

# Tax Reform in Latvia

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Pētījums nodokļu sistēmas pilnveidošanas jomā

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## Executive Summary

The research reported here offers an analysis the Latvian tax-benefit system from the point of view of fairness, redistribution, progressivity and work incentives within an EU member state context. Informed by a survey theoretical and empirical research a number of reforms aimed at addressing the low work incentives observed in the Latvian tax-benefit system are analysed using the EUROMOD micro-simulation model based on EU-SILC data. Also analysed are possible reforms of the property tax.

The results of the research were presented on 14th May at a seminar held at the Ministry of Economics. Participants at the seminar included experts from the Economics Ministry, the Finance Ministry, the Ministry of Welfare and the Ministry of Environmental Protection and Regional Development. Taking into account that the research was based the results of theoretical and empirical literature and implemented using the EUOMOD microsimulation model based on EU-SILC data it was deemed important to seek the opinions of experts from the ministries in order to understand the effectiveness of proposed reforms from a practical standpoint. The presentation resulted in extensive discussion and valuable suggestions from the participants which have been taken into account in this final version of the research results. In particular the clarifications and improvements have been made in the areas of progressivity indicators e.g. the Kakwani index, indicators of work incentives e.g. marginal effect tax rates and participation tax rates and especially clarification of property tax data and analysis. Generally the comments of the experts have contributed to enhancing the coherence of the report.

The following summarises the results by chapter.

**Chapter 1** addresses the task defined by (TS 2.2.1.2.2) and provides a detailed overview of tax systems in the EU and Latvia There is a particular focus on comparison with a set of comparator countries which consist of: the three Baltic states; two countries with a high overall tax share: France and Sweden; three countries where the overall tax share is low: Poland, Bulgaria and Ireland; and Germany where the tax share is close to the EU-27 average. The chapter offers a comparison of the tax systems of the EU member states with respect to the following features:

- The overall distribution and structure of tax revenues including revenue structure by type of tax (direct indirect) and by type of tax base (labour, consumption)
- Analysis of the dynamics of tax structures over 2004-2011
- The detailed characteristics of labour taxation: the personal income tax and social taxes or contributions
- Taxation of consumption in particular the VAT
- Taxation of property and capital

### Key observations are:

- The overall country distribution tax revenues as a share of GDP has been very stable
- The EU27 average share of taxation as a share of GDP has risen marginally from 38.6% in 2004 to 39.6 in 2012. Denmark, Sweden, Belgium, France, Finland, Austria and Italy have the highest tax revenue/GDP ratios in 2012 and these are the only countries with a tax share in excess of the EU average in both 2004 and 2012.
- Romania, Lithuania, Latvia, and Ireland are in the bottom 6 in both years. Estonia and Portugal who were in the bottom 6 in 2004 have been replaced by Bulgaria and Slovakia in 2012.

- The composition of taxes has however changed quite considerably and for the selected comparator countries particularly large shifts were observed in Bulgaria and Lithuania and to a lesser extent in Estonia, Ireland and Latvia. Larger tax shifts were observed in 2008-2011 than in 2004-2008.
- Tax systems remain very diverse across the EU: e.g. revenues from capital taxation vary from a low of 2.1% of GDP in Lithuania to 10% or over in UK, France, Italy and Luxembourg; the number of different personal income tax bands vary from just one in Hungary and Bulgaria (pure flat tax) to 7 in Portugal and no less than 19 in Luxembourg; the share of property tax in total tax revenues varies from less than 1% in Estonia, Austria, the Czech Republic, Greece and Luxembourg to 3.4% in the UK and 2.4% in France.

**Chapter 2** surveys theoretical and empirical research on change/reform of tax benefit systems (TS 2.2.1.2.5) and the implications of this research for possible reform directions (TS 2.2.1.2.6) as well as a review of theoretical and empirical research specifically devoted to property taxation (TS 2.2.2.2.1).

The single most important publication of the last 10 years in the area of tax systems and their design is the Mirrlees Review whose recommendations about a good tax system include:

- Ideally, the tax system should be considered as a whole e.g. from the point of view of degree of progressivity
- The tax system should be neutral: similar activities should be treated in similar ways.
- The direct tax and benefit system is appropriate instrument for achieving distributional objectives.
- Merging of personal income tax and social contributions into a single income tax is a desirable long term aim.
- A desirable effective tax schedule is one that strengthens work incentives where they are most effective e.g. lower effective tax rates for groups that have a high labour supply elasticity
- For taxation of income the recommendation is: “a single tax on income with an allowance and two or three rates, combined with a single benefit to support those with low income and/or high needs”.
- It is argued that the economic case for taxing land is very strong but taxing buildings used for business is distortionary. By contrast residential buildings represent both a flow of consumption services and an investment and thus should be taxed accordingly: a housing services tax for consumption and rent or imputed rent for housing as an asset.

The detailed review of the empirical literature on work incentives and income distribution confirms that labour supply elasticities are high for particular groups such as low income/low skilled workers and hence an efficient tax/benefit system should concentrate on improving incentives for such persons. This leads to the following reform proposals for Latvia:

- Progression in the personal tax allowance
- In-work benefit in the form of a modified withdrawal of means tested benefit
- Introduction of a higher rate income tax band

The evidence on the progressivity of property taxes and their impact on inequality is mixed.

The degree of redistribution generated by the tax-benefit systems in Latvia and elsewhere in the in EU is addressed in **Chapter 3**. Also analysed are Marginal Effective Tax Rates (METR) in

Latvia and other EU countries. This chapter addresses tasks 2.2.1.2.1 and 2.2.1.2.4 of the Technical Specifications.

The main findings of this chapter are:

- The degree of redistribution ensured by the tax-benefit system in Latvia is one of the lowest in the EU
- There is a positive correlation between the degree of redistribution and METRs across the EU countries, i.e., greater redistribution corresponds to higher METRs. In Latvia, however, the average level of METRs is higher than one would predict given the low degree of redistribution.
- The main reason for relatively high METRs in Latvia as compared to other European countries, are high METRs faced by poor people. The distribution of *high* METRs (defined as METRs in excess of 50%) by deciles of disposable income in Latvia differs strikingly from most other European countries: in Latvia, all individuals facing high METRs belong to the first two deciles of income distribution (Estonia is the only other country with such a concentration of high METRs in the lowest deciles).
- The reason for high METRs faced by poor people is the way means-tested benefits are provided in Latvia. Means-tested benefits (GMI and housing benefit) are withdrawn at the same rate as income rises, hence, the recipients of means-tested benefits face METRs of 100%.
- Simulations of changes in the PIT system suggest that a reduction in PIT rate or an increase in the basic tax allowance do reduce the average METR. However, these reforms are not very effective in lowering METRs in the lowest deciles of the income distribution, because the lowest deciles contain a considerable numbers of non-employed people and pensioners.

**Chapter 4** evaluates the reforms proposed in Chapter 2, using the micro-simulation model EUROMOD-LV. This section addresses points TS 2.2.1.2.7, TS2.2.1.2.8, TS 2.2.1.2.9, TS 2.2.3.2.1, TS 2.2.3.2.2, and TS 2.2.3.2.3.

The aim of this chapter is to analyse a number of proposed reforms of the tax/benefit system with respect to their effect on competitiveness (as indicated by METRs and participation tax rates (PTRs)), income distribution, the poverty rate and budget revenues and expenditures. The following reforms are evaluated:

- A reform of provision of GMI and housing benefit, which allows an individual to receive a certain amount of income from employment before his/her benefit starts to be withdrawn
- The introduction of a progressive personal tax allowance
- The introduction of a higher rate income tax band

The main findings are:

- Reform of provision of means-tested benefits is most effective instrument targeting the poorest population groups is the. It reduces income inequality and reduces both the participation tax rate (PTR) and the METR in the lowest decile of income distribution
- Reforms of the basic tax allowance is effective in lowering METRs in the 2<sup>nd</sup> to the 6<sup>th</sup> deciles of income distribution, but METRs in the lowest decile are hardly affected
- Introduction of a higher rate income tax band, if accompanied by a sufficient reduction in the standard rate, results in modestly lower income inequality and is effective in lowering METRs in the middle deciles of the income distribution

- Reforms to means tested benefits come at a cost of local governments' budget balance deterioration of about EUR 20 m. The reforms of PIT are expected to reduce general government budget revenues by about EUR 120 m.

**Chapter 5** describes the property tax systems in selected EU countries (TS 2.2.2.2.2) and based on theory and practice proposes possible property tax reform directions (TS2.2.2.2.3).

Key results include:

- Revenues from taxes on immovable property are rather low. The EU average ratio to GDP is 1.5%. The only countries with revenue to GDP ratio in excess of this in 2012 were: UK (3.4% of GDP), France (2.4%), Denmark (2.1%), and Italy (1.6%).
- In Latvia, taxes on land buildings and other structures yielded 0.8% of GDP in 2012 which is about the same as in Sweden. By contrast revenues from such taxes yielded 0.3% of GDP in Estonia and Lithuania
- There is great diversity in the way property taxes are applied: in much of Western Europe and the Baltic states capital values form the tax base; in much of Eastern Europe property tax is area based, while in France and Belgium the tax base is imputed rents. Hybrid systems can be found in Italy, Hungary and UK.
- Many countries have special provisions for one or more of the following: low income persons, elderly persons, and second properties vs main residence.

**Chapter 6** offers an evaluation of possible reform using the micro-simulation approach (TS 2.2.2.2.4) and makes proposals for reform (TS 2.2.2.2.6).

Reforms evaluated include:

- A simple increase in tax rate
- The introduction of thresholds for payment of property tax e.g. no tax applied on properties with a cadastral value of less than EUR 5000.
- Taxing only high value properties (cadastral values in excess of EUR 10,671.54) at flat rate of 0.4%

Results include:

- The only simple rate increases and flat rate applied to high value properties have significant positive effects on revenues. A uniform doubling of the tax rate on residential property would increase revenues by EUR 20m.
- Introducing non-taxable thresholds improves progressivity
- None of the reforms has a significant effect on poverty and inequality indicators such as the poverty line or the Gini. This is essentially because property taxes and especially changes in them represent a rather small share of the incomes of most households.

## **TS nodevums 2.2.1.2.2: Nodokļu sistēmu salīdzinājums Latvijā un citās ES dalībvalstīs**

### **1. Tax systems in Latvia and other EU countries (TS 2.2.1.2.2)**

#### **1.1. Introduction**

This chapter offers a comparison of the tax systems of the EU member states with respect to the following features:

- The overall structure of tax revenues including revenue structure by type of tax (direct indirect) and by type of tax base (labour, consumption)
- The dynamics of tax composition for selected countries
- The detailed properties of labour taxation: the personal income tax and social taxes or contributions
- Taxation of consumption in particular the VAT
- Taxation of property and capital

For some purposes eight EU member states (in addition to Latvia) are selected for a detailed comparative analysis of tax structures. The comparator countries are:

- The three Baltic States
- Two countries with a high overall tax share: France and Sweden
- Three countries where the overall tax share is low: Poland, Bulgaria and Ireland
- Germany where the tax share is close to the EU-27 average.

*A clear general conclusion of this analysis is that tax systems are much diversified across the EU. For example:*

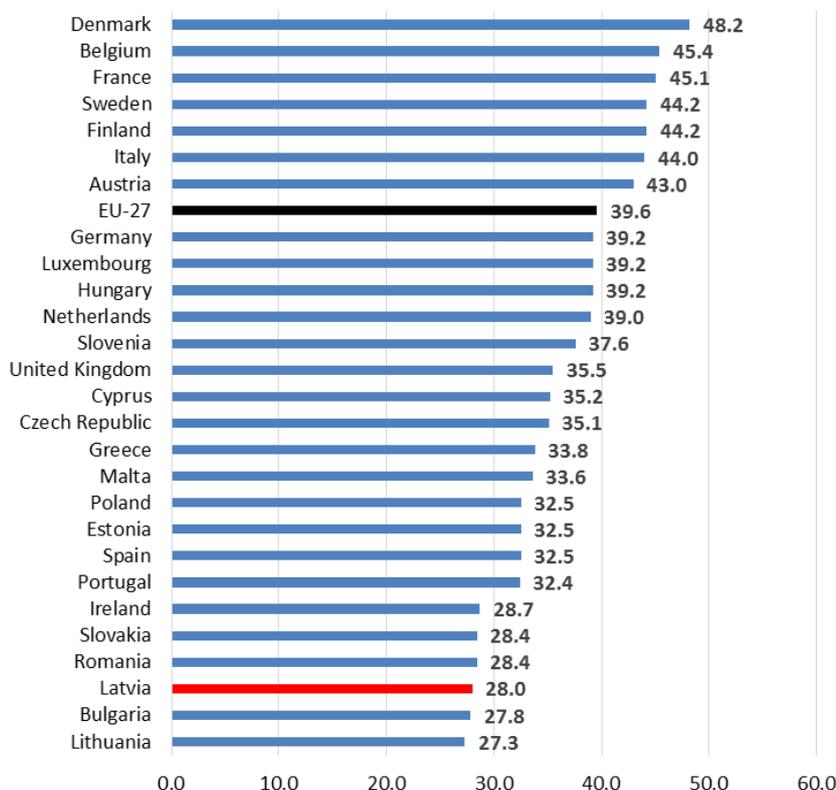
- in 2012 the share of tax revenues in GDP ranged from a high of nearly 48% in Denmark to a low of just over 27% in Lithuania
- the ranking of countries in terms of tax revenues as a share of GDP has remained rather stable over time
- revenues from capital taxation varied from a low of 2.1% of GDP in Lithuania to 10% or more in UK, France, Italy and Luxembourg
- the number of different personal income tax bands vary from just one in Hungary and Bulgaria (pure flat tax) to 7 in Portugal and no less than 19 in Luxembourg
- the share of property tax in total tax revenues varied from less than 1% in Estonia, Austria, the Czech Republic, Greece and Luxembourg to 3.4% in the UK and 2.4% in France.

None of this is surprising, because taxation remains a national competence within the European Union. However, it does provide a rich body of experience and evidence, which may be used to inform tax system reform.

## 1.2. The distribution of tax revenues as share of GDP by country in the EU-27

Figure 1.1 shows the distribution of total tax revenues as a percentage of GDP in 2012 and for comparison Figure 1.2 shows the same for 2004.

**Figure 1.1: Distribution of tax revenues (including social contributions) in EU-27 in 2012, % of GDP**



Note: Definition of total taxes is based on Eurostat methodology.

Source: Eurostat (online data code gov\_a\_tax\_ag) and authors' calculations

In 2012 overall tax-to-GDP ratio in the EU-27 amounted to 39.6% of EU-27 GDP but this indicator varied considerably between Member States, ranging from 27.3% in Lithuania to 48.2% in Denmark. Tax-to-GDP ratios are generally higher in the EU-15 countries. The highest tax ratios are generally observed in the richest countries. The first nine positions in terms of overall tax share in 2012 were occupied by EU-15 countries: Denmark, Belgium, France, Sweden, Finland, Italy, Austria, Germany, and Luxembourg. Exceptions were Ireland, whose tax ratio (28.7%) was sixth lowest in EU-27 and Spain (32.5%) with a tax ratio amongst 10 lowest in the EU.

The overall Latvian tax share in 2012 was 28.0% of GDP – the third lowest in the EU after Lithuania (27.3%) and Bulgaria (27.8%). In Estonia, the 2012 tax-to-GDP ratio (32.5%) was also below the EU-27 average (39.6%).

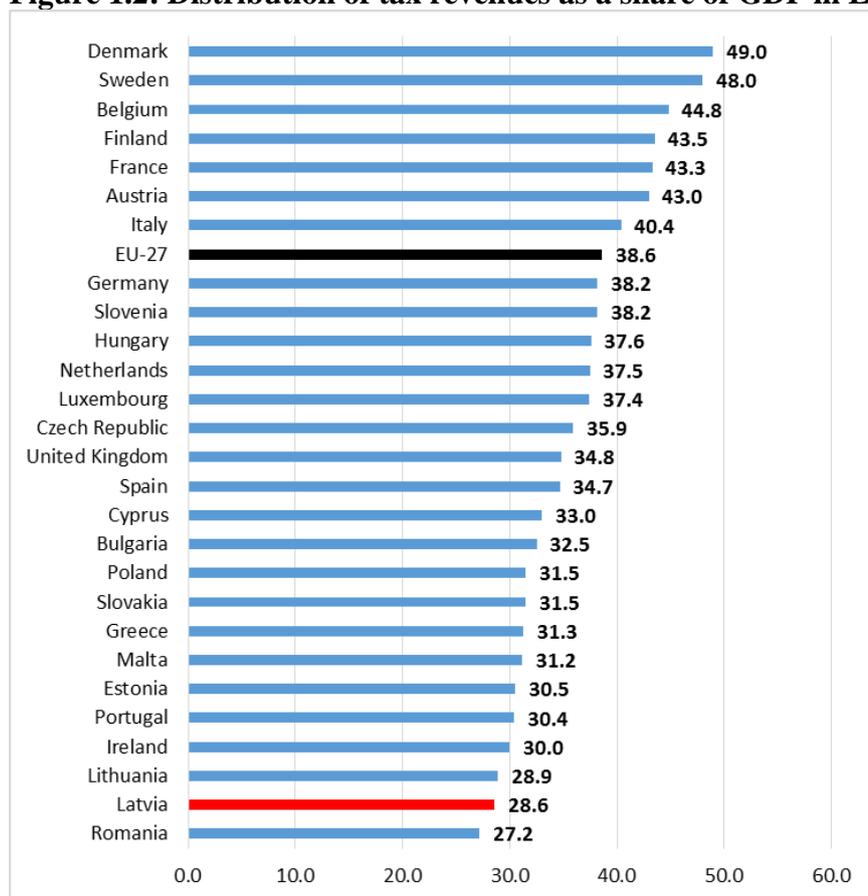
In 2012, the gap between the tax-to-GDP ratio in the Member States with the highest and the lowest tax ratios was almost 21 percentage points. In general, the main reasons for this diversity are: differences in tax structure (e.g. tax rates, tax base, thresholds, exemptions, etc.), differences in the efficiency of tax collection and possibly different levels of the shadow economy.

Figure 1.2 shows the tax shares as they were in 2004 where it is evident that not much has changed in the overall structure as between 2004 and 2012.

- The average share of taxes in 2004 was 38.6% (just one percentage point less than in 2012)

- The gap between the country with the top share and the one at the bottom was 1.8 percentage points (slightly higher than in 2012)
- The same 7 countries, Denmark, Sweden, Belgium, France, Finland, Austria and Italy were at the top of the table and were the only countries with a tax share in excess of the EU average.
- The picture at the bottom is also similar with Romania, Lithuania, Latvia, and Ireland all in the bottom 6 in both years. Estonia and Portugal who were in the bottom 6 in 2004 have been replaced by Bulgaria and Slovakia.

**Figure 1.2: Distribution of tax revenues as a share of GDP in EU-27 in 2004**



Note: Definition of total taxes is based on Eurostat methodology.

Source: Eurostat (online data code gov\_a\_tax\_ag) and authors' calculations

Countries with high taxation levels are typically the richest in the terms of GDP per capita (e.g. Sweden, France, Germany), while countries with a low tax-to-GDP ratio (e.g. Bulgaria, Poland, Latvia, Lithuania, Estonia) are amongst the poorest in EU-27 and this has not really changed between 2004 and 2012. The exception to this correlation is Ireland which is a rich country but has been consistently in the bottom 6 in terms of the overall share of taxes in GDP.

### 1.3. Revenue structure by type of tax

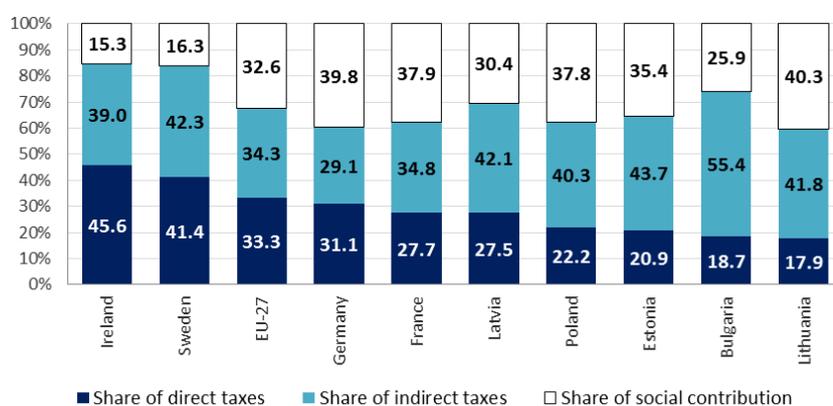
In this section we focus attention on the selected comparator countries: the three Baltic states, France and Sweden as high tax countries; Germany where tax share is close to the EU-27 average; and Bulgaria, Ireland and Poland as three low tax countries.

On average, EU-27 tax revenues in 2012 were evenly divided between the three major types of taxes: 33.3% was generated by direct taxes, 34.3% by indirect taxes and 32.6% by social contributions. However, considerable variation can be observed across the Member States (see Figure 1.3).

In particular, in the New Member States the largest contribution to total tax revenues in 2012 was made by indirect taxes. Thus in 2012 revenues from indirect taxes in Latvia represented 42.1% of total tax revenues, which is 7.8% points higher than EU-27 average (34.3%).

The tax structure in Ireland and Sweden is characterized by strong reliance on regular taxes rather than social contributions. Direct and indirect taxes made up 45.6% and 39.0% respectively in Ireland and 41.4% and 42.3% in Sweden, while the share of social contributions in total tax revenue was 15.3% in Ireland and 16.3% in Sweden as against 30%-40% in the other selected countries.

**Figure 1.3: Structure of revenues by major type of tax in 2012, % of total tax revenues for selected countries**



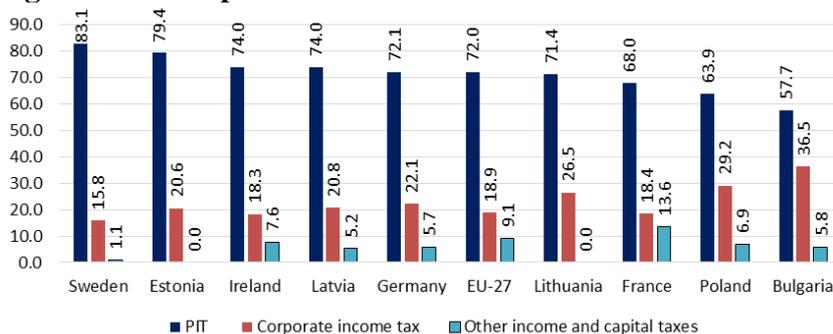
Note: (1) Definition of major types of tax is based on Eurostat methodology; (2) This includes amounts assessed but unlikely to be collected.

Source: Eurostat and authors' calculations

The share of direct taxes in total taxation appears to be higher in richer countries (i.e. Sweden, France, Germany and Ireland) while the lowest shares of direct taxes in total taxation were observed in Lithuania (only 17.9%) and Bulgaria (18.7%) (see Figure 1.3).

Personal income tax (PIT) generated 72.0% of direct tax revenues for the EU-27 as a whole (see Figure 1.4). Corporate tax made up around one fifth of direct tax revenues in the majority of EU-countries as a result of which the EU-27 average corporate tax share of total tax revenues was 18.9% in 2012. Other income and capital taxes play a limited but variable role: the share of these taxes was negligible in Estonia, Lithuania and Sweden but in the EU-27 9.1% of direct tax revenue was generated by other income and capital taxes. The Latvian structure is similar to the EU average but with a noticeably lower share of other income and capital taxes (5.2%).

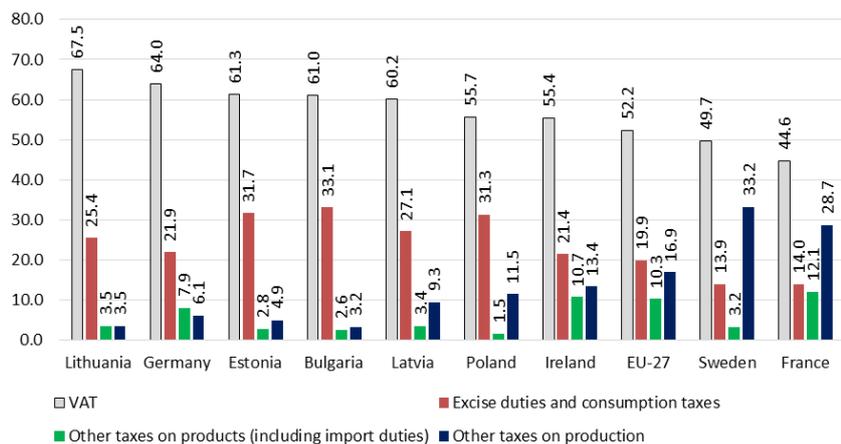
**Figure 1.4: Composition of revenues from direct taxes in 2012, %**



Source: Eurostat (gov\_a\_tax\_ag) and authors' calculations.

In the 12 new Member States indirect taxes represent the largest revenue source with the VAT component typically accounting for more than half of indirect tax revenues, resulting in an EU-27 average share of 52.2% (see Figure 1.5). However, non-VAT taxes are not negligible. Excise duties and other consumption taxes make up, on average, around one fifth of the revenue from indirect taxation in the EU-27, other taxes on products including import duties, on average, one tenth, and other taxes on production one sixth of indirect tax revenues. For Latvia and the other Baltic states the share of both VAT and excise duties in indirect taxes considerably exceeds the EU-27 average.

**Figure 1.5: Composition of revenues from indirect taxes in 2012, %**



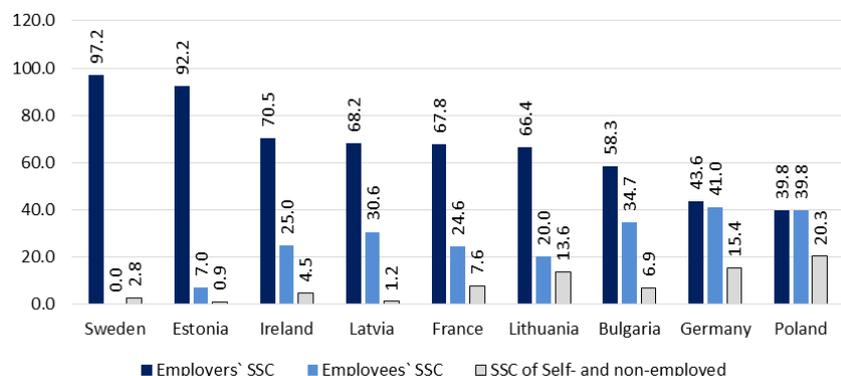
Source: Eurostat (gov\_a\_tax\_ag) and authors' calculations.

The structure of SSC paid by employers, employees, self-employed and non-employed varies considerably across the EU-27 (see Figure 1.6). For example, in 2012, employers' contributions in Estonia represented 92.2% of total SSC and in Sweden 97.2%, while in Ireland the share of employer paid SSC was just over 70%.

The highest proportion of SSC paid by employees among selected countries is in Poland (39.8% of total SSC) and Germany (41.0%), thus making SSC paid by employers and employees equally important in these countries. At 30.6% the share paid by employees in Latvia is also quite high.

A relatively high share of SSC paid by self-employed and non-employed in total SSC can be observed in Poland (20.3%), Germany (15.4%) and Lithuania (13.6%), while in Latvia SSC revenues from self-employed and unemployed are slightly above 1 percent.

**Figure 1.6: Composition of social contributions of different groups in 2012, as % of total social contributions revenues**

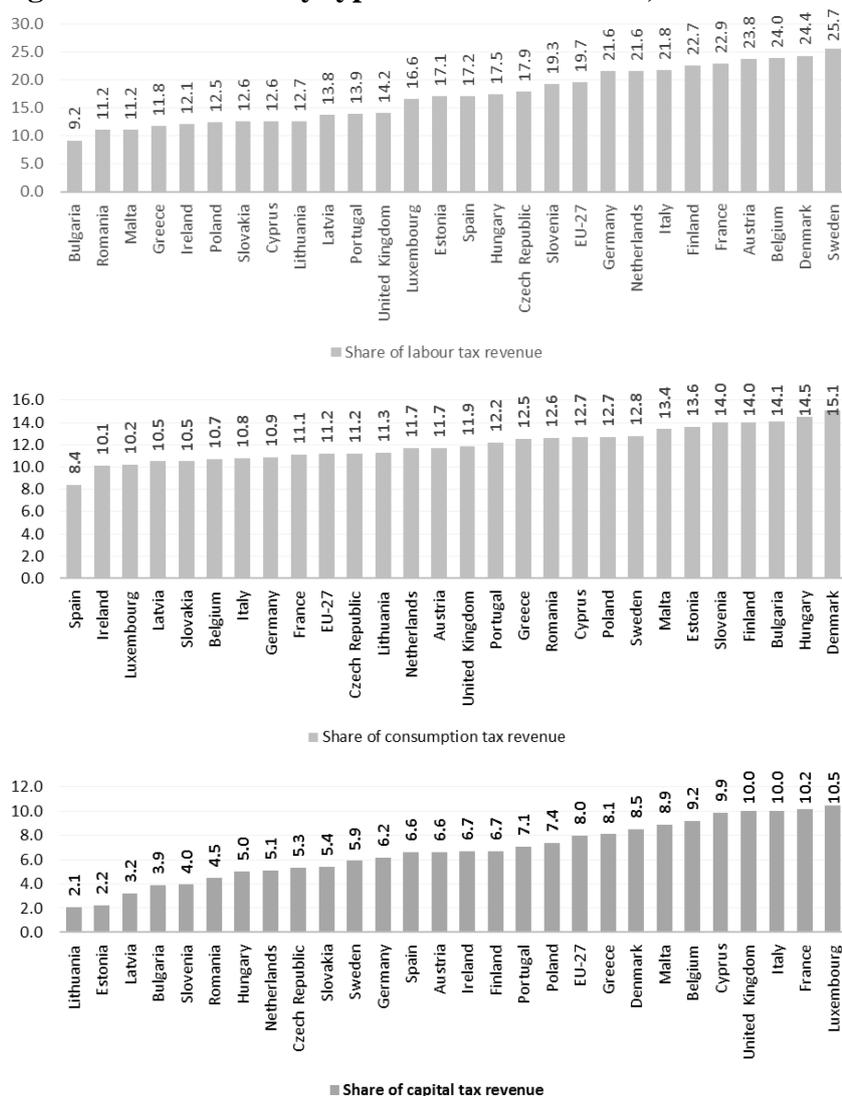


Source: Eurostat (gov\_a\_tax\_ag) and authors' calculations

## 1.4. Revenue structure by type of tax base

This section considers tax revenues by type of tax base i.e. labour consumption and capital. Revenue shares as a percentage of GDP in 2011 are shown in Figure 1.7.

**Figure 1.7: Revenue by type of tax base in 2011, % of GDP**



Source: Eurostat (gov\_a\_tax\_str)

The revenue share of labour taxation to GDP ranged from 25.7% in Sweden to 9.2% in Bulgaria. At 13.8% of GDP, Latvia's labour tax share was 5.9 percentage points below the EU-27 average (19.7%), whereas in Lithuania, the overall tax burden on labour was 12.7%. By contrast, in Estonia, the labour tax share was 17.1%,

Consumption tax revenues in relation to GDP ranged from 15.1% in Denmark to 8.4% in Spain. The ratio of consumption taxes to GDP in the Baltic states ranged from 10.5% in Latvia to 13.6% in Estonia as against an EU average of 11.2%.

In the Baltic states capital tax revenues as a share of GDP were the lowest in the EU with the 2.1% observed in Lithuania being the lowest and compares with the EU-27 average of 8.0% and more than 10% in the UK, Italy, France and Luxembourg. In Latvia and Estonia, the 2011 capital tax share amounted to 3.2% and 2.2% respectively.

## 1.5. Developments in the composition of taxes

While the country distribution of the overall share of taxes in GDP was rather stable between 2004 and 2012 this overall stability hides considerable changes in structure. This section examines the changes in tax composition for the comparator countries over the period from 2004 to 2011. For analytical purposes we divide the period into two: 2004 to 2008 (pre-crisis) and 2008-2011 (crisis and post crisis).

Two approaches are taken to developments in the tax structure: one is to examine changes in tax *rates* or tax *parameters* for key taxes and the other is to calculate changes in the share of different bases in total tax revenues. The former indicates the changes in policies while latter picks up the effect of changes in both tax rates and changing economic conditions.

Table 1.1 to Table 1.3 illustrate the main changes in tax parameters for VAT, personal income tax and corporate income tax for the comparator countries over 2004-2011 divided into the two sub-periods. It can be seen that in the first period standard rates of VAT were stable in all countries except Germany, while in the second sub-period there was considerably more policy activity with VAT rate increases in Poland, Bulgaria, Estonia, Lithuania and most notably in Latvia where the standard rate increased by 4 percentage points and the reduced rate by 7 percentage points

**Table 1.1: VAT Rates in Comparator Countries, 2004-2011, %**

Member State	VAT rate	2004	2005	2006	2007	2008	2009	2010	2011	Change 2004-2008	Change 2008-2011
Bulgaria	Standard	20	20	20	20	20	20	20	20	0	0
	Reduced	-	-	-	7	7	7	7	9		2
Germany	Standard	16	16	16	19	19	19	19	19	3	0
	Reduced	7	7	7	7	7	7	7	7	0	0
Estonia	Standard	18	18	18	18	18	20	20	20	0	2
	Reduced	5	5	5	5	5	9	9	9	0	4
Ireland	Standard	21	21	21	21	21	21.5	21	21	0	0
	Reduced	13.5 (4.4)	13.5 (4.8)	0.4	0						
France	Standard	19.6	19.6	19.6	19.6	19.6	19.6	19.6	19.6	0	0
	Reduced	5.5 (2.1)	0	0							
Latvia	Standard	18	18	18	18	18	21	21	22	0	4
	Reduced	5	5	5	5	5	10	10	12	0	7
Lithuania	Standard	18	18	18	18	18	19	21	21	0	3
	Reduced	5; 9	5; 9	5; 9	5; 9	5; 9	5; 9	5; 9	5; 9	0	0
Poland	Standard	22	22	22	22	22	22	22	23	0	1
	Reduced	7 (3)	5; 8.	0							
Sweden	Standard	25	25	25	25	25	25	25	25	0	0
	Reduced	6; 12	6; 12	6; 12	6; 12	6; 12	6; 12	6; 12	6; 12	0	0

Note: Super reduced rates (below 5% are shown in brackets).

Source: Eurostat (2013)

**Table 1.2: Top Personal Income Tax Rates 2004-2011, %**

Member State	2004	2005	2006	2007	2008	2009	2010	2011	Change 2004-2008	Change 2008-2011
Bulgaria	29	24	24	24	10*	10*	10*	10*	-19	0

Germany	47.5	44.3	44.3	47.5	47.5	47.5	47.5	47.5	0	0
Estonia	26*	24*	23*	22*	21*	21*	21*	21*	-5	0
Ireland	42	42	42	41	41	41	41	41	-1	0
France	53.4	53.5	45.8	45.8	45.8	45.8	45.8	46.7	-7.6	0.9
Latvia	25*	25*	25*	25*	25*	23*	26*	25*	0	0
Lithuania	33*	33*	27*	27*	24*	15*	15*	15*	-9	-9
Poland	40	40	40	40	40	32	32	32	0	-8
Sweden	56.5	56.6	56.6	56.6	56.4	56.5	56.6	56.6	-0.1	+0.2

Note: (1) Germany – including solidarity surcharge; France - including general social welfare contribution (CSG), which is partly deductible from PIT, and welfare debt repayment levy (CRDS); Sweden - state taxes plus municipality taxes.

(2) Figures\* represent a flat-rate tax

Source: Eurostat (2013)

**Table 1.3: Adjusted Top Statutory Tax Rate on Corporate Income 2004-2011, %**

Member State	2004	2005	2006	2007	2008	2009	2010	2011	Change 2004-2008	Change 2008-2011
Bulgaria	19.5	15.0	15.0	10.0	10.0	10.0	10.0	10.0	-9.5	0.0
Germany	38.3	38.7	38.7	38.7	29.8	29.8	29.8	29.8	-8.5	0.0
Estonia	26.0	24.0	23.0	22.0	21.0	21.0	21.0	21.0	-5.0	0.0
Ireland	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	0.0	0.0
France	35.4	35.0	34.4	34.4	34.4	34.4	34.4	34.4	-1.0	0.0
Latvia	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0	0.0
Lithuania	15.0	15.0	19.0	18.0	15.0	20.0	15.0	15.0	0.0	0.0
Poland	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	0.0	0.0
Sweden	28.0	28.0	28.0	28.0	28.0	26.3	26.3	26.3	0.0	-1.7

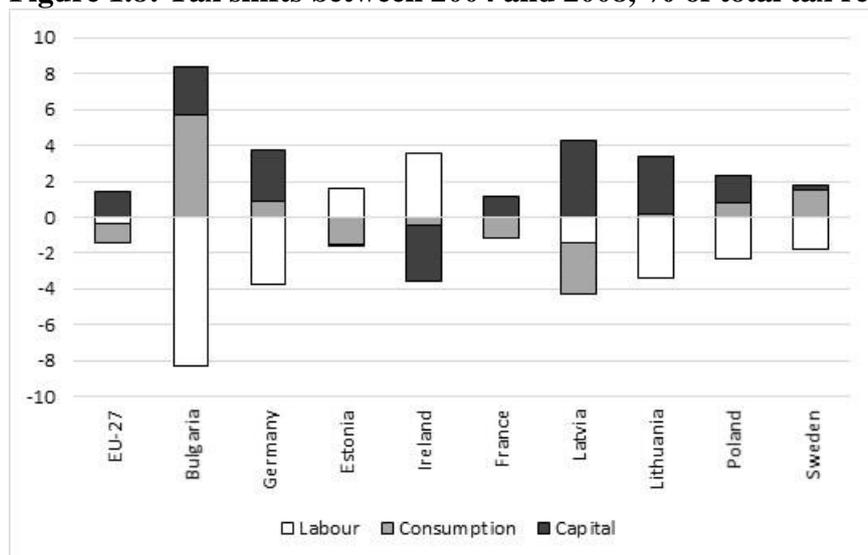
Source: Eurostat (2013)

By contrast the selected countries were much more active in cutting personal income tax and corporate income tax, mainly in the first sub-period. Thus in 2007 Bulgaria cut its top personal income tax rate from 29% to a flat 10% and corporate income tax by 9.5 percentage points to also 10%. Other notably active income tax cutting countries were France and Estonia.

### 1.5.1 Tax shifts over 2004-2008

Figure 1.8 illustrates the tax shifts (change in share of revenues by tax base) observed in the group of comparator countries between 2004 and 2008. The observed shifts can be interpreted as driven either by changes in tax policy or by cyclical developments (or both).

**Figure 1.8: Tax shifts between 2004 and 2008, % of total tax revenues**



Note: The tax shift is measured by the change of the revenue share by economic category in total taxation

Source: Eurostat (gov\_a\_tax\_str), (gov\_a\_tax\_ag) and authors' calculations

It can be seen that for the EU-27 on average only a modest change in the composition of tax receipts was observed: the capital share in total taxation increased by 1.4 percentage points, while the share of labour and consumption taxation decreased by 0.4 and 1.0 percentage points respectively.

The most significant common feature is the increased share of revenues from capital taxes (with the exception of Estonia where the corporate income tax was reduced), very likely as a result of the boom.

Among the comparator countries the biggest tax shift was observed in Bulgaria with a big increase in the share of consumption and capital taxes at the expense of taxes on labour. This was largely policy induced (large reduction in the PIT rate).

By contrast, in Latvia there were no major tax reforms in 2004-8 and the observed increase in the share of capital taxes could be the result of the economic cycle.

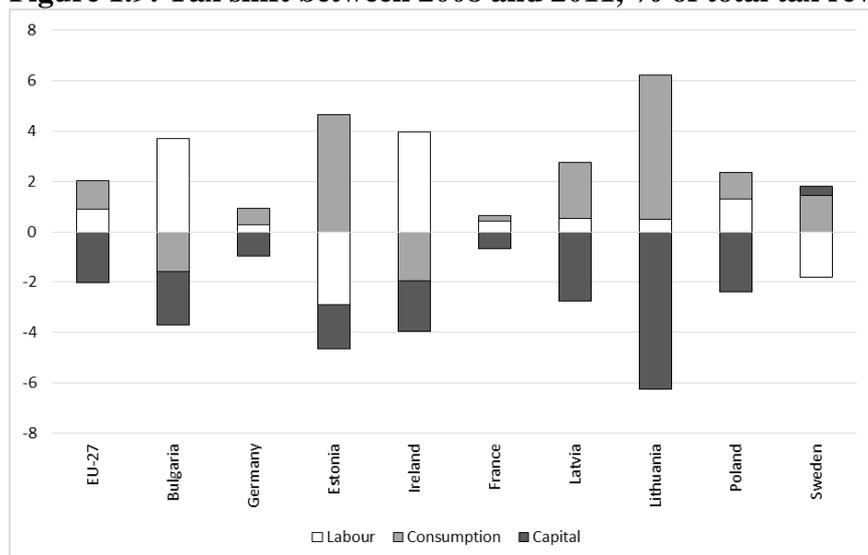
In Germany a number of reforms were implemented between 2004 and 2008 which shifted part of the income tax burden from private individuals to businesses.

In France and Sweden (two high tax countries) the observed tax shifts were rather modest as was the case in Estonia.

### 1.5.2 Tax shifts over 2008-2011

Figure 1.9 tax shows that shifts between 2008 and 2011, i.e. over the crisis, were generally larger in the selected comparator countries than observed before 2008.

**Figure 1.9: Tax shift between 2008 and 2011, % of total tax revenues**



Note: The tax shift is measured by the change of the revenue share by economic function in total taxation

Source: Eurostat (*gov\_a\_tax\_str*), (*gov\_a\_tax\_ag*) and authors' calculations

The most notable general tendency was a shift towards consumption and labour and away from capital, i.e. in the opposite direction as compared with 2004-2008. In the high taxation comparator countries a smaller change in tax composition was observed than in Baltic States and other low tax burden comparator countries. In Ireland and Bulgaria the share of taxes on labour increased largely as a result of the reduction of tax credits and changes in the rate band (Ireland) and the removal of personal allowance and dependents tax allowances (Bulgaria) which in revenue terms offset the headline, reduction in the Bulgarian PIT rate.

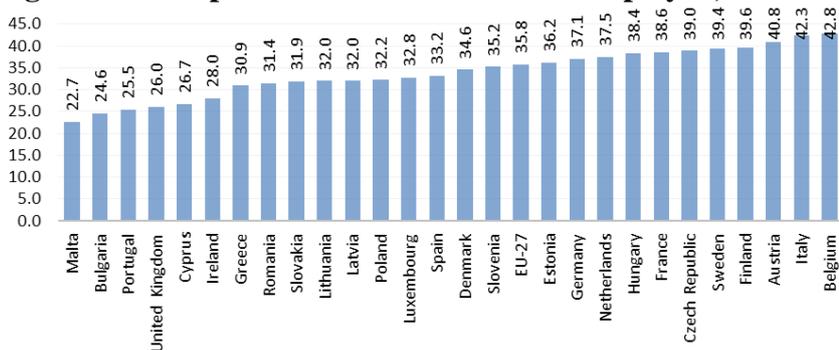
In Lithuania, the large observed shift in the share of taxes paid towards consumption and away from capital was the result of two increases in VAT and the near abolition of reduced rates of VAT as well as significant increases excise duties on fuel, tobacco products and alcoholic beverages in 2009.

## 1.6. Labour taxation

This section considers in some detail the diversity of labour taxation in the EU, focussing on the main taxes on labour: the personal income tax (PIT) and social security contributions (SSC) or social taxes.

An indicator of the overall importance of taxes on labour is the implicit tax rate on labour (ITR) i.e. *the ratio of total tax revenues from labour taxation to the potential tax base*. Figure 1.10 illustrates ITRs for EU Member state in 2011. In 2011, the GDP-weighted average ITR on labour in the EU-27 was 35.8%. ITRs on labour in 2011 ranged from 22.7% in Malta to 42.8% in Belgium.

**Figure 1.10: Implicit Tax Rate on Labour Employed, 2011**



Source: Eurostat (gov\_a\_tax\_itr)

The ITR on labour in Latvia and Lithuania at 32.0% was 3.8 percentage points below the EU-27 average (35.8%) while in Estonia it was 36.2%, i.e. above the average EU-27 level and close to that in Germany (37.1%).

### 1.6.1 Personal Income tax

This section documents the complexities and diversity of the personal income tax in EU member states. The structure of a country's personal income tax system can be described in terms of two basic type of parameter: one is the level of income which is not subject to the personal income tax, this is the *basic tax allowance* and the other is the *schedule of tax rates* at which taxable income is taxed<sup>1</sup>. The parameters are described in Table 1.4 for the EU-27.

#### PIT allowances and rates in the EU-27 Member States, 2013

Notable features of tax schedules include the following:

- All three Baltic states apply a marginal flat tax rate system<sup>2</sup> to the PIT, i.e. a single flat rate is applied for income above the basic allowance. PIT rates in the Baltic states vary from 15% in Lithuania, to 21% in Estonia and 24% in Latvia. Romania also has the same structure but with a single rate of 16%.
- Currently Bulgaria and Hungary are the only Member States of the EU-27, where there is no basic allowance and hence they apply a true flat rate system of PIT
- Five countries: the Czech Republic, Ireland, Poland, Slovakia and Sweden apply two tax bands to the PIT for income above the basic allowance, while four countries – Austria, Denmark, Greece and the UK – apply three rates. The remainder apply four or more with Spain and Portugal applying rates and Luxembourg no less than 19.
- Germany has an incrementally rising tax schedule over the range 14%-45%.
- Sweden has a dual income tax system: the national income tax and a municipal income tax. Combining the two implies a top statutory tax rate of 56.73%.
- In Ireland in addition to the PIT, all individuals are liable for a variable Universal Social Charge if their annual gross income exceeds the threshold of EUR 10,036.
- The highest top statutory income tax rates are in Belgium (53.7%), Denmark (56.2%) and Sweden (56.73%).

<sup>1</sup> As will be clear below actual taxes systems can be extremely complex but in general the complexity can be described in terms of allowances and rate schedules

<sup>2</sup> A marginal flat tax is progressive at lower level of income (which is ensured by allowances) and turns flat as income increases. Source: <http://termsexplained.com/567436/flat-tax>

Table 1.4 also shows the basic allowances across EU Member States in both money terms and in relation to average gross earnings. The main features are:

- The basic yearly allowance is zero only in Bulgaria and Hungary, i.e. a true flat rate system of PIT is applied.
- The highest basic allowance in relation to average earnings is in Cyprus (73.6%). Greece, Malta, and the Czech Republic also have a high basic allowance relative to earnings.
- Personal allowances at less than 10% of average earnings are observed in: Poland, Sweden, Finland, Denmark and Latvia
- In Lithuania, the tax exempt amount is determined on a sliding scale, declining as income increases: thus depending on income, the basic allowance varies from 19.9% to 0.0% when monthly income exceeds EUR 910. Romania, Sweden, UK, Netherlands, Slovenia and Italy are other countries where the size of the basic allowance depends on income.

**Table 1.4: PIT rates for employment income, number of tax bands and basic yearly allowance, % of average annual gross earnings in the state, EU- 27, 2013**

	Country	Tax rates	Basic yearly allowance	Basic yearly allowance as % of average annual gross earnings for the most recent year available
1	Bulgaria	10.0%	Absent	0.0%
	Estonia	21.0%	EUR 1,728.00	15.3%
	Hungary	16.0%	Absent	0.0%
	Latvia	24.0%	EUR 768.35	8.6%
	Lithuania	15.0%	EUR 1,633, if the annual gross income of individuals does not exceed EUR 2,780, thereafter the tax-exempt amount is gradually reduced until annual gross income amounts to EUR 10,920, where no basic personal allowance is granted.	19.9% - 0.0%
	Romania	16.0%	EUR 669.60, but individuals earning more than EUR 8,042 are not entitled to the personal allowance <sup>3</sup> ;	11.1%-0.0%
	Czech Republic	15.0%–22.0%	The basic yearly credit EUR 903.34.	51.7%
2	Ireland	20.0% - 41.0%	A single employed income earner is entitled to the basic yearly personal tax credit of EUR 1,650 and the employee tax credit of EUR 1,650.00.	45.7%
	Poland	18.0% - 32.0%	Tax credit EUR 125	6.4%
	Slovakia	19.0% - 25.0%	EUR 3,735.94	36.6%
	Sweden	51.73%-56.73%	Varies from EUR 3,830.09 to EUR 1,462.80 depending on earned income.	8.8% - 3.3%
	Austria	36.5% - 50.0%	EUR 11,000	38.2%
3	Denmark	8.0% - 56.2%	The personal allowance of EUR 5 637 and the employment allowance (earned income tax credit) of 6.95 % with a maximum of EUR 2 993 is deducted.	16.8%
	Greece	22.0% - 42.0%	Tax credit of EUR 2,100 exists for taxable income up to EUR 21,000; for income above EUR 21,000, the credit is reduced by EUR 100 for each EUR 1,000 of income whilst no credit is granted for taxable income beyond EUR 42,000.	70.7% - 0.0%
	UK	20.0% - 50.0%	EUR 9,675.88. The personal allowance is tapered down by GBP 1 for ever GBP 2 of income for	34.4% - 0.0%

<sup>3</sup> CFE (2014). Personal Income Tax in Romania. Accessed at <http://www.cfe-eutax.org/taxation/personal-income-tax/romania>

Number of tax bands (beside the basic allowance)	Country	Tax rates	Basic yearly allowance	Basic yearly allowance as % of average annual gross earnings for the most recent year available
			individuals with total income over EUR 120,492, from EUR 9,675.88 of personal allowance to EUR 0 where income exceeds EUR 140,024.	
	Cyprus	20.0% - 35.0%	EUR 19,500.	73.6%
	Netherlands	37.0% - 52.0%	Basic yearly tax credit of EUR 2,011. Additional Earned Income Tax Credit max EUR 1,723, from an income of EUR 40,428 gradually declining to EUR 550.	27.4% - 18.8%
4	Malta	15.0% - 35.0%	EUR 8,500 for a single individual	54.8%
	Slovenia	16.0% - 50.0%	EUR 6,519.82 for residents with active income up to EUR 10,866.37, EUR 4,418.64 for residents with active income more than EUR 10,866.37 and up to EUR 12,570.89, EUR 3,302.70 for resident with active income more than EUR 12,570.89.	35.4% - 17.9%
	Belgium	25.0% - 53.7%	EUR 6,800	18.2%
5	Finland	25.88% - 51.13%	The maximum amount, EUR 2,880, is reduced by 20 % of income exceeding EUR 2,880.	7.5% - 0.0 %
	France	5.5% - 45.0%	EUR 5,963	18.7%
6	Italy	23.0% - 43.0%	Tax credits for employed without children: Gross Income up to EUR 8,000 - .EUR 1,840; from EUR 8,001 to EUR 55,000 - EUR 1,840 decreasing with income; Over EUR 55,000 - EUR 0	25.2% - 0%
7	Portugal	14.5% - 53.0%	Tax credit for a single person EUR 213.75	7.6%
	Spain	24.75% - 52.00%	EUR 5,151 for a single individual	22.7%
19	Luxembourg	8.0% - 49.0%	EUR 11'264	21.9%
Tax rate rising incrementally	Germany	14.0% - 47.5%	EUR 8,130 for a single individual	18.4%

Source: "Taxes in Europe - Tax reforms" database, Eurostat

Another parameter of the PIT system is the tax treatment of married couples. Table 1.5 shows that in 2013 joint taxation of income of households was applied in 8 Member States and married couples were taxed separately in the other countries.

**Table 1.5: Taxation of employment incomes of married couples in EU-27, 2013**

Employment incomes of married couples are taxed:	Countries
Jointly	France, Germany, Ireland, Luxembourg, Malta, Poland, Portugal, Spain.
Separately	Austria, Belgium, Bulgaria, Czech Republic, Cyprus, Denmark, Estonia, Finland, Greece, Hungary, Italy, Latvia, Lithuania, Netherlands, Romania, Sweden, Slovakia, Slovenia, UK.

Source: "Taxes in Europe - Tax reforms" database, Eurostat

However specific rules apply in some cases:

- In the Czech Republic, although married couples are taxed separately, an additional basic allowance is granted if a spouse is living in the taxpayer's household and with an income of less than a certain limit.
- In Denmark, where separate taxation of married couples is applied, the transfer of unused personal allowance between spouses is allowed.

- In France the tax unit is the household: the natural person, his or her spouse, their children and other dependents. Family incomes are aggregated, but the aggregate income is divided by a number of points, awarded on the basis of the taxpayer's family situation: the family quotient. The tax benefit from this income splitting system is capped.
- In Germany spouses living together are in general jointly assessed, their combined personal allowance being double the EUR 8,130 for single persons. Husband and wife each pay income tax on half the total of their combined incomes.
- Married couples in Ireland may opt to be assessed in any of the following ways: assessment of each spouse as a single person; joint taxation, or separate taxation with the tax payable apportioned between the spouses
- In Poland married couples may, at request, be taxed jointly. PIT is assessed on behalf of both spouses in an amount equal to double the tax applied for half of the joint taxable incomes of the spouses.

Further parameters of the income tax system include additional allowances for children/dependants, and taxation of pensions. Key features include:

- In most countries an additional tax allowance applies to taxpayers with at least one child. In Latvia this allowance is LVL 960 (EUR 1366) for each child per year, in Lithuania for the first child - LTL 1200 (EUR 344) per year and two times more for the second and each additional child. In Estonia, the allowance is the largest in the Baltic states at EUR 1728 per year, but it is granted starting from the 2<sup>nd</sup> child. In Bulgaria, Ireland, France and Sweden there are no additional child allowances.
- In Latvia all pension payments determined under the State Pension Law are taxable to the extent that they exceed LVL 1,980 (EUR 2,839) per year. In Estonia state pensions enjoy an additional allowance of EUR 2,300 and as a result the non-taxable amount is EUR 4,028 per year.
- In Lithuania pensions and annuity payments received from the Lithuanian state budget, municipal and State Social Insurance Fund budgets as well as from foreign state funds are considered as non-taxable income under the provisions of the Law<sup>4</sup>.
- Some countries apply special rules for older persons e.g. in Ireland individuals over 65 years are exempt from income tax if their gross income, before deductions, does not exceed EUR 18,000 for single or widowed persons and EUR 36,000 for a married couple while Sweden applies a higher basic tax allowance for individuals over 65.

Other deductions from PIT in many EU-27 Member States include expenditures (typically subject to a ceiling) on:

- education,
- medical expenses,
- housing loan interest,
- contributions to supplementary pension
- health insurance and life insurance funds

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<sup>4</sup> [http://ec.europa.eu/taxation\\_customs/tedb/taxDetail.html?id=380/1357119849&taxType=PIT](http://ec.europa.eu/taxation_customs/tedb/taxDetail.html?id=380/1357119849&taxType=PIT)

### Beneficiaries of the PIT in the EU-27, 2013

The revenues from PIT are usually shared between the central and local government, although the distribution of the revenues considerably differs amongst the Member States.

In Latvia 80% of PIT accrues to the local government budget of the place of residence of the payer; and 20% accrues to the state basic budget. The Lithuanian PIT allocation is similar to the Latvian: 27.71% of personal income tax is allocated to the state budget and 72.29% is allocated to municipalities. In Estonia in 2013 11.57% of the taxable income of a resident natural person was allocated to local government, representing 70.2% of PIT revenues.

In Ireland and Bulgaria the beneficiary of PIT is the central government. While in France and Sweden revenues from national PIT is allocated to the central government budget, while revenues from local income tax go to the municipality and the county.

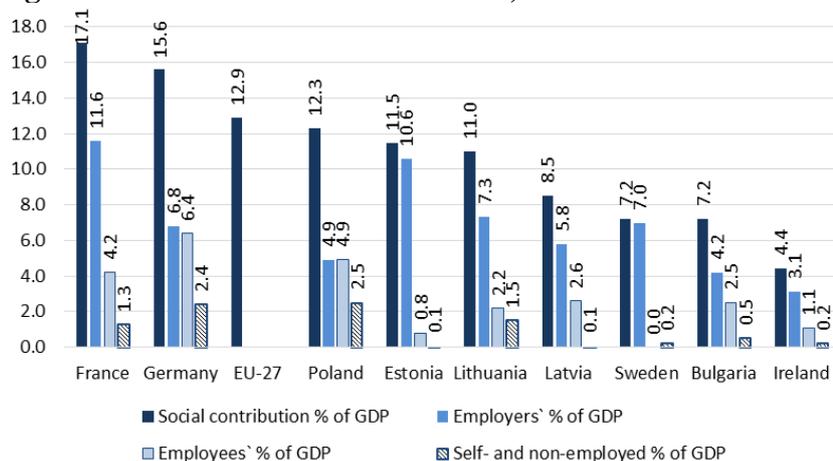
In Poland, PIT is almost evenly divided between local and state budgets: a share of 49.27% of the revenues from PIT accrues to the local authority, all the rest is allocated to the state budget.

In Germany, the beneficiaries of personal income tax are central and regional authorities, each receiving 42.5% of tax revenue, whilst the local authorities, i.e. municipalities are entitled to a share of 15%.

### **1.6.2 Social security contributions**

As with the PIT social security contributions vary considerably across the EU member states. Figure 1.11 shows the distribution of revenues from social security contributions for the representative selection of EU comparator countries. It can be seen that in 2012 in the selected comparator countries the highest overall revenue from SSC as a share of GDP is in France at 17.1% and the lowest at 4.4% was in Ireland. The EU-27 average in 2012 was 12.9%.

**Figure 1.11: SSC revenues % of GDP, 2012**



Source: Eurostat (gov\_a\_tax\_ag) and authors' calculations

Differences in revenue are a result of differences in the structure and level of social security rates. The key features of social security contributions in 2012 include:

- Lithuania exhibits the highest total social contribution rate at 39.8% that is almost 5 percentage points higher than in Latvia (35.09%), and almost 4 percentage points above the Estonian total rate (36.0% in 2013 and 37.2% in 2012).
- The Estonian social tax consists mainly of employer contributions leading to the highest rate applied to employers (34.0% in Estonia, 30.8% in Lithuania, 24.09% in Latvia in 2013).

- The highest rate of SSC payable by employees in 2013 was applied in Latvia (11.0%), while Lithuanian employees pay 9.0% of earned income and Estonian employees paid only 2%.
- The overall social tax rate in Sweden was 38.42%.
- The French social tax depends on the size of enterprise where the employee works and earned amount, ranging from 28.0% (at the minimum wage, in SMEs with less than 20 workers) to 53.7%. At 17.1% the highest ratio of SSC revenues to GDP was in France.
- In Germany, the overall SSC rate for all types of risk is 39.45% paid for persons with children and 39.7% for those without children. The share of SSC in GDP in both France (17.1%) and Germany (15.6%) exceeds the EU-27 average (12.9%).
- In Poland, the overall rate for all types of risk is was 33.3%, of which 19.59% is contributed by the employer and 13.71% by employees resulting in equal shares of revenue to GDP at 4.9%.
- In Bulgaria, the overall social tax, at 31.4%, was below the rates in all Baltic states.
- A significantly lower rate of social tax was applied in Ireland, where the overall social tax is 14.75% resulting in low revenues relative to GDP.

#### Ceilings on application of SSC in EU-27, 2013

In 16 out of 27 Member States the SSC are or have been capped for employers, employee or for overall social tax. In 2013, none of the Baltic States applied a ceiling on the size of annual assessment of SSC. From 2014, the maximum annual base for SSC in Latvia has been set at EUR 46,400, which is equivalent to 522% of the average annual gross wage for the most recent year available. Ireland is among the 11 Member States, where no ceiling was applied in 2013. Table 1.6 illustrates.

The highest ceiling is set in Poland for contributions to the old-age pension scheme and disability insurance, paid by both employer and employee, and equals to 30 times (or 3000%) of average annual gross wage. The lowest ceiling in relation to average annual gross earnings is set for SSC paid by employees for pension insurance in Sweden at annual incomes of EUR 50,625 or 115.8% of average annual gross earnings, while in Sweden there is no ceiling for employer SSC.

In France social contributions to unemployment insurance are capped for both the employer and employee: the annual ceiling is a gross income of EUR 148,128 or 464.5% of average annual gross earnings. The ceiling for pension insurance is EUR 111,096 or 348.4% of average annual gross wage.

In Bulgaria, the maximum annual base 2013 was set at the equivalent of 276.5% of average annual gross earnings.

In Germany contributions to pension insurance, unemployment insurance, health insurance and long-term nursing care insurance are capped for both the employer and the employee in monetary units and in 2013 represented 157.2%, 157.2%, 106.7% and 106.7% of average annual gross earnings respectively.

**Table 1.6: SSC annual assessment limit, EUR and % of average annual gross earnings for the most recent year available, 2013**

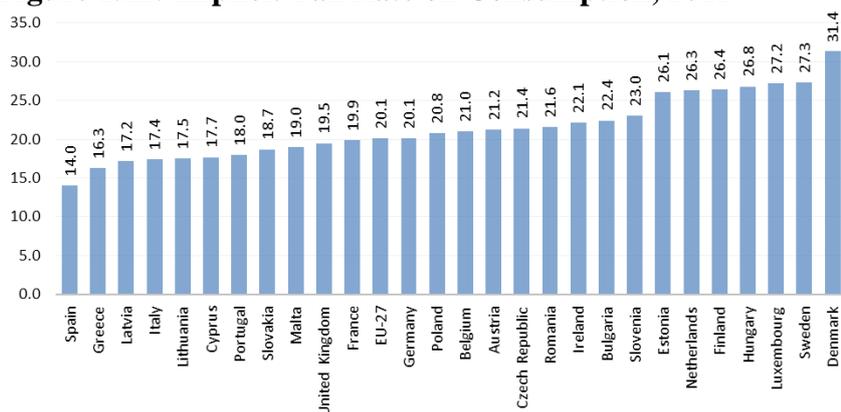
Country	SSC annual assessment limit	Annual assessment limit as % of average annual gross earnings for the most recent year available
Austria	EUR 62,160	216.1%
Bulgaria	EUR 13,500	276.5%
Czech	4 times the average annual gross earnings	400.0%

Country	SSC annual assessment limit	Annual assessment limit as % of average annual gross earnings for the most recent year available
Republic Cyprus	EUR 52,104	196.5%
France	Contribution to unemployment insurance is capped at EUR 148,128 for both the employer and employee; the ceiling for pension insurance at EUR 111,096 is set for employers SSC.	464.5% (for unemployment insurance); 348.4% (for pension insurance set for employers' SSC);
Germany	Contributions to pension insurance (EUR 69,600), unemployment insurance (EUR 69,600), health insurance (EUR 47,250) and long-term nursing care insurance (EUR 47,250) are capped for both the employer and the employee.	157, 2% (both pension insurance and unemployment insurance) and 106, 7% (for health insurance and long-term nursing care insurance).
Greece	EUR 66,522.6	492.8%
Italy	EUR 96,149.	302.4%
Luxembourg	5 times the minimum wage. The annual ceiling for 2013 is EUR 112,451.88.	218.9%
Malta	EUR 23,616	152.3%
Netherlands	Employers` SSC to health insurance maximum assessment limit - EUR 50,853.	138.0%
Poland	30 times an average annual gross earnings (a ceiling on contributions to the old-age pension scheme and disability insurance, paid by both employer and employee).	3000%
Romania	Employers` SSC is capped at 5 times the average annual gross earnings	500.0%
Slovakia	5 times the average annual gross earnings	500.0%
Spain	EUR 41,108.4	181.2%
Sweden	SSC of employees (contribution to pension insurance) is paid on annual incomes up to EUR 50,625. There is not a ceiling for SSC of employers.	115.8%
Belgium	No ceiling is set.	
Denmark	Most of the employer SSC liability is set at fixed amount. The SSC of employees is not capped	
Estonia	No ceiling is set	
Finland	No ceiling is set	
Hungary	No ceiling is set	
Ireland	No ceiling is set	
Latvia	No ceiling in 2013. From 2014, maximum annual base is EUR 46,400.	522% from 2014
Lithuania	No ceiling is set	
Portugal	No ceiling is set	
Slovenia	No ceiling is set	
United Kingdom	No ceiling is set	

Source: Source: "Taxes in Europe - Tax reforms" database, Eurostat

## 1.7. Taxation of consumption

This section provides an overview of the diversity of the taxation of consumption in the EU-27, focussing on the main tax on consumption in terms of revenue – the VAT.

**Figure 1.12: Implicit Tax Rate on Consumption, 2011**

Source: Eurostat (gov\_a\_tax\_itr)

An indicator of the overall importance of taxes on consumption is the implicit tax rate (ITR) on consumption i.e. *the ratio of total tax revenues from consumption taxation to the potential tax base*. Figure 12 illustrates ITRs on consumption for EU Member States in 2011. The GDP-weighted average ITR on consumption in the EU-27 was 20.1% in 2011, ranging from 14.0% in Spain to 31.4% in Denmark. The ITR on consumption in Latvia (17.2%) and Lithuania (17.5%) are the third and fifth lowest in EU, while the ITR on consumption in Estonia (26.1%) occupies the seventh highest position after high tax burden countries, e.g. Denmark, Sweden, and Finland.

In 2011, VAT (7.1% of GDP) was the largest component of consumption taxation in the EU accounting for more than half of the overall taxation of consumption (11.2% of GDP) in EU-27. Excise taxes and other consumption taxes with revenues at 2.7% of GDP are the other main revenue contributors<sup>5</sup>.

### 1.7.1 VAT rates in the EU-27

**Table 1.7: Standard VAT rates in EU-27, 2013**

Country	Standard VAT rate
Austria	20.0
Belgium	21.0
Bulgaria	20.0
Cyprus	18.0
Czech Republic	21.0
Denmark	25.0
Estonia	20.0
Finland	24.0
France	19.6
Germany	19.0
Greece	23.0
Hungary	27.0
Ireland	23.0
Italy	22.0
Latvia	21.0
Lithuania	21.0
Luxembourg	15.0
Malta	18.0

<sup>5</sup> Definition of taxes on consumption is based on Eurostat methodology.

Country	Standard VAT rate
Netherlands	21.0
Poland	23.0
Portugal	23.0
Romania	24.0
Slovakia	20.0
Slovenia	20.0
Spain	21.0
Sweden	25.0
United Kingdom	20.0
EU-27*	21.3

\* Arithmetic average

Source: Eurostat

In EU-27 Member States, in general, the standard or reduced rate is applied to the majority of goods or services. The highest standard VAT rates are in Hungary (27.0%), Sweden (25.0%) and Denmark (25.0%), while the lowest are applied in Luxembourg (15.0%), Cyprus (18.0%) and Malta (18.0%).

The standard VAT rates in the Baltic states are very close to each other. In Latvia and Lithuania the rate is set at 21.0% that is slightly below the arithmetic average of EU-27 standard VAT rates of 21.3%, while in Estonia it is 20.0%.

In Latvia in 2013, the reduced rate of 12.0% was applicable only on the following transactions: supplies of medicines, medical devices and medical goods, specialized products intended for infants, the inland public transport services, supply of heating to households and guest accommodation services. The number of exemptions exists for certain kinds of services (e.g. medical services, educational services, postal services, the rent payments).

In Lithuania a 9.0% reduced rate applied to books and non-periodical publications, to residential heating and hot water supplied for housing. The 5.0% reduced VAT rate applicable to medicines. Certain sectors of services are exempted from VAT (e.g. services related to health care, education and training services, financial services).

In Estonia a 9.0% reduced rate applies to a limited list of goods (e.g. books, periodicals, medicine, and accommodation). Education, health services, social services, financial services are some of the services exempted from VAT.

Bulgaria applies the standard rate of 20.0% to the majority of goods and services and a reduced rate of 9.0% to hotel accommodation. VAT is not applied to health care services, welfare and social security work, education and sport, financial services.

The standard VAT rate in Germany was 19% in 2013, which is one of the lowest in the EU-27. A 7.0% reduced VAT rate is applied to certain products (e.g. staple food, public transport and books, hotels and pensions). VAT exemptions are granted for a small number of services such as rents and medical services.

The standard rate is 23.0% in Ireland, while a reduced rate of 13.5% is applied to various services, newspapers, building work and household energy. A second reduced rate of 9.0% applies to some activities in the tourism sector while a zero rate applies to basic food, children`s clothing, children`s footwear and books. There are also reduced rates specifically applicable to certain agricultural activities.

In Poland, there is the standard VAT rate of 23.0% and 3 types of reduced rates of 8.0%, 5.0% and 0%. The reduced rates of 5.0% and 8.0% are applied to foodstuffs (including beverages but excluding alcoholic beverages); live animals, seeds, plants and ingredients normally intended for use in the preparation of foodstuffs. The 8.0% reduced rate is also applied to supply of water, medicine, pharmaceutical products, and restaurant services.

Four types of VAT rates, i.e. a standard rate and 3 reduced rates, are applied to goods and services in France and tax exemptions are granted to certain services and activities. There is the standard rate of 19.6%, and a reduced rate of 7.0% is applied to transport services, hotel accommodation, restaurant services, television, and cinemas. The reduced rate of 5.5% is applied to foodstuffs, equipment for disabled, books, gas, electricity, heating, concerts, and theatres. The lowest reduced rate of 2.1% is applied to newspapers and medicines. Certain financial services and educational activities are exempt from VAT.

Sweden is a country with a high standard VAT rate: in 2013 it applied a standard VAT rate of 25.0% to 85% of non-export turnover. A reduced rate of 12.0% was applied to foodstuffs, restaurant services and to services related to tourism. A reduced rate of 6.0% applies to domestic newspapers and periodicals, domestic public transport services, cinema, circus and concert admission fees. The purchase and rental of immovable property, medical, social care services, educational financial services, and certain cultural and sporting activities are exempt from VAT payments.

## **1.8. Taxation of capital**

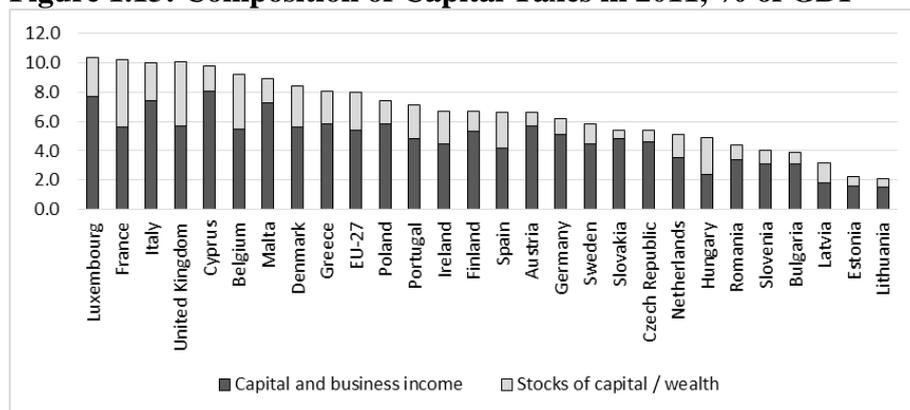
According to the Eurostat definition (2013), capital taxes include taxes on business income in a broad sense: i.e. not only taxes on profits but also taxes and levies that could be regarded as a prerequisite for earning profit.

Capital taxes can be divided in two components: taxes on capital and business income and taxes on capital stock. Taxes on capital and business income include the personal income tax paid on dividends, interest and entrepreneurial activity and corporate income tax as well as other taxes on holding gains. Taxes on capital stock include wealth tax, inheritance tax, real estate tax, taxes on the use of fixed assets, professional and business licenses and some other taxes on products.

Overall, in 2011, taxes levied on capital income made up almost 8.0% of EU-27 GDP or roughly one fifth of total taxation (see Figure 13). The largest part of capital taxes was represented by taxes on capital and business income, i.e. 5.4% of EU-27 GDP, while the taxes on stocks (wealth) made up 2.6% of EU-27 GDP. An exception is Hungary, where the taxes on capital stock generated approximately 52% of capital tax revenues.

The three Baltic states exhibit the lowest capital tax revenues as a share of GDP amongst the EU-27. The 2011 shares were: 3.2% in Latvia, 2.2% in Estonia and 2.1% in Lithuania. This compares with the highest (i.e. Luxembourg, 10.5% of GDP) and a little over one quarter of the EU-27 average of 8.0%.

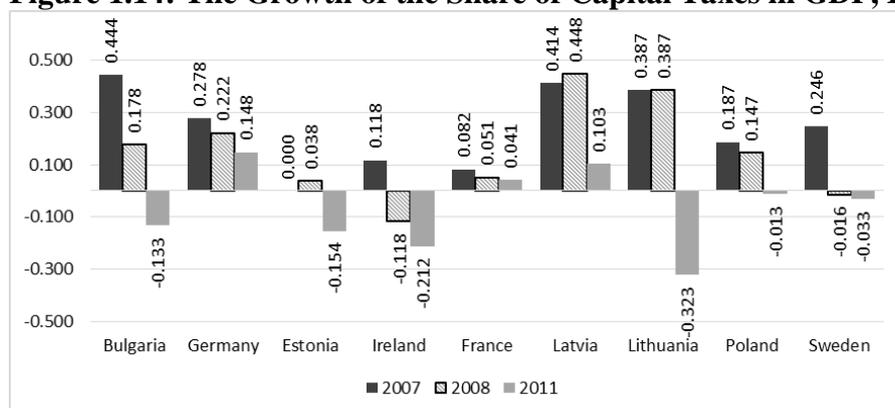
**Figure 1.13: Composition of Capital Taxes in 2011, % of GDP**



Source: Eurostat (gov\_a\_tax\_str)

Figure 1.14 illustrates the changes in the share of capital taxes in GDP over 2008-2011. Among the comparator countries the largest growth of capital taxes share in GDP (from a 2004 baseline) was experienced in Bulgaria (44.4%), Latvia (41.4%) and Lithuania (38.7%). Despite the crisis, the share of capital taxes as % of GDP continued to increase in Latvia and Estonia in 2008 and remained constant in relation to the 2007 level in Lithuania. However, by 2011, in most of the comparator countries, the proportion of taxes on capital in GDP began to decrease. In 2011, the share of capital taxes in GDP fell below the 2004 level in 6 out of 8 comparator countries, while in Latvia this indicator remained above the 2004 level by 10.3 percentage points. Lithuania experienced the sharpest drop in the share of capital taxes: the indicator for 2011 was 32.3% down from 2004.

**Figure 1.14: The Growth of the Share of Capital Taxes in GDP, Index 2004=1**

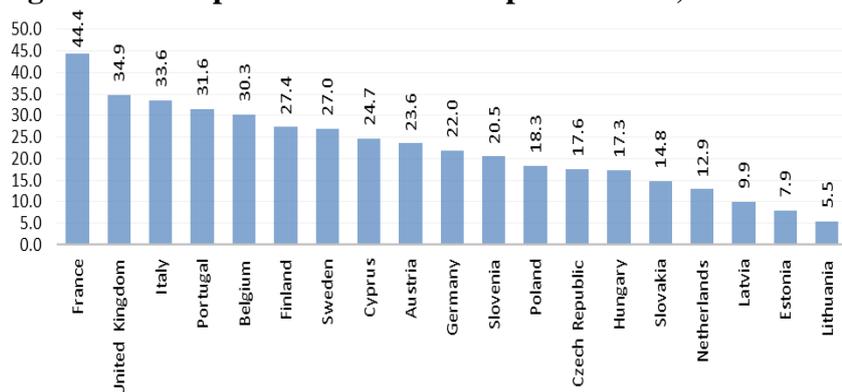


Source: Eurostat (gov\_a\_tax\_str) and authors' calculations

According to Eurostat methodology, the overall implicit tax rate on capital is computed as the ratio between revenue from all capital taxes, and all potentially taxable capital and business income in the economy. The computation of the ITRs is not possible for all countries because data is not available in the sector accounts (Eurostat, 2013). Thus, data for ITR on capital in 2011 are available for 19 Member States and this indicator ranged from 5.5% in Lithuania, 7.9% in Estonia and 9.9% in Latvia to 44.4% in France, 34.9% in United Kingdom and 33.6% in Italy (see Figure 1.15).

In 2011, the lowest level of ITRs was in Baltic states which also have the lowest tax burden on capital in terms of the share of tax revenues in relation to GDP. Similarly, countries, where the overall importance of taxes on capital measured by ITRs on capital is the highest, i.e. UK, Italy and France also have the highest tax burden on capital in terms of ratio of tax revenues to GDP.

**Figure 1.15: Implicit Tax Rate on Capital in 2011, %**



Source: Eurostat (*gov\_a\_tax\_itr*)

The observed value of the ITR on capital can reflect a wide range of factors, which can vary across Member States. In particular, three main factors may distort the ITR on capital in the short and medium run: time lags, capital gains and structural changes in the financing of companies. Unlike other taxes, corporate income tax is characterised by long and variable lags between the emergence of income and its taxation (Eurostat, 2013).

### **1.9. Taxes on land, buildings and other structures in the EU-27**

In 2012, immovable property tax revenue amounted to 1.5% of EU-27 GDP weighted average. It made up 3.8% of EU-27 total taxation and 18.8% of revenues from total capital taxation. In Latvia, property tax represented 0.8% of GDP, that is almost half the EU-27 average (1.5%), and 2.7% of the total tax revenues, that is also below the EU-27 average (3.8%) (see Figure 1.16).

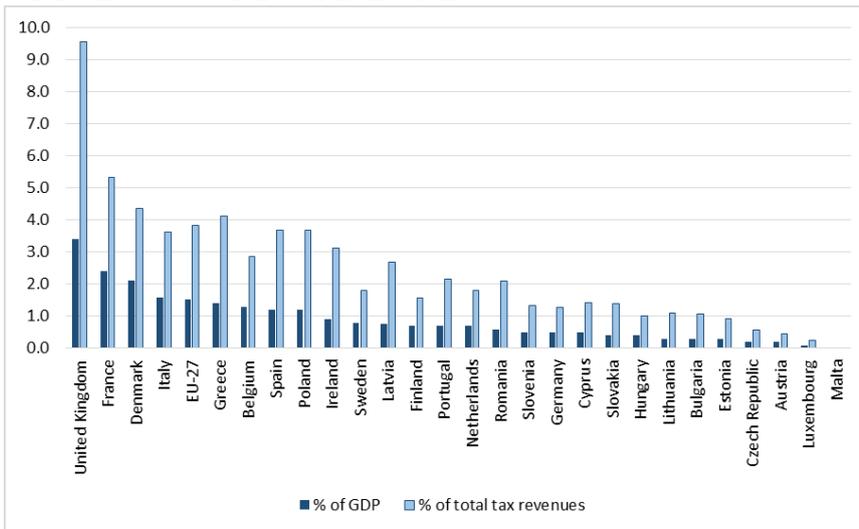
In 2012 an immovable property tax was applied in 26 EU countries and only in 4 was the tax revenue as a share of GDP above EU-27 GDP weighted average. These were: UK, France, Denmark and Italy. Revenues from immovable property taxes in UK were the largest in the EU as a share of GDP (3.4%), 1.9 percentage points above the EU-27 GDP average (1.5%).

In UK, these taxes also represented the highest share relative to total taxation (9.6%) among EU countries, nearly double the share observed in France (which occupies 2<sup>nd</sup> highest position in terms of immovable property taxes as a share of GDP).

In Ireland, tax revenues on land, buildings and other structures were, at 0.9% of GDP, much below the EU average. However, as a proportion of total taxation the 3.1% revenue share was close to EU-27 average of 3.8%.

Estonia (0.3%) and Lithuania (0.3%) as well as Bulgaria (0.3%) also had low rates of immovable property tax revenues in relation to GDP in 2012 in comparison to other EU-27 countries. The lowest shares were observed in Luxembourg (0.1%), Austria (0.2%) and the Czech Republic (0.2%).

**Figure 1.16: Revenue from Taxes on Land, Buildings and Other Structures in 2012 as % of GDP and as % of Total Taxation**



Source: Eurostat (online data code gov\_a\_tax\_ag) and authors' calculations

**TS Nodevums 2.2.1.2.5: Apkopot teorētisko atziņu un empīrisko pētījumu (pēdējo 10 gadu publicēto) rezultātus par nodokļu un pabalstu izmaiņām, vērstām uz nodokļu robežlikmju samazināšanu un iedzīvotāju ienākumu nevienlīdzības mazināšanu.**

**TS Nodevums 2.2.2.2.1: Veikt teorētisko atziņu un empīrisko pētījumu (pēdējo 10 gadu publicēto) rezultātu apkopojumu NĪN aprēķināšanas un piemērošanas pieejām, kā arī ietekmei uz mājsaimniecību dažāda līmeņa ienākumu grupām.**

## **2. Review of theoretical and empirical research on change/reform of tax benefit systems (2.2.1.2.5), implications for possible reform directions (2.2.1.2.6) and review of theoretical and empirical research on property taxation**

This chapter consists of the following sections: the first is devoted to a review of the theoretical and empirical research carried out over the last 10 years on the design and reform of tax benefit systems with a particular focus on the impact of the tax benefit system on work incentives (including marginal effective tax rates) and on income inequality. Accordingly, this addresses task 2.2.1.2.5 of the Technical Specifications. The second section reviews the theoretical and empirical literature on property taxation. This addresses task 2.2.2.2.1 of the Technical Specifications. Informed by the theoretical and empirical evidence the third section discusses several possible directions or scenarios of tax benefit reform in Latvia and hence addresses task 2.2.1.2.6 of the Technical Specifications.

### **2.1. Tax Design: a survey of the theory and evidence**

This section offers the following:

- a summary of the key findings of the Mirrlees Review
- a review of the key theoretical and empirical results on tax rates, benefits and work incentives
- the scope for growth friendly tax reforms.

#### **2.1.1 The Mirrlees Review**

The Mirrlees Review is a once in a generation<sup>6</sup> assessment of the design of the tax system carried out under the chairmanship of Nobel Prize winning economist James Mirrlees<sup>7</sup>. The Review analyses and reports the policy implications for efficiency and fairness of recent research on the design of tax-benefit systems. Although the context of the Review is the UK tax system the evidence used comes from international sources and the results are applicable to tax design in all modern economies.

The Mirrlees Review consists of two volumes:

- The first volume, Mirrlees et al (2010), consists of 13 chapters containing commissioned papers and commentaries from top tax economists on particular topics. Chapter 2 on “Means-testing and Tax Rates on Earnings” by Mike Brewer, Emmanuel Saez, and Andrew Shephard and chapter 3 on “Labour Supply and Taxes” by Costas Meghir and David

<sup>6</sup> The report by Meade, J. (1978) is the predecessor of the current Review.

<sup>7</sup> James Mirrlees was the joint winner of the Nobel Prize for Economics in 1996 for his contribution to the modern theory of optimal taxation.

Phillips are of particular relevance for the incentives/fairness theme addressed in this project and are discussed below in the context of the section on tax rate, benefits and work incentives.

- The second volume, Mirlees et al (2011), provides an integrated exposition of tax design together with detailed recommendations for all aspects of the tax system written by the editors. The editors have also published a summary version of the main finding in Mirlees et al (2012).

The aim of the Review is to articulate recommendations and guiding principles for what the authors regard as “a tax system that can raise the revenue that government needs to achieve its spending and distributional ambitions while minimizing economic and administrative inefficiency, keeping the system as simple and transparent as possible, and avoiding arbitrary tax differentiation across people and forms of economic activity” (Mirlees et al 2012). The Review identifies the trade-off between redistribution and work incentives as the central tax system design issue. i.e. how to “minimize the efficiency loss associated with achieving progressivity”.

Key conclusions/ recommendations of the Review include:

- The tax system should be considered as a whole e.g. from the point of view of degree of progressivity or “greenness” or other relevant or desirable characteristics.
- The tax system should be neutral: similar activities should be treated in similar ways. This principle leads to the proposition that different sources of income should be taxed according to a single income tax schedule i.e. income from capital and capital gains (after a rate of return allowance) should be taxed according to the same schedule as income from employment.
- The direct tax and benefit system is appropriate instrument for achieving distributional objectives. Using differential consumption taxes or taxes on capital is regarded as an inefficient means of achieving redistribution.
- Merging of personal income tax and social contributions into a single income tax is a desirable long term aim.
- A desirable effective tax schedule is one that strengthens work incentives where they are most effective e.g. lower effective tax rates for groups who have a high labour supply elasticity such as mothers of school age children or people at pre-retirement age.
- Overall taxation of income recommendation: “a single tax on income with an allowance and two or three rates, combined with a single benefit to support those with low income and/or high needs”.

### **2.1.2 Tax rates, benefits and work incentives**

The trade-off between income redistribution and work incentives has to be considered as central to analysing and implementing tax-benefit policies. The research literature has developed a variety of conceptual tools to analyse these issues. They include alternative ways of measuring work incentives and alternative ways of conceptualising the way economic agents respond to changes in the tax benefit system.

Measuring the incentive to work

The literature distinguishes between two margins at which work incentives may operate:

- the incentive to be in paid work at all – sometimes referred to as the *extensive margin*

- the incentive for those in work to increase their earnings by working more or working harder – referred to as the *intensive margin*

At least three measures are often used:

- The financial incentive to be in work at all can be measured using the *replacement rate*, which is defined as the income an individual would receive if they were not working as a percentage of the income they would receive if they were working
- Another indicator of the incentive to work at the extensive margin is the *participation tax rate* (PTR) which is defined as the proportion of total gross earnings lost in the form of tax and withdrawn benefits when a person enters employment. The PTR can be expressed as follows (Mirlees et al (2011) Box 4.2):

$$PTR = 1 - \frac{\text{Net income in work} - \text{Net income out of work}}{\text{Gross earnings}}$$

- At the intensive margin the incentive for those in work to increase their earnings can be measured by the *marginal effective tax rate* (METR) which is defined as the proportion of a small increase in earnings that is lost in tax and withdrawn benefits.

In all three cases, higher numbers for the indicators imply weaker work incentives. These measures of work incentives depend on both the gross amount individuals can earn if they are working, and the tax/benefit structure that affects the relationship between gross earnings and net income.

### Responses to changes in tax rates

Two concepts may be used to characterise the response of individuals to the changes in tax rates:

- the wage elasticity of labour supply or *labour supply elasticity* – defined as the proportional change in the quantity of hours worked given a one percent change in the net wage.
- taxable income elasticity or *elasticity of taxable income* – defined as the change in taxable income in response to a change in the marginal tax rate.

The advantage of the taxable income elasticity concept is that it takes into account all the behavioural aspects of the taxpayer in response to a change in the tax rate. As well as labour supply responses it includes other responses e.g. switching the form in which income is received as well as simple tax evasion (Saez et al., 2012). It is argued (Slemrod and Kopczuk, 2002) that the elasticity of taxable income is what best summarizes the efficiency cost of taxation (irrespective of how the elasticity is generated) and therefore is the crucial parameter in models of optimal progressivity. The evidence (see Brewer et al (2010)) suggests that the elasticity of taxable income may be quite high especially for high income persons. At the same time, the responsiveness of taxable income to tax rate changes is influenced by the nature of the tax system and generally a broader tax base and equal tax treatment of similar activities will minimise the opportunities of shifting taxable income to less taxed activities or tax bases and hence would tend to reduce the elasticity of taxable income.

### Simulation

Estimates of the size of the labour supply elasticity for different groups are by themselves not sufficient to give us a complete view of the labour supply effects of tax and benefit reforms. The responses will depend on the whole structure of the work choice budget constraint facing different groups and how it is shifted by the reforms. Non-convexities, such as those induced by a

tax credit system can induce large behavioural responses, even if the elasticities themselves are quite small. So a complete analysis of the effort/hours responses of reforms ideally requires simulation taking into account the whole structure of the tax and transfer system (see Meghir and Phillips, 2010).

### A selection of empirical findings

#### a) *Optimal tax schedules and labour supply elasticities*

The empirical literature shows that the labour supply elasticity varies significantly depending on age, level of education, gender, marital status, household composition, etc. Most interest concerns the impact of the tax system on the labour supply decisions of the groups most sensitive to the incentive structures implicit in the tax benefit system i.e. people on low incomes, mothers with children and people at pre-retirement age. From the point of view of optimal tax theory these are the groups where tax distortions are highest. For workers who reduce their labour supply less in response to the marginal tax rate i.e. with lower elasticity of supply – tax distortions are smaller.

Brewer et al (2010) simulate an optimal tax schedule (METR) for the overall UK income tax/transfer system which takes into account a positive concern for inequality<sup>8</sup>. This optimal schedule is U-shaped with high METRs at very low incomes which then fall rapidly and subsequently rise at higher incomes. At a constant labour supply elasticity of 0.5 the simulated METR is around 60% at very low incomes falling to a low of 20% before gradually rising to a top rate of around 45%. If a lower labour supply elasticity applies then the whole tax schedule would be shifted upwards.

The optimal tax schedule described above reflects the intensive margin. However, Blundell et. al. (2011) show that the decision on whether to work or not (the extensive margin) is more strongly influenced by tax changes as compared with the decision how many hours to work (intensive margin) and Brewer et al (2010) show that allowing for supply participation effects can drastically change the optimal tax system affecting low income individuals. In particular, instead of traditional welfare programmes with high withdrawal rates, a system of in-work benefits such as Working Tax Credit in the UK which can have very low or negative withdrawal rates, can be optimal.

The incentive effects of the Working Family Tax Credit introduced in the UK in 1999 have been assessed by (Brewer et al 2006) who show that the measure increased labour supply of lone mothers by around 5.1 percentage points, but slightly reduced labour supply of mothers in couples by 0.6 percentage points, and increased the labour supply of fathers in couples by 0.8 percentage points, compared with the programme that preceded it. Without any form of in-work benefit in the UK, labour force participation by lone mothers would be around 45 percent, rather than the 55 per cent.

These results are confirmed by the empirical findings reported in Meghir and Phillips (2010) which indicate that the participation elasticity of lone mothers is among the highest of all categories.

In the context of participation Brewer et al (2010) recommend: *Increasing the amount people can earn before they have means-tested benefits withdrawn. This would increase the financial gain on entering work at low earnings.*

Results for other groups include:

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<sup>8</sup> For the reported calculations it is assumed that the government places twice as much weight on the utility gains of an individual relative to another individual whose utility is twice as high.

People close to retirement age are among the most sensitive groups in the economy (Karabarbounis, 2012). According to French and Jones (2012) a 20% increase in pay is associated with a labour supply elasticity of 0.17 at age 40 but at age 60 the elasticity is 1.17. This suggests a possible role for age-specific tax incentives.

Individuals with a low level of education or income are also highly responsive to changes in taxation. According to Meghir and Phillips (2010) participation decisions are particularly sensitive among males with low and medium level of education. The effect of changes in taxation for well-educated males is not strong either at the intensive or extensive margins.

On the other hand, the reported taxable income for highly educated males is responsive to taxation, mainly due to shifting of their income into non-taxable or less taxable forms, rather than a reduction of work input (Meghir and Phillips, 2010).

The labour supply elasticity for second income earners is higher than for main earners (Kaene, 2011). Partners in couples where one spouse is not working (usually a married woman) – are generally found to be the most responsive to the changes both in terms of hours supplied and participation in the labour market.

Joint taxation of married couples may result in higher marginal tax rates for secondary wage earners depending on the spouse's income. Haan (2010) tested the hypothetical shift from joint to individual taxation of married couples in Germany and estimated that this shift has high positive effects both on female participation and hours.

In countries where the level of out-of-work support is relatively low (as in Italy), the incentive for women to take paid work is relatively high. Furthermore, where in-work support for low earnings is substantial, as in the UK, the incentive for the partners of low earning men to take work themselves is relatively low. As with joint income tax assessment, this reduces work incentives for the “second” earner (Figari et. al., 2007).

Bargain and Orsini (2006) in their paper simulate the effect of two types of in-work benefits for three countries (France, Germany, Finland): family means-tested working tax credit (WTC) and purely individualized low-wage subsidy (LWS). They found that WTC increases single woman participation but decreases the participation of married women with a negative net effect in all three countries. LWS has a positive effect on participation on both single and married women.

The study by Vork (2007) suggests that in the new member states, where wages are more flexible, a simple reduction of the marginal income tax rate and the increasing tax allowance might give the best results to encourage the employment of low wage earners.

#### *b) Redistribution*

Avram et al (2012) examine the redistributive effects of EU member state tax benefit systems using the EUROMOD micro-simulation model for the EU. Conclusions include:

- EU tax-benefit systems constitute effective redistributive mechanisms in all the 27 member states of the EU. While market income inequality levels, as measured by the Gini index, range between 0.35 and 0.60, they are considerably reduced after the intervention of tax-benefit instruments to levels between 0.20 and 0.35.
- The New Member States together with Southern European countries have the common characteristic that their direct tax policies and tax schedules in particular, tend to be comparatively less redistributive than is the case elsewhere. One possible explanation is the comparatively widespread use of flat-rate taxation in the Eastern European region.

- Countries with higher levels of redistribution also are the countries where direct taxation is higher (but an increased taxation level does not necessarily equate with more extensive redistribution).
- The influence of non-pension contributory benefits on disposable income inequality is rather modest. While non-contributory benefits do generally advantage poorer households, their share in disposable income is too small for them to have a large effect on inequality.
- Neither tax allowances nor tax credits influence inequality levels to any great extent. However, it should be kept in mind that the effect of tax allowances and tax credits are critically linked to the design of tax schedules. In particular, tax allowances and tax credits cannot, by design, have a significant impact in the context of low taxation levels.
- Both tax allowances and tax credits affect inequality much less than means-tested and even non-contributory benefits. This reinforces the idea that the inequality-reducing capacity of fiscal benefits is limited.

Jara et al (2012) apply micro-simulation to examine the impact of tax-benefit systems on income inequality and work incentives across the 27 EU member states. Results include:

- The distribution of high METRs shows two prevalent patterns across the EU member states: a first one in which people facing high METRs are mainly in the upper deciles of the income distribution (e.g. Denmark and Belgium) and a second one in which high METRs are concentrated in the lower deciles (e.g. Latvia and Estonia).
- For “flat tax countries” like Estonia, Lithuania or Latvia the distribution of METRs is quite narrow (the distance between the 25-th and 75-th percentile is small). The tax component is usually the most important and social insurance contributions the second most important components of the mean METR. People in the lower part of the income distribution are likely to receive means-tested benefits and benefit withdrawal due to the increase in earnings is captured by higher values of the benefit component of the METRs for this group of people.
- There is a negative relationship between redistribution and METRs. In other words countries with high income inequality are usually characterised by strong work incentives while the opposite is true for countries with low inequality. This relationship between income redistribution and work incentives was found at the individual country level by Adam et al. (2006) who found a significant negative relation between METRs and Gini coefficients over time in the UK.

### **2.1.3 Taxes, growth and tax shifting**

A further dimension of the tax system is its impact on aggregate performance of the economy. In this context Prammer (2011) provides a survey of the theory and evidence on the quality of tax systems from the perspective of growth. Assessing the quality of a tax system from this point of view generates two basic questions:

- The first is what is the optimal *level* of tax revenues?
- the second question is how a *given level of tax revenues* can be raised optimally

Prammer argues that with respect to the first question “results of [numerous] studies, are rather inconclusive with respect to providing evidence that a high total level of taxation impacts negatively on economic growth”. For example the extensive survey by Myles (2009b) concludes that “empirical evidence for the hypothesis that the level of taxation affects economic growth is very weak”(p.52).

However, with respect to the second question there is considerable support for the view that the structure of taxation affects growth. Thus Myles (2009a) concludes from a survey of simulations of tax reform that “almost all the results support the claim that a move from income taxation to consumption taxation will raise the rate of growth even though the predicted effect may vary.” (p.44). Econometric evidence reported in Arnold et al (2011) suggests that there is ranking of taxes in terms of their impact on growth with recurrent taxes on immovable property being the least harmful (or most beneficial) tax instrument in terms of the effect on long-run GDP per capita, followed by consumption taxes (and other property taxes). Personal income taxes and corporate income taxes are the least conducive to growth. It is suggested that a revenue neutral 1% shift in tax revenues from income to consumption and property would result in an increase of GDP per capita by between a quarter of a percentage point and one percentage point in the long run.

EU member states are considered to have room to shift taxes away from labour if their tax burden is relatively low in at least one of the following three areas: consumption taxes, recurrent property taxes or environmental taxes. All of these tax categories have been found to be among those which are the least detrimental to growth. See Prammer (2011) and Arnold et al (2011).

As measured by the share of consumption taxes in GDP in 2011, revenues from consumption taxes were particularly low in Belgium, Ireland, Spain, Luxembourg, Slovakia and Latvia (see Table 3.9 in European Commission 2013a).

The second category of less growth-harmful taxation comprises recurrent taxes on immovable property, though these generate substantially less revenue than consumption taxes. In terms of revenue, property taxes can be considered particularly low in 19 Member States (see Wöhlbier et. al. (2014), Graph 4.1), which could raise their revenues by 0.4 percentage points or more by bringing revenue in line with the EU-27 average<sup>9</sup>. The literature on property taxation is considered in more detail in Section 2.2 below.

The third tax category which has been found to be less detrimental to growth is environmental taxation, in particular taxes that fall on consumption.

On most of these criteria Latvia has scope or space for changing taxes to a more growth friendly structure.

Reducing overall taxation on labour is expected to both foster employment growth and, in countries where tax evasion and tax avoidance is widespread, may help to shift employment from the underground economy to the formal economy. A shift from taxes on income to taxes on consumption may have two effects: first, such a tax shift might be favourable with respect to employment as a consequence of higher incentives to participate in the labour market, because of lower marginal tax rates on labour income and second, higher consumption taxes are often associated with a reduction in tax progressivity and thereby increased inequality. Research by Picos-Sanchez (2012) which simulates a revenue-neutral shift of 5% of the SSC burden to VAT finds increasing work incentives particularly for low-income earners across several European countries. This suggests that employment increases from a tax shift may outweigh adverse distributional impacts.

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<sup>9</sup> However, the revenue from the tax on imputed rent, which is applied in a limited number of countries, is not included in the above data

## **2.2. Theoretical and empirical research on approaches to the taxation of property**

### **2.2.1 Introduction**

There is no single uniform type of property tax. Rather according to the classifications employed by OECD (2013) and Eurostat (2013), the following main categories of taxes on property can be distinguished<sup>10</sup>:

- Recurrent taxes on immovable property
- Recurrent taxes on net wealth
- Estate, inheritance and gift taxes
- Taxes on financial and capital transactions

Moreover within these categories there is a considerable variety of different taxes and duties. However, the focus of interest of most recent contributions to the literature has been recurrent taxes on immovable property in particular in the context of switching towards a less distortionary tax base. Accordingly recurrent taxes on immovable property are the main focus of this review section.

### **2.2.2 Review of the theory and empirics of the taxation of property**

The Mirrlees Review (Mirrlees et al (2011)) has the following quotation from the Nobel Prizewinning economist William Vickrey: “The property tax is, economically speaking, a combination of one of the worst taxes — the part that is assessed on real estate improvements — and one of the best taxes — the tax on land or site value” (Vickrey, 1999). This illustrates the potential complexity facing an economic analysis of property taxation and also of applying sound economic principles in practice. As Mirrlees et al (2011) emphasise: “Land and property should be thought of as distinct bases for taxation, although in most countries taxes are levied on the combined value of property and the land on which it is located”. They also argue: “The economic case for taxing land itself is very strong ... taxing land ownership is equivalent to taxing an economic rent — to do so does not discourage any desirable activity. Land is not a produced input; its supply is fixed and cannot be affected by the introduction of a tax. With the same amount of land available, people would not be willing to pay any more for it than before, so (the present value of) a land value tax (LVT) would be reflected one-for-one in a lower price of land”.

Mirrlees et al (2011) also discuss taxation of buildings, which may be divided into buildings used for business and dwellings, i.e. buildings used for living purposes or housing. For business property they recommend a land value tax only as taxing the value of the buildings represents a tax on business inputs that is distortionary.

On the other hand, they note that housing has two main attributes that are relevant for tax design:

- First, by living in a house, a person consumes a flow of services. If there is a consumption tax such as a VAT, they argue that there is “a reasonable presumption is that housing should in some way be covered by it”.
- Second, homeowners also own a valuable asset and as an asset the basic principles for the efficient taxation of savings should apply.

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<sup>10</sup> OECD (2013). Revenue Statistics 1965-2012: The OECD Interpretative Guide. Accessed at <http://www.oecd.org/ctp/tax-policy/RS2013-OECD-Interpretative-Guide.pdf>

They argue: “The distinction between these two attributes is explicit in the case of private rented property: the landlord invests in the asset, while the renter consumes (and pays for) the flow of services. But the two attributes are just as surely present in owner-occupied housing: in effect, the owner-occupier is both landlord and tenant simultaneously”.

As a solution Mirrlees et. al. (2011) propose a housing services tax (HST) should be levied as a simple, flat percentage of the rental value of each property, whether it is rented or owner-occupied. For the UK case they propose a 12% tax rate on the value of housing services consumed – imputed rents in the case of owner occupiers. They argue that such a reform would be progressive – i.e. in general, better-off people live in more expensive houses which would have higher imputed rents. For the asset component of housing Mirrlees et. al. (2011) propose that the rents or imputed rents should be taxed as income subject to the same rate of return allowance that applies to the taxation of returns from other assets.

### **2.2.3 The fairness of property taxes: progressivity and distributional impacts**

#### Progressivity

There is no unambiguous theoretical or empirical evidence on the progressivity and distributional impact of property taxes. The distributional implications of a property tax will depend on the design of the tax, which can differ radically across countries. One view is that since wealthy people tend to own property with a higher value, a tax rate which increases with the value of the house is one mechanism for generating a property tax that is directly progressive (European Commission, 2012b). However, many countries use the property tax for purposes of broader social policies and as a result tax liabilities depend on a variety of exemptions, allowances deductions and credits, which collectively may enhance or reduce progressivity (Figari and Verbist, 2013).

The discussion of progressivity in the European Union (European Commission, 2012b) suggests that progressivity could be created through a basic allowance corresponding to the basic quality of an owner-occupied house. Norregaard (2013b) suggests that the progressivity of the property tax can be enhanced by reducing or eliminating tax liabilities for low-income or low-wealth property owners. For example, one can tax only properties above some threshold value — and then gradually increase the rate; exempt the elderly and disabled from the tax or charge them at lower rates; or allow “mortgaging” or delayed payments of property tax liabilities for low-income households. Some countries provide special reliefs depending on family structure.

There remain different theoretical positions or opinions on the incidence of property taxes. Norregaard (2013a) distinguishes three:

- *The “old” (or traditional) view.* Incidence studies based on this view, which puts the emphasis on the shifting of the tax, generally conclude that the property tax is regressive. According to this view, the property tax is a combination of a tax on immobile land with a tax on mobile capital. Arguably, the tax on capital is shifted fully to renters, consumers, and labour, while the tax on land is borne by landowner.
- *The “new” view* - attributed to Mieszkowski (1972), argues that in an efficient capital market the burden of property taxes is borne by owners of capital across the economy; and since capital owners tend to be richer, the tax is likely to be progressive. There is growing consensus that the tax is borne predominantly by those with middle and high incomes. This is why strengthening property taxation in many countries is now seen as a way to improve the fairness of the overall tax system given increasing levels of inequality (Norregaard (2013a)).

- The “benefit” view provides an alternative, but not necessarily mutually exclusive, view of property tax incidence, and argues that the property tax is a benefit tax related to the benefits received from the public services funded by the tax. The property tax thus acts as a price for local public goods and individuals will choose the locations that offer services best in line with their preferences (the Tiebout effect). By being in essence a user charge for local public services, there is an inherent fairness to the property tax based on the benefit principle. It has also been argued that property values capitalize the benefits provided, and hence that a tax on values represent a fair burden-sharing arrangement. By seeing the tax as a price for services received, the benefit view has the important implication that immovable property taxes are *efficient taxes* that do not interfere with savings, investment, and labour supply decisions of individuals and companies (see. Norregaard (2013a)). If a property tax is truly charged as a benefit tax i.e. charges are equal to the value of services received, then such a tax would have no distributional impact. But this is unlikely to be realised in practice.

Empirical evidence: property taxes are regressive in some countries

Distributional data on the property tax burden are limited. What evidence there is suggests that while high-income households pay more recurrent taxes on immovable property in absolute terms, real estate taxes often absorb a larger share of the income of the poorer households. Measuring actual tax liabilities from tax returns, i.e. amounts to be paid by property owners, property tax is found to be regressive in 2008 in Belgium (Verbist and Figari 2013) and in the fiscal year 2009/2010 in the UK (Joumard et.al., 2012).

A possible factor is that recurrent taxes on immovable property are often a sub-national government tax whose amount should reflect the provision of local public services (waste collection, etc.) which do not increase much with income. In some countries, real estate taxes are also paid by renters, who often have low income. Part of the regressive nature of real estate taxes may also reflect the fact that many older people own expensive houses but receive relatively little income.

Some countries have introduced tax allowances, income-conditional exemptions or progressive tax rates to reduce real estate tax payments on low-income groups. For instance, in France, generous income- and family-related tax relief has succeeded in making the largest recurrent tax on immovable property (*Taxe d'habitation*) slightly progressive since 2000, at least for the first part of the income distribution (Marical, 2009).

The property tax in Denmark appears regressive (Norregaard, 2013a) over the first two deciles of the distribution of taxpayers' disposable income – presumably because the populations in these deciles typically are quite heterogeneous and include, for example, pensioners with low income and newly self-employed with low income – while the tax becomes progressive from the third decile and up. This explained in part because of the fact that property ownership, as data shows, increases strongly over the deciles; and by applying the “new” view it is assumed that renters are not carrying any of the property tax-burden.

Finally, it is frequently argued that the use of market values maximizes fairness of the property tax. This is particularly so if market values broadly reflect the capitalized benefits provided by local services that are financed by the tax. In contrast, alternative approaches such as area-based taxation (for example, specific square metre taxes) unrelated to actual property values (or related only imperfectly so) typically entail variations in effective tax rates across properties which may violate equity considerations.

## Inequality

Norregaard (2013b) argues that property taxes are an effective but unpopular way to reduce inequality. Essentially this is based on the view that the incidence of property taxes falls on middle and high income households. Inequality reduction through such taxes depends on the one hand on the distribution of pre-tax incomes, and on the other hand on the specific design of the tax system. However Norregaard also argues that governments generally have not made as much use of property taxation to address income and wealth inequality and raise revenue as they could because property taxes are unpopular. Moreover, he argues that “in many countries property taxation is not effectively enforced, not only because it is politically unpopular, but also because historically it has not generated much revenue. In addition, there may be little incentive to collect the tax because the entity responsible is not always the one that ultimately receives the revenue”.

Maestri (2013) has evaluated the redistributive effect of a comprehensive set of housing-related policies, taking into account the housing advantage of homeowners and social tenants using the EUROMOD micro-simulation model to simulate housing policies in Estonia, Italy and the United Kingdom. It is found that the current design of property taxes is not progressive and that other housing policies have a limited impact on inequality in Estonia and on both inequality and relative poverty in Italy.

A number of studies suggest that a well-designed reform introducing taxation of imputed rent can achieve redistributive goals. In a study for a set of European countries, a revenue-neutral reform that includes imputed rent in taxable income while introducing a lump-sum tax credit is inequality reducing (Figari et.al., 2012). A study of Japan shows that inclusion of imputed rent in taxable income guarantees a more progressive distribution of income (Yagi and Tachibanaki, 1998). Pellegrino et.al. (2011) find that, in Italy, replacement of cadastral incomes from dwellings with taxation of imputed rent estimated at market values would generate a more progressive outcome.

### **2.3. Suggestions for possible reforms of the tax/benefit system**

The theory and empirical evidence surveyed in Section 2.1 provide evidence and arguments for a number of possible tax reforms in Latvia. For preliminary investigation we select the following:

- The introduction of a higher rate income tax band
- Progression in the personal tax allowance
- Modified withdrawal of means tested benefit. An allowance for income earned from employment added to the test level of income before means tested benefits are withdrawn i.e. GMI or housing benefit.

In addition to these reforms, which concern the structure of the personal income tax and its interaction with benefits, the literature also points to the desirability from a growth perspective of a shift of taxation away from labour to consumption taxes and taxes on property. Potential reforms in these spheres are addressed in detail in chapters 4 and 6 below.

#### Higher rate tax band

Most EU countries have at least two tax bands for the personal income tax and only six (Bulgaria, Estonia, Hungary, Latvia, Lithuania and Romania) have just one. A higher rate income tax band serves at least two purposes:

- It increases the progressivity of the income tax system and if implemented in a revenue neutral way to the benefit of lower income persons would also increase the impact of the tax system on the after tax income distribution i.e. it would reduce the after tax Gini coefficient.

- A higher rate band would increase tax revenues. This effect could be empirically significant e.g. in the UK the top 1% of UK taxpayers account for about nearly a quarter income tax revenues(see Adam et al (2010)).

If one is to introduce a higher rate tax band what should be the rate and what should be the income at which the higher rate should apply? The elasticity of taxable income concept provides some insights into how these parameters might be determined.

Brewer et. al. (2010) develop the following argument for determining the optimal tax rate on high earners that in the sense of maximizing revenues from a higher rate band. Suppose there is an increase in the tax rate,  $t$ , this has two effects: one effect is the increase in revenues from the higher tax rate at an unchanged reported taxable income called the *mechanical effect* by Brewer et. al. (2010) and the other is the *behavioural effect* which is captured by the reduction in reported taxable income in response to the higher tax rate. The revenue maximising rate is determined when these two effects just balance. The optimal rate is determined by the following formula (see Brewer et al 2010, Box 2.2):

$$t = \frac{1}{1 + a * e}$$

where  $e$  is the elasticity of taxable income and  $a = z/(z - z^*)$  where  $z^*$  is the boundary of the top income tax bracket and  $z$  is the average income reported by taxpayers in the top income bracket. The  $a$  parameter can be thought of as a measure of the density (or alternatively the thinness) of the top income distribution<sup>11</sup>.

This formula can be applied to Latvian data. Suppose the higher tax band is applied to the top 5% of incomes then on the basis of EU-SILC data (uprated to 2013) the income at which the top rate would have operated ( $z^*$ ) would be EUR 1690 per month and the average income for taxpayers in the top bracket would be EUR 2496 and hence the parameter  $a$  would equal 3.1. Evidence on the tax elasticity for Latvia is unavailable but for the UK Brewer et al (2010) tentatively propose 0.46. For illustrative purposes we choose 0.5 and 0.6. Applying the tax formula yields:

$$t = \frac{1}{1 + 3.1 * 0.5} = 0.39$$

in other words with these parameters the optimal top tax rate for Latvia would be 39%.

However, it is well known that survey data do not fully capture the very highest incomes and we can correct for this by having a higher average income for top tax payers. Suppose the average income of top rate tax payers is EUR 3000 then applying the formula would imply:

$$t = \frac{1}{1 + 2.3 * 0.5} = 0.47$$

or a tax rate of 47%.

On the other hand Latvian top rate taxpayers may be more responsive e.g. the taxable income elasticity is higher at 0.6, in which case the optimal higher tax rate would be:

$$t = \frac{1}{1 + 2.3 * 0.6} = 0.42$$

or a tax rate of 42%.

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<sup>11</sup> A more extensive version of this argument can be found in Saez et.al. (2012)

### Progression in the personal tax allowance

Progression in the personal tax allowance is a measure that has been under consideration as a measure to increase the progressivity of the personal income tax. It represents a reform at the intensive margin by addressing the high METRs observed for the lowest earners in Latvia (as reported for example by Avram et al (2012)). The evidence suggests that stronger work incentives would be effective in increasing labour supply. The measure could be expected to reduce inequality. The Lithuanian tapered personal allowance represents an interesting model to investigate.

### Modified withdrawal of means tested benefit

This is a reform that alters work incentives at the extensive margin for low income workers i.e. it alters the incentive to enter employment and is a recommendation made in Brewer et al (2010). The proposed measure, to exempt a small fixed amount of employment income from the income test for GMI and housing benefit, is a modest version of a working tax-credit type instrument that has been widely used in the UK with positive effects on the labour supply of certain groups e.g. lone mothers. In contrast to the most recent change in GMI (a reduction) which affects incentives by making not working *less attractive*, the proposed measure would change incentives by *making work more attractive* as compared with not working.

**TS Nodevums 2.2.1.2.1.: Izanalizēt pašreizējo nodokļu sistēmu, atklājot tās priekšrocības un trūkumus konkurētspējas kontekstā, analīzi balstot uz nodokļu robežlikmju vērtībām.**

**TS Nodevums 2.2.1.2.4: Veikt Latvijas un ES dalībvalstu (vismaz 7 ES dalībvalstīs, t.sk. Baltijas valstīs) nodokļu sistēmas salīdzinošo analīzi nodokļu robežlikmju un taisnīguma (t.i. nodokļu vienmērīgu sadalījumu starp iedzīvotājiem atbilstoši viņu ienākumiem) kontekstā**

### **3. Marginal tax rates and work incentives in Latvia and other EU member states (TS 2.2.1.2.4)**

This chapter provides a comparative analysis of the degree of redistribution generated by tax-benefit systems in Latvia and elsewhere in the in EU. Also analysed are Marginal Effective Tax Rates (METR) in Latvia and other EU countries including the factors that influence the overall level of METRs in Latvia and METRs faced by people with different levels of income. It presents analysis of sensitivity of METRs to two parameters of PIT rate: the tax rate and the basic allowance. Thus the analysis addresses the empirics involved in the fundamental dilemma of tax-benefit policy design – namely balancing the goal of a socially acceptable distribution of income with adequate incentives to work and supply labour. The chapter concludes with a preliminary analysis of the effect of selected reforms of PIT on marginal effective tax rates, the aim being to assess sensitivity of work incentive indicators to changes in certain parameters of the tax-benefit system. Thus, this chapter addresses tasks 2.2.1.2.1 and 2.2.1.2.4 of the Technical Specifications.

Most of the analysis in this chapter is done using the tax-benefit micro-simulation model EUROMOD. EUROMOD has been built for all EU-27 countries<sup>12</sup> using a unified methodology, which allows for cross-country comparison of the model output<sup>13</sup>. EUROMOD is a static model (implying that behavioural responses to reforms are not modelled), and is based on national representative datasets (EU-SILC in most countries). The latter allows evaluating the effects of reforms on actual indicators characterising poverty, inequality, work incentives, etc. This distinguishes EUROMOD from other available tax-benefit simulators, which are built to analyse the impact of tax-benefit reforms on typical households or individuals.

#### **3.1. Redistribution and tax incentives in the EU**

##### **3.1.1 Redistribution**

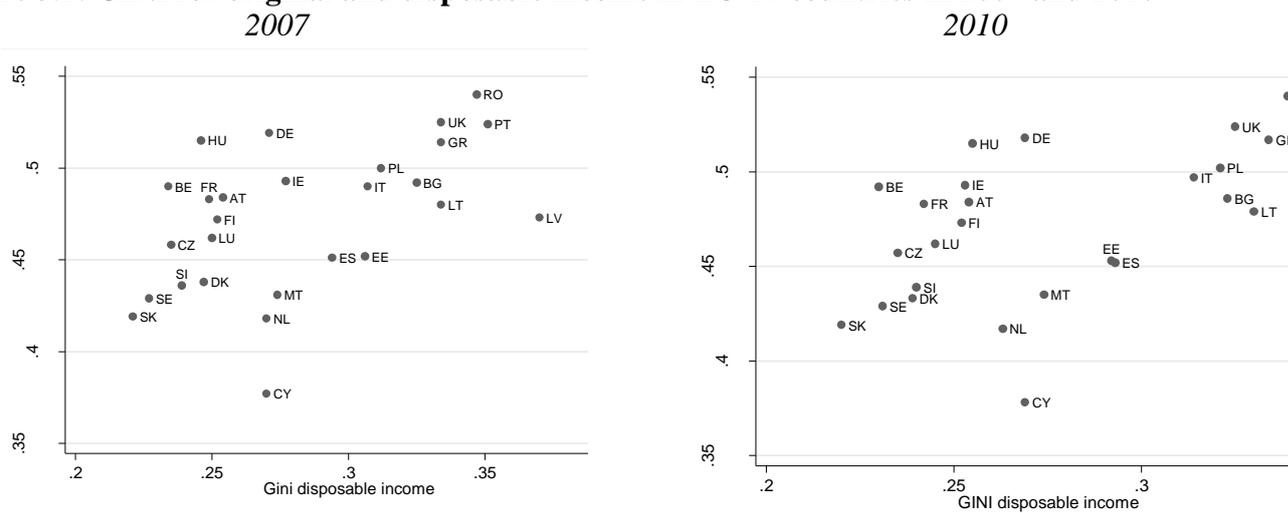
EU countries differ substantially in terms of inequality of original income and in terms of the degree of redistribution (see Figure 3.1). The Gini coefficient for original income (which includes income from employment and self-employment, property income, private pensions, private transfers and other relatively minor components) in 2007 ranged from 0.38 in Cyprus to 0.54 in Romania; in Latvia, inequality of original income roughly corresponds to the EU average – in 2007 the Gini for original income in Latvia was 0.47.

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<sup>12</sup> EUROMOD model for Croatia is currently being developed.

<sup>13</sup> EUROMOD has been developed by the Institute for Social & Economic Research (ISER, University of Essex) in co-operation with national teams and is supported by PROGRESS funding from EC DG-EMPL.

**Figure 3.1: GINI for original and disposable income in EU-27 countries in 2007 and 2010**

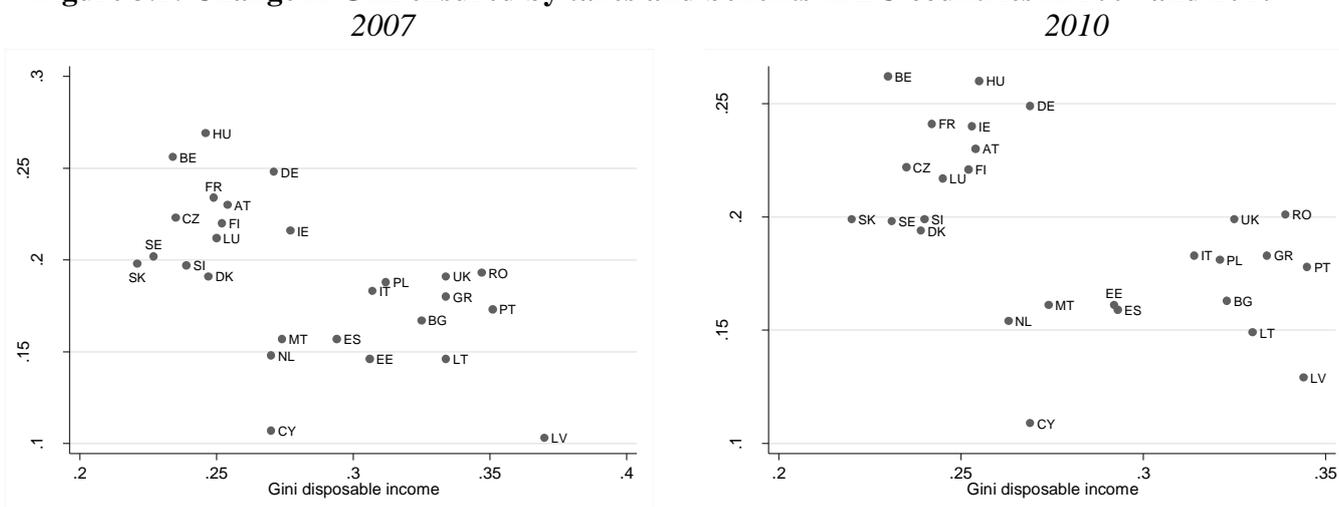


Note: Gini coefficients are computed using EUROMOD tax-benefit microsimulation model. Calculations are based on EU-SILC 2008 data (2007 year incomes), which is updated to 2010 (latest available year) using a unified methodology. The data is not adjusted for labour market and demographic changes that took place over this period, therefore the changes in Gini coefficients between 2007 and 2010 reflect the changes in tax-benefit systems, controlling for changes in income distribution that occurred because of changes in economic or demographic situation.

Source: EUROMOD version no. F6.0++

The degree of redistribution generated by taxes and benefits in 2007 in Latvia was the lowest in the EU (see Figure 3.2)<sup>14</sup>. The reduction in the Gini for original income generated by the tax-benefit system was just 0.10, much lower than in countries like Hungary (0.27), Belgium (0.26), Germany (0.25), France (0.23) and also lower than in Estonia and Lithuania (0.15). As a result, inequality of disposable income in Latvia in 2007 was the highest in the EU, despite the average inequality of the original income.

**Figure 3.2: Change in Gini ensured by taxes and benefits in EU countries in 2007 and 2010**



Note: Gini coefficients are computed using EUROMOD tax-benefit microsimulation model. Calculations are based on EU-SILC 2008 data (2007 year incomes), which is updated to 2010 (latest available year) using a unified methodology. The data is not adjusted for labour market and demographic changes that took place over this period, therefore the changes in Gini coefficients between 2007 and 2010 reflect the changes in tax-benefit systems, controlling for changes in income distribution that occurred because of changes in economic or demographic situation.

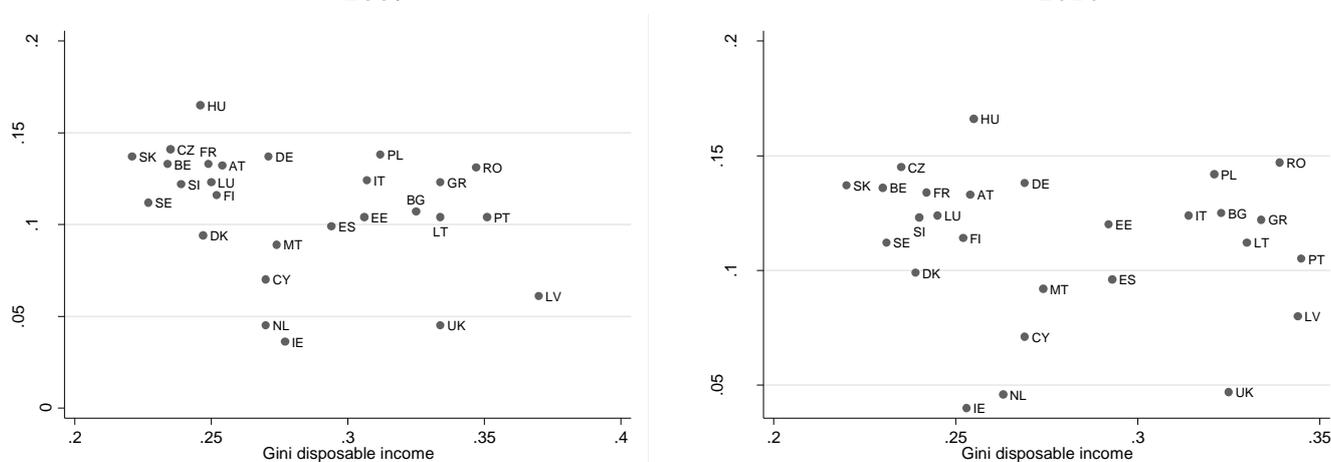
Source: EUROMOD version no. F6.0++

Part of the answer as to why the degree of redistribution in Latvia is one of the lowest in Europe lies in a relatively minor contribution of pensions to the redistribution (see Figure 3.3),

<sup>14</sup> Taxes include personal income tax, property tax, social security contributions paid by employees and self-employed. Benefits include all major benefits – old-age, survivors’ and disability benefits and pensions, unemployment benefits, family benefits, health benefits and social assistance benefits.

despite the fact that the share of public pension recipients in total population in Latvia is one of the highest in the EU (Eurostat, 2013). Both in Lithuania and Estonia the reduction in Gini ensured by public pensions is almost twice as high as that in Latvia.

**Figure 3.3: Change in Gini generated by pensions in EU countries in 2007 and 2010**



Note: Gini coefficients are computed using EUROMOD tax-benefit micro-simulation model. Calculations are based on EU-SILC 2008 data (2007 year incomes), which is updated to 2010 (latest available year) using a unified methodology. The data is not adjusted for labour market and demographic changes that took place over this period, therefore the changes in Gini coefficients between 2007 and 2010 reflect the changes in tax-benefit systems, controlling for changes in income distribution that occurred because of changes in economic or demographic situation.

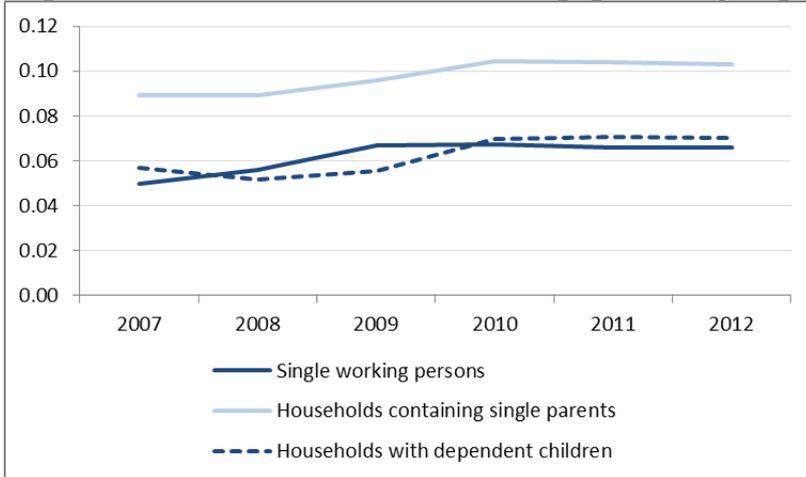
Source: EUROMOD version no. F6.0++

Over the period 2007-2010, the degree of redistribution generated by the tax-benefit system in Latvia increased (see Figure 3.2). The main reason was an increase in the average size and the number of recipients of social assistance benefits (mainly GMI), which was a result of reforms in the provision of GMI and housing benefit (changes to the income test, increased level of guaranteed income) and of the fact that wages were falling and people who previously did not receive benefits, became eligible<sup>15</sup>. Nevertheless, the degree of income redistribution ensured by tax-benefit system in Latvia remained second lowest in the EU in 2010.

Figure 3.4 shows the level and dynamics of the degree of redistribution in Latvia for selected population groups. It shows that households containing single parents, which are relatively poor, face a relatively high degree of redistribution, if compared to single working individuals or households with dependent children in general.

<sup>15</sup> The estimated effect of GMI and housing benefit can be overestimated due to the fact that EUROMOD-LV is not adjusted for benefit non take-up. At the same time, the baseline EUROMOD-LV version, which is used in Figure 3.1-Figure 3.3 to make the results comparable with results on other countries, is not adjusted for labour market changes, which can lead to an underestimation of the impact of GMI and housing benefit, taking into account that the unemployment rate increased substantially over the period of 2007-2010, which increased the number of people eligible for GMI and the housing benefit.

**Figure 3.4: Difference between Gini for equivalised original income and Gini for equivalised disposable income in Latvia for selected population groups in 2007-2012, percentage points**



Source: authors' calculations using EUROMOD-LV

### 3.1.2 Incentives

There are several ways of measuring work incentives created by the tax-benefit system, which can be grouped in two major categories (Adam et al, 2006). First, a tax-benefit system can affect an individual decision to work at all, for which the most common measures are the *replacement rate* (which shows the proportion of net income which is preserved when a person moves from being unemployed to being employed) and the *participation tax rate* (which shows the proportion of gross earnings that are “taxed away” in the form of lost benefits or additional taxes when a person starts working). Second, there are indicators that measure incentives to increase work effort for those who are already in work, the most common being the *marginal effective tax rate (METR)*. The METR measures the proportion of a small increase in earnings that is lost due to extra tax payments or foregone benefits.

In this section, we focus on METRs to compare work incentives created by tax-benefit systems in Latvia and elsewhere in Europe. METRs are computed at household level, so that to take into account all the interdependencies between incomes of all members of the household. METR is calculated as shown below (Jara and Tumino, 2013).

$$METR = 1 - \frac{Y_{HH}^1 - Y_{HH}^0}{E_i^1 - E_i^0}$$

where the numerator measures the increase in the household’s disposable income generated by an increase in the individual’s earnings in period 1 compared to period 0, and the denominator measures the increase in the earnings of individual  $i$  in the corresponding period. Thus, METRs can be calculated only for those who are already in work and have income, but their METR depends on incomes of other members of the household, even if they are not employed and have zero earnings. For example, a two-person household, where one person is working and the other is unemployed, can be eligible for social assistance benefits, if their household per capita income is below a certain threshold. In a situation like this, METR for the employed person can be as high as 100% if every additional EUR of earnings results in a reduction of social assistance benefit of an equivalent amount. METRs that are analysed in this section are calculated for a 3% increase in earnings, which roughly corresponds to an additional hour of work assuming the standard 40 hour working week (Jara and Tumino, 2013).

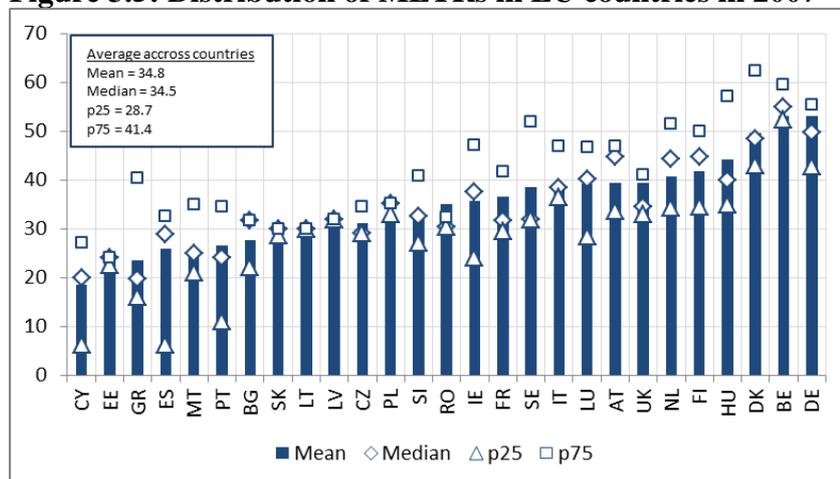
The effect of the METR on labour supply can be decomposed into two effects which work in the opposite directions. Suppose there is an increase in the tax rate. This reduces the individual’s

net income, and can induce the person to increase his or her labour supply to maintain the level of after-tax earnings – this is the income effect. On the other hand, an increase in the tax rate on wage income makes working less attractive relative to leisure and will induce substitution of leisure for work – this is substitution effect. The net effect of an increase in the tax rate on the amount of labour supplied depends on which effect dominates which is an empirical issue.

There is vast amount of theoretical and empirical literature on the effect of taxation on labour supply and work effort. The overall consensus, as summarized by Meghir and Phillips (2010) in their review article, is that incentives do matter for labour supply decisions, but the responsiveness of supplied hours is different for different demographic and education groups. In particular, incentives have a significant impact on supplied hours by women with small children. Tax-benefit systems are also important in affecting low educated men’s decision to work, however, the number of work hours they supply generally cannot be explained by changes in taxes or benefits, as this group tends to either work full time or not work at all. Similarly, hours supplied by highly educated men are found to be not responsive to incentives created by tax-benefit systems, however, as the authors argue, it is particularly difficult to measure the work effort exerted by this group (e.g., intellectual or creative effort), which might obscure estimation of the effect of incentives on labour supply of highly educated individuals.

Figure 3.5 shows distribution of METRs across EU member states in 2007. The mean METR in Latvia (31%) is below the EU average (34.8%), but is slightly above the mean METR in Lithuania (28.1%) and considerably above the mean METR in Estonia (23.4%). Median value of METR, as well as the 1<sup>st</sup> (p25) and 3<sup>rd</sup> (p75) quartiles of METR distribution in Latvia are very close to the mean value, which implies that there is no big variation in the level of METRs, while there are countries (Cyprus, Spain, Portugal, Ireland), where the lower quartile of METR distribution is much below the average, but the upper quartile if much above the average, suggesting that there is a considerable number of individuals with relatively low and relatively high METRs in these countries.

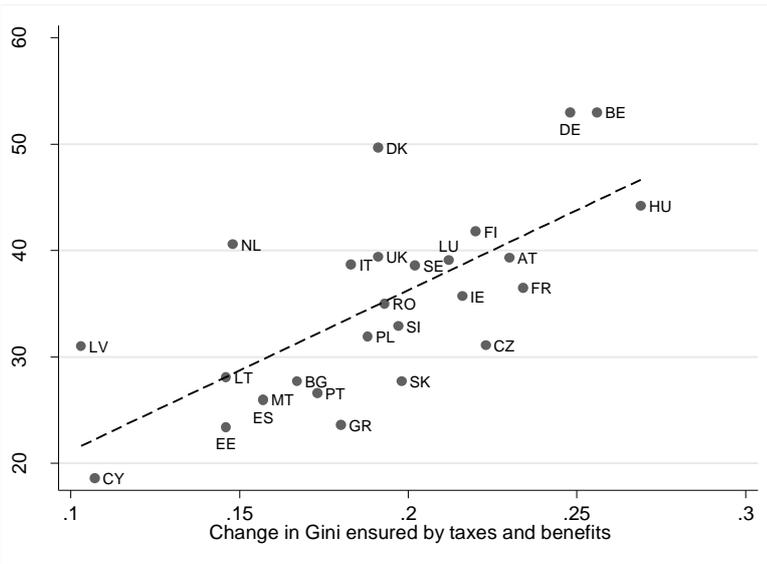
**Figure 3.5: Distribution of METRs in EU countries in 2007**



Source: Jara & Tumino, 2013

Given that Latvia has one of the lowest rates of redistribution generated by taxes and benefits, one might expect a relatively low level of METR. Figure 3.6 plots the mean METRs against the difference between Gini coefficients for original and disposable income in 2007. There is a clear positive correlation between these two indicators in EU countries (i.e., more redistribution is associated with higher marginal tax rates). Latvia, however, is located considerably above the fitted line, suggesting that if the Latvian METR/redistribution ratio were close to the “average” the observed METR should generate more redistribution.

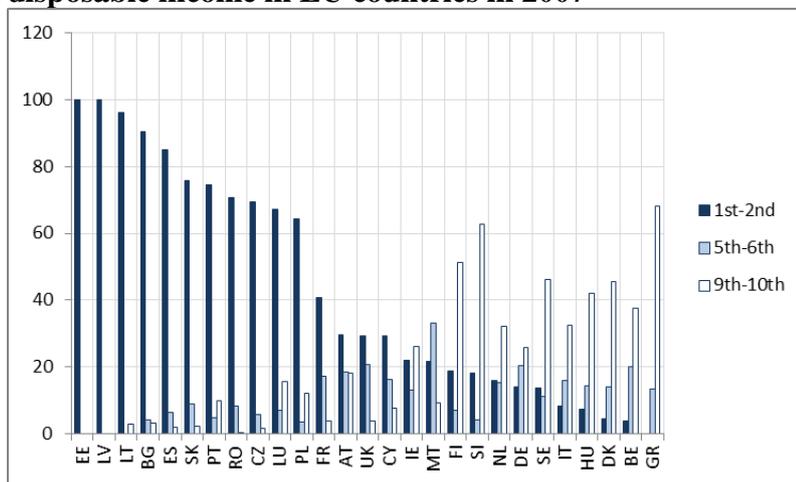
**Figure 3.6: Mean METRs vs. redistribution ensured by taxes and benefits in EU countries in 2007**



Source: Jara & Tumino (2013) EUROMOD version no. F6.0++, authors' calculations

In Latvia and in the other Baltic states, people facing high METRs<sup>16</sup> are concentrated in the lowest deciles of disposable income distribution. This is very different from many other EU countries, where the distribution of people facing high METRs is either more even across deciles or is rising towards the top of the income distribution. In fact, in Latvia and Estonia all people facing high METRs belong to the first two deciles of equivalised disposable income (see Figure 3.7). In Lithuania also, 96% of high METRs are concentrated in the first two deciles of the income distribution.

**Figure 3.7: Distribution of high METRs (% of total high METRs) by deciles of equivalised disposable income in EU countries in 2007\***



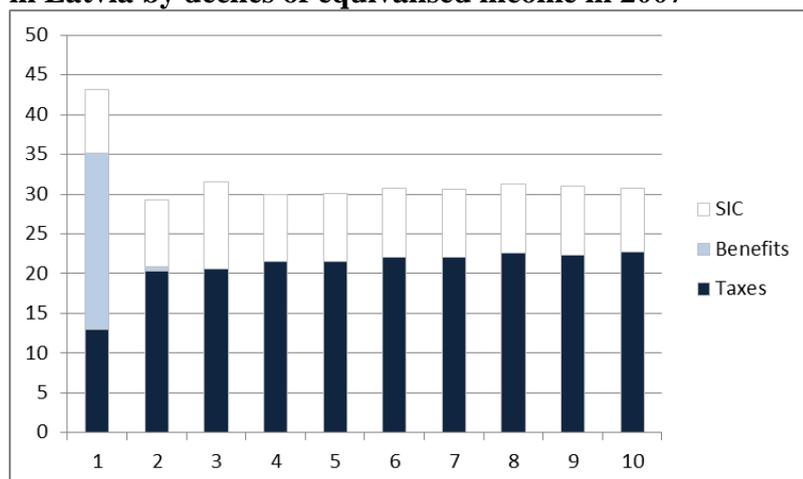
Note: High METR is defined as METR exceeding 50%.

Source: Jara & Tumino, 2013, authors' calculations

The main reason for high METRs faced by the poorest population groups (see Figure 3.8) in Latvia is the fact that means tested benefits (GMI and housing benefit) are withdrawn at the same rate as income rises, i.e., for every additional EUR of income a recipient of GMI or housing benefit faces an equivalent reduction in the amount of benefits, while in many other EU countries the benefits either taper off gradually or individuals are allowed to have a certain amount of income from employment that is not included in the income test for means-tested benefits.

<sup>16</sup> Jara & Tumino (2013) define high METR as METR that exceeds 50%.

**Figure 3.8: Contribution of taxes, benefits and social insurance contributions (SIC) to METR in Latvia by deciles of equivalised income in 2007**



Source: author's calculations using EUROMOD-LV

In their study on the incentive structure created by the tax and benefit system in Latvia, the World Bank (2013) shows that the level of means tested benefits relative to the average wage are very low in Latvia, far below the level observed in most OECD countries. They conclude that “[t]he comparatively low benefit levels [...] suggest that income support measures create significantly fewer problems in terms of work incentives than in other countries”. At the same time, they identify the design of means tested benefits as a source of potential problems, arguing that “[i]n Latvia, the GMI benefit and the housing benefit are designed with a 100% marginal effective tax rate on earnings, i.e. the benefits decrease by 1 lat for each additional lat earned. As a result, on earnings ranges where households are eligible for either or both of these benefits, earners face an METR of 100 percent.” Our results, based on actual data on incomes, confirm that means-tested benefits do represent a major contributor to high METRs in the lowest deciles of income distribution.

Another concern emphasised by the World Bank (2013) is the problem of informal employment (either in the form of undeclared work or undeclared wages). The World Bank argues that there is a risk that the problem of informal employment is exacerbated by high participation tax rates (PTRs) and METRs and recommends introduction of gradual phasing out of benefits or provision of employment-conditional benefits or tax credits.

### 3.2. Impact of selected reforms of personal income tax on marginal effective tax rates

This subsection provides an indicative assessment of the sensitivity of METRs to two parameters of the PIT system: the non-taxable minimum (basic allowance) and the tax rate. The 2013 tax-benefit system is used as the baseline, i.e., apart from the changes in taxes or benefits, induced by the reform experiments described below, other parameters of the tax-benefit system correspond to the actual policies that are in force in 2013. Note: these are *not* reforms that are being proposed they are simply used to illustrate how the incentive structure contained in the PIT system depends on the key parameters.

The following reforms are considered:

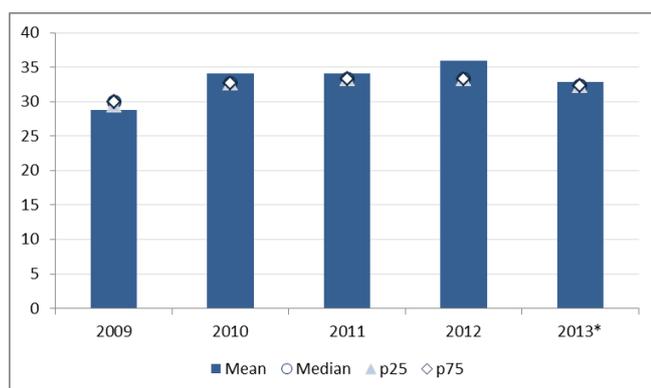
- **2013a:** Personal income tax rate = 20%, non-taxable minimum = 45LVL
- **2013b:** Personal income tax rate = 25%, non-taxable minimum = 45LVL
- **2013c:** Personal income tax rate = 24%, non-taxable minimum = 40 LVL

- **2013d:** Personal income tax rate = 24%, non-taxable minimum = 65 LVL
- **2014:** Personal income tax rate and tax allowances correspond to the system in force as of January 1, 2014: personal income tax rate = 24%, social insurance contributions paid by employees = 10.5%, social insurance contributions paid by employers = 23.59%, non-taxable allowance for dependents = 116LVL, non-taxable minimum = 53LVL.

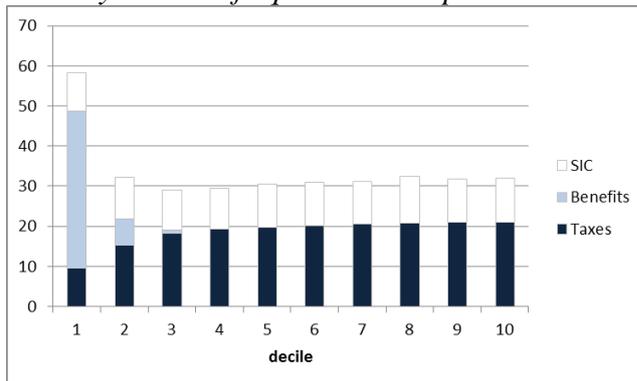
Figure 3.9 shows the evolution of mean, median, p25 and p75 METRs in 2009-2013 as well as mean METRs by deciles of equivalised disposable income under the actual tax-benefit system.

**Figure 3.9: Mean, median, p25, p75 METRs in 2009-2013 and mean METRs by deciles of equivalised disposable income in 2013 in Latvia under actually observed tax-benefit systems**

*Mean, median, p25 and p75 METRs in 2009-2013*



*Mean METRs by contributing components in 2013 by deciles of equivalised disposable income*



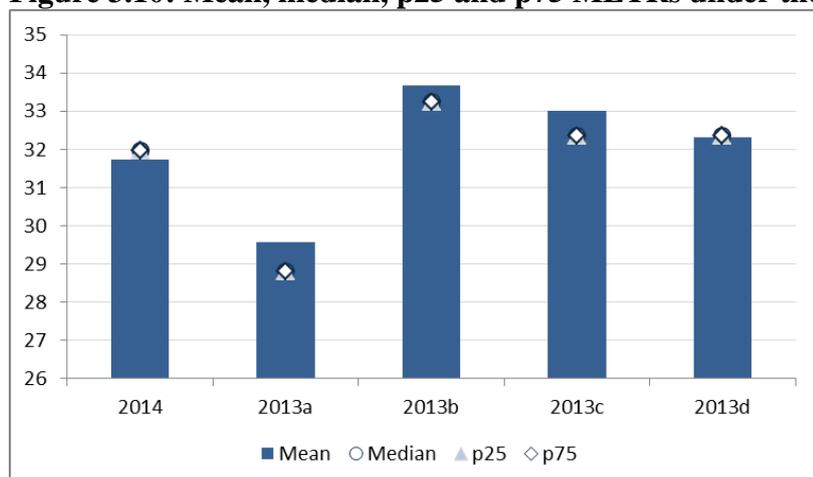
Note: 1) Calculations are based on EU-SILC 2010 data (2009 year incomes), which is updated to 2013 using a EUROMOD recognised methodology. The data is not adjusted for labour market and demographic changes that took place over this period, therefore the changes in METRs between 2009 and 2013 reflect the changes in tax-benefit systems, controlling for changes in METRs that occurred because of changes in economic situation or composition of the population.

\* Does not include policy changes that were introduced after June 30, 2013. According to EUROMOD methodology, a tax-policy system in a given year is modelled as it is on June 30 of that year.

Source: authors' calculations

Figure 3.10 summarizes the impact of the considered reforms on the distribution of METRs. The following reforms result in a reduction of mean METR: the reforms of 2014, a reduction in PIT rate to 20% (2013a), and an increase in the non-taxable allowance to 65LVL (2013d).

**Figure 3.10: Mean, median, p25 and p75 METRs under the reforms**

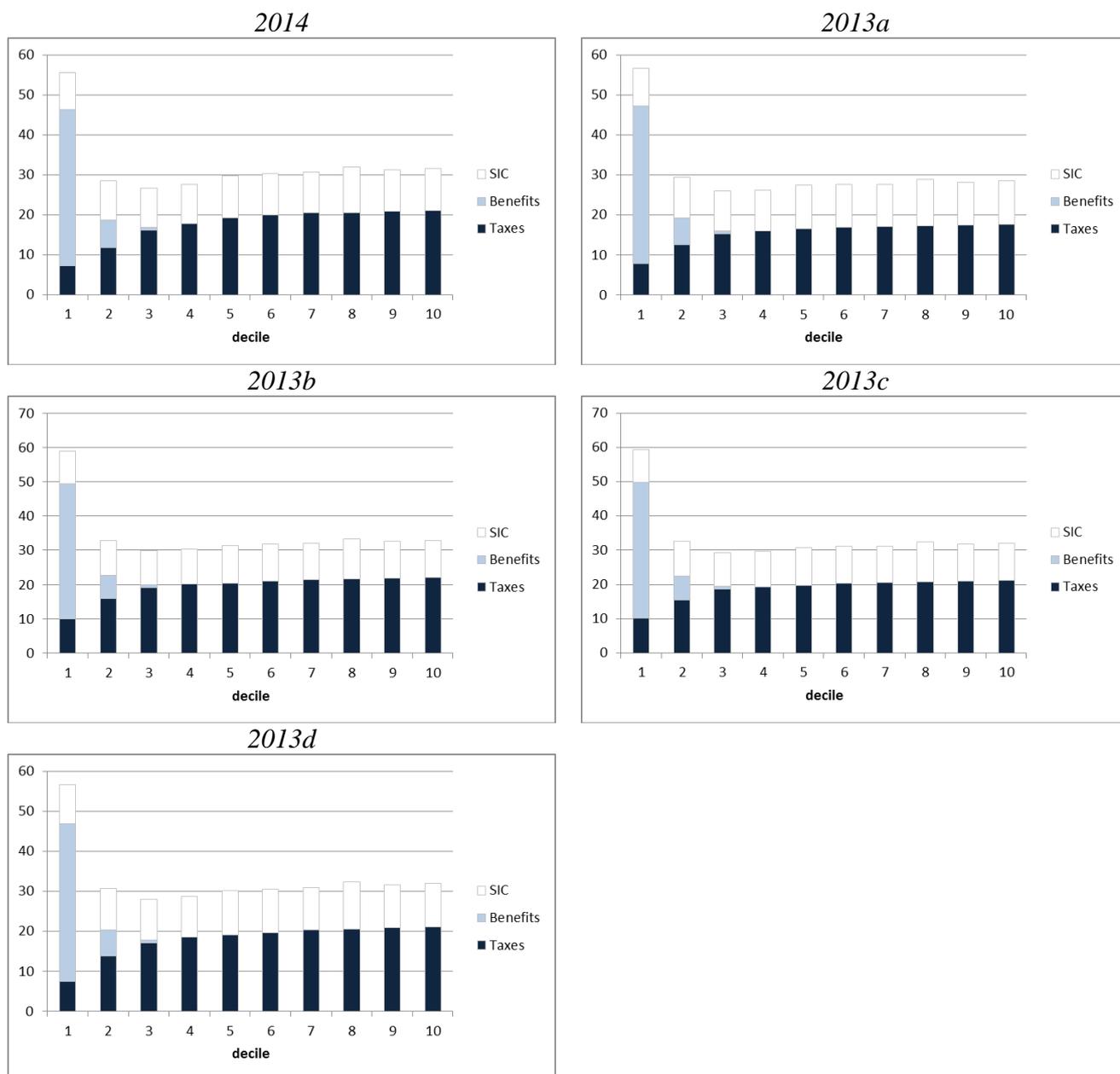


Source: authors' calculations using EUROMOD-LV

PIT reforms are shown to be less effective in changing the distribution of METRs across deciles of income distribution (Figure 3.11). The METR in the lowest decile of the income

distribution remains virtually unaffected by changes in the PIT rate. One reason for that is that there are relatively few employed individuals among those in the first decile, and second – the gain from a lower rate is smaller for those with low incomes, as for them the basic tax allowance accounts for a bigger share of income.

**Figure 3.11: Distribution of METRs by deciles of disposable equivalised income under the reforms**



Source: authors' calculations

### 3.3. Summary

Key results are:

- The degree of redistribution generated by the tax-benefit system in Latvia is one of the lowest in the EU.
- There is a positive correlation between the degree of redistribution and METRs across the EU countries, i.e., greater redistribution corresponds to higher METRs. In Latvia, however,

the average level of METRs is higher than one could predict given the low degree of redistribution. So work incentives are lower than they might be given the achieved degree of redistribution

- Distribution of high METRs (METRs in excess of 50%) by deciles of disposable income in Latvia differs strikingly from many other European countries: in Latvia, all individuals facing high METRs belong to the first two deciles of income distribution (Estonia is the only other country with that high concentration of high METRs in the lowest deciles). The main reason for observing very high METRs faced by poor people are means-tested benefits, which are withdrawn at the same rate as income rises.
- Simulations of changes in PIT system suggest that a reduction in PIT rate or an increase in the basic tax allowance do reduce average METRs. However, these reforms are not effective in lowering METRs in the lowest deciles of income distribution.

**TS Nodevums 2.2.3.2.1: Veikt nodokļu sistēmas progresivitātes piemērošanas pamatprincipu ES dalībvalstīs (vismaz 7 ES dalībvalstīs, t.sk. Baltijas valstīs) salīdzinošo analīzi un sniegt starptautiskās pieredzes apkopojumu**

**TS Nodevums 2.2.3.2.2: Salīdzināt nodokļu sistēmas progresivitāti Latvijā un citās ES dalībvalstīs (vismaz 7 ES dalībvalstīs, t.sk. Baltijas valstīs), izanalizēt galvenās atšķirības un to neteicošos faktorus**

**TS Nodevums 2.2.3.2.3. Izmantojot mikroekonomiskās simulācijas modeli, izvērtēt nodokļu sistēmas progresivitātes piemērošanas iespējamo ietekmi uz Latvijas konkurētspēju, kas šī pētījuma kontekstā raksturojama ar nodokļu robežlikmēm, un iedzīvotāju labklājības un ienākumu nevienlīdzības rādītājiem**

**TS Nodevums 2.2.3.2.4. Detalizēti aprakstīt pētījuma rezultātus un sniegt no pētījuma izrietošos secinājumus un priekšlikumus, kuri pēc pētījuma beigām būtu izmantojami Latvijā**

#### **4. Progressivity of tax systems in Latvia and other EU countries and reforms aimed at reducing inequality, poverty and increasing progressivity of the system**

In this chapter, we analyse and compare progressivity of tax systems in Latvia and elsewhere in Europe, propose reforms that are aimed at increasing the degree of progressivity and address issues that we see as being other main weaknesses of the current Latvian tax-benefit system, namely, low degree of redistribution ensured by the system and weak work incentives for low paid workers. Thus, this section addresses tasks 2.2.3.2.1 - 2.2.3.2.4 of the Technical Specifications.

A key analytical tool that is used throughout is European-wide micro-simulation tax-benefit model EUROMOD to analyse distribution of income, progressivity of taxation (with the exception of VAT) in European countries and impact of the proposed reforms in Latvia. EUROMOD is a static model, in the sense that it only allows for simulation of the first round effects of a tax or a benefit reform. This represents a good base for the analysis of the potential impact the reforms and especially given that there are substantial disagreements among economists regarding the size of behavioural (second round) responses to taxation (Piketty and Saez, 2007).

As in Verbist and Figari (2014), we assume full tax compliance and full benefit take-up, hence, our analysis reveals the “intended redistributive effects of the different components embedded in the tax system.”

The chapter is structured as follows. Section 4.1 compares the progressivity of major taxes in Latvia with other EU member states, section 4.2 sets up reform scenarios aimed at increasing progressivity, reducing inequality and strengthening work incentives in Latvia. Section 4.3 discusses the expected impact of the reforms in the context of their impact on inequality and poverty indicators, competitiveness as measured by marginal tax rates (METR) and incentives for participation, budget balance and progressivity of taxation. Section 4.4 considers how proposed reforms might be financed from consumption tax revenues.

#### 4.1. Progressivity of tax systems in Latvia and other EU countries (TS 2.2.3.2.1; TS 2.2.3.2.2)

A progressive tax system is a system that ensures that the share of income that an individual pays in taxes increases as income rises (Verbist and Figari, 2014). There is an inherent trade-off between the degree of progressivity on the one hand and efficiency on the other, as more progressivity tends to be associated with higher distortions to labour supply and investment in skills (Heathcote et al, 2014; Saez, 2006).

Why may governments wish to redistribute income from rich to the poor? As argued by Saez (2006), earnings and work abilities differ considerably in market economies, generating income inequality. And, given that poverty is generally considered by the public as being an undesirable market outcome, governments may wish to intervene to make income distribution more even. The problem that a government faces when designing a tax-benefit system is that earning ability is not directly observable. The adverse effect of redistribution on efficiency stems from the fact that redistribution generates disincentives; if earning ability were observable directly, assistance could be assigned directly based on the ability to work and earn<sup>17</sup>. Earning abilities, however, are not always directly observable, that is why the government has to intervene based on some kind of proxies, of which the most obvious is market income (Saez, 2006).

However, a high degree of redistribution does not necessarily imply high progressivity of taxes. Redistribution can be ensured either by taxing individuals differently or by taxing everyone equally and providing generous benefits to the poor. For example, as shown by Verbist and Figari (2014), there is a significant negative correlation between the average tax rate in the EU-15 and degree of tax progressivity, which suggests that “these two building stones of the redistributive impact of taxes are substitutes rather than complements.”

In this section, we assess and compare progressivity of taxes in Latvia and other EU countries, using micro-simulation tax-benefit model EUROMOD. For the purpose of assessment and comparison of progressivity, we use the Kakwani index, originally developed by Kakwani (1976).

Following Haughton & Khandker (2009), we calculate Kakwani index in three steps (see Figure 4.1):

Step 1: Compute Gini coefficient, i.e.,  $G_y = \frac{A}{A+B+C}$

Step 2: Compute concentration coefficient of a tax  $C_t = \frac{A+B}{A+B+C}$

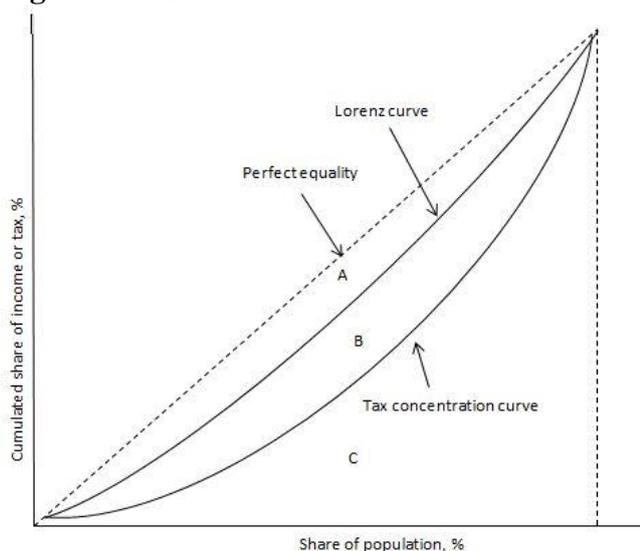
Step 3: Calculate Kakwani index  $K = -|G_y - C_t|$

A positive value of Kakwani index implies that the tax is progressive, a negative value implies that the tax is regressive.

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<sup>17</sup> As is in practice done when we *can* observe impediments to the ability to work e.g. disabled persons tend to receive a more favourable treatment by the tax benefit system.

**Figure 4.1: Calculation of the Kakwani index**



Source: compiled by authors based on Haughton & Khandker (2009)

Below we present estimates of the degree of progressivity of the main taxes in Latvia as compared with other EU countries and dynamics of the Kakwani index in Latvia over the period 2007-2013. The taxes examined are:

- personal income tax (PIT),
- social security contributions (SSC),
- value added tax (VAT).

The calculations for all countries except Latvia are based on data provided in EUROMOD Web statistics (EUROMOD, 2014). For Latvia, calculations are performed using EUROMOD-LV model and two databases: EU-SILC 2008 that contains information about 2007 year incomes and EU-SILC 2010 (2009 year incomes)<sup>18</sup>. Kakwani indices for VAT were calculated using information about statutory VAT rates by disaggregated groups of goods and services (European Commission, 2014), structure of private consumption (Eurostat, 2014; Central Statistical Bureau of Latvia, 2014b). Households are ranked according to disposable income equivalised using the OECD scale. Income shares received by each decile of income distribution are computed based on original income (which includes employment income, self-employment income, investment income, property income, private pension income, income from private transfers, and other income excluding income from benefits or other government transfers).

According to our results (see Figure 4.2), PIT in Latvia is progressive (the Kakwani index is positive), which is ensured by the presence of tax allowances. The degree of progressivity was increasing up to 2009, which was the result of a gradual increase in the size of allowances, however, after 2009, following a sharp reduction in the amount of the basic allowance, the degree of progressivity declined.

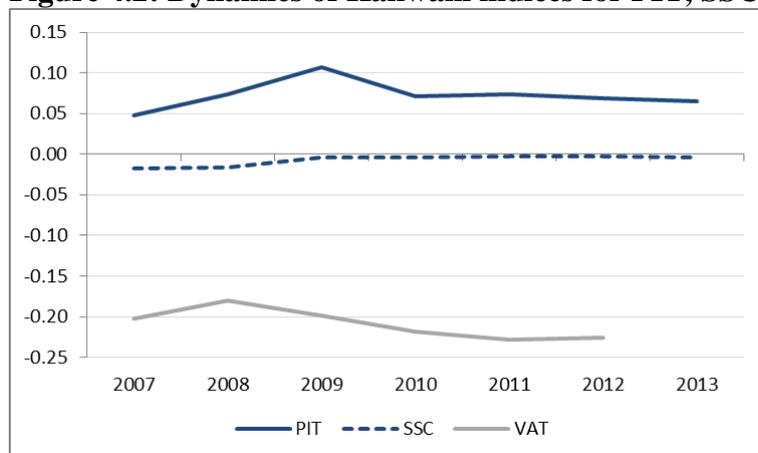
SSC in Latvia is proportional in 2009-2013 (Kakwani index is zero), but before 2009 it was slightly regressive because of a ceiling on the annual amount of SSC (29600 LVL in 2008), which was abolished in 2009.

VAT is regressive, as demonstrated by a negative value of Kakwani index. Regressivity of VAT is commonly observed in other countries as well, which is mainly due to the fact that poor

<sup>18</sup> EU-SILC 2008 is used to calculate Kakwani indices in 2007-2008, but EU-SILC 2010 is used to calculate Kakwani indices in 2009-2013.

population groups spend a larger share of their income on taxed consumption goods (Piketty and Saez, 2007). Over the course of the crisis, the degree of VAT regressivity in Latvia increased, which was a result of higher standard and reduced VAT rates, broadening of the tax base and abolishment of the reduced rate for certain groups of goods and services.

**Figure 4.2: Dynamics of Kakwani indices for PIT, SSC and VAT in Latvia in 2007-2013**



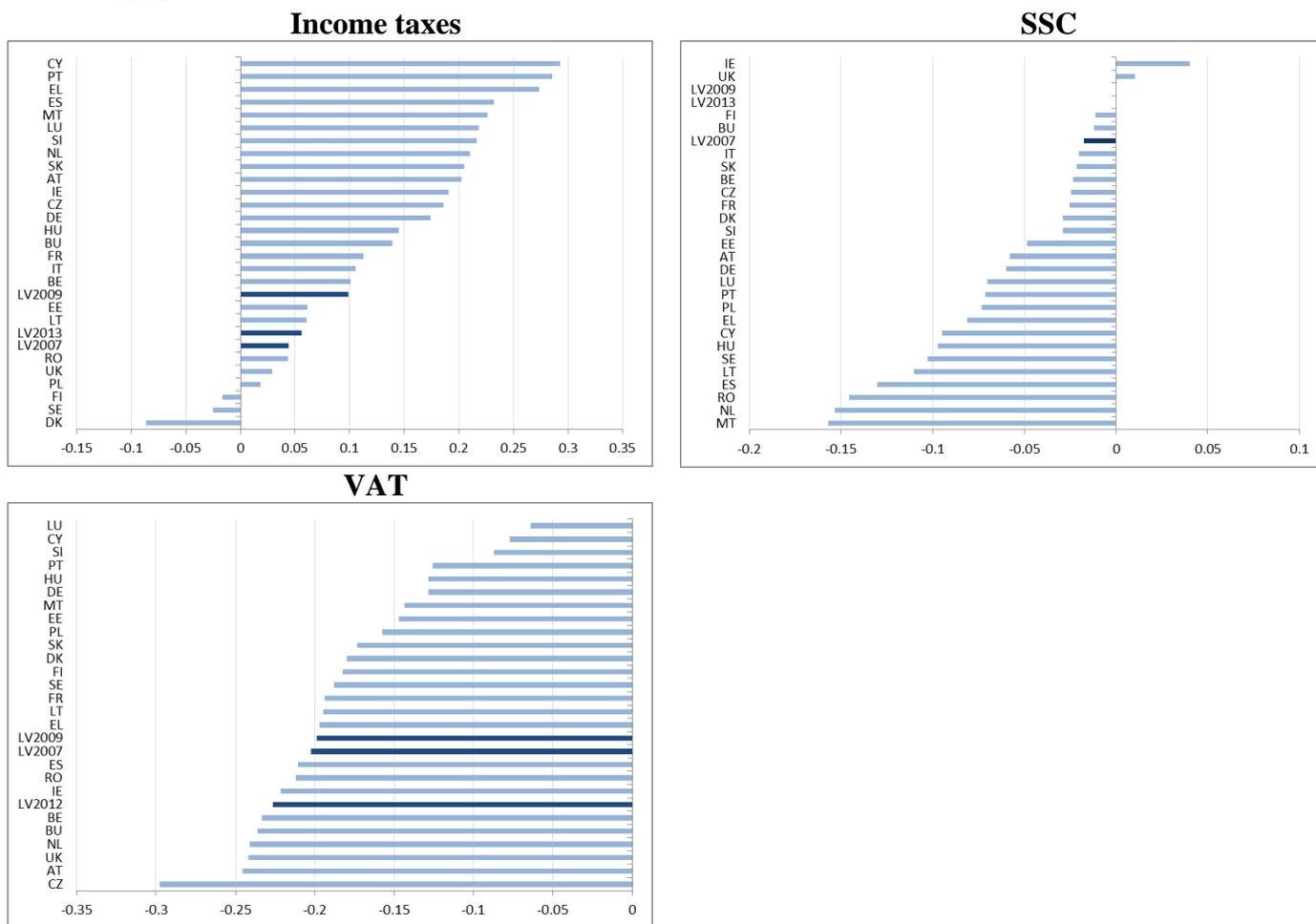
Source: authors' calculations

The degree of progressivity of income tax in Latvia is one of the lowest in the EU (see Figure 4.3) being very close to the systems in place in Lithuania and Estonia. Our results on the ranking of EU-15 countries with respect to the progressivity of income taxes is similar to that found in Verbist and Figari (2014)<sup>19</sup>. The countries with the highest degree of progressivity are Southern European countries – Spain, Cyprus, Greece, where there is either a very big difference between the top and the lowest PIT rates (Portugal), or a very high tax allowance (Cyprus) or both (Greece). The countries where income taxes are least progressive are Scandinavian counties, where the tax systems are characterized by high but basically flat schedules (e.g., in Sweden, where income tax consists of two parts – a part that is levied by municipalities, which features a flat tax rate, and a national part, which features a slightly progressive tax schedule, the total PIT rate ranges from 51.73% to 56.73%).

SSC are regressive in almost all EU countries (as opposed to proportional in Latvia), but the Kakwani index for VAT in Latvia is slightly below the EU average. Consumption of food, which comprises a notable share of total consumption in all countries, and takes up an especially big income share in lower deciles, is (totally or partially) in many EU countries either subject to a reduced VAT rate (Belgium, Czech Republic, Germany, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Luxembourg, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, UK) or is VAT exempt (Malta). In all three Baltic states food is taxed at the standard VAT rate, which is one of the reasons for a relatively high degree of VAT regressivity. In Estonia, VAT is less regressive than in Latvia and Lithuania mainly because of a lower standard rate (20% in Estonia vs. 21% in Latvia and Lithuania). Another reason for a relatively high degree of VAT regressivity in Latvia as compared with Estonia and Lithuania is that medical products, appliances and equipment, which comprise a relatively large share of consumption in lower quintiles, in Latvia are taxed at a higher rate (12% in Latvia vs. 9% in Estonia and 5% in Lithuania).

<sup>19</sup> There are several differences between the approach used in Verbist and Figari (2014) and our approach, which makes it impossible to directly compare the numerical values of the calculated Kakwani indices. First, Verbist and Figari (2014) use income which includes benefits to calculate income shares, while we use original income; second, Verbist and Figari (2014) disaggregate the overall Kakwani index by types of income taxes.

**Figure 4.3: Kakwani indices for income taxes, SSC and VAT in Latvia compared to other EU countries**



Note. The top left panel of the figure aggregates all income taxes. For Latvia, the figure includes PIT and property tax. The reason for aggregating all income taxes is unavailability of more disaggregated data for countries other than Latvia.

Source: EUROMOD (2014) and authors' calculations using EUROMOD-LV

## 4.2. Reforms aimed at reducing inequality, poverty and increasing progressivity of the system (TS 2.2.3.2.3 and 2.2.3.2.4.)

In this section, we present results of simulation of the reforms aimed at shifting the tax burden from labour and addressing what we see as the main two problems of the current tax-benefit system, namely, improving work incentives for low paid workers and raising the degree of redistribution ensured by the tax-benefit system. We use the micro-simulation tax-benefit model EUROMOD to simulate the impact of selected reforms on inequality, poverty and progressivity of the system. The essential elements and directions of the proposed reforms follow from our analysis presented in Chapter 3. .

First deliverable of this project (BICEPS, 2014) identified the following possible directions for reforms:

**1. Reform of provision of means tested benefits** aimed at improving work incentives of low paid/low skilled workers and reducing poverty. To pursue this goal, we propose the following reforms:

**Reform 1a.** First 71 EUR (50LVL) of net income from employment or self-employment are excluded from income test for provision of GMI

**Reform 1b.** First 142 EUR (100 LVL) of child care (parental) benefit are excluded from income test for provision of GMI

**Reform 2 – reform of the basic personal income tax (PIT) allowance** to make the personal income tax more progressive. We propose to implement a system that follows closely the system that is currently in force in Lithuania. Namely, we simulate the impact of introducing tax allowance that is calculated as follows:

$$TA = 136 - 0.28 * (Y - 232)$$

where TA is basic monthly tax allowance **in euro**, and Y is monthly gross income from employment **in euro**. Hence, this reform stipulates maximum monthly allowance to be 136 EUR (96 LVL) per month. The maximum allowance is applied to income that does not exceed 232 EUR (163 LVL) per month. For every additional euro earned, the allowance is reduced by 0.28 EUR (0.2 LVL), which means that the tax allowance becomes zero when monthly income exceeds 717 EUR (504 LVL).

**Reform 3 - reform of PIT rate.** We simulate the impact of introduction of a higher tax rate for top income earners and lowering the standard tax rate. Theoretical analysis suggests that the optimal top PIT rate for Latvia is around 40%. Together with a higher tax band, we propose lowering the standard tax rate to 20%. Thus, the proposed PIT rates are very close to those currently in force in Ireland (20% and 41%), and the ratio of the top to the standard rate is approximately equal to the ratio of the tax rates currently in force in Belgium, Italy and Spain (see Table 1.4).

We simulate the impact of the reform assuming that the top rate is applied to income from employment that lies within the top 5 centiles of income distribution, while income below that level is taxed at the standard rate: i.e. an individual whose monthly gross income from employment exceeds the lowest income in the 96<sup>th</sup> centile of income distribution, would be obliged to pay 20% tax on income below that threshold and 40% on income above that level. We assume that income is assessed per individual, i.e., if a person is employed in more than one job, his/her income is summed up across all jobs.

To establish the threshold for gross income above which the top rate is applied, we use SILC2010 database (2009 year incomes) uprated to year 2013 using EUROMOD standard uprating

methodology (for more details on uprating procedure, see Zasova, Rastrigina, Vanags (2013)). The estimated threshold for monthly gross employment income above which the top rate can be applied is 1693 EUR (1190 LVL).

It is a typical feature of survey-based data on income (such as EU-SILC) that individuals in the top tail of income distribution are poorly represented in the sample (e.g., because the wealthiest people are relatively difficult to reach). This can lead to undervaluation of the income threshold above which the top rate is applied. To assess how important this might be, we used individual-level data on social contribution wages from the State Social Security Agency (SSSA) as a supplementary source of information on incomes to assess and adjust the distribution of income in SILC dataset<sup>20</sup>. The SSSA dataset includes information on incomes of all socially insured individuals and provides information on the true distribution of income from employment in the top centiles. Comparison of income distributions from the two sources showed that only in the top 1 centile is there any significant difference in income levels. Average income in the top 5 centiles and the lower boundary of the top 5 centiles are pretty close in the two data sets. After adjusting income from employment in SILC data to make the distribution identical to that in SSSA data, the threshold above which the top income tax rate should be applied would be 1744 EUR per month, which is just 3% higher than the EU-SILC-based threshold. This suggests that the SILC-based threshold is a reasonable approximation of the income level that identifies 5% of top income earners. Therefore, we proceed with the analysis using unadjusted SILC data and using the monthly gross income threshold of 1693 EUR (1190 LVL).

### **4.3. Analysis of the reforms: results**

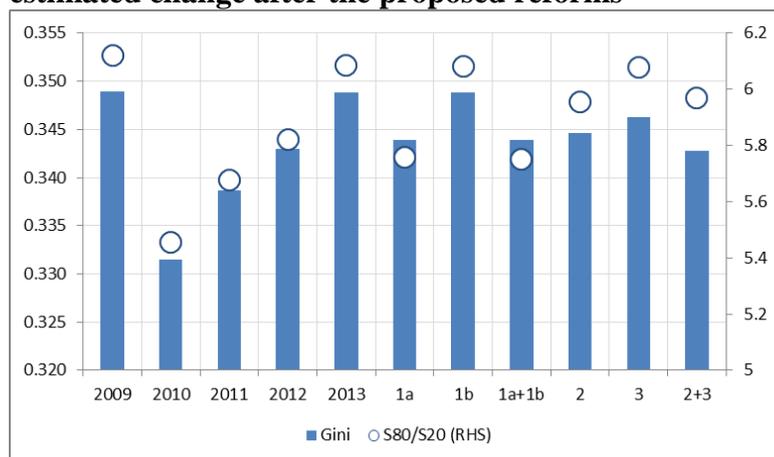
#### **4.3.1 Inequality and poverty**

Figure 4.4 presents the dynamics of Gini index and S80/S20 quintile share ratio in Latvia in 2009-2013 and presents the estimation results of the proposed reforms. The reform that is most effective in lowering income inequality is the reform 1a (where the first EUR 71 of monthly earned income is excluded from the income test for GMI). This is estimated to bring down the Gini by approximately 0.5 percentage points and to lower the S80/S20 ratio from above 6 to 5.76. The reforms of PIT (reform 2 and 3) are less effective in tackling inequality, the reason being that there are relatively few employed people in the bottom tail of income distribution, and therefore relatively few people who gain from reforms that affect net income from employment.

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<sup>20</sup> The adjustment was done by calculating the average income in each centile of income distribution and calculating the ratio of average income in each centile to the average income across the whole distribution. Then income from employment in SILC dataset was adjusted to make the ratio of average income by centiles equal to the average income equal to the ratios calculated based on the SSSA dataset.

**Figure 4.4: Gini Coefficient and S80/S20 quintile share ratio in Latvia in 2009-2013 and estimated change after the proposed reforms**

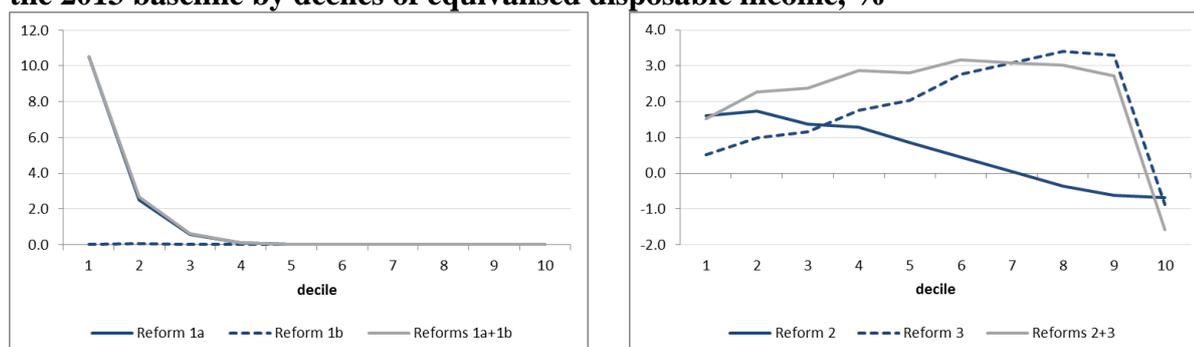


Note. Reform 1a – 71EUR of monthly net income from employment is excluded from income test for GMI; reform 1b – 142 EUR of child care (parental) benefit is excluded from income test for GMI; reform 2 – progressive PIT allowance; reform 3 – progressive PIT rate

Source: authors' calculations using EUROMOD-LV

It is revealing to look at the impact of the reforms on equivalised disposable income by deciles of income distribution (see Figure 4.5). The impact of reforms 1a and 1b is clearly progressive, as these reforms are targeted at the bottom tail of income distribution. The impact of Reform 2 is also progressive; although the proportional increase in the bottom deciles is smaller as compared with Reform 1a, the group that gains from that reform is larger. At the same time, reform 3 is most beneficial for people whose income is high but does not exceed the threshold above which the top rate is applied. Poor people are less affected, as the proportion of employed individuals in the bottom end of income distribution is smaller. It should be noted that the average impact on disposable within a decile group can contain individuals with diverse experiences e.g. within a decile that gains on average there could be individual losers and vice versa for a decile which on average loses.

**Figure 4.5: Change in mean equivalised disposable income resulting from reforms relative to the 2013 baseline by deciles of equivalised disposable income, %**



Note. Reform 1a – 71EUR of monthly net income from employment is excluded from income test for GMI; reform 1b – 142 EUR of child care (parental) benefit is excluded from income test for GMI; reform 2 – progressive PIT allowance; reform 3 – progressive PIT rate

Source: authors' calculations using EUROMOD-LV

Next we show the estimated impact of the reforms on the poverty rate. The standard indicator that is used to assess poverty is at-risk-of-poverty-rate, which shows the share of population receiving income below a certain proportion of the median income. This is a relative indicator and hence can grow even at growing incomes and decline even if the average income is declining. Here, in addition to the standard poverty rate we present the impact of the reforms on the absolute poverty rate, which is measured as the proportion of population that is below 60% of the median wage in the baseline system (2013). All of the proposed reforms reduce poverty and child poverty if the poverty rate is assessed at a fixed cut-off level (see Table 4.1).

The reforms that reduce the poverty rate most effectively are reforms 1a and 2; reform 1a is the most effective in lowering child poverty. Yet the groups of population that these reforms affect are different.

**Table 4.1: Absolute and relative poverty rates in Latvia in 2009-2013 and estimated change after the proposed reforms, %**

	2009	2010	2011	2012	2013	1a	1b	1a+1b	2	3	2+3
Relative poverty rate	20.9	19.6	20.0	20.3	20.3	19.6	20.3	19.6	20.0	21.0	21.0
Child poverty rate	27.7	26.5	26.7	26.8	26.8	25.1	26.8	25.0	26.6	27.3	27.3
Poverty rate at 2013 cut-off level	-	-	-	-	20.3	19.6	20.3	19.6	19.7	20.0	19.3
Child poverty rate at 2013 cut-off level	-	-	-	-	26.8	25.1	26.8	25.0	26.1	26.6	25.8

Note. 1) Reform 1a – 71EUR of monthly net income from employment is excluded from income test for GMI; reform 1b – 142 EUR of child care (parental) benefit is excluded from income test for GMI; reform 2 – progressive PIT allowance; reform 3 – progressive PIT rate

2) Poverty rates are assessed at 60% of the median equivalised disposable income. Two bottom rows of the table show poverty rates assessed at the 60% of median equivalised disposable income in 2013. Child poverty is assessed for individuals aged 0-17.

Source: authors' calculations using EUROMOD-LV

### 4.3.2 Work incentives

#### Marginal effective tax rates

As shown in Chapter 3, Latvian tax-benefit system generates very high marginal tax rates (METRs) for low-paid workers, creating disincentives to supply more labour. Table 4.2 and Figure 4.6 show the estimated impact of the reforms on METRs and contributions of various components to METRs by income deciles. Reform 1a + 1b is more effective in lowering METRs in the lowest decile, which is due to the fact that individuals receiving means-tested GMI and housing benefit are no longer faced by 100% METRs when working and receiving up to 71 EUR income from employment. Reforms 2 + 3 lower METRs in the middle of income distribution, due to a lower standard tax rate and raise METR in the upper decile due to the introduction of 40% tax rate for top income earners.

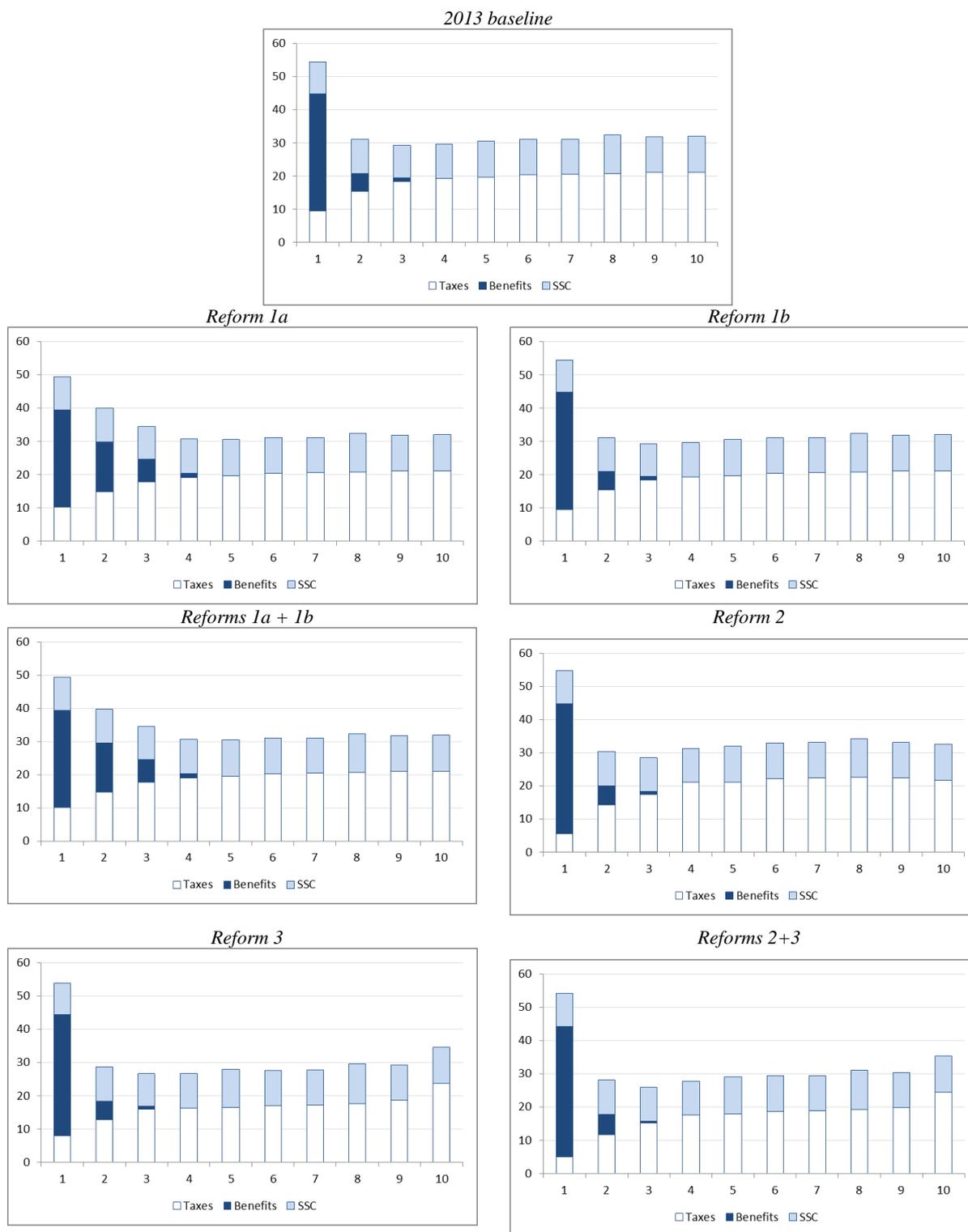
**Table 4.2: Distribution of METRs in Latvia in baseline 2013 system and change due to reforms - mean, median, p25 and p75, %**

	2013	1a	1b	1a+1b	2	3	2+3
Mean	32.6	33.1	32.6	33.1	33.7	30.5	31.5
Median	32.4	32.4	32.4	32.4	32.4	28.8	32.8
p25	32.4	32.4	32.4	32.4	32.4	28.8	28.8
p75	32.4	32.4	32.4	32.4	37.2	28.8	32.8

Note. Reform 1a – 71EUR of monthly net income from employment is excluded from income test for GMI; reform 1b – 142 EUR of child care (parental) benefit is excluded from income test for GMI; reform 2 – progressive PIT allowance; reform 3 – progressive PIT rate

Source: authors' calculations using EUROMOD-LV

**Figure 4.6: Contribution of taxes, benefits and social security contributions (SSC) to mean METRs by deciles of equivalised disposable income, percentage points**



Note. Reform 1a – 71EUR of monthly net income from employment is excluded from income test for GMI; reform 1b – 142 EUR of child care (parental) benefit is excluded from income test for GMI; reform 2 – progressive PIT allowance; reform 3 – progressive PIT rate

Source: authors' calculations using EUROMOD-LV

### Participation tax rates

Below we report our results on the impact of the reforms on participation tax rates. The participation tax rate (PTR) is defined as 1 minus the financial gain to work as a proportion of gross earnings (Brewer et al, 2010):

$$PTR = 1 - \frac{Y_d^1 - Y_d^0}{Y_g^1}$$

where  $Y_d^1$  and  $Y_d^0$  is disposable income while working and not working, respectively, but  $Y_g^1$  is gross income from work. Similar to Immervol et al (2004), we compute PTRs by comparing disposable income in two scenarios: first, we run EUROMOD to simulate baseline disposable income where an individual's earnings are equal to actual earnings. Then, we set earnings to zero and simulate disposable income at zero earnings. The difference between the disposable incomes in these two scenarios represents the numerator in the equation above.

Table 4.3 reports estimated PTRs in baseline 2013 system and reform systems. The results suggest that all of the proposed reforms reduce PTRs and improve incentives to increase labour supply at the extensive margin. Reform 3 is the most effective in reducing the meant PTR, the reason being that the proposed reduction in the standard PIT rate which results in a lower PTR for a large group of individuals.

**Table 4.3: Distribution of PTRs in Latvia in baseline 2013 system and change due to reforms - mean, median, p25 and p75, %**

	2013	1a	1b	1a+1b	2	3	2+3
Mean	33.1	31.6	33.1	31.6	31.7	30.9	29.8
Median	29.9	30.1	29.9	30.1	30.1	26.8	27.1
p25	26.6	26.6	26.6	26.6	23.7	24.0	21.7
p75	32.2	32.4	32.3	32.4	32.4	29.2	29.6

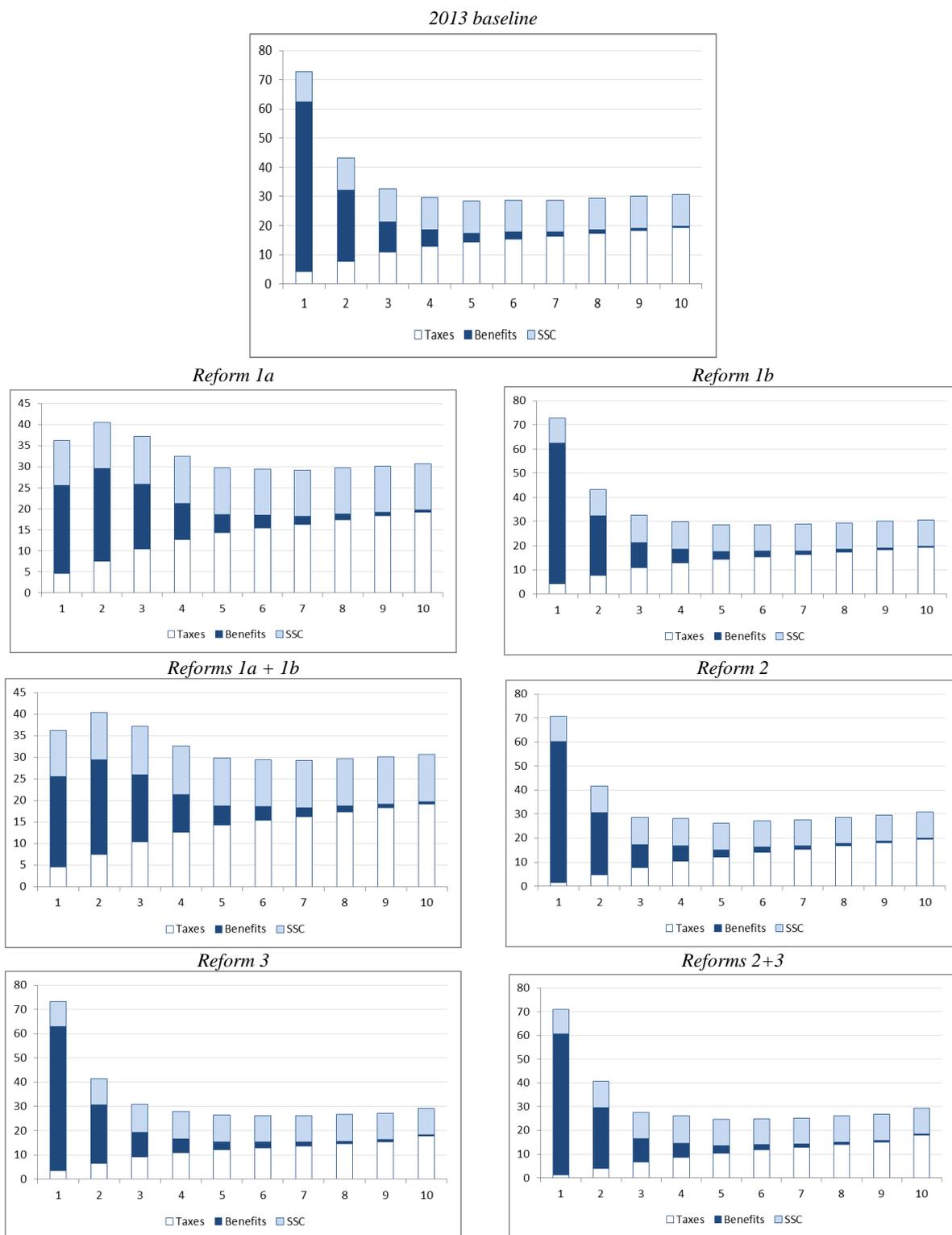
*Note. Reform 1a – 71EUR of monthly net income from employment is excluded from income test for GMI; reform 1b – 142 EUR of child care (parental) benefit is excluded from income test for GMI; reform 2 – progressive PIT allowance; reform 3 – progressive PIT rate*

*Source: authors' calculations using EUROMOD-LV*

Figure 4.7 shows distribution of PTRs by deciles of disposable income in the baseline and reform scenarios. Similar to our results regarding METRs, the results on distribution of PTRs suggest that individuals in the lowest deciles of income distribution face particularly high PTRs, which is a result of means-tested benefits. It is noticeable that PTRs in the lowest deciles are much higher than METRs. This suggests a particularly strong disincentive for low income persons to even participate in the labour market. PTRs in the upper deciles are almost twice as low.

The reform 1a, which foresees exclusion of some employment income from the income test used in provision of the means tested benefits, makes the distribution of PTRs much more even and lowers PTR in the first decile from above 70% to about 35%. The reforms of personal income tax are less effective in lowering PTRs for poor households, which again is a result that is similar to our results related to the impact of the reforms on METRs.

**Figure 4.7: Contribution of taxes, benefits and social security contributions (SSC) to mean PTRs by deciles of equivalised disposable income, percentage points**



Note. Reform 1a – 71EUR of monthly net income from employment is excluded from income test for GMI; reform 1b – 142 EUR of child care (parental) benefit is excluded from income test for GMI; reform 2 – progressive PIT allowance; reform 3 – progressive PIT rate

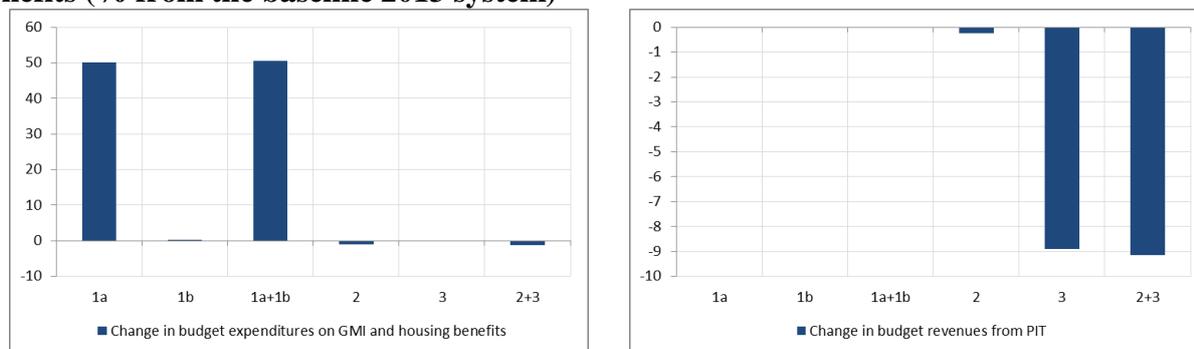
Source: authors' calculations using EUROMOD-LV

### 4.3.3 Revenue impact

Figure 4.8 reports the estimated percentage impact of the reforms on revenues from PIT and expenditures on GMI and housing benefit. According to our results, reform 1a + 1b increases

expenditures on the benefits by about 50% and reform 2 + 3 lowers the expenditures slightly (the latter result is due to the fact that it is net income from employment that is included in the income test for the benefits). It should be mentioned though that this result represents an upper bound estimate, since in the simulations we assume zero non-take up of the benefits. The estimated reduction in revenues from PIT resulting from reforms 2+3 is about 9%. The estimated impact of reform 3 is much stronger than the impact of reform 2. This result assumes full tax compliance both before and after the reform.

**Figure 4.8: Impact on revenues from PIT and impact on expenditures on GMI and housing benefits (% from the baseline 2013 system)**



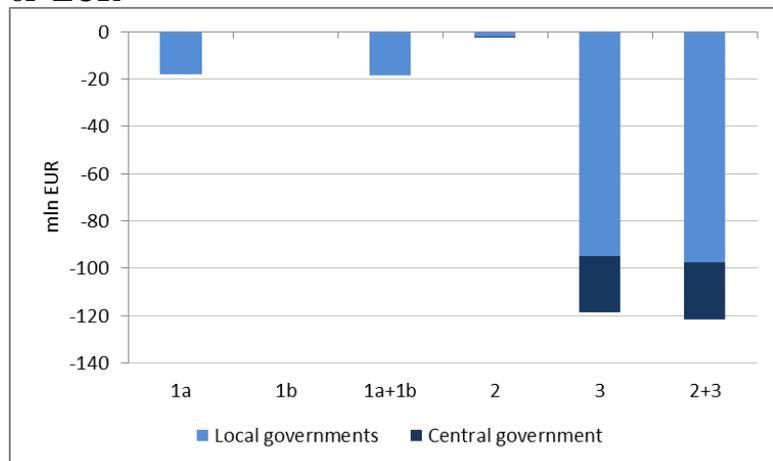
Note. Reform 1a – 71EUR of monthly net income from employment is excluded from income test for GMI; reform 1b – 142 EUR of child care (parental) benefit is excluded from income test for GMI; reform 2 – progressive PIT allowance; reform 3 – progressive PIT rate

Source: authors' calculations using EUROMOD-LV

Local governments' expenditures on GMI and housing benefits in 2013 amounted to EUR 36.7m (Ministry of Welfare, 2014). This represents total financing of GMI and housing benefits, as central government's co-financing of these benefits was seized as of 2013. Total consolidated general government budget revenues from PIT in 2013 was EUR1333m of which 80% (EUR 1067m) were revenues received by local governments (State Treasury of Latvia, 2014).

The proposed reforms mainly affect local government budgets (see Figure 4.9). According to our estimates, local governments' budget balance can deteriorate by up to EUR 18.3 m as a result of implementation of reforms 1 and 2 (assuming that the benefits remain to be financed by local governments only). The effect of the reforms 2 and 3 is much more sizeable. Our estimates suggest that local governments' budget balance can deteriorate by about EUR 97m, while the central governments' budget balance deterioration is estimated at about EUR 24 m. Thus the total budgetary cost of the reforms 1a+1b and 2+3 can be close to EUR 140m.

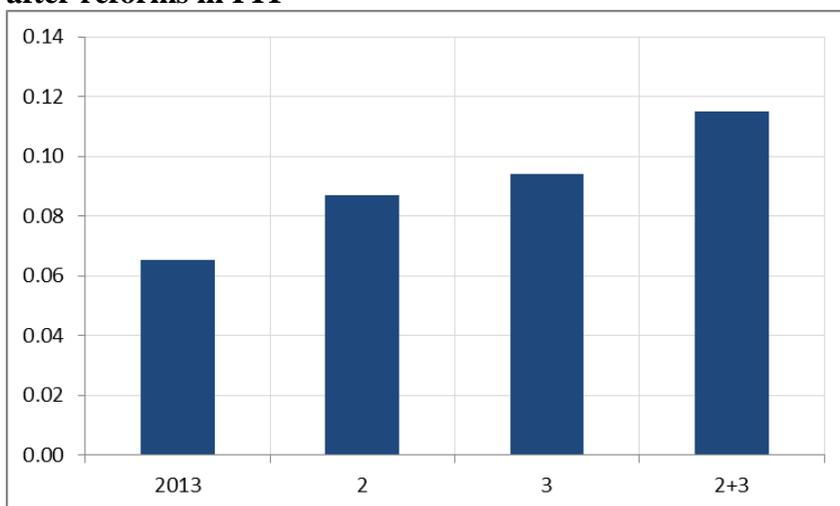
**Figure 4.9: Impact on the budget balance of local and central government budget, in millions of EUR**



Source: State Treasury of Latvia, Ministry of Welfare of Latvia, authors' calculations using EUROMOD-LV

Finally, Figure 4.10 reports the estimated change in Kakwani index for PIT following reforms 2 and 3. The two reforms together almost double the Kakwani index to about 0.12, suggesting a strong increase in the degree of progressivity of PIT. As a consequence of these reforms, Kakwani index is estimated to be higher than the Kakwani observed for 2009 (see Figure 4.2), when it was the highest in recent years.

**Figure 4.10: Kakwani index for PIT in 2013 baseline system and estimated Kakwani index after reforms in PIT**



Note. Reform 2 – progressive PIT allowance; reform 3 – progressive PIT rate

Source: authors' calculations using EUROMOD-LV

#### 4.4. VAT as a potential source of financing of the reforms

The theory and evidence on growth friendly tax reforms suggests the desirability of switching taxes from labour to consumption. Thus we regard the VAT as a potential source of financing the tax/benefit reforms proposed in the previous sections. The VAT may represent a source of financing in two ways:

- By reducing the so-called VAT gap
- By a simple increase in the VAT rate.

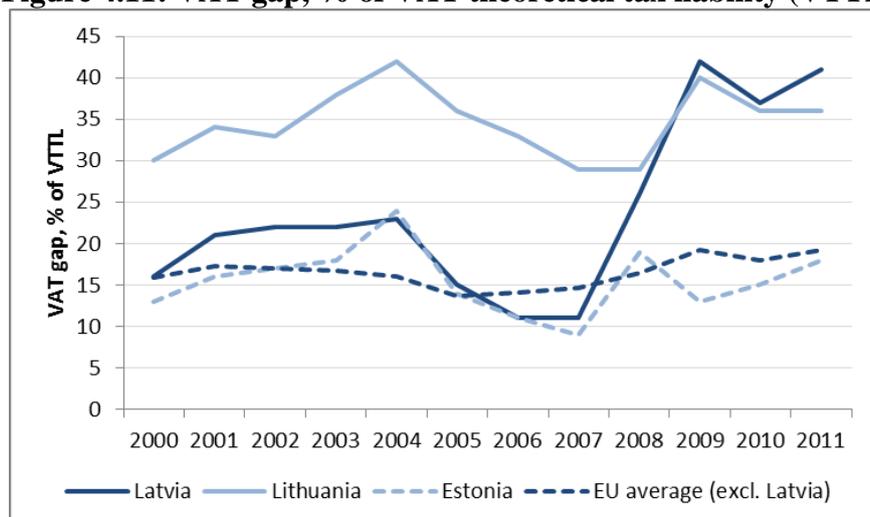
##### Closing the VAT gap

VAT represents a major source of revenues for the Latvian government - in 2013 accounting for more than one half of total tax revenues of central government. Still, as compared with other EU countries, the implicit tax rate on consumption in Latvia is one of the lowest in the EU (see Figure 1.12 in Chapter 1 above), for which one potential explanation is poor tax compliance. This in turn suggests that revenues can be increased by improved compliance.

The hypothesis of poor compliance more directly supported by research reported in (CASE 2013) which provides estimates of the so-called *VAT gap* for EU countries in 2011. The VAT gap is defined as the gap between the VAT theoretical tax liability (VTTL) and actual VAT revenues. In Latvia in 2011 the VAT gap was the second highest in the EU, amounting to 41% of VTTL. The only EU country with a larger estimated VAT gap was Romania (48%). The average gap across all EU countries (excluding Latvia) in 2011 was 19.2%; in Estonia, the gap in 2011 was estimated at 18%, but in Lithuania it was also rather high, amounting to 36%.

Figure 4.11 shows the estimated VAT gap for the Baltic states and the EU average from 2000 to 2011.

**Figure 4.11: VAT gap, % of VAT theoretical tax liability (VTTL)**



Note: VAT gap measures the VAT compliance gap, i.e., it is calculated as the difference between theoretical VAT liability according to the law and the actual VAT revenues

Source: Table C.9 in CASE (2013); EU average is calculated by the authors as (not weighted) arithmetic average

The presence of a large VAT gap suggests that there is considerable room for raising extra budget revenues without raising the VAT rate by addressing the VAT gap. Moreover as can be seen from Figure 4.11 in 2007 and earlier the VAT gap in Latvia was much smaller and close to the EU average as well as to the Estonian level. This suggests that the VAT gap is not a deep structural problem.

What revenue can this bring? Assuming that the VAT gaps in all countries have remained at the 2011 level, and taking into account that actual VAT revenues in Latvia in 2013 amounted to about EUR 1667m, reducing the VAT gap to the average EU level would generate extra revenues of EUR 617.0m, reducing the gap to the Estonian level would generate extra revenues of about EUR 650m. Reducing the gap to the Lithuanian level, would generate extra revenues of approximately EUR 140m, which is about the amount that is needed to finance the proposed reforms of PIT and social assistance benefits.

#### Increasing the VAT rate

If measures to address the VAT gap are not regarded as sufficiently reliable or credible an alternative is to increase the VAT rate. According to the estimates of the Ministry of Finance, based on the experience of the VAT rate increase from 18% to 21%, the elasticity of VAT revenues with respect to a one percentage point increase in the VAT rate is about 5.5% (Ministry of Finance, 2009). VAT revenues in 2013 were EUR 1667m so a 1 percentage point increase in the VAT rate could be expected to generate extra VAT revenues of about EUR 92m which would cover nearly 66% of the budgetary costs of the reforms. Other consumption tax changes e.g. excise taxes or changes in the property tax can close this financing gap – details in chapter 6.

### **4.5. Summary of findings**

- The progressivity of the PIT in Latvia has declined in recent years because of the reduction in the basic tax allowance and is one of the lowest in the EU. SSC was perfectly proportional between 2009 until 2013 – before that SSC was slightly regressive because of the ceiling on social security contributions. As everywhere VAT in Latvia is regressive because poor individuals spend a larger proportion of their income on consumption. In 2009 the degree of VAT regressivity was about average for the EU but since then regressivity as a result of rises in VAT rates and a broadening of the VAT base.

- Using micro-simulation tax-benefit model EUROMOD, we estimate the impact of reforms of provision of social assistance benefits and PIT on inequality, work incentives, progressivity and the general government consolidated budget.
- Reforms of income test for GMI and housing benefits are more effective in lowering inequality of disposable income than reforms aimed at increasing progressivity of PIT, as the former reforms directly target the poorest population groups and generate sizeable increases in disposable income in the bottom end of income distribution. Reforms of PIT, on the other hand, are more effective at lowering progressivity in the upper end of the distribution and produce a smaller overall effect on income inequality.
- Reforms of PIT (reform 2 + reform 3) are more effective in lowering the average METR. The reason for this is that reform 3, which foresees a reduction in the standard PIT rate, lowers METRs for a relatively large group of individuals. Reforms of provision of social assistance benefits (reforms 1a + 1b), on the other hand, are shown to be very effective in reducing METRs in the bottom end of income distribution, as people who receive GMI and housing benefits are no longer faced by 100% METRs when working and receiving income up to 71 EUR per month.
- Reform 1a+1b are the most effective in reducing the PTR for the bottom deciles because they directly affect the rate at which benefits are reduced when a person starts to work.
- The proposed reforms of PIT are estimated to be effective in increasing the degree of progressivity of PIT. As a result of these reforms, Kakwani index is estimated to almost double and to exceed the level of 2009, when (as a result relatively high tax allowances up to mid-2009) this indicator of progressivity was the highest in recent years.
- The combined PIT and benefit reforms are estimated to cost EUR140m and could be covered by a modest reduction in the VAT gap or could be 66% covered by a one percentage point in the VAT standard rate.

## **TS nodevums 2.2.2.2.2: NĪN piemērošanas pamatprincipu salīdzinājums Latvijā un citās ES dalībvalstīs un NĪN izmantošana ienākumu nevienlīdzības mazināšanai**

### **5. The basic principles of application of immovable property tax in Latvia and other EU member states (2.2.2.2.2)**

This chapter offers an overview of immovable property tax systems of the EU member states with respect to the following features:

- The classification of property taxes
- Revenues from property taxation in EU
- The basis of assessment
- Special conditions of property taxation with respect to low-income persons, thresholds and second properties.

#### **5.1. Classification of property taxes**

According to the OECD (2013a) and Eurostat (2013), the following categories of property taxes can be distinguished:

1. **Recurrent taxes on immovable property**- cover taxes levied on land and buildings regularly with respect to the use or ownership of immovable property.
2. **Recurrent taxes on net wealth** - cover taxes levied regularly on net wealth, i.e. taxes on a wide range of movable and immovable property, net of debt.
3. **Estate, inheritance and gift taxes** - are divided into taxes on estates and inheritances and taxes on gifts. Estate taxes are charged on the amount of the total estate whereas inheritance taxes are charged on the shares of the individual recipients; in addition the latter may take into account the relationship of the individual recipients to the deceased.
4. **Taxes on financial and capital transactions** – comprises taxes on the issue, transfer, purchase and sale of securities, taxes on cheques, and taxes levied on specific legal transactions such as validation of contracts and the sale of immovable property.
5. **Other non-recurrent taxes on property**: capital levies - cover once-and-for-all, as distinct from recurrent, levies on property.
6. **Other recurrent taxes on property** - these rarely exist in OECD member countries, but these would include taxes on goods such as cattle, jewellery, and other external signs of wealth.

In Latvia, only the three categories of property taxes are present (Ministry of Finance of Republic of Latvia, 2014): recurrent taxes on immovable property, taxes on estate, inheritance and gift taxes, and taxes on financial and capital transactions.

**Recurrent taxes on immovable property** include immovable property tax on land, buildings and other structures (latv. *Nekustāmā īpašuma nodoklis*).

**Taxes on financial and capital transactions** include:

- Stamp duty on land registration activities performed, with the exception of inheritances and gifts (latv. - Kancelejas nodeva par zemesgrāmatas veiktajām darbībām, izņemot mantojumus un dāvinājumus)

- Fee for property rights and pledge registration in the land registry, with the exception of inheritances and gifts (latv. - Nodeva par īpašuma tiesību un ķīlas tiesību nostiprināšanu zemesgrāmatā, izņemot mantojumus un dāvinājumus)
- The fee for transactions with privatization vouchers (latv. - Nodeva par operācijām ar privatizācijas sertifikātiem).

**Estate, inheritance and gift taxes** include:

- Fee for inheritances and gifts (latv. - *Nodeva par mantojumiem un dāvinājumiem*)
- Stamp duty on land registration activities performed on inheritances and gifts (latv. - *Kancelejas nodeva par zemesgrāmatas veiktajām darbībām attiecībā uz mantojumu un dāvinājumu*)
- Fee for property rights and pledge registration in the land registry in respect of inheritances and gifts (latv. - *Nodeva par īpašuma tiesību un ķīlas tiesību nostiprināšanu zemesgrāmatā attiecībā uz mantojumu un dāvinājumu*)
- Stamp duty on land registration activities performed on inheritances and gifts (latv. - *Kancelejas nodeva par zemesgrāmatas veiktajām darbībām attiecībā uz mantojumu un dāvinājumu*)
- Stamp duty on land registration activities performed, collected from individuals, with the exception of inheritances and gifts (latv. - *Kancelejas nodeva par zemesgrāmatas veiktajām darbībām, kas iekasēta no fiziskām personām, izņemot mantojumus un dāvinājumus*)
- Stamp duty on land registration activities performed, collected from legal entities, with the exception of inheritances and gifts (latv. - *Kancelejas nodeva par zemesgrāmatas veiktajām darbībām, kas iekasēta no juridiskām personām, izņemot mantojumus un dāvinājumus*).

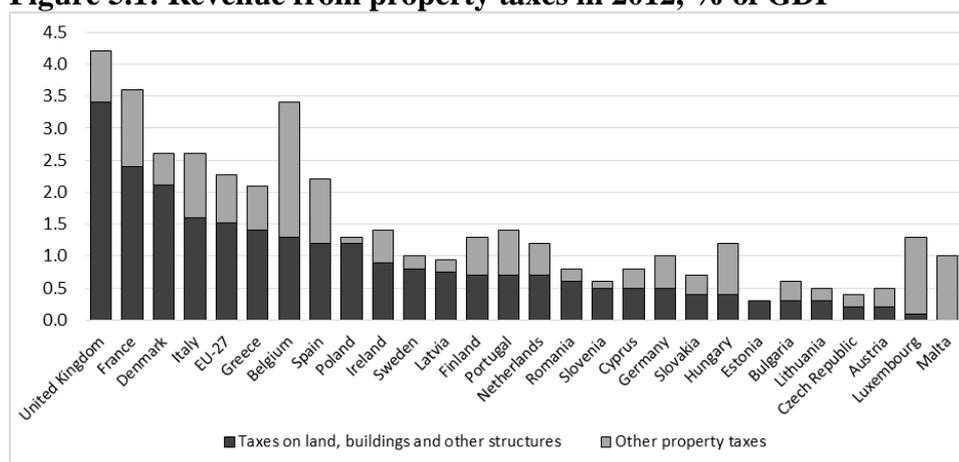
## **5.2. Revenues from property taxation in EU**

Recurrent taxes on immovable property in the EU are levied on land, buildings and other structures and in 2012 made up 65.2% of total property related tax revenues in the EU-27 , corresponding to 1.5% of EU-27 average GDP. See Figure 5.1.

The UK (3.4% of GDP), France (2.4%), Denmark (2.1%), Italy (1.6%) apply immovable property taxes most actively with revenues exceeding the EU average level (1.5%).

In Latvia, taxes on land buildings and other structures yielded 0.8% of GDP in 2012 which is about the same as in Sweden. By contrast revenues from such taxes yielded 0.3% of GDP in Estonia and Lithuania.

**Figure 5.1: Revenue from property taxes in 2012, % of GDP**



Note: ordered by revenues from taxes on land, buildings and other structures.

Source: Eurostat (gov\_a\_tax\_ag) and authors' calculations (for Finland data on property taxes is based also on OECD (2013b) statistics database)

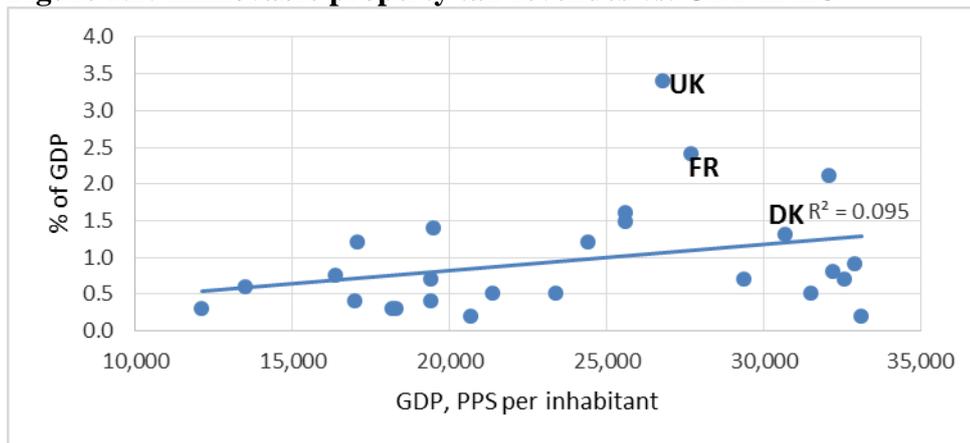
The share of taxes on land, buildings and other structures in revenues from property taxes is 100.0% in Estonia, 92.3% in Poland, 83.3% in Slovenia, 81.0% in UK, 80.8% in Denmark, 80.0% in Sweden, 66.7% in France. In Latvia, taxes on land, buildings and other structures make up 79.8% of property taxes, while in Lithuania immovable property taxes comprise 60.0% of revenues from property taxes.

The land tax is the only property tax applied in Estonia. By contrast Malta does not levy any recurrent taxes on immovable property but applies taxes on financial and capital transactions (0.8% of GDP, 2012) and taxes on capital transfers (0.2% of GDP, 2012), making up 1.0% of GDP in total.

Revenues from immovable property taxation in the EU are positively but weakly correlated with income levels (see Figure 5.2, where Malta has been excluded because it has no immovable property tax and Luxembourg because it is an outlier (very high GDP per capita combined with very low property tax revenues)).

However, (Norregaard 2013a) found a greater but still a modest correlation using a sample of OECD and selected non-OECD countries (developing, emerging and developed). Among high-income countries, some, such as Canada, the United Kingdom, and the United State raise more than 3 percent of GDP in annual property tax revenue, and a number of others raise over 2 percent of GDP (France, Israel, Japan, New Zealand). Accordingly, Norregaard argues a property tax target of 2 to 3 percent of GDP seems a realistic long-term goal for high-income countries, including the majority of EU Member States that are classified under the high income economy definition.

**Figure 5.2: Immovable property tax revenues vs. GDP in EU**

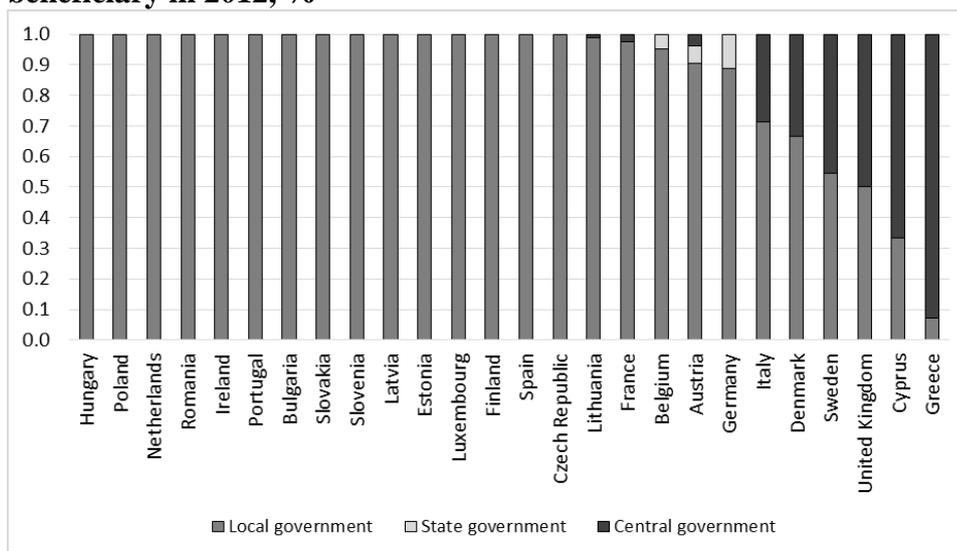


Note: Malta and Luxembourg are excluded.

Source: Eurostat (online data code: nama\_gdp\_c, gov\_a\_tax\_ag)

While immovable property taxes do not take up a central position in the overall revenue systems of most countries, they frequently contribute significantly to the financing of local governments. Figure 5.3 shows that in 15 out of 26 EU Member States, where recurrent tax on immovable property was applied in 2012, it was entirely allocated to local government budgets.

**Figure 5.3: The distribution of revenues from taxes on land, buildings and other structures by beneficiary in 2012, %**



Note: In 2012, Malta did not apply taxes on land, buildings and other structures. Data for Finland is for 2011.

Source: Eurostat (gov\_a\_tax\_ag), "Taxes in Europe - Tax reforms" database and authors' calculations

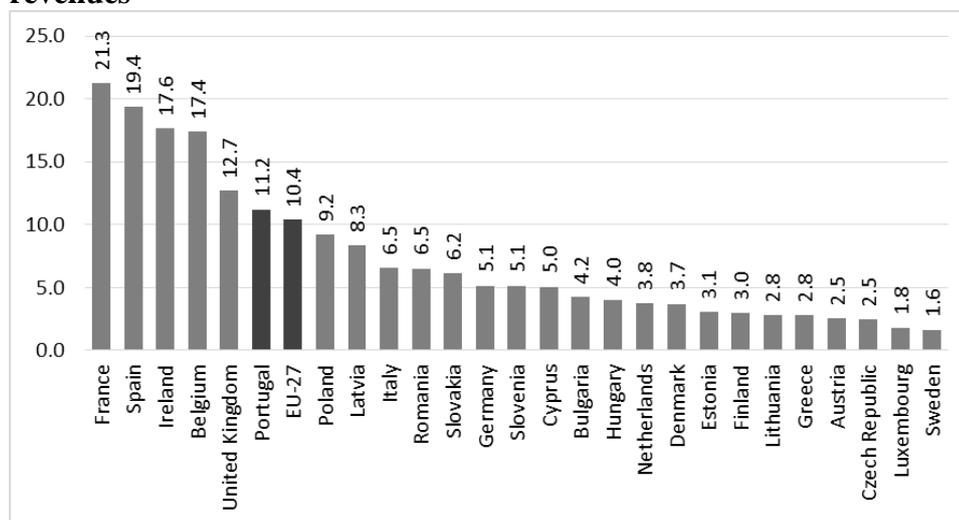
In Sweden and UK<sup>21</sup> revenues from taxes on land, buildings and other structures are almost evenly divided between local and central government, while Greece more than 90% of revenues from real estate taxes accrue to central government.

Figure 5.4 shows that taxes on land, buildings and other structures provide quite a large proportion of local budget revenues in some EU Member States. Thus the share of real estate taxes in local budget revenues in France was 21.3% and high shares were also observed in Spain (19.4%), Ireland (17.6%), Belgium (17.4%), UK (12.7%) and Portugal (11.2%). In Latvia, the importance of real estate tax in local revenues was 8.3% which is just below the EU-27 average of 10.4%. In

<sup>21</sup> In the UK interpretation is complicated: council tax accrues to local authorities but business rates although collected by the central government are returned to local authorities except in Scotland.

Lithuania and Estonia property taxes are much less important contributing only 2.8% and 3.1% respectively to local government revenues. In 18 out of 26 countries, the share of revenues from taxes on land, buildings and other structures in local budget does not exceed 7%.

**Figure 5.4: Taxes on land, buildings and other structures in 2012, % of local government revenues**



Note: Malta does not apply taxes on land, buildings and other structures

Source: Eurostat (gov\_a\_tax\_ag, gov\_a\_main), and authors' calculation

### 5.3. Real estate tax practice in the EU

Property taxes can be levied on different bases. The most common are:

- Capital value
- Imputed rent
- Area

Table 5.1 shows that all three tax bases can be found in EU countries. The capital value system is widespread in Western European Member States (in 13 out of 15) while an area-based system prevails in many Eastern-European Member States (in 8 out of 11). The Baltic states all use the capital value system. In Hungary and Slovenia both capital value and area are used: in Slovenia the capital value system is used for buildings and the area-based system for land while in Hungary local authorities can chose between applying an area based tax and one based on “adjusted fair market values”. In France and Belgium the imputed rent system is applied while in Italy both capital value (applied to the land on which a property is located) and imputed rent (applied to buildings and agricultural land) are used.

**Table 5.1: Tax bases applied for immovable property taxation in the EU**

Member State	Capital Value System	Rental Value System	Area-Based System	Real Estate Tax base		
				Land only	Improvements only	Land and improvements
<b>Western Europe (15)</b>						
Austria	X			X		
Belgium		X			X	
Cyprus	X					X
Denmark	X					X
Finland	X					X
France		X				X
Germany	X					X
Ireland	X				X	

Member State	Capital Value System	Rental Value System	Area-Based System	Real Estate Tax base		
				Land only	Improvements only	Land and improvements
Italy	X (building areas)	X (buildings and agricultural land)				X
Luxembourg	X			X		
Netherlands	X				X	
Portugal	X					X
Spain	X					X
Sweden	X				X	
United Kingdom	X (council tax)	X (business rates)			X	
<b>Eastern Europe (11)</b>						
Bulgaria			X			X
Czech Republic			X			X
Estonia	X			X		
Greece			X			X
Hungary	X		X			X
Latvia	X					X
Lithuania	X					X
Poland			X			X
Romania			X			X
Slovakia			X			X
Slovenia	X		X			X

Note: X – applicable methodology and tax base

Source: Legal acts of EU Member States, "Taxes in Europe - Tax reforms" database (TEDB/TAXREF)

In Austria, Luxembourg and Estonia only land is taxed, while in Belgium, Germany, Ireland, Netherlands, Sweden and UK only improvements (buildings) are taxed. In the remaining countries both are taxed.

A major characteristic of many capital value or imputed rent based systems is that taxes frequently are paid on a base that bears little resemblance to the true level of property or rental values. Thus cadastral values (rateable values) in UK refer to 1993, in Denmark to 2001/2002, in Belgium refer to 1975, in France to 1980 and so on. In some cases these values are adjusted by inflation or by other kinds of coefficient. Essentially, in many instances e.g. in the UK the 'rate' applied to the 'outdated cadastral value' is based on the budget needs of the local authority rather than any theoretical principle. Because of outdated and somewhat arbitrary cadastral values as well as numerous exemptions and rebates comparison of the tax rates applied is not particularly meaningful. Thus:

- In Latvia the land tax rate is 1.5% and the rate on residential property is between 0.2% and 0.6% of cadastral value depending on the cadastral value of the property.
- In Estonia the land tax varies between 0.1% and 2.5% except for agricultural land where the upper bound is 2%
- In Lithuania the range for land tax is 0.01% to 4% of market value and the tax on residential property is 1% but subject to a very high threshold
- In Hungary if a value based tax is applied, the rate is 3.6% of the adjusted market value.

Thus it is clear that the tax rates applied provide almost no information about the burden of property taxes across countries.

Interestingly, the biggest efforts to establish cadastral values that reasonably closely reflect market values have been in the Latvia and Lithuania. According to Valsts Zemes Dienests (2013) in Latvia it is planned that cadastral values within a 15% range of market values and that an average

discrepancy of 14% this is expected to be achieved in 2014. For dwellings on average the gap is expected to be 10%.

However, as (Norregaard 2013a) points out valuation is a major administrative problem. Norregaard suggests a number of reasons for this: a lack of educated valuers, a generally weak administration, and property tax market that generates insufficient transactions to provide a continuous flow of input to the valuation system. Moreover, if cadastral values do track market values, fluctuations in market values can lead to instability of tax liabilities. Thus, in Lithuania in order to address this, the 2013 reform towards a market value based system allows for a transition period of 4 years and values are fixed for 5 years.

### **5.3.1 Special provisions: provisions for low-income or elderly persons, main residence, thresholds**

It is widely recognised that a mechanical application of rates to the property tax base may generate hardships or inequities to some people. In order to prevent hardships or inequities in many EU countries special provisions are made for certain categories of person or certain categories of property e.g. elderly or poor people or main residence vs second property.

#### Poor or elderly persons

Special provisions for poor or elderly persons are applied in Latvia, Lithuania, Bulgaria, Denmark, France, Hungary, Ireland, Slovenia, Sweden and UK. The measures include:

- Full exemption for low income people (Slovenia),
- Up to 100% for certain categories of needy people,
- Up 90% relief for indigent and low income persons. Many municipalities provide varying relief for specific categories of vulnerable persons e.g. pensioners, disabled persons etc. (Latvia),
- 75% relief for persons with limited ability to work (Bulgaria),
- Deduction of 0.4% from the basic rate for persons over 65 (Denmark),
- Exemption or automatic relief is granted to elderly or disabled people of modest means (France),
- Retired persons property tax on main residence limited to 4% of their annual income (Sweden).

#### Provisions for main residence

Special provisions for the main residence and/or second properties apply in a number of countries:

- Full exemption from land tax if a person's residence is located on the land, subject to maximum land area(Estonia),
- 25% reduction for main residence (Belgium),
- Tax rate on main home 0.2%, on second home 1.2% or 1.7% depending on imputed rent (France),
- 50% discount for main residence (Bulgaria),
- Reduced tax rate band for main residence (Finland),
- Reduction of EUR 200 for main residence (Italy),

- Exemption of 100% for newly built new residences (Portugal),
- Higher tax for a second property (65%), for a third (150%) and for a fourth (300%) (Romania).

### Tax free thresholds

Countries that apply tax free thresholds include:

- Residential property tax applied only to properties valued at more than EUR290,000 (Lithuania) (European Commission, 2013b),
- Property worth less than EUR 12,500 is tax free (Cyprus),
- Main homes taxable only if imputed rent exceeds EUR 4,573 (France),
- Tax free threshold of EUR 200,000 for main property if income is less than EUR 35,000 (Greece).

**TS nodevums 2.2.2.2.3: Balstoties uz teorētiskām atziņām un ņemot vērā starptautisko pieredzi (labas prakses piemēri), sniegt priekšlikumus attiecībā uz izmaiņām NĪN piemērošanas pieejā (t.sk. kadastrālās vērtības aprēķināšanā).**

**TS nodevums 2.2.2.2.4: Izmantojot mikroekonomiskās simulācijas modeli, izvērtēt NĪN piemērošanas pieejas izmaiņu iespējamo ietekmi uz iedzīvotāju labklājības un ienākumu nevienlīdzības rādītājiem.**

**TS nodevums 2.1.1.1.5. Detalizēti aprakstīt pētījuma rezultātus un sniegt no pētījuma izrietošos secinājumus un priekšlikumus, kuri pēc pētījuma beigām būtu izmantojami kadastrālās vērtības un NĪN piemērošanas pieejas pilnveidošanai.**

**TS nodevums 2.2.2.2.6. Sniegt priekšlikumus par nepieciešamajām izmaiņām kadastrālās vērtības un NĪN piemērošanas pieejai (vismaz divi scenāriji) un to ietekmes izvērtējumu uz valsts budžeta stāvokli kopumā un ienākumu nevienlīdzības un nabadzības rādītājiem.**

## **6. Possible Real Estate Tax reform directions based on the theoretical review and best practice and their impact on the monetary poverty and income inequality indicators**

The rather modest yield of property taxes in many countries has led to suggestions that they represent a source of raising extra revenue in an economically efficient way (European Commission (2012a), European Commission (2013a), Wöhlbier et.al (2014)) or that they can be used improve inequality (Norregaard 2013b). Latvia is one of the countries where revenue from taxes on immovable property is low (0.8% of GDP). Accordingly property tax in Latvia is an obvious candidate for reform. This chapter examines a number of directions of reform based on theoretical evidence and practice in other countries from the perspectives of:

- Higher revenue
- Poverty and inequality
- Progressivity
- Administration costs

Proposed reform scenarios for residential tax are simulated using the EUROMOD micro simulation model to establish their impact on poverty and inequality indicators, on revenues and on the Kakwani index for the property tax. However, it should be noted that such simulation is not possible for land tax because to date the CSB has not provided data that can link property ownership to individuals or households. For residential property it is possible to estimate a link between individual and cadastral values using information available in EU-SILC – the method used is described in the Annex. However, residential property tax has in recent years generated just over 12% of total property tax revenues, with the land tax generating more than 50% and tax on buildings other than dwellings more than 30%<sup>22</sup>.

Because the relevant micro data is unavailable simulation is not possible and hence the discussion of land tax reforms in section 6.2 is necessarily brief.

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<sup>22</sup> There is also a tax on engineering constructions which yields just over 1%.

## 6.1. Reforms directions for residential property tax

Possible reforms based on theoretical considerations and international experience include:

### *A change in the minimum tax payment*

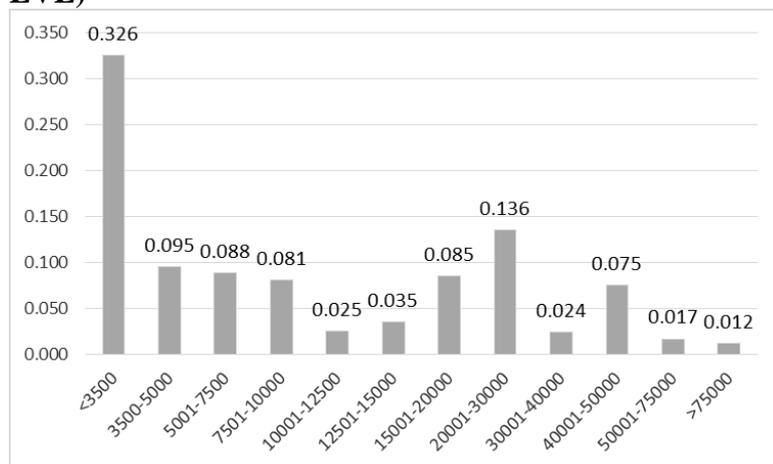
It could be argued, that because of administrative costs<sup>23</sup>, it is not financially efficient to collect the real estate tax for low valued dwellings. To cope with this problem, in Latvia a minimum payment of 7 EUR (LVL 5) real estate tax for dwellings was introduced in 2010 for those taxpayers that have not been endowed the status of an indigent (Law on Immovable Property Tax, 2014). This level has not been changed since its introduction and may not currently does not cover the actual administration costs. This reform is simulated for an increase in the minimum payment to EUR 20.

### *Non-taxable threshold*

According to the Norregaard (2013b), progressivity of the property tax can be enhanced by reduction of tax liabilities for low-income or low-wealth property owners. For this purpose the methods that can be used include: the taxation of properties only above some threshold value, the exemption of the elderly and disabled from the tax or tax allowances, income-conditional exemptions or progressive tax rates to reduce real estate tax payments on low-income groups. As shown in 5.3 all of these methods and more are used in different EU countries.

Here it is proposed to analyse the introduction of a non-taxable threshold. Two simulations are conducted: one with a threshold at cadastral value of EUR 5000 (LVL 3500) and the other with a threshold of EUR 10,671.54 (LVL 7,500). For this we use estimates of cadastral values based on EU-SILC responses about the properties in which people live. The Annex provides a brief description of how the cadastral values were estimated. We have checked the distribution generated in this way (see Figure 6.1) against State Land Service data on distribution of cadastral values of residential property.

**Figure 6.1: Distribution of cadastral values of dwellings based on EU-SILC estimates (in LVL)**



Source: Based on authors' calculations and assumptions (see the Annex on the description of how the cadastral values were calculated)

In the "real data" dwellings that are valued below EUR 5000 (LVL 3500) make up 35% of total number of taxed dwellings while in the EU-SILC based estimates of cadastral values this share

<sup>23</sup> In Latvia real estate tax administrative costs include – tax calculation, real estate tax accounting, preparation of payment notification, identification and recording of payments, tax recalculation, debt cancellation and transfer of the overpayments, maturity extensions, calculation of the penalty and its cancellation, deadline extension for the commitment, personal account state updating (Vienotā pašvaldības sistēma; 2014).

is 32.6%. Dwellings valued up to EUR 10,671.54 (LVL 7,500) make up at least half of total taxed dwellings, which is very similar to the share in the EU-SILC based distribution.

Thus, when applying a threshold at the value of EUR 5000, approximately 35% of all owners of the dwellings in Latvia would be exempt from the real estate tax, while a threshold of EUR 7500 means that roughly half would be exempt. A tax free threshold would be applied only to the first property owned by a household. Implementation of a non-taxable threshold could be accompanied a single tax rate for all dwellings valued above the threshold which would simplify the administrative process. These reforms can be simulated.

### ***Increase of real estate tax rates***

Higher progressivity of real estate tax could be ensured by taxing high valued real estate at higher rates. This would be expected to increase the revenues from the recurrent real estate taxation and the effect on progressivity is expected to be positive the owners of high valued property tends to be richer (the “new” view on the incidence of property taxes, Norregaard (2013a)). This can be simulated.

### ***Higher rates for the second homes***

In order to make the real estate taxation more fair and progressive the reform of taxation of second homes at higher rates is proposed. This approach is used e.g. in France where the tax rate for the second dwelling is up to 8.5 times as high as the tax rate for the first dwelling, and Finland where the difference could be up to 200%. This is not simulated because of lack of data.

### ***Tax allowances and the exemption of the elderly & income-conditional exemptions***

House-owners often tend to stay in their properties as they get older at the same time their income may decline. It was shown in the previous chapter that a number of countries offer property tax relief for older persons. If higher property taxes are implemented in Latvia it might be desirable to implement such reliefs on a broader scale than is done at present. This is not simulated for lack of data.

## **Evaluation of proposed reforms**

The effects of the proposed reforms have been evaluated using EUROMOD. The main characteristics of the reforms are summarized in Scenarios 1-6 below (see Table 6.1).

**Scenario 1 (baseline)** corresponds to the actual tax system in force in 2013. According to the law in 2013 the residential property is taxed at the following tax rates:

- 0.2% of the cadastral value below EUR 56,915 (LVL 40,000);
- 0.4% of the cadastral value from EUR 56,915 to EUR 106,715 (from 40,000 LVL to 75,000 LVL);
- 0.6% of the cadastral value above EUR 106,715 (LVL 75,000).

The minimum payment is 7 EUR (LVL 5) for the real estate tax on dwellings applied to taxpayers do not have the status of an indigent (Law on Immovable Property Tax, 2014).

**Scenario 2** is the tax system of 2013 with the increased minimum payment of real estate tax on residential property from EUR 7 (LVL 5) to EUR 20 (LVL 14.06).

**Scenario 3.1** is based on the actual tax system in Latvia of 2013. It keeps the tax bands and the minimum payment in the amount of EUR 7 (LVL 5), while the tax rates applied on residential property are increased by 50%, i.e.:

- 0.3% of the cadastral value below EUR 56,915 (LVL 40,000);
- 0.6% of the cadastral value from EUR 56,915 to EUR 106,715 (from 40,000 LVL to 75,000 LVL);
- 0.9% of the cadastral value above EUR 106,715 (LVL 75,000).

**Scenario 3.2** is similar to scenario 3.1: it based on the actual tax system in Latvia of 2013. It keeps the tax bands and the minimum payment in the amount of EUR 7 (LVL 5), while the tax rates applied on residential property are doubled, i.e.

- 0.4% of the cadastral value below EUR 56,915 (LVL 40,000);
- 0.8% of the cadastral value from EUR 56,915 to EUR 106,715 (from 40,000 LVL to 75,000 LVL);
- 1.2% of the cadastral value above EUR 106,715 (LVL 75,000).

**Scenario 4.1** is based on the tax system applied in 2013 (scenario 1) plus a non-taxable threshold of EUR 5,000 (LVL 3,500), thus making the minimum possible payment equal to EUR 10 (LVL 7).

**Scenario 4.2** keeps the conditions of scenario 4.1 but the minimum payment is set at EUR 20.00 (LVL 14.06).

**Scenario 4.3** keeps the conditions of scenario 4.1. plus a non-taxable threshold of EUR 5,000 (LVL 3,500).

**Scenario 5** has a non-taxable threshold accompanied with a single tax rate for all dwellings valued above the threshold that could simplify the administrative process. The flat rate is set at **0.4%** of the cadastral value and is applied to the residential property valued above EUR 10672 (LVL 7500).

**Scenario 6.1** is based on the Lithuanian approach to tax only high valued residential property. In this case high valued residential property is defined as residential property of cadastral value above EUR 106,715 (LVL 75,000). In order to achieve a budget neutral system, it would be necessary to implement a tax rate of 29% on the total value of residential property exceeding EUR 106,715 (LVL 75,000).

**Scenario 6.2** is based on the Lithuanian approach of taxing only high valued residential property (in this scenario of the cadastral value above EUR 106,715 (LVL 75,000)) at the rate applied to the high valued residential property in Lithuania, i.e. 1.0%.

Scenarios 6.3.-6.8. are budget neutral relative to the actual tax system of 2013 (i.e. scenario 1). All of these scenarios include the non-taxable threshold, while the total value of residential property exceeding this threshold is taxed at the flat rate.

Table 6.1 summarises the main results.

**Table 6.1: The effect of real estate tax reforms on monetary poverty and income inequality indicators, changes in revenues from taxation of dwellings, and effect on the progressivity of tax on dwellings**

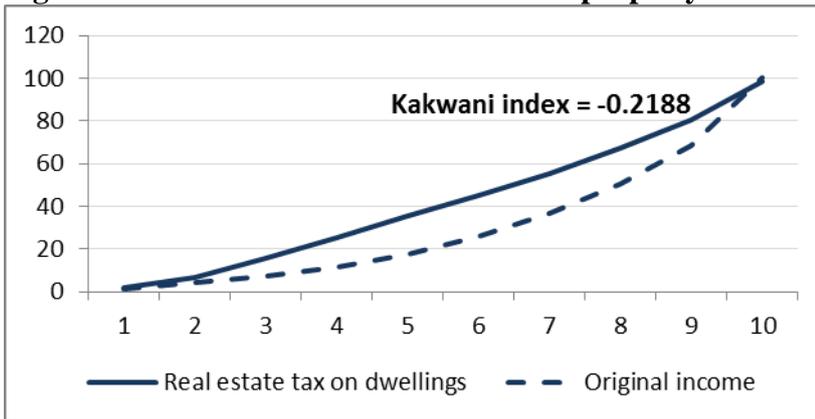
Tax reform scenario	Main changes	GINI	S80/S20	Relative poverty rate	Poverty line	Revenue changes compared with scenario 1	Kakwani index
1	The actual tax system of 2013	0.348	6.044	0.203	165.32		-0.2188

<b>Tax reform scenario</b>	<b>Main changes</b>	<b>GINI</b>	<b>S80/S20</b>	<b>Relative poverty rate</b>	<b>Poverty line</b>	<b>Revenue changes compared with scenario 1</b>	<b>Kakwani index</b>
<i>Increase of minimum tax payment</i>							
2	Scenario 1 conditions and minimal payment EUR 20 (LVL 14.06)	0.348	6.046	0.204	165.32	7.6%	-0.24151
<i>Increase of the tax rates</i>							
3.1	Scenario 1 with the rates increased by 50%	0.348	6.043	0.203	165.66	49.1%	-0.22237
3.2	Scenario 1 with the rates doubled	0.348	6.043	0.204	165.28	98.5%	-0.22512
<i>Introduction of the non-taxable threshold</i>							
4.1	Scenario 1 and non-taxable threshold of EUR 5000	0.348	6.042	0.202	166.36	-17.3%	-0.19131
4.2	Scenario 4.1 and minimal payment of EUR 20	0.348	6.050	0.202	166.34	-0.5%	-0.25784
4.3	Scenario 4.1 and increased tax rate by 50%	0.348	6.040	0.201	165.83	24.0%	-0.19592
<i>Application of the flat tax rate</i>							
5	Flat tax rate 0.4% applied to the property valued above EUR 10,671.54 (LVL 7,500)	0.348	6.039	0.203	166.10	20.5%	-0.19411
<i>Taxation of high valued properties only</i>							
6.1	Taxation of only high valued dwellings: budget neutral scenario	0.348	6.088	0.202	166.58	0.0%	-0.31075
6.2	Taxation of only high valued dwellings: at the rate of 1.0%, scenario based on Lithuanian practice	0.348	6.042	0.200	167.02	-96.6%	-0.0651
<i>Taxation of high value property, budget neutral scenarios</i>							
6.3	18.2% of the cadastral value above EUR 99,601 (LVL 70,000).	0.348	6.079	0.202	166.36	0.0%	-0.31529
6.4	13.2% of the cadastral value above EUR 92,487 (LVL 65,000).	0.348	6.073	0.202	166.36	-0.2%	-0.30265
6.5	9.7% of the cadastral value above EUR 85,372 (LVL 60,000).	0.348	6.068	0.202	166.36	0.5%	-0.2845
6.6	7.2% of the cadastral value above EUR 78,258 (LVL 55,000).	0.348	6.058	0.201	165.99	0.2%	-0.25362
6.7	5.4% of the cadastral value above EUR 71,144 (LVL 50,000).	0.348	6.054	0.201	166.12	-0.5%	-0.21022
6.8	3.9% of the cadastral value above EUR 64,029 (LVL 45,000).	0.348	6.047	0.201	166.06	0.2	-0.17225

Source: authors' calculations using EUROMOD-LV

Based on the data used here in the baseline case, i.e. scenario 1, real estate tax levied on residential property is regressive in 2013 (i.e., the Kakwani index is negative, see Figure 6.2). All the real estate tax reforms including different application of real estate tax on dwellings are making this tax more or less regressive.

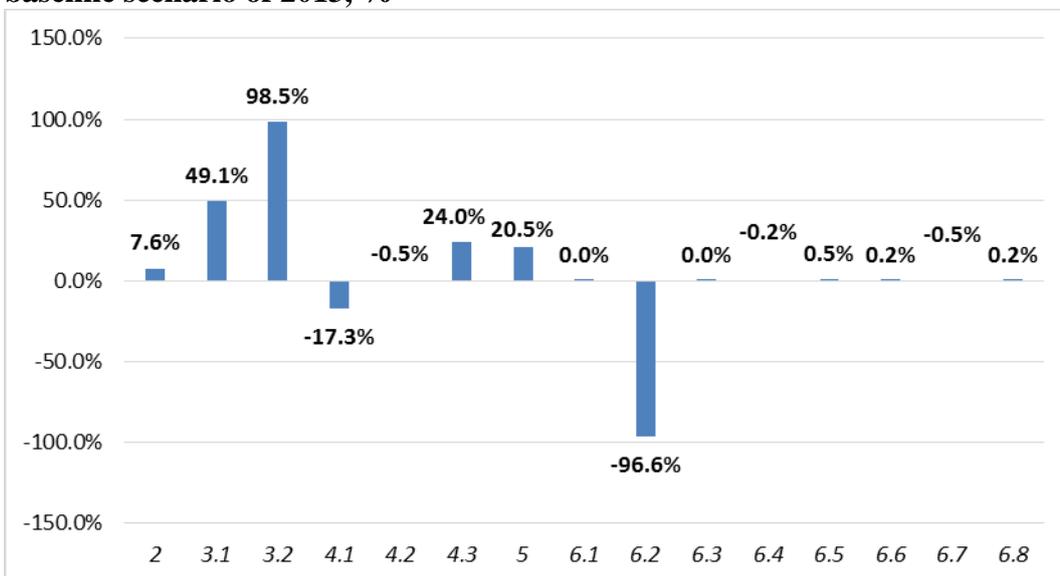
**Figure 6.2: Kakwani index for residential property in Latvia, 2013**



Source: authors' calculations using EUROMOD-LV

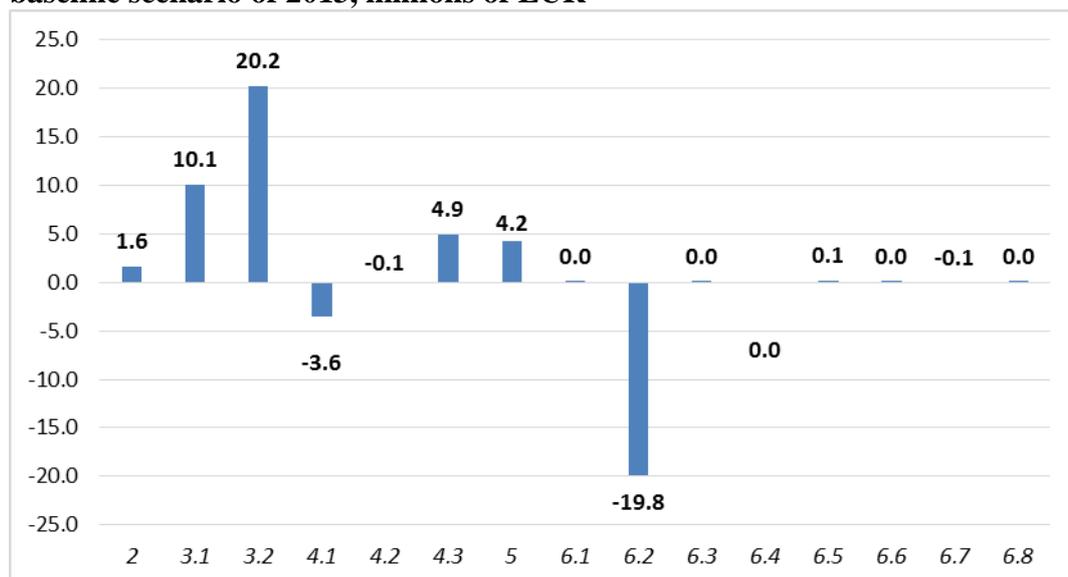
Figure 6.3 and Figure 6.4 summarise the revenue effects in percentage and money terms of the reforms.

**Figure 6.3: Changes in the revenues from real estate tax on dwellings with respect to the baseline scenario of 2013, %**



Source: authors' calculations using EUROMOD-LV

**Figure 6.4: Changes in the revenues from real estate tax on dwellings with respect to the baseline scenario of 2013, millions of EUR**



Source: authors' calculations using EUROMOD-LV

### Summary of effects

Five reform scenarios (and several sub-scenarios) have been evaluated relative to the 2013 baseline. The effects are:

#### Revenues

The only reforms that have significant positive effects on revenues are simple increases in the rate (Scenarios 3.1 and 3.2 and 4.3) but also taxing high valued properties only at a flat rate of 0.4% (Scenario 5). However, given that residential tax revenues represent only about 12% of all property tax inflows, the revenue effects are quite modest. Thus increasing the schedule of property tax rates by 50% would yield just over EUR 10m and doubling it would yield just over EUR 20m. In practice increasing rates by this much would probably require more an extension of measures to alleviate hardship which would imply lower revenue gains. Introducing the Lithuanian system wholesale would reduce revenues by nearly 97%. Otherwise the revenue effects are very modest.

#### Progressivity

Introducing non-taxable thresholds (Scenarios 4.1 and 4.3) improve progressivity as do the implementation of budget neutral changes in tax rates on properties valued above EUR 71,144 and EUR 64,029 (Scenarios 6.7 and 6.8).

#### Poverty and inequality

None of the reforms has any significant effect on poverty and inequality indicators such as the poverty line or the Gini. This is essentially because property taxes and especially changes in them represent a rather small share of the incomes of most households.

## **6.2. Land tax and tax on business property**

Land tax and tax on buildings represent much bigger tax bases than residential property. In 2012 land tax generated revenues of EUR 87.6m (LVL61.6m) and tax on non-residential buildings generated EUR 58.8m (LVL 41.3m). Theoretical considerations (Mirlees et al 2011) suggest that

land is a particularly good tax base from the perspective of economic efficiency and hence should be a good candidate for a higher tax rate.

Thus an increase in the rate of land tax to 2% should increase revenues by about EUR 29m and a doubling of the land tax rate to 3% should double revenues i.e. increase them by nearly EUR 88m<sup>24</sup>. If such an increase is implemented then in order to avoid hardship for vulnerable groups of persons it may be necessary to extend existing reliefs or to introduce thresholds, which may reduce the tax yield somewhat. However, without being able to link households with cadastral values it is not possible to analyse such measures in the way that is done in section 6.1 for residential property.

More complicated reforms cannot be evaluated without a data base linking residents and properties but qualitatively the impact of reforms such as thresholds should be similar to what was simulated for residential property tax in section 6.1.

Data from the local authorities on the burden of property tax per resident suggest that there is 'space' for tax increases. For example the 2013 property tax revenues per resident in the Republican cities ranged from EUR 140 in Jurmala to EUR 27.6 in Jekabpils and the average was EUR 97.8. In the municipalities (novadi) the lowest per resident tax was in EUR 24 Viļānu novads and the highest was EUR 181.7 in Saulkrastu novads. The average for the novadi was EUR 59.5. In Latvia as a whole the average per resident tax revenue was EUR 79.2. These are not excessive burdens and subject to adequate hardship safeguards could readily be increased.

A particular problem in the taxation of land and property is the prevalence of significant discounts in a number local authorities e.g. in Riga the land tax rate applied to persons with their declared residence in Riga is only 1%, in Jurmala there is a 70% discount for declared residents. There are also discounts for both land and property tax for businesses. A similar 1% land tax rate also applies declared residents in the municipalities of Inčukalns, Kocēni and Ādaži. Many municipalities also apply a variety of discounts to businesses located in the territory of the municipality.

Although not explicitly justified in such a way these lower rates can be interpreted as representing tax competition between local authorities – lower property tax attracts residents whose income tax (80% of it) accrues to the local authority. From an overall societal perspective such tax competition is both distortionary and wasteful. No gain to society occurs if a property tax discount generates a switch in residence from say Riga to Jurmala. Similarly, there is no social gain if a business switches location because of property tax discounts. Such competition is distortionary to the extent that it artificially alters the advantages of different locations. On the other hand, to the extent that discounting is implemented by all municipalities, the location effects are cancelled out, but discounting results in the erosion of a potentially useful tax base.

Here it is suggested that land tax and business property tax discounts that are aimed simply at inducing people to switch residence or businesses to switch location should be limited and preferably banned altogether. Where genuine hardship can be anticipated, e.g. as with elderly persons of limited means, this can be addressed with a specific allowance aimed at such persons.

Competition for location of businesses is particularly undesirable since the location of business activity should be based on the real costs and benefits of a location and not on artificial financial incentives.

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<sup>24</sup> These calculations assume that all discounted rates are adjusted pro rata

### Summary

- Land tax represents a potential source of additional tax revenues: a rate increase to 2% would yield EUR 29m and a doubling of the land tax rate could generate up to EUR88m extra revenues
- A full analysis of impact of reforms on poverty and inequality requires a data base with links between taxpayers and properties.
- Tax competition between authorities creates distortions and results in misallocation of resources.

## 7. Concluding remarks and reform scenarios

This report provides an extensive review of tax systems in the EU and of the literature on the impact of tax/benefit systems on work incentives, redistribution, and inequality. The Latvian tax system has been analysed in an EU context using the EUROMOD micro-simulation model. It should be emphasised that this is a technical document aimed at analysing the implications of potential reform scenarios. Thus it is informative and not political. Political reforms have to be decided by politicians.

The analysis confirms that redistribution through the tax system in Latvia is one of the lowest in the EU and that work incentives are low for the lowest decile of the population because of high participation tax rates and high marginal effective tax rates. The following reform scenarios are feasible and would go some way to addressing these problems:

- Reform of means tested benefits to allow some in-work benefit.
- Reform of basic allowance to make it progressive: it is proposed to increase the basic allowance for low income earners and a gradually declining basic tax allowance for higher income earners.
- Reform of personal income tax (PIT) with lowering the standard tax rate to 20% and the introduction of a higher rate (40%) tax band to be applied to incomes in the top 5 centiles of the income distribution.

The benefits reform would reduce the participation tax rate in the lowest decile from over 70% to just over 35%. The PIT reforms together would double the Kakwani index of progressivity of the PIT. The budgetary cost of the reforms collectively is estimated at EUR 140m and this could be covered from VAT, either by improving collection and hence reducing the VAT gap, or by increasing the standard rate of VAT, and by reforms of the property tax.

One good conclusion on property taxes in Latvia is that the Latvian system of cadastral valuation is rather good by EU standards – in many countries cadastral values are hopelessly out of date and the rationale of the tax base is lost. In Latvia cadastral values are reasonably close to market values and this is expected to further improve in the future.

A negative conclusion concerns the discounts applied by local governments in order to attract residents or businesses. This kind of tax competition generates zero societal gains but creates inefficiencies as a result the distortions it creates.

The revenue from immovable property taxes in Latvia is less than 1% of GDP and the individual average payments per resident in 2013 were EUR 41.4 for the land component of property tax and EUR 10.2 for tax on dwellings. These figures suggest some room for increasing both forms of property tax.

Accordingly possible reforms scenarios for property taxes are:

- To increase the rate of land tax to at least 2% and possibly to 3%. This could generate a revenue gain of between EUR29m and EUR 88m.
- To increase the tax on residential property by 50%. Possibly with a threshold of EUR 5000. This would generate a revenue gain of between EUR 20m and EUR 4.9m.
- Continue to provide adequate safeguards, e.g. through thresholds or allowances, for vulnerable groups of residents that are consistent across municipalities
- Abolish property tax discounts which have the sole aim of attracting residents or businesses.

However, the revenue gains from feasible increases in property taxes are likely to be quite modest in a national context. An increase in property tax revenues of say 1% of GDP will not make a huge impact on Latvia's low tax to GDP ratio. Moreover, property tax accrues to local government so, with the exception of personal income tax, an increase in property taxes cannot be used to compensate directly for reductions in national level taxes.

Reforms of taxes and benefits and property tax on the lines presented in the reform scenarios represent changes in tax structure that are likely to improve both efficiency and fairness. At the same time Latvia should not be afraid of raising the overall level of taxes at the same time as improving the structure. The international evidence suggests no clear correlation between the level of taxation and economic performance but there is a clear consensus that the structure matter rather a lot.

## Annex

### Calculation of the cadastral values of the dwellings used in simulations

This annex explains how cadastral values are estimated and linked to EU-SILC respondents. Data on market values of the dwellings is based on the sales prices of flats and private houses for transactions made in 2012-2013 (Valsts Zemes Dienests, 2014). The sales comparison method is most widely used in Latvia in the development of the basis of cadastral value for construction land, rural land, as well as buildings.

Table A.1 shows the average value of flats and houses based on detailed sales data of the flats located in Latvia's six geographical regions.

**Table A.1: The average market value of the dwellings in Latvian regions, 2012-2013**

Region	The average price of the flat in the urban area in Riga (EUR) and the ratio of the property value in regions and Riga				The ratio of the rural and urban property value within the region	Average Price of the m <sup>2</sup> of Private Houses (EUR)
	1 room	2 room	3 room	4 room		
<b>Riga</b>	22760.33	40933.13	64881.33	114845.39		482.94
<b>Pierīga</b>	0.661	0.484	0.524	0.712	0.659	976.53
<b>Vidzeme</b>	0.154	0.145	0.198	0.256	0.623	148.01
<b>Kurzeme</b>	0.159	0.156	0.186	0.307	0.363	243.97
<b>Zemgale</b>	0.183	0.149	0.148	0.188	0.918	144.22
<b>Latgale</b>	0.084	0.073	0.072	0.095	0.565	239.10

Source: Valsts Zemes Dienests (2014), Central Statistical Bureau of Latvia (2014a) and authors' calculations

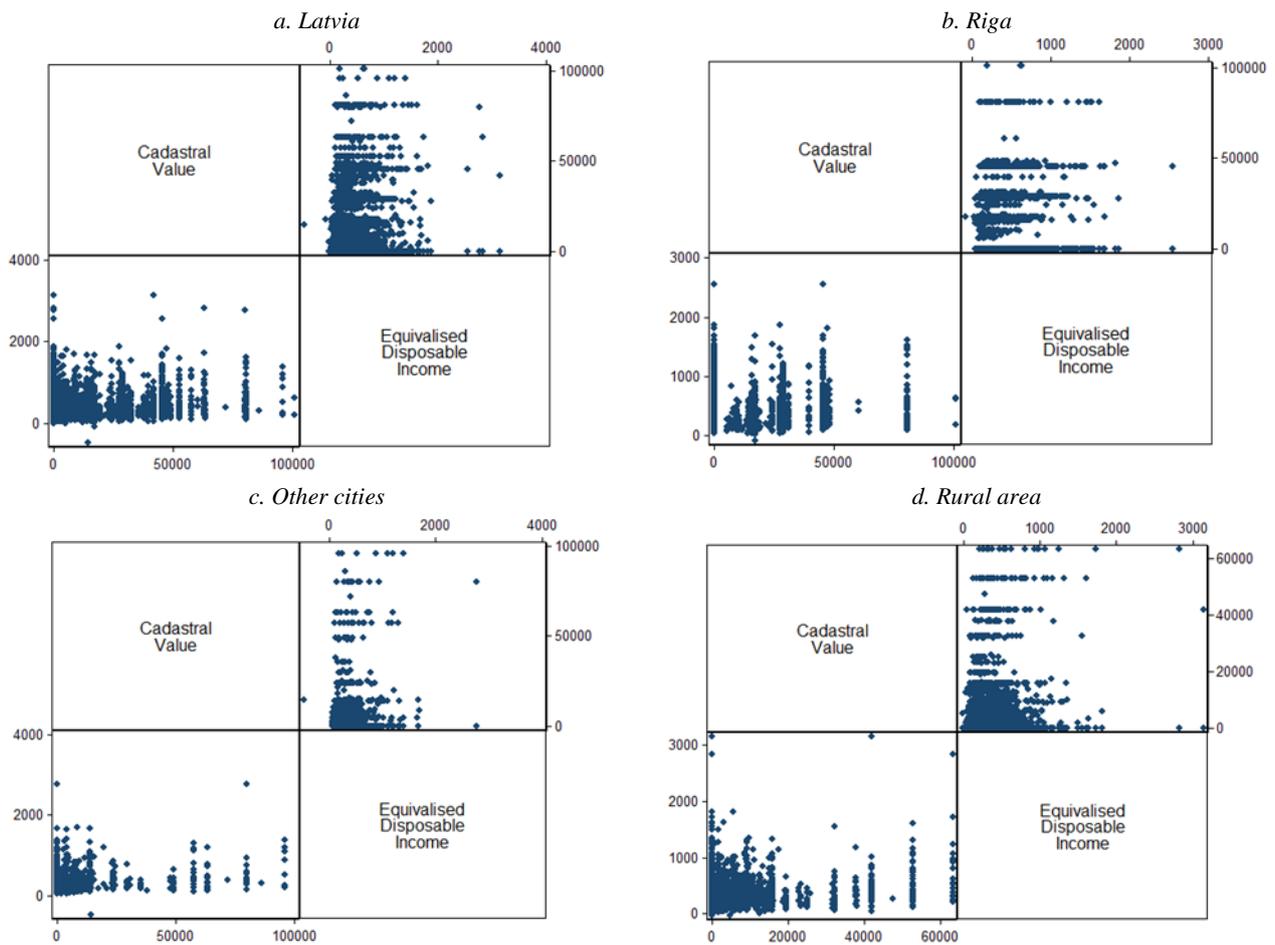
The average prices for the flats by number of rooms in Riga are summarized in monetary units, while the average price of flats in other regions and in rural versus urban areas are represented as coefficients (typically less than 1). The ratio of the rural to urban property value indicates the difference between the rural and urban property within a given region. The market price of houses is expressed as per square metre.

The value of the dwelling which owned by an EU-SILC respondent is then estimated by the characteristics reported by EU-SILC respondents and the market value estimated in this way is taken to correspond to the basic cadastral value. However, other reported characteristics of the dwellings are used to generate correction coefficients:

- A value correction coefficient of 0.8 applied there is a shared indoor flushing toilet for use of several households, and a coefficient of 0.6 if the dwelling has no indoor flushing toilet. A coefficient of 1 is applied in the case of an indoor flushing toilet for the sole use of household.
- A correction coefficient of 0.6 is applied for dwellings where the owner has indicated deficiencies such as leaking roof, damp walls, floors, foundation, or rot in the window frames or floor.

There are 5187 owners of dwellings among 15267 EU-SILC respondents. Comparing the estimated distribution with the real cadastral values of the dwellings in Latvia, the estimation method based slightly overestimates the values of relatively expensive apartments on the whole the distribution is close to the (see Figure A.1). According to the estimated cadastral values, there is little correlation between the equivalised disposable income and the cadastral value of the owned dwellings: there is a widespread case of high income earners owning low-valued dwelling and conversely.

**Figure A.1: Equivalised disposable income and cadastral value of the owned dwellings LVL, Riga, other cities and rural areas**



Note: Cadastral value is based on the sales prices of 2012-2013, equivalised disposable income is of 2009.

Source: Source: authors' calculations using EUROMOD-LV

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