

# Efficiency and Progressivity Measures of the Flat Tax with a Special Focus on Bosnia and Herzegovina

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## ABSTRACT

The research begins with a brief overview of the personal income taxation trends in developed and transition countries in the past thirty years. During this period, we determine that in developed countries there has been a shift from equity towards efficiency principle conducted by a reduction of top progressive personal income tax (hereafter: PIT) rates and through base broadening. For selected transition countries, we develop a theoretical benchmark model under flat tax and compare it in practice in order to measure efficiency in terms of tax neutrality. We find very few characteristics of theoretical flat tax applied in practice causing inefficiency. We also analyse the progressivity indicators as an equity enhancing measure under flat tax. Progressivity indicators are very low and are a result of the flat PIT and flat social security contributions (hereafter: SSCs). Finally, for the case of Bosnia and Herzegovina (B&H), efficiency and progressivity measures can be enhanced indicating that PIT reforms should be brought together with SSCs reforms.

*Keywords:* income, flat tax, transition, progressivity indicator

*JEL:* H20, J31

## 1 Introduction

In personal income tax (hereafter PIT) systems in developed and transition countries, theoretical discussions evolve around efficiency-equity trade-off of such system. So, the main hypothesis is that efficiency principle in PIT is given priority over equity principle in developed and transition countries. In order to evaluate this hypothesis, it is important to firstly define income as a tax base and then look at the PIT rates. Income as a tax base can be either comprehensive defined under Schanz-Haig-Simons (hereafter: S-H-S) or an expenditure or consumption based tax base. Secondly, PIT rates can be progressive or proportional and are respectively linked to the definition of the PIT tax base.

After a brief theoretical discussion regarding definition of the tax base and the flat tax, we focus on efficiency measures of the flat tax. We develop a theoretical benchmark model and compare three (former) transition countries to this model: Estonia, which has applied the flat tax since 1994 and has since decreased the flat tax rate from 26% to current 20%, Slovakia which switched from progressive to flat with 19% rate and in 2013 back to progressive PIT and Bosnia and Herzegovina (hereafter B&H), namely Federation of B&H (hereafter: FB&H), that has applied the flat tax since 2009 at the rate of 10%. We conclude that none of the selected countries (in 2008 or 2009 in FB&H) has applied the flat tax fully in practice and that most differences exist in the definition of the tax base.

Also, we calculate progressivity indicator for each of three selected countries in 2011 as an equity aspect of PIT under flat tax. Due to lack of structural reforms in PIT and SSCs in FB&H, we conclude that there is no progressivity in the FB&H case unlike in two selected transition countries. Progressivity and hence equity aspects of PIT are highly affected by the social security contributions (hereafter SSCs), so PIT reforms in (F)B&H should be brought together with SSCs reforms.

## **2 Income as a Tax Base and Personal Income Tax – Theoretical Analysis and Recent Trends**

In the discussion of income as a tax base and personal income tax, we need to distinguish two different concepts as basis for the analysis: the definition of the tax base and the definition of tax rates. These two concepts are very much interlinked and we attempt to distinguish between the two. So, in the definition of tax base, two popular discussions are known in the history of economic thought: comprehensive S-H-S definition of income as a tax base, and an expenditure or consumption based tax base. Regarding tax rates, PIT rates are nowadays either proportional (or flat, with or without personal allowance) or progressive.

The “right mix” of tax base and tax rates is very important in each tax system. Discussions regarding this topic are very old and can be found in the works of classical economists (Musgrave, 1998). However, external factors also affect PIT base and rates. In the past century, with the outbreak of intensified industrialisation, discussion regarding comprehensiveness of income as a tax base has been enhanced in developed countries. Popular discussions regarding definition of income as a tax base can be found in the works of German authors<sup>1</sup> (e.g. Andel, 1993), as well as Anglo-Saxon authors (e.g. Seligman, 1914; Musgrave, 1998). In these discussions, we can clearly determine differences in ideological roots between German (continental) and Anglo-Saxon organisation of the fiscal system which is reflected in their PIT and SSCs

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<sup>1</sup> For a discussion regarding broader versus narrower definition of income, see e.g., Blažić (2006).

system (Esping-Andersen, 1990). However, with the outbreak of neoliberal economic thought induced by globalisation, some new (old) issues regarding comprehensiveness of income as a tax base began to be re-examined. The 1980s marked the new era in terms of discussion of comprehensiveness of the tax base (Pechman, 1980; Pechman, 1984) and popular discussions regarding income versus consumption as a tax base. Discussions regarding rates (progressive or proportional PIT) followed suit.

In theory, the most comprehensive and broadest definition of income is the S-H-S definition of income since it best accords with economic ability to pay (Goode, 1964). Nowadays, empirical discussion of S-H-S definition of income has its numerous limitations from theory to practice. These mainly relate to the tax treatment of saving, realised (and unrealised) capital gains, property, rent, wealth, etc. Thus, comprehensive S-H-S definition of income is considered to accord with progressive PIT rates and is mostly as such applied in developed countries.

A major difference between income and consumption as a tax base is defined through (economic) double taxation of saving. Under S-H-S definition, income includes both consumption and saving, which are then taxed. Therefore, S-H-S definition of income taxes all income, i.e. regardless of its source, which means that income 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). Saving is not taxed under consumption tax. So, the majority of differences between S-H-S definition of income and an expenditure tax arise from these differences in treatment of various sources of saving. This issue was identified very early (i.e., Pigou, 1928 in Musgrave, 1998). Nowadays, transition countries that apply proportional or flat tax rate are considered to apply a version of an expenditure tax since income from saving is mostly left untaxed.

Since 1980s, developed countries have been flattening the progressive PIT rates and base-broadening the tax base. Base broadening measures relate to the treatment of different sources of saving and are (theoretically and empirically) discussed in Blažič (2006; 2009) for both developed and transition countries. Within the sources of saving, taxation of dividends is of special interest. A comparative analysis of dividend taxation in Croatia and Slovenia shows regressivity of differential treatment of dividend taxation (Blažič & Bašagić, 2005).

Recent microsimulation empirical testing undertaken in most developed countries and transition countries that apply progressive PIT indicate that a switch from progressive PIT to flat tax would bring more inequality into income distribution, but would enhance efficiency in terms of its positive effects on income/capital/wealth accumulation, and increased efficiency of labour (for example, Teather, 2005 (UK); Peichl, 2008 (Germany); Gonzalez

& Pijoan-Mas, 2005 (Spain); Jacobs, de Mooij, & Kees, 2007 (Netherlands); Paulus & Peichl, 2008 (EU); Čok, 2004 (Slovenia); Urban, 2010 (Croatia).

So, developed countries have not applied the flat tax, but have undertaken measures that flatten the progressive PIT and broaden the tax base, which enhances efficiency at the expense of growing inequality (Stiglitz, 2013; Piketty, 2014). These measures also provided an opportunity for capital accretion which does not necessarily come from income, but capital and business income which is a result of "financialisation" (OECD, 2014a) and deregulation of the financial sector(s) worldwide. Additionally, the number and size of PIT rates have decreased, although developed countries have maintained progressive PIT (OECD, 2014a), i.e., the overall progressivity decreased giving opportunity for an income/capital/wealth accumulation (Atkinson, Piketty, & Saez, 2009; Davies, Sandström, Shorrocks, & Wolff, 2011; Matthews, 2011; Piketty & Zucman, 2013).

As a result of such trends and decisions, the PIT tax share (i.e. PIT revenues to total revenues, Cnossen & Bird, 1990) in OECD countries has declined by significant five per cent since early 1980s (OECD, 2013). In the same period, the share of value added tax (VAT) increased by about ten per cent (OECD, 2013). This clear shift from direct to indirect taxes has *per se* caused greater overall inequality bearing in mind regressive effects of indirect taxes. Both OECD and the European Commission (OECD, 2010; Garnier et al., 2013) are still supporting further PIT tax rate cuts and base broadening measures as a reduction of high labour tax wedge in OECD/EU countries<sup>2</sup>. These measures favour the efficiency principle over equity, and cause greater inequality. Lately, global financial crisis in 2008 has led to an increase in top PIT rates as a response to growing inequality in developed countries as well as the need for financing budget deficits (EUROSTAT, 2013).

In transition countries, these patterns are more difficult to clearly disentangle and evaluate. This is mainly due to the dominant transition process, especially in the first four to six years of transition – the transition shock (Onaran, 2011). As a result of the shock, growing inequality is inevitable in these years (Rutkowski, 1996) and it is not caused by either progressive or flat tax. Thus, since developed countries are aiming at enhancing the efficiency over equity principle, transition countries should follow suit since they are aiming to reach the (tax-related) goals of developed countries and become developed countries. Also, efficiency could be enhanced by improving efficiency of the public (tax) administration and further reduction of bureaucracy especially in South-East European states (Aristovnik & Obadić, 2015), but this is beyond the topic of this paper.

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<sup>2</sup> The European Commission suggests to the EU Member States that they should flatten progressive PIT, in terms of "shifting taxation away from labour, broadening tax bases, reducing corporate tax debt bias and improving tax compliance..." (Garnier et al., 2013, p. 1).

As an efficiency-enhancing measure, most transition countries have applied the flat tax since it enhances the efficiency aspect at the expense of equity. For those applying progressive PIT, flattening of PIT and base-broadening also occurred (for example in Slovenia, see Klun, 2006). The satisfaction of the efficiency principle is even more important than the satisfaction of the equity principle in transition countries since they "crave" for income and capital accumulation.

## **2.1 The Flat Tax Model – Income or Consumption-Based PIT?**

The idea of flat tax was proposed in the USA in the 1980s by Hall and Rabushka. USA did not apply it, but with the fall of the Iron Curtain, the former Eastern bloc countries began to apply it. Transition countries that are nowadays considered flat tax countries apply a different model from the theoretical one – the Hall and Rabushka flat tax. This model defines the tax base as consumption-based. Saving under such a model is left untaxed, which provides an opportunity for income/capital/wealth accumulation. Since the theoretical model is defined together with corporate income tax (CIT), we will only analyse its PIT component. Simply said, PIT under flat tax is considered as a single rate above a certain threshold (basic/personal allowance) with a very few (non) standard deductions or exclusions. The system is indirectly progressive. SSCs are not considered under flat tax but pension incomes when received (and belonging to SSCs) are considered to be taxed.

In the transition process, transition countries aim at becoming developed countries with similar tax systems. So, in developed countries, PIT systems are organised under progressive PIT with mostly comprehensive (close to S-H-S) definition of income. Suggestions and recommendations to the transition countries from the international community (i.e. IMF and the World Bank) indicate that transition countries should apply simple and broad-based progressive PIT with PIT rates not exceeding 40% (Stotsky, 1995). However, this is not the case in most transition countries, especially in the Western Balkan countries<sup>3</sup>. Hence, transition countries that apply the flat tax define tax base closer to S-H-S definition of income, which includes all income from different sources with many (non) standard deductions and exclusions, and have low flat tax rates (currently up to 20%).

## **2.2 Personal Income Tax in Transition Countries under Flat Tax – Departures from the Theoretical Model**

For selected transition countries (i.e. two countries and one B&H entity – FB&H) that apply the flat tax, we have developed a theoretical benchmark model for the flat tax and compared it empirically for years of 2008 and 2009. Table 1 defines theoretical benchmark model as a combination of Cnossen and Messere (1990) definition of the tax base since it best satisfies the principle

<sup>3</sup> Western Balkans countries mostly apply the flat tax with very low PIT rates (except Croatia and, most recently, Albania).

of efficiency in terms of tax neutrality. The model includes a few modifications. The modifications relate to a combination of five important empirical departures from definition of income as a tax base (Cnossen & Messere, 1990) in terms of standard and non-standard allowances and other loopholes defined by Hall and Rabushka (2007, p. 49). There are five areas considered which are grouped into three important aspects: treatment of fringe benefits and standard and non-standard deductions, SSCs which include welfare benefits and retirement, and insurance schemes and treatment of capital gains. Hall and Rabushka's (2007) theoretical model does not recognise SSCs, but they should be included in this analysis (due to treatment of pension incomes). So, a clear definition of income as a tax base with a few deductions and exclusions under flat tax is considered to be more efficient than progressive PIT with numerous deductions and exclusions. In table 1 we have also assumed that income was defined in terms of gross wages and salaries since in the selected transition countries they take more than 90 per cent of all reported income. Within standard deductions (exclusions), personal and family allowances were considered together with a group of other non-standard deductions which are eliminated in Hall and Rabushka's (2007) model, but are discussed in the model of Cnossen and Messere (1990). It is evident that all selected countries recognise standard allowances (i.e., personal characteristics of the taxpayer), but not non-standard allowances, where most differences from theoretical to empirical model occur. Hall and Rabushka (2007) define tax unit and recognise joint taxation in the theoretical model. In practice this is not the case in Slovakia and FB&H. Similarly, fringe benefits only include hot meal allowance, transport allowance and holiday pay allowance and are not taxed in Slovakia and FB&H. Theoretical model promotes taxation of pensions when they are received, no taxation of dividends, equalising rate of PIT and corporate income tax (CIT), and single tax slip. The most significant difference from theoretical model in practice is in the tax treatment of pensions and inclusion of SSCs into taxable base. Bear in mind that, unlike in the FB&H case, Estonia and Slovakia have gone through a comprehensive pension reform, but again excluded pensions (coming from the 1st and 2nd pillar) from PIT taxation.

From table 1 we can also see that selected transition countries still have room for improvements in terms of enhancing efficiency of PIT especially in terms of removal of deductions and exclusions. Equity aspects should be partly satisfied through social policy (i.e. SSCs<sup>4</sup>) although there is a growing inequality in all selected countries (EUROSTAT, 2014). Results from table 1 should also show a case of hybrid income tax, a combination of S-H-S comprehensive definition of income, and consumption-based-flat tax definition. With a clear departure from the theoretical flat tax model in terms of definition of the tax base, the analysis of (a number of) tax rates comes second.

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<sup>4</sup> As early as in the 1990s, Cnossen and Messere (1990) anticipated that SSCs will be considered as a redistributive tool of the tax policy rather than progressive PIT.

**Table 1: Main differences between theoretical and practical flat tax in 2008 and 2009 in Estonia, Slovakia, and FB&H<sup>5</sup>**

Category of PIT	Theoretical flat tax	Estonian case	Slovakian case	FB&H case
Earnings – wages, salaries are taxed	Yes	Yes	Yes	Yes
Annual personal allowance	Yes	Yes	Yes	Yes
Annual family allowance	Yes	Yes	Yes	Yes
Marital status and number of dependents considered/Joint taxation	Yes/Yes	Yes/Yes	Yes/No	Yes/No
Taxable fringe benefits	Yes	Yes	No	No
Other non-standard deductions:				
Mortgage interest payments	No	Yes	N/A	Yes
Educational expenses	No	Yes	N/A	N/A
Specific health expenses	No	N/A	N/A	Yes
Pensions (the 1 <sup>st</sup> and 11 <sup>nd</sup> pillar) taxed when received	Yes	No	No	N/A(No)
SSCs included in the tax base	No/N/A	Yes	Yes	Yes
Dividends taxed	No	No*	No	No
PIT and CIT rate equal	Yes	Yes	Yes	Yes
Single tax slip	Yes	No	No	Yes

\* For a specific treatment of dividends and its link to CIT in Estonia, see Trasberg (2011).

Source: Kesti (2008); FB&H (2009). Own interpretation.

### 3 Personal Income Taxation in Bosnia and Herzegovina

#### 3.1 Constitutional Structure of B&H

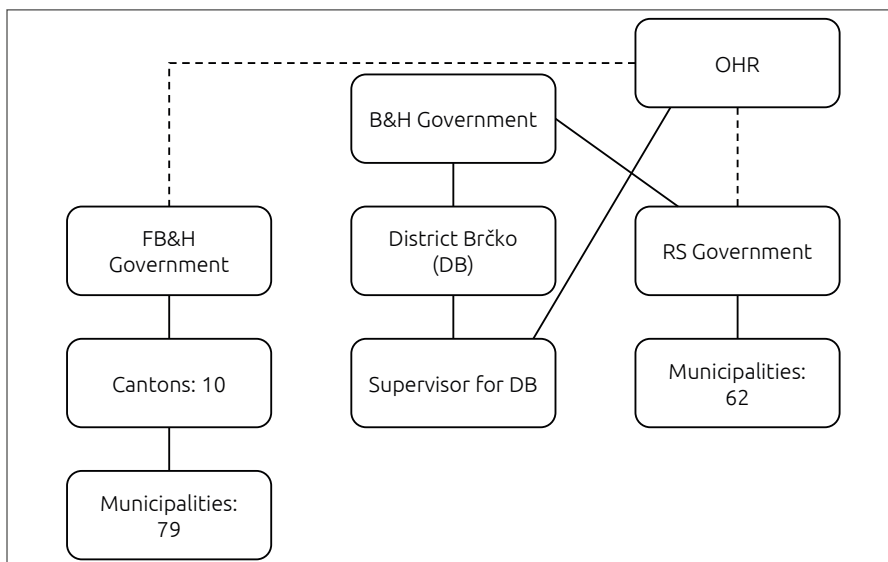
As a former Yugoslav Republic, B&H gained its independence in March of 1992 through a referendum. However, due to a devastating war in B&H (from 1992 to 1995), B&H entered transition as late as in 1996. B&H's current fiscal structure is determined by the B&H Constitution, i.e. the Dayton Peace Agreement<sup>6</sup>. Bearing in mind that B&H's GDP<sup>7</sup> fell by 80 per cent in 1992, B&H's pre-war macroeconomic performance was/is difficult to reach. Hence, the expected fall in GDP per capita, rise in inflation and unemployment, which was expected in all transition countries at the beginning of the transition process, in B&H occurred under the worst possible circumstances (except the rise in inflation). Due to significant human, capital and infrastructural losses, up until 2000, B&H's economy heavily depended on international aid i.e. B&H was an aid-driven economy. Since 2000, B&H should have finished its reconstruction process and should have progressed in the transition process. However, this was (is) not the case, primarily due to unfinished privatisation (B&H Directorate for Economic Planning, 2014), lack of political will induced by divided markets, and weak institutional and legal system. B&H Constitution under Dayton Peace Agreement left the legacy of two entities organised as an asymmetric federation (Figure1).

5 FB&H case analyses the flat tax in 2009 and Estonian and Slovak case in 2008.

6 Formally, The General Framework Agreement for Peace in Bosnia and Herzegovina.

7 There was a methodological change in the calculation of GDP after 1992 since the Yugoslav Statistical Office calculated GMP (Yugoslav Statistical Yearbook, 1991).

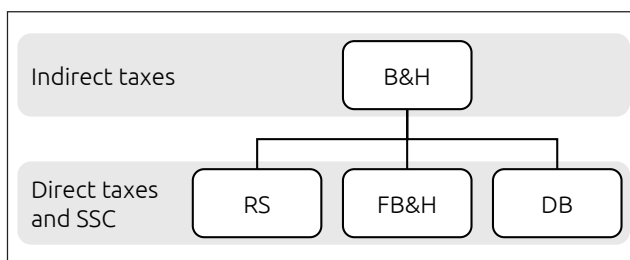
**Figure 1: Constitutional structure of B&H**



N.B. Solid line indicates direct supervision; dashed line indicates indirect supervision. FB&H stands for Federation of Bosnia and Herzegovina, RS stands for Republika Srpska and DB for District Brčko. Under Article 10 of the Dayton Agreement, OHR stands for "Office of the High Representative" which oversees the civilian implementation of the Dayton Agreement. 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, p. 256)

Under such challenging circumstances, fiscal system and tax system are decentralised at entities' levels in the area of direct taxes and SSCs, and centralised at the level of B&H (since 2003) in the area of indirect taxes. Figure 2 shows the current fiscal structure in B&H.

**Figure 2: Fiscal structures of B&H since 2006**



N.B. Residents and employees in DB can opt in terms of SSCs payments between SSCs funds in RS and FB&H.  
 Source: own interpretation

### 3.2 Flat Tax Reforms in FB&H and RS

Since 1995, both B&H entities in the area of PIT have been passing laws and made frequent changes in the past nineteen years. FB&H has since 1996 applied 'schedular' wage tax at the net wage with flat rates decreasing from



15 per cent to 5 per cent in the period 1996–2008. Additional cantonal annual tax on total income (i.e. tax on high income-earning individuals) 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 a 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, 2008, own calculation). In 2008, a new law was passed, and in 2009 synthetic PIT at a flat rate of 10 per cent above a certain threshold – basic/personal allowance was introduced. With the flat tax adoption, PIT system was made more progressive compared to the previous “schedular” system. However, unlike Estonian or Slovakian case, we cannot say that B&H’s entities applied a comprehensive tax reform due to the fact that laws were passed separately and inconsistently. SSCs reforms have not followed PIT reforms, so that SSCs rates have been decreasing, but are still very high causing a high labour tax wedge (higher than EU15 average, OECD, 2014b) especially in FB&H for low income earners (Arandarenko & Vukojevic, 2008; Kreso & Lazovic-Pita, 2011). Recent suggestions from international community in B&H (both entities) promote comprehensive reforms in the area of labour taxation, namely lowering the labour tax burden (Delegation of the European Union to B&H, 2014). Additionally, reforms with the introduction of flat tax that were undertaken in both entities still cause efficiency distortions (Table 1); they were not revenue neutral, nor did they bring higher employment rates (B&H Directorate of Economic Planning, 2010). Note here that flat tax reforms were brought in the midst of the Global Financial Crisis in 2008–2009.

RS has been changing legal provisions regarding tax rates, personal allowances (abolishing and reintroducing) and SSCs rates almost annually (especially after 2010). Currently, RS applies flat 10% PIT rate with basic/personal allowance reintroduced in 2014 and lower SSCs rates than in FB&H. The RS case was not analysed in Table 1 because, with the change towards flat tax, RS did not redefine the tax base, i.e., the law remains unclear in the definition of net versus gross income (wages). In fact, tax slips and the claim of personal allowances are quite different from the FB&H case.

The situation of “organised mess” resulting in an unfinished transition process (i.e., unfinished privatisation) and low political will reflects on the tax system, namely PIT. Successful reforms (in terms of greater fiscal discipline and higher tax revenues) brought in the area of indirect taxes were in fact decisions from the international community in B&H (OHR decisions). Long, inefficient and unfinished transition process (primarily privatisation) heavily affects B&H’s economy reflecting in low levels of efficiency, high pre-tax income inequality and severe poverty. All this, and high costs of entering the labour markets in terms of high labour tax wedge induced by predominant and high SSCs cause high levels of unemployment, high informal/shadow economy and high tax evasion due to the lack of institutional framework. In an asymmetric

(con)federation such as B&H, proportional (or flat tax) PIT might be a better option than progressive PIT (Brennan & Buchanan, 1977).

### 3.3 Progressivity Indicators in FB&H and Comparison to Estonia and Slovakia

Using OECD methodology (Paturot, Mellbye, & Brys, 2013, p. 8), we will prove the lack of actual income tax reforms in FB&H. Even with the flat tax introduction, it will be shown that progressivity as an equity indicator is very low in FB&H. For OECD countries, 2011 was the year when the average PIT rate progression indicator was calculated using the following formula:

$$\tau = \frac{\text{AETR}_{X_2\%AW} - \text{AETR}_{X_1\%AW}}{(X_2\%AW - X_1\%AW)} \quad (1)$$

Average effective tax rate ( $\text{AETR}_{X_2\%AW}$ ;  $\text{AETR}_{X_1\%AW}$ ) in the numerator represents the average effective tax rates corresponding to two different income levels  $X_1$  and  $X_2$ , respectively. The income levels are expressed as multiples of the average wage (AW) and are all in accordance with the methodology given in Paturot et al. (2013). Thus, AW and the corresponding measures of labour tax burden including PIT and SSCs paid by employee and employer are calculated in accordance with OECD methodology (OECD, 2014b). Additionally, average annual gross wage earnings required for the calculation of progressivity indicators are calculated for an average worker earning income in all economic activities under ISIC rev 3.1. The average PIT rate progression indicator “measures how the average PIT rate increases per percentage point increase in income, measured as a multiple of the AW, over the  $X_2\%AW - X_1\%AW$  income range” (Paturot et al., 2013, p. 9).

There is also another progressivity indicator (Paturot et al., 2013) and it relates to average tax wedge progression indicator. Since this progressivity indicator follows the trend of the average PIT rate progression indicator for the group of OECD countries for various tax units (for example, single or married taxpayer with or without children), it will not be separately analysed.

In FB&H, there were no legal changes, either in the tax base (excluding the effects of inflation), or in the PIT and SSC rates, so average PIT rate progression indicator was the same in 2011 as in 2009 – the year of flat tax introduction. The RS case will not be analysed due to unclear definition of the tax base in both periods and frequent legal changes. For FB&H, we will use OECD methodology for a single earner without children at five intervals depending on the size of the average (gross) wage (AW). The five intervals are defined in the range from 50% of AW to 200% of AW (Paturot et al., 2013, p. 9). OECD (2014b) broadens the analysis to 500% of the AW.

In the case of FB&H in 2009 and 2011, only 3.1% and 3.6% respectively of the total employed earned an average gross income greater than 200% (Institute

for Statistics of FB&H, 2011<sup>8</sup>), so a measure with five intervals is sufficient. For the OECD countries, Paturot et al. (2013, p. 21) indicate an important conclusion regarding overall progressivity: even in countries with progressive PIT, since SSCs are levied at a flat rate, SSCs reduce overall progressivity. The indicators are the highest at the bottom income interval (50–67% of the AW for a single earner), and decrease with a rise of income. In OECD countries in 2011, the year when the indicator was calculated, the average PIT rate progression indicator (the highest indicator) amounted to 0.195 over 50–67% of the average wage earnings interval, which means that the personal average tax rate increased with 0.195% points per 1% point increase in the AW over the 50–67% income level. The increase in the average PIT rate at 67% of the AW, compared to the rate at 50% of the AW, is then 0,195 multiplied by 17% (the difference between 50% and 67% income interval) and equals 3.3 (Paturot et al., 2013, p. 9).

Alternative measure of progressivity could be calculated using Musgrave and Thin (1948) methodology of marginal tax rates being greater than average tax rates. Since Musgrave and Thin (1948) define structural and effective progressivity indicators, we will focus on structural indicators using equation (1).

The average PIT rate progression indicators in Estonia and Slovakia are also low for a single earner at 50–67% of AW in 2011, and amount to 0.1 and 0.2 respectively (Paturot et al., 2013, p. 32). Also, they have a falling tendency as the average income rises and are the lowest at the top income interval (167–200% of AW), and amount to 0.01 and 0.02 respectively (Paturot et al., 2013, p. 12).

In the case of FB&H, due to flat tax at a low 10% rate as well as flat SSCs rates (levied at 31% and 10.5% rate and paid by the employee and employer respectively), the average PIT rate progression indicator for a single earner at two thirds of AW in 2011 is virtually zero (i.e., it amounts to 0.000005 and has a downward trend as average income rises to top income intervals). In the top interval (200% of AW), it amounts 0.000004 (own calculation). In fact, progressivity indicators are insignificantly low at all levels of AW in FB&H. Hence, flat tax reform with standard allowances did not bring any significant progressivity since SSCs reforms did not follow suit – and SSCs take most of the average gross wage earnings and the corresponding tax wedge. So it is justified to say that progressivity indicators tend to equal zero, especially in those transition countries with “low levels of AW and flat taxes” (Paturot et al., 2013, p. 12).

Even though it is not a progressivity measure, we have to bear in mind that total tax wedge (for a single earner without children at the income level of average worker) is significantly higher in FB&H than in Estonia, Slovakia

<sup>8</sup> Net wage earnings were converted to gross and calculated at the annual level rather than at the monthly level, although monthly versus annual makes no difference in the final outcome.

or RS (OECD, 2014b, p. 16; Kreso & Lazovic-Pita, 2011). So, (F)B&H needs to undertake serious reforms in both PIT and SSCs policy if it aims to make the PIT system more progressive (and equitable). In order to improve efficiency, FB&H should reform PIT system introducing a clear definition of the PIT tax base and perhaps reform SSCs system introducing a differentiated SSCs rates for different levels of average wages which would affect both efficiency and equity aspects.

#### 4 Conclusion

We have determined that in developed countries since 1980s there has been a shift from equity to efficiency principle. The comprehensiveness of the tax base was firstly evaluated since efficiency was enhanced by base broadening measures. We came to a conclusion that PIT tax base is nowadays hybrid regardless of tax rates. We also investigated efficiency aspects of the flat tax by developing a theoretical benchmark model and comparing it in practice in selected transition countries. We conclude that very few characteristics of theoretical flat tax have been applied in practice. As an equity aspect of PIT, we also analysed the progressivity indicators. Progressivity indicators are very low in selected transition countries, which are a result of the flat PIT and flat SSCs. Finally, for the case of (F)B&H, efficiency and progressivity measures can be enhanced indicating that PIT reforms should be brought together with SSCs reforms which would be a unique reform solution. We could broaden our research to other non-standard deductions and allowances and other sources of income in all selected countries or even expand our research to all transition countries that apply the flat tax and compare it to the theoretical model.

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## POVZETEK

### 1.02 Pregledni znanstveni članek

## **Ukrepi za doseganje učinkovite in progresivne enotne davčne stopnje s posebnim poudarkom na Bosni in Hercegovini**

Ta članek se osredotoča na ukrepe za doseganje učinkovitega in progresivnega davka od dohodka fizičnih oseb (dohodnina) v izbranih tranzicijskih državah. Dohodnino se večinoma odmerja na osnovi treh davčnih načel s poudarkom na uravnalovki med učinkovitostjo in pravičnostjo.

Ta članek v prvi vrsti analizira splošne težnje pri obdavčitvi dohodnine v razvitih državah, ki so v zadnjih tridesetih letih dajale prednost načelu učinkovitosti pred načelom pravičnosti. Ta težnja se vrednoti po eni strani z zmanjšanjem celotne progresivnosti obdavčitve dohodkov fizičnih oseb v smislu zmanjšanja števila davčnih razredov in davčnih stopenj ter drugih osnovnih ukrepov na eni strani ter naraščajoče neenakosti na drugi strani. Poleg tega pa je bil prihodek v primerjavi s porabo kot davčno osnovo za izračun dohodnine analiziran zgolj na kratko, saj teoretični model enotne davčne stopnje spodbuja ukrepe za doseganje večje učinkovitosti. Kot drugič, se članek osredotoča na izbrano število tranzicijskih držav, ki pri obdavčitvi dohodkov fizičnih oseb uporabljajo ali so uporabljale enotno davčno stopnjo. V tem članku se učinkovitost meri v smislu davčne nevtralnosti. Za te namene je bil razvit teoretični referenčni model, namenjen za obdavčitev dohodkov fizičnih oseb. Ta model združuje teoretske koncepte učinkovite (ali davčno nevtralne) davčne osnove za odmero davka s teoretičnimi koncepti davčne osnove v skladu z enotno davčno stopnjo. Davčna osnova za odmero dohodnine, ki je opredeljena v takih okoliščinah, je široka in ima zelo redke olajšave, odbitke ali oprostitve. Teoretični referenčni model se je nato uporabil za primerjavo z uporabljenim modelom enotne davčne stopnje v Estoniji, na Slovaškem ter v Bosni in Hercegovini (BiH). Države so bile izbrane na podlagi njihovih izkušenj z enotno davčno stopnjo, in sicer v Estoniji se model enotne davčne stopnje uporablja od leta 1994 dalje, Slovaška pa je namesto progresivnega davka od dohodkov fizičnih oseb za deset let uvedla enotno davčno stopnjo, ki jo je leta 2013 ponovno spremenila v progresivni davek od dohodkov fizičnih oseb. Primerjava je bila narejena med prakso, ki je uveljavljena v dveh izbranih državah, in primerom prakse v BiH oz. Federaciji BiH. Zaradi predvsem nejasne opredelitve davčne osnove (tj. kombinacije dohodka in porabe, ki služi kot davčna osnova za odmero dohodnine) ugotovimo, da obstajajo odstopanja od teoretičnega modela v praksi, kar prispeva k njegovi neučinkovitosti. Izkrivljanja so posledica odstopanj v opredelitvi davčne osnove, in sicer v številnih dodatkih in odbitkih. Prišli smo do sklepa, da so razlike med teoretično in empirično opredelitvijo osebnega dohodka kot davčne osnove bolj pomembne kot pa izbira števila



davčnih stopenj v smislu razprave o progresivni davčni stopnji v primerjavi z enotno davčno stopnjo.

Tretjič, analizirali smo še en pomemben vidik enotne davčne stopnje, in sicer pomanjkanje progresivnosti, kar vpliva na vidik pravičnosti. Kazalniki progresivnosti predstavljajo ukrepe, ki so močno obremenjeni s prispevki za socialno varnost (PSV-ji). Enotna davčna stopnja v teoriji PSV-jev ne analizira, vendar so zelo pomembni pri analizi uravnilovke za doseganje učinkovitosti in pravičnosti. PSV-ji so v večini držav OECD obračunavajo po pavšalnih stopnjah, torej po merilu strukturnih kazalnikov progresivnosti, pri katerih se upošteva povprečno plačo, PSV-ji znižujejo splošno progresivnost. V izbranih tranzicijskih državah so kazalniki progresivnosti zelo nizki, kar je posledica enotne davčne stopnje in pavšalnih PSV-jev. V Estoniji in na Slovaškem je kazalnik povprečne progresivne davčne stopnje za obračun davka od dohodka fizičnih oseb pri enem zaposlenem nižji za dve tretjini povprečne plače kot v (razvitih) državah, ki uporabljajo progresivno obdavčitev.

Nenazadnje ta članek predstavi kratko analizo zapletene ustavne ureditve v BiH kot asimetrične (kon)federacije, ki se odraža tudi v davčnem sistemu BiH. BiH je organizirana kot država z dvema entitetama in enim okrožjem (Brčko), kjer vsaka entiteta izvaja svojo lastno politiko obdavčitve dohodka fizičnih oseb. Čeprav je bila v Federaciji BiH leta 2009 uvedena enotna davčna stopnja, je davčna osnova za določitev davka od dohodka fizičnih oseb v Republiki srbski (RS) zaradi njenih številnih zakonskih sprememb nejasno opredeljena. Proces tranzicije poteka v BiH zelo počasi in davčne reforme, ki so bile izvedene, se večinoma izvajajo pod pritiskom ali na podlagi končnih odločitev mednarodne skupnosti v BiH. Reforme PSV-jev, ki predstavljajo ostanke iz prejšnjega davčnega sistema, se v obeh entitetah še niso začele izvajati. V primeru Federacije BiH smo lahko videli, da v Federaciji BiH zaradi pomanjkanja strukturnih reform na področju dohodnine in PSV-jev do progresivnosti ni prišlo (le-ta je dejansko enaka nič), za razliko od ostalih dveh izbranih tranzicijskih držav, ki uporabljata ali pa sta uporabili enotno davčno stopnjo. Ta ukrep izpostavlja pomembno dejstvo, da PSV-ji v veliki meri vplivajo na progresivnost, in s tem tudi na vidike pravičnosti pri obdavčevanju dohodka fizičnih oseb, in da je davek od dohodka fizičnih oseb treba analizirati skupaj s PSV-ji v smislu dohodninskih reform in uravnilovke med učinkovitostjo in pravičnostjo. V primeru Federacije BiH je mogoče povečati ukrepe za doseganje učinkovitosti in progresivnosti, ki kažejo, da je reformo davka od dohodka fizičnih oseb treba združiti z reformo PSV-jev, kar bi bila edinstvena reformna rešitev.