
Figure 1 represents the average total general government tax receipts in % of GDP for EU15, new EU13 and all (EU28) member states. Old EU members have, on average, higher share of total general government tax receipts in GDP. The difference between EU15 and EU13 average total general government tax receipts has decreased until 2007 due to an upswing of tax receipts in new EU members. However, new EU members turned out to be much more vulnerable to the financial crisis facing a sharp decline in the total tax receipts since 2008. This resulted with the further increase of the average total general government tax receipts gap between EU13 and EU15 countries.

From 2006 to 2012 most member states have faced a decrease in the total general government tax receipts in percentage of GDP. However, some countries (most notably Germany, Italy, Austria, Hungary, Luxembourg and Greece) have witnessed an increase in total tax receipts. This is mainly a result of a tax reforms that proved to be beneficial for tax collection in those countries.

In general, based on the share of tax revenue collected from various sources, tax systems are usually divided to those income or consumption oriented. Income oriented taxation is in place if the majority of tax revenue relies on income-like taxes, whereas consumption oriented tax systems generate revenue predominantly from consumption taxation. The EU countries have used different orientations in structuring their tax revenue sources. The theoretical and empirical literature dealing with orientation of tax systems still lacks a general conclusion on the effects of income vs. consumption orientation on generating the tax revenue. Not that the tax structures of the EU members are not harmonized at the EU level, but the lack of consensus on the optimal tax structure is also reflected even in the tax systems of individual countries. Therefore, a lot of the EU countries use a mixed system which relies on both tax revenue sources evenly (see Figure 3).

FIGURE 2

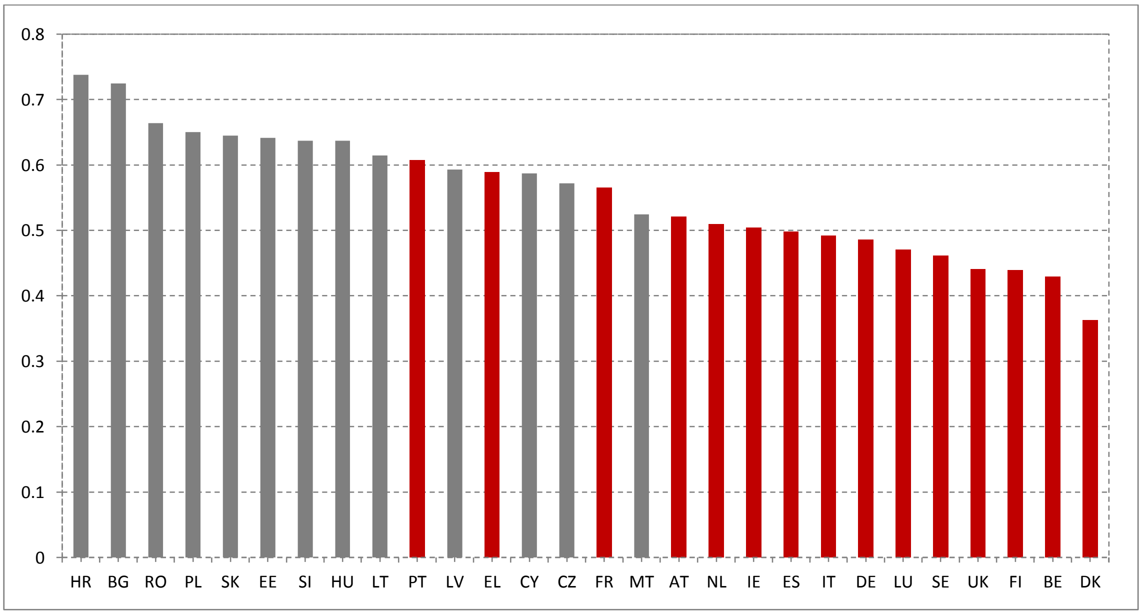
Absolute changes in total general government tax receipts in % of GDP from 2006 to 2012



Source: Authors according to the Eurostat data.

FIGURE 3

The average share of taxes on production and imports in total tax receipts from 2006 to 2012



Source: Authors according to the Eurostat data.

3.1 TAX CHANGES IN THE PERIOD OF RECESSION

Having in sight the fact that the financial crises has influenced tax revenue in the EU countries with the differing intensity, but also considering their various tax orientations, the EU countries have applied varying tax reform measures to cope with the consequences of the crises. Although the measures used in certain countries were quite extensive and encroached all possible spheres of tax systems, this paper deals with those conducted in the system of personal income tax, corporate income tax (CIT) and value added tax. Those three taxes should generate the highest share of tax revenue in all observed countries so understanding the changes conducted in these systems should provide a satisfactory insight into the importance of certain reform measures and their impact on total tax revenue.

Policymakers are primary concerned with the effects of tax changes on revenues and that motivation was also present in the period of recession. Of course most tax changes are induced to promote growth and as response to reductions in spending.

Within three major tax forms both tax increases and tax cuts have been introduced over the first two years of recession, and in some cases that happened even in the same tax form. Furthermore, base-narrowing measures have been most common for PIT and CIT, because the Member States are not limited in those tax forms as for instance in partly harmonized EU taxes such as VAT or excise duties. As for the personal income tax, one of the most common types of measure was the direct support of household purchasing power by reductions in the PIT. This was mostly achieved through increases in allowances rather than cuts in rates because this measure has larger impact on low-income households. In few countries PIT rates were increased but only for the categories of high incomes. In the case of VAT in most countries standard tax rates were increased but in some countries base narrowing measures were introduced[12]. Implications of the measures that increased standard VAT rates have larger positive impact on revenue collection than base narrowing measures. Due to a crisis several governments introduced measures with an explicit end date, in order to encourage spending by consumers and businesses in the short term.

In year 2010 and 2011 most member states have tried to consolidate public finance and improve their tax systems in more growth-friendly way. In almost all EU member states, the tax reforms implemented during this period were connected with revenue increase which was due to tax increase measures. A majority of member states have increased their PIT dominantly by base narrowing measures and in some cases by raising statutory rates[13]. VAT rates have also been increased in many countries. Countries with large budgetary deficits, such as Greece and Portugal have increased taxation in all three major tax forms. In analyzed period, if we consider the EU as whole, there are signs of a modest shift in the composition of the tax burden from direct to indirect taxation.

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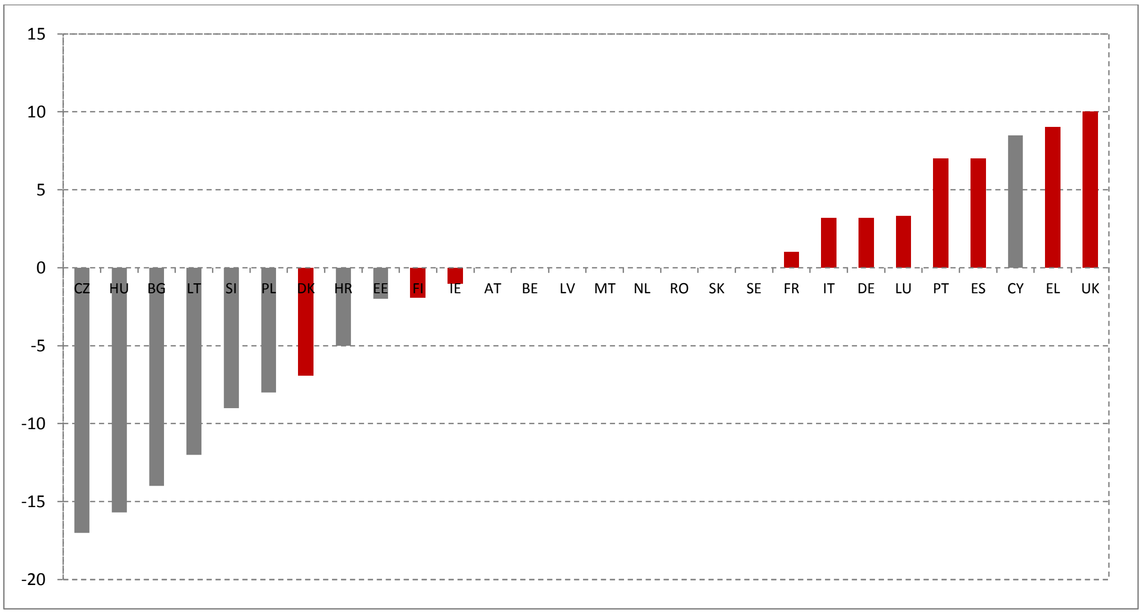
[12] Base narrowing was in some countries also connected with reduction of tax burden on staples.

[13] PIT statutory rates has been raised in Greece, France, Ireland, Latvia, Luxembourg, Portugal, Spain and the United Kingdom.

In year 2012 and 2013 tax policy continued to be strongly influenced by the consequences of the financial and economic crisis and many Member States have increased the overall tax burden. An interesting phenomenon is that increase in indirect taxes does not seem to be accompanied by corresponding cuts in labor taxation which would lead to reduction of labor costs. Only few member states have taken measures to decrease PIT, while most of them increased top marginal rates or introduced new tax brackets. The reforms related to CIT are primarily focused on narrowing the tax base in response to the prolonged impact of the crisis on private sector investment. Regarding the VAT reforms we can see again increase of standard tax rates rather than a broadening of the VAT base. So we can conclude that one of the effects crisis have on tax systems is reinforcement of the trend towards higher consumption taxes.

FIGURE 4

Changes in top personal income tax rates from 2006 to 2012 in %



Source: Taxation trends in the European Union, Eurostat (2013).

The EU member states have very differing personal income tax structure. Some states (i.e. Estonia, Latvia, Lithuania, Romania and Slovakia) have used a flat-rate tax, whereas certain countries have had up to 18 different tax brackets (Luxembourg). Comparing the PIT system of countries with such a differing rate structure does not seem viable. However, observing changes in the top personal income tax rates might provide a sufficient insight into the change of the PIT burden throughout the period of the financial crisis.

TABLE 1

PIT tax changes in the period of recession

Personal income tax				
I Statutory rate				
	2009-2010	**2010-2011**	**2011-2012**	**2012-2013**
Increase	EL, IE, FR, LV, PT, SI, UK	EL, ES, FR, IE, LV, LU, PT, UK	BE, DK, CY, FI, EL, ES, IE, IT, LU, NL, PT	BG, EL, FR, CY, LU, PT, SI, SK, FI
	EU 15 (5) EU 13 (2)	EU 15 (5) EU 13 (3)	EU 15 (10) EU 13 (1)	EU 15 (6) EU 13 (3)
Decrease	AT, DE, DK, FR, FI, HU, LV, LT, RO	DE, DK, FI, HU, NL	FI, HU, LV, NL	LV, MT
	EU 15 (5) EU 13 (4)	EU 15 (4) EU 13 (1)	EU 15 (2) EU 13 (2)	EU 15 (2) EU 13 (0)
II Base or special regimes				
	2009-2010	**2010-2011**	**2011-2012**	**2012-2013**
Increase	DK, EE, EL, ES, IE, HU, LV, LT, PT	AT, CZ, DK, EE, ES, FR, IE, LV, PT, RO, SK, UK	AT, BE, CZ, DK, ES, FI, FR, EL, HU, IE, PL, PT, SK, UK	BE, CZ, EE, IE, EL, ES, FR, LU, NL, AT, SI, FI, SE, UK
	EU 15 (5) EU 13 (4)	EU 15 (7) EU 13 (5)	EU 15 (10) EU 13 (4)	EU 15 (11) EU 13 (3)
Decrease	AT, BE, BG, DE, DK, ES, FI, HU, MT, IE, IT, LV, LU, NL, PL, PT, RO, SK, SI, SE	AT, BG, DE, FI, IT, LT, SE	CZ, DK, EE, FI, DE, ES, HU, IE, LV, MT, NL, SE, UK	IE, EL, ES, FR, HR, IT, LT, LU, HU, NL, RO, SI, FI, SE, UK, CZ
	EU 15 (11) EU 13 (9)	EU 15 (5) EU 13 (2)	EU 15 (8) EU 13 (5)	EU 15 (10) EU 13 (6)

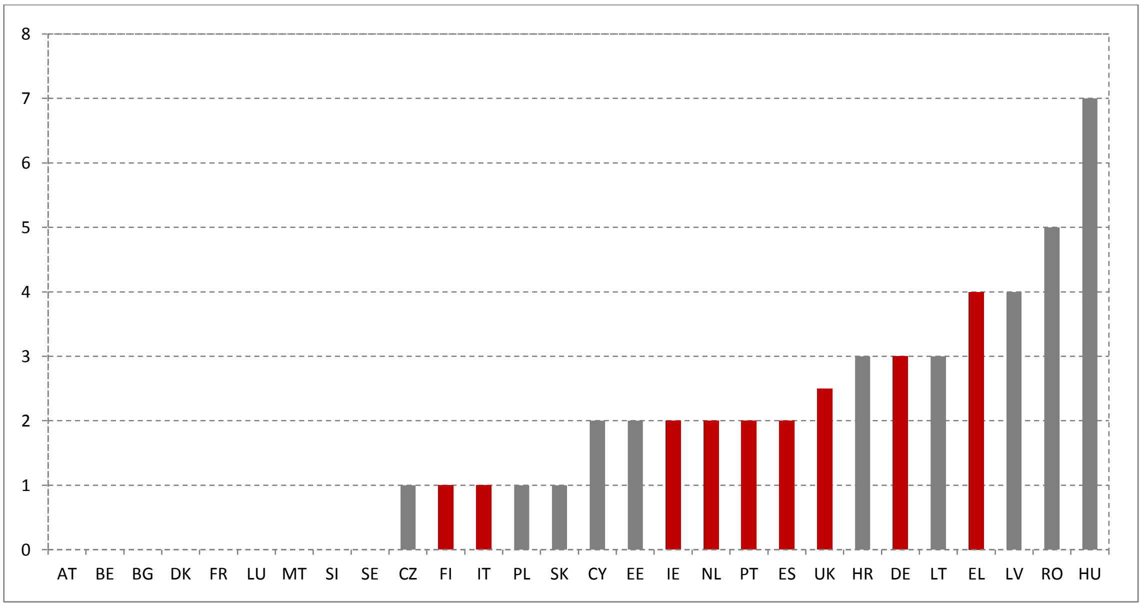
Source: Authors according to the European Commission (2011, 2012, 2013).

A number of EU countries have changed the top personal income tax rates throughout the financial crisis. From 2006 to 2012, some countries have decreased the top personal income tax rates by more than 10 percentage points (Czech Republic, Hungary, Bulgaria and Lithuania). On the other side, some EU countries (Portugal, Spain, Cyprus, Greece and UK) have increased the top personal income tax rates by more than 5 percentage points. In general, the new EU members were prone to decreasing whereas old EU members were prone to increasing the top personal income tax rates.

The value added tax rate structure in the EU also significantly differs across member states. It has to be pointed that, in addition to harmonized VAT rates, some countries have still used the super reduced rates and parking rates. However, the major part of VAT revenue should be based on taxation of goods and services with the standard rate. Therefore, the observed changes in the VAT system in the period of the crisis encompass changes in the standard VAT rate.

FIGURE 5

Changes in standard VAT rates from 2006 to 2012 in %



Source: Taxation trends in the European Union, Eurostat (2013).

TABLE 2

VAT tax changes in the period of recession

Value added tax				
I Statutory rate				
	2009-2010	**2010-2011**	**2011-2012**	**2012-2013**
Increase	CZ, EL, ES, EE, HU, LV, LT, FI, IE, FR, UK	CZ, EL, ES, FI, HU, LV, PL, PT, RO, SK, UK	PT, UK, CY, ES, IE, HU, LV, PL, SK, IT, FR, BG, EL, CZ	CZ, ES, FR, HR, IT, CY, NL, SI, FI
	EU 15 (6) EU 13 (5)	EU 15 (5) EU 13 (6)	EU 15 (8) EU 13 (6)	EU 15 (5) EU 13 (4)
Decrease	IE, FI, UK,	IE		EL, HR, LV
	EU 15 (3) EU 13 (0)	EU 15 (1) EU 13 (0)		EU 15 (1) EU 13 (2)
II Base or special regimes				
	2009-2010	**2010-2011**	**2011-2012**	**2012-2013**
Increase	EE, LV, LT	BG, CY, EL, ES, FR, PT, LV	AT, BE, BG, CY, DK, EL, ES, FI, LV, NL, PL, PT	BE, ES, LV, LU, PL, PT
	EU 15 (1) EU 13 (2)	EU 15 (4) EU 13 (3)	EU 15 (8) EU 13 (4)	EU 15 (4) EU 13 (2)
Decrease	BE, DE, CY, FR, LT, MT, HU, NL, RO, SI, FI	BE, DE, HU, LT, NL, PL	CY, EL, ES, IE, LT, PL	LT, LU, SE
	EU 15 (5) EU 13 (6)	EU 15 (3) EU 13 (3)	EU 15 (3) EU 13 (3)	EU 15 (2) EU 13 (1)

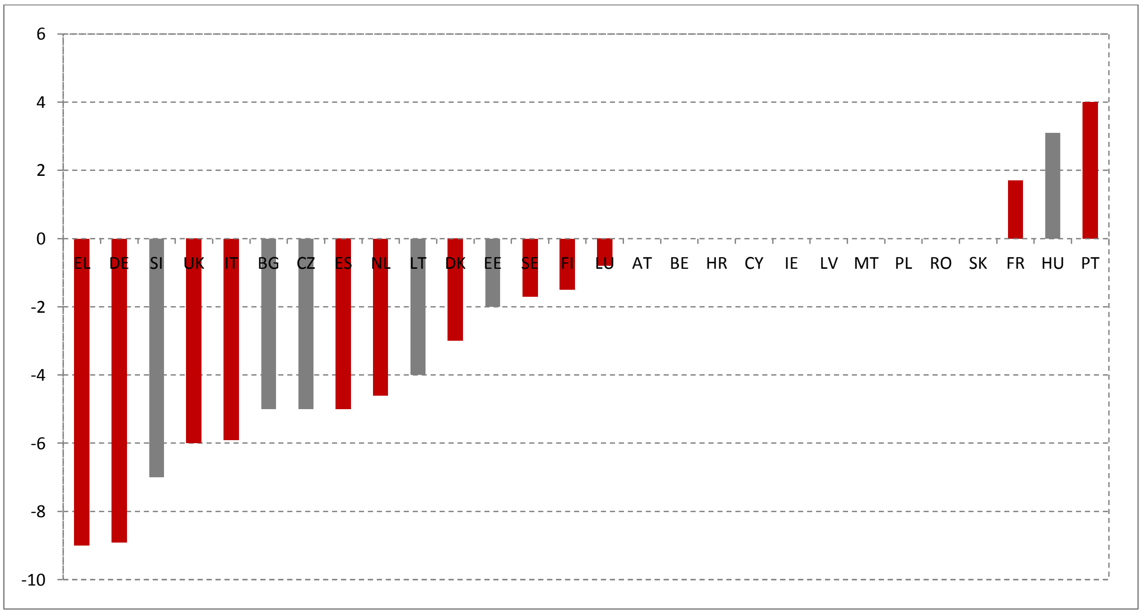
Source: Authors according to the European Commission (2011, 2012, 2013).

In the period from 2006 to 2012 the standard VAT rate was increased in 19 out of 28 EU members. Countries that did not alter the standard VAT rate are mostly old EU members, while new member states took the leading positions in increasing the standard VAT rate.

Hungary has, in the observed period, increased the standard VAT rate by as much as 7 percentage points which brought country the status of the EU member with the highest standard VAT rate.

FIGURE 6

Changes in adjusted top statutory tax rate on corporate income from 2006 to 2012 in %



Source: Taxation trends in the European Union, Eurostat (2013).

Considering the corporate taxation, the adjusted top statutory tax rate on corporate income mostly decreased. In the period from 2006 to 2012 the adjusted top statutory tax rate on corporate income was increased in only three countries (France, Hungary and Portugal), whereas ten countries have not undertaken changes in the rate structure during the period of the financial crisis.

It is obvious that countries undertook varying tax reform measures trying to cope with the consequences of the financial crisis, which resulted with the real fiscal crises in most of the EU countries. However, some of those measures turned out to be more successful than others. In order to test whether the observed changes in the tax rates had any influence on the tax revenue, we develop a panel data regression model.

TABLE 3

CIT tax changes in the period of recession

	Corporate income tax			
I Statutory rate				
	2009-2010	**2010-2011**	**2011-2012**	**2012-2013**
Increase	LT, HU, PT	EL, PT	FR, PT	EL, CY, LU, PT, SK, HU
	EU 15 (1) EU 13 (2)	EU 15 (2) EU 13 (0)	EU 15 (2) EU 13 (0)	EU 15 (3) EU 13 (3)
Decrease	CZ, EL, HU, LU, SI, SE, LT	CZ, EL, HU, LT, NL, UK	UK, FI, EL, SI, NL	DK, EE, SI, FI, SE, UK
	EU 15 (3) EU 13 (4)	EU 15 (3) EU 13 (3)	EU 15 (4) EU 13 (1)	EU 15 (4) EU 13 (2)
II Base or special regimes				
	2009-2010	**2010-2011**	**2011-2012**	**2012-2013**
Increase	BE, BG, IE, EL, IT, LT, HU	LU, RO	CZ, AT, BE, DK, ES, HU	EL, ES, LU, AT, FI, PT, BE, FR
	EU 15 (4) EU 13 (3)	EU 15 (1) EU 13 (1)	EU 15 (4) EU 13 (2)	EU 15 (8) EU 13 (0)
Decrease	AT, BE, DE, ES, IT, CY, LT, NL, PT, PL, RO, SK, SI, SE	AT, BE, DE, ES, LT, NL	ES, HU, IT, LT, LU, UK	IE, EL, ES, FR, HR, IT, LT, LU, HU, NL, RO, SI, FI, SE, UK, CZ
	EU 15 (8) EU 13 (6)	EU 15 (5) EU 13 (1)	EU 15 (4) EU 13 (2)	EU 15 (10) EU 13 (6)

Source: Authors according to the European Commission (2011, 2012, 2013)

4 THE IMPACT OF TAX REFORMS ON TOTAL GENERAL GOVERNMENT TAX RECEIPTS

4.1 DATA USED IN ECONOMETRIC ANALYSIS

Dataset used in the model represent Eurostat data on top personal income tax rates, adjusted top statutory tax rates on corporate income, standard value added tax rates, compensation of employees (% of GDP), gross operating surplus and gross mixed income (% of GDP), gross value added (% of GDP), total general government tax receipts (% of GDP) and a dummy variable controlling for the period of increased fiscal crises (2008-2011). The dataset include data for all 28 member states in the period 2003-2012.

TABLE 4

Specification of selected variables

Variable	Description	Expected effect
TTR	Absolute annual change in total general government tax receipts (in % GDP)	Dependent variable
PIT	Absolute annual change in top personal income tax rate (in %)	Positive
CIT	Absolute annual change in adjusted top statutory tax rate on corporate income (in %)	Positive
VAT	Absolute annual change in standard value added tax rate (in %)	Positive
COE	Absolute annual change in compensation of employees (in % GDP)	Positive
GSI	Absolute annual change in gross operating surplus and gross mixed income (in % GDP)	Positive
GVA	Absolute annual change in gross value added (in % GDP)	Positive
CR	Period of intensified fiscal crises (2008-2011). Dummy variable: 1 if crisis, 0 else.	Negative

Source: Authors.

Since tax revenue should be a function of the tax base and tax rates, the tax base proxy is used for all relevant tax revenue sources. Compensation of employees (in % GDP) corresponds to the PIT base, gross operating surplus and gross mixed income (in % GDP) corresponds to the CIT base and gross value added (in % GDP) corresponds to the VAT base. Tax rates used in the model are top personal income tax rates for PIT, adjusted top statutory tax rate on corporate income for CIT and standard value added tax rate for VAT. Considering the functional relationship of data, all those independent variables should have a positive impact on the total tax receipts (in % of GDP). A dummy variable for the period of intense fiscal crisis (2008-2011) is expected to have a negative impact (if positive) on the dependent variable. All variables are used as absolute annual changes.

TABLE 5

Summary statistics of the variables used in the model

Variable	Mean	Median	Minimum	Maximum	Std. Dev.
TTR	0.0114	0.1000	-4.2000	4.6000	0.9881
PIT	-0.4539	0.0000	-24.0000	10.0000	3.2093
CIT	-0.6096	0.0000	-18.0000	10.0000	2.1457
VAT	0.1589	0.0000	-5.0000	5.0000	0.8555
COE	0.0004	-0.1000	-4.4000	4.7000	1.2628
GSI	-0.0246	0.1000	-4.3000	4.5000	1.3311
GVA	-0.0375	0.0000	-2.2000	2.6000	0.6045
CR	0.4000	0.0000	0.0000	1.0000	0.4908

Source: Authors.

In the period from 2003 to 2012, total tax receipt in GDP have been changing from -4.2% of GDP to +4.6% of GDP. Compensation of employees changed in the range from -4.4 to +4.7% of GDP, gross operating surplus and gross mixed income from -4.3 to + 4.5 and gross value added from -2.2 to +2.6% of GDP. The tax rates changed from -24 to +10 percentage points (top personal income tax rate), -18 to + 10 percentage points (adjusted top statutory tax rate on corporate income) and up to 5 percentage points in both directions (standard value added tax rate).

4.2 SPECIFICATIONS OF THE MODEL

To test the relationship between indicated dependent and independent variables a panel data regression model is formulated. The model will be estimated using a data for 28 EU member states in the period from 2003 to 2012. The model can be written as:

$$TTR_{it} = C + \beta_1 PIT_{it} + \beta_2 CIT_{it} + \beta_3 VAT_{it} + \beta_4 COE_{it} + \beta_5 GSI_{it} + \beta_6 GVA_{it} + \beta_7 CR_{it} + u_{i,t}, i = 1, \dots 28; t = 2003, \dots 2012.$$

where:

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7$ are panel data regression coefficients,

TTR_{it} is the absolute annual change in total general government tax receipts (in % GDP) of country *i* in period *t*,

C is the constant term,

PIT_{it} is the absolute annual change in top personal income tax rate (in %) of country *i* in period *t*,

CIT_{it} is the absolute annual change in adjusted top statutory tax rate on corporate income (in %) of country *i* in period *t*,

VAT_{it} is the absolute annual change in standard value added tax rate (in %) of country *i* in period *t*,

COE_{it} is the absolute annual change in compensation of employees (in % GDP) of country *i* in period *t*,

GSI_{it} is the absolute annual change in gross operating surplus and gross mixed income (in % GDP) of country *i* in period *t*,

GVA_{it} is the absolute annual change in gross value added (in % GDP) of country *i* in period *t*,

CR_{it} is the dummy variable having the value of 1 during the 2008-2011 period, and 0 otherwise for country *i* in period *t*,

u_{it} are independent identically distributed normal random variables of zero expectation and variance σ^2 for country *i* in period *t*.

All independent variables should have a positive and statistically significant impact on the total tax receipts, except of the dummy variable, which should present the negative relationship.

4.3 RESULTS OF ECONOMETRIC ANALYSIS

The previously described panel data regression model is estimated using the least squares method. The Correlated Random Effects – Hausman Test and Redundant Fixed Effects Test were conducted to test for the fixed and random effects, but they both proved statistically insignificant.[14]

TABLE 6

Specification of selected variables

Variable	Coefficient	t-Statistics
C	0.193398	2.337557
PIT	0.063101	4.869752
CIT	*0.012766	0.602361
VAT	-0.090740	-2.827814
COE	-0.444682	-5.129906
GSI	-0.452296	-5.814079
GVA	-0.552225	-4.477369
CR	-0.407046	-2.977332
R-squared: 0.495428		
Adjusted R-squared: 0.482443		
Prob(F-statistic): 0.000000		

Source: Authors

*Note: * Not statistically significant for usual significance levels (1%, 5% and 10%)*

All independent variables proved to be statistically significant in the model, except the absolute annual change in adjusted top statutory tax rate on corporate income (in %). However, variables COE, GSI and GVA used to capture the effect of the change in PIT, CIT and VAT tax base are associated with negative coefficients. This essentially means that an increase in those tax bases negatively influenced the tax revenue, which is in contrast to the common economic logic. Nevertheless, since the aim of this model is to evaluate efficiency of changes in PIT, CIT and VAT rates in raising the tax revenue, the focus of the interpretation is on other statistically significant independent variables.

The coefficient related to PIT shows that an increase in the absolute annual change in top personal income tax rate of 1 percentage points increases the absolute annual change in total general government tax receipts by 0.06% of GDP. However, an increase in the absolute annual change in standard value added tax rate of 1 percentage point results with the decrease in the absolute annual change in total general government tax receipts of 0,09% of GDP. This might be explained with the fact that consumers can react to the increase in the tax burden by reducing consumption. Therefore the tax revenue might end up lower. On the other hand, tax base of the taxation of income cannot be altered in such a way, because lower tax burden would not be sufficient incentive to purposely decrease income. Having in sight this

[14] See Balatagi (2013:24-25).

causality, potential increase in the tax pressure, aiming at increasing the tax revenue, should be based on the income and not the consumption taxation.

The dummy variable CR turned out to be statistically significant. The coefficient value reveals that in the midst of the crisis the absolute annual change in total general government tax receipts of EU member states has on average decreased by 0.4% of GDP per annum.

5 CONCLUSION

The aim of this paper is to explore how tax policy measures, implemented during the period of recession, influenced tax revenues and tax orientation of EU member states. The first step in the analysis was to identify legislated tax changes in the period 2008-2013. To do this, we simply look for tax changes in three major tax forms personal income tax, corporate income tax and value added tax. We limit ourselves to actions taken in those taxes because they generate the highest share of tax revenue in all observed countries and should provide a satisfactory insight into the importance of certain reform measures and their impact on total tax revenue.

The recent financial and fiscal crises have changed taxation trends in a large number of EU Member States. It should be noted that member states have been hit differently by the crisis depending mostly on the different degree of macroeconomic imbalances ascendant in the economy. Therefore policy responses varied among them and were strongly connected with macroeconomic and fiscal conditions.

Most member states have tried to consolidate public finance and improve their tax systems in more growth-friendly way. In almost all EU member states, the tax reforms implemented during this period were connected with revenue increase which resulted of course with tax increase measures. An interesting phenomenon is that increase in indirect taxes does not seem to be accompanied by corresponding cuts in labor taxation which would lead to reduction of labor costs.

The reforms related to CIT are primarily focused on narrowing the tax base in response to the prolonged impact of the crisis on private sector investment. Regarding to the VAT reforms we can see increase of standard tax rates rather than a broadening of the tax base, because this measures have larger positive impact on revenue collection than base narrowing measures. We can conclude that one of the effects crisis has had on tax systems is reinforcement of the trend towards higher consumption taxes.

The panel analysis has not fully confirmed our initial hypothesis that tax measures undertaken in the period of recession are efficient in tax revenue collection. Briefly, using panel model with data covering the years 2003–2012 for EU countries, we find evidence that efficiency of measures undertaken in PIT, CIT and VAT differ. Moreover, we demonstrate that the overall increase in the tax pressure, aiming at increasing the tax revenue, should be based on the income and not the consumption taxation.

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Tax Reform in Australia:
The Minerals Resource Rent Tax

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JEL classification: K

Abstract

This paper covers the introduction of new tax legislation on mineral resources in an era of partisan, polarized politics and focuses on the degree of effectiveness and acceptance of the tax. It considers the reform to Australia's resources taxation, introduced in July 2012 in the form of the Minerals Resource Rent Tax (MRRT) legislation, which is likely to be repealed sometime in 2014 due to a change in political parties. Nonetheless, there are lessons from this experience of tax reform.

The qualitative approach of 'grounded theory' is used to generate a theory about the process, effectiveness and acceptance of the MRRT, which is grounded through the analysing the rich data from mainstream media. For context, the paper includes a comparison of Australia's minerals tax regime to those of other key and competitor countries that export to China, that of Brazil, South Africa and Indonesia.

Keywords: Australia tax, resource rent tax, grounded theory, mineral resources

1 Introduction

Governments more than ever must reduce deficits and balance the national budget. The heterodoxy of suggesting new or higher taxes has now become orthodoxy. Observe the Obama administration, which at the end of its term, is now emboldened to the task of addressing ways to increase tax receipts. This paper concerns the introduction of new tax legislation for a resource rent tax in an era of partisan, polarised politics (Megalogenis 2010; Prior, 2012) and is builds on other resource rent tax papers by the author (Kraal 2012; Kraal and Nash, 2010; Kraal and Yapa, 2012). The aim is to generate theories, rather than pose initial questions and present answers, to provide explanations from contextual elements, conditions and events, which have an effect on the success of a new tax. The research framework uses the interpretive approach of 'grounded theory' for analysis of print media data relating to an Australian tax, the Minerals Resource Rent Tax (MRRT) which took effect in July 2012.[1] The motivation to conduct this research arose after observing the sheer volume of media articles on the MRRT between April and December 2012 and the need to make sense of them. The literature repeatedly establishes that a resource rent tax provides a greater return to the state and community, fewer tax-led distortions for business, and ongoing financial attractiveness of

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[1] Minerals Resource Rent Tax Act 2012 (Cth).

mining for a sovereign state (Emerson and Kraal 2014a, 2014b; Emerson and Lloyd 1983; Freebairn and Quiggin 2010; Garnaut and Clunies-Ross 1975; Mintz 2010; Osmundsen 2010).

This qualitative research contributes to an understanding of the politics of tax policy and the practical implementation issues, which apply to the introduction of a new tax. It also adds to the literature on the institutional and social factors that affect tax reform. The four theories that develop from this study provide explanations about the success of a new tax include: the importance of contextual issues around over-claims about tax reform; the need for an understanding of the causal conditions that give rise to a new tax, such as the functionality of the current tax regime, business conditions, and appetite for tax reform; that a minority government needs to develop and maintain support in the Parliament for reform; and the inevitability of unexpected pressures from deliberately staged intervening events or conditions that will impact on reform initiatives. These theories have implications for other jurisdictions considering new tax legislation. Before describing the methodological framework for this paper, the next section provides some context on Australia's minerals exports and taxing regime.

2 MINERALS EXPORT AND TAXATION CONTEXT

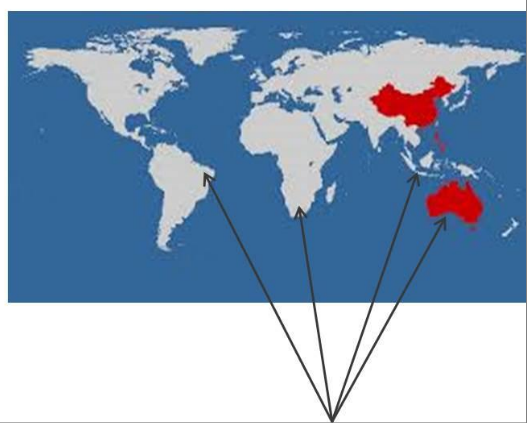
Australia is the world's leading exporter of iron ore and coal to China. Australia's competitors for the export of these minerals to China are Brazil and South Africa. Indonesia is also included in this contextual overview as it is not only a closely situated country to Australia, but provides a contrast - having legislated to effectively nationalise its mining. Figure 1 below shows the comparator countries

FIGURE 1

Selected high-value mineral exporters to China

Iron ore, coal & other minerals

Mineral Export Country	Exports to China (US$ billion)
Australia	50.4
Brazil	23.0
South Africa	7.5
Indonesia	5.4



Source: UN Comtrade data.

In comparing the taxation of extracted minerals in Australia, Brazil, South Africa and Indonesia it is noted that all apply corporate taxation. Australia currently has a resource rent tax on iron ore and coal. Royalties are levied by all the states of Australia, but vary in method: volumetric (based on production volume), *ad valorem* (based on sales value) and income-based.

Brazil has a royalty regime. In August 2013 Brazil's Congress approved a bill changing the royalty regime effective in 2014. Maximum royalties on mineral wealth has risen from 2 percent to 4 percent, with iron ore and gold attracting the top rate, with royalties levied on gross revenue rather than net profit (Economist Editor, 2013).

South Africa has a royalty regime that was reformed and amended in 2010. It is now an income-based (adjusted revenue) and applies at an average rate of 2.5 percent. The royalty formula contains variable factors of either 9 percent or 12.5 percent; the lower rate is designed to encourage refining of mineral resources, thus the higher is for unrefined exports.

Indonesia has an *ad valorum* royalty regime at an average of 3 percent on refined minerals. Its tax reforms in 2009 were aimed at encouraging local refining of minerals, but are seen as a form of resource nationalism. For instance, exports of unrefined minerals are restricted as there is a 20% export duty on certain unrefined minerals.

While the detailed methods of taxing generally differ, the point of similarity is that all comparator countries have progressed through some form of tax reform. Figure 2 shows a comparison of minerals taxation.

FIGURE 2

Comparison of minerals taxes: mineral exporters to China

Country	Mineral resource legislations	Tax Method
Australia	*Minerals Resource Rent Tax Act (2012)*	**Resource rent** Fixed rate on mining profits *less* allowances, including royalties
	Royalties (State, Territory & Federal)	**Royalty** – *Ad valorum* – Volumetric – Profits-based
Brazil	*Compensation for the Exploitation of Minerals, mining royalties*	**Royalty** – Gross revenue-based
South Africa	*Mineral and Petroleum Resources Royalty Act (2008)*	**Royalty** – Income-based (adjusted revenue) – Formula preferences refined minerals
Indonesia	*Mineral and Coal Mining No. 4 (2009)* as amended	**Royalty.** – *Ad valorum* for standard licences. – Formula preferences refined minerals

Government strategies to attract capital inflow should observe investors' key considerations, which include the general factors of resource prospectivity, fiscal regime, sovereign risk, prevalent debt to equity ratios, security of operations, issues surrounding corruption, and environmental and social concerns. These factors need to be considered and ranked in terms of degree of importance to investors and by mining project, given the potential impact of such perceptions on government 'tax take' (tax revenue as a proportion of GDP) for mineral resources. Thus caution should observed if one simply compares effective tax rates by jurisdiction, as shown in Figure 3.

FIGURE 3

Effective tax rates for mineral resources: mineral exporters to China

	Australia	**Brazil**	**South Africa**	**Indonesia**
	Rent tax, Royalty, Corporate income tax	**Royalty, Corporate income tax**	**Royalty, Corporate income tax**	**Royalty, Corporate income tax**
Revenue	100	100	100	100
Royalty cost	7	4	2.5	3
Costs, other	54	54	54	54
EBIT	39	42	43.5	43
Minerals Resource Rent Tax @30%	11.7			
less Extraction Factor @25%	2.9			
less Royalty Allowance	7			
Net rent tax	1.8			
Corporate Tax	11.2	14.3	12.2	10.8
Profit	26.1	27.7	31.3	32.3
Total Tax	19.9	18.3	14.7	13.8
Effective Tax Rate %	**51**	**44**	**34**	**32**
Royalty %	7	3.1	~2.5	3
Corporate Tax Rate %	30	34	28	25

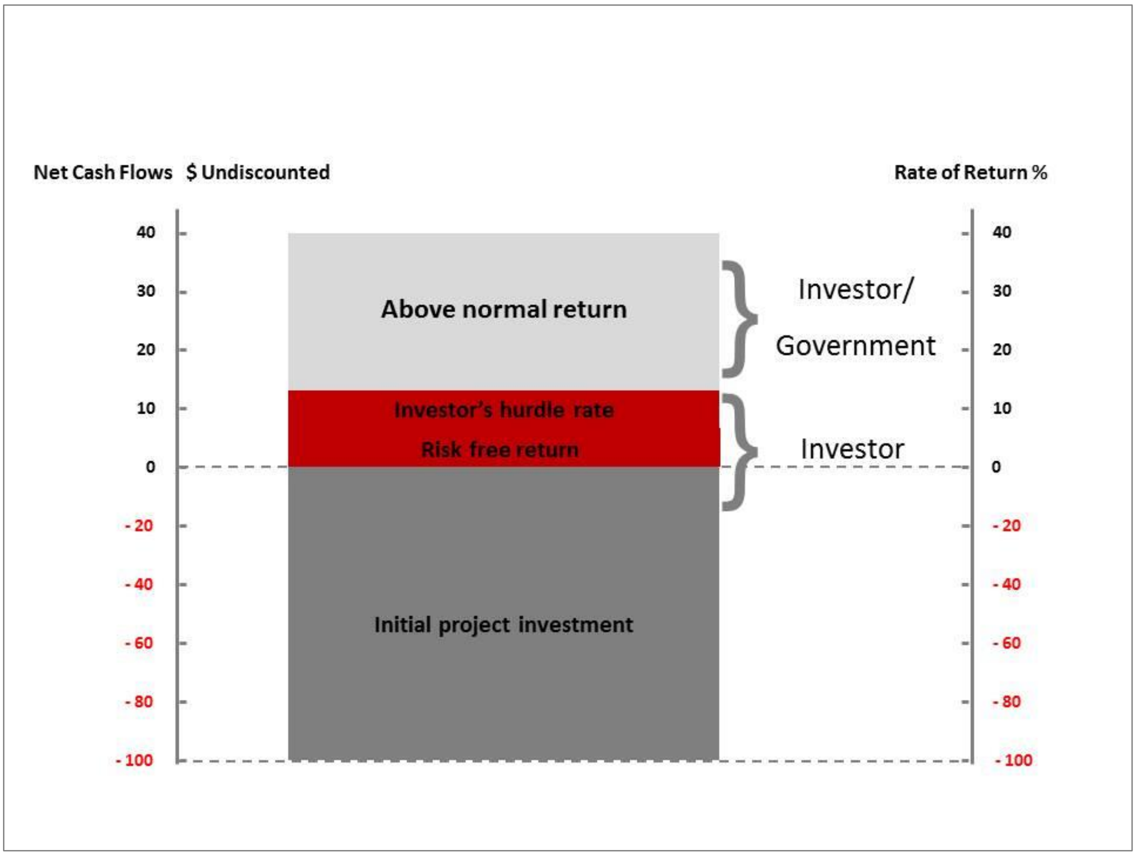
Source: KPMG, 2014

Shifting back to the Australian mining tax regime, it is observed that the royalties are payable irrespective of project profitability. Company income tax is a necessary part of the mining taxing regime – it ensures that the normal return to equity is taxed. With regard to the resource rent tax regime, we note that mineral deposits that are of higher quality and closer to final market are capable of generating returns greater than the 'hurdle rate', the risk-weighted rate of return, or the rate the investor needs to justify undertaking a project. These additional returns are known as resource rent, or 'above normal profits'.

A resource rent tax, can be designed as a cash flow tax, which is a tax levied at a constant percentage on the difference between receipts and expenditure, or net positive cash flow. Under the resource rent principle, the investor is allowed to recover exploration and development costs before the tax is payable. When returns are 'above normal' then the resource rent tax liability arises. These features of a cash flow-based resource rent tax offer stability of a fiscal regime over time, which is highly valued by investors. It supports the argument that taxation should be based on profitability, not on production volume or sales value. A cash-flow based resource rent tax levied at some point on 'above normal returns', as depicted in Figure 4.

FIGURE 4

A Cash Flow Resource Rent Tax



Source: the author.

The concept of a resource rent tax can be difficult to 'sell' to an electorate, as experienced in Australia. The paper now moves back to the main part of the paper to the methodology section.

3 METHODOLOGY

Grounded theory was first introduced in 1967 by US academics, Barney Glaser and Anselm Strauss (Glaser and Strauss, 1967). The collaboration ended, and Strauss continued work with and his then student, Juliet Corbin, on a 'more prescriptive' variation of grounded theory (Corbin and Strauss, 1990); and Glaser continued to solely research on the 'original' grounded theory technique (Glaser, 1998). This paper's research framework uses the grounded theory approach based on the Corbin and Strauss variation (Corbin and Strauss, 2008). The objective of this paper's research is to analyse mainstream newspaper data over the period between April to December 2012 concerning the introduction of Australia's Minerals Resource Rent Tax (effective 1 July 2012) with the aim of grounding a theory that seeks to explain the issues which might affect the success of a new tax.

For this paper, grounded theory involved setting up a matrix and categorising data in a three-stage coding process. In conjunction with grounded theory, the method of document analysis was used. The document analysis required intense reading of the media data to enable categorisation of the content into the matrices. The last step was to validate the data. This was achieved by undertaking a comparative analysis of the theory to the literature.

Thus this paper's grounded theory approach involved gathering data on the generally defined topic of minerals resource rent tax. Grounded theory is about building a theory rather than testing a hypothesis. It is an inductive, as opposed to deductive, approach. The aim has been to build a substantive theory on issues arising from new legislation that are evident in the selected media and consider if the theory can be applied to broader areas.

4 FINDINGS AND THEORY CONSTRUCTION

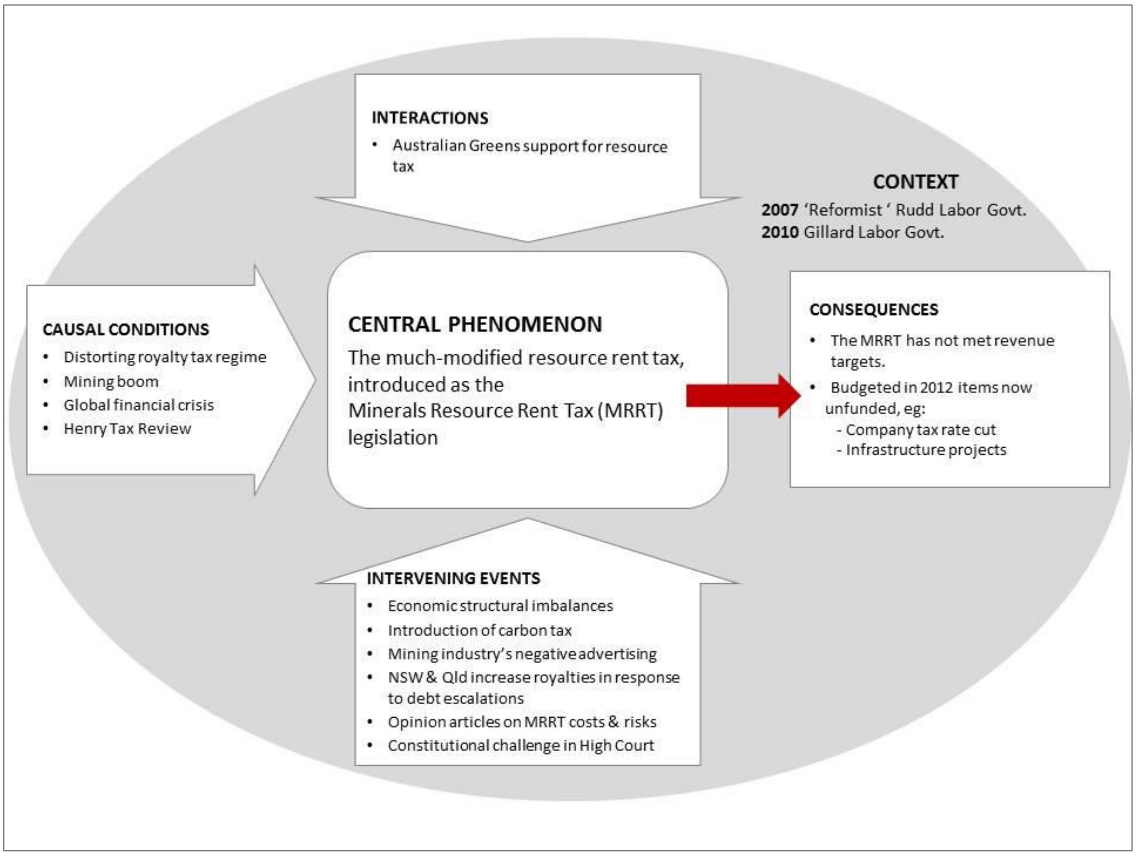
Immediately after first iteration of reviewing the media, the data was coded, as the first stage, and a matrix of MRRT issues was constructed. Some of the 260 newspaper articles covered more than one MRRT issue, so the item count totalled of 297. The second stage, axial coding, involved scrutinising the data matrix for themes and patterns to determine the central phenomenon that emerged from the data set. The Figure 5 model of interactions was constructed to show the context, interrelationships of causal conditions, interactions and intervening events and consequences concerning the central phenomenon.

The third and final stage was the construction of a narrative, drawing on the model and the document analysis. Taking into account the preceding three-part analysis the following theories, grounded in the data, were constructed:

1) The central phenomenon of a new tax can be the result of a range of contextual *pressures*. The context enveloping the phenomenon gives the first clue on self-generated pressure, whereby a government claims to be 'reformist' before achieving a positive result.
2) Causal conditions that give impetus to the idea of a new tax must be understood, whether a dysfunctional tax regime requiring attention, buoyant or negative business conditions, or a well-supported tax review.
3) If a new tax proposal comes from a minority government, then the government must interact with others. Finding reliable support within the Parliament is essential, especially in an ear of partisan, polarised politics.
4) Unexpected pressures from deliberately staged intervening events and/or conditions can interrupt the acceptance, or perception of benefits, of a new tax with powerful effects. The consequences of unfunded projects from a failed tax can be fatal for a government.

FIGURE 5

Model of interactions based on the newspaper data matrix



5 CONCLUSION AND FUTURE RESEARCH

Comparative analysis was used to validate the four grounded theories against the literature. Overall, the extent to which the four theories on issues that affect the success of a new tax can be generalised is limited to the print media data collated for this research. However, for future research the scope could be widened to include data from electronic media; such as radio, television, internet blog sites and other social media.

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SHIFTING FROM LABOUR TO CONSUMPTION TAXES: THE IMPACT ON TAX REVENUE VOLATILITY

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JEL CLASSIFICATION: E62, H2, H68

ABSTRACT

This paper provides estimates of tax revenues with respect to their individual tax bases, focusing on differences between long- and short-run elasticities and allowing for asymmetries in the speed of adjustment, as well as, in the short-run volatility. Estimates are presented for two major tax categories in Poland – Value Added Tax and employers and employees social contributions for the period 1999–2013. Our results indicate that long-run elasticities are close to unity. The analysis of short-run elasticities by considering their asymmetric responses to the economic fluctuations, which is complemented by the rolling regression, suggests that VAT revenues are characterized by larger volatility. Therefore, implementation of a shift in taxation from labour income to consumption increases the sensitivity of public finances to the business cycle.

Keywords: fiscal policy, tax revenue elasticities, Value Added Tax, social contributions

1 INTRODUCTION

The global economic crisis has led to a severe deterioration of fiscal positions in developed countries. While several factors contributed to this, including discretionary stimulus efforts and financial assistance to ailing banks, overall the most important one was probably the decline in tax revenue associated with the cyclical downturn. The magnitude of worsening of budget balances was in many cases larger than expected. The likely reason for this was the underestimation of the extent to which they vary with the economic cycle. A key concept in this context is that of elasticity of tax revenue, which determines how much tax receipts change in response to a change in the tax base.

Fiscal policy analyses conventionally assume that tax elasticities are stable over time and unless the taxes in question are progressive, that the elasticity with respect to the base is unitary. This is indeed a sensible assumption for the long-run value of the tax elasticity, as there is no reason for the ratio of tax revenue to tax base to persistently rise or decline. However, practice shows that in the short-term there is often substantial of variation in tax receipts, implying the deviation of elasticities from this assumption.

The size of tax elasticities is a crucial variable for the assessment of the underlying fiscal position and the stance of fiscal policy. This is usually done using cyclically-adjusted budget balances, with the cyclical sensitivity of the budget balance calculated using the assumed elasticities of respective tax categories with respect to output. Cyclically-adjusted budget balances are also gaining relevance as policy variables used in European and national fiscal rules. In addition, tax elasticities are important for budgetary planning and forecasting. All of the above implies that short-term variations in tax elasticities may increase uncertainty and thus impede execution and real-time monitoring of fiscal policy.

This paper looks empirically at the variability of tax elasticities. Two approaches are used to capture the fluctuations of elasticities. Firstly, we estimate long- and short-term elasticities of taxes with respect to their bases using an error correction model. We allow for asymmetries in the error correction mechanism in order to test whether the behaviour of elasticities is different depending on whether they are above or below their long-run equilibrium. Secondly, we track changes of tax elasticities over time using rolling window regressions.

Our study focuses on the case of Poland, an economy which has undergone a considerable transformation in recent decades, associated with the transition to a market system and its entry to the EU. This transformation also affected public finances and the tax system. In order to accurately measure the relationship between tax receipts and tax bases it is therefore essential to correct for the impact of these changes. We do so using a detailed database of tax measures which has been compiled at the National Bank of Poland based on an analysis of legislative acts.

We focus specifically on the elasticities of two of the largest sources of general government revenue in Poland, namely VAT and social contributions. Based on a preliminary survey of the data as well as existing literature, a priori we expect to find more variation in elasticities of VAT than for social contributions.

The paper contributes to the literature as the first (to our knowledge) study of tax elasticities in Poland. It is also one of the first analyses of the variability of tax elasticities which covers the period of the global economic crisis which may be expected to have affected the relationship between tax receipts and their respective bases.

The paper is structured as follows. We firstly briefly discuss the concept of tax elasticities and the related empirical literature. Next, we present an overview of the tax system in Poland and how it has evolved over our sample period. We then discuss the data used and present our empirical approach. Finally, we discuss our results and close with conclusions.

2 TAX ELASTICITIES: AN OVERVIEW

There are three concepts of tax elasticities used in the literature (Koester and Priesmeier, 2012). The first are tax base elasticities which describe the relationship between the relevant tax base and macro variables such as GDP. This elasticity is particularly relevant for studies of sales taxes at U.S. state level (e.g. Bruce, Fox and Tuttle, 2006), as these studies are often based on precise data on tax bases obtained from the tax administration. The second are elasticities of tax receipts with respect to GDP. These are useful for calculating cyclically-adjusted budget balances using an aggregated method, where a cyclical component of the budget balance is estimated by multiplying the aggregated elasticity of revenue and expenditure components by the output gap. The third are elasticities of tax receipts with respect to macroeconomic variables which can be considered proxies for their tax bases. These elasticities may be used to estimate cyclically-adjusted budget balances using the so-called disaggregated approach (for a detailed description see Bouthevillan et al., 2001), whereby the cyclical component of each tax category is calculated using separate trends and gaps are calculated for each tax base.

We consider the last of these concepts to be the most relevant, in particular because both the relationship between tax receipts and their respective macroeconomic proxies, as well as the relationship between these proxies and GDP may vary over time. By focusing on only one of these relationships, the third concept should allow us to better capture the link between tax receipts and macroeconomic developments than the second one, in which changes in the structure of GDP growth could additionally complicate the assessment.

For the purposes of calculating cyclically-adjusted budget balances, as well as preparing fiscal plans and projections, it is common to assume that the tax elasticity is constant over time. This implies that the elasticity in question is a long-term one. Such elasticities are often estimated drawing on analyses of the tax code, such as in the case of Girouard and Andre (2005) who estimated elasticities for OECD countries or Mourre et al. (2013).

However, as noted earlier, the above assumption does not hold in practice, as tax elasticities often vary considerably. This has led to development of the concept of short-term elasticities, describing the fluctuation of tax receipts within the economic cycle and emergence of a strand of literature estimating short- and long-term elasticities using time series methods. This approach has been pioneered by Sobel and Holcombe (1996) who evaluated the dynamic properties of different categories of tax elasticities for several tax categories and different U.S. states. Bruce, Fox and Tuttle (2006) extended this approach, also applying it to U.S. states, by additionally allowing for asymmetry in the short-run elasticities.

The methodology of Bruce, Fox and Tuttle (2006) has been subsequently applied to European countries by Wolswijk (2007), Koester and Priesmeier (2012) and Bettendorf and van Limbergen (2013). Our paper is most closely related to these studies. The studies use an error correction model to estimate long- and short-run tax elasticities. In addition, the first and the third one test for asymmetry in the error correction depending on whether tax receipts are above or below the equilibrium value. This may be associated with the economy being in ‘good’ or ‘bad’ times. The asymmetry may apply both to the size of short-run elasticity, as well as adjustment speed towards the equilibrium. All three studies use data adjusted for the impact of legislative measures on tax receipts.

Wolswijk (2007) conducted his study using annual data for the Netherlands for the period 1970-2005. He considered five tax categories, in each case estimating a long-term and a short-term elasticity using an error correction model. He found significant asymmetry particularly in the case of VAT and other indirect taxes. For these taxes, separate short-term elasticity values were found to be significant both when revenues were above and below their equilibrium. However, the short-term VAT elasticity for taxes above equilibrium was only slightly higher than the long-term elasticity (1.01 vs 0.90). In case of personal income taxes no asymmetry of short-term elasticities was found, while for corporate taxes and other direct taxes, elasticities for taxes below equilibrium were not statistically significant.

Bettendorf and Limbergen (2013) perform a similar exercise to Wolswijk (2007), also using data for the Netherlands, but extending the dataset to 2011 and correcting for a structural break in PIT revenues, as well as testing for different bases of VAT. They focus on two tax categories – VAT and personal income taxes. For VAT, they estimate a long-run elasticity of 0.97 and a short-run one of 1.0. They also find asymmetry in VAT elasticities, as short-run values estimated separately for instances when tax receipts are above and below the equilibrium amount to 1.2 and 0.7, respectively, and both are statistically significant. The authors also test for an alternative measure of 'good' and 'bad' times, namely the output gap, in this case estimating the elasticities at 1.06 and 0.83 and also statistically significant. Meanwhile, for PIT, they estimate a long-run elasticity of 0.89 and a short-run one of 1.07. Again, they find statistically significant asymmetry in the short-run elasticity with a value of 1.27 for tax receipts above the equilibrium and 0.65 for taxes below the equilibrium. In addition, Bettendorf and Limbergen (2013) assess the variability of tax elasticities over time using rolling window regressions. They find no clear pattern in the VAT elasticity and an upward trend in the PIT elasticity.

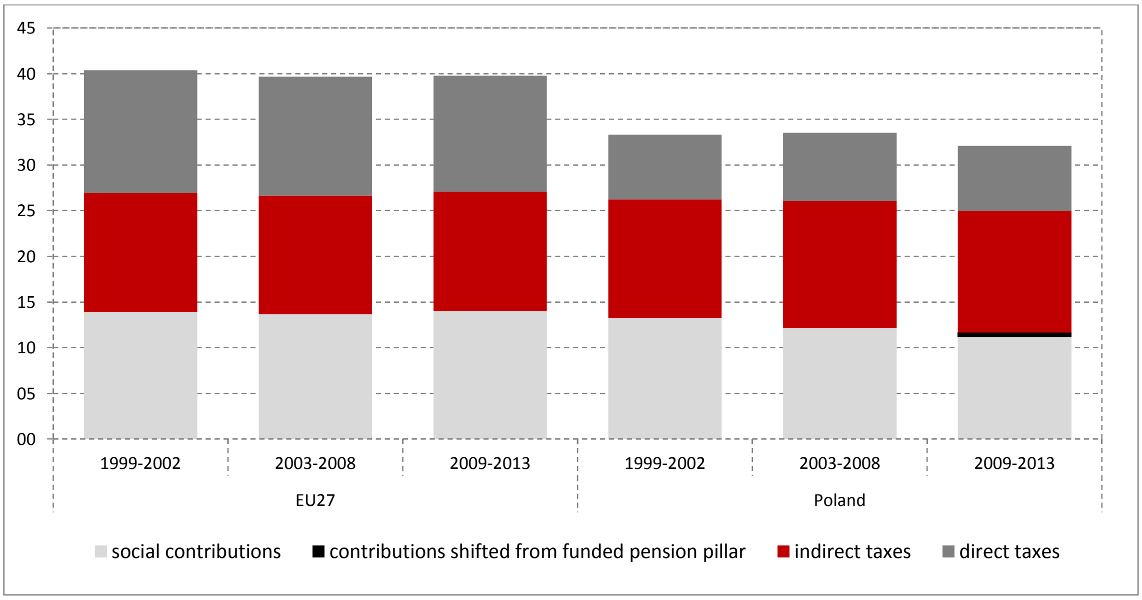
3 TAX SYSTEM IN POLAND

One of the elements of Poland's transition to a market economy was the establishing of a modern tax system in the early 1990s. The corporate income tax was introduced in 1989, the personal income tax in 1992 and the value-added tax in 1993. These taxes, together with excises and social contributions which had been levied already before transition, constitute the core of government's revenue sources.

Figure 1 presents a summary comparison of the structure of tax revenue in Poland and EU countries on average. These structures are broadly similar with one notable exception – the share of direct taxes in Poland is clearly lower than the EU average. This reflects lower taxes paid by households which is partly due to relatively low headline PIT rates (18% and 32%), but in particular due to the deduction of health care contributions from PIT. Poland has a slightly higher share of indirect taxes which has been increasing over the past 15 years. Meanwhile, the share of social contributions is lower than in the EU on average and visibly decreasing over the last 15 years. This shows that Poland has been one of the countries which shifted the tax burden from labour, where it has been excessive, to indirect taxes.

FIGURE 1

Composition of tax revenue in Poland and the EU27 (% of GDP)

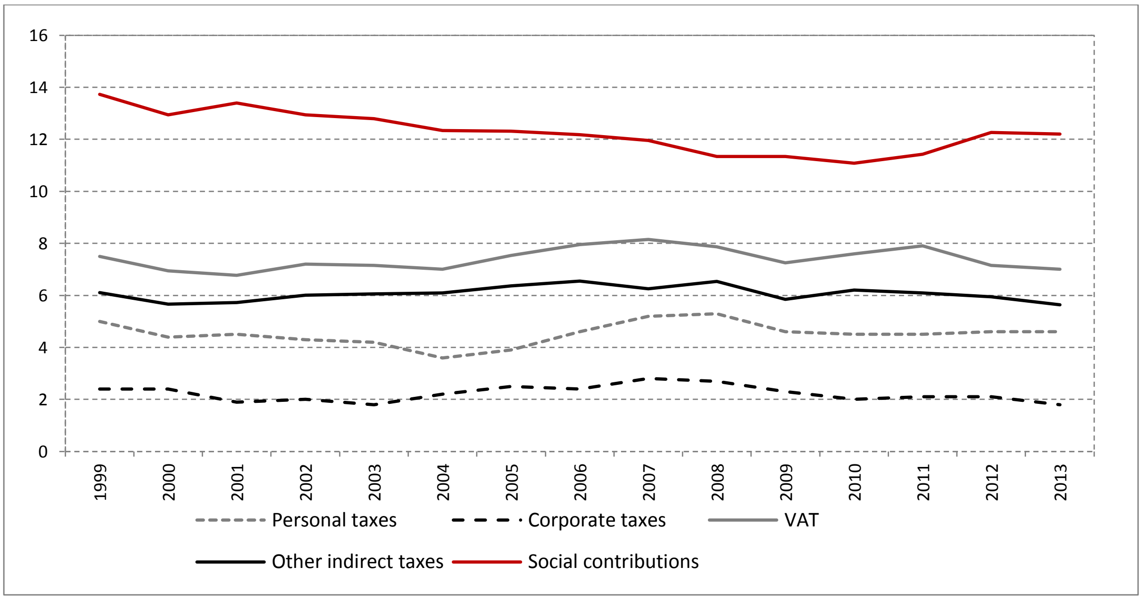


Source: Eurostat.

The overall structure of revenue from taxes and social contributions over the past 15 years has been quite stable, while the fluctuations of the overall level of tax revenue as a percentage of GDP are mainly attributable to the impact of the economic cycle (Figure 2).

FIGURE 2

Main tax categories in Poland in the period 1999-2013 (% of GDP)



Source: Eurostat.

The decline of the ratio of social contributions to GDP over the period 1999-2006 is partly due to the falling level of employment in the early part of this period and partly due to the gradual impact of the shift to a partly funded pension scheme. Social contributions of new employees entering the labour market in that period were being partly diverted to the funded pillar, classified outside general government, while those of retiring older were paid fully to the government pension scheme. Then, in 2007 and 2008 a very large cut in social contributions was implemented, in an effort to increase employment by reducing the tax wedge. Once the economic crisis started, the government implemented wide-ranging fiscal adjustment measures, including changes in the pension scheme entailing a shift of contributions between the funded pillar and the government pension scheme. In addition, in 2012 the reduction in social contributions from five years earlier was partly reversed.

Personal income taxes were also lowered over the period in question, firstly through introduction of a flat 19% tax rate for the self-employed in 2004 and then by moving from three tax brackets with a top rate of 40% to two, with a top rate of 32% in 2009. Meanwhile, the gradual decline of PIT revenue in the 1999-2003 period and then its increase in 2004-2008 were related to cyclical developments. In addition, in mid-2000s receipts additionally increased due to abolition of some breaks and freezing of tax brackets. The main change in corporate income taxes was the reduction of the tax rate from 27% to 19% in 2004.

Revenues from value-added taxes were driven to a large extent by the cycle and Poland's EU accession in 2004. The increase in revenue in 2004-2005 is related to the EU entry, although not all of that increase can be attributed to specific legislative measures. Instead, this event may rather be considered a far-reaching shock to trade with repercussions for VAT receipts. In 2011, as part of the fiscal consolidation process, VAT rates were raised from 22% to 23% and from 7% to 8%. The remaining fluctuations, particularly the sizeable upturn in 2006-2007 and the sharp decline in 2012-2013, are related to the economic cycle

4 DATA

In this paper we estimate the elasticities of tax revenues with respect to their tax bases. Facing the problem of short time series, which are available for Poland, we use quarterly data for 1999 through 2013. The data are seasonally adjusted following the methodology applied by Eurostat. Tramo-Seats method with working days correction is used to seasonally adjust our data.

As noted earlier, because of changes taking place in the tax system over the period in question, it is important to correct the data for the impact of discretionary measures, including legal changes in tax rates, tax base definitions and tax administration. We do this by following Wolswijk (2007) and Bettendorf and van Limbergen (2013) and applying the proportional adjustment method introduced by Prest (1962). The basic idea is to obtain time series as if there were no discretionary changes, using the officially reported tax revenues and the predictions of adjustments in tax yield due to discretionary changes. The benchmark is given by the prevailing tax structure in the base year. Hence the adjusted tax revenues (*AT*) are equal to the observed tax revenues (T).

$$AT_0 = T_0 \tag{1}$$

In the next year, the projected impact of fiscal changes on tax revenues (D) is subtracted for the observed ones. So the adjusted tax revenues in period t=1 is equal to

$$AT_1 = T_1 - D_1 \tag{2}$$

Bearing in mind that permanent discretionary changes influence not only revenues in the current period but also in the following ones, the cumulative effect has to be determined. This can be done by multiplying the corrected term (T-D) in the current period with the ratio of the adjusted to actual tax revenues in the previous ones. In case of quarterly data, the adjusted tax revenues in period t is as follows

$$AT_t = (T_t - D_t)\frac{AT_{t-4}}{T_{t-4}}, t > 4 \tag{3}$$

The quality of the adjusted data depends to a large extent on the accuracy of estimates of the impact of new tax measures. Our estimates are based on official government sources whenever they were available, complemented with own calculations.

FIGURE 3

Impact of legislative measures on receipts from social contributions (% of annual GDP)

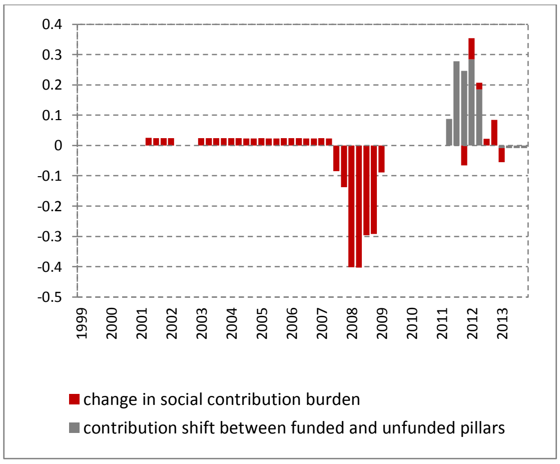
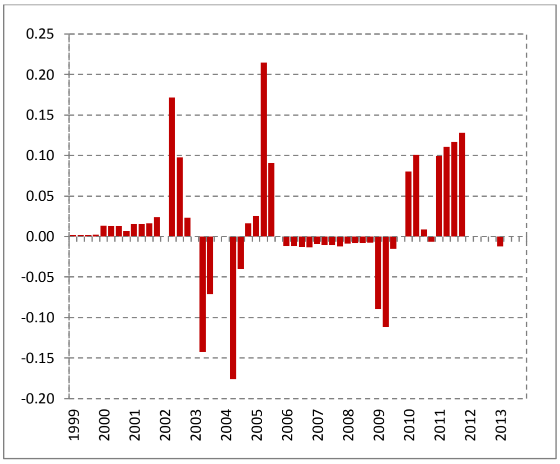


FIGURE 4

Impact of legislative measures on receipts from VAT (% of annual GDP)



Source: NBP estimates.

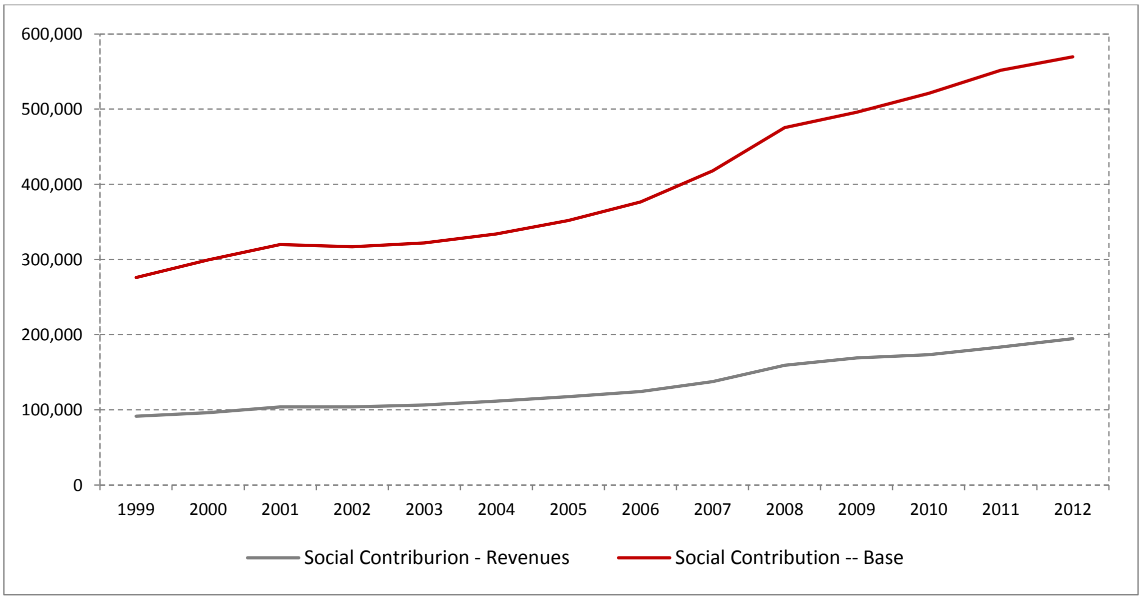
In our analysis, we focus on two types of taxes, which constitute a lion's share of general government revenues (Figure 2), namely social contributions and indirect taxes. Over the time period of our study, on average, social contributions, accounted for 32% of overall general government revenues, whereas VAT revenues represented 19% them. Hence altogether these two tax categories accounted, on average, for more than 50% of all tax revenues over the investigated period. Another reason for focusing on these two categories, aside from their relative size, is that they may serve as a representation of tax reforms which took place in Poland over the period 1999-2013. Specifically, similarly to many other countries, these reforms entailed a shift from taxation of labour towards taxation of consumption. By examining tax elasticities of these two forms of taxation, we may draw policy conclusions regarding the impact of such reforms on the volatility of tax receipts.

Figure 3 and Figure 4 show the estimated effect of the discretionary changes on the tax revenues (expressed as a percentage of GDP). In general, the legislative measures lead to growth (decline) of 0.4% of GDP or 0.2% of GDP, respectively, in case of social contributions' and VAT receipts. The impact of changes in social contributions is broken down into measures which actually change the tax burden, such as reductions in social contributions in 2007-2008 and changes arising from the shifting of contributions between the funded and unfunded pension pillars, which do not change the overall burden faced by taxpayers.

As it is mentioned above, the aim of this paper is to estimate the elasticities of tax revenues with respect to their tax bases. Therefore, defining properly tax bases for the taxes of interest seems to be crucial to obtain reliable results. For social contributions, we take the national accounts category 'compensation of employees' (ESA code D.1). The literature (e.g. Girouard and Andre, 2005) typically indicates private consumption as the VAT base. However, as noted by Wolswijk (2005) and Bettendorf and Limbergen (2013), other macroeconomic categories are also taxed with VAT, specifically government investment, government intermediate consumption and private residential investment. The results of these studies suggest that private consumption is characterized by greater both long- and short-term volatility in comparison to other VAT base components. In our paper, we examine two various VAT bases – a narrower, which constitutes of private consumption and a broader one, which additionally includes intermediate consumption and fixed capital formation. However, as both bases show similar trend and there is no significant differences between estimates using narrower and broader tax base, we decide to present only the results for models, in which a broader base is used.

FIGURE 5

Social contributions' revenues and compensation of employees (in millions of polish zloty)

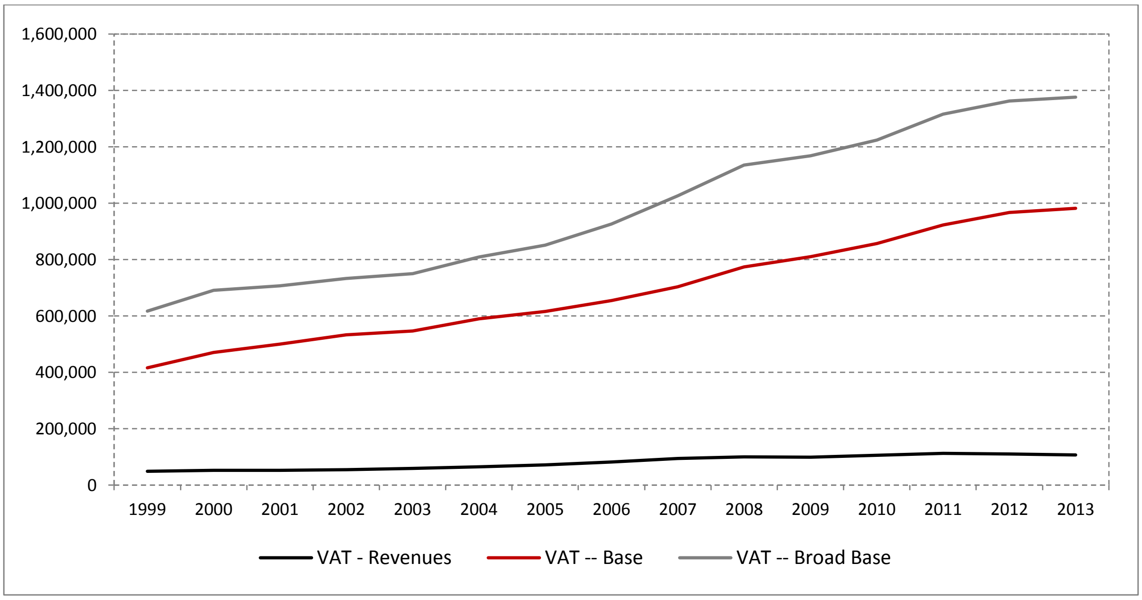


Source: Eurostat, National Bank of Poland.

Figure 5 and Figure 6 show tax revenues and their bases. It is worth pointing out that in both cases tax bases grow more rapidly than tax revenues in the entire period. Moreover, regardless of the definition, VAT bases follow the same pattern.

FIGURE 6

VAT revenues and their bases (in millions of polish zloty)



Source: Eurostat, National Bank of Poland.

5 METHODOLOGY

The main empirical challenge of our research is to examine whether there is a long-run and short-run relationship between tax revenues and their individual bases, as well as if there exists any differences in tax revenues behaviour depending on the business cycle.

To generate testable hypotheses, we employ the approach applied by, inter alia, Wolswijk (2007) and Bruce, Fox and Tuttle (2006) and estimate long-run relationship using cointegration techniques to avoid the problem of spurious regressions as usually both tax revenues and their bases are integrated in order (Appendix A).

The long-run equilibrium relation in the most general model can be described as follows

$$lnTR_t = \alpha_0 + \alpha_1 lnTB_t + \varepsilon_t \tag{4}$$

where $lnTR_t$ is the natural logarithm of tax revenues in period t, $lnTB_t$ is the natural logarithm of tax base, ε_t is the error term and α_1 is our parameter of interest as it reflects the long-run tax revenue elasticity.

The short-run equation is expressed in terms of growth rates

$$\Delta lnTR_t = \delta(lnTR_{t-1} - lnTB_{t-1}) + \beta \Delta lnTB_t + \xi_t \tag{5}$$

The cyclical variability of tax revenues is given by the estimate of β and represents the direct short-run elasticity (Koester and Priesmeier, 2012). However, the error correction term, which is defined as the lagged disturbance term of the long-run equation, constitutes the other important element of the error correction model. Any deviations from the long-run equilibrium are corrected if the adjustment speed parameter (δ) is negative and larger than -1.

The literature provides evidence that short run elasticities differ depending on the business cycle (Bettendorf and van Limbergen, 2013). Therefore, to complement our initial approach two types of asymmetries are allowed in our model. Firstly, it seems fairly reasonable to assume that tax revenues grow more than proportionally as the tax base increases in 'good' times, which are defined as the periods, in which revenues exceed their long-run equilibrium. Consequently, the elasticity is below unity as the economy faces the recession. Last but not least, the speed of adjustment might be also unequal within the business cycle.

$$\Delta lnTR_t = \delta^+(lnTR_{t-1} - lnTB_{t-1})^+ + \delta^-(lnTR_{t-1} - lnTB_{t-1})^- + \beta^+\Delta lnTB_t{}^+ + \beta^-\Delta lnTB_t{}^- + \eta_t \quad (6)$$

$$\begin{aligned}(lnTR_t - lnTB_t)^+ &= (lnTR_t - lnTB_t), if\ (lnTR_t - lnTB_t) \geq 0; 0\ otherwise \\ (lnTR_t - lnTB_t)^- &= (lnTR_t - lnTB_t), if\ (lnTR_t - lnTB_t) \leq 0; 0\ otherwise\end{aligned} \quad (7)$$

$$\begin{aligned}\Delta lnTB_t^+ &= \Delta lnTB_t, if\ (lnTR_t - lnTB_t) \geq 0; 0\ otherwise \\ \Delta lnTB_t^- &= \Delta lnTB_t, if\ (lnTR_t - lnTB_t) \leq 0; 0\ otherwise\end{aligned} \quad (8)$$

For the purpose of our analysis, we implement the two-step Engle-Granger approach, which allows us to estimate long-run equilibrium relationship and corresponding error correction model (Engle and Granger, 1987). In the first step, the dynamic ordinary least squares (DOLS) estimator proposed by Stock and Watson (1993) is used to obtain our baseline long-run tax revenues elasticity. This estimator offers several advantages in comparison to the traditional ordinary least square technique. Firstly, the obtained estimates are superconsistent. Moreover, as leads and lags of the explanatory variables are included in the model, the negative impact of possible endogeneity and autocorrelations is mitigated. Last but not least, even though the model describes a relationship between nonstationary variables, the distributions of the basic tests' statistics are known. Therefore, it is possible to test linear restrictions imposed on the parameters. In the second step, the short-run elasticity is computed on the basis of the error correction model using ordinary least squares (OLS).

To obtain reliable and precise estimates the model has to be well-specified. For this purpose, we test several various specifications, e.g. including trend or richer dynamic structure to avoid the problem of serial correlation. On the other hand, taking into account short time period of our analysis, we finally decide to include one lag and lead in the DOLS model and not to include any lags in the ECM model as there is not serial correlation. We attempt also to find evidence of structural breaks that occurred within the analysed period. The first natural breaking point might be Poland's accession to the European Union, which took place in the second quarter of 2004. The European Union enlargement had a material impact on trade, as well as resulted in a flow of transfers from the EU budget, which are likely to increase consumption and investments. This event has an impact on VAT revenues and therefore, is included in our model.

In the last part of our analysis, the robustness of the obtained results is checked. The sensitivity analysis is twofold. On the one hand, we use ordinary least square and fully-modified ordinary least squares (FM-OLS) to test the stability of estimates from our baseline model describing long-run relationship (Phillips, 1995). Moreover, lagged residuals for these individual models are included as a deviation from equilibrium in the error correction models. The second approach is based on the rolling regression.

6 RESULTS

6.1 VALUE-ADDED TAXES

Table 1 presents the estimation results using household consumption, intermediate consumption and gross capital formation as tax base. All of the presented models include additional deterministic component -- Poland's accession to the European Union, which took place in May 2004. This variable has significant impact on VAT revenues in a long run regardless the estimation technique we apply. As expected the accession stimulated both private consumption and investments leading to growth in VAT revenues. The estimate of the long-run elasticity in our baseline model is 1.06, however it is not significantly different from unity. The short-run value is equal to 0.96 and there is no evidence to reject the null hypothesis of a unit short-run elasticity. The adjustment speed parameter indicates that VAT revenues get back to their long-run path after 7 months. Our baseline results seem to be fairly stable. Although, the estimates of the long-run elasticities using OLS or FM-OLS are numerically below 1, they are not significantly different from unity. In case of the short period, only the model in which residual from the FMOLS regression are used, suggests that the short-run elasticity is larger than 1.

TABLE 1

VAT elasticities

Long-run Relationship			
Variable	**(1) OLS**	**(2) DOLS**	**(3) FM-OLS**
Constant	-2.088* (1.215)	-3.381*** (0.788)	-1.253 (0.821)
Log(VAT_base)	0.960*** (0.101)	1.062*** (0.065)	0.890*** (0.068)
EU	0.125** (0.057)	0.075** (0.037)	0.161*** (0.036)
Obs	57	57	57
Short-run Relationship			
Variable	**OLS**	**DOLS**	**FM-OLS**
Error correction term	-0.253*** (0.088)	-0.247** (0.116)	-0.275*** (0.085)
Δlog(VAT_base)	1.185*** (0.228)	0.960*** (0.224)	1.211*** (0.225)★★★
Obs	56	56	56

*Standard errors in parentheses. The *-symbol refers to the p-value of the test that the coefficient equals 0, with * 0.1 p-value, ** 0.05 p-value, *** 0.01 p-value. Respectively, the ★symbol refers to the test that the elasticity equals 1.*

We also explore whether changes of the tax base, which occurs in 'good' and 'bad' times, affect differently tax revenues. We define 'good' times as the periods when the tax revenues are above their long-run equilibrium and consequently, 'bad' times as those when the tax revenues are below. As significant asymmetries in the adjustments speeds are not found, we report only results on asymmetric tax elasticities in Table 2. The estimates denote larger tax elasticity as economy boosts – it is significant and exceeds one, whereas that for economic downturn is insignificant.

Our results are not in line with findings of other authors. Bettendorf and van Limbergen (2013), as well as Koester and Priesmeier (2012) find long-run elasticity to be below unity. Moreover, Bettendorf and van Limbergen (2013), and Wolswijk (2007) encounter clear evidence of asymmetric response of tax revenues to changes in their tax bases. Whereas, our estimates indicate that only economic upturns play an important role in tax collection. The discrepancies might result from different time series, which are used in these analyses. Firstly, this research is based on quarterly data instead of yearly ones. Although the sample contains almost 60 observations, the impact of at most two business cycles is captured in our data. Hence, a part of the short-run volatility might be ascribed to the long-run relationship and consequently, the negative impact of economic downturn is insignificant.

TABLE 2

Asymmetric VAT elasticities

	Short-run Relationship
Variable	
Error correction term	-0.461*** (0.122)
Δlog(VAT_base)$^{+}$	1.585*** (0.265)★★
Δlog(VAT_base)$^{-}$	-0.097 (0.361)★★★
Obs	55
Asymmetry of elasticity (p-value)	0.000

*Standard errors in parentheses. The *-symbol refers to the p-value of the test that the coefficient equals 0, with * 0.1 p-value, ** 0.05 p-value, *** 0.01 p-value. Respectively, the ★ symbol refers to the test that the elasticity equals 1.*

In the final step of our analysis, we examine the stability of the estimates by using rolling regression covering 32 observations. To receive the most comparable estimates for the entire period, we do not decide to include any additional deterministic variables e.g. inclusion of a structural break could lead to perfect collinearity with a constant for some periods.

The long-run elasticity violates significantly within the analysed period. Figure 7 shows a declining trend in it from the beginning of 2001. In addition, the elasticity reaches its lowest level (below unity) for the last periods, which cover also years in and after the crisis. The short-run elasticity seems to be more stable within the time (Figure 8). It fluctuates around one.

However, in the last period the elasticity remains below unity. Hence, one can conclude about the negative effect of the last crisis on the tax revenues.

FIGURE 7

Rolling regression of VAT long-run elasticity

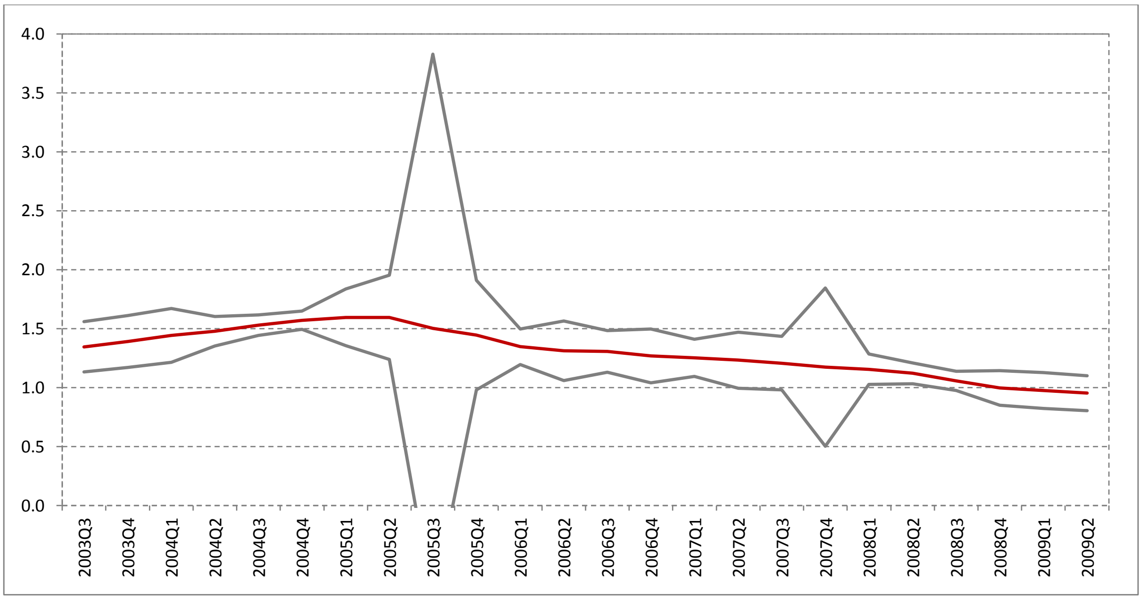
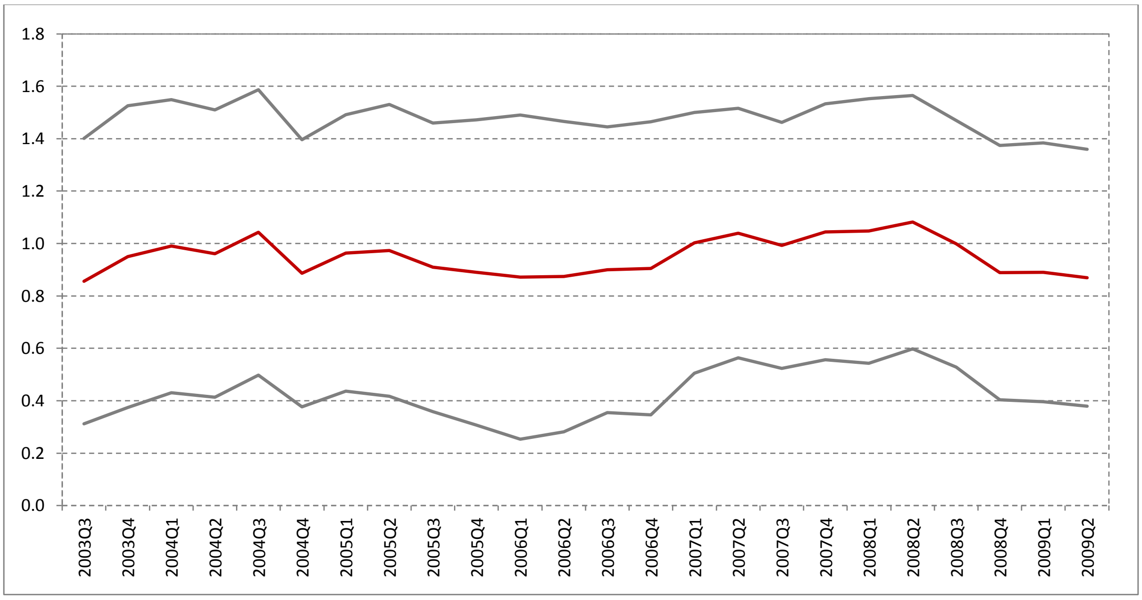


FIGURE 8

Rolling regression of VAT short-run elasticity



6.2 REVENUES FROM EMPLOYERS AND EMPLOYEES SOCIAL CONTRIBUTIONS

The final specification of our model contains only one deterministic component – a dummy variable for the last quarter of 2008. The inclusion of this dummy can be justified by the legislative changes concerning social contributions that took place in 2008, the effect of which is not fully addressed using the proportional adjustment method. We first show the results of the long-run and short-run elasticities in Table 3. Our benchmark estimations presented in column (2) imply that long-run elasticity is equal to 1.05 and is significantly different from 1. Additionally, the elasticity in a short run is 0.73 and assuming the statistical significance level equal to 0.1, it is below unity. The results obtained for two other estimators are similar – the long-run elasticity is greater than one, whereas there is no evidence of short-run elasticity being below or above one. The adjustment speed is pretty high (0.84) and reflects that revenues adjust very quickly to deviations from the long-run equilibrium. Last but not least, the social contributions are characterized by higher speed of adjustment in comparison to VAT revenues.

TABLE 3

Social contributions elasticities

	Long-run Relationship		
Variable	**(1) OLS**	**(2) DOLS**	**(3) FM-OLS**
Constant	-1.656*** (0.159)	-1.619*** (0.166)	-1.671*** (0.173)
Log(compensation)	1.048*** (0.014)★★★	1.045*** (0.014)★★★	1.049*** (0.015)★★★
2008Q4	0.104*** (0.005)	0.118*** (0.014)	0.091*** (0.027)
Obs	56	56	56
	Short-run Relationship		
Variable	**OLS**	**DOLS**	**FM-OLS**
Error correction term	-0.796*** (0,1333)	-0.837*** (0.143)	-0.796*** (0.134)
Δlog(compensation)	0.752*** (0.162)	0.728*** (0.160)★	0.737*** (0.162)
Obs	56	56	56

*Standard errors in parentheses. The *-symbol refers to the p-value of the test that the coefficient equals 0, with * 0.1 p-value, ** 0.05 p-value, *** 0.01 p-value. Respectively, the ★symbol refers to the test that the elasticity equals 1.*

The next step of our analysis is to allow for asymmetric elasticities in the short run (Table 4). The outcomes suggest that the elasticity to the compensation of employees in 'good' times is significant and insignificantly different from unity, whereas in 'bad' times it is equal to zero.

TABLE 4

Asymmetric social contributions elasticities

Short-run Relationship	
Variable	
Error correction term	-0.952*** (0.149)
Δlog(compensation)+	1.065*** (0.221)
Δlog(compensation)-	0.374 (0.228)***
Obs	55
Asymmetry of elasticity (p-value)	0.036

*Standard errors in parentheses. The *-symbol refers to the p-value of the test that the coefficient equals 0, with * 0.1 p-value, ** 0.05 p-value, *** 0.01 p-value. Respectively, the *symbol refers to the test that the elasticity equals 1.*

To complement our sensitivity analysis, we investigate the stability of our estimates. Figure 9 shows no clear trend in the long-run elasticity. Figure 10 indicates some instability at the beginning of the study period. However, the short-run elasticity does not vary significantly from the beginning of 2001.

FIGURE 9

Rolling regression of social contributions long-run elasticity

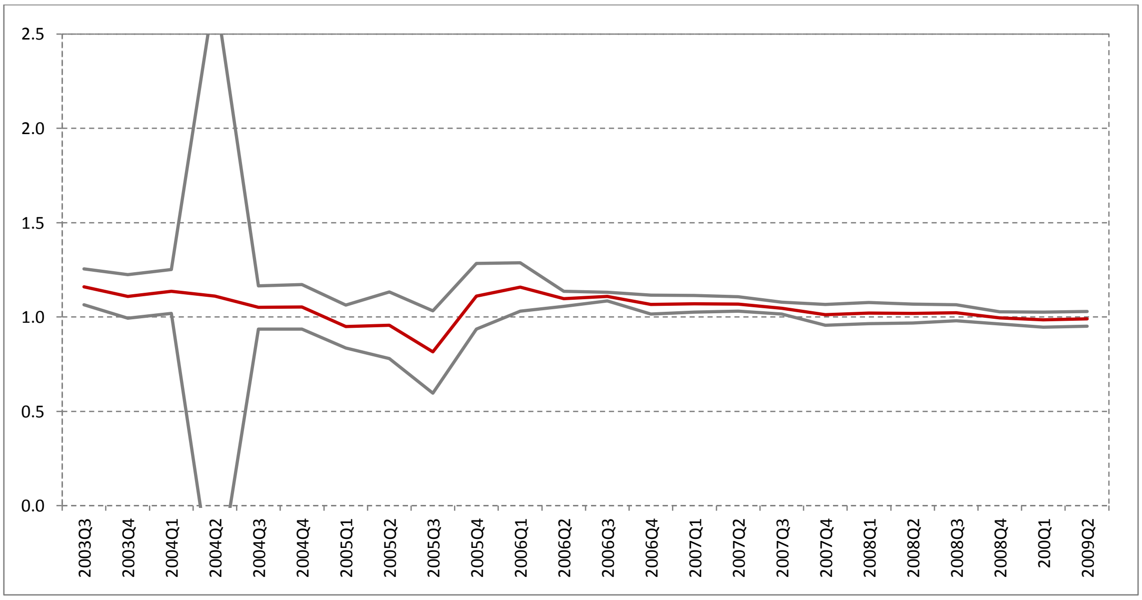
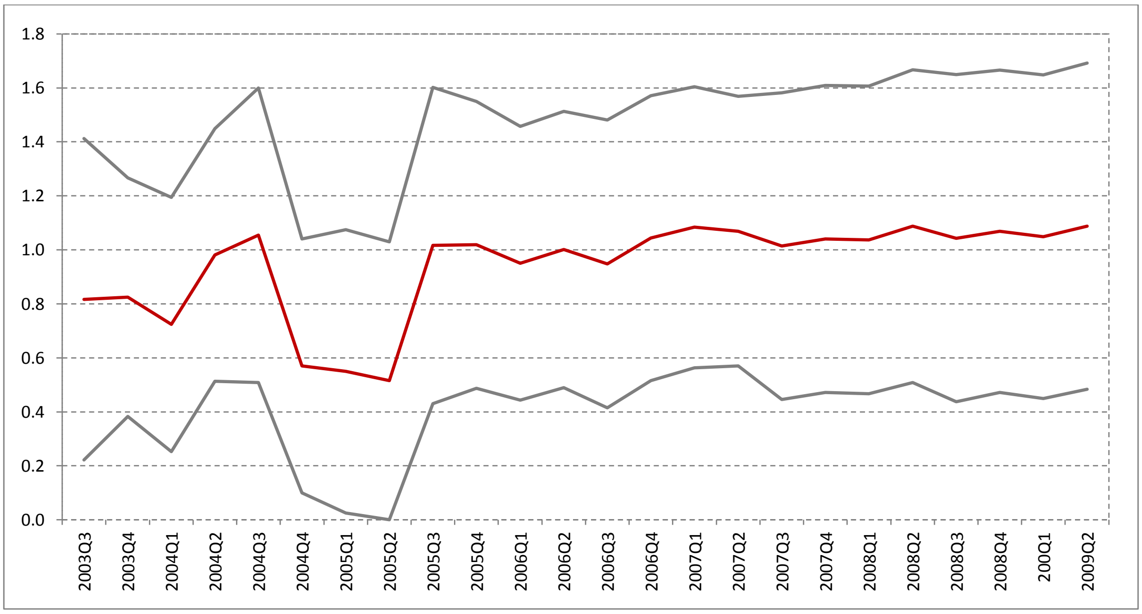


FIGURE 10

Rolling regression of social contributions short-run elasticity



7 CONCLUSIONS

In the paper we estimate short- and long-run tax elasticities in Poland. We focus on two large tax categories which together account for more than half of general government revenue, namely VAT and social contributions. These two sources of revenue are also representative for the shift of tax burden away from labour towards consumption which took place in Poland and in many other countries. We have found both revenue sources to have long-term elasticities close to unity which is consistent with what is assumed in the literature for these types of taxes, as well as with their design.

In case of social contributions, short-term elasticities were lower than 1 and lower than the long-term elasticity. Meanwhile, for VAT receipts, short-term elasticities in some of the specifications were higher than 1 which would indicate that in the short run VAT revenue tends to fluctuate more than the tax base.

We have examined the asymmetry of short-term elasticities, but results were not fully conclusive. In case of VAT, the asymmetry is somewhat more visible, as in case of receipts above the equilibrium value (in 'good times'), the short-run elasticity is statistically significant and clearly higher than 1, i.e. the long-run elasticity, amounting to 1.5. This difference is also statistically significant. For social contributions, the elasticity value for revenue above the long-run equilibrium is also significant, but it is not significantly different from the long-run elasticity. In both cases, we were not able to establish a statistically significant elasticity value for revenues below the long-run equilibrium ('bad times').

We have also examined the variability of elasticities over time using rolling regressions. The long-run elasticity of social contributions is quite stable and very close to 1 for most of the analysed period. The picture is quite different for VAT receipts, where in the period before the global economic crisis, the long-run elasticity reached levels exceeding 1.5. This was a period of very strong growth of the Polish economy which may have been associated with an increase in the share of transactions covered by VAT reporting, as opposed to those in the shadow economy. However, afterwards the long-run elasticity declined to 1, implying that these positive developments have ended with the onset of the crisis.

Our results need to be interpreted with caution, as the difference in results obtained for VAT and social contribution elasticities are relatively small. There is clearly an issue of a short data sample. Other studies of tax elasticities are usually based on annual data of at least 30 years, which was not an option for us. In order to ensure a sufficient number of observations, we have used quarterly data, but there is still a problem of few business cycles in the sample.

Overall, we have found VAT elasticities to be more volatile than those of social contributions. This result is in line with our expectations and the existing literature. In case of VAT, the potential for revenues to diverge from the underlying tax bases is quite considerable. Such effects may for example arise from changes in the structure of consumption. When agents reduce their consumption during an economic downturn, they are likely to limit their consumption of luxury goods, usually taxed with the maximum VAT rate, to a greater extent than the consumption of basic goods, such as food, which are often taxed with reduced rates. Another effect which is well-established in the literature is the impact of asset prices on tax receipts. This phenomenon is more likely to appear in VAT receipts than in social contributions. Finally, VAT is a more complex tax, with numerous reduced rates and deductions. This may be exploited in the form of tax abuse which is likely to have a procyclical pattern and additionally increase fluctuations of receipts.

These results have an implication for tax reforms which is often overlooked. Many countries have introduced reforms shifting the tax burden from labour to consumption, particularly since such policies are considered beneficial for employment. While taxation of consumption has been shown to be less detrimental to growth, policymakers also need to be aware of the likely increase in revenue volatility associated with such a shift and incorporate this factor in their budgetary plans.

APPENDIX

TABLE A1

Augmented Dickey-Fuller tests for variables (levels and first differences)

Variable name	Intercept	Intercept with trend	First difference
Social contributions revenues	0.351	-2.646	-10.710***
Social contributions base	0.701	-1.523	-2.655*
VAT revenues	-0.816	-1.431	-3.177**
VAT base	0.151	-1.166	-5.638***
VAT broad base	0.171	-2.466	-4.812***

Number of lags chosen on the basis of BIC criterion.

, **, * -- significant at 10%, 5% and 1% level respectively.*

TABLE A2

Modified Dickey-Fuller test proposed by Elliott, Rothenberg and Stock for variables (levels and first differences)

Variable name	Intercept	Intercept with trend	First difference
Social contributions – revenues	1.787	-2.597	-1.128
Social contributions – base	1.031	-1.851	-1.103
VAT revenues	0.327	-1.543	-2.093***
VAT base	0.874	-1.571	-5.026***
VAT broad base	0.850	-2.206	-2.703***

Number of lags chosen on the basis of BIC criterion.

, **, * -- significant at 10%, 5% and 1% level respectively.*

To complement our analysis, Perron's unit root test under a structural break for VAT revenues is computed (Perron, 1989, Perron and Vogeslang, 1993). The test's results are in line with those presented for traditional ADF test and DF-GLS test.

TABLE A3

Augmented Dickey-Fuller test on residuals from long-term DOLS equation

Variable name	No Intercept	Intercept
Social contributions revenues	-5.386***	-5.318***
VAT revenues	-4.372***	-4.764***

Number of lags chosen on the basis of BIC criterion.

, **, * -- significant at 10%, 5% and 1% level respectively.*

Additionally, Johansen's procedure of cointegration with a structural break is used for VAT revenues (Johansen, Mosconi and Nielsen, 2000). The results denote an existence of one cointegration vector.

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EXCISE DUTIES IN POLAND AFTER ACCESSION TO THE EUROPEAN UNION: CHANGES, IMPACT ON REVENUE AND PROSPECTS FOR THE FUTURE

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JEL CLASSIFICATION: H20, H30

ABSTRACT

The purpose of this article is to identify changes which occurred in terms of excise duties in Poland after the accession to the European Union as well as to examine how they impacted on the revenue from these duties in the discussed country. An analysis of literature and a review of legal documents revealed that the harmonization was involved in the adoption of new trade procedures in Poland. Moreover, it was indicated that Poland after the accession still collected excise duty on non-harmonized products, e.g., passenger cars. However, the need to comply with the European Union law caused a rise in the rates of tobacco products and fuels, which in turn resulted in the increase of those products prices. In addition, the analysis of Polish government revenue showed that in the first year after the accession the nominal revenue from excise duties was higher by 10.4% as compared to the previous year.

Keywords: excise duties, Polish tax system, tax harmonization, European Union

1 INTRODUCTION

Excise duty, along with value added tax, belongs to the group of indirect taxes in Poland. They play a much more important role in Poland than direct taxes – 14.5% of GDP compared to 8.7% in 2007 (European Commission, 2009:203). Indirect taxes amounted to 72.8% of total tax revenue in 2012. The biggest share in total tax revenue had such indirect taxes as VAT and excise duties which amounted to 47.3% and 25.0%, respectively. Unlike value added tax, which is charged on almost all goods and services, excise duty concerns only the turnover of some specific products which a given country's legislator recognizes as excise goods and subjects them to a special tax regime (Mirek, 2011:3). It is imposed on products regarded as luxury ones, which are distinguished by the fact that the demand on them does not decline while their price grows, and on goods whose consumption the state wants to limit due to social reason. Through the imposition of excise duties which restrain the consumption of products recognized as unhealthy public health objectives can be achieved (Cnossen, 2005:5).

Unlike direct taxes, indirect taxes are subject to the European Union's (EU) harmonization. It is based on Article 93 of the Treaty on EU, according to which the Council of the EU may "adopt provisions for the harmonization of legislation concerning turnover taxes (VAT), excise duties and other forms of indirect taxations". This harmonization is not only one of the most significant, but also the most difficult areas of the integration process carried out within the EU.

Excise duty harmonization consists in, i.e., defining product categories which are subject to excise duties, eliminating control on borders between the EU member states, setting the scope of possible tax exemptions, defining minimum excise duty rates and implementing laws concerning production as well as storage of excise goods. The harmonization aims at providing free movement of excise goods in the European internal single market (Tyc, 2008:87). Excise duty harmonization, like value added tax harmonization, was determined by introducing the EU single market on 1 January 1993. The whole revenue from this tax goes to a state budget (European Commision, 2006:5).

Directives issued by the Council of the EU are the main instruments of tax law harmonization. Council directive 2008/118/EC of 16 December 2008 concerning the general arrangements for excise duty is the most significant act of the EU law regulating excise duty. It sets, i.e. the rules of keeping tax warehouses. Apart from the horizontal directive, which defines the foundations of the EU's excise system, there are also structural directives and directives setting tax rates. Structural directives specify products which are subject to excise duty, and directives on tax rates, in turn, define minimum rates of the tax on harmonized excise goods (Lenartova, 2012:3).

Excise duty harmonization, like in case of VAT, was a long-lasting process. Excise standardization was a difficult problem to solve because taxes binding in particular countries were imposed on different products and they differed in collection techniques and tax rates (Smiechowicz, 2003:1). What is more, excise rates not only depended on economic factors, but they also resulted from tradition, consumer habits and environmental aspects (Tyc, 2008:91). That is why, in accordance with the Founding Treaties of the EU, tax issues were regulated carefully in order not to limit state authorities' fiscal competence, which is one of the key ones for each country (Golasa, 2009:165).

At present excise duty harmonization concerns only three groups of goods: manufactured tobacco, alcoholic beverages and energy products. Taxation on other excise goods lies in the hands of a state. The possibility to impose excise duties on other goods was left to a state in order to avoid high inflation in the EU member states. The loss of tax revenue resulting from the lack of the capability to collect excise would have probably driven the majority of the member states to raise VAT rates, which, in turn, would have led to inflation increase (Moussis, 2011:271).

2 CHANGES IN POLISH EXCISE DUTY AFTER THE ACCESSION TO THE EUROPEAN UNION

Excise duty was introduced in Poland on 5 July 1993 and it was regulated by the Act of 8 January 1993 on goods and services and on excise duty. After Poland's accession to the EU in 2004, which was connected with the necessity to adjust the country's law to the EU law, the act was replaced with the Act of 1 January 2004 on excise duty.

The new law significantly changed excise duty operation in Poland. First of all, Poland, as the EU member, had to conform to the excise duty rules binding in the EU. One of the overriding rules of this system is the destination principle according to which excise goods should be taxed in the country of their final consumption. A special tax regime, suspension of duty in tax warehouses, was implemented to make the realization of the destination principle and free movement of goods between states possible (Lenartova, 2012:3-4). Thus, Poland's accession to the EU involved the need for creating tax warehouses. They are places where natural and legal persons authorized by a member state's competent authorities are permitted to produce, process, store, receive or dispatch products, as part of business activity, in accordance with the requirements defined by this state, and excise duty is suspended in those places and it is not due (Directive of 16 Dec 2006, Article 4, paragraph 1). It meant a resignation from the rule, functioning in Poland previously, according to which tax was paid when the goods were leaving a production facility or crossing a border while being imported. The introduction of tax warehouses enabled producing and transferring goods between different warehouses without the obligation to pay excise duty, i.e., under suspension of duty, and the duty becomes due, as it was stated before, when the goods are released for consumption.

Production, processing and storage of excise goods on which excise duty has not been paid may be carried out exclusively in tax warehouses (Directive of 16 Dec 2006, Article 11, paragraph 2). This is a mandatory principle, which means that any production of excise goods outside a tax warehouse or possession of excise goods on which excise duty has not been paid is illegal. Thus, it raises doubts if it is possible to impose duty on a producer (possessor) who illegally produces (possesses) excise goods on which excise duty has not been paid. This would mean taxation of illegal activities. However, the Court of Justice case law shows that it is possible. The Court of Justice answered affirmatively to the Supreme Court of the Netherlands query if illegal distillation of gin, outside a tax warehouse, causes a release for consumption and the necessity to impose excise duty on a producer. The Court of Justice ruled that the production and turnover of alcohol may, after fulfilling certain requirements, become legal. Failure to fulfil these requirements must not justify the exclusion of taxation because this would be an unjustified privilege of illegal behaviours (the Court of Justice ruling of 5 April 2001). The decisions of the Court of Justice of the EU are considered as a specific instrument of tax system convergence in the EU (Siroky and Kovarova, 2010:2).

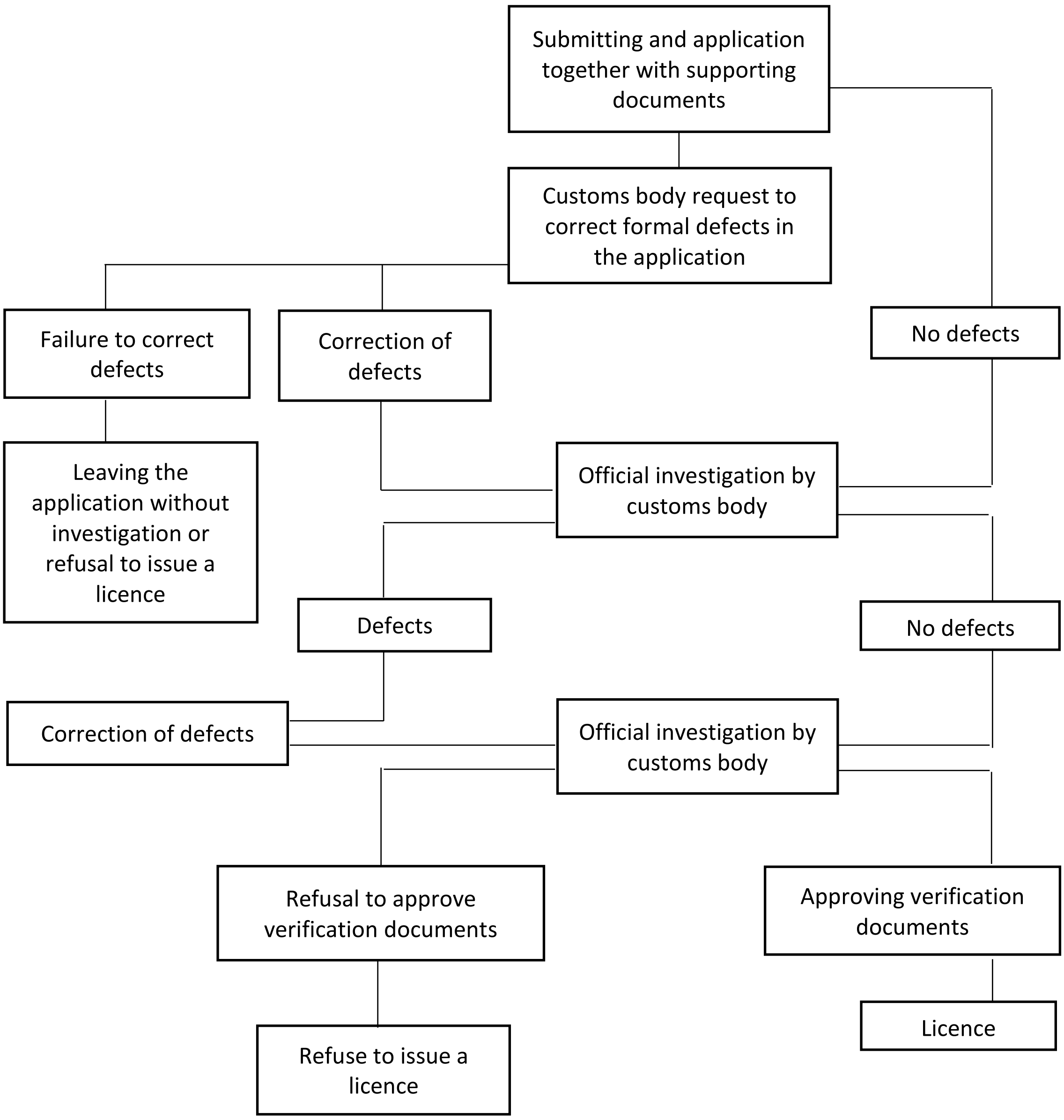
Tax warehouses may be also kept by private companies and function based on commercial rules, but they have to fulfil requirements which are to be defined by competent authorities of a member state. In Poland, submitting an application for a licence to run a tax warehouse is required (see figure 1). The application has a form defined by Minister of Finance. A licence is issued by a competent head of customs office. After the tax warehouse licence is issued, a tax registration number is granted and registered in the international system SEED.

Running a tax warehouse is also connected with an obligation to pay a deposit for excise duty by this warehouse owner. The deposit is to guarantee the cover of an existing or potentially existing excise duty obligation. This deposit is binding in the whole territory of the EU (Act of 1

January 2004, Article 67, paragraph 2). In the event of any irregularity during transfer of excise goods between member states, competent tax authorities will be able to collect excise duty where the irregularity has been committed or found. The level of deposit is set by particular member states (Lenartova, 2012:4).

FIGURE 1

The procedure of issuing a licence to run a tax warehouse in Poland



Source: the author's own work based on (Lis and Jedynak, 2013:12).

Polish legislation provides for five forms of deposits for excise duty: cash deposit, bank or insurance guarantee, cheque certified by a legal person with its registered office in the territory of the EU or EFTA member state, promissory note, or another non-cash payment instrument (Act of 1 January 2004, Article 67). The amount of this deposit is defined by a competent head of customs office at the level of tax obligation if this amount may be precisely calculated at the moment of accepting the deposit, or at an estimated maximum level resulting from the tax obligation (Act of 1 January 2004, Article 43, paragraph 1). The deposit should cover the whole amount of the suspended tax obligation.

The EU legal provisions do not prohibit Poland to levy excise duty on specific products. The accession to the EU did not cause resignation from collecting excise duty on such goods as, i.e., salt, cars, or certain cosmetics. The EU law allows on taxation of other products than those harmonized within the EU and the rules of taxation lie in the hands of a member state (Schroer-Schallenberg, 2012:10). The list of excise duty goods in Poland is much longer than the one imposed by the EU. 45 products are recognized as excise goods in Poland at present. The accession to the EU required, however, adjusting the law concerning three categories of harmonized products: manufactured tobacco, alcoholic beverages and energy products. The most important changes were connected with excise duty rates (see table 1). According to the EU directives, the member states are obliged to apply at least minimum rates defined in these directives. The member states may, however, set and apply higher excise duty rates based on their own fiscal policy. Polish legislator fulfilled this requirement by adopting an act that provides for higher rates than the minimum EU rates on particular excise goods. Cigarettes, for which a transitional period was applied, are an exception.

Excise duty may be a specific duty – per unit of a product or *ad valorem* duty – calculated as a certain percentage of retail selling price, or some combination of these rates. Uniform specific rates reduce price differences between high-priced and low-priced brands, whereas uniform *ad valorem* rates increase absolute price differences (Cnossen, 2005:6).

In table 1 it is notable that after the accession to the EU, certain excise rates were increased, and other – decreased. Among other things, excise duty on beer was lowered. It resulted from the fact that before the accession to the EU, Poland had one of the highest excise duty rate on this product in comparison to its neighbours. Due to the accession to the EU and making free movement of goods between member states possible, the government had to reduce this rate – Poland needed to compete with breweries, i.e., from the Czech Republic and Germany, where excise rates on beer were much lower. Keeping very high excise rates would have decreased Polish breweries' competitiveness and the inflow of cheaper beer from abroad would have contributed to lowering budget revenue because the Polish consumer would have paid the tax abroad. Thus, reduction of this rate was necessary to maintain a stable situation in the beer market in Poland, which, in turn, provided a stable source of tax revenue to the state budget. This decision appeared to be right as the reduced excise rate on beer along with low labour costs resulted in the increase of beer production in Poland by half in the first year of the EU membership as compared to the year 2003.

TABLE 1

Excise duty rates of selected harmonized excise goods in Poland

Items	**Before accession**				**After accession**			
	Unit of measurement	**2002**	**2003**		**Unit of measurement**	**2004**	**2005**	**2014**
Beer	EUR per hl/degree Plato of finished product	1.68	1.68	EU	EUR per hl/degree Plato of finished product	0.748		
				PL		1.50	1.57	1.84
Cigarettes	% of TIRSP and EUR/1000 it.	25 and 11.04	25 and 12.10	EU	% of TIRSP and EUR/1000 it.	57 and 60		60 and 90
				PL		26.39 and 14.00	28.48 and 15.66	31.41 and 48.87
Unleaded petrol	EUR per 1000 liters	313.62	320.03	EU	EUR per 1000 liters	359.00		
				PL		320.28	377.00	394.53-455.28

Source: the author's own work based on (Smiechowicz, 2005:188).

TABLE 2

Minimum excise duty rates on cigarettes

Minimum excise duty	**Unit of measurement**	**2004**	**2005**	**Unit of measurement**	**2004**
EU	% of TIRSP and EUR/1000 it.	57 and 64	57 and 64	% of WAP and EUR/1000 it.	60 and 90
PL		28.15 and 53.06	29.66 and 54.27		66.31 and 92.86

Source: the author's own work based on (Smiechowicz, 2005:187-189).

To avoid a sharp increase in excise duty on cigarettes, Poland was granted the right to utilize a transitional period as regards the application of minimum excise rate. That is the reason why in the first years of Poland's membership the minimum excise duty on cigarettes in Poland was lower than rates applied in the EU (see table 2). Although Poland could have used the lower rate until the end of 2017, it reached the minimum in 2014, which is believed to be too fast as it caused a very high increase of this product price in discussed country.

3 THE ANALYSIS OF THE INFLUENCE OF EXCISE DUTY CHANGES ON THE STATE BUDGET REVENUE

The work on the 2004 state budget was especially important because it had to include changes in external and internal conditions of public finance sector, which resulted from Poland's accession to the EU (Supreme Audit Office, 2005:50). As part of adjusting Polish law to the EU requirements, a series of changes in the tax system, in particular in indirect taxes, were implemented. Although the changes were considered during budget planning, there were significant differences between the forecast and delivery of revenue from indirect taxes. Excise duty, which is a crucial source of budget revenue in Poland (see table 3), was 9.4% higher than planned.

TABLE 3

Excise duty revenue in Poland after accession to the EU

Items	2003	2004	2005	2006
Excise duty revenue (mln PLN)	34,387.7	37,964.0	39,479.1	42,078.0
Year-on-year change (%)	9.2	10.4	4.0	6.6
Excise duty revenue to total revenue ratio (%)	22.6	24.3	22.0	21.3

Source: the author's own work based on (Supreme Audit Office, 2004, p. 48-49; Supreme Audit Office, 2005, p. 78-79; Supreme Audit Office, 2006, p. 49-50; Supreme Audit Office, 2007, p. 48).

As it is shown in table 3, in the analysed period, the ratio of excise duty revenue to total revenue was over 21%. Excise duty is the second most significant source, after VAT, of state budget revenue. In 2004, i.e., in the first year of Poland's membership in the EU, excise duty income was 10.4% higher as compared to the previous year, and amounted to PLN 37,964.0 million. Its ratio to total income increased from 22.6% in 2003 to 24.3% in 2004. The ratio of excise duty income to GDP increased in 2004 by 0.1 percentage point and amounted to 4.3%. Greater revenue was caused not only by the increase of excise rates on harmonized goods in the EU (see also table 1), but also by introducing the system of tax warehouses, which contributed to reducing the shadow economy. Higher income from excise duty on cars also significantly influenced this revenue. It was caused by intensified purchases of new cars from the EU states made before 1 May 2004 in fear that after Poland's accession to the EU, car prices would rise. The inflow of second-hand cars after Poland's accession to the EU was another reason – from May to December 2004, 812,000 cars were purchased (Supreme Audit Office, 2005:80). In the following years excise income was higher by 4-7% year-on-year, and its ratio to total revenue amounted to more than 21% each year.

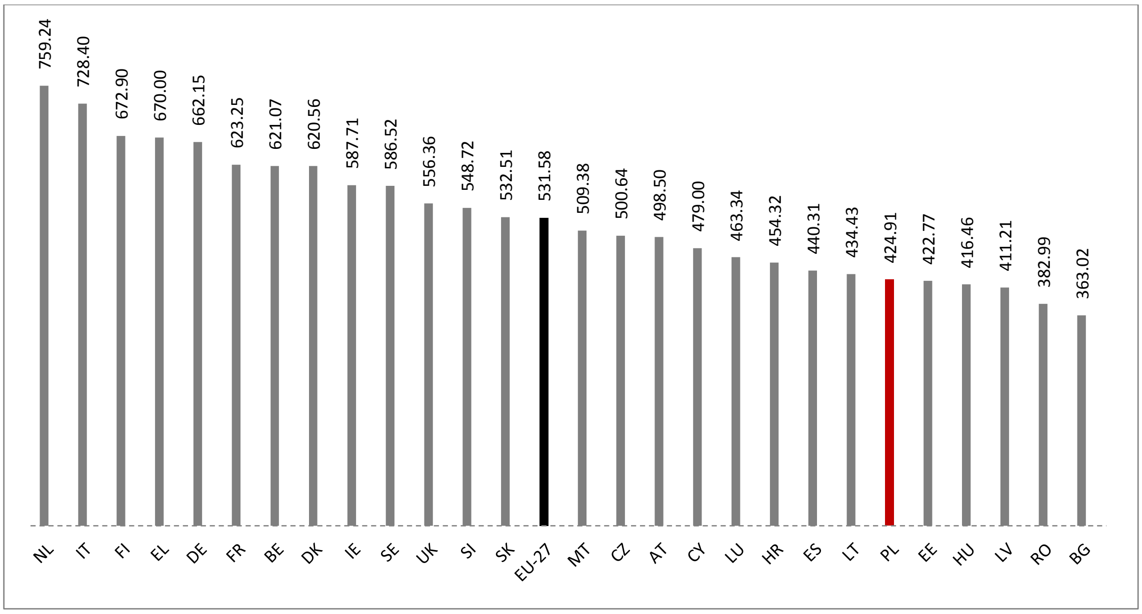
4 EXCISE DUTY LEVEL IN POLAND AGAINST SELECTED EU MEMBER STATES

As it was stated above, excise duty rates differ depending on a member state (see graph 1 and graph 2). It results from the fact that the EU law defines only minimum excise rates, and each member state, due to the lack of maximum rates, may set them at any level exceeding minimum rates.

Such differences in rates cause, however, discrepancies in the competitiveness of particular countries as regards excise goods, and thus, the main aim of excise duty harmonization is delivered less and less effectively. Significant differences in excise rates on a given product may result in product movement due to tax reasons, and in loss of income or abuses. The mode of setting excise rates is another problem. Minimum rates are set in amount and that is why their real value is constantly decreasing due to inflation. Minimal excise rates are not indexed. Minimum excise rate on cigarettes is an exception as it was risen.

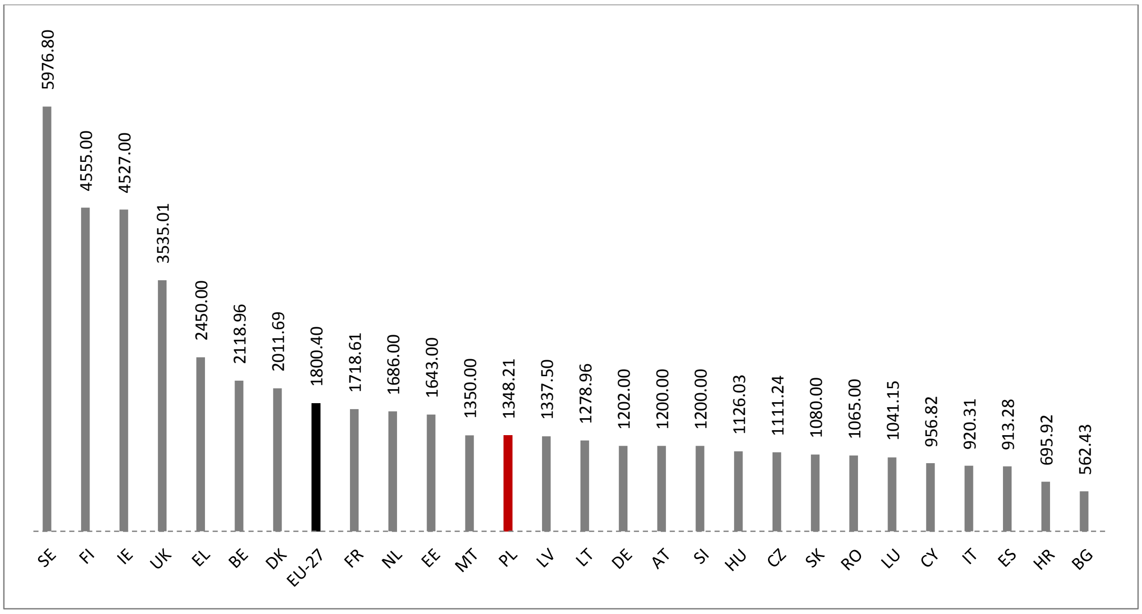
GRAPH 1

Excise duty rates on unleaded petrol in Poland against the other EU member states in 2014



GRAPH 2

Excise duty rates on ethyl alcohol in Poland against the other EU member states in 2014



Source: the author own work based on (European Commission, 2014).

As graph 1 reveals, excise duty rates differ from each other depending on a member state. In case of unleaded petrol, this difference is at the level of 109%, and in case of ethyl alcohol, it is bigger and amounts to as much as 963%. Tax rates in Poland are in most cases under the EU average. Excise on unleaded petrol in Poland is one of the lowest among the member states. In 2014 excise rate on this product in Poland amounts to EUR 394.55 – EUR 455.28 while an average for all the EU states amounts to EUR 531.58%. The excise duty on ethyl alcohol in Poland is also below the EU average.

Although Poland applies one of the lowest excise rates on unleaded petrol, prices of this product in Poland have risen by 150% during 10 years of the EU membership. Poland's accession to the EU caused also the increase of the prices of alcoholic beverages and cigarettes.

5 CONCLUSION

Poland's accession to the EU was associated with the need to adapt Polish tax law to the legal requirements being in force in the EU. Although in the sphere of income taxes, Poland, as a member state, kept freedom in shaping tax law, in case of indirect taxes the country was obliged to implement regulations based on the EU directives. This caused significant changes in excise duty law. The changes covered not only excise rates of harmonized products, i.e., alcoholic beverages, energy products and manufactured tobacco; new institutions dealing with excise goods turnover also appeared and new excise turnover principles were introduced.

It has been proved that in the first year of membership, the state budget revenue from excise duty was 10.4% higher as compared to the previous year, and the ratio of excise duty to total revenue in the analysed period amounted to over 21%, which placed excise revenue second among the most important state budget revenues.

The level of minimum excise duty rates is varied and it depends on the category of a product. The analysis done allows to claim that Poland's accession to the EU resulted in reducing excise rate on beer and increasing rates on, i.e., unleaded petrol and cigarettes, which caused the rise of their prices. The comparison of Polish excise rates with the rates in selected EU states reveals that in case of the most products, Polish excise rates are similar to the European average. It has been pointed out that differences in excise rates among particular member states distort competition conditions in the European market. Excise duty requires taking further steps towards reducing the differences in the rates in particular countries because at present, although this tax is harmonized, it contributes to competition distortion in the European single market.

It has been proved that the most significant changes in the nearest future may be expected in case of excise duty on cigarettes. This results from the fact that the increasing consumption of other tobacco products, e.g. e-cigarettes, may cause the decline in the revenue from excise duty on this product.

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Evolution of tax systems in euro area crisis countries and former transition economies that are now members of the EU

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Abstract

This paper addresses changes in the tax structure of crisis countries and former transition economies that are now members of the European Union. Paper looks at taxation trends in these countries and how their tax systems are likely to evolve going forward. Paper offers several suggestions for policy how tax structure can be changed to promote investment.

Paper also discusses how the tax policy in Croatia should evolve considering its planned adoption of the Euro. This paper finds there is an increasing trend of the average share of indirect taxes to GDP among crisis and transition economies, but that trend will only remain for crisis countries in the next three years.

Keywords: tax policy, EU crisis countries, transition economies, tax trends, tax system evolution

1 Introduction

Tax systems in euro area crisis countries have undergone dramatic changes in the last several years. After the financial crisis in 2008, those countries have been pushed into serious recession, from which many are yet to fully recover. As GDP went down, governments found themselves with lover tax revenues and large budget deficits. Fiscal policy remains constrained by The Stability and Growth Pact. Because of that, governments resorted to increasing tax rates and introducing new taxes to increase their tax revenue. Tax systems in euro area crisis countries look different today than they did before. Free movement of goods, services and capital within the European Union has created additional challenges for policymakers when designing tax systems. Additionally, increasing globalization, competition, demographic changes, the need to encourage entrepreneurship and to increase productivity should also be taken into consideration.

Total tax revenue largely reflects social preferences. However, there has been some considerable change in overall tax-to-GDP ratio for euro area crisis countries and former transition economies that are now members of the European Union. In crisis countries of the euro area, some of changes to tax systems were involuntary, as tax revenue fell faster from some sources than others.

Transition economies are generally defined as economies which are undergoing a structural change in how they allocate resources, from centrally planned economy to a free market oriented economy. Some former transition economies are now part of the EU and may have to change their tax systems to compete in a single market.

2 METHODOLOGY

This paper categorizes two groups of countries that are included in the analysis. This paper defines euro area crisis countries as countries in which the financial crisis and its aftermath were felt the worst. Those counties include Greece, Ireland, Italy, Portugal and Spain. The other group of countries is compromised of former transition economies that are now members of the EU. Those are Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

Methodology used in this paper is ESA 95 methodology. According to Eurostat (2013) indirect taxes are calculated as a sum of the following ESA 95 tax categories: VAT (D.211), excise duties and consumption taxes (D.214A + D.2122C), other taxes on products including import duties (taxes and duties on imports excluding VAT, D.212, excluding excise duties, D.2122C, taxes on products, except VAT and import duties, D.214, excluding excise duties, D.214A and other taxes on production (D.29). Direct taxes are defined as a sum of personal income tax (D.51A + D.51C1), corporate income tax (D.51B + D.51C29 and other income and capital taxes (D.51C3 + D.51D + D.51E + D.59 + D.91)(Eurostat, 2013).

All data (from 2002 to 2012) on taxes are from Eurostat (gov_a_tax_ag) and generally presented as a percentage of GDP, unless noted otherwise. This paper looks at how structure of direct and indirect taxes shifted in selected countries. Paper defined indirect to direct tax ratio as total indirect taxes divided by total direct taxes. Ratio of one represents that country's tax systems has an equal weight of indirect and direct taxes.

Using ARMA model analysis paper estimates parameters of average contribution of indirect taxes as a share of GDP for crisis countries and transition economies. The error terms are assumed to be independent identically distributed random variables sampled from a normal distribution with zero mean.

$$X_t = c + \varepsilon_t + \sum_{i=1}^{p} \varphi_i X_{t-i} + \sum_{i=1}^{q} \theta_i \varepsilon_{t-i}.$$

ε_t ~ N $(0,\sigma^2)$

3 EVOLUTION OF TAX SYSTEMS IN EURO ZONE CRISIS COUNTRIES

Tax revenues stabilized as a proportion of GDP in 2010, after a three-year decline (Wahrig, 2012). Overall tax-to-GDP ratio (including social contributions) in 2012 was the lowest in Ireland at 30.2% and the highest in Italy at 44.3%. For the eighteen countries in the euro area average was 41.7%. Since 2007 it fell in Ireland, Spain and Portugal, and rose modestly in Greece and Italy. Average for eighteen euro area countries in 2012 was 41.7% and 35.9% for crisis countries.

Average taxes on products and imports as a share of GDP in the eighteen euro area countries in 2012 were 13.3%. In the same year average taxes on products and imports as a share of GDP in five crisis countries were at 12.8%. Lowest taxes were in Spain at 10.7% which were down from 12.8% in 2006, and highest were in Italy at 15.2% in 2012, up from 14% in 2008.

Highest taxes on products as a share of GDP in 2012 were in Portugal at 12.9% and lowest in Spain at 8.8%. Those were down from 14.4% in 2006 for Portugal and 11.7% for Spain. Average taxes on products for crisis countries in 2012 were at 10.9%, the same as the eighteen euro area countries.

Highest VAT as a share of GDP in 2012 was in Portugal at 8.5% and lowest in Italy at 6.1%. Average for crisis countries in 2012 was 6.9%, slightly lower than 6.9% for eighteen euro area countries. Only Portugal has the same share of VAT as a percentage of GDP in 2012 as it did in 2007, while other crisis countries had lower contribution of VAT.

There is a declining trend in the VAT Gap, defined as the difference between the theoretical VAT liability and the collections of VAT in any country and in any year, prior to 2008, but as some Member States raised VAT post-2008, VAT Gaps have since increased and amount to Euro 193 billion, or 1.5 percent of the GDP of the EU-26 (European Commission, 2013).

Highest taxes on income as a share of GDP in 2012 were in Italy at 14.6% and the lowest in Greece at 8.2%. In Greece and Italy share of taxes on income to GDP in 2012 returned to or increased from levels in 2006, while Italy, Portugal and Spain had lower ratios. Average taxes on income were lower in crisis countries then in eighteen euro area countries in 2012.

Taxes on individual or household income including holding gains remain are higher in 2012 for all crisis countries then in 2008, highest were in Italy at 12.2% and the lowest in Portugal at 5.9% for 2012.

Taxes on income or profits of corporations including holding gains as a share of GDP in 2012 were lower in crisis countries than in 2007, highest were in Portugal and the lowest in Greece. Ireland with their 12.5% tax on corporate income had the same share of taxes on income or profits of corporations including holding gains in GDP as eighteen euro area countries who had higher rates on corporate income.

TABLE 1

Indirect taxes in euro area crisis countries as % of GDP

	2005	2006	2007	2008	2009	2010	2011	2012
Ireland	13.4	13.9	13.4	12.2	11.3	11.4	10.9	11.0
Greece	11.8	12.5	12.8	12.4	11.3	12.3	12.7	12.6
Spain	12.3	12.5	11.5	9.8	8.8	10.4	10.0	10.4
Italy	14.1	14.7	14.5	13.7	13.6	14.0	14.0	14.9
Portugal	14.5	14.8	14.5	14.1	12.8	13.4	13.7	13.7

Source: Author's calculation.

Looking at structure of revenues, highest indirect taxes as a percentage of GDP were in Italy at 14.9% in 2012. The lowest were in Spain at 10.4%. Ireland, Portugal and Spain have decreased contribution of indirect taxes to overall structure of revenues since 2005, while Italy and Greece have increased it. Average indirect taxes as a share of GDP for seventeen euro area countries in 2012 were 13%.

TABLE 2

Direct taxes in euro area crisis countries as % of GDP

	2005	2006	2007	2008	2009	2010	2011	2012
Ireland	12.3	13.2	12.8	11.6	10.9	10.6	12.3	13.1
Greece	8.6	8.0	8.1	8.1	8.4	7.9	8.6	10.0
Spain	11.5	12.3	13.5	11.0	10.1	10.0	10.1	10.6
Italy	13.2	14.2	15.0	15.2	15.4	14.7	14.7	15.2
Portugal	8.1	8.6	9.5	9.7	9.0	8.9	9.8	9.4

Source: Author's calculation.

Average direct taxes as a share of GDP for seventeen euro area countries in 2012 were 12.6%. Italy had the highest contribution of direct taxes in 2012 among crisis countries to its revenues and Portugal the least. All euro area crisis countries have increased their share of direct taxes in their tax structure since 2005 expect Spain. Ireland, Italy and Spain have higher dependency on direct taxes then indirect taxes as their source of revenues. Greece and Portugal relied more on indirect taxes in 2012.

Greece enacted several tax reforms designed to increase revenue as part of their effort to stabilize country's finances. Corporate income tax rate was raised to 26%, VAT to 23% and reduced rate to 13%, personal income tax system was reformed by removing personal allowances and curtailing many of the remaining tax credits (Eurostat, 2013). Ireland increased personal taxes on labor by widening of the social insurance tax base, introduced a new property tax, increased excise duties on alcohol and cigarettes and few other tax increase that have a small impact on raising additional revenue (Eurostat, 2013). Unlike Greece, Ireland did not increase corporate income tax and it remains at 12.5%.

These two different approaches to stabilizing country's finances where Greece increased corporate income taxes and Ireland did not may contribute to a problem of not having harmonized corporate income tax systems across euro area. This problem could lead to multi-speed Europe and would be able to undermine the internal market, economic, social and territorial cohesion of the European Union (Danko, 2012).

Tax systems could be reformed to promote economic growth by simplifying tax systems, eliminating tax exemptions and preferential treatment of some sectors of the economies in the corporate tax system and in the value added tax system. This could, combined with lowering rates, enhance competition and long-term growth prospects.

Crisis countries could improve labor market performance by lowering income taxes on the lower end of the scale. Lower income worker spend higher percentage of their income than higher income workers. This would increase aggregate demand and may also incentivize people who have left the labor force to get back in, thus increasing labor participation rate.

4 EVOLUTION OF TAX SYSTEMS OF FORMER TRANSITION ECONOMIES THAT ARE NOW MEMBERS OF THE EU

Overall tax-to-GDP ratio (including social contributions) in 2012 was the highest in Hungary at 39.3% and the lowest in Lithuania. Average overall tax-to-GDP ratio in former transition economies was 32.2% in 2012, lower than 40.7% for the 27 countries of the European Union.

Taxes on products and imports as a share of GDP in 2012 were the highest in Hungary at 18.5%, Croatia was the second at 18.2% and the lowest was Slovakia at 10.2%. Average taxes on products and imports as a share of GDP in former transition economies were in 1012 were 13.9%, slightly higher than 13.6% for the 27 countries of the EU. Czech Republic, Estonia, Hungary and Romania increased contribution of taxes on products and imports to GDP since 2007, while other countries have decreased it.

Average taxes on products as a share of GDP in 2012 for former transition economies were 13.1%, higher than 11.3% in the 27 countries of the EU. Among countries studied, highest taxes on products were in Croatia at 17.4% of its GDP, and the lowest were Slovakia at 9.2% in 2012. Some former transition economies that are now members of the EU like Croatia, Slovenia, Hungary, Bulgaria and Estonia remain highly dependent on taxes on products as a source of revenue. There is a large variance among transition economies in the taxes on products as a share of GDP.

Croatia’s VAT is the highest among transition economies and a share of GDP it is at 12.4% in 2012. The lowest VAT as a percentage of GDP is in Slovakia. Average for transition economies was 8.4% in 2012, higher than 7.1% which was for 27 countries of the EU. Former transition economies as a whole depend more on the VAT for revenue than advanced countries.

Income and wealth are taxes considerably lower in former transition economies then in advanced countries. Average taxes on income and wealth for 27 countries of the EU in 2012 were 13% as a share of GDP, more than double what former transition economies were getting at 6.5%. Highest taxes on income and wealth as a share of GDP in 2012 were in Latvia at 7.7% and the lowest in Lithuania. Former transition economies that are now members of the EU on average have lower incomes than advanced European economies that rely more on income taxes to generate revenue. That may be one of the reasons why former transition economies don’t depend on income and wealth taxes as much as developed countries.

Highest taxes on income among transition economies in 2012 were in Latvia at 7.3% of GDP and the lowest were in Lithuania at 4.8%. Lithuania reduced share of income taxes to GDP from 9.5% in 2006 to 4.8% in 2012. All studied former transition economies have lower share of income taxes to GDP in 2012 than they did in 2007, suggesting in part that weaker economy and therefore lower incomes were to blame for lower share of income taxes to GDP.

Average taxes on income as a share of GDP for former transition economies in 2012 were 6.2%, while in the same year they were 12% for 27 countries of the EU.

Average taxes on income or profits of corporations including holding gains as a share of GDP in 2012 among transition economies were 1.9%, which was lower than 2.5% that 27 countries of the EU had in the same year. Lowest were in Slovenia, Hungary and Lithuania at 1.3% of GDP and the highest were in Czech Republic at 3.3% in 2012. There is a trend of lowering corporate income taxes among transition economies since 2006 when average share of corporate income taxes to GDP was 2.7%. All former transition economies reduced their share of corporate income taxes to GDP since 2006. The biggest reduction was in Slovenia which reduced its corporate income taxes as a share of GDP by 1.7% since 2006 to 2012.

Looking at structure of revenues, highest indirect taxes as s percentage of GDP in 2012 were in Hungary at 18.3%, followed by Croatia at 18.2%. Lowest contributions of indirect taxes to structure of revenues in 2012 were in Slovakia at 10%. Average indirect taxes as a share of GDP for twenty-seven euro area countries in 2012 were 13.3%. Former transition economies that are now members of the EU rely more on indirect taxation.

TABLE 3

Indirect taxes in transition economies as % of GDP

	2007	2008	2009	2010	2011	2012
Bulgaria	16.7	17.4	15.1	14.8	14.5	15.1
Czech Republic	10.8	10.6	11.1	11.0	11.6	12.0
Estonia	13.1	12.0	14.5	13.8	13.7	13.9
Croatia	18.3	18.1	17.1	17.9	17.4	18.2
Latvia	12.2	10.8	10.7	11.2	11.3	11.6
Lithuania	11.6	11.3	11.4	11.7	11.5	11.0
Hungary	15.9	15.6	16.6	17.0	16.9	18.3
Poland	14.1	14.3	12.8	13.6	13.7	12.9
Romania	12.4	11.8	10.7	11.8	13.0	13.2
Slovenia	14.5	14.0	13.6	14.0	13.9	14.3
Slovakia	11.1	10.4	10.3	10.2	10.5	10.0

Source: Author's calculation.

Highest direct taxation as a share of GDP in 2012 was in Latvia and Slovenia at 7.7%. Lowest was in Lithuania. All transition economies reduced their share of direct taxes to GDP since 2007. That trend is likely going to continue as countries switch their tax structure more towards indirect taxation.

TABLE 4

Direct taxes in transition economies as % of GDP

	2007	2008	2009	2010	2011	2012
Bulgaria	8.2	6.7	6.0	5.3	5.2	5.2
Czech Republic	9.1	8.0	7.2	7.0	7.2	7.2
Croatia	7.4	7.2	6.9	5.9	6.3	6.1
Latvia	9.2	9.8	7.2	7.4	7.4	7.7
Lithuania	9.2	9.2	5.9	4.6	4.3	4.8
Hungary	10.5	10.7	10.0	8.5	6.9	7.5
Poland	8.6	8.5	7.4	7.0	7.1	7.2
Romania	6.7	6.7	6.5	5.9	6.0	6.0
Slovenia	9.1	8.8	8.2	8.2	8.0	7.7
Slovakia	5.9	6.1	5.2	5.1	5.3	5.3

**Estonia is excluded due to lack of some direct tax data.*

Source: Author's calculation.

Some former transition economies that are now members of the EU have reduced VAT taxes on or exempted exports from them to promote exports. However, import duties still remain a considerable source of revenue. There is room to reduce import duties as a share of revenue to promote trade and economic development. These countries are highly dependent on domestic indirect taxes so there is room to reduce that dependency. Countries could rebalance tax systems to lower indirect taxes to revenue and change it so that contributions from direct taxes to revenue are higher.

Over the short run countries struggling with deficits higher than 3% of the GDP should consider raising tax revenue for short run deficit reduction. One way this could be achieved for countries with inadequate aggregate demand is to increase corporate income taxes. Corporate income taxes are important in promoting competitiveness over the long run. However, in the short run if a country has a deeply depressed economy and investment prospects look grim, corporate income tax rate doesn't matter as it does during times when economy is growing and investment opportunities are plenty. After economy returns to sustainable growth, a country's government should consider lowering corporate income taxes back to previous rates.

5 SOCIAL CONTRIBUTIONS

The lowest actual social contributions amongst euro zone crisis countries are in Ireland at 4.4% of GDP and the highest are in Italy at 13.6% of GDP in 2012. Average actual social contributions in the euro zone (18 countries) are 14.7% of GDP. Euro zone crisis countries have lower actual social contributions that euro zone average. Trend of actual social contributions was declining from 1995 to 2007, when it started to rise gradually. Given demographic changes in the EU, it is likely that actual social contributions need to be increased to match demographic changes or social benefits will need to be reduced.

Ireland, Greece, Spain, Italy and Portugal are requiring employers to contribute more toward social programs than employees. Italy's employers' social contributions are the highest amongst crisis countries at 9.3% of GDP in 2012, while in the same year Ireland had lowest of 3.1% of GDP. Euro area (18 countries) average was 8.3% of GDP. There is a rising trend of requiring employers to pay a larger share of the actual social contributions in euro zone crisis countries. They are shifting tax burden away from employees onto employers.

Lowest tax burden that employees have to pay for social contributions is in Ireland at 1.1% of GDP in 2012. The highest in the same year is in Greece at 4.6% of GDP. In Greece employers and employees are paying about the same tax for social contributions as a percentage of GDP. In Ireland employers pay three times as much as employees and in Spain they pay almost five times as much.

6 PROMOTING INVESTMENT AND ENHANCING PRODUCTIVITY

As tax systems evolve, there is a need to enhance productivity and structure a tax system to promote innovation and investment. One tax mechanism through which countries try to increase investment is through corporate tax code. There is a trend of lowering corporate tax rates in the last few decades in European Union. Tax system can help in enhancing productivity by promoting growth-friendly tax structures and eliminating or reducing tax evasion problem so that additional revenue can be used in more productive uses. This is a very important issue for the members of the EU as study shows that VAT tax evasion could lower performance of the European Single Market (Nam, Gebauer and Parsche, 2003).

Simplifying corporate tax code and lowering rates may lower compliance costs, improve efficiency and information asymmetries facing investors that are the result of incomplete information about specific tax deductions and complexities of different tax codes across the European Union when investors have high costs in obtaining such information.

A country could consider eliminating taxes on capital gains to promote investment. However, some countries have this policy implemented so competition effect may be limited. This policy would also reduce country's tax revenue which is likely to be needed to reduce budget deficits. Capital income tax may improve welfare in an incomplete market economy with a labor-leisure decision, but improvement is so small that it may weaken any arguments in favor of implementing this type of policy (Medak Fell, 2006).

Another way to promote investment is for a country to be a tax leader among neighboring countries. This would encourage foreign direct investment in countries, but it may be short-lived as other countries could imitate tax leaders. Tax rates set in small countries, especially the ones located in the centre of the EU, influence those in big countries (Chatelais and Peyrat, 2008).

7 THE PLANNED ADOPTION OF THE EURO

Introduction of a new currency into the economy is generally followed by price increases as producers and sellers try to use information asymmetries. There are ways to use taxes to soften the impact a new currency will have on a national economy. Government may reduce indirect taxes such as VAT to lower or eliminate price increases. This would help consumers adjust to a currency change. However, this approach would only work in highly competitive sectors of the economy. In an economy where producers have high pricing power, like Croatia, this approach may not have a desired effect.

Joining euro area usually means that such countries will experience lower interest rates and therefore lower borrowing costs. Broadening tax bases and lowering rates would promote investment climate in an environment with lower borrowing costs and higher returns on investment.

Countries at the periphery of the euro area and countries that have fixed or managed exchange rates have a problem with higher labor costs than core of the euro area. To reduce the labor cost gap, those countries could lower taxes or implement tax breaks that target companies' labor costs. One example would be to temporarily lower taxes employers have to pay for social contributions. However, this approach is not recommended in countries that have demographic problems or shortfalls in their social systems, under the assumption they don't want to change their social systems.

Countries that plan to adopt the Euro should harmonize their tax systems with the rest of the euro area, especially corporate taxes to attract foreign companies to invest in them. This would reduce a two speed euro area problem where some countries are able to attract companies better than others. This may over the long run be growth-promoting as an increase in number of companies would increase competition.

8 RESULTS

Average ratio of indirect to direct taxes for seventeen countries of the euro area has slightly increased in favor of indirect taxation. The same is true for twenty-seven countries of the EU. There is a general trend of shifting tax system from direct taxes to indirect taxes. Biggest shifting counties were Bulgaria, Croatia, Lithuania, Hungary and Romania. These countries have more than twice share of indirect taxes to GDP than direct taxes to GDP.

Using ARMA (1.1) model an estimation of average contributions of indirect taxes to GDP are made to crisis countries and former transition economies.

TABLE 5

Ratio of indirect to direct taxes in selected countries

	2007	2008	2009	2010	2011	2012
Euro area (17)	1.01	0.99	1.06	1.08	1.05	1.03
Ireland	1.05	1.05	1.04	1.08	0.89	0.84
Greece	1.58	1.53	1.35	1.56	1.48	1.26
Spain	0.85	0.89	0.87	1.04	0.99	0.98
Italy	0.97	0.90	0.88	0.95	0.95	0.98
Portugal	1.53	1.45	1.42	1.51	1.40	1.46
EU (27)	0.96	0.93	1.00	1.02	1.02	1.02
Bulgaria	2.04	2.60	2.52	2.79	2.79	2.90
Czech Republic	1.19	1.33	1.54	1.57	1.61	1.67
Croatia	2.47	2.51	2.48	3.03	2.76	2.98
Latvia	1.33	1.10	1.49	1.51	1.53	1.51
Lithuania	1.26	1.23	1.93	2.54	2.67	2.29
Hungary	1.51	1.46	1.66	2.00	2.45	2.44
Poland	1.64	1.68	1.73	1.94	1.93	1.79
Romania	1.85	1.76	1.65	2.00	2.17	2.20
Slovenia	1.59	1.59	1.66	1.71	1.74	1.86
Slovakia	1.88	1.70	1.98	2.00	1.98	1.89

**Estonia is excluded due to lack of some direct tax data.*

Source: Author.

TABLE 6

Results of ARMA for crisis countries

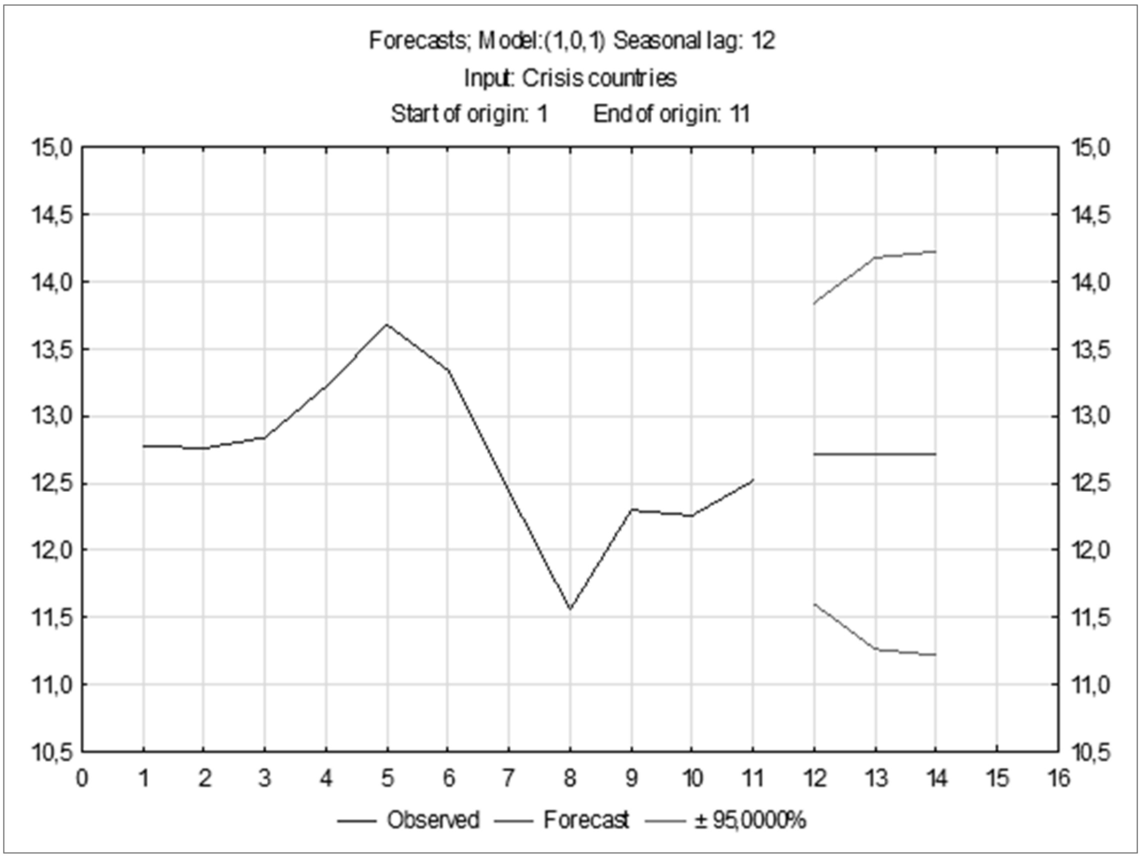
	Input: Crisis countries (Working data (F6:P16))					
	Transformations: none					
	Model: (1,0,1) MS Residual = ,23503					
Paramet.	**Param.**	**Asympt. Std. Err.**	**Asympt. t(8)**	**p**	**Lower 95% Conf**	**Upper 95% Conf**
Constant	12,72119	0,317937	40,01170	0,000000	11,98803	13,45435
p(1)	0,39959	0,444568	0,89882	0,394997	-0,62559	1,42476
q(1)	-0,43215	0,389240	-1,11025	0,299145	-1,32974	0,46544

Source: Statistica.

This paper estimates that average indirect tax share of GDP in crisis countries is 12.72%. Since midpoint in forecast (3 periods) with 95% confidence is higher than current share, it is likely that average indirect taxes as a share of GDP will increase in euro zone crisis countries.

FIGURE 1

Forecast (3) for indirect taxes as a share of GDP for crisis countries



Source: Statistica.

TABLE 7

Results of ARMA for transition countries

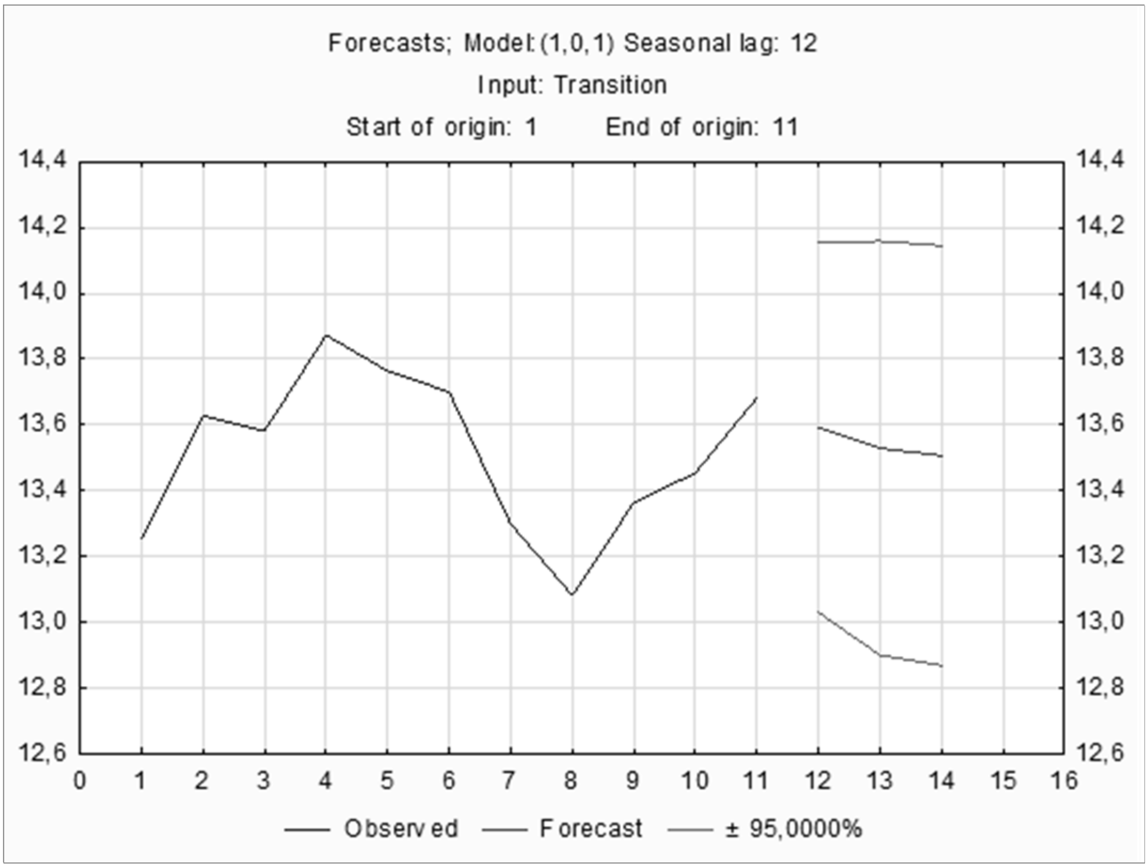
	Input: Transition (Working Data (F6:P16))					
	Transformations: none					
	Model: (1,0,1) MS Residual = ,05920					
Paramet.	**Param.**	**Asympt. Std. Err.**	**Asympt. t(8)**	**p**	**Lower 95% Conf**	**Upper 95% Conf**
Constant	13,49444	0,136677	98,73260	0,000000	13,17926	13,80961
p(1)	0,35718	0,529259	0,67487	0,518782	-0,86329	1,57765
q(1)	-0,15017	0,435486	-0,34483	0,739110	-1,15440	0,85406

Source: Statistica.

This paper estimates that average indirect tax share of GDP in transition economies is 13.49%. Since midpoint in forecast (3 periods) with 95% confidence is lower than current share, it is likely that average indirect taxes as a share of GDP will decrease in former transition countries that are now members of the EU.

FIGURE 2

Forecast (3) for indirect taxes as a share of GDP for transition economies



Source: Statistica.

9 CONCLUSION

Crisis countries have a share of indirect taxes to GDP similar to a share of direct taxes to GDP. They could improve economic performance by lowering income taxes on the lower end of the scale, simplifying their tax systems and eliminating tax exemptions and preferential treatment. There is a rising trend where employers have to pay for a greater share of the social contributions in euro zone crisis countries. Former transition economies have a much larger share of indirect taxes to GDP than direct taxes to GDP. There is a trend among them in reducing share of corporate income taxes to GDP since 2006.

Promoting investment through the evolution of tax system towards a more growth-friendly tax system is one way to achieve better economic performance. Simplifying the tax code and lowering corporate tax rates over the long run could contribute to better economic performance. This is further complicated for countries that plan to adopt the Euro currency. Reducing VAT, broadening tax bases, lowering employer’s social contributions tax and harmonizing corporate tax systems to the rest of the euro area could lower costs associated with adopting the Euro.

There is a trend of increasing share of indirect taxes to GDP for both crisis countries and former transition economies that are now members of the EU. However, trends are likely to diverge in the next three years. Average indirect taxes as a share of GDP will increase in euro zone crisis countries using 95% confidence interval and decrease in transition economies.

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APPENDICES

TAX REFORMS: EXPERIENCES AND PERSPECTIVES – PROGRAM

8:30—9:00	**REGISTRATION**
9:00—9:30	**INTRODUCTION AND WELCOME**
	JURICA PAVIČIĆ, *FACULTY OF ECONOMICS AND BUSINESS ZAGREB*
	SAŠA DREZGIĆ, *FACULTY OF ECONOMICS RIJEKA*
	KATARINA OTT, *INSTITUTE OF PUBLIC FINANCE*
9:30—11:00	**JOINT SESSION 1: INVITED LECTURES**
	GAËTAN J. A. NICODÈME, *HEAD OF THE "ECONOMIC ANALYSIS, EVALUATION & IMPACT ASSESSMENT SUPPORT" UNIT–EUROPEAN COMMISSION, GENERAL DIRECTORATE FOR TAXATION AND CUSTOMS UNION* TAX REFORMS IN EU MEMBER STATES, A EUROPEAN SEMESTER PERSPECTIVE
	SIJBREN CNOSSEN, *MAASTRICHT UNIVERSITY AND ERASMUS UNIVERSITY, ROTTERDAM* THE LONG ARM OF EU VAT, EXEMPLIFIED BY THE DUTCH EXPERIENCE
	MICHAEL KEEN, *IMF, WASHINGTON* TAX GAPS AND EFFICIENT TAX ADMINISTRATION
11:00—11:30	BREAK
11:30—13:15	**PARALLEL SESSIONS 1**
	SESSION 1A: ADMINISTRATION, COMPLIANCE, EVASION, AVOIDANCE
	SESSION 1B: TAX REFORM: COUNTRY EXPERIENCES AND EXPERT OPINION SURVEY
13:15—14:15	LUNCH
14:15—16:00	**PARALLEL SESSIONS 2**
	SESSION 2A: EQUITY
	SESSION 2B: MACROECONOMIC ASPECTS
16:00—16:30	BREAK
16:30—17:30	**SESSION 3: CONSUMPTION TAXES AND TAX STRUCTURE**
17:45-18:30	**JOINT SESSION 2: CONCLUSIONS**

PROGRAM COMMITTEE

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IVICA URBAN, *INSTITUTE OF PUBLIC FINANCE, ZAGREB*

SESSIONS

SESSION 1A – ADMINISTRATION, COMPLIANCE, EVASION, AVOIDANCE

(MODERATOR: TINE STANOVNIK, *FACULTY OF ECONOMICS LJUBLJANA*)

Time to stop avoiding the tax avoidance issue in Croatia? A proposal based on recent developments in the European Union	Stjepan Gadžo, *University of Rijeka, Faculty of Law* Irena Klemenčić, *Institute of Public Finance*
Evasion of social security contributions: the example of Croatia and Bosnia and Herzegovina	Sabina Hodžić, *University of Rijeka, Faculty of Tourism and Hospitality Management* Lejla Lazović-Pita, *School of Economics and Business – Sarajevo*
Legislative proposal for controlled foreign companies regime in Poland from an international perspective	Magdalena Małgorzata Hybka, *Poznan University of Economics, Department of Public Finance*
Can the efficiency of the Croatian tax authorities be improved?	Vjekoslav Bratić, *Institute of Public Finance* Mihaela Bronić, *Institute of Public Finance*
Relationship between tax administration and taxpayers: quo vadis, Croatia?	Tereza Rogić Lugarić, *University of Zagreb, Faculty of Law*

SESSION 1B – TAX REFORM: COUNTRY EXPERIENCES AND EXPERT OPINION SURVEY

(MODERATOR: MICHAEL KEEN, *IMF, WASHINGTON*)

Tax Reform in Serbia: experiences and perspectives	Birger Nerré, *GIZ Public Finance Reform – Serbia* Aleksandar Dragojlović, *GIZ Public Finance Reform – Serbia* Saša Randjelović, *University of Belgrade, Faculty of Economics* Marina Djenić, *University Singidunum, Faculty of Economics, Finance and Administration*
Tax reforms: experiences and perspectives – the case of the Republic of Macedonia	Vesna Pendovska, *University "SS Cyril and Methodius", Faculty of Law "Iustinianus Primus"* Elena Neshovska, *University "SS Cyril and Methodius", Faculty of Law "Iustinianus Primus"*
Perspectives of tax reforms in Croatia: expert opinion survey	Helena Blažić, *University of Rijeka, Faculty of Economics* Hrvoje Šimović, *University of Zagreb, Faculty of Economics and Business* Ana Štambuk, *University of Rijeka, Faculty of Economics*
Slovenian experiences and lessons from tax reforms	Maja Klun, *University of Ljubljana, Faculty of Administration*

SESSION 2A – EQUITY

(MODERATOR: IVICA URBAN, *INSTITUTE OF PUBLIC FINANCE, ZAGREB*)

Income, personal income tax and transition: case of Bosnia and Herzegovina	Lejla Lazović-Pita, *School of Economics and Business – Sarajevo*
Reform of labour taxes in Latvia	Ilmārs Šņucins, *Ministry of Finance of Latvia* Ieva Kodoliņa-Miglāne, *Ministry of Finance of Latvia*
In pursuit of tax progressivity: lessons from VAT rate structure adjustment in Poland	Artur Swistak, *Warsaw School of Economics* Sebastian Wawrzak, *Warsaw School of Economics* Agnieszka Alińska, *Warsaw School of Economics*
Personal income tax reforms and tax progressivity in Slovenia, 1991-2012	Tine Stanovnik, *University of Ljubljana, Faculty of Economics* Miroslav Verbič, *University of Ljubljana, Faculty of Economics*

SESSION 2B – MACROECONOMIC ASPECTS

(MODERATOR: ROBERT SONORA, *FORT LEWIS COLLEGE, DURANGO, COLORADO*)

The effectiveness of tax measures during the crisis in Croatia	Ana Grdović Gnip, *Juraj Dobrila University of Pula, Faculty of Economics and Tourism Dr. Mijo Mirković*
Tax policy in times of limited fiscal space: the case of Poland	Artur Swistak, *Warsaw School of Economics* Sebastian Wawrzak, *Warsaw School of Economics* Agnieszka Alińska, *Warsaw School of Economics*
The role of tax policy in the fiscal recovery of the European Union	Nika Šimurina, *University of Zagreb, Faculty of Economics and Business* Marko Primorac, *University of Zagreb, Faculty of Economics and Business*
Tax Reform in Australia: The minerals resource rent tax	Diane Kraal, *Monash University, Department of Business Law and Taxation*

SESSION 3 – CONSUMPTION TAXES AND TAX STRUCTURE

(MODERATOR: SIJBREN CNOSSEN, *MAASTRICHT UNIVERSITY AND ERASMUS UNIVERSITY, ROTTERDAM*)

Shifting from labour to consumption taxes – the impact on tax revenue volatility	Tomasz Jędrzejowicz, *Economic Institute, Narodowy Bank Polski* Kamila Sławińska, *Warsaw School of Economics*
Excise duties in Poland after accession to the European Union – changes, impact on revenue and prospects for the future	Olga Palczewska, *Poznan University of Economics, Department of Public Finance*
Evolution of tax systems in euro area crisis countries and former transition economies that are now members of the European Union	Dean Žugčić, *University of Zagreb, Faculty of Economics and Business*

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The Faculty of Economics and Business is a part of the University of Zagreb. The Faculty started out as the School of Commerce and Transport in 1920. The purpose of the School of Commerce and Transport was to provide theoretical education in fields of banking, domestic and international trade, transport and insurance. Since then it has often changed its name but never its mission. In 1968 the two schools (the Faculty of Economics and the School of Business) were merged together and the Faculty of Economic Science was founded. In 1982 the Faculty of Economic Science and the Faculty for International Trade merged into the Faculty of Economics and Business. The Faculty of Economics and Business has an excellent reputation in educating experts in the field of economics and business. Interest in studying at this faculty is higher and higher year after year, particularly so in the last few years. Therefore our goal is to fulfil the expectations of our students by developing modern educational programmes and encouraging various teaching and research programmes.

The Faculty of Economics in Rijeka was founded in mid 1961, as a constituent member of the University of Zagreb. When the University of Rijeka was established in 1973, the Faculty was incorporated into the new institution. The openness of the Faculty's researchers and teachers to world science, new economic developments and new laws governing national economies and entrepreneurship, has created the conditions for conducting high quality, up-to-date, critical and scientifically based teaching. Within the national boundaries, the Faculty of Economics in Rijeka was among the first to introduce scientifically based contents, courses and research work, founded on the theory and practice of economic association and integration of countries and their respective economies. The Faculty has signed agreements on collaboration with eminent foreign faculties and universities, in the field of research and in the organization of, for instance, joint conferences and student exchanges (summer schools).

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