Latvia Tax Review

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1. INTRODUCTION

1.1 Context of review

Since the introduction of the flat personal income tax (PIT) in the mid-1990s Latvia has made several changes to the tax system that moved away from the original uniform PIT and corporate income tax (CIT) rates. In 2016, a series of measures were put in place aimed at reducing income inequality by making the tax system less regressive: the non-taxable minimum was increased and is set to be differentiated in favor of lower income groups in future years.[1] A solidarity tax on higher income earners came into effect on January 1, 2016.[2] Looking forward the Ministry of Finance intends to draw up a medium-term tax strategy to put in place a more permanent change to the design of the system and asked the World Bank to do a review of the tax system as a basis for the reform.

Latvia was among the first wave of adopters in the recent episode of flat-tax directed reforms with a flat tax of 25 percent introduced in 1997. Latvia's flat tax reform followed on from the introduction of a flat tax in Estonia and in Lithuania in 1994. The flat tax introduced in 1997 replaced a degressive[3] personal income tax (PIT) regime with a general marginal tax rate of 25 percent and a 10 percent marginal tax rates for high incomes. Corporate income taxes (CIT) remained unchanged at 25 percent, and capital income remained tax exempt. Latvia's flat tax system put in place in 1997 differed from that of later adopters, such as Russia or Romania, as in Latvia the flat tax was set at the highest rather than lowest marginal income tax, and capital income was exempt. Additionally, the non-taxable minimum was only slightly increased in Latvia compared to the larger increases seen in many other countries with the aim of reducing the average income tax imposed on lower-income earners through a flat tax.

Over time the parameters of the tax system were altered moving away from the initial flat tax concept and introducing a lower CIT rate—with changes put in place during the stabilization program following the financial crisis of 2008-09 making the PIT system more regressive. In 2002, the CIT rate was reduced to 15 percent and is below PIT, which currently is 23 percent. Modifications were made to the tax system following the 2008-09 financial crisis, including a reduction in the non-taxable minimum, the introduction of a 10 percent tax on interest and dividends, a 15 percent tax on capital gains, and a reduction in tax expenditures through a tightening of tax exemptions, deductions

[1] See the October 7, 2015 statement of the Minister of Finance, Janis Reirs, on the equity objective of the 2016 budget http://www.fm.gov.lv/en/news/51418-minister-of-finance-janis-reirs-next-years-budget-focuses-on-solitaire-reduction-of-income-inequality

[2] The solidarity tax will be levied on annual incomes above EUR 48,600 and the solidarity tax rate is equal to the state social insurance contribution of 34.09 percent (23.59 percent paid by the employer and 10.5 percent by the employee). In essence, the new solidarity tax removes the cap on social insurance contributions, but its proceeds will go to general revenues and it will not entitle contributors to increased social insurance benefits. The solidarity tax came into effect on January 1, 2016. The Ministry of Finance (2015a) estimates that 4,700 individuals will be affected by the tax or 0.6 percent of the employed (Source: http://www.fm.gov.lv/lv/aktualitates/jaunumi/nodokli/51253-solidaritates-nodokli-maksas-tikai-personas-ar-alguvirs-48-600-eiro-gada).

[3] Under a degressive tax, the tax rate decreases with as the taxable amount increases. It should be noted that the degressive PIT system was in place only since 1996; prior to 1995, the PIT system was progressive with five rates ranging from 15 to 35 percent.

and credits targeted to select groups or specific activities. In response to the crisis a new tax regime for microenterprises was adopted in 2010, which reduced taxation including social insurance contributions.[4] It is estimated that in 2015 19.2 percent of private sector employees[5] report at least part of their income through the microenterprise regime. In addition to potential tax avoidance, for example through the shifting of activities to microenterprises, the concern is that some microenterprise workers may accrue lower entitlements for pensions as well as other social insurance benefits such as unemployment.

Latvia's recent tax changes were prompted by concerns over high inequality and the Government of Latvia intents to implement further tax design changes to enhance the equity of the system. Inequality is high; Latvia's Gini is the second highest for (after-tax) disposable income in the European Union (EU) (with Estonia just 0.1 percentage points ahead).[6] Aside from the recent PIT tax changes, there is a large agenda to address equity concerns of the current tax system. Labor taxes make up a large share of overall revenues and are relatively high at 34.09 percent, made up of 10.5 percent (employee's part) and 23.59 percent (employer's part). The labor tax wedge for low-income workers is particularly high, raising concerns on incentives for labor supply (Strokova and Damerau, 2013a and OECD, 2015). Finally, last year moves were made to make the tax system more progressive—the minimum non-taxable income was increases in 2016 and gradually (by 2020) to introduce differentiation of the non-taxable minimum threshold, and introduced the solidarity tax.

The government target is to increase tax revenues by three percentage points of GDP to reach a target tax-to-GDP ratio of 32 percent in the medium term. This is to cover growing spending needs in Latvia. Latvia has one of the smallest government sizes in the EU—Latvia ranks third lowest in the EU in government revenues and spending, with general government revenues equaling 35.6 percent of GDP and government expenditure 37.1 percent of GDP in 2014. In addition, Latvia's tax share of GDP is one of the lowest when compared with countries of a similar level of development. As the economy grows and converges toward the higher-income EU economies, there may be an increasing need for social spending both to invest in human capital and provide a better safety net. National security—defined as social protection and military spending—has been identified as a critical area that needs more fiscal resources by the Government of Latvia. Spending and coverage of the Guaranteed Minimum Income program (the last resort social assistance program) is low relative to needs (Strokova and Damerau, 2013b). The Government aims to increase defense spending (currently at 1.4 per cent of GDP). Education and health are additional areas that the Government has identified as requiring further investments. In particular, public health spending is low and health outcomes are lagging compared to the EU (Levin and Sinnott, 2015).

Any shift in taxation and expenditure policy will take place within a framework of commitment to fiscal sustainability. Latvia institutionalized a framework to maintain fiscal sustainability—hard won in the crisis period—with a Fiscal Discipline Law in 2013 and the creation of an independent Fiscal Discipline Council to monitor the compliance with the Fiscal Discipline Law in

[4] The micro enterprise tax rate is 9 percent from turnover. The tax replaces state social contributions both for employers and employees and the business risk state fee as well as PIT and CIT depending on the legal form of taxpayer. To qualify for status of microenterprise taxpayer the employee's income should not exceed EUR 700 per month, turnover should not exceed EUR 100,000 per year, and the number of employees may not exceed five. Source: http://www.fm.gov.lv/en/s/taxes/

[5] The estimate was given in discussions by the Ministry of Welfare in 2015.

[6] Based on the Gini coefficient of equalized disposable income from the EU-SILC.

2014. The country joined the Eurozone in 2014. Public debt is among the lowest in the EU. The general government structural deficit target is 1 percent of GDP in 2016 and 2017, with a reduction in the deficit planned thereafter. The 2016 budget was drafted with a cautious 3 percent GDP growth assumption. Both the IMF (2015) and the Fiscal Discipline Council (2015) have recently assessed fiscal policy as prudent and called for further moves to increase the equity of the tax system.

The Government of Latvia is working to achieve consensus support for tax system reform with its social partners. There was widespread criticism of the introduction of the solidarity tax by the business community and across media outlets. Partly this was related to competitiveness concerns, but also objections were again raised on the imposition of new taxes when tax evasion is high. The business community and media most often focus on "envelope wages" as the big tax fraud issue, whereby a formal employee receives not only a declared wage but also an undeclared "envelope wage". Further efforts to raise compliance under the existing tax system is then an important element of building support for tax reforms. In addition, the Government wants to make sure that additional spending is efficient and achieves the intended benefits for the population. With this in view, the Government has been investing in detailed sector strategy and spending reviews, including in the areas of health and social protection.

1.2 Objectives of the review

There are multiple dimensions to be taken into account in examining tax reform options and it is useful to set out a brief set of principles to be focused on in reviewing of Latvia's tax system. First, the Government of Latvia requested that the tax review identify options to increase government revenues to finance higher spending on security (particularly health, social protection and defense). Second, the Government of Latvia aims to improve design of the tax system to enhance productivity, employment and help position Latvia businesses to be flexible, competitive and robust in the face of dynamic global conditions. Finally, the government would like to assess options to increase the equity and fairness of the tax system. By equity, there is a focus on how to improve the vertical equity of the system, i.e. taxing less those of lower income, with a particular focus on reducing the high labor tax wedge faced by low-income workers. There also will be an emphasis on increasing horizontal equity—treating equally those of equal income.

The efficiency and welfare implications of the tax system are critical to the review. Tax systems should be efficiently designed to meet distributional goals and revenue targets with the lowest possible distortions on economic activity. Taxes entail economic costs by affecting people's and firm's behavior: decisions on working, saving/consuming, investing and employing. These 'excess burdens' of taxes are the economic costs of taxation. They arise over and above the income that individuals and firms pay in taxation, since the latter are compensated by larger public revenues. Governments are inevitably confronted with an equity-efficiency trade-off: higher taxes on the richer parts of the population—to raise revenue and to finance benefits for poorer groups—can distort the economic incentives for work, entrepreneurship, saving and risk-taking of middle- and higher-income individuals. At the same time, redistribution to low-income individuals, through tax credits or benefits, could weaken labor supply incentives. The tax review will aim to estimate the magnitude of these types of efficiency effects.

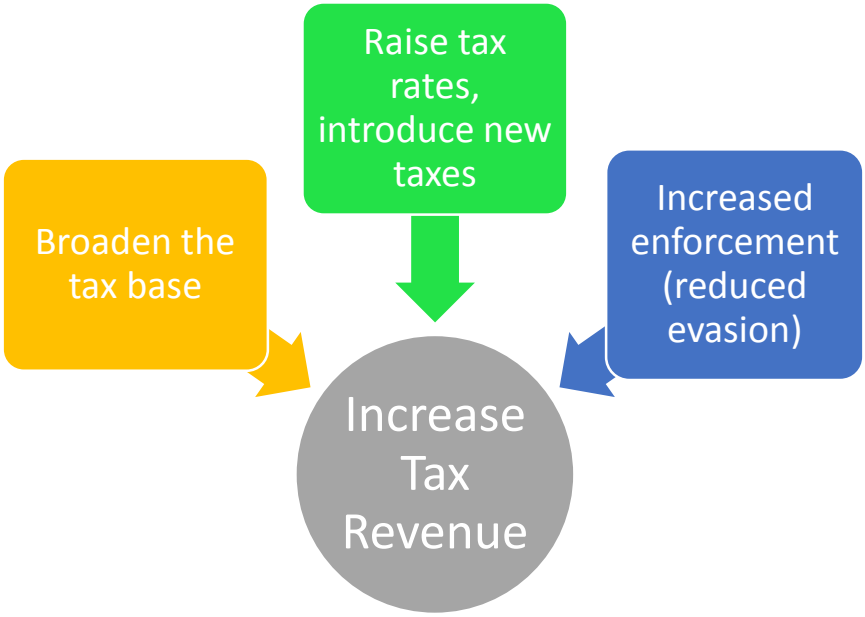
Apart from the revenue mobilization and equity objectives of the tax review, the following are desirable attributes for the tax system that will be covered in the review:

- **Raise the efficiency of the tax system and identify potentially welfare-improving tax reforms.** Efficiency considerations aim at minimizing the tax distortions and administrative burdens to meet given equity or revenue objectives. Not all elements in the Latvian tax system need to be in line with optimal tax theory. By removing the inefficiencies the Latvian government can raise more revenue, redistribute more income, or lower tax rates. In addition, some features of the tax system are neither equitable, nor efficient, nor both. In such cases welfare-improving tax reforms can be identified that raise efficiency, equity or both.
- **Reduce avoidance, evasion and the grey economy**. An important concern in looking at tax design and administration reforms in Latvia is the potential impact of any policy measures on informality and the size of the grey economy on the side of individuals and firms. To combat tax avoidance neutrality in the tax treatment of various sources of income is important. Different tax regimes applied on goods, inputs, various forms of income and asset types should not generate strong incentives for individuals or firms to shift income across tax bases, between people and over time.
- **Competitiveness**. Taxes have an impact on competiveness of firms (their ability to produce its output at the same or lower cost/higher quality than other firms in the same line of business). For a typical advanced economy there are likely to be strong links between the competitiveness of its firms and the overall levels of productivity and living standards that the country is able to sustain. Latvia is a small open economy that faces tax competition on tax rates, tax bases, and tax burdens from other countries in the EU, and in particular its Baltic neighbors. Changes in tax policy should take into account the impact on the competitiveness positions of Latvian firms and the level of the international playing field. Given its geographical location, comparisons with the tax systems of neighboring countries (in particular Estonia and Lithuania) are thus key to analyze the implications for the mobility of labor and capital, including attracting inward foreign direct investment (FDI).
- **Reduce administrative and compliance costs**. Simplicity is a critical feature of a tax system that aims at minimizing tax collection costs for the government and compliance costs for individuals/firms. In addition, the parameters of the tax system should be transparent and easy to grasp.

The tax review looks the tax structure in its entirety and examine its general evolution over time. The study is aimed at informing the formulation of the medium-term tax strategy by Government of Latvia. In addition, the activity would support dialogue aimed at reaching agreement in society on reforms to the tax system by presenting the study's analysis and policy recommendations for public discussion.

The framework used for evaluating options to increase revenues considers behavioral responses to tax changes (particularly in Stage 2 of the analysis). The report considers not only changes to the tax system parameters, but also tax administration policies, such as enforcement tools (audits, evasion penalties, public disclosure) (see Figure 1). The indirect ways to increase tax revenues through policies that boost economic activity, income and wealth are not discussed in the review. The review, however, pays attention to how individuals and firms respond to taxation. To the extent possible, it considers not only how behavioral responses affect labor supply and investment, but also tax avoidance and evasion.

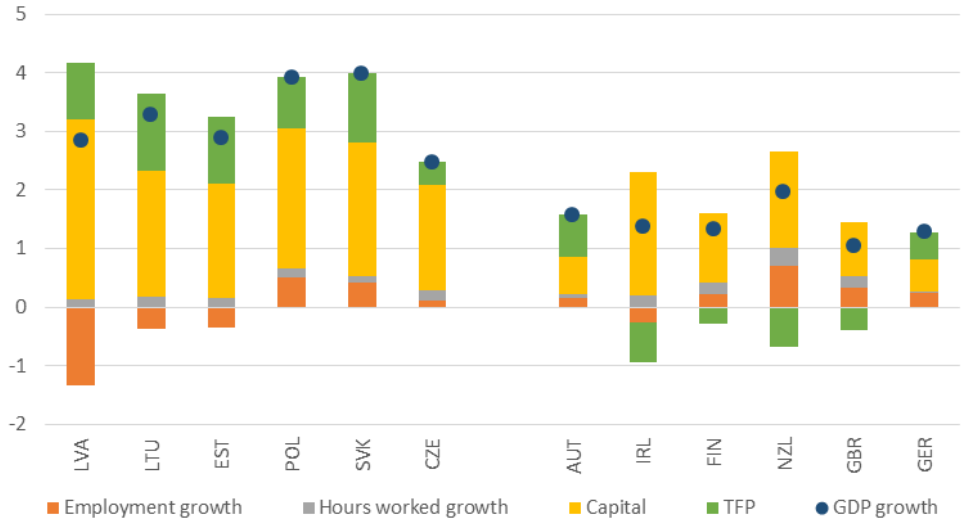
Figure 1. Potential sources of revenue increases



1.3 Economic context

Latvia recorded fast income convergence over the last 20 years, although the process was marked by significant volatility. Latvia is a small open economy that has made significant progress in catching-up to the income and productivity levels of the richer EU economies since regaining independence. Rapid income convergence has been supported by market-oriented reforms, an openness to foreign capital inflows and technology transfer from abroad, with a significant boost coming from market integration with the EU. Strong economic growth was based both on capital deepening and total factor productivity (TFP) growth (Figure 2). Growth in Latvia relied much more on capital than in other countries in the region such as Estonia or the Czech Republic. Growth was relatively volatile, with a particularly marked boom starting around the EU accession in 2004 (with GDP growth averaging 10 percent over 2003-07), mostly based on credit-fueled domestic demand, and as a result the overheating economy experienced an inflationary spiral and a loss of competitiveness, with a doubling of unit labor costs and a real estate bubble. The bursting of the domestic demand bubble coincided with the international financial crisis, leading to a major economic downturn with GDP shrinking by about a quarter.

Figure 2. Contribution to GDP growth, percentage points, average over 2004-2013



Source: Groningen Growth and Development Centre, Total Economy Database.

So far, investment in Latvia has been driven by large firms, which account for about 80 percent of investment outlay, with largest companies accounting for about 30 percent while micro companies make up 13 percent (Figure 3 and Figure 4). The same is true for value added: more than 70 percent of value added is generated by firms employing more than 20 people (Figure 4). Large enterprises play the same role in Poland or Slovakia but much smaller role in Estonia, Lithuania and the Czech Republic. Small companies (up to 20 employees) are critical for employment. In Baltic States as well as peers from Central Europe small (and micro) companies give jobs to at least 40 percent of employed.

Figure 3. Investment by company size in Latvia, in EUR million

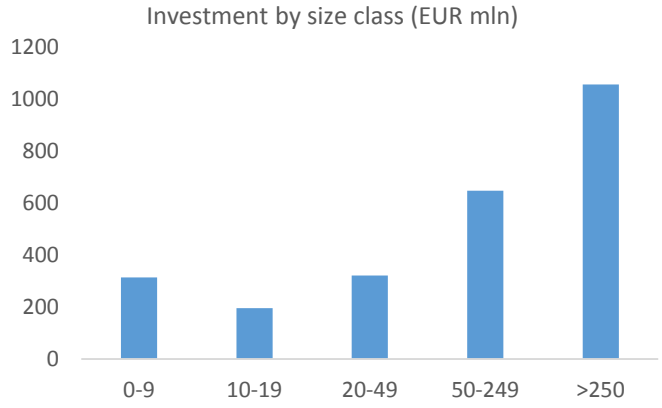
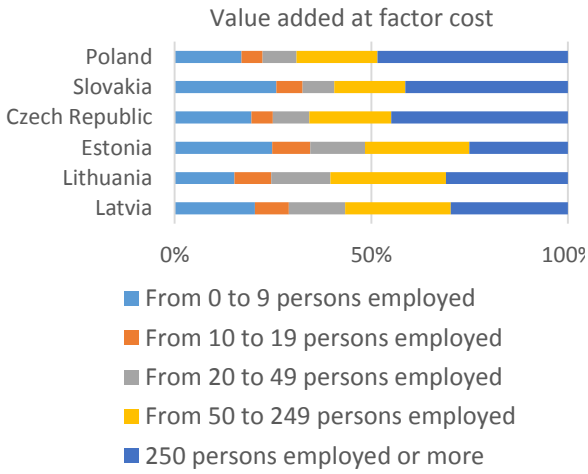


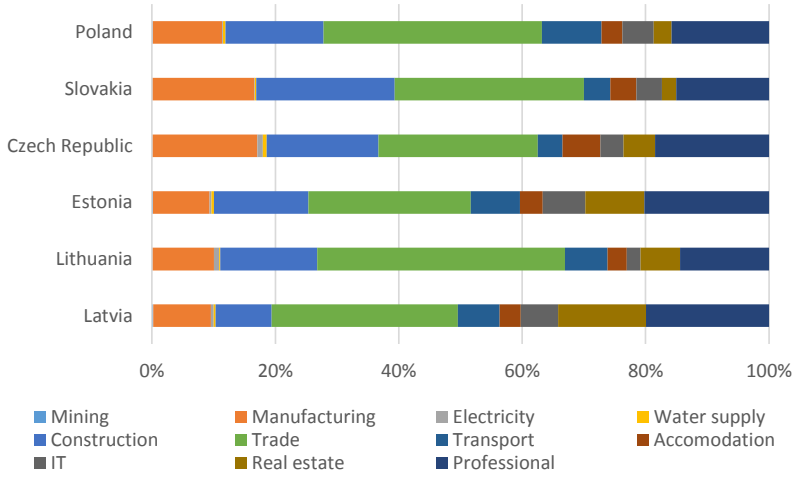
Figure 4. Structure of value added by size of the enterprise in Latvia and in benchmark countries, 2013



Source: Eurostat, SBS.

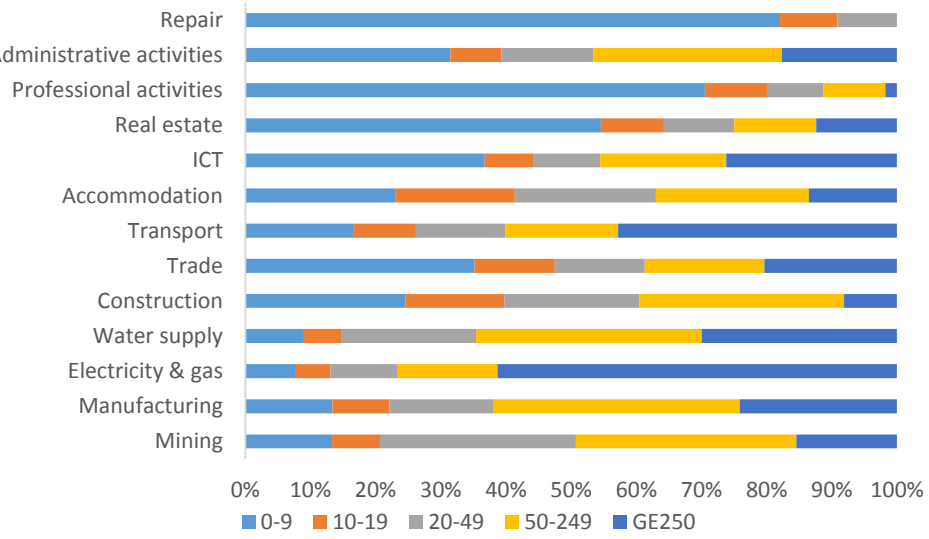
In Latvia repair services, real estate and professional activities are the sectors with the highest share of workers employed in micro and small enterprises. Repair activities, professional and real estate activities are dominated by micro and small enterprises in Latvia. Micro enterprises (up to five employees) hire more people in professional services and real estate than this is the case in the peer countries form Central Europe. In contrast, share of employed in micro enterprises in the sectors such manufacturing, construction and, to some extent, trade in Latvia is smaller as compared to other Central European countries (especially non-Baltic states), see Figure 5 and Figure 6 below.

Figure 5. Sectoral structure of micro enterprises (0-5 employees) in Latvia and in benchmark countries, 2013



Source: Structural Business Statistics, Eurostat.

Figure 6. Structure of employment in Latvian enterprises, by size of enterprise and sector, 2013



Source: Structural Business Statistics, Eurostat.

The economic adjustment of 2009-2010—achieved through internal devaluation and fiscal austerity reduced domestic demand by about one third—was rapid and impressive, but also came at a cost. The economy adapted swiftly to the macroeconomic shocks and most of the imbalances accumulated during the boom years (including the excessive increase in private sector indebtedness, unsustainable current account deficits and oversized public spending programs) were addressed, backed by an international financial assistance program (EUR 7.5 billion, i.e. 30 percent of GDP, of which 4.5 billion was used). Latvia maintained the currency peg with a view to joining the euro area and instead the economy was rebalanced through a significant internal devaluation. The budget deficit was reduced significantly within four years by implementing austerity measures amounting to 17 percent of GDP. Consolidation was made both on the expenditure and revenue side, including a 20 percent decrease in public sector wages and increase in VAT rates. Internal devaluation came also from productivity increases stemming from labor shedding. Unit labor costs decreased, restoring external competitiveness and supporting an export-led recovery. However, the rebalancing came at a cost, as a significant part of the adjustment happened through massive emigration flows (10 percent of working age population lost during 2008-2013), with emigrants being disproportionally young and relatively well educated-- the share of university graduates among Latvian emigrants is higher than among their age group that stayed in Latvia (Hazans, 2015).

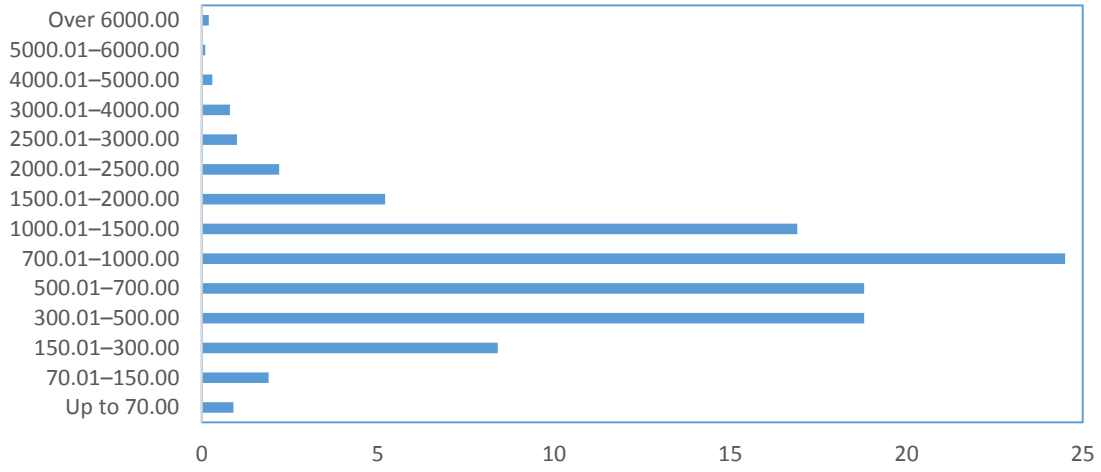
To reduce its distance from the productivity frontier Latvia will need structural reforms and investment to support productivity improvements; productivity gains will be crucial for robust convergence. Despite major reform efforts in response to the crisis, some structural vulnerabilities still remain to be addressed to maintain a high and sustainable pace of convergence and to make the economy more resilient. Latvia can further its integration into global-value chains, investment in knowledge-based capital and innovative capacities. It exports mostly goods with a low technological content (agricultural, food, wood, metals products) and productivity gains will be essential to moving up the value chain and securing robust convergence (OECD, 2015). A sector-level analysis also points to the importance of investment in addition to structural reforms (IMF, 2015). Some sectors lack "intrinsic" convergence and their productivity growth is quite sensitive to investment. A prominent example is the manufacturing sector, where during the last few years the level of investment fell short of the level needed to achieve historical average labor productivity growth in this sector. One reason for the low level of investment could be the weak credit environment, with the stock of bank credit shrinking for many years. To this end an upswing in investment recorded in the second half of 2015 together with some signs of the credit cycle turning are positive developments (IMF, 2015).

At the same time economic growth will need to be more inclusive to address significant income inequality and high levels of informality. Despite impressive economic growth over the past two decades, growth has not been inclusive and a high share of the population are at risk of poverty, 19.4 percent in 2014. Income inequality in Latvia is among the highest among OECD countries and second highest in the EU after Estonia (as measured by the Gini coefficient). Inequality of incomes after social transfers and pensions was 35.5 in 2014 compared to 25 in Slovenia, which is the most equal country in the EU. The lowest income quintile in Latvia earned less than 4,299 Purchasing power standard (PPS) in 2014; Bulgaria and Romania were the only EU countries with a lower cut-off for the lowest quintile at 3,871 PPS and 2,083 PPS, respectively, in 2014. But top-earning households did not rank high compared to other EU countries, making more than 12,356 PPS in 2014: Latvia is just ahead of Romania, Former Yugoslav Republic, Serbia, Bulgaria, Hungary and Croatia in the cut-off for fifth quintile incomes (the three countries have a top 20 percent of incomes cut-off ranging from 6,628 to 11,883 PPS).

The labor market continues its recovery and unemployment among individuals aged 15-74 has fallen from its crisis peak of 19.5 percent in 2010 to 9.9 percent in 2015. The concern is that long-term unemployment remains high compared to before the crisis and accounts for 50.6 percent of total unemployment as of Q3 2015 (Eurostat). Labor demand has yet to fully recover and vacancies remain the lowest in the EU at 0.4 percent of total posts (compared to 2.2 percent for Germany). Older groups are more likely to spend a long time out of work and there is a concern that the cyclical unemployment causes by the crisis over time becomes structural as people's skills deteriorate, and those without long unemployment spells are preferred in the labor market.

Labor force participation rates in Latvia are relatively high and have increased in recent years. Latvia's labor force participation rate, with 68 percent of those aged 15 to 74 participating in the labor force, is higher than the EU15 (65 percent) but below that of the Denmark (67 percent) and significantly below Sweden (at 73 percent) (2015 Q3 data). Having higher education is correlated with higher labor force participation after 25 years of age, with the biggest differences are between the lowest-educated group (with less than upper-secondary education) and those with secondary and above education. For women, these differences occur over their whole working life, but for men, they emerge in the mid-40s. Education becomes very important in terms of exit from the labor force for both sexes: more educated are much more likely to stay in the labor market around retirement age.

Figure 7. Distribution of monthly income earners, by EUR wage band, in percent, 2014



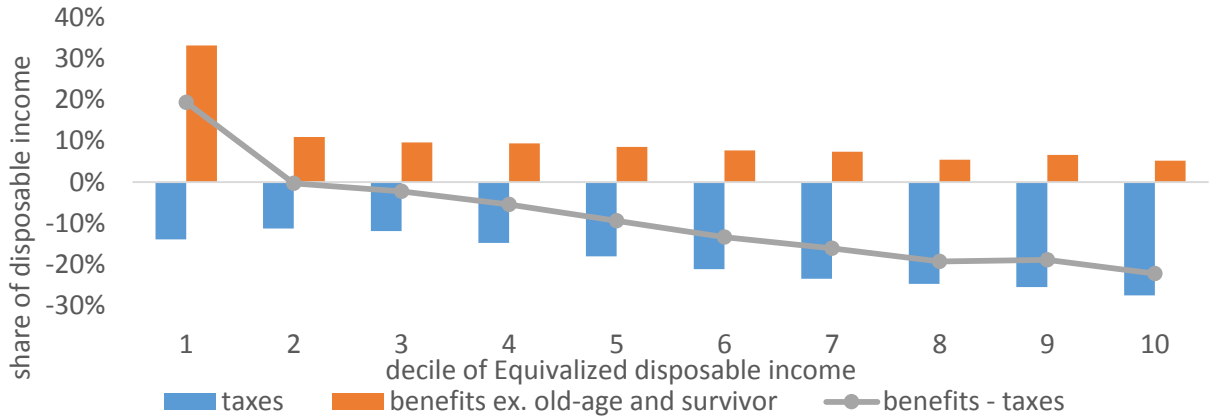
Source: Central Bureau of Statistics.

The real adjusted gross disposable income of households per capita is just recovering to the high of 2008. According to the latest available data from Eurostat, the real adjusted gross disposable income of households per capita was EUR 11,802 in 2014 compared to EUR 9,910 in 2009 and EUR 11,838 in 2008. Households rely mostly on labor income prior to retirement age, when pensions rise in importance (World Bank, 2015). Social assistance is small for all age groups, and substantially contributes to income only for short episodes of need for a low proportion of the population. The majority of workers (73.3 percent) earned under 1,000 EUR a month in 2014, with 11.2 percent earning 500 euros or less a month, which is close to the minimum wage of 370 EUR a month (Table 7).

The tax and benefit system does redistribute from high-income to low-income households. (Figure 8). The lowest income decile receives more benefits than taxes paid, and higher income deciles pay a larger share of income in taxes. However, redistribution through benefits (social insurance and social assistance transfers) is limited beyond the poorest 10 percent of the population and the redistribution that occurs through the tax-benefit system is much smaller than in most other EU economies. For example, in the U.K., the increase in disposable income due to the impact of the tax-benefit system for the poorest decile is close to 40 percent (Mirrlees et al. 2011) compared to 15 percent in Latvia. In order to get a complete picture of the impact of taxes and benefits, the effect of value-added taxes (VAT) has to be factored in.

Figure 8. Distributional impact of the Latvian tax and benefit system

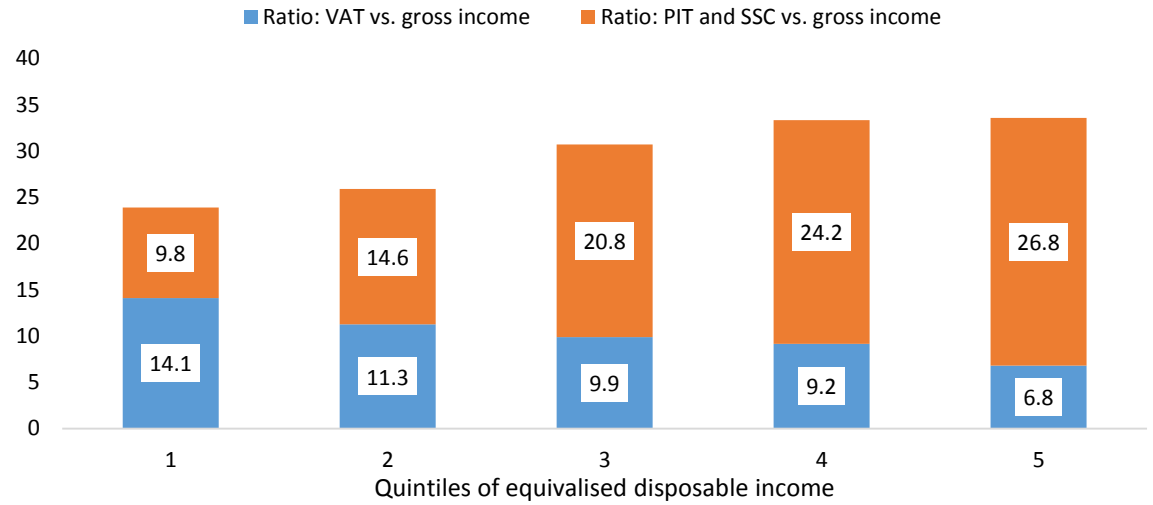
Tax and benefit share of disposable income, by income decile group, in percent, 2014



Notes: Deciles are based on adult equalized disposable income. Negative values of incomes are removed and incomes more than +4 standard deviations from the mean are top-coded.
Source: Calculation based on National EU–SILC 2015 (income 2014).

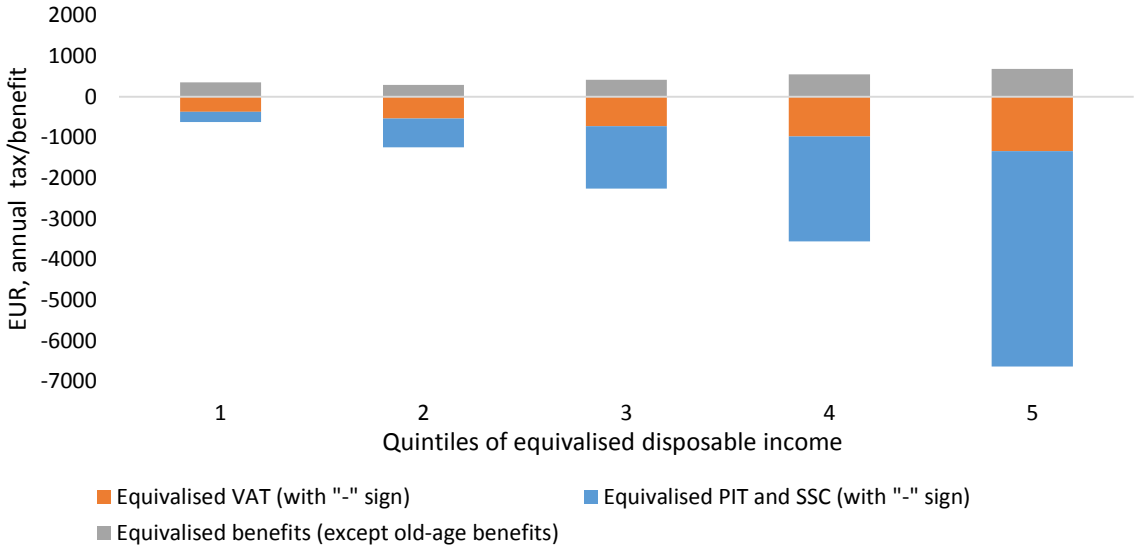
VAT is, effectively, regressive: estimated share of VAT is household gross income falls steadily from 14.1 percent in the first quintile to 6.8 percent in the top quintile. The distributional impact of VAT is estimated by using EU-SILC 201 household survey data as the main income source, and assigning annual spending on VAT to each EU-SILC household using information imputed from HBS 2014 as described in Box 1. Figure 9 presents the shares of VAT spending in household gross income by quintile, in comparison with PIT and social security insurance contribution (SSC) spending. While effective total rate of PIT and SSC is progressive (as it grows from less than 10 percent for the first quintile to almost 27 percent for the fifth quintile), it appears that VAT is regressive with lower income households paying a greater share of their income on VAT than higher income household. Quantitatively, this finding should be treated with a degree of care because due to data limitations purchases made abroad or in the unofficial sector have not been identified and excluded from assigning VAT. However, this is unlikely to change the conclusion qualitatively. Figure 10 compares VAT spending in absolute terms with PIT and SSC spending, as well as with benefits (excl. the old-age ones) received. It appears that in each quintile household pay more in VAT that they receive in benefits.

Figure 9. Estimated VAT, PIT and SSC as shares of household gross income, 2014, by quintiles of equalized disposable income



Notes: Quintiles ordered from poorest to richest in terms of disposable income.
Sources: Calculation with EU-SILC 2015 and HBS 2014 microdata.

Figure 10. Equalized direct and indirect taxes, contributions and benefits, by quintiles of equalized disposable income, 2014



Notes: Quintiles ordered from poorest to richest in terms of disposable income.
Sources: Calculation with EU-SILC 2015 and HBS 2014 microdata. Benefits have been simulated using EUROMOD (i.e. assuming full take-up of benefits based on eligibility).

Box 1. VAT contribution to inequality

To quantify contribution of the VAT to inequality, we use the Latvian Household Budget Survey (HBS), which is the only source on consumption data by category and group of households. The most recent survey available for analysis was HBS 2014. However, the CSB does not recommend using the HBS as a survey representative in terms of income (the reason being that the sample size is substantially reduced in comparison with that of the previous year and rather high non-responses).[7] Furthermore, HBS does not provide as detailed information on taxes and benefits as EU-SILC. Therefore we use EU-SILC 2015 microdata as the main source, and assign annual VAT spending to each EU-SILC household using information imputed from HBS 2014 as described below[8].

(i) For each of the 3713 households in the HBS sample, information on consumption expenditures in cash by category X_i is matched with the respective VAT rates t_i (21, 12 or zero percent, see Appendix F) and total VAT paid is estimated as $\sum_i t_i X_i /(1+t_i)$. Due to data limitations, it is not possible to identify at the household level two categories of expenditures which should have been excluded: purchases abroad, as well as purchases in non-regulated markets and from sellers which are not VAT payers. According to CSB estimates, on average purchases abroad account to 1.3% of total expenditures in the HBS 2014 sample, but this share is likely larger for wealthy households and smaller for low-income ones. Not excluding purchases abroad from VAT estimates results therefore in a slight overestimate of the VAT share in expenditures for the higher quintiles. But the opposite effect due to under-representation of the richest households in the HBS is likely to be stronger. On the other hand, "unofficial" purchases happen across the whole income distribution. Plausibly, their share in total consumption expenditures is higher among the low-income households. If this is the case, the VAT share in expenditures of low-income households will be somewhat overestimated.

(ii) For the purpose of matching EU-SILC households with HBS households featuring similar consumption patterns, OECD-scaled size (*Eq_size*) is calculated for each household as the sum of member's "weights" assigned as follows: the oldest person is assigned 1, other adults 0.5, and children 0.3. Equivalized household disposable income (*Eq_dinc*) is derived as the household disposable income (available in both surveys) divided by *Eq_size*. Three main variabels used in the 5 rounds of matching are: *Eq_dinc/100* (rounded to the closest integer); *Eq_size* (6 categories); education level of the main earner *Edu_main* (3 categories). In the first round, 77.4 percent of 6113 EU-SILC households have been matched with HBS housholds. After each round, EU-SILC households with missing VAT values (initially this is the case for all households) are assigned average of VAT spending over matched HBS households In the second round, only *Eq_dinc/100* and *Eq_size* are used for matching. Only 13.9 percent of the EU-SILC households remain unmatched. In the third round,

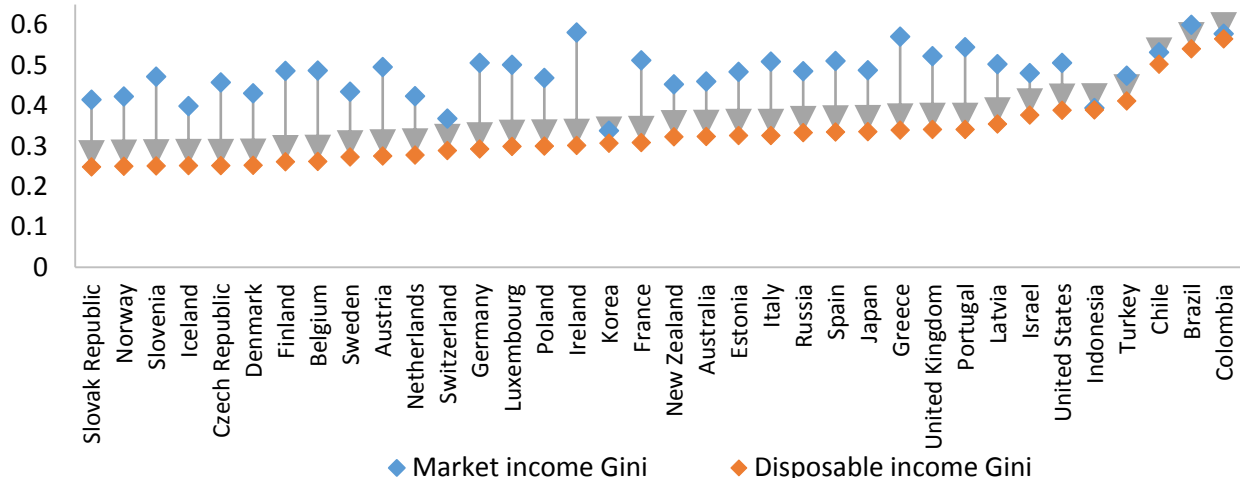
[7] Average equalized household disposable income of HBS 2014 respondents is by 18.4% lower than that of EU-SILC 2015 respondents (both surveys refer to income of 2014).

[8] Conceptually similar but operationally different methodology to impute information on spending for durable and non-durable commodities into EU-SILC data and simulate indirect taxes is being developed by the EUROMOD team at the University of Essex, see https://www.iser.essex.ac.uk/research/projects/euromod-extension-to-indirect-taxation

***Edu_main* is restored but *Eq_size* is replaced with the number of children *N_child* (0, 1, 2 or 3+); only 7.7 percent of households remain unmatched. In the fourth round, only *Eq_dinc/100* and *Edu_main* are used (5.1 percent of households, all from the top quintile, still unmatched). Finally, in the fifth round, matching is performed on *Eq_dinc/500* , *N_child* and *Edu_main*, leaving just 3.1 percent of households unmatched. These remaining households are assigned average VAT of the top quintile.**

Fiscal policy has a lower impact on inequality in Latvia than in many EU and OECD countries (Figure 11). Market income inequality in Latvia is not particularly high, but the combined impact of direct taxes and government transfers is lower than in other EU countries. Why is the impact on inequality low in Latvia? Benefits, especially means-tested benefits, play little role in reducing inequality, direct taxes have only a small impact and pensions play a lower role than on average in the EU (Leventi and Vujackov, 2016) (Figure 12). To achieve a higher reduction in inequality of disposable income, a broad mix of re-distribution across benefits and taxes is important. However, there is not one recipe. Ireland, with a relatively low tax-to-GDP ratio, has substantial means-tested benefits targeted at low-income groups and through these achieves a large reduction in inequality.

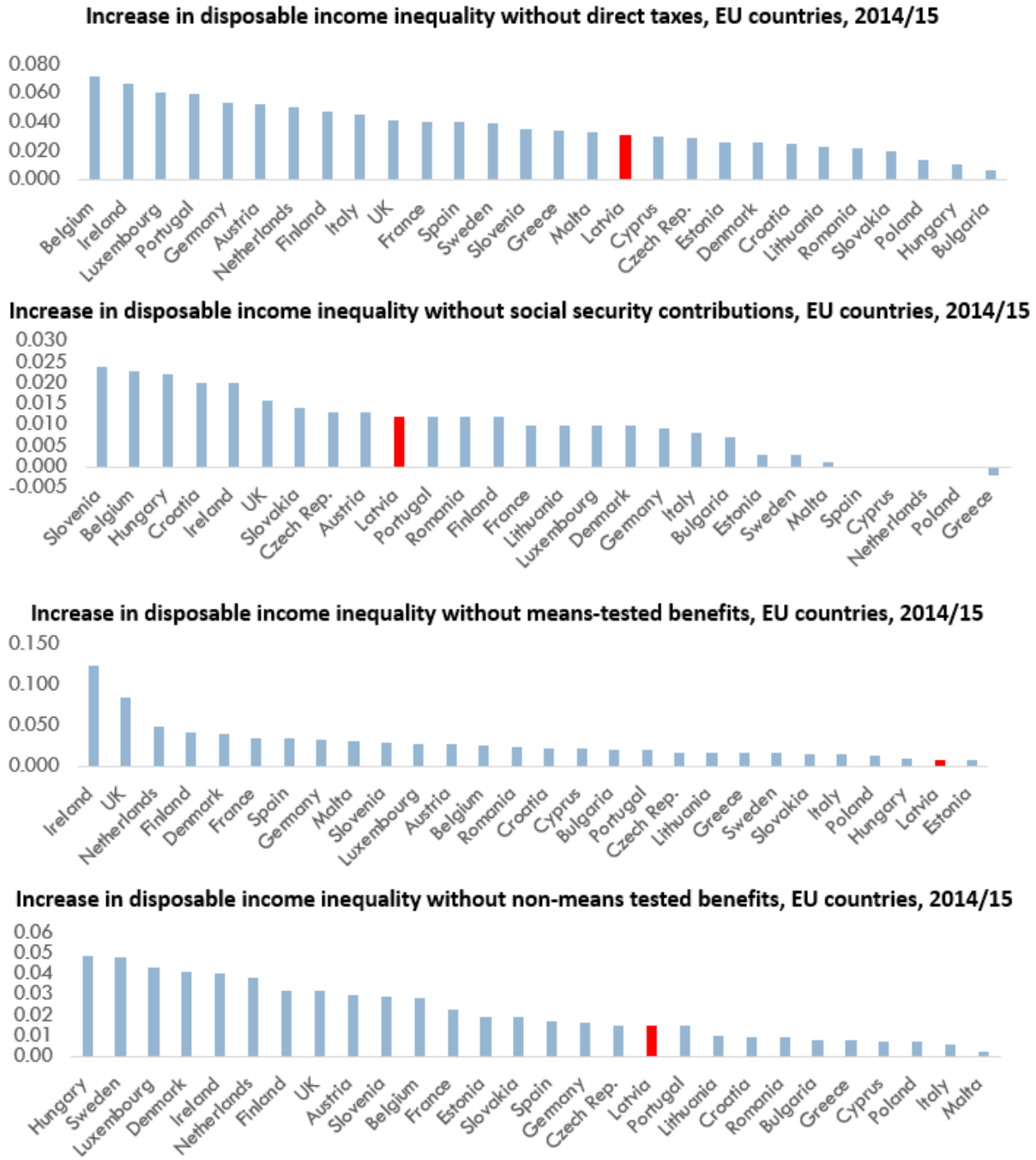
Figure 11. Gini Coefficient Before and After Taxes and Transfers, Selected Countries



Notes: The OECD assumes that pensions are a government transfer (and social insurance contributions are a tax). In-kind spending on education and health is not included in the calculations for OECD countries.

Sources: Gini before and after taxes and transfers are from OECD for all OECD countries and from the Commitment to Equity country papers for the remaining countries. Russia's data is for 2014. Government spending as a share of GDP is from the World Bank's World Development Indicators.

Figure 12. Role of Taxes and Benefits in Reducing Inequality, Percentage Point Reduction in Gini of Disposable Income, EU Countries

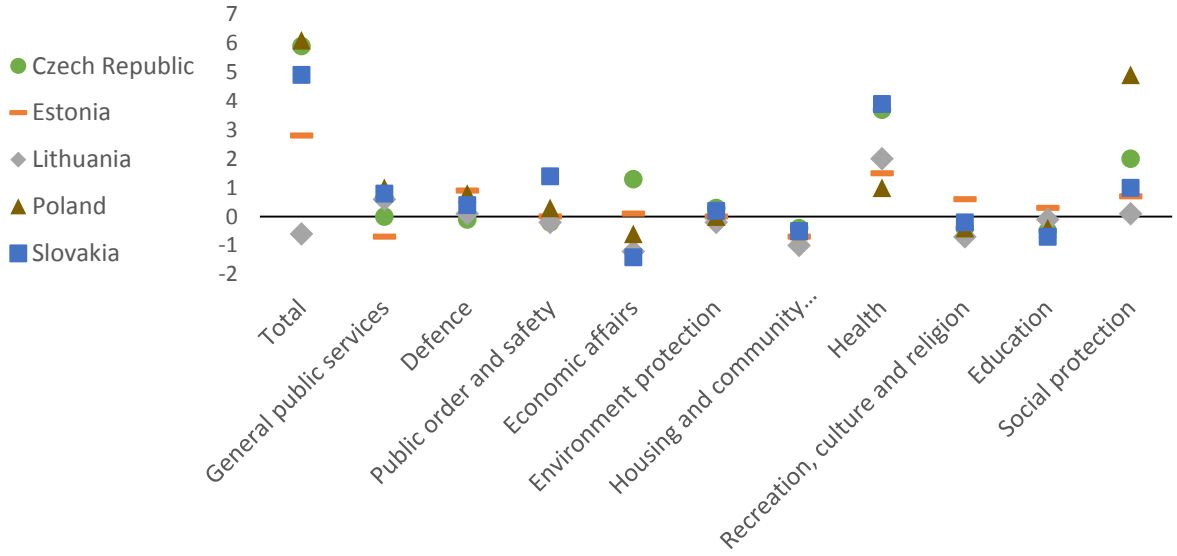


Source: Extracted from Table 4 in Leventi and Vujackov (2016).

Government spending is lower than on average in OECD and EU countries, but also compared to Latvia's peers. Latvia has a relatively strong fiscal position with the deficit projected to gradually improve from around to below 1 percent of GDP by 2017 and government debt being one of the lowest in the OECD (at around 40 percent of GDP in 2014). However, spending pressures are emerging: Latvia currently allocates a significantly smaller proportion of GDP to the public sector than

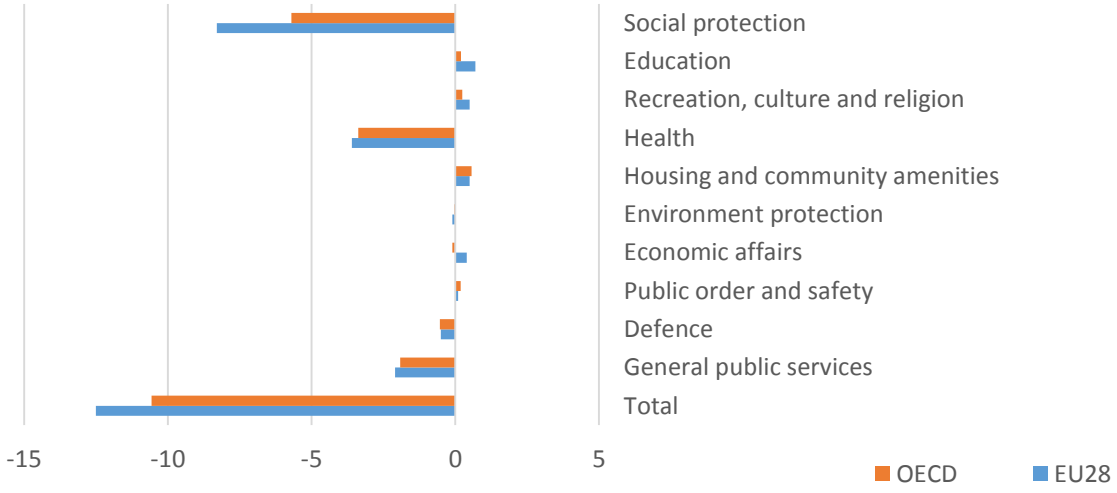
the EU and OECD countries (the gap accounted for 12 percent and 10 percent of GDP in 2013, respectively). The spending level in Latvia is also lower than in all peer countries—Estonia, Slovakia, the Czech Republic, and Poland—except Lithuania (Figure 13). Social protection and health spending in particular are lower than the EU or OECD average (Figure 14). Health outcomes lag behind not just the EU but also many middle-income countries, and there are large health inequalities (Levin and Sinnott, 2015).

Figure 13. Difference in spending with comparator countries



Source: OECD Stat database.

Figure 14. Difference in spending with the OECD and the EU28 average, in percent of GDP, 2014



1.4 Grey economy

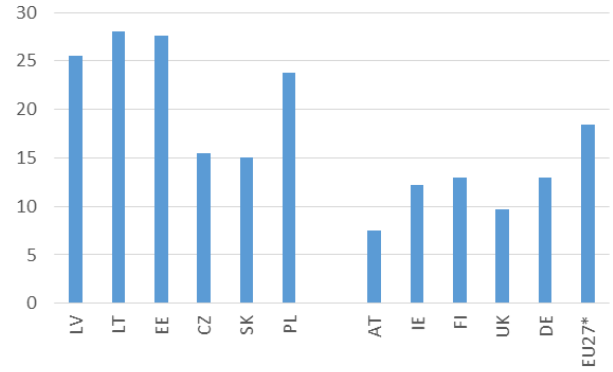
Existing estimates of the grey economy

The shadow economy in Latvia is estimated as relatively large, at close to a quarter of the official GDP level, compared with an OECD average of 14.4 percent. The share of the informal sector has fallen over the past decade, but remains very large albeit similar to the size of the informal sector in the other Baltic States. Informality in Latvia is more likely to take the form of unreported business income or underreported wages rather than individuals working completely outside the system in unregistered jobs. Existing estimates of entirely unregistered jobs are low, with one of the few available studies pointing to around 8 percent of the labor force during the height of the economic crisis in 2008-2009 (Hazans, 2011). The contrast between the high level of informality but the low share of entirely unregistered workers reflects not only the difficulties of documenting informality with any degree of precision, but also the widespread phenomenon of "envelope wages" i.e. formally registered workers receiving a possibly sizeable part of their pay informally. A recent Eurobarometer report indicates that among EU countries. Latvia has the highest proportion of workers who report receiving envelope wages (European Commission, 2014a).

Estimates of unreported activity are difficult to make and tend to vary depending on the source and the method used. According to estimates using cross-county macro data methods, calculated for 36 OECD countries (including 31 EU countries), Latvia, along with Lithuania and Estonia, are among the EU countries with the largest shadow economy (Figure 15), exceeding 25 percent of GDP in 2013 (Schneider, 2013). There is some concern that macro model estimates are too high and detailed national accounting imputation procedures are preferred and often yield much lower estimates of underground economy activity.[9] Therefore, it is important to have national statistical agency and tax administration estimates using detailed national accounts or tax administration data as a check on these macro model or survey estimates. Using a survey of company managers to gauge the size of a shadow economy in the Baltic countries, provides a similar estimate for the size of the informal economy in Latvia, with informal activity accounting for 23.5 percent of GDP in 2014. According to this survey it is twice as high as that in the neighboring Estonia and Lithuania (Putnins and Sauka, 2015). A large share of Latvia's shadow economy is found in this survey data to be due to unreported business income, i.e. tax evasion, estimated as equal to about 46 percent of the shadow economy in 2014 and to have grown in the previous two years. Unreported salaries remains the second largest item, although the share has been declining (Table 1). It should be noted that such survey responses may give an inaccurate representation of the size of the shadow economy, being subjective in nature.

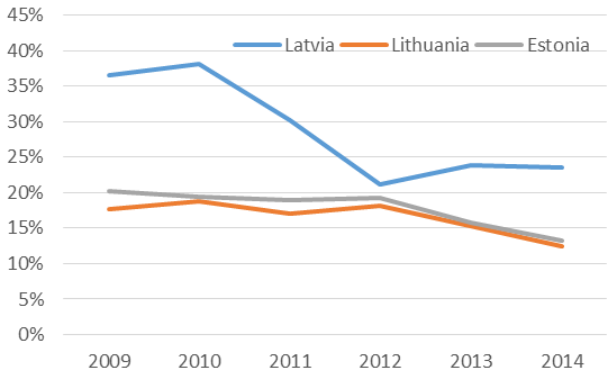
[9] See http://www.oecd.org/ctp/administration/reducingopportunitiesfortaxnon-complianceintheundergroundeconomy.htm for a discussion.

Figure 15. Size of the shadow economy calculated using the estimation procedure, 2013, in percent of GDP



* Simple average for 27 EU countries.
Note: The calculation of the size and development of the shadow economy with the MIMIC (Multiple Indicators and Multiple Courses) estimation procedure.
Source: Schneider (2013).

Figure 16. Size of the shadow economy according to the survey data (% of GDP)



Source: Putnins and Sauka (2015).

Table 1. Survey measure of the shadow economy

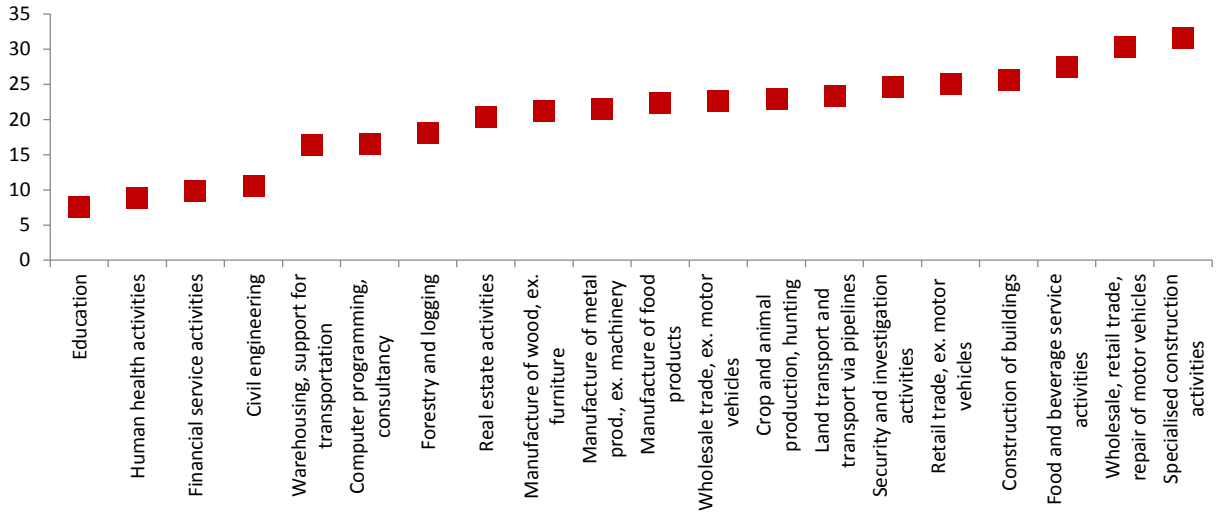
	Business profits (% of actual profits)	Number of employees (% of actual employees)	Salaries (% of actual salaries)	Level of bribery (% of revenue spent on payments 'to get things done')
Estonia	6.7	7.6	13.6	3.4
Lithuania	9.4	5.4	12.2	9.8
Latvia	21.7	9.6	20.3	10.2

Source: Putnins and Sauka, 2015.

The degree of underreporting of business profits and salaries ("envelope" wages) is estimated to be particularly marked. It is approximately twice as large as the underreporting of the number of employees, while bribes constitute approximately 10 percent of firms' revenue (Table 1). According to surveys, the tolerance of tax evasion is more entrenched in Latvia than in Estonia or Lithuania and firms are more dissatisfied with the tax system and the government, which is a factor behind high informality (Putnins and Sauka, 2015). In terms of the prevalence of envelope wages, Latvia stands out in the European context. According to the results of a 2007 survey on envelope wages in the EU, as many as 16 percent of formal employees in Latvia received envelope wages from their formal employer, amounting to 46 percent of their gross pay on average (the third highest share in the EU, source: Williams and Padmore, 2013). Government estimates based on administrative tax data (State Revenue Service, 2015) point to a lower wage gap, which amounts to about 20 percent of total wage, on average and reaches slightly above 30 percent in case of the construction sector. The sectors in which envelope wages have penetrated most deeply are construction, food and beverage services, retail trade, transport and repair services (Figure 17). In addition, workers of manufacturing sectors in Latvia receive about 20 percent of their wage in the form of envelope wage which is on the high side as compared to other EU countries (Williams, Kedir, and Feth, 2011). Finally, in Latvia it is

more socially acceptable for firms and individuals to operate in the shadow economy than in Estonia, Lithuania and on average in the EU (Williams and Horodnic, 2015).

Figure 17. Wage gap (in percent of total wage)



Source: Latvia's State Revenue Service.

Measuring undeclared earnings with EU-SILC data

In Latvia, informal work largely takes the form of under-reported earnings such that payments to workers exceed the wages that are reported to tax authorities, with the remainder being paid informally ("envelope wages"). We refer to such situation as that of *partial informality*. In this case, social security contributions are paid but they do not cover the whole employee income received by the individual. By contrast, *complete informality* refers to situation of individuals who receive their entire employee income in the form of envelope wages; in this case no social insurance contributions are paid although the individual reports positive employee income.

In order to attempt quantifying the incidence of complete and partial informality, data from surveys and administrative sources are combined. Here we focus on informal employees leaving aside informal self-employment. Our main data source is the national version of the European Union Statistics on Income and Living Conditions (EU-SILC) for 2008-2015. This provides estimates of actual annual gross and net earnings in 2007-2014, thus covering pre-crisis, crisis and post-crisis periods. Table 2 outlines the process of obtaining these estimates, disregarding less important details and differences between the two countries (e.g. whether the survey question concerns annual or monthly earnings) or relatively rare deviations from the "mainstream" procedures. Note that we focus on cash (or near-cash) employee income, ignoring in-kind income and employee benefits (health insurance, company car, etc.).

In Latvia, earnings recorded in EU-SILC come from two sources: survey and administrative (SRS and SSIA) data. If respondent's earnings (from all jobs) according to SRS records (E2) are higher than those reported in the survey (E1), SRS-based earnings are recorded in EU-SILC; this is the case also when E2 is between 0.95E1 and E1 (allowing for respondent's error within 5 percent), as well as in the case of non-response; otherwise survey-based earnings E1 are kept. Statistical imputation is used when both E1 and E2 are missing for respondents which reported that they had some earnings

(note that SRS data would be missing if during the income reference period the respondent was informal employee or worked only abroad or for employers which are not taxpayers in Latvia).

Table 2. Estimation of employee earnings (in all jobs) during the last calendar year in the Latvian and Estonian national EU-SILC data, 2008-2013

Data collection method or EU-SILC variable	**Data content and/or calculation formula**
Survey item	*E1*: Net earnings
Administrative (SRS) data	*E2*: Net earnings
Statistical imputation	*E3*, only when *E1* is missing (non-response) and *E2* is missing as well (no earnings are recorded in SRS database)
SILC, net earnings PY010n	*E1* if *E2* is missing; *E1* if *E2* ≤ 0.95*E1*; *E2* if *E2* > 0.95*E1*; *E2* if *E1* is missing (non-response); *E3* if both *E1* and *E2* are missing
Administrative (SRS) data (2)	MSSC1: Employee MSSC; PIT: personal income tax paid from earnings
SILC, gross earnings PY010g	*PY010n* + MSSC1 + PIT
Survey-based gross earnings ***G1***	*E1*+ MSSC1 + PIT
SILC, PY031g (2007-2012: survey; since 2013: administrative (SRS))	Employer optional SSC
Administrative (SSIA) data	MSSC (employer + employee)
SILC, Employer social security contributions PY030g	Mandatory + optional: MSSC - MSSC1 + *PY031g*

Abbreviations: SRS: State Revenue Service; SSIA: State Social Insurance Agency; SSC: social security contributions; MSSC - Mandatory SSC.

Completely informal employees (referred to simply as *informal employees* hereafter) now can be identified in EU-SILC as employees with positive earnings for whom no mandatory social security contributions (MSSC hereafter) have been paid by employers during the income reference period (i.e. the previous calendar year). Table 3 specifies this definition in terms of EU-SILC variables and additional data collected by Statistics Latvia. A few issues which complicate identification have been addressed using details of data collection process and additional survey and administrative data added to EU-SILC datasets on our request.[10] First, some observations feature zero employer social contributions, but a positive difference between gross and net earnings (hence, some payroll taxes paid); those are obviously not informal employees.[11] Second, starting from year 2012 (income reference period 2011) some employees receive earnings from *microenterprises* which are subject to special taxation regime: the only tax they pay is microenterprise tax. Although part of this tax is afterwards transferred to social security, Latvian EU-SILC data before 2015 in most such cases recorded zero employer social security contribution. These employees are, however, not informal because earnings from microenterprises are registered in SRS. Third, about 2 percent of EU-SILC

[10] We thank Viktors Veretjanovs from Statistics Latvia for his advice.
[11] The apparent contradiction is due to a conflict between the two sources of administrative data.

respondents with non-negligible earnings in the income reference period report in the survey that some of these earnings were gained abroad. Earnings gained abroad in most cases are nor recorded in SRS data, hence respondents who worked only abroad would appear as informal based on zero mandatory social security contributions. We exclude these respondents from analysis of informality and envelope wages.

Table 3. Identification of informal employees in the Latvian national EU-SILC data, 2008-2015

EU-SILC variables used	PY010g, PY010n, PY030g, PY031g
Additional survey items used	IQ38: Did the respondent during the income reference period gain some earnings abroad?
Additional SRS data received on request	Employee earnings from microenterprises (M_E) and share of these earnings in total declared earnings (M_E_sh).
Definiti Equivalised Equivalised on of informal employee	PY010g > 0 & PY010n=PY010g and (PY030g PY031g = 0) & ME=0. Respondents with earnings abroad (IQ38=1) are excluded from analysis.

The next step toward measuring envelope wages is to estimate, for every respondent, annual gross earnings *G* reported for tax purposes (referred to as *declared earnings* hereafter), as well as undeclared earnings. Technical details are found in Table 4 and Table 5. For informal employees (which are identified as described above) *G* = 0. For other employees *G* is available (and received by Statistics Latvia) from administrative data. In cases of survey non-response *G* is available directly from the data (as variable PY010g, see Table 2).

When both survey-based and declared (administrative) gross earnings (say, *G1* and *G*) *are available*, income flags variables available in EU-SILC data make it possible to identify *G1* and *G* separately (due to the fact that *Statistics Latvia* treats earnings from administrative data as imputed rather than collected), except for the cases when earnings recorded in EU-SILC equal survey-based earnings. After excluding informal employees, such cases (which account for about one-third of all observations, see Table 4) are dealt with as follows:

Declared gross earnings = (Employer MSSC)/(Employer MSSC rate) (1a)

Employer MSSC are directly available from EU-SILC as (PY030g - PY031g) (see Table 1). In the "general" case, employer MSSC rate in Latvia was 24.09 percent throughout the 2007-2013 period. Individuals having reached the retirement age, benefit from reduced employer social contributions rates that vary by year from 19.9 percent to 20.8 percent.[12] As mentioned above, data on employer MSSC in EU-SILC are less reliable for microenterprise workers. However, in these cases total declared gross earnings can be found using SRS-based additional variables ME, ME_sh provided by Statistics Latvia for this project as follows:

Declared gross earnings of microenterprise employees = ME/ ME_sh =
(Earnings in microenterprises)/(Share of these earnings in total declared earnings) (1b)

[12] There are several other groups with employer MSSC rate different from the general case, but these groups are relatively small and cannot be identified in the standard EU-SILC data.

Finally, for employees which are neither informal nor microenterprise workers but feature zero employer MSSC due to data imperfections, declared gross earnings are derived from the difference between gross and net earnings (see Table 5 for details).

In estimating *undeclared (*a.k.a. *envelope) earnings* we again distinguish several cases (which are numbered from [1] to [6] in Table 4). In case [1], EU-SILC variable *PY010g* estimates total gross earnings, and declared gross earnings *G* are also available (as described above). The difference between the two, when positive (which is almost always the case), is our estimate of undeclared earnings *B,* otherwise estimated to be zero. The share of undeclared earnings β is calculated as B/*G*. Cases [2] and [4] refer to informal employees, when *B = PY010g*, and β = 1. Cases {1], [2] and [4] together cover about 40 percent of observations. Case [5], when self-reported earnings are below the declared ones (by about 18 percent on average) also covers about 40 percent of observations. In this case *B* (and therefore also β) is assumed to be zero (hence our estimates of undeclared earnings should be seen as lower bounds[13]). In case [6] (less than 5 percent of observations), self-reported earnings *G1* slightly (within 5 percent) exceed the declared ones *G*. *Statistics Latvia* ignores this difference and reports in such cases the SRS data, but for our purposes it makes sense to assume that the difference is due to undeclared earnings, so we estimate *B = G1- G* and β = *B/G1.*

The remaining case [3] corresponds to survey non-response (between 15 percent and 20 percent of respondents depending on the year), when only declared gross earnings *G = PY010g* are available. There is no reason to assume that respondents which have not answered the survey question on earnings do not receive envelope wages. On the other hand, excluding this (rather sizable) group could result in selection bias. We use imputation procedure to estimate the share of undeclared earnings ???given our estimates for cases [1], [2], [4], [5] and [6]). A proxy equal to the average share of undeclared earnings in the same year across employees with respondent's education level, gender and sector of economic activity (21 sector) has been imputed in most cases; when the economic sector is unknown, ethnicity and citizenship (3 categories) have been taken into account as well. We have also used the rotating annual panel structure of the data: when the shares of undeclared earnings in the previous and in the next year for the same respondent are available, their average has been imputed instead of the above-mentioned proxy. When only one of these respondent-specific values is available, the average of it and the above-mentioned proxy has been imputed.

[13] We plan to relax this assumption and provide also an upper estimate of envelope wages in the second stage of the study.

Table 4. Estimation of declared and undeclared gross earnings in the Latvian national EU-SILC data, 2008-2015

Source of net earnings data (identifiable from data using flags)	Percentage of observations (by period)		Declared gross earnings, G	Undeclared ("envelope") earnings	
	2008-2011	2012-2015		Amount, *B*	Share in total earnings, β
[1] Survey (≥ SRS earnings)	35.1	31.5	See Table 5	*PY010g* - *G* if positive; 0 otherwise	*B/ PY010g*
[2] Survey (no SRS earnings) [a]	7.4	4.7	G = 0	*PY010g*	1
[3] SRS (survey non-response) [b]	15.5	18.6	*G = PY010g*	β*G*/(1 - β)	imputed
[4] Statistical imputation (no SRS earnings; survey non-response) [a]	0.7	0.5	G = 0	*PY010g*	1
[5] SRS (> survey earnings) [c]	38.3	39.9	*G = PY010g*	0 (assumed)	0 (assumed)
[6] SRS (between 95% and 100% of survey earnings)	3.0	4.8	*G = PY010g*	*G1- G* (*G1*: see Table 2)	*B/ G1*

Notes: [a] Cases [2] and [4] refer to informal employees (see Table 3).
[b] In case [3], a proxy equal to the average share of undeclared earnings in the same year across employees with respondent's education level, gender and sector of economic activity (21 sector) has been imputed in most cases; when the economic sector was unknown, ethnicity and citizenship (3 categories) have been taken into account as well. In cases when the shares of undeclared earnings in the previous and in the next year for the same respondent were available, their average was imputed instead, and when only one of these respondent-specific values was available, the average of it and the above-mentioned proxy was imputed.
[c] In case [5], survey-based gross earnings are, on average, by 17.6 percent below administrative data.
[d] Respondents with some earnings abroad during the income reference year are excluded from analysis.

Table 5. Estimation declared earnings in the Latvian national EU-SILC data when survey-based earnings are recorded, 2008-2015

Declared gross earnings *G*	
General case	*G* = (Employer MSSC)/(Employer MSSC rate). Employer MSSC = *PY030g* − *PY031g*
Informal workers	*G* = 0
Microenterprise workers	*G* = M_E/ M_E_sh = (Gross earnings in microenterprises)/(Share of these earnings in total declared earnings)
Other workers with zero employer MSSC in EU-SILC data	*G = A* = ((PY010g) − (PY010n) + *tNM*)/(*s*+*t*(1−*s*)) if *A*(1−*s*) > *NM*, where *t* is income tax rate applied to earnings, *N* is monthly non-taxable minimum, *M* is number of months worked as employee, *s* is employee MSSC rate; *G* =((*PY010g*) − (*PY010n*))/s if *A*(1−*s*) ≤ *NM*

Notes: PY010g, PY010n, PY030g, PY031g are EU-SILC variables (see Tables 2, 3). MSSC stands for "mandatory social security contributions".

Table 6 summarizes various indicators of earnings under-reporting which are used in the analysis.

Table 6. Indicators of under-reported earnings

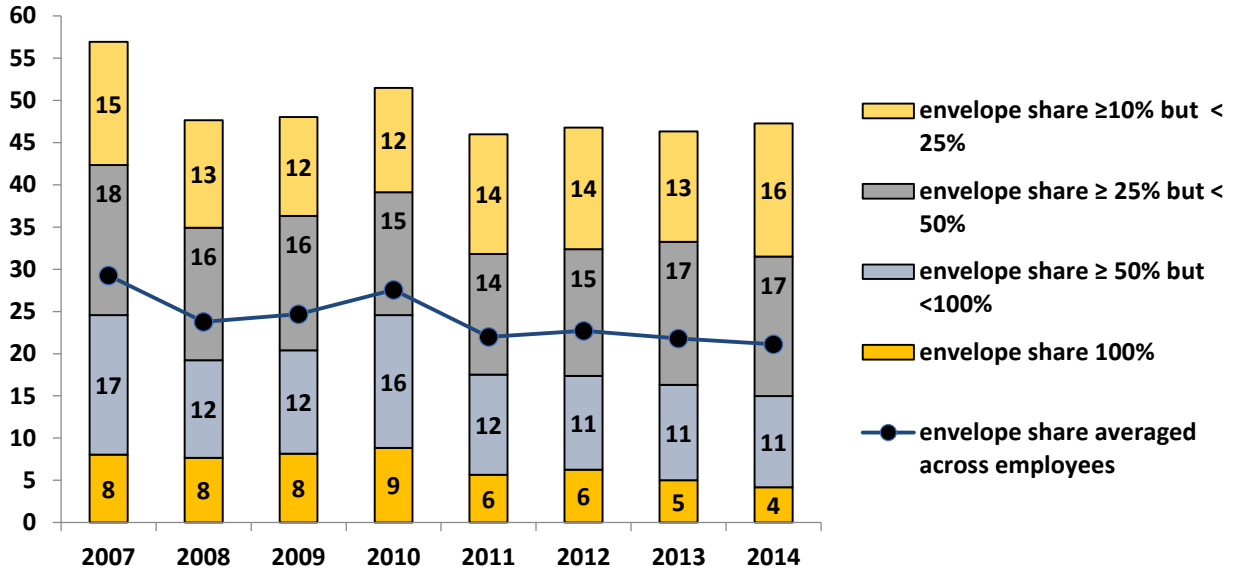
Description	Level of measurement	Definition
Share of undeclared earnings	Individual	□ = (Estimated undeclared earnings)/(Estimated total gross earnings)
Share of undeclared earnings averaged across employees	Economy, sector of economic activity, or a certain category of employees	Average value of □□across all (or a group of) employees
Envelope share in aggregate earnings		Ratio of total undeclared earnings to total gross earnings (for the economy, sector, etc.)
Incidence of envelope share above certain level (10%, 25%, 50%)		Proportion of employees with □□≥□10% (respectively, □□≥□25%, □□≥□50%) among all (or a category of) employees
Incidence of complete informality		Proportion of informal employees among all (or a category of) employees

Notes: In our analysis we have used only employees with positive earnings as the base. Alternatively, the analysis can be restricted only to employees with earnings above some threshold, e.g. one minimum monthly wage per year. Respondents with some earnings abroad during the income reference year are excluded from analysis.

Results of informality estimates

Both the proportion of fully informal employees and the average (across workers) envelope share in earnings dropped with introduction of the microenterprise regime in 2011, according to estimates based on EU-SILC microdata. Since then, incidence of complete informality among all employees has been slowly falling in recent years, but incidence of partial informality (envelope earnings), as well as average envelope share (in percent of total gross earnings) remained relatively stable (Figure 18).

Figure 18. Incidence of complete informality and envelope earnings (in percent of employees with positive earnings during the year), and average envelope wage share (in percent of total gross earnings), 2007-2014



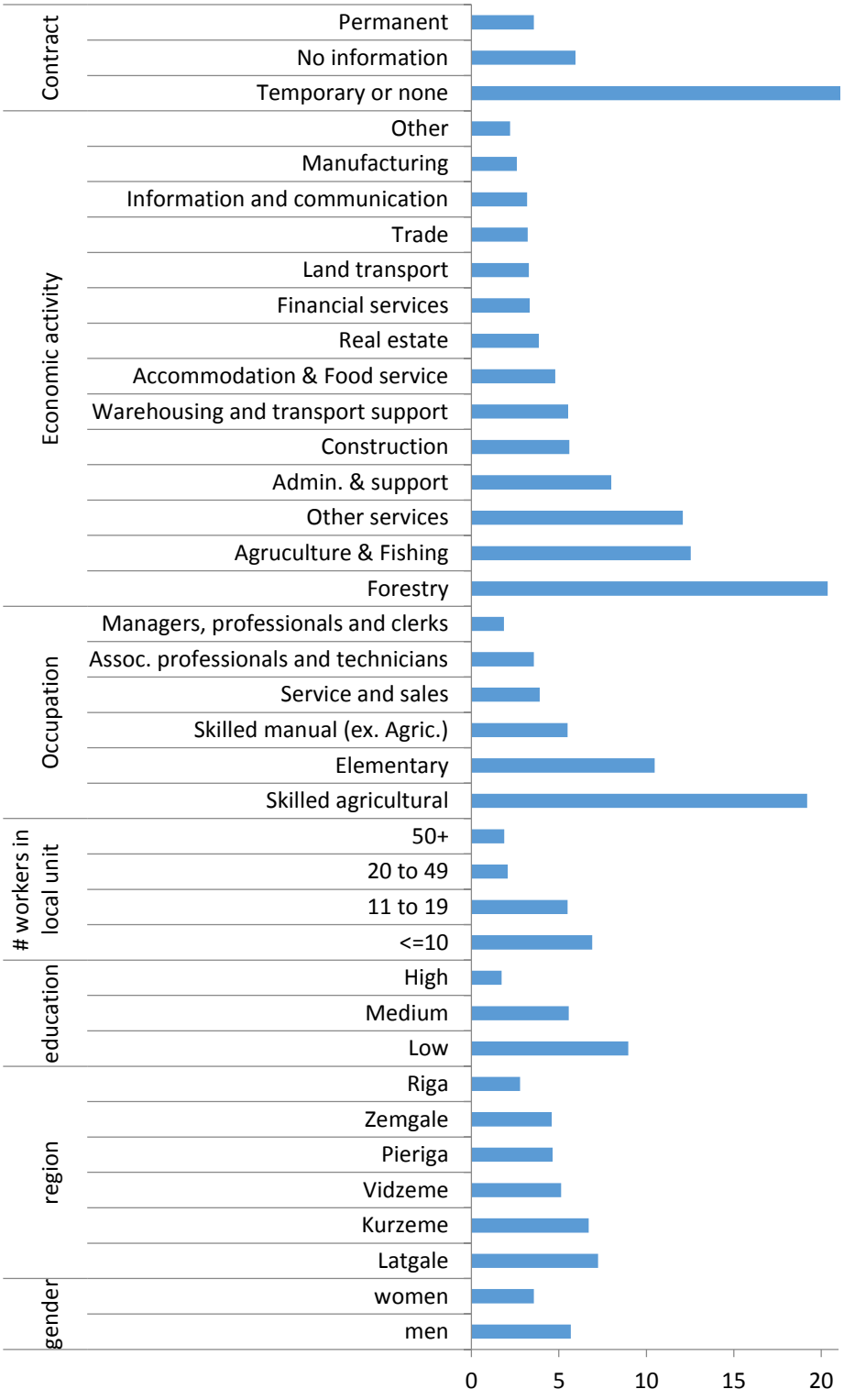
Note: The sample includes individuals with positive earnings in respective year.
Source: Calculations based on national EU-SILC 2008-2015 and SRS data for 2007-2014.

As expected, workers with temporary contracts or without contracts feature a very high incidence of informality (23 percent). Figure 19 presents incidence of complete informality among different categories of employees in 2013-2014. In terms of occupation, the highest incidence of informality is among skilled agricultural workers (19 percent) and individuals employed in elementary occupations (11 percent); informality is above average (5 to 6 percent) also among skilled non-agricultural manual workers. Informal employees are especially often found in the following sectors: forestry (20 percent), agriculture and fishing (13 percent), and other services (12 percent), followed by administrative and support activities (8 percent), construction, warehousing and transport support (5 to 6 percent), accommodation and food service (about 5 percent). In other sectors, the proportion of informal workers varies from 2 to 4 percent.

The level of informality falls with the size of the business unit (from 7 percent in establishments with up to 10 employees to 2 percent in units with 20+ workers) and with educational attainment (from 9 percent among low-educated to less than 2 percent among tertiary-educated employees). It is however worth noting that informality is not restricted to only very small enterprises or only low-educated workers: establishments with 11 to 19 workers feature above-average level of informality (5.5 percent), as do workers with secondary education.

There are differences in informality across regions. Estimated informality levels in Latgale and Kurzeme regions (about 7 percent) is higher than in Zemgale, Pieriga and Vidzeme (about 5 percent), but among workers living in Riga less than 3 percent are informal. Male employees have higher informality level than their female counterparts (5.7 percent and 3.6 percent, respectively; the difference is statistically significant).

Figure 19. Incidence of complete informality by category of workers (in percent of employees with positive earnings), 2013-2014

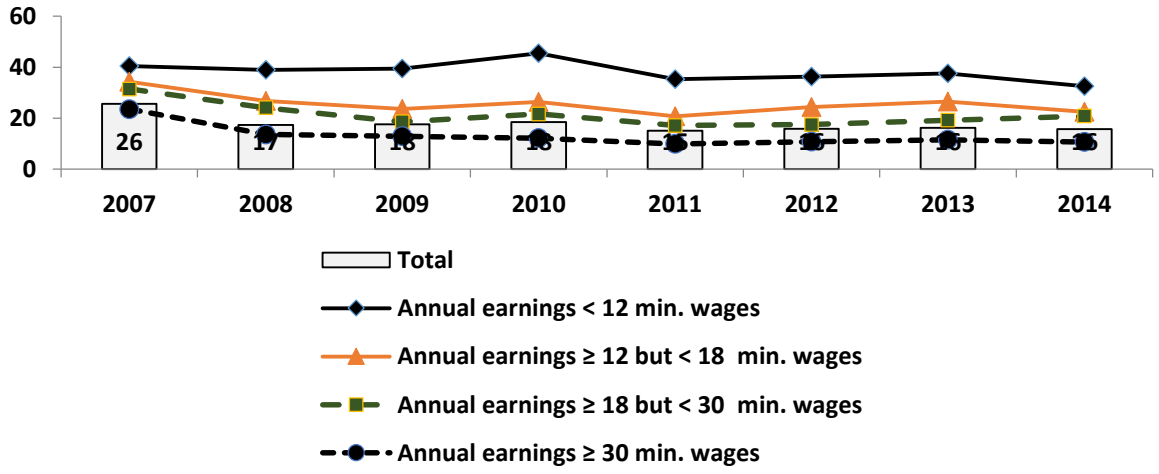


Note: The sample includes individuals with positive earnings in respective year.
Source: Calculations based on national EU-SILC 2014-2015 and SRS data for 2013-2014.

The estimated envelope share in the aggregate economy-wide wage bill was 15.7 percent in 2014 according to the most recent available data, as shown in Figure 20. Official data on average earnings and number of employees in public and private sector suggest that the official wage bill in the private sector was twice as big as in the public sector. Assuming that there are no envelope wages in the public sector, our estimate implies that envelope wages accounted to 21.8 percent of the private sector total wage bill in 2014. This is close to the estimate by Putnins and Sauka (2015) (20.3 percent of the total private sector wage bill), which was obtained by a very different methodology (opinion survey).

The envelope share in the wage bill is higher for low-income workers, but total amount of undeclared earnings is larger among high-income employees. Figure 20 compares the *envelope share in total earnings* (in the context of shadow economy a.k.a. *wage gap*) for four categories of workers which roughly correspond to earnings quartiles[14] and can be characterized as low-income (annual gross earnings less than 12 minimum monthly wages), middle-low income (annual earnings between 12 and 18 minimum monthly wages), middle-high income (annual earnings between 18 and 30 minimum monthly wages) and high-income (annual gross earnings at least 30 minimum monthly wages). It appears that the envelope share in the wage bill falls with the level of earnings: since 2008, it was three to four times higher among low-income workers than among high-income ones. The difference between middle-low and middle-high income groups is smaller and disappears in the last year of observation (2014). From a policy perspective, it might be more practical to categorize workers in terms of full-time monthly earnings (rather than annual earnings which depend not only on monthly earnings but also on the number of months spent in employment). Figure 21 focuses on employees who spent 12 months in full-time work; they are split into quarters by gross monthly earnings. The finding that the envelope share in the wage bill falls with the level of earnings is confirmed also in this setting. Comparison of Figure 20 and Figure 21 suggests that envelope wages are somewhat more widespread among workers who work part-time or employed not a full year.

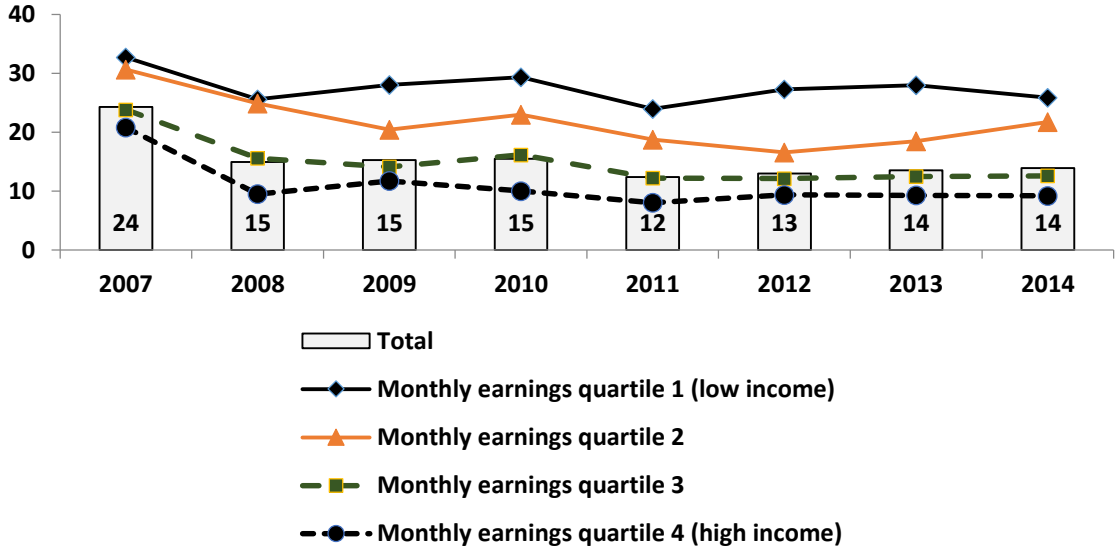
Figure 20. Estimated envelope share in aggregate earnings (in percent), by worker income



Note: The sample includes individuals with positive earnings in respective year.
Source: Calculations based on national EU-SILC 2008-2015 and SRS data for 2007-2014

[14] Results for quartiles are similar.

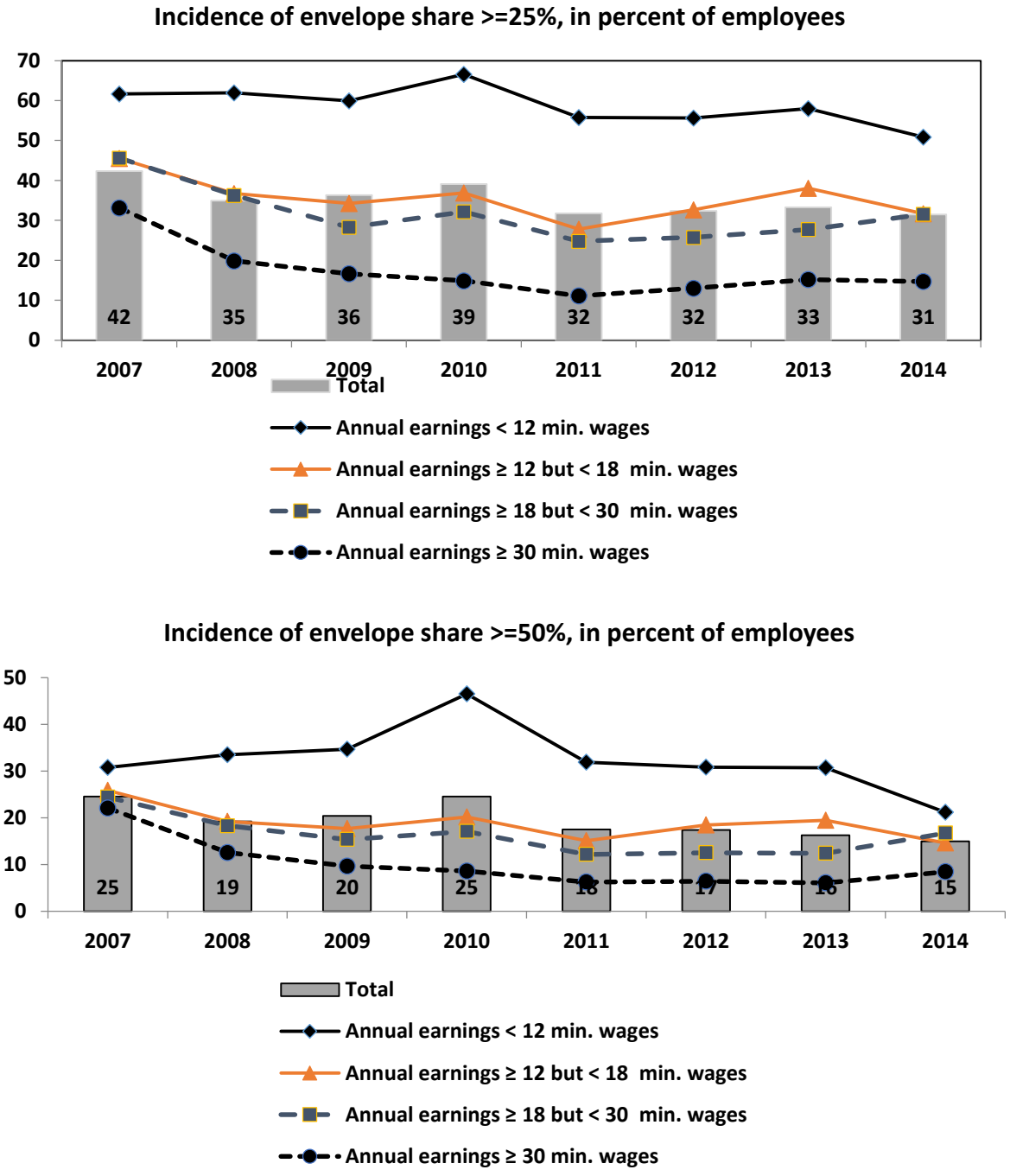
Figure 21. Estimated envelope share in aggregate earnings (in percent), by quartile of gross monthly earnings of full-time employees



Note: The sample includes individuals with positive earnings who spent 12 months in full-time work in respective year.
Source: Calculations based on national EU-SILC 2008-2015 and SRS data for 2007-2014

Figure 22 compares the incidence of envelope shares of at least 25 percent and at least 50 percent across the same income groups as used in Figure 20. High envelope wage shares are more often found among low-income workers. Recently, however, these shares seem to increase among high-earners.

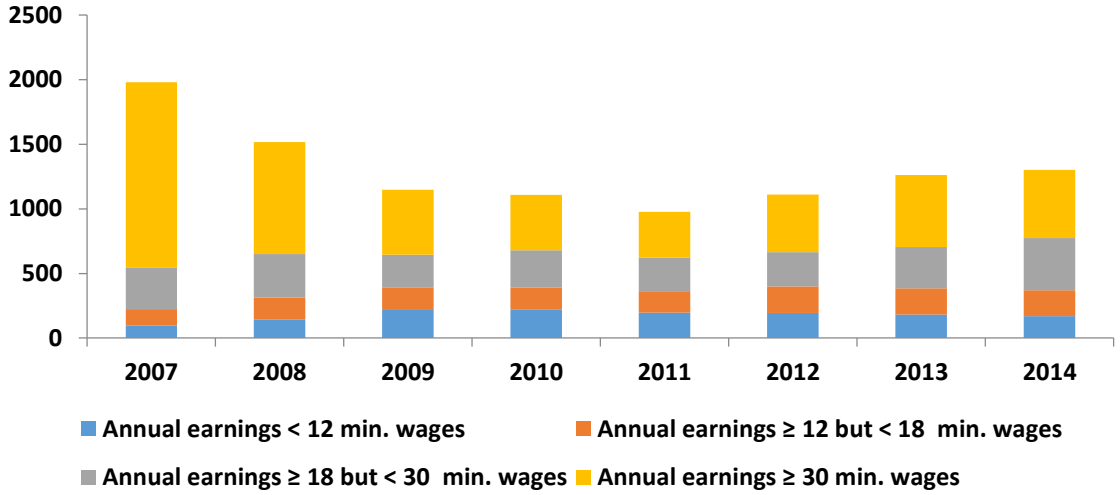
Figure 22. Incidence of high envelope share, by worker income
Top panel: envelope share ≥ 25%
Bottom panel: envelope share ≥ 50%



Note: The sample includes individuals with positive earnings in respective year.
Source: Calculations based on national EU-SILC 2008-2015 and SRS data for 2007-2014

Finally, although high envelope wage shares are more often found among low-income workers, total amount of undeclared earnings (and hence unpaid taxes) is larger among high-income employees (see Figure 23).

Figure 23. Estimated total envelope earnings, million EUR, by worker income

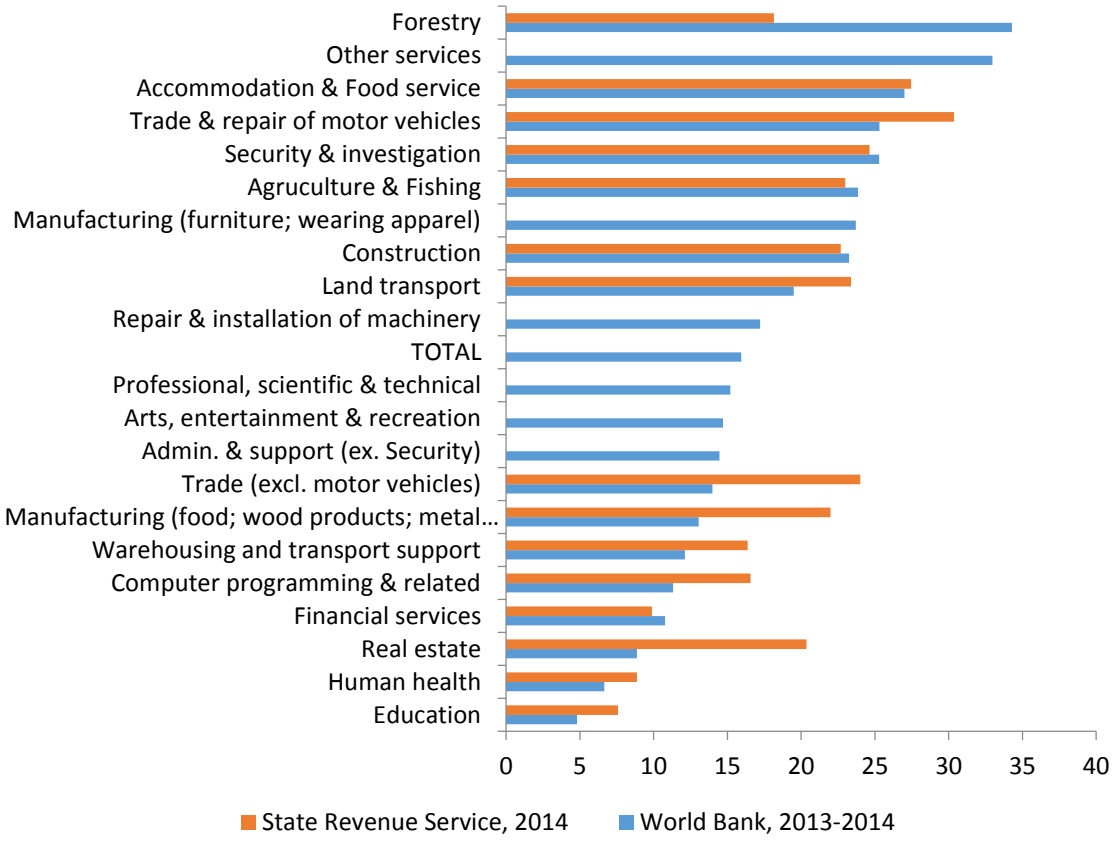


Note: The sample includes individuals with positive earnings in respective year.
Source: Calculations based on national EU-SILC 2008-2015 and SRS data for 2007-2014

The total amount of envelope wages is estimated to be EUR 1.3 billion in 2014, of which 40.5 percent (EUR 528 million) went to those earning at least 30 minimum monthly wages per year, while the share of this group among all employees was just 30.4 percent. High- and middle-high income workers together (those earning at least 18 minimum monthly wages per year, or 55.8 percent of all workers) received 71.5 percent of envelope wages.

The envelope wage share differs across sectors, as shown in Figure 24. It stands very high (between 23 and 27 per cent of wage bill) in construction, manufacturing of furniture and wearing apparel, agriculture, security services, trade and repair of motor vehicles, and hotels and restaurants, and reaches one-third of the wage bill in other individual services and forestry. Our microdata-based estimates are generally well in line with those obtained by SRS using different (macro) methodology. In some sectors (trade; manufacturing of food, wood products and metal products; real estate), however, the SRS estimates are higher. Our estimate is higher for forestry; in addition we identify some high-risk sectors not covered by SRS estimates.

Figure 24. Wage gap (envelope share in percent of total wage bill) in selected sectors: World Bank estimates compared to SRS estimates



Note: The sample includes individuals with positive earnings in respective year.

Source: Calculations based on national EU-SILC 2014-2015 and SRS data for 2013-2014

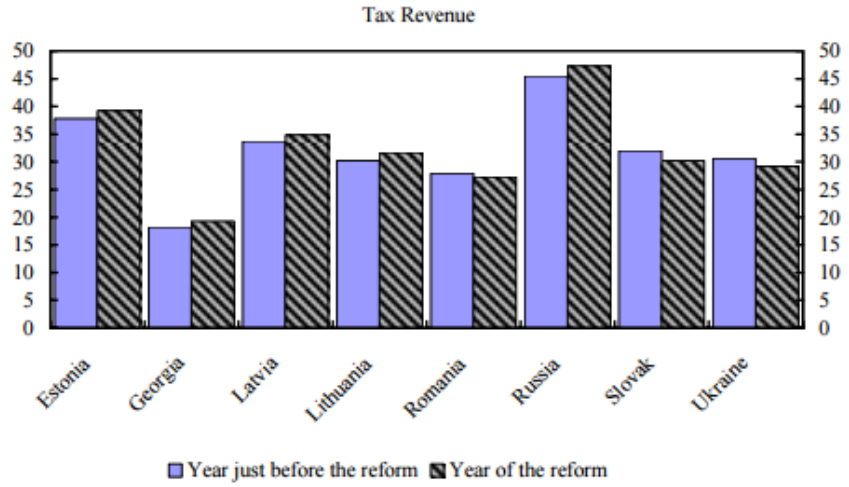
2. EVOLUTION OF TAX SYSTEM AND STRUCTURE

2.1 Tax system developments

Latvia needs to re-design a tax system that will position the country well for future challenges. Latvia was among the fastest growing OECD economies in the last decade. As the economy continues to expand, the Government intends to direct more resources to health, education, the social safety net and national defense, but also to invest to support the modern economy. The world economy has been dramatically transformed in recent decades. Financial deregulation, the growth of multinational companies using global supply chains and increasing digitization have been very positive developments for Latvian economy, but they also pose challenges to the tax system, including by driving global tax avoidance activities. Likewise, with the opening of borders people become very mobile which impacts on employment, human capital and social protection systems. The tax system needs to adapt to these challenges. At the same time, the tax system has moved away from the initial flat tax regime put in place in 1997 (see Annex 1). There are concerns on the regressive nature of the tax system and on tax compliance. Hence, the need for a review of the design of the tax system and the priorities for strengthening tax administration.

The flat tax system put in place in 1997 was accompanied by a series of tax administration reforms aimed at reducing tax avoidance and tax arrears, and overall tax revenues increased following the reform (see Figure 25). The rise in tax receipts after the introduction of the flat tax was, however, not substantial. Russia is the one country for which there is evidence that revenues strongly increased following the move to a flat tax regime, due mainly to improved tax compliance (Ivanova, Keen and Klemm, 2005): Russia had a PIT increase of almost a quarter after the flat tax reform in 2001. The increase in PIT in Latvia was similar to that experienced by Estonia after the flat tax was introduced—to be expected given that there was not a large change in either CIT or PIT rates. PIT revenues rose as to be expected given that the marginal tax rates remained unchanged or increased, and CIT also increased possibility contributed to not just by efforts to raise tax compliance but also because of the reduction of incentives against incorporation at higher income levels following the removal of the 10 percent marginal tax rate on higher incomes. In gauging the impact, an assessment also should be made of the impact of the move toward a flat PIT tax in 1994, when the 25 percent tax rate was introduced with the 10 percent tax rate for high incomes. In a survey of the lessons to be learned on the impact of the latest wave of flat taxes, Varsano, Kim and Keen (2006) find that there is no evidence of Laffer-type behavioral responses due to tax cuts; that the theoretical basis for the impact of flat taxes on compliance is ambiguous and only for Russia is there empirical evidence that compliance actually improved; that the tax treatment of capital income is not uniform under the systems that had adopted the flat tax, with many countries not opting for a flat tax across wages and capital income, but rather having a lower rate for capital given the potentially mobile nature of capital; and that to gauge the distributional impacts of flat taxes, the effect on compliance has to be studied.

Figure 25. Total tax revenue, years before and after reform, in percent of GDP



Source: Varsano, Kim and Keen (2006).

Latvia has scope to raise more revenue from taxes. At 29 percent of GDP, Latvia had one of the lowest tax-to-GDP ratios in the EU in 2014.[15] Its tax burden is far below the 39 percent EU average and the 34.2 percent OECD average. Not only is the tax revenue share of Latvia's GDP in the fourth lowest in the EU, it is also one of the lowest in the world for countries at a similar level of development). Globally, controlling for degree of development, only small islands (like the Bahamas, Mauritius, and Antigua and Barbuda, or resource-rich economies have lower taxes than Latvia. The tax-to-GDP ratio in Latvia is below what Ireland, Denmark, Austria, and Finland had when they were at the same point in their development (Figure 27). Compared to Estonia, Lithuania, Poland, Slovakia, and the Czech Republic, only Lithuania has lower tax revenues.

Figure 26. Tax-to-GDP Ratios and GDP per capita, PPP, 2014

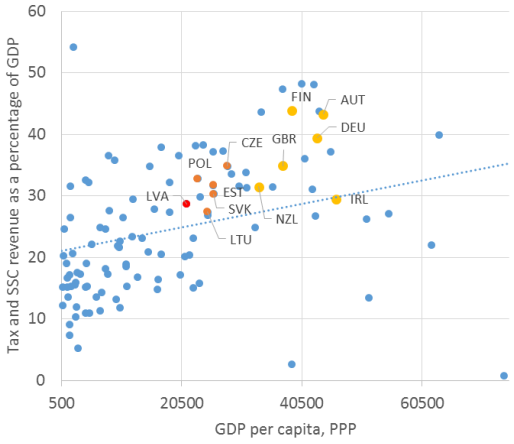
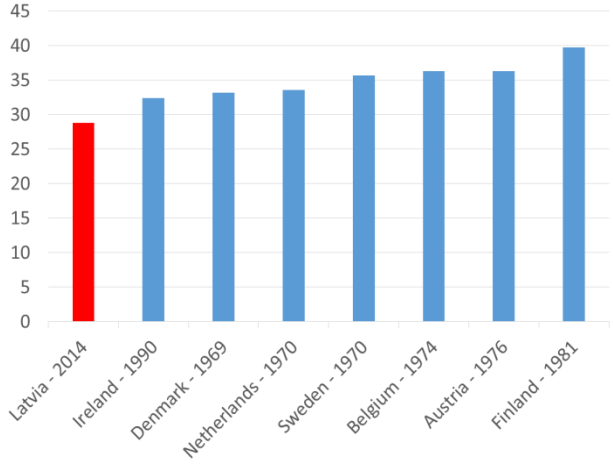


Figure 27. Tax revenues in Latvia and selected countries when they had similar GDP per capita

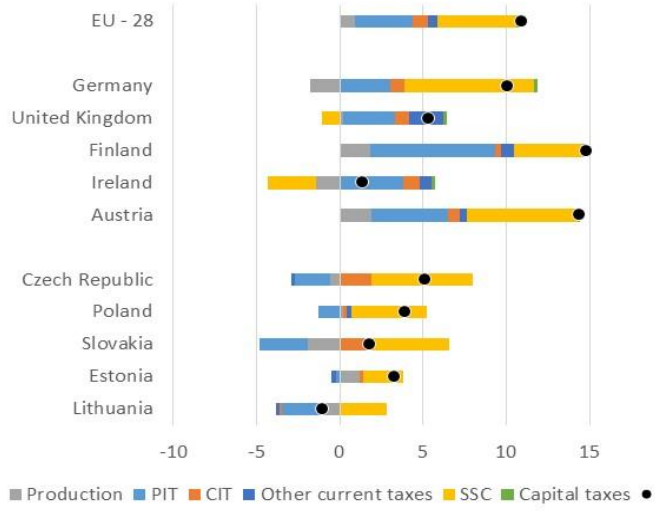


Source: WDI database, IMF.

[15] General government revenues equalled 35.6 percent of GDP in 2014 and consisted of tax revenues (29 percent of GDP), capital transfers (1.6 percent), other current transfers (1.1 percent), and other non-tax revenues (4.9 percent).

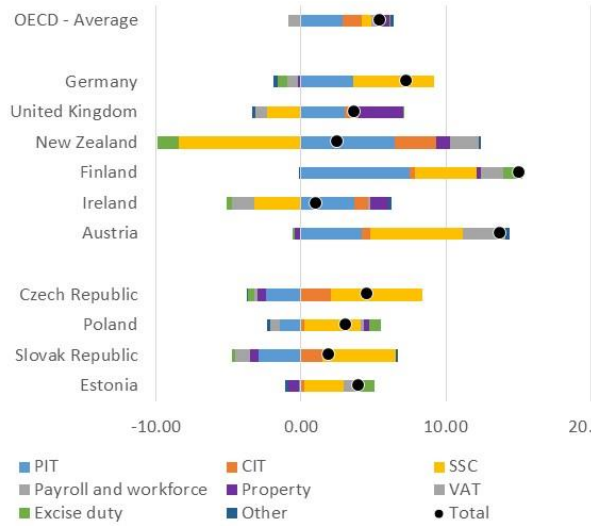
Compared with OECD countries, Latvia collects a slightly higher amount of tax revenues from consumption (VAT) as a share of output, but PIT and CIT tax revenues contribute somewhat less on average than in the OECD (Figure 28 and Figure 29). Together lower PIT revenues and social security contributions explain more than 75 percent of the difference with the EU average and about 65 percent of the difference with the OECD average. The share of revenues from capital taxation is also lower. The picture looks somewhat different if we compare to regional peers the Czech Republic, Estonia, Lithuania, Poland and Slovakia (see Table 7). Latvia's social security contributions (SSCs) are still lower by 2.5 to 6 percentage points of GDP, which could be explained by a lower standard rate for SSCs (Table 8), but the PIT-to-GDP ratio is higher than in all the selected comparison countries. Latvia has a relatively high PIT rate, with a relatively small non-taxable personal allowance. Other peers have either a higher untaxed personal allowance or a lower tax rate, at least at the lower end of income distribution. Finally, Latvia collects more VAT revenues as a percent of GDP than its regional peers, except for Estonia (Figure 28 and Figure 29). Latvia's revenues from CIT as a percentage of GDP are similar to those of Lithuania, Estonia, and Poland, but lower than in Slovakia and the Czech Republic.

Figure 28. Difference between the level of tax-to-GDP in selected countries and Latvia, percentage points, 2014



Source: Eurostat.

Figure 29. Difference between the level of tax-to-GDP in selected countries and Latvia, percentage points



Source: OECD, SRS.

Table 7. Composition of taxation, 2014, in percent of total tax revenue

	Latvia	Estonia	Slovakia	Poland	Czech	OECD Average
Personal income tax	20.7	17.8	9.9	14.0	10.5	25.7
Corporate income tax	5.4	5.4	9.9	5.6	10.9	8.4
Social security contributions	29.3	34.1	44.0	38.7	44.1	26.6
Payroll taxes	0.1	0.0	0.0	0.8	0.0	1.2
Property taxes	3.6	0.9	1.4	4.4	1.4	5.4
General consumption taxes	26.9	26.8	21.8	22.0	22.5	20.0
Specific consumption taxes	11.8	13.6	10.3	13.1	8.8	10.1
Other taxes	2.4	1.4	2.8	1.4	1.8	2.5
Labor taxation	50.0	51.9	53.9	53.5	54.6	53.5
Capital taxation	5.4	5.4	9.9	5.6	10.9	8.4
Consumption taxation	11.8	13.6	10.3	13.1	8.8	10.1

Source: OECD, SRS

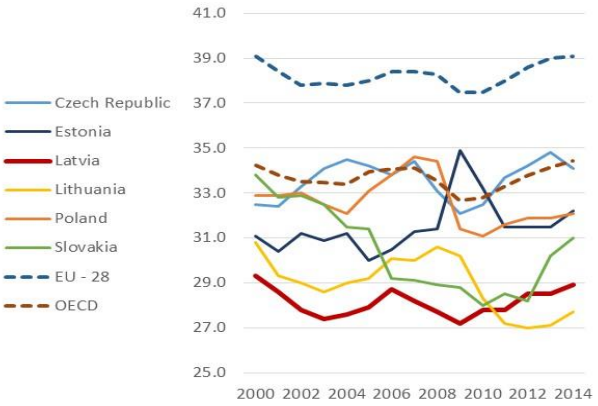
Table 8. Tax system characteristics, Latvia and peers, 2016

	Latvia	Estonia	Lithuania	Slovakia	Poland	Czech R.
Personal Income tax						
Top/bottom PIT rate	23% *	20%	15%	19%/25%	18%/32%	15% *)
Tax credit/basic allowance (% of Average Wage, AW)	13.7%	13.9%	31.6%	32.3%	7.2%	40.0%
Top PIT rate threshold (expressed as a multiple of AW)	0.1	0.1	0.3	3.9	2.4	0.4
Tax base (wage bill), per employed person, EUR	€11,141	€14,754	€10,995	€12,076	€9,687	€12,501
Tax base (% of GDP)	42%	46%	40%	38%	37%	40%
Corporate Income tax						
Top/bottom CIT rate	15%/9% (MET)	20%	15%/5% (MET)	22%/mini value (EUR 480)	19% (lump sum PIT)	19%
Tax base (operating surplus of firms), per firm, EUR	€114,447	- **)	€115,375	€100,366	€104,511	€81,694
Tax base (% of GDP)	47%	41%	50%	53%	51%	51%
Social Security Contributions						
Employee social security contribution rate	10.5%	2.0%	3.0%	9.4%	19.1%	8.5%/6.5%
Employer social security contribution rate	23.6%	34.0%	27.98%/29.6%	25.2%	21.0%	25.0%
Cap (percentage of AW)	694%	-	-	589.3%	250.0%	400.0%
Self-employed social security contribution rates	28.2%	33.0%	37.5%	47.2%	29.0%	21.4%
Employer health care contribution	-	-	6%	14%	9% ***)	9%
Employee health care contribution	-	-	3%	4%	-	4.5%
Self-employed health care contribution	-	-	9%	18%	9% ***)	13.5%
Taxes on good and services						
VAT standard rate	21%	20%	21%	20%	23%	21%
Tax base (consumption), per capita, EUR	€7,974	€8,754	€8,620	€9,230	€7,252	€8,737
Tax base (% of GDP)	67.7%	57.7%	69.6%	66.2%	67.1%	59.4%

Notes: *) additional solidarity taxes in Latvia (from 2016) and the Czech Republic since 2013; **) Operating surplus = 104284, but the tax base for Estonia is not based on corporate income but on corporate distributions ***) paid by employee, 86 percent (7.75 percent out of 9 percent) of health-care contribution is deductible from Personal Income tax, MET: microenterprise tax. Tax base is the theoretical amount on the basis of which tax liability should be calculated – it is equal to wage bill for personal income tax and social security contributions (as these taxes are, by definition, levied on wages), gross operating surplus for corporate tax and consumption for VAT (as VAT is, ideally, meant to act as consumption tax). Tax credit is the lump-sum amount that is deducted from the total tax liability paid by tax payer. Basic allowance is the income that is exempted from tax. In the table, tax credit was divided by the minimal tax rate such that tax credit and basic allowance are comparable between countries.
Sources: OECD, KPMG.

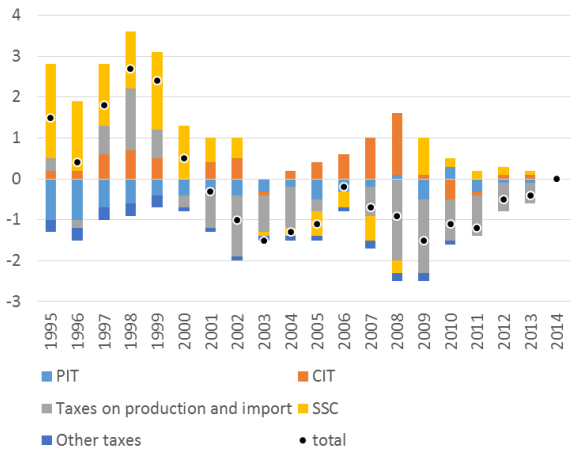
Tax to GDP in Latvia has been relatively stable since 2000, fluctuating at around 29 percent of GDP, about 5 percentage points below the OECD average and 10 percentage points below the EU average. Having dropped from 31.8 percent of GDP in 1998 to 27.4 percent in 2003, as revenues from SSCs and VAT fell, it then reversed direction as revenues from CIT and consumption taxes went up (Figure 31). The economic and financial crisis caused Latvian tax revenues to drop again, to 27.2 percent, led by consumption taxation; then came a gradual recovery to the levels registered in early 2000. Similarly, the ratio in the OECD and the EU15 as a whole were relatively stable between 2000 and 2008 (Figure 30 and Figure 31). By 2014 almost all OECD and EU countries had managed to recover from the crisis-related drops in 2008 and 2009: the average tax-to-GDP ratio in OECD countries was 34.4 percent in 2014 compared with 34.2 percent in 2000.

Figure 30. Tax-to-GDP Ratio, Latvia and Benchmark Countries, 2000–14



Source: Eurostat.

Figure 31. Difference between the tax-to-GDP ratio in given year and 2014 (in percentage points)



Source: Eurostat.

The effective taxation on labor is significantly higher than on consumption and capital (Figure 32), although it has gone down since 2000. In Latvia, the implicit tax rate (ITR) on labor dropped from 36.5 to 33 percent while it fell on average by about 2.5 percentage points in the neighboring countries and less than 1 percentage point in the EU. The decline in Latvia was driven by the reduction in PIT revenues as SSCs increased. Effective taxation of consumption in Latvia, like the average in the EU, did not change much between 2000 and 2012. It is important to note, though, that although Latvia, like many other EU countries, raised its VAT rates during the crisis, for Latvia that did not lead to an increase in effective taxation. This could result from a changes to consumption pattern, an introduction of a new system of VAT returns but also some VAT base erosion. In contrast, effective taxation of consumption for both Poland and Estonia surged in response to the rate increases (Figure 33). Finally, Latvia's ITR on capital is now one of the lowest in the EU, having declined by about 2 percentage points from its 12.3 percent in 2000. The drop came because the reduction in the CIT rate for micro enterprises during the crisis was not compensated for by the broadening of the tax base and the higher tax rates for dividends, interest income, and capital gains.

Figure 32. Effective (implicit) tax rates, 2012

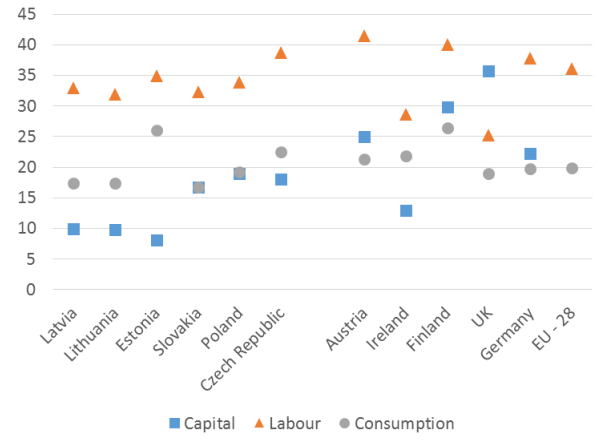
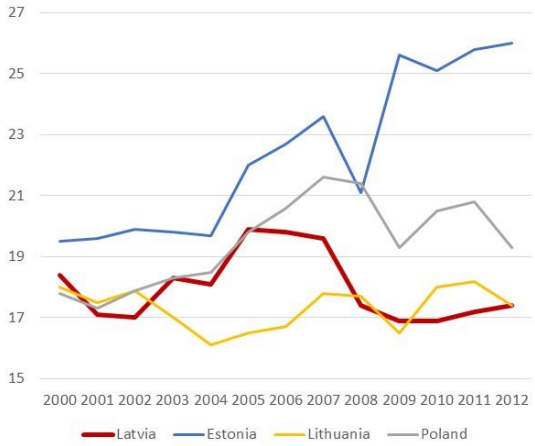


Figure 33. ITR on consumption, selected EU countries, 2012



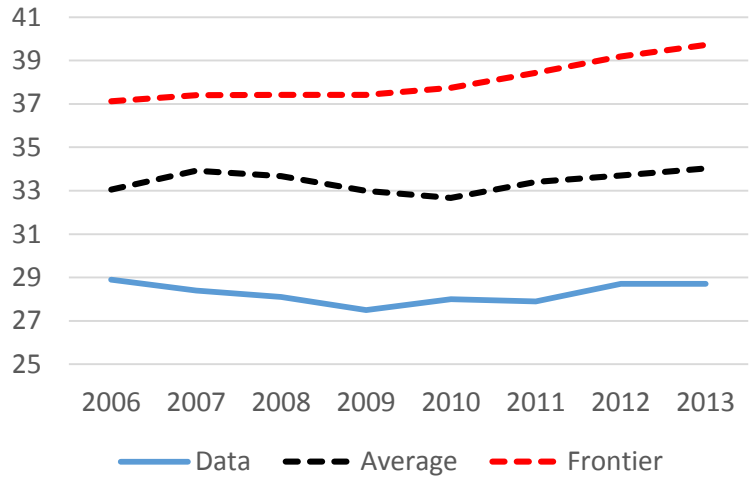
Source: Eurostat.

2.2 Potential areas for mobilizing revenue

A country's potential for raising additional revenue may be measured in terms of distance to its peers, taking into account a range of characteristics likely to affect revenue-raising capacity. The appropriate level of taxation in any country depends on its characteristics—economic (degree of development, openness to external partners, sectoral structure, size and structure of the firm); political (the choices and preferences of the society); institutional (the effectiveness of government, the efficiency of tax administration, labor market institutions and types of contracts); and even geographical (long and leaky borders, extent of territory, sparsely populated). That is why it is hard to derive an "optimal" size of government. It is useful, nonetheless, to have at least some sense of whether a country has some realistic possibility of bringing in more in taxes. For this, two complementary approaches were adopted. The first compares Latvia's tax revenues with the average for its peers, controlling for a range of characteristics likely to affect revenue raising. The second compares a country's tax ratio not with the average but with the maximum achieved by others with similar characteristics (see Annex 2). Both approaches are simply indicative; they need to be interpreted with caution. The calculations indicate how much more can be done but the decision about whether to do more is up to the authorities.

In Latvia, actual tax receipts are lower than predicted for its income level (the gap is positive)—not surprisingly, given that the tax-to-GDP ratio is relatively low compared to peers. Latvia could increase its tax revenues by about 5 percentage points of GDP if it would collect the same taxes as its average country peer as denoted by the black-dotted line in Figure 34. The blue line shows the actual tax collected in Latvia. The red-dotted line in the figure below shows the maximum revenue generated for a country with the same level of institutional development as Latvia. These estimations are in line with previous results that found a gap of 6 to 10 percentage points of GDP for Latvia (Torres 2013, Minh Le, Moreno-Dodson, and Bayraktar 2012).

Figure 34. Revenue frontier, average revenue, and actual taxes collected in Latvia, 2006–13



Source: World Bank staff calculations based on data from Eurostat, the IMF's Global Finance Statistics, and the World Bank's WDI, World Governance Indicators and Doing Business databases.

3. PERSONAL INCOME TAX AND SOCIAL SECURITY CONTRIBUTIONS

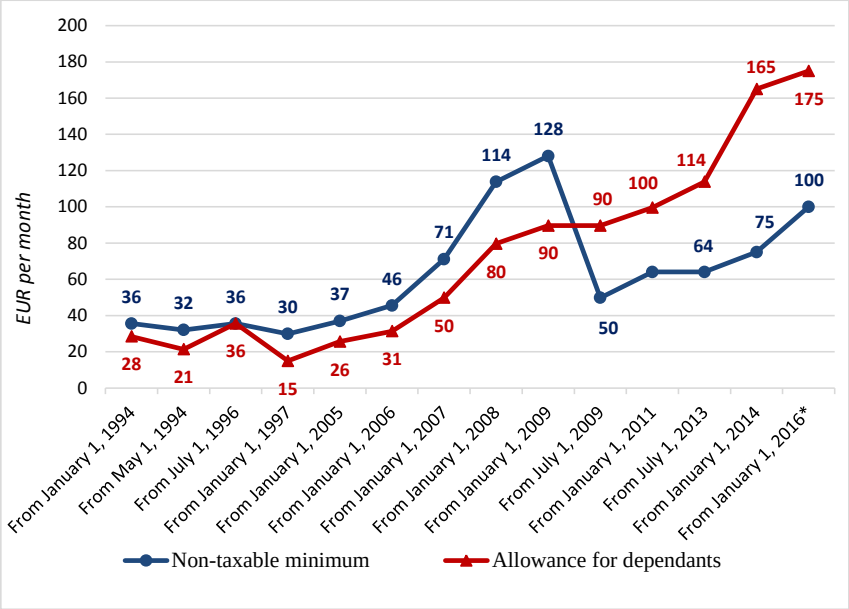
3.1 Labor income

Latvia's personal income tax (PIT) has flat income tax structure with a rate of 23 percent. In addition, there are flat-rate social-security contributions (SSCs). Employers pay a SSC rate of 23.59 percent of gross earnings and employees pay a SSC rate of 10.5 percent of gross earnings. Social security includes benefits for unemployment, care, sickness, disability due to accidents and work-related illnesses, old-age pensions, survivor pensions, pensions of disabled workers, maternity and paternity leave, funerals, and family allowances.

Tax progression in Latvia is achieved in three ways: via non-taxable allowances, the solidarity tax and social/housing assistance. First, there is the tax-exempt minimum income and a number of allowances (for dependents, persons with disabilities, politically repressed persons and participants of the national resistance movement, and expenses for education and medical services). The allowances are all uniform, i.e. they are independent from earned income. Second, there is income-dependent housing assistance, which is provided at the level of the municipalities. And, there is income-dependent social assistance in the form of a guaranteed minimum income (GMI) program. The GMI and housing assistance are both withdrawn when gross income crosses the relevant threshold at a rate of 100 percent. However, in practice few households are entitled to these programs due to strict application of eligibility criteria. For example, about 3 percent of the population receives GMI (Gotcheva and Sinnott, 2013). GMI is mainly provided to elderly and disabled workers. Working-age and work-capable people benefit from GMI, but their benefit spells are typically short (1-3 months). An even smaller fraction would be entitled to both programs at the same time. Both GMI and housing support are provided at the local level and hence differ across municipalities, also depending on local resource constraints (Gotcheva and Sinnott, 2013). Consequently, the average marginal tax rate is at the lowest income levels is in practice lower than the parameters of the programs imply. The government is currently planning a reform of GMI and is

considering a range of options to enhance the impact on poverty reduction. In 2010, the non-taxable minimum income was substantially decreased. However, the minimum-tax allowance and the allowance for dependents have increased in recent years to enhance tax progression and achieve a more equitable distribution of post-tax income (see Figure 35).

Figure 35. Changes in non-taxable minimum and allowances for dependents, 1994-2016



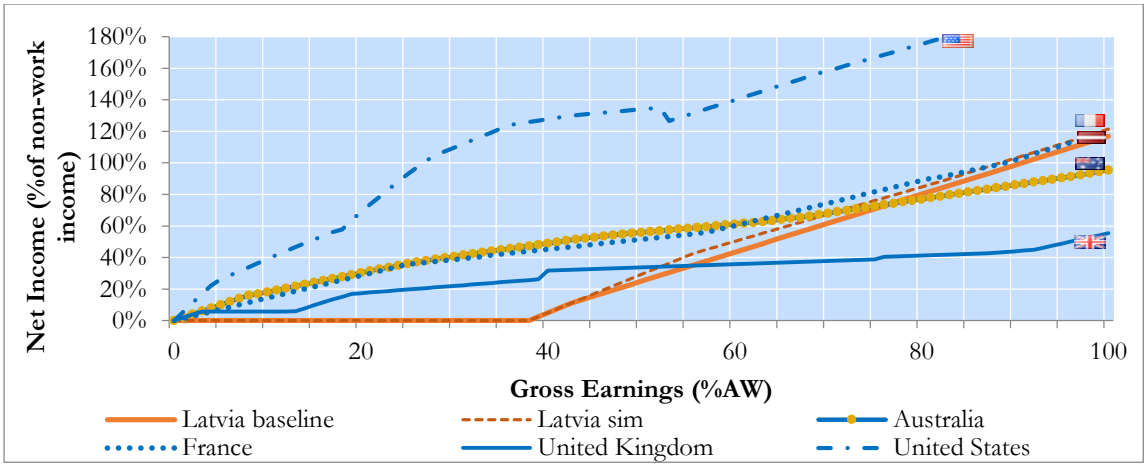
Source: Ministry of Finance, Latvia.

Low-income workers face high effective marginal tax rates (EMTR), particularly those who move above the minimum level of income after which they do not qualify for social assistance. The effective marginal tax rate (EMTR) looks at the combined impact of income tax and benefits on an individual's income. The EMTR is the percentage of an additional euro of income that the individual loses due to personal income taxes, social security contributions, and a fall in social assistance and other benefits. In Latvia, the GMI social assistance benefit and the housing benefit is designed with a 100 percent marginal effective tax rate on earnings, i.e. the benefits decrease by 1 euro for each additional euro earned. As a result, on earnings ranges where households are eligible for either or both of these benefits, earners face an EMTR of 100 percent. After that, a flat rate of 33.5 percent applies, which consists of 23 percent PIT and 10.5 percent employee's SSC.[16] Here, we overestimate the EMTR since the employee's SSCs are not fully distortionary, since SSCs also yield entitlements to social benefits. This design could contribute to low-wage traps, when it does not pay off for low-wage earners to increase working hours or move to marginally higher paid employment if all additional earnings are "taxed away". In effect, the population coverage of GMI is limited and the benefit low, reducing the risk of such a benefit trap.

[16] In accordance with OECD statistical conventions, one we assume here that the incidence of the employer's SSC falls completely on the employee in the form of lower wages, hence these can be ignored in calculating METRs (OECD, 2007).

Other countries that have used In-work benefit or tax credits to increase work incentives among low-wage earners and to increase adequacy of incomes for low-income groups. To improve work incentives and incomes for the working poor, an earned income disregard could be introduced in the GMI program or an earned income tax credit put in place. Many OECD countries disregard a certain percentage of earned income for the purposes of calculating social assistance benefit eligibility/amount. With such an income disregard, the coverage of the GMI program could increase significantly at a very low additional cost. Based on 2013 calculations, assuming a 25 percent earned income disregard, GMI coverage would increase to 25 percent of the population, climbing to 63 percent for those at risk of poverty. Despite such an increase in coverage, the total cost of the program would rise to just 0.6 percent of GDP (Strokova and Damerau 2013). Alternatively, in-work benefits, such as the earned income tax credit in the U.S., could be introduced to increase incentives to work and supplement incomes of the working poor. However, it should be noted that introducing additional low-income targeted programs and systems can be administratively costly. With this in view, the U.K. The U.K. implemented a major reform to the tax and benefit system to consolidate multiple means-tested benefits and tax credits into one program administered through the tax system—the Universal Tax Credit (UTC). One of the advantages of such a system is that it can reduce administrative costs, and simplify the rules and procedures needed to apply for various benefits. The current regime in Latvia offers low incentives for the working poor compared to policies existing in other countries to raise work incentives and incomes for the low-income workers (Figure 36). Compared to the countries with in-work benefits, in Latvia workers with low wages do not face a large increase in income compared to non-work social assistance. In the U.S., the earned income tax credit is a benefit given to low- and moderate-income working individuals and couples, particularly targeted at those with children. The U.S.'s earned income tax credit phases in slowly, plateaus and then phases out more gradually with the parameters designed such that it is better to receive higher wages at the taper out amount than continue qualifying for benefits at a lower income. It is the main anti-poverty program in the U.S. and introduces large incentives for low-income groups to work relative to relying on non-work related benefits.

Figure 36. Increase in net income as work effort increases for one earner couple with 2 children, selected countries



Note: In-Work Benefits: United Kingdom (Working Tax Credit), United States (Earned Income Tax Credit); Tapered withdrawal of Social Assistance in France, Australia. Latvia baseline is the situation in 2013 and Latvia sim represents a reform scenario simulated in 2013. AW: Average wages.
Source: Strokova and Damerau (2013) based on OECD tax-benefit model for 2013.

The Latvian government can strengthen tax progression, reduce welfare losses, raise tax revenues, or a combination of all three by implementing a more U-shaped pattern of EMTRs. A discussion of optimal tax theory and its insights for setting marginal tax rates is given in Annex 3. The current pattern of EMTRs in Latvia does not satisfy the criteria for an optimal tax system. An optimal income tax system should feature marginal tax rates that start out high at the bottom, because income-dependent support (e.g. GMI) is phased out. Then, taxes should decline towards the mode of the earnings distribution, since distortions of marginal tax rates increase while distributional benefits increase. After the mode, depending on the empirical distribution of earnings, marginal tax rates may increase until it reaches the top rate. Currently, marginal tax rates at the bottom are too high (i.e., at least 100 percent) and tax rates are flat at 33.5 percent for all incomes above the minimum income. The Latvian government could consider (i) making the tax system more progressive; (ii) reducing the welfare loss of the tax system; (iii) raising revenue, or do a combination of all three by adjusting the structure of EMTRs to a stronger U-shape.

Flat tax systems are socially costly. The optimal-tax literature finds that welfare losses from optimal flat tax regimes—compared to optimal non-linear tax regimes—are very large. By levying non-linear tax schedules, the government can target income support better to the low-income earners by phasing out the non-taxed minimum with income. Consequently, the net incomes of the low-income earners can be maintained with much lower marginal tax rates than with a flat tax. Flat taxes are sub-optimal because all individuals, also middle- and high-income earners, benefit from the non-taxed minimum income. Hence, in order to raise the net incomes for the low-income earners via a higher non-taxed minimum income, marginal tax rates need to be much higher. Consequently, a flat tax causes more distortions for the same income redistribution, or can redistribute less income for the same economic distortions. Saez (2001) finds that optimal flat taxes need to be 10 percentage points larger than optimal (average) non-linear taxes, while keeping the net incomes of the non-employed (nearly) constant. Empirical literature–although based on stylized models–demonstrate that the welfare costs of constraining tax systems to a flat tax regimes can be very large[17].

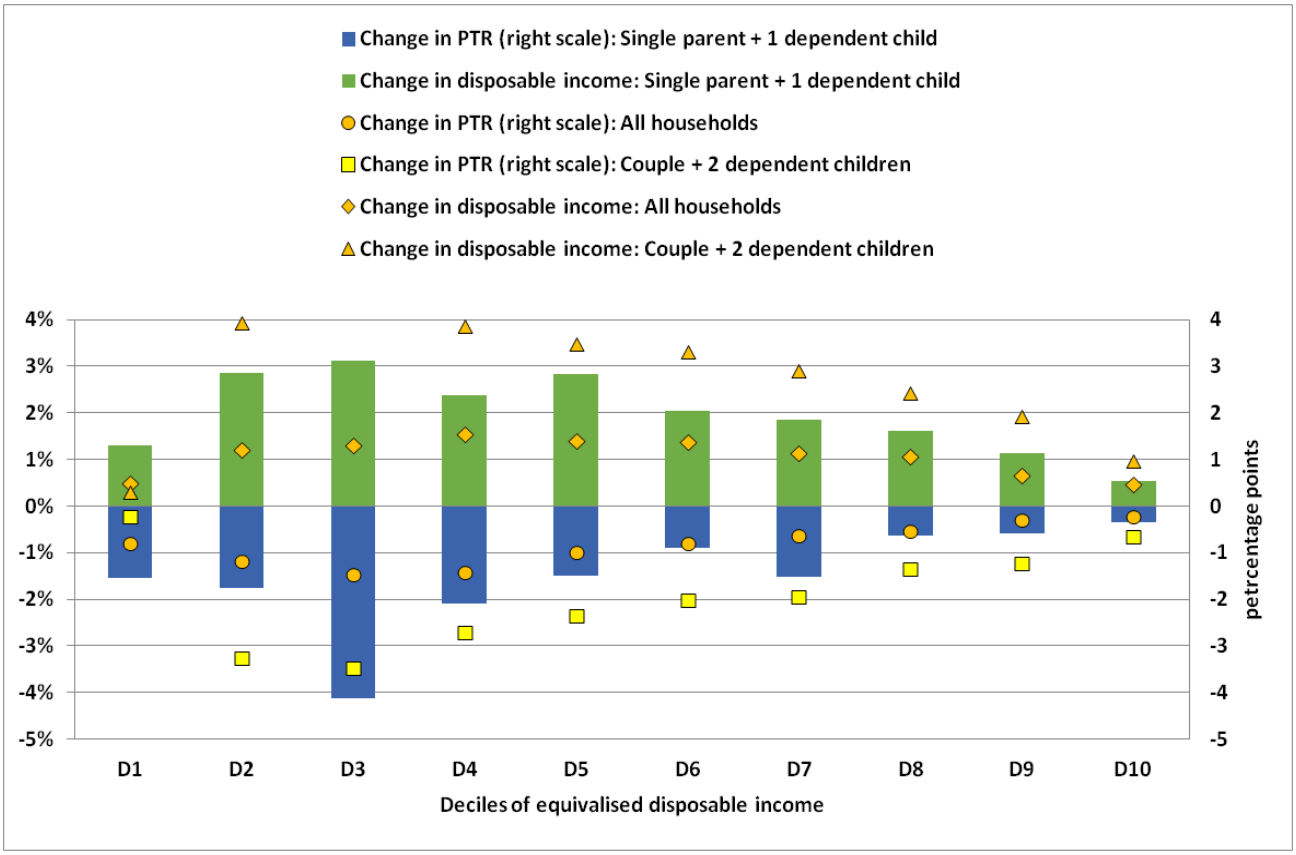
It is desirable to subsidize labor participation of low-income workers. Individuals not only respond on the intensive margin to taxation, e.g. in hours, effort, avoidance and evasion, they also decide whether or not to work or not. Individuals decide whether to work in the formal sector rather than in the informal sector (household production, care activities) or in the informal labor market, which is important in Latvia. Hence, when designing the income tax system not only the intensive earnings-supply margin should be taken into account, but also the participation margin. Policy makers may also express non-welfarist motives to promote labor-force participation, which is seen as something that is intrinsically good so as to raise inclusion and social cohesion in societies (Kanbur et al. 2006).

Taxation distorts labor-market participation, particularly for low-income groups. The participation tax, which equals total taxes paid when working (in the formal sector) *plus* the non-employment benefits that a worker foregoes when the individuals start working. These non-

[17] Zoutman et al. (2013) find that the welfare costs of flat taxes range from 0.5 percent of GDP for 'right-wing' (utilitarian) social preferences for income distribution to 9 percent of GDP for 'left-wing' (Rawlsian) social preferences for income redistribution. Bastani et al. (2013) show that moving from an optimal flat tax to an optimal non-linear tax gives a social welfare gain of 1.2 percent of GDP with 'right-wing' (utilitarian) social preferences and 4.5 percent of GDP with 'left-wing' (Rawlsian) social preferences for income redistribution.

employment benefits include, for example, social assistance (GMI) and housing assistance. Similarly, an individual (partially) foregoes income from the informal sector when working in the formal sector. The higher is the participation tax in the formal sector, the more people will stop working or move to in informal sector.[18] Recent increases in tax allowances for dependent children have reduced participation tax rate for households with children (Figure 37). However, participation tax rates on the lowest income earners remain high: for the first decile can be as high as 90 percent of gross earnings, (see Figure 38). Moreover, these estimates ignore the benefits of individuals working in the informal sector. These high participation taxes suggest that low-income individuals are highly taxed. As a result, formal labor participation could be too low, participation in the informal sector could be too high, and non-employment could be too high. Therefore, it is advisable to explore the possibilities to lower the tax burden for the working poor through EITC-type programs.

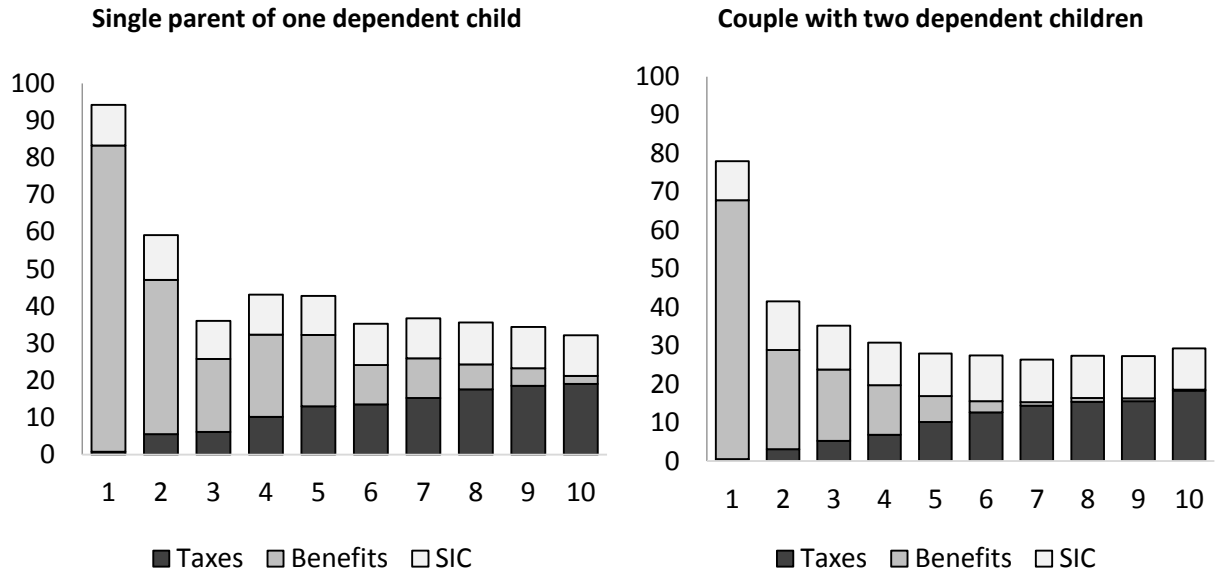
Figure 37. Increase in tax allowances for dependent children reduced participation tax rate for households with children



Source: EUROMOD simulations using EUROMOD-adjusted EU-SILC data with two versions tax legislation (as of 2012 and as of 2015).

[18] It can even be socially desirable to subsidize participation at the lowest end of the labor market when the government sufficiently values redistribution towards the working poor (Diamond, 1980; Saez, 2002). Such a program can be interpreted as an earned-income tax credit (EITC).

Figure 38. Contributions of taxes, benefits, and social security contributions to participation tax rate, by decile of equalized disposable income for selected household types, 2015



Source: EUROMOD simulations and further calculations using EUROMOD-adjusted EU-SILC data

Main conclusions:

The following policies could thus be considered to strengthen the U-shape of marginal tax rates:

- **Introduce an earned-income tax credit (EITC)**. The EITC is a tax allowance targeted at reducing the tax bill of the working poor. The EITC may contain a phase-in range to strengthen work incentives and participation rates at the bottom of the earnings distribution. The EITC can be phased out with income to broaden the tax base and lower marginal tax burdens for middle- and high-income workers. This raises marginal tax rates especially at the bottom of the earnings distribution, but lowers average tax rates at the same time, and thereby makes the tax system more progressive.

- **Withdrawal rates for minimum-income guarantees and housing could be set at less than 100 percent**. EMTRs should optimally be below 100 percent. Hence, withdrawal rates of 100 percent in GMI and housing assistance are not desirable. It is optimal to gradually withdraw these programs such that EMTR's result of around 80 percent when both programs are phased out. On the one hand, withdrawal rates need to be reasonably steep to avoid an increase in the aggregate tax burden. On the other hand, withdrawal rates need to be sufficiently low that incentives for work remain present.

- **Introduce non-linear tax schedule** (see Box 2). Optimal marginal tax rates are dependent on country-specific circumstances (income distribution, behavioral responses to taxation) and political preferences for income distribution. Nevertheless, the shape of the structure of effective marginal tax rates (i.e., including the phase out of income-dependent programs) should generally be non-linear and U-shaped. More (less) redistributive governments set

marginal tax rates at higher (lower) levels without fundamentally changing the shape of marginal tax rates with income. Moreover, the elasticity of taxable income (ETI) could change with earnings, and this changes the U-shape in tax rates. In particular, if top-income earners respond elastically, their tax rates should be reduced. Similarly, when low-income earners feature a strong behavioral response to taxation, e.g. the black market or grey economy, their tax rates should be lowered as well. If behavioral responses would be larger at the bottom and the top of the earnings distribution, then the U-shape in EMTRs becomes less pronounced.

- **Consider raising the top rate** (see Box 3). The revenue-maximizing ('Laffer') rate decreases when the ETI is higher. The revenue-maximizing rate increases when the top tail of the earnings distribution is 'fatter". Whether to introduce a separate top bracket, or increase its rate, fundamentally rests on political valuations regarding the social value of income for top-income earners. Preliminary calculations suggest that an increase in the current top rate of 23 percent is feasible and would contribute to more income redistribution or public revenue. Such an increase is no free lunch. Economic distortions also increase, since incentives for work and entrepreneurship are weakened. A higher top rate also provokes stronger avoidance and evasion. These behavioral responses can be taken into account by using quite conservative estimates for the ETI of top-income earners.[19]

[19] Behavioral economics has given a number of reasons why optimal marginal taxes could be useful to correct externalities or internalities. Optimal top rates can be increased to stop status or rat races when consumption is a status good, causes rivalry or induces keeping-up-with-the-Joneses' effects (Akerlof, 1976; Layard, 1980; Kanbur et al. 2006). However, also leisure can be a status good (Alesina et al., 2005) or high leisure consumption could erode work ethic (Lindbeck and Nyberg, 2006). In that case, optimal labor taxes should be lowered to internalize these externalities and internalities. The net effect of these behavioral-economic aspects is unclear and should be weighed by politicians.

Box 2. Selected PIT reform simulation results

Methodology. Reform simulations have been conducted using the European Union tax-benefit microsimulation mode EUROMOD[20] and the latest available EUROMOD-adapted EU-SILC dataset for Latvia (Latvian EU-SILC 2012) updated to the tax-benefit system as of June 30, 2015. At a later stage of the project, the simulations will be repeated using EU-SILC 2015 uprated to the tax-benefit system as of June 30, 2016.

Reporting the simulation results, we present the number of persons affected, the fiscal effect (positive or negative), change in equalized disposable income by decile, change in equalized taxes and mandatory social contributions by decile, change in selected inequality indicators (Gini , S80/S20 ratio, and decile dispersion ratio) and selected poverty measures. Additional (more specific) indicators will be added at a later stage of the project. At this stage, simulation results do not take into account possible side effects of the reforms (such as increase in tax evasion by some of the affected groups).

Reforms simulated. Four types of reforms have been simulated:

***(A) Raising the top PIT rate for top X percent of earners* (X= 5, 10, 15, 20 have been considered). Labor income threshold Y* is determined such as, say, 15% of earners earn > Y*.** Earnings not exceeding Y* for everybody are taxed, as before, at 23 percent, while earnings above Y* are taxed at 33 percent (other top rates can be simulated at a later stage; for the given threshold, the fiscal effect of raising the top rate by 1 percentage point equals one tenth of the estimated effect of raising it from 23 percent to 33 percent (however, a lower top rate is likely to generate smaller side effect in terms of tax evasion).

(B) *Introducing earned income tax credit (EITC).* EITC is effectively, a tax subsidy (tax return) for (eligible) low-earners.[21] The parameters of EITC are defined and results reported on annual basis, but the implementation could be also quarterly. In principle, the typical design of EITC (see e.g. Nichols & Rothstein 2015) looks as follows (rates are hypothetical; they are significantly higher in most countries which apply EITC or similar in-work tax credits):

For earnings $Y < Y1$ EITC rate is c (we have used 7 percent in simulations). Between $Y1$ and $Y2$, EITC amount stays constant at $C = cY1$ (this amount is known as maximum subsidy), so that marginal EITC rate is zero, while the average effective EITC rate falls from c to $b = C/Y2 < c$ at $Y2$. Between $Y2$ and the EITC eligibility threshold, $Y3$, the EITC amount falls linearly according to formula EITC= C

[20] 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.
EUROMOD aims to simulate as much as possible of the tax and benefit components of household disposable income. The following instruments are simulated: income tax, social contributions (paid by the employees, self-employed and employers), unemployment benefit, family benefits, housing benefit, guaranteed minimum income benefit (EUROMOD, 2016).

[21] The empirical evidence indicates that in the US and other countries, EITC and similar in-work tax credits help to promote work, reduce poverty, and support children's development (Marr et al. 2015; Hoynes 2014; Nichols and Rothstein 2015).

□□*h(Y*□*Y2)*, where *h* is benefit withdrawal rate (*h= C/(Y3* □□*Y2)*; in this (phasing-out) range, marginal EITC rate is □*h*, while average effective EITC rate falls from *b* to zero.

Both EITC rates and earnings thresholds (including eligibility threshold) might depend on presence and the number of dependent children; This is the case in the US, the UK, France, Ireland, and Slovakia, see Table 3 in Nichols and Rothstein (2015).

Below we present results of simulations using the 2015 monthly minimum wage of EUR 360 as the following thresholds:

***Y1*=9*MinWage =€ 3240,**

***Y2*=12*MinWage = =€ 4320 ;**

***Y3*=21*MinWage = € 7560 = 77% of 12 *(Average gross monthly wage)**

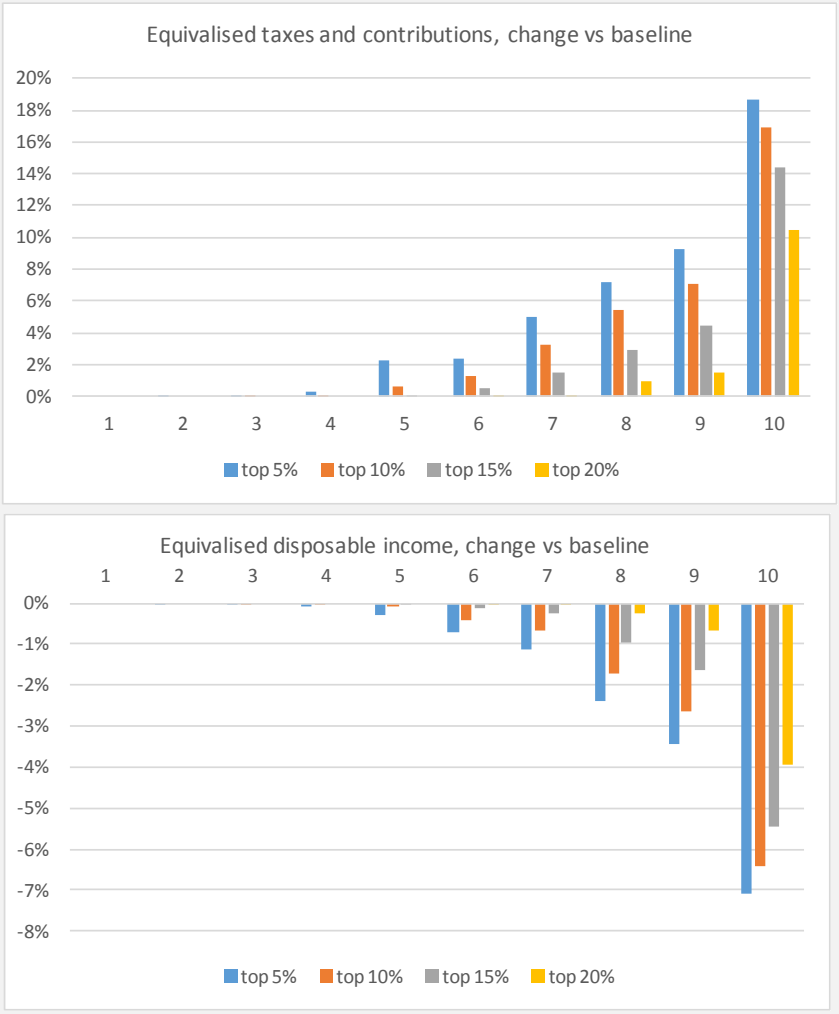
A scenario with EITC granted only to one of the parents of dependent children aged below 15 (or below 19 if study in general or professional secondary education institution, do not receive scholarship and are not married) has been also simulated.

(C) Mixed reform: *Raising the top PIT rate to 29 percent for top 10-15 percent of earners, lowering PIT rate to 19 percent for income below the minimum wage, and introducing EITC targeted only to one of the parents of dependent children*. The 15 percent threshold earnings threshold according to data of the year 2015, would be between EUR 1000 and 1200 per month for full-year workers, while the 10 percent threshold would be below EUR 1400 and EUR 1500 per month. We have chosen 1300 EUR per month for simulations. The result show that simulated revenues from raising the top rate are more than sufficient to finance both lowering PIT rate for low-earners and EITC, so that the total fiscal effect is positive (above 3 million EUR per annum).

(D) Lowering the withdrawal rates of GMI from 100 percent to 50 percent or 75 percent. This reform changes the formula for calculating GMI from MAX_GMI - FAMILY_INCOME to MAX_GMI - 0.5*FAMILY_INCOME or MAX_GMI - 0.75*FAMILY_INCOME, thus widening the eligible population.

Results. As shown in **Figure 39**, raising the top PIT rate for top 5 percent to 20 percent of earners reduces disposable income of the top decile by 7 percent to 4 percent and that of the 9th decile by 3.4 percent to 0.7 percent, while for the 7th and lower deciles the effect is almost negligible. The estimated fiscal effect ranges between EUR 88 and 222 million per annum (**Table 9**). Income inequality goes down: the quintile ratio S80/S20 from 6.27 to 5.91-6.10 and the decile dispersion ratio D10/D1 from 10.27 to 9.54-9.86, while the Gini falls by 0.7 to 1.3 percentage points (**Table 9**).

Figure 39. Simulated effect of raising the top PIT rate, by household income deciles
Top panel: taxes and contributions. Bottom panel: Household equalized disposable income



Source: EU-SILC microdata and staff calculations.

Table 9. Raising top PIT rate, simulation results

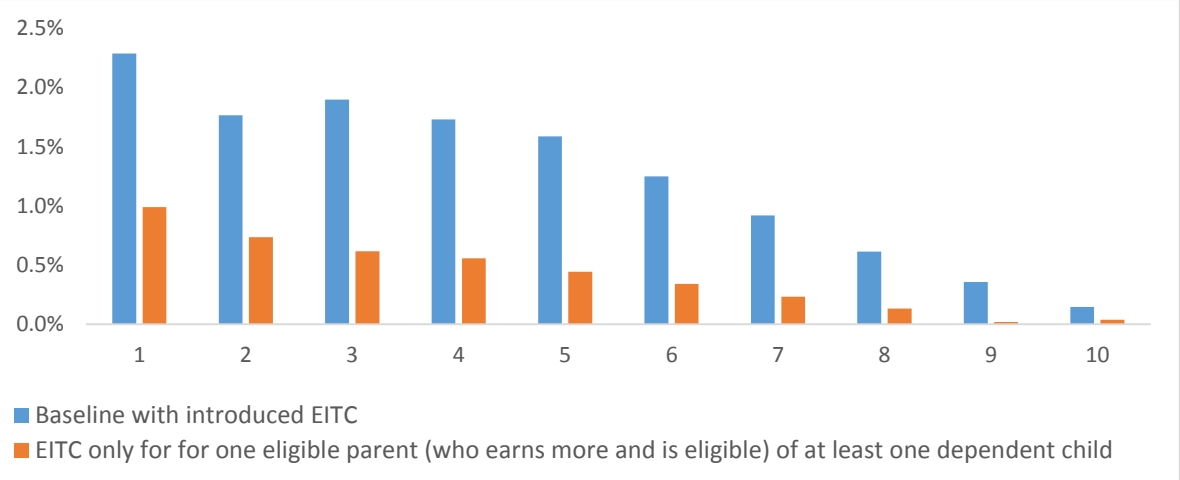
	Baseline 2015	Top 20%	Top 15%	Top 10%	Top 5%
Tax revenue from PIT, change (%)		15.9	13.3	10.1	6.3
Revenue from PIT in 2014, million EUR	1397				
Fiscal impact, million EUR		222.5	185.7	141.3	88.2
Quintile ratio S80/S20	6.274	5.909	5.953	6.015	6.101
Decile dispersion ratio D10/D1	10.266	9.538	9.606	9.707	9.863
Gini	0.361	0.348	0.349	0.351	0.354

Source: Eurostat (baseline revenue), EU-SILC microdata and staff calculations.

The simulation of a modest EITC regime (with a maximum tax credit subsidy of EUR 226.80 per annum) reveals small, but not negligible income effects, for the 1st decile. The impact extends to

(although of a smaller magnitude) deciles 2 to 6 (**Figure 40**). The fiscal cost of this "general" EITC scenario is about EUR 73 million per annum, but it falls to just EUR 19 million if the EITC is only targeted to families with dependent children (where just one parent is eligible). This suggests that providing a significantly more generous EITC for families with children is a feasible policy option. As is evident from **Figure 40**, this version of the EITC is also better targeted to those with lower household incomes, as the impact for deciles 3 to 6 is much smaller than for decile 1 compared to the "general" EITC simulation. The EITC has potential to shrink the gap between the rich and the poor: the decile dispersion ratio falls from 10.27 to 10.05 for the "general" EITC and to 10.17 for the child-oriented EITC version (**Table 10**).

Figure 40. Simulated effect of introducing EITC, by household income deciles



Note: The figure shows the change in equalized disposable income.
Source: EU-SILC microdata and staff calculations.

Table 10. Introducing universal EITC and EITC targeted to families with children, simulation results

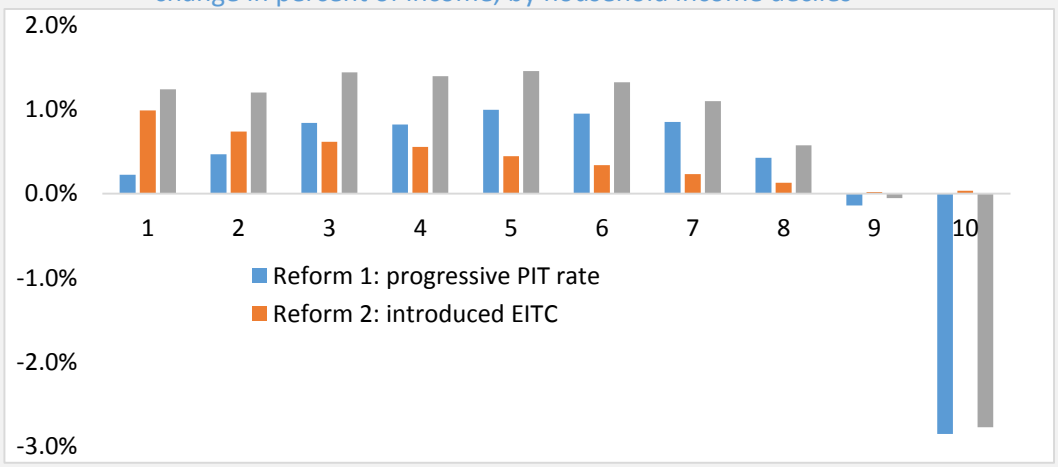
	Baseline 2015	Universal EITC	EITC for parent of dependent child
Fiscal impact, million EUR	-	-73.294	-19.583
S80/S20	6.274	6.158	6.219
Decile dispersion ratio	10.266	10.051	10.169
Gini	0.361	0.357	0.360

Notes: Universal EITC simulation is an EITC of 7 percent of annual gross earnings below EUR 3240; an EITC equal to EUR 226.80 for annual earnings between EUR 3240 and EUR 4320; and an EITC equal to (EUR 226.80 less 0.07 multiplied by (income minus 4320) for annual earnings between EUR 4320 and EUR 7560; and EITC equal to 0 for annual earnings above EUR 7560. The alternate EITC simulated is given only to one eligible parent (the parent who earns more and is eligible) of at least one dependent child.
A negative number means under the fiscal impact represents that the program has a fiscal cost.
Source: EU-SILC microdata and staff calculations.

Introducing a progressive PIT with three rates 19 percent/23 percent/29 percent) generates a positive fiscal effect of almost EUR 23 million, raises household income in all but the top 2 deciles (**Figure 41**), and substantially reduces the gap between the rich and the poor: the quintile ratio goes

down from 6.27 to 6.13, while the decile dispersion ratio falls from 10.27 to 9.95 (**Table 11**). When the PIT reform is combined with the EITC targeted to houesholds wiht dependent children, the fiscal effect is still positive at EUR 3 million per annum, disposable income in middle- and, especially, low-income households increases further (**Figure 41**), and the quintile ratio and the decile dispersion ratio decline further to 6.08 and 9.86, respectively (**Table 11**).

Figure 41. Impact of introducing a progressive income tax and a targeted EITC: Simulated effect, change in percent of income, by household income deciles



Note: The figure shows the percentage change in equalized disposable income due to each simulation. The "Reform 1" scenario shows the impact of introducing three PIT bands: a low rate of 19 percent (for annual earnings below 12 minimum monthly wages, i.e. EUR 4320 (12*360); a 23 percent rate for annual earnings between EUR 4320 and EUR 15600); and a top rate of 29 percent annual earnings above EUR 15600 (12*1300). The "reform 2" scenario shows the impact of introducing an EITC targeted to one eligible parent (the parent who earns more and is eligible) of at least one dependent child.
Source: EU-SILC microdata and staff calculations.

Table 11. Introducing progressive PIT and progressive PIT combined with EITC targeted to families with children, simulation results

Scenario	Baseline 2015	Three PIT tax bands	Three PIT tax bands + EITC for parent of dependent child
Fiscal impact, million EUR		22.820	3.234
S80/S20	6.274	6.131	6.082
Decile dispersion ratio	10.266	9.951	9.860
Gini	0.361	0.355	0.354

Note: The first scenario shows the impact of the introduction of three PIT bands: a low rate of 19 percent (for annual earnings below 12 minimum monthly wages, i.e. EUR 4320 (12*360); a 23 percent rate for annual earnings between EUR 4320 and EUR 15600); and a top rate of 29 percent annual earnings above EUR 15600 (12*1300). The second shows the impact of the introduction of three PIT tax bands together with an EITC targeted to one eligible parent (the parent who earns more and is eligible) of at least one dependent child.
Source: EU-SILC microdata and staff calculation

Simulations of progressive PIT without and with joint taxation of married couples

These simulations compare the effect of four progressive PIT systems versus the baseline as of 2015 (the most recent fully available for EUROMOD simulations).

(i) ***Progressive "A"*: Tax system 2015 + progressive PIT** (19 percent up to income EUR 360, 23 percent for income above 360 and up to EUR1300, 29 percent for income above EUR1300 per month), applied to the sum of income from employment and self-employment**.**

(ii) ***Progressive "A", joint*: Same as *Progressive "A"* for all taxpayers but married couples.** For married couples: (i) Tax allowance for non-working spouse (EUR 165 per month added to nontaxable income) [22] does not apply (except for disabled spouses). (ii) Nontaxable income for the couple is EUR 150 per month. (iii) PIT rates 19 percent, 23 percent, and 29 percent apply, respectively, for joint labor income up to EUR 720, above EUR 720 up to EUR 2600, and above EUR 2600.

(iii) ***Progressive "B"*: Tax system 2015 + progressive PIT** (19 percent up to income EUR 360, 23 percent for income above 360 and up to EUR1300, 29 percent for income above EUR1300 per month), applied to the sum of income from dependent employment. All self-employment income is taxed at the rate of 19 percent.

(iv) **Progressive *"B", joint*: Same as *Progressive "B"* for all taxpayers but married couples.** For married couples: (i) Tax allowance for non-working spouse (EUR 165 per month added to nontaxable income) does not apply (except for disabled spouses); (ii) Nontaxable income for the couple is EUR 150 per month; (iii) PIT rates 19 percent, 23 percent, and 29 percent apply, respectively, for joint employee income up to EUR 720, above EUR 720 up to EUR 2600, and above EUR 2600; and (iv) All self-employment income is taxed at the rate of 19 percent.

Simulations have been performed based on EU-SILC microdata for 2015 (adapted for EUROMOD by the team). The nontaxable minimum is not differentiated as it has been conceptually agreed that if progressive PIT is introduced, there will be no need for differentiated minimum.

Note that although assumed threshold for the top rate is EUR 1300 for a single earner and EUR 2600 for a couple, due to lowering the PIT rate to 19 percent for incomes up to EUR 360/720, the *net effect of introduction of the progressive PIT (in comparison with the flat rate of 23 percent) on employee net earnings will be negative only for singles earning above EUR 1660 and couples earning above EUR 3320* (in the latter case we leave aside removing of the allowance for non-working spouse which has already happened).

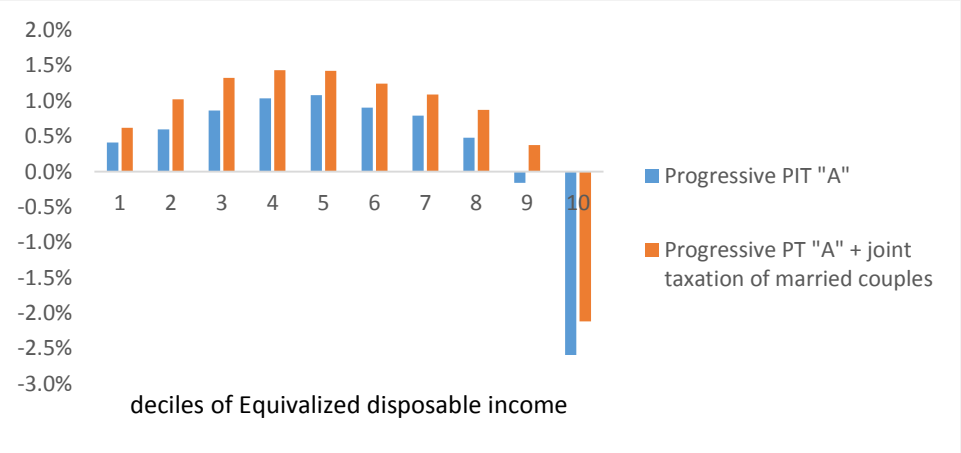
Why joint taxation? There is a number of economic arguments in favor of joint taxation. *First*, married couples typically have common budget and hence the couples rather than individual partners are the economic units. *Second*, it is well documented in labor economics literature that labor supply decisions of members of a couple are in fact joint decisions. *Third*, joint taxation is a family-friendly policy, which is particularly important in Latvian demographic context. The theory of household production suggests that it is rational for a couple to reduce labor supply of the partner whose marginal productivity in the household production (e.g. in child care) is higher than in the market, and this might be combined with increase in work hours and labor income of the other partner. Progressive taxation which is not joint would punish such a behavior if the income of the

[22] This was a part of the tax system in 2015, but not in 2016.

second partner exceeds the threshold for the top rate. *Fourth*, joint taxation is likely to reduce administrative burden on the SRS. *Last, but not least*: Politically, it is easier to introduce progressive PIT combined with joint taxation, because for married couples with middle-high income (and for some high-income couples) progressive taxation results in a smaller income loss (or a larger gain) if implemented as joint taxation.

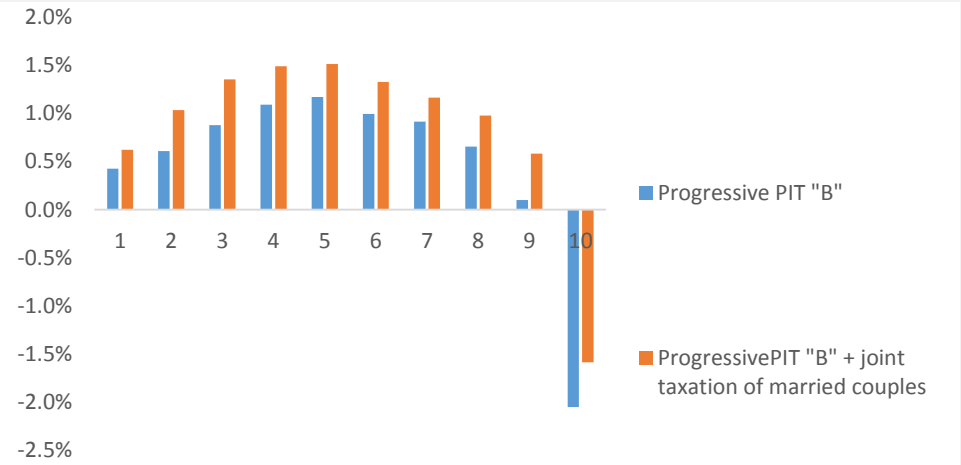
Figure 42, Figure 43 and **Table** 12 show that introduction of joint taxation slightly (by less than 0.5 percent) improves household income across the income distribution (results for Progressive "B" version are qualitatively very similar and not shown) while the fiscal cost of the measure is EUR 27 to 29 million, and the effect on inequality is negligible.

Figure 42. Scenario Progressive A: Effect of introduction of progressive PIT and joint taxation of married couples on the equalized disposable income, change vs baseline



Notes: [a] Baseline, as well as Progressive PIT "A" include tax allowance for non-working spouse (EUR 165 per month), while the joint versions of Progressive PIT "A" does not.
Source: EU-SILC microdata and staff calculations using EUROMOD

Figure 43. Scenario Progressive B: Effect of introduction of progressive PIT and joint taxation of married couples on the equalized disposable income, change vs baseline



Notes: [a]Baseline, as well as Progressive PIT "A" include tax allowance for non-working spouse (EUR 165 per month), while the joint versions of Progressive PIT "A" does not.
Source: EU-SILC microdata and staff calculations using EUROMOD

Table 12. Progressive PIT with and without joint taxation of married couples: Impact on tax revenues and inequality

	Baseline 2015 [a]	*Progressive A*		*Progressive B*	
		Not joint	Joint	Not joint	Joint
Tax revenue from PIT, change (%)		1.0%	-1.0%	-0.2%	-2.1%
Revenue from PIT in 2014, million EUR	1444.6				
Fiscal impact, million EUR		14.3	-15.1	-3.3	-30.4
Quintile ratio S80/S20	6.162	6.026	6.036	6.053	6.057
Decile dispersion ratio D10/D1	10.312	10.004	10.032	10.058	10.086
Gini	0.348	0.343	0.343	0.344	0.344

Notes: [a]Baseline, as well as not joint versions of progressive taxation include tax allowance for non-working spouse (EUR 165 per month), while Joint versions do not.
Source: Eurostat (baseline revenue), EU-SILC microdata and staff calculations using EUROMOD.

Box 3. Calculating the optimal top rate for Latvia

Saez (2001) has shown that the welfare-optimal top tax rate can be calculated using only three statistics: the Pareto parameter for the top of the earnings distribution, the elasticity of taxable income (ETI), and the social welfare weight for top-income earners. The welfare-maximizing marginal top rate $T'(y)$ can be computed as $T'(y) = (1 - g)/(1 - g + \alpha\varepsilon)$, where g is the social welfare weight of top-income earners, α is the Pareto parameter, and ε is the ETI.[23] The revenue-maximizing or 'Laffer rate' is obtained by setting the welfare weight of top-income earners at zero ($g = 0$). Tax policy then only 'soaks the rich'. It is generally not desirable to set the top rate beyond the Laffer rate. If top tax rates are higher than the Laffer rate, reducing the top rate constitutes a Pareto improvement: it raises more revenue and gives fewer distortions, while no one is worse off. The revenue-maximizing rate increases when the top tail of the earnings distribution is 'fatter', i.e., when the Pareto parameter α is lower. The revenue-maximizing top rate decreases when the ETI (ε) is higher. A higher top rate then causes more economic distortions, avoidance and evasion. The revenue-maximizing top rate is not equal to the welfare-optimal top rate, since it is impossible to calculate the optimal top rate without making an intrinsically political judgment regarding the social welfare weight of top-income earners. A Rawlsian government only cares for the poor, and thus attaches a zero welfare weight to the top-income earners ($g = 0$). Consequently, it sets the top rate at the revenue-maximizing rate. For any positive social welfare weight for the top-income earners ($g > 0$), optimal top rates are below the revenue-maximizing rate.

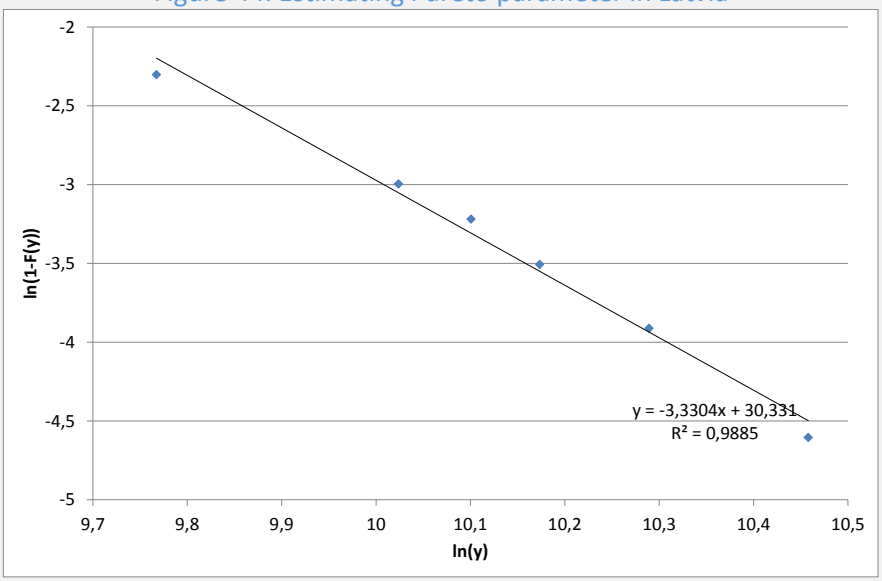
The top of the income distribution can be characterized well by a Pareto distribution in most countries in the world (Atkinson, Piketty and Saez, 2011). By using data on income percentiles from Eurostat we calculate a provisionary estimate of the Pareto-parameter for the top of the Latvian earnings

[23] We ignore income effects for top income earners here, since these are generally considered small and have not often been estimated (Saez et al., 2012).

distribution.[24] Let earnings be denoted by *y*. And let the cumulative distribution be Pareto and denoted by *F*(*y*). When the income distribution is Pareto, there exists a linear relationship between ln(1-*F*(*y*)) and ln(*y*).[25]

In **Figure 44**, we plot this relationship for the 90-99 percentiles of the earnings distribution. Strikingly, the relationship is indeed nearly linear (R^2 = 99 percent), hence the Pareto distribution provides a good fit. The implied Pareto parameter equals 3.3, which is among the highest in the world (Atkinson et al., 2011).[26] From this estimate it appears lonely at the top in Latvia. However, given that there is large income inequality according to Gini coefficients, we expect the Pareto-parameter to be biased upwards considerably due to (possible) top coding in the tax data and tax evasion/avoidance, which result in underreporting of top incomes. We use a baseline value of 3.0 and values between 2.5 and 3.5 as robustness checks given that there is large uncertainty in this parameter. For our computations, we will use a range of values of the ETI between 0.2 and 0.5, see also our review of estimates elsewhere in the report.

Figure 44. Estimating Pareto parameter in Latvia



Source: Calculations based on Eurostat data.

Table 13 gives the calculations for the optimal effective top rate for Latvia. The 'optimal effective top rate' includes both indirect taxes and SSCs, and corresponds to the optimal top rate according to the Saez-formula above. The row 'optimal top rate incl. SSC' corrects the optimal effective top rates for indirect taxes indicated at the bottom of the table. The 'optimal top rate PIT' excludes the SSCs from the 'optimal top rate incl. SSC'. Baseline values are indicated in bold. These calculations need to be interpreted with caution, since there is uncertainty regarding the parameters on which these calculations are based.

Table 13. Optimal top rates PIT Latvia

Pareto-parameter (α)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50

[24] This estimate should be interpreted with caution and can be revised when micro-data become available.
[25] The Pareto distribution is characterized by 1 – F(y) = ηαy-α. Taking logs from both sides yields ln(1 – F(y)) = αln(η) – αln(y). Consequently, the Pareto parameter α is (minus) the slope of a regression of ln(y) on ln(1 – F(y)).
[26] When we estimate the Pareto parameter using the P80-P99 percentile ratios, the Pareto parameter drops to 3.1.

Welfare weight top incomes (g)	0.00	0.25	0.50	0.00	0.25	0.50	0.00	0.25	0.50
ETI (ε)	0.20	0.20	0.20	0.35	0.35	0.35	0.50	0.50	0.50
Optimal effective top rate	0.67	0.60	0.50	0.53	0.46	0.36	0.44	0.38	0.29
Optimal top rate incl. SSC	0.63	0.56	0.45	0.48	0.40	0.29	0.38	0.31	0.21
Optimal top rate PIT	0.53	0.45	0.34	0.38	0.30	0.19	0.28	0.20	0.10
Pareto-parameter (α)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Welfare weight top incomes (g)	0.00	0.25	0.50	0.00	0.25	0.50	0.00	0.25	0.50
ETI (ε)	0.20	0.20	0.20	**0.35**	0.35	0.35	0.50	0.50	0.50
Optimal effective top rate	0.63	0.56	0.45	**0.49**	0.42	0.32	0.40	0.33	0.25
Optimal top rate incl. SSC	0.58	0.51	0.39	**0.43**	0.35	0.25	0.33	0.26	0.17
Optimal top rate PIT	0.48	0.40	0.29	**0.33**	0.25	0.14	0.23	0.16	0.06
Pareto-parameter (α)	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Welfare weight top incomes (g)	0.00	0.25	0.50	0.00	0.25	0.50	0.00	0.25	0.50
ETI (ε)	0.20	0.20	0.20	0.35	0.35	0.35	0.50	0.50	0.50
Optimal effective top rate	0.59	0.52	0.42	0.45	0.38	0.29	0.36	0.30	0.22
Optimal top rate incl. SSC	0.54	0.46	0.35	0.39	0.31	0.21	0.29	0.22	0.14
Optimal top rate PIT	0.44	0.36	0.25	0.28	0.21	0.11	0.19	0.12	0.03
Current top rate	0.23								
Current top rate incl. SSC	0.34								
Indirect taxes	0.11								
Current effective top rate	0.40								
SSC-rate	0.105								

Our calculations suggest that an increase in the current top rate in the PIT of 23 percent seems feasible and would contribute to more income redistribution or public revenue. Introducing a separate top bracket for incomes potentially raises more revenue at baseline values for the ETI (0.35) and Pareto parameter (3.0). Top rates can be increased from 23 percent to about 33 percent. In this case the MTR including SSCs equals 43 percent (and it equals 49 percent when we include indirect taxes of 11 percent).[27] When there would be more inequality, and the Pareto-parameter of the earnings distribution would be 2.5 rather than 3.0, the revenue-maximizing top rate in the PIT is 38 percent. In that case, the PIT rate can be increased with 15 percent-points from 23 percent. However, the current top rate in the PIT of 23 percent would be revenue maximizing when the ETI would be higher than in the baseline (0.50). Clearly, the ETI is a critical parameter to judge the desirability of raising the top rate in Latvia. Another critical element is the political valuation of the income of top-income earners. The table shows that with low social welfare weights for top-income earners, optimal tax rates are higher than current ones. However, with high social welfare weights for top-income earners, optimal tax rates can be lower than current ones. Indeed, current top rates of 23 percent in the PIT can be rationalized with a social welfare weight of the top-income earners around 0.3. Thus, a final proposal for the changes to PIT rates are dependent on two critical parameters: ETI and desired earning distribution.

[27] Indirect taxes should be added to the EMTR since also indirect taxes lower the price of leisure or non-work activities in terms of consumption. The EMTR including indirect taxes is calculated as: EMTR = (direct tax + indirect tax)/(1 + indirect tax).

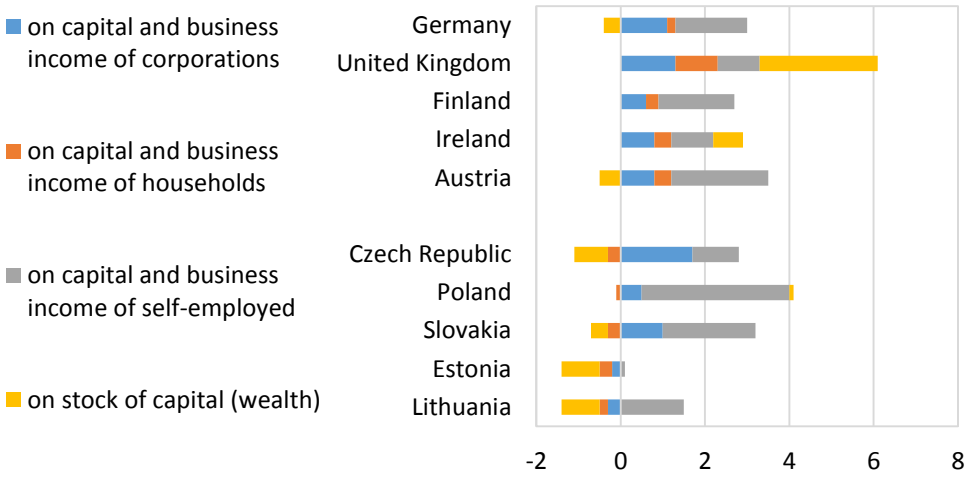
3.2 Capital income taxation

The aggregate burden of capital taxes in Latvia is low. Latvia has a low effective tax rate (Figure 45) and raises relatively little revenue from taxing capital income. In particular, the implicit tax rate on capital and business income of corporations and self-employed is below the level in most peer countries.

The Latvian tax system is a dual tax system where labor incomes and capital incomes are taxed separately. From an optimal-tax perspective it is probably most desirable to have a dual-income tax system where labor incomes are taxed at progressive rates, and capital incomes are taxed at lower, flat rates (Jacobs, 2013). Most Scandinavian countries have a dual tax system. The consensus in the economics literature suggests that capital income should be taxed at lower rates than labor income, given the high international mobility of capital. However, while taxes on capital income are generally considered more distortionary, they could also yield larger distributional benefits in view of the skewed distribution of capital income and wealth holdings. Moreover, capital incomes should preferably be taxed at a uniform rate, since capital incomes from one source can easily be transformed into capital income from another source. For example, dividends can be converted into capital gains, ordinary assets can be transformed into pension plans, and savings can be converted into equity of closely-held companies. A uniform tax on capital income is needed to avoid tax arbitrage between people, across bases and over time.

Taxing capital income at very low or zero rates is not socially desirable. Optimal tax theory points to good reasons for the taxation of capital income for both equity and efficiency reasons (Diamond and Banks, 2010; Diamond and Saez, 2011; Jacobs, 2013). It is optimal to tax capital income for redistributive reasons, since not all income inequality originates from differences in labor earnings. Individuals inherit different amounts of wealth (Piketty and Saez, 2013). Individuals with higher earnings capacities also have stronger preferences to save (Banks and Diamond, 2010; Diamond and Spinnewijn, 2011; Gordon and Kopczuk, 2014). And, individuals with high earnings ability not only earn more labor income, but also more capital income (Gerritsen, Jacobs, Rusu and Spiritus, 2016). It is also optimal to tax capital income for efficiency reasons. Taxation of capital income helps to alleviate the distortions of labor and consumption taxes in the labor market by boosting labor supply (Blundell and MaCurdy, 1999; Meghir and Phillips, 2010; Pirttilä and Suoniemi, 2014; Erosa and Gervais, 2002; Conesa et al. 2011), promoting later retirement (Gruber and Wise, 1999, 2002) and stimulating investments in human capital (Jacobs and Bovenberg, 2010). Moreover, capital taxes can alleviate the distortions from borrowing constraints (Hubbard and Judd, 1986; Aiyagari, 1994, 1995) and missing insurance markets (Diamond and Mirrlees, 1978, 1986; Golosov et al., 2003; Jacobs and Schindler, 2012). Taxing capital income is also desirable when capital income contains unearned income, i.e. capital incomes for which no economic sacrifice has been made in the form of postponing consumption or bearing risk, such as rents on land and housing or the profits from market power or location advantages. Finally, taxes on capital income are needed to combat tax avoidance and maintain the integrity of the PIT (Christiansen and Tuomala, 2007)**.** The separation between capital and labor income is the Achilles heel of any dual income tax system, such as the tax system in Latvia. Without taxation of capital income individuals would get strong incentives to transform taxed labor income into untaxed capital income (Fuest and Weichenrieder, 2002; De Mooij and Nicodème, 2008).

Figure 45. CIT difference between the level of the implicit tax rate on capital income in in selected countries and Latvia (in percentage points), 2012



Source: Eurostat.

The tax treatment of capital income is not uniform. Table 14 shows the different forms of capital income and how they are taxed in Latvia. Interest and dividends at the personal level are taxed at a rate of 10 percent. Capital gains are taxed at a rate of 15 percent. Currently dividends in the hands of enterprise are exempt from tax provided that dividends are not received from enterprise established in countries or territories listed in Latvia's list of low tax or no tax counties or jurisdictions. The neutral tax treatment for capital gains is provided. Given that there is no correction of accrued interest in unrealized capital gains, a good case can be made of setting a somewhat higher tax on capital gains to avoid arbitrage by converting dividends into lower taxed capital gains using for example stock options (Auerbach, 1991a, 1991b). There is no taxation of imputed rent on home ownership, and costs of financing (e.g., mortgage rent) owner-occupied housing are not deductible. Incomes from renting out property are taxed. Individuals can choose to have either a tax of 10 percent on turnover or a PIT on rental income. Rental of private property can be registered as private activity (subject to PIT) or as a business activity (liable to CIT or MET). Realized capital gains on real estate are taxable, but a number of tax exemptions exist. Capital gains for owner-occupied housing are not taxed as long as the capital gain is reinvested into a new residence.[28] Also, capital gains on owner-occupied housing are not taxed in case of the house being sold due to a divorce. If these criteria are not met, capital gains on home ownership are taxed at 15 percent. The exemptions provide wide relief from capital gains tax on housing.

Pension benefits from first-pillar, PAYG state pensions are taxed at the 23 percent rate of the PIT, while they are funded from SSCs (EC, 2014). The second-pillar of pension savings— occupational

[28] Capital gains on houses are not taxed when home ownership before alienation lasted more than 60 months; it was the place of residence for at least 12 months or it was the only house for the last 60 months; it has been replaced with an owner-occupied house 12 months before or after the alienation; capital gains on the house have been divided in the case of a divorce provided that it was the residence of both spouses at least 12 months until the alienation; an alienation of the real estate is realized in accordance with the Law On Alienation of Immovable Property for the Public Needs, provided that ownership lasted more than 60 months or the capital gain is invested in a functionally similar property within 12 months after alienation.

pensions—is a funded system. Second-pillar pension benefits are taxed under the 23 percent rate of the PIT. Its tax treatment can be characterized as an ETT system (**E**xempt contributions, **T**axed accrual, **T**axed benefits). Contributions by employees for third-pillar, occupational pensions are tax deductible up to a maximum of 20 percent of gross earnings. However, contributions for employers to occupational pensions are not tax deductible. Accrual of pension wealth in occupational pension schemes is taxed at 10 percent, the rate at which dividends and interest income is taxed (Latvian Revenue Service, 2016). In addition, individuals can make voluntary pension savings in the third pillar via pension products with a favorable tax treatment. The tax treatment of the third pillar differs from the second pillar and can be characterized as an ETE system (**E**xempt contributions, **T**axed accrual, **E**xempt benefits). Premiums for life-insurance and pension contributions are deductible from the labor income tax up to a maximum of 20 percent of taxable income. Voluntary pension savings into private pension funds under licensed pension plans are not taxed when the employee contributes to the pension plan. However, when employers contribute to the pension plan of the employee, the tax advantage disappears since pension benefits are then taxed at the PIT rate of 23 percent (Latvian Revenue Service, 2016). Pension accrual in private pension savings in the third pillar are taxed at a rate of 10 percent. Only about 25,000 people make use of the tax advantages for third-pillar private pension savings. The reasons are unclear; it may be due to inadequate income to contribute to third pillar savings or perhaps due to a preference for other forms of savings. Fees on third pillar savings also may act as implicit taxes on pension saving and ultimately soak up most of the explicit tax advantages. Consequently, there appears to be no substantial private gain from saving for pensions using these products compared to private savings or home ownership.

The corporate income tax (CIT) is a 'classical' system where interest is deductible from the CIT, but dividends are not deductible. Standard corporations pay a corporate tax rate of 15 percent. In addition the CIT provides some generous depreciation allowances that reduce the EMTR on corporate income – see below for an extensive discussion of the CIT-regime. Besides the standard corporate structure, Latvian firms may file their taxes as a microenterprise (Micro Enterprise Tax, MET) when they meet certain requirements. This regime levies a 9 percent tax on turnover of the ME-corporation. In addition there is a tax of 10 percent on dividends received from the ME. Hence, the effective marginal tax rate on dividends from the ME equals 18.1 percent. The effective marginal tax rate on interest income is 9 percent: it is effectively taxed at the ME-level, but not at the individual level. Finally, there is a local property tax, ranging from 0.2-3 percent of the value of the property, depending on the jurisdiction. Immovable property is also subject to a stamp duty of 2 percent of the property value. There is no inheritance taxation.[29] Total tax allowances are limited to equal 20 percent of taxable income, comprising the maximum total limit for contributions to pension funds, insurance premium payments, donations to charities and political parties. Furthermore, payments to private pension funds can only be included in allowances up to an amount equal to 10 percent of taxable income per year. Likewise, insurance premiums only can be included in tax allowances to an amount equal to 10 percent of taxable income per year.

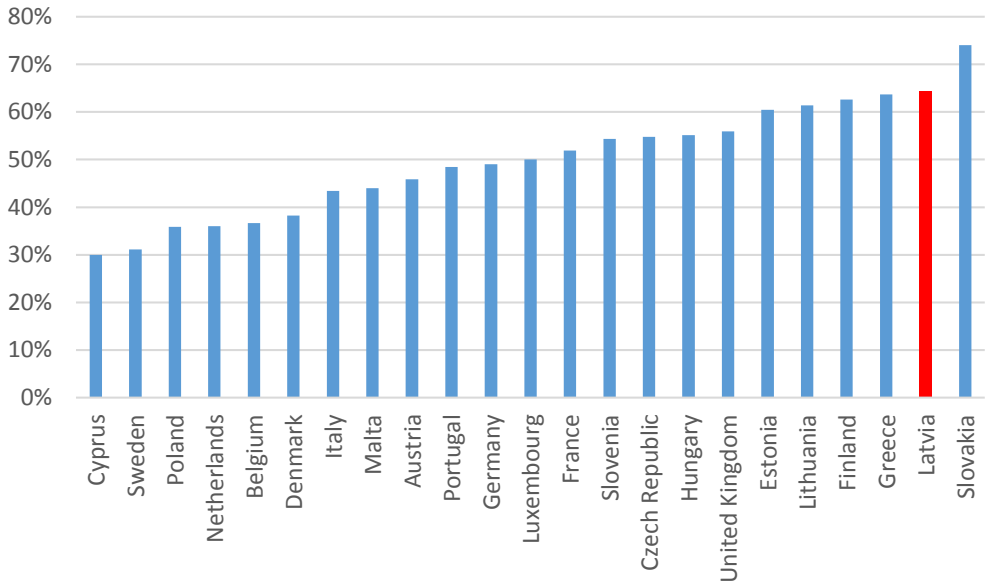
[29] However, there is a provision for the taxation of inheritance of copyrights, which are taxed at 23 percent.

Table 14. Taxes on capital income and wealth in Latvia, in percent

	Rate		Rate
Personal capital income		**Corporations**	
Interest	10	Interest (effective)	15 (10)
Dividend	10	Dividend (effective)	0 (23.5)
Capital gains on assets	15	Capital gains (effective)	0 (27.75)
Housing		**Microenterprises**	
Imputed rental income	-	Interest (effective)	9 (9)
Realized rental income	10	Dividend (effective)	9 (18.1)
Deduction mortgage rent	-	**Wealth taxes**	
Capital gains housing	0, 15	Property	0.2-3
Occupational pensions (second pillar)		Stamp duty immovable property	2
Pension benefits	23	Inheritance	-
Deduction contributions employer/employee	0/23		
Pension accrual	10		
Private pension saving (third pillar)			
Pension benefits	0/23		
Deduction contributions employer/employee	0/23		
Pension accrual	10		

Non-uniform tax treatment of capital income is inefficient, generates inequities and provokes tax arbitrage. From Table 14, it follows that housing assets taxed to a low degree, except for renting out property and capital gains under certain conditions. There is no taxation of imputed rent, while the costs of financing are not deductible. Capital gains on housing are not taxed under many common scenarios (using the capital to move to a new house or in the case of divorce). This implies that there are strong incentives to save in the form of housing assets, since all other forms of capital income are generally taxed. This is confirmed by the high share of housing wealth in the total households' wealth in Latvia, see Figure 46, where Latvia's share is higher than all EU countries (for which data is available) but Slovakia. There is not a big difference between the tax treatment of ordinary savings, second-pillar pension savings and third-pillar pension savings. The microenterprise regime always provides tax advantages over the standard CIT-regime. Moreover, property is lightly taxed and bequests are not taxed at all. The tax regime for capital income implies that Latvians are able to lower their average and marginal tax rates on their assets to very low levels, possibly close to zero by making suitable portfolio choices (save in the form of housing and microenterprises). This is also reflected in the very low tax revenue from capital income in Figure 47. Since large parts of capital income remain untaxed, taxes on labor income and consumption need to rise, which is not efficient as it distorts labor and other markets more heavily. Moreover, given that there is typically much larger inequality in wealth holdings, the tax system does not optimally address distributional concerns by largely exempting capital income and wealth holdings from taxation. Finally, the non-neutral tax treatment is likely to cause arbitrage, since saving in houses and microenterprises is generally preferred over any other form of saving. For all these reasons, the Latvian tax system does not meet the criteria for an optimal tax treatment of capital income.

Figure 46. Housing wealth as a percentage of total households wealth in European Union in 2013

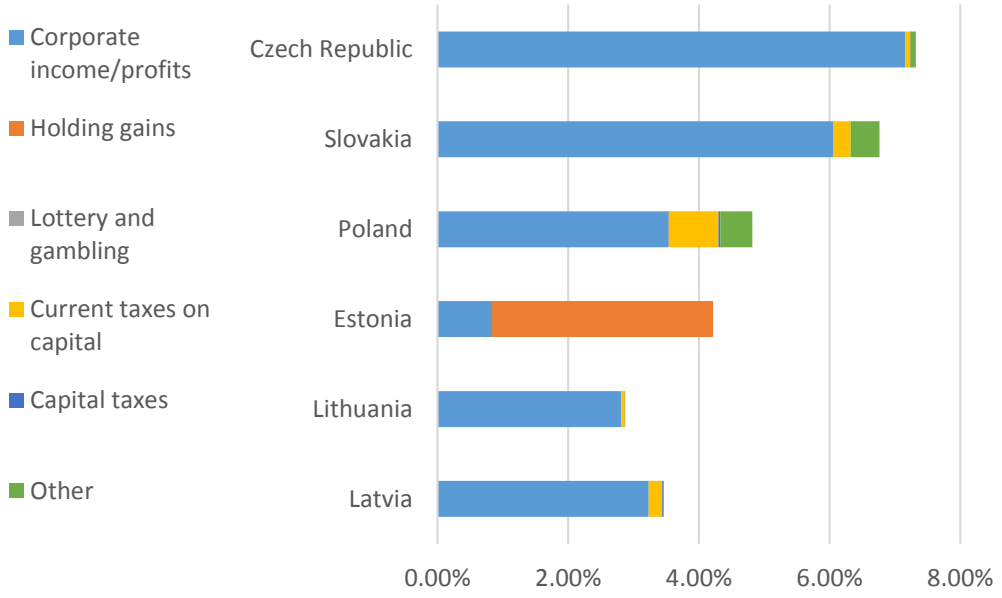


Source: Eurostat, ECB

Latvia can raise the share of capital taxes in the tax mix. Arguably, taxes on capital income are too low from an aggregate perspective. Given that Latvia has such a low share of taxes on capital income in total tax revenue a good economic case can be made that Latvia should shift the aggregate tax burden from labor (i.e. consumption and taxes on labor earnings) towards capital income. Note that this is not a plea for raising the aggregate tax burden, only a shift in the mix of taxes from labor towards capital. Such a shift can contribute to raising the efficiency or equity (or both) of the Latvian tax system.

To ensure a uniform tax treatment of capital income some countries tax housing via taxes on imputed rent. Housing is the most important private asset in Latvia, which is largely tax exempt. The asymmetric tax treatment of housing distorts asset portfolios of households; households will have largely undiversified portfolios with a large share of their assets invested in real estate. This makes households financially vulnerable to volatility in the real-estate markets. Hence, the tax system promotes boom-bust cycles via housing markets. Moreover, home-ownership is unequally distributed. A neutral tax treatment of housing introduced in several European countries implies that imputed rent is taxed at a rate that equals to the tax on dividends from other assets, mortgage interest while other costs of financing are deductible, and capital gains in housing are taxed at the same rate as the capital gains on other assets. For example, Netherlands set imputed rent a return, which is roughly equal to rates of return on real-estate investments, taking into account the safe rate of return on risk-free assets (currently approximately 1 percent), risk-and liquidity premiums (3 percent), depreciation of the house (0.4 percent), costs of maintenance (0.9 percent), costs of insurance (0.1 percent), transaction costs (0.3 percent) and expected capital gains of housing (approximately 3 percent) (Poterba, 1984). Imputed rent should then be around 2.7 percent.

Figure 47. Components of capital taxation as a percentage of operating surplus and mixed income, 2014



Source: Eurostat

Latvia could consider taxing bequests. Currently, there is no tax on inheritances, except for the taxation of inherited patents. Bequests are just an ordinary form of saving as long as bequests are completely intentional decisions by those leaving a bequest. Hence, when the incomes from the underlying assets are taxed, then there would be no need to introduce a tax on bequests. This is similar to the argument that a wealth tax is redundant if all capital incomes are taxed. However, not all bequests are intentionally made. Unintentional bequests arise when individuals have accumulated precautionary savings or because they were unable to annuitize their wealth holdings. In that case, an inheritance tax has very attractive properties – even if all underlying assets are correctly taxed. Non-intentional bequests can be taxed away without distortions, hence this is optimal from a revenue-raising perspective. In addition, taxing away initial wealth differences helps to reduce inequality. Moreover, non-welfarist motives could justify an inheritance tax, just as a wealth tax: correction of differences in status, power, security etc. (Boadway et al., 2010). Finally, as long as the Latvia does not completely tax all capital incomes (e.g. housing and pensions), the inheritance tax may be a second-best correction for this lack of taxation of capital incomes. It can be desirable to introduce exemptions for the inheritance tax so as to redistribute resources form individuals with a high to individuals with a low inheritance. Intuitively, initial wealth differences are a second source of inequality, besides the differences in earning ability. Typically, both are positively correlated. How large the non-intentional part of bequests is, cannot be easily established on the basis of objective data. See for example Blumkin and Sadka (2003), Kopzcuk (2010), and the many studies to which they refer. The rate of inheritance taxation should depend on the share of non-intended bequests, the size of the exemptions, and the desired redistribution through the inheritance tax. Depending on political preferences, exemptions can be introduced, as well as non-linear tax rates. Revenues from a higher inheritance tax could be recycled in the form of lower taxes on labor income or consumption.

Main conclusions:

Latvia should consider the following changes in the tax treatment of capital income:

- The share of capital taxes in total tax revenue needs to be raised to obtain a more efficient and equitable tax mix between taxes on labor/consumption and capital income.
- Consider introducing a uniform tax treatment of all capital income derived from interest, dividends, capital gains, pensions, firm-ownership and housing to raise both equity and efficiency and to reduce tax arbitrage.
- Consider changing the tax treatment of housing.
- Consider taxing bequests for both efficiency and equity reasons.

3.3 Social security contributions

The main objective of labor taxation is to raise revenue in order to finance vital public services and benefit payments.[30] This helps ensure that individuals enjoy income security, despite the loss of earnings suffered as a result of old age, disability, sickness, or unemployment. Labor taxes can also provide incentives or disincentives for certain activities and correct market failures. In addition, labor taxes and relevant expenditures can also serve to (re-)distribute income and help reduce poverty and inequality (Prasad, 2008).

Taxes on labor—personal income taxes and social security contributions—directly reduce labor demand by driving up labor costs for employers and reduce labor supply by lowering after-tax wages. As such labor taxes create a "tax wedge" between labor cost to the employer and the worker's take-home pay and thereby reduce both employment and economic growth (see Box 4 on the impact of labor taxes on growth). The higher the marginal effective tax rate, the lower the incentives for the employee to look for work or to work additional hours. In the face of higher labor costs, due to their share of the payroll taxes, employers can reduce employment, reduce working time, reduce the wages of employees, underreport the formal wage (e.g. only report the minimum wage), or go informal. The tax wedge between total labor costs to the employer and the corresponding net take-home pay for average single workers without children in EU28 countries varied between Belgium (49.9 percent) and Malta (18.8 percent) in 2015. Latvia is on the higher end with a tax wedge of 42.3 percent (Table 15). It should be noted that the tax wedge is a so-called synthetic measurement, meaning it is purely based on legislation and therefore measures what individuals are supposed to pay, not what they actually pay, in taxes and social security contributions. In the case of Latvia, the social contribution as a percent of GDP at 6.0 percent in Latvia is less than countries with a lower tax wedge (for example, compared to 11.1 percent of GDP in Estonia) (Table 16).[31] Social security tax collection depends on the wage bill, employment rates, exemptions and compliance and so the effective tax rate may diverge from the statutory rates set.

[30] "Labor taxes" is used as a term to include both social security contributions (levied on employers and employees) as well as personal income taxes levied on employees.

[31] The IMF's World Revenue Longitudinal Data set 2015 (WoRLD). In: http://data.imf.org/?sk=77413F1D-1525-450A-A23A-47AEED40FE78

Table 15. Tax rate indicators in 2014 in the EU countries, in percent

	Tax wedge on labor costs	Unemployment trap	Low wage trap – single person without children	Low wage trap - one earner couple with two children
EU28	34.9	73.8	47.3	61.8
Belgium	49.9	93.0	60.7	48.8
Bulgaria	33.6	81.6	30.1	40.8
Czech Republic	39.6	80.2	48.9	91.4
Denmark	34.1	90.0	77.3	89.5
Germany	45.1	73.0	56.2	89.5
Estonia	39.0	63.7	24.2	33.7
Ireland	22.0	73.2	46.5	72.6
Greece	35.8	50.3	21.9	19.0
Spain	37.3	81.7	30.3	14.8
France	45.1	77.4	51.8	83.8
Croatia	36.1	81.0	29.9	23.8
Italy	42.3	79.5	37.8	0.3
Cyprus*	11.9	61.5	6.3	114.5
Latvia	42.3	88.7	32.0	50.7
Lithuania	38.9	61.5	26.8	84.6
Luxembourg	30.5	86.7	57.9	107.7
Hungary	49.0	78.5	37.4	39.4
Malta	18.8	57.7	22.1	22.3
Netherlands	31.4	82.2	71.9	63.8
Austria	44.9	67.9	42.8	97.1
Poland	33.6	77.6	61.0	44.9
Portugal	34.9	79.9	27.7	24.3
Romania	41.0	50.6	31.1	34.7
Slovenia	38.6	89.7	48.5	58.2
Slovakia	38.7	44.5	26.2	51.4
Finland	38.2	81.5	55.8	100.0
Sweden	40.5	69.5	38.7	69.3
United Kingdom	26.2	62.4	48.1	80.5
Iceland	29.3	84.8	47.4	61.2
Norway	33.8	75.6	34.0	96.2
Switzerland	19.4	…	…	…
United States	29.5	69.7	28.5	70.7

*-2007

Source: Eurostat Statistics Explained (2016). Wages and labor costs. http://ec.europa.eu/eurostat/statistics-explained/index.php/Wages_and_labour_costs

Table 16. Personal income tax and social contributions as a percent of GDP in 2013, and social contribution rates paid by insured persons and employers in 2013/2014 in EU countries, in percent

	PIT as % of GDP	Social contribution as % of GDP	Contributors		
			Insured persons	Employers	Total
Austria	9.77	14.59	17.2	25.15	42.35
Belgium	12.73	14.16	13.07	24.8	37.87
Bulgaria	2.95*	7.02*	12.9	17.8	30.7
Croatia	2.99*	11.45*	20	15.2	35.2
Cyprus	3.64*	8.35*	7.8	7.8	15.6
Czech R.	3.66	14.76	11	34	45
Denmark	26.37	0.79	8	0	8
Estonia	5.50	11.09	4	34	38
Finland	12.91	12.73	8.41	22.19	30.6
France	8.35	16.75	13.2	37.5	50.7
Germany	9.55	13.98	20.175	20.575	40.75
Greece	6.95*	10.62	12.05	23.6	35.65
Hungary	5.05	12.86	16	27	43
Ireland	9.27	4.40	4	4.25	8.25
Italy	11.57	12.98	9.19	33.68	42.87
Latvia	3.95*	6.01*	10.5	23.59	34.09
Lithuania	12.02	…	9	31.17	40.17
Luxembourg	8.98	11.27	12.7	11.95	24.65
Malta	6.43*	6.98*	10	10	20
Netherlands	7.34*	14.95*	22.7	19.07	41.77
Poland	4.52*	12.11*	22.71	19.38	42.09
Portugal	7.68	8.93	11	23.75	34.75
Romania	3.57*	8.87*	16.5	28	44.5
Slovakia	2.55	13.29	13.4	33.2	46.6
Slovenia	5.32	14.75	22.1	16.63	38.73
Spain	7.32	11.28	6.25	31.13	37.38
Sweden	12.26	9.80	7	31.42	38.42
United Kingdom	9.16	6.22	11.1	13.8	24.9

*- 2012

Source: SSA and ISSA (2014); The IMF's World Revenue Longitudinal Data set 2015

There is not a consensus across the empirical literature on whether it is the employee or the employer who bears the burden of labor taxation. A range of results have been found using within-country variation, i.e. differences in tax and social contribution schedules for different individuals or firms in a country, to estimate the incidence of labor taxation. By contrast, estimates using cross-country or time series variation in the labor tax burden initially mostly found that the burden falls largely on workers, but more recent studies using updated estimation strategies have found more mixed evidence (Hofer et al 2015).

The tax burden for low-income workers as measured by the METR is relatively high in Latvia (discussed in section 3.1). High employer contributions to social security leads to high wage costs, especially for low-skilled workers and the youth, and reduces their job opportunities in the formal sector. The loss of unemployment and other social benefits coupled with labor taxes can create *unemployment traps*. These are situations where unemployed or informally employed people have a

financial disincentive to seek formal sector employment since the level of social benefits they receive as registered unemployed are higher than their net earnings would be if employed formally and losing those benefits. In other words, when unemployed workers go back to work, they do lose unemployment benefits, all or some of the social assistance and other benefits paid to the family of the unemployed, while having to pay social security contributions and income taxes. In EU countries, the net effect amounts to an implicit "tax" that totals 92.4 percent of earnings in Belgium and 89.6 percent in Slovenia, but "only" 44.4 percent in Slovakia and 50.5 percent in Greece. In Latvia, in 2014, the unemployment trap equaled 88.7 percent—one of the highest in Europe which indicates that unemployed workers have little incentives to return back to the (formal) labor market (Table 15).

An important way in which Latvia tackles the unemployment trap is by using employment services to focus on activation policies for those who are out of work. The registered unemployed are encouraged to engage in active job searches and to participate training programs. There is a case for more funding to be provided for these active labor market programs to ensure adequate coverage and increase the intensity of case management (OECD, 2016).

Low-wage traps may also occur where a relatively large part of an increase in earned income is taxed away through higher income taxes, contributions, and reduced benefits, thus making work with higher (reported) earnings unprofitable. The low-wage trap measures the percentage of gross earnings taxed away by the combined effect of the levied taxes, social contributions, and the withdrawal of social benefits, when an employee's gross earnings increase from 33 percent to 67 percent of the average wage. The worker loses 77.3 percent of income in Denmark and 71.9 percent in the Netherlands, but "only" 21.9 percent in Greece and 26.8 percent in Lithuania (Table 15). In Latvia, the low-wage trap was in 2015 32.0 percent which was much below the EU average of 47.3 percent. This indicates that higher earnings are modestly taxed away. The low wage trap for one earner couple with two children was 50.7 percent in Latvia compared to the average of 61.8 percent in EU28, e.g., half of its incomes are taxed away as a result of an increase in gross earnings.

Box 4. Impact of labor taxes on growth and employment

There is a sizable body of empirical research into the employment and wage effects of payroll taxes.[32] Overall, a number of studies have found that high labor taxes have a negative impact on employment, and tend to increase unemployment rates[33], although other studies are less conclusive.[34] Empirical studies have shown the existence of a positive relationship between the tax wedge on labor income and unemployment.[35] However, as noted by Bell et al. (2002), "One problem the studies face is that it is very difficult to isolate the causal effect of tax changes on wages and employment because other factors are changing at the same time. Nonetheless, the findings suggest that, in the long run, wages absorb the changes in payroll taxes."

Impact on employment and unemployment. Although labor tax cuts and employment subsidies have been implemented in many countries at different times, the quantitative evidence of their impacts on employment is limited. The existing literature offers some guidance on the plausible range of labor

[32] Summary of the literature see, for example, Nickell and Layard (1999), Vroman and Brusentsev (2005), World Bank (2009), Melguizo and González-Páramo (2012), Antón, 2014.
[33] Belot and van Ours, 2004; Nickell, 1997
[34] Scarpetta, 1996; Nunziata, 2002; Macculloch and DiTella, 2002
[35]Nickell and Layard (1999), Daveri and Tabellini (2000), Nickell et al. (2005), Ohanian et al., 2006.

demand elasticity estimates, although most of the studies are based on data from industrialized countries. The international evidence suggests that the likely range is between -0.30 and -0.50 (i.e., a 10 percent decrease in the cost of labor would cause employment to rise from between 3 and 5 percent). Recently, there have been a growing number of studies from developing and transition countries, with most of the (long run) elasticities estimates in the -0.20 to -0.60 range.[36]

On the basis of cross-country regressions for Eastern European and Central Asian countries (ECA), Rutkowski (2007) estimates that a one percentage point change in the tax wedge results in a 0.3-0.6 percent change in the employment rate. In ECA, the tax wedge is expected to have a stronger negative impact on employment in more rigid labor markets, where wages are slow to adjust to downward shifts in labor demand because of, for example, strict employment protection or a high minimum wage.

A study by Bassanini and Duval (2006) using pooled cross-section/time series data for OECD countries over the period 1982–2003 found that a 10 percentage point reduction in the tax wedge would be associated with a drop in the unemployment rate of 2.8 percentage points. The unemployment effects of high tax wedges are found to be largest in those countries where binding minimum wage floors prevent tax shifting to workers.

For a summary of studies focusing on employment impacts of changes in payroll taxes, see Table 17.

Table 17. Employment and wage effects of changes in payroll taxes

Author(s); year	Countries	Impact
Bassanini and Duval, 2006	OECD countries	On average, it is estimated that a 10 percentage point reduction in the tax wedge, a 10 percentage point reduction of unemployment benefits and/or a decline in product market regulation by two standard deviations would be associated with a drop in the unemployment rate by about 2.8, 1.2 and 0.7 percentage points, respectively.
Bell et al., 2002	UK, the 1999 reform in National Insurance Contributions (NIC)	The reform shifted the tax burden from low-wage to high-wage earners. A 1 percentage point rise in the NICs share is predicted to reduce nominal pay growth by around 1.4 percentage points after a year, while producer prices in the manufacturing sector rise by around 1.3 percentage points. Also, it led to a rise in employment growth of 0.5 percentage points, but the employment effect is statistically insignificant.
Daveri and Tabellini, 2000	EU countries	The observed rise of 14 percentage points in labor tax rates between 1965 and 1995 in the EU could account for a rise in EU unemployment of roughly 4 percentage points, a reduction of the investment share of output of about 3 percentage points, and a growth slowdown of about 0.4 percentage points a year. No effects for a subsample of Anglo-Saxon and Nordic countries.

[36] Vroman and Brusentsev, 2005; Rutkowski, 2007

Góra et al., 2006	A sample of 27 OECD countries for two years (1997 and 2003)	The tax wedge has a statistically significant and strong negative effect on the employment rate of unskilled prime-age male workers, but no effect on skilled workers.
Katz, 1998	USA	A 15 percent reduction in labor costs because of the Targeted Jobs Tax Credit yielded a net employment effect of 7.7 percent; under the assumption of an infinitely elastic labor supply, this implies an elasticity of labor demand of -0.5.
Nickell and Layard, 1999	Advanced countries	A one percentage increase in real labor cost in response to a one percentage point rise in the tax wedge between 0 percent in Austria and New Zealand to 1.6 percent in Belgium, and 1.4 percent in Ireland and Switzerland. No important differential tax effects on unemployment, but there is evidence that overall labor tax rates do influence labor costs in the long run and hence raise unemployment.
Rutkowski, 2007	ECA countries	A one percentage point change in the tax wedge results in a 0.3-0.6 percent change in the employment rate.
World Bank, 2005	EU8 countries	For a given GDP growth rate, each percentage point difference in the tax wedge is associated with a decrease in employment growth by 0.5 - 0.8 percentage points.

A study by Katz (1998) for the U.S. found that "wage subsidies to employers to hire disadvantaged workers appear to modestly raise the demand for labor for those workers. Stand-alone wage subsidies (or employment tax credits) that are highly targeted on very specific groups (such as welfare recipients) appear to have low utilization rates and may (in some cases) stigmatize the targeted group. But new evidence based on an examination of changes in eligibility rules for the Targeted Jobs Tax Credit (TJTC), the major U.S. wage subsidy program for the economically disadvantaged from 1979 to 1994, suggests modest positive employment effects of the TJTC on economically disadvantaged young adults. Policies combining wage subsidies with job development, training, and job search assistance efforts appear to have been somewhat successful in improving the employment and earnings of specific targeted disadvantaged groups." Estimates by Katz (1998) indicate that the TJTC program increased employment for disadvantaged 23- to 24-year-olds by 3.4 percentage points.

Past studies have shown that the employment of less skilled workers appears to be more sensitive to changes in the tax wedge than that of more skilled workers. Góra et al. (2006), using panel regressions for a sample of 27 OECD countries (including EU-8 countries) for two years (1997 and 2003), found that the tax wedge has a statistically significant and strong negative effect on the employment rate of unskilled prime-age male workers, but no effect on that of skilled workers.

Impact on wage levels. Another important gap in the literature is the effect of tax cuts and subsidies on wages, e.g., the extent to which labor taxes are shifted on to employees (the "pass through" effect). Studies in middle-income countries provide a wide range of estimates which indicate that, in some cases, the pass through can be quite large.[37] For example, research in Latin America suggests that

[37] World Bank, 2009

anywhere from 20 to 70 percent of the employer's social security contributions are passed on to the worker, and in some cases close to 100 percent.[38] This means that a large part of changes in payroll taxes is transferred to workers by adjusting wages, so that the effect on employment is marginal. Melguizo and González-Páramo (2012) base their meta-analysis work on 52 empirical studies, and conclude that "in the long run, workers bear between two thirds of the tax burden (on labor) in Continental and Anglo-Saxon economies, and nearly 90 percent in the Nordic economies." Higher values have also been found by Gruber (1997), who in the case of Chile has found an almost total shift, and by Cruces et. al. (2010), who have calculated a *"pass-through"* effect between 40 and 90 percent in Argentina. However, Prasad (2008) finds no effect of personal income tax rates on wage rates. This could be because his study focuses on manufacturing wages, and this sector is highly capital intensive, and as suggested by other authors (Davis et al., 2004), unresponsive to tax rates.

Impact on work hours. The effect of personal income taxes on work activity has also been studied in the literature although the evidence is scarce. In particular, cross-country comparisons in the mid-1990s conducted by Davis and Henrekson (2004) indicate that a tax hike of 12.8 percentage points (one standard deviation) leads to 122 fewer hours of market work per adult per year and a 4.9 percentage point drop in the employment-to-population ratio. It also increases the size of the shadow economy by 3.8 percent of official GDP. The evidence suggests that tax rate differences among rich countries are a major reason for large international differences in market work time and in the industry mix of market activity. Changes in hours of work in 21 OECD countries between 1956 and 2004 were studied by Ohanian et al (2008). The key finding of their paper is that differences in taxes across countries are a very important piece of the explanation for the vastly different levels of hours of market work.

Impact on informality. Labor taxes heavily contribute to informal employment. In the words of Giles and Tedds (2002), "Perhaps the single most commonly cited 'driving force' of the underground economy is the actual, or perceived, tax burden." [39] Governments are sometimes motivated to decrease taxes, particularly payroll taxes, to promote labor formality and thus provide social insurance services for a larger share of the population. However, many factors besides tax rates, including cultural factors, corruption, and enforcement capacity affect the level of informality. Economic development has historically involved a gradual shift from informal to formal employment, as well as an increase in the size of government coupled with increasing tax rates. Thus, many high-income OECD countries combine high tax rates with a relatively low incidence of undeclared work.[40] In a sample of 69 developing and developed countries, Friedman et al. (2000) found that higher tax rates are associated with lower—not higher—unofficial activity as a percentage of GDP, and argued that this is possible (at least in the richer countries) where higher tax burden is matched by better provision of public goods. Thus, the cost of higher tax burden is outweighed by the advantages of better public services, thereby reducing any incentive for the tax payers to move into informality.[41]

Finally, there is evidence that higher labor taxes are associated with larger shadow economies for countries at similar levels of per capita income. Regressions on a rich country sample (14 countries) in the mid-1990s indicated that a unit standard deviation tax difference of 12.8 percentage points is associated with, among other things, a rise in the shadow economy of 3.8 percent of GDP, which corresponds to a 24 percent increase in the size of the shadow economy evaluated at the mean.[42]

[38] Azemar and Desbordes, 2010; World Bank, 2009; Heckman and Pagés 2004; Oghe et al., 2003
[39] http://www.imf.org/external/pubs/ft/survey/so/2007/car0726a.htm
[40] OECD, 2006
[41] Rei and Bhattacharya, 2008
[42] Davis and Henrekson, 2004

Informality entails a loss in budget revenues by reducing taxes and social security contributions paid, and therefore the availability of funds to provide public goods and services. A large informal sector also invariably leads to a high tax burden on registered labor and firms because of the narrow tax base. A high level of informality also can undermine the rule of law and governance. This situation means that a significant share of the population does not have access to formal instruments to protect themselves against economic risk.

Overall, empirical evidence from different countries and regions confirms that the impact of labor taxes on employment, wages, work hours and on informality can be rather substantial. In particular, most studies from developing and transition countries estimate the (long run) elasticities in the -0.20 to -0.60 range, i.e., a 10 percent decrease in the cost of labor would cause employment to rise from between 2 and 6 percent.

A mandatory minimum state social insurance contribution was due to come into effect on January 1, 2017, but the government decided against its introduction in November 2016. The minimum social insurance contribution amount for self-employed and voluntarily insured persons was to be based on the minimum monthly wage.[43] Employers and employees (via a withholding tax from an employee) would have had to pay additional social insurance contributions to make up for any deficit in social insurance contributions below that based on the minimum wage. The objective was to reduce underreporting of income. Partly the minimum social insurance contribution was not introduced due to concern over the number of exemptions that would needed to confront potential vulnerabilities associated with the higher contributions. The mandatory minimum social insurance contribution scheme may have had a detrimental impact on the employment prospects of low-wage, particularly, part-time[44] workers who would have had to pay disproportionally higher taxes on earned incomes. It also would have limited the capacity of employers to respond to economic conditions by reducing working hours.

Options for differentiated social contribution rates

Income taxes and social security contributions may be subject to a floor, a ceiling, tax brackets, tax exemptions, personal basic exemptions, and tax credits. Examples from some of the countries in Europe are listed in Annex E, Table 65 and are summarized as follows:

- In many countries the tax legislation sets up a **social contribution floor**, often by categories of workers, which is different from the minimum wages. For example, in Bulgaria, the minimum amount of contributions varies according to occupation and industrial branch, and

[43] In 2016, a minimum amount for voluntary contributions was not set for the employees of micro-enterprises, who could join the state social insurance voluntarily. Contributions were made from freely selected income that did not exceed 720 euro a month. http://www.vsaa.lv/en/services/employees/contributions. A change has been made whereby an employer, who has the status of a payer of the micro-enterprise tax, has to pay social insurance contributions based on the minimum wage for each employed. In 2017, a transition period is planned and the taxable amount is 75 percent from the minimum salary.

[44] From Eurostat data, in 2015, there were 63,000 part-time workers in Latvia, or 7.2 percent of the total employed population aged 15-64.

is negotiated annually between the social partners. Lower floors are often established for self-employed, farmers, or voluntarily insured. In some countries (e.g., Switzerland, the Czech Republic, Bulgaria), persons who are not engaged in paid employment or are not insured on any other ground, are still obliged to pay minimum contributions at their own expense.

- In many countries, **a ceiling on contributions on insurable earnings** has been established as a fixed amount (e.g., Austria, Spain, Croatia, Cyprus, Bulgaria), or as a multiple of average wages (e.g., Slovakia, Slovenia, Romania, the Czech Republic), the minimum gross wages (e.g., Romania for sickness and maternity benefit contributions), or using some other benchmarks. In Latvia, the maximum taxable amount had been established at EUR 48,600 a year, but starting from January 1, 2016 mandatory contributions of the statutory social insurance have to be made also from income exceeding the maximum threshold of the object of mandatory contributions, i.e., also from the sum exceeding EUR 48,600 (solidarity tax).

- **Discounts in contributions** have been established for certain categories of workers, or employees' contributions are omitted or reduced in case of low incomes. In Austria, there is no employee unemployment insurance contribution to be paid on incomes up to EUR 1,311. In Slovakia, contributions as a percentage of the assessment base for the disabled is half of that for regular workers, and former long-term unemployed with low wages are exempted from insurance contributions. In Germany, the employer pays a reduced contribution for low-earners (on mini-jobs). In France, contribution for family allowances is paid by the employer at the rate of 5.25 percent, or 3.45 percent on wages lower than 1.6 times the minimum wage. In Switzerland, lower premiums have been established for youth. In some countries, contribution rates vary depending on the level of taxable earnings (e.g., U.K. and Austria).

- In some countries, there are **discounts for small enterprises**. For example, in France, for general health insurance schemes for employees, and for accidents at work and occupational diseases, a flat-rate deduction of employers' contributions of EUR 1.50 per hour has been established for companies with less than 20 employees. However, there is no evidence that targeted tax relief for small firms is more effective in increasing aggregate employment than general tax relief for businesses. In fact, special relief may hurt economic growth by creating a small-business trap, preventing small firms from growing larger to maintain their special tax treatment. Jobs created by small firms are also generally of lower quality than jobs created by large firms, with the former paying lower wages, offering more modest health insurance and pension plans, and providing poorer working conditions (Brown et al, 1990; IMF, 2012).

- Many countries have established **differentiated contribution rates depending on working conditions** to cover the risks associated with accidents at work and occupational diseases.

- Alternatively, **contributions for certain benefits or categories of individuals** can be paid from the state budget. For example, financing of sickness and maternity benefits in kind is tax-based in Cyprus, Denmark, Italy, Portugal, and Spain. In Bulgaria, contribution for sickness and maternity leave benefits is covered from general tax revenues on behalf of civil servants, soldiers, and other military personnel; the judiciary including judges, prosecutors, investigators, and bailiffs; uninsured persons under 18 years of age and for students up to the age of 26; socially vulnerable persons with a right to social assistance or accommodated in

social care centers; persons under arrest or imprisoned; war veterans and war invalids; and some other categories of individuals. A portion of the employer's contributions is paid from the state budget for people with disabilities. Also Bulgaria began to finance active labor market policies from the general budget rather than the contribution-financed Employment Fund (EC, 2014).

- **Minimum floor.** As the minimum wage sets a floor to the gross wage, especially in high income countries, the combination of the minimum wage and high employer contributions to social security leads to high wage costs for low-skilled workers and reduces their job opportunities in the formal sector. With binding wage floors in place, taxes paid by the employer cannot be passed on to minimum wage workers by lowering their pay. Employers may nevertheless be able to shift taxes paid for minimum wage workers to higher-paid workers by lowering their wages. Social contribution payments tend to accrue around the level of minimum contribution, suggesting that many firms report only wages that are close to the negotiated minimum contribution threshold. This under-reporting, combined with the sizeable informal sector, means that the tax base is not as wide as it could be, and that tax rates on those who pay them are higher than they otherwise might be. Hungary has tried to address this problem through the introduction of a double minimum wage contribution base with opt-out possibilities. Presuming widespread tax evasion through undeclared earnings, Hungary has established the employer's social contribution base at twice the minimum wage, unless the employer declares that workers are indeed earning the minimum wage (which, in turn, raises the risks of a tax audit). A minimum contribution floor increases the tax burden considerably for those in low-paying, part-time jobs. As a result, the total tax burden on employment income is very high for low income earners.

- **Differentiated minimum wages.** Another approach is to introduce multiple minimum wages to differentiate among workers with different productivity levels. Some countries have put in place differentiated minimum wages (or contribution bases) to reflect presumed variations in the productivity level of workers with different characteristics. However, these can increase administrative complexity, create enforcement challenges, and lead to wage discrimination (Kuddo et al, 2015).

  Minimum wages that are set higher for categories of workers with higher productivity (and expected wages) can be a potentially effective way to reduce undeclared earnings, by shifting some portion of wages from cash to taxable income. Another option is to differentiate the minimum wage according to sector and occupation. Yet another alternative is to set different minimum wage levels by region, given the substantial differences in regional wages in some countries. Whatever model is implemented, it is critical to maintain a low minimum wage for unskilled workers so that they are not priced out of the formal labor market.

- **Tax credits** can be a useful tool to mitigate the tax burden on vulnerable groups of population. This program provides tax credits to the labor income of families whose annual earnings remain below a certain threshold, often gradually phased out as income rises. These in-work tax credits reduce the net tax liability—or turn it negative in some cases for low-wage earners—and increase the net income gain from accepting a job relative to the alternative of being out of work. For example, policies such as the EITC (Earned Income Tax Credit) in the

U.S. or the WFTC (Working Families Tax Credit) in the U.K. have been shown to improve transitions from unemployment to employment as these policies shift the tax burden away from some disadvantaged groups (e.g. employed lone parents) (Lehmann et al, 2014). Currently, at least 14 advanced economies apply in-work tax credits, and experience has shown that low-skilled employment is relatively responsive to such financial incentives (IMF, 2011).

- **The presumptive approach.** In order to expand the tax base, some countries impose taxes on bases that are administratively determined rather than self-assessed by taxpayers. Presumptive systems may, for example, calculate taxable income based on key factors that are presumably associated with income generation such as sales, turnover, number of employees, size of firm, assets of the taxpayer, and so forth (Rutkowski, 2007). The estimated tax base typically is calculated based on coefficients for different factors applied to specific taxpayers or specific types of taxpayers (such as certain sized enterprises in particular industries). The idea is to use data available to officials to capture at least some minimum level of tax from those taxpayers who are considered to be unreliable sources of information on their own activities.

  Such presumptive taxation can be found, as an example, in Greece, where individuals may be taxed according to imputed income, when imputed income is higher than actual income declared, and the taxpayer cannot substantiate the difference. Imputed income is calculated based on criteria such as rent of second home, operating expenses of vehicles, costs of domestic servants, assets (e.g., cars, boats, ships), enterprise share-holdings, purchase or construction of immovable property, and loans to personal enterprises, partnerships, and limited liability companies (Wallace, 2002).

- **Reduced taxes on low income earners, older workers and women/secondary earners.** Section 3.1 illustrated how households in the lowest income quartile face a much higher METR than those in higher income groups. An increase in labor taxes will have the strongest effect on employment of worker groups for whom labor demand is most elastic. These include low-skilled workers, youth, older workers, and women. The negative employment effect will be amplified if the elasticity of labor supply of those groups is high. The current social protection financing structures in many countries discriminate against low wage earners. Most countries charge similar rates of payroll taxes and employer social contributions for minimum-wage labor as for higher-earning employees. Moreover, a minimum contribution floor at such a low wage increases the tax burden considerably for those in low-paying, part-time jobs.

  There is concern that a high labor tax wedge on low income earners reduces their probability of being formally employed. Reductions in employer social security contributions then can be effective in raising employment if targeted to low-wage earners (e.g., decreasing the labor tax wedge at lower wage levels) and where the link with benefits is weak (e.g., for health expenditures). In particular, targeted cuts in employer social security contributions can have a sizable impact on the employment prospects of low-skilled workers, particularly given their relatively high elasticity of labor demand (Gill et al, 2013). The low-skilled are more likely to be unemployed, informal or inactive. They are also expected to work more in temporary or

part-time contracts rather than regular contracts. Austria, Belgium, France, the Netherlands, Spain, and the United Kingdom have cut social security contributions by low-paid workers by about 1.5 percentage points since 1997 (IMF, 2011).

For example, France introduced payroll tax subsidies in 1993, and the system is still in place in a modified form. The program provides payroll tax exemptions for low-wage workers according to a sliding scale up to a threshold of 1.33 times the minimum wage, when the subsidy is stopped. The maximum exemption is 18.2 percentage points in employer's payroll tax for minimum wage workers. Crépon and Desplatz (2002) estimated that each reduction in labor cost of 1 percentage point led to a rise in employment of 1.6 percent in manufacturing and 1.8 percent in nonmanufacturing, and the unskilled labor content increased substantially. These changes in employment were due to two effects: substitution between factors of production—as less skilled labor was substituted for more skilled labor and capital—and expanded profitability and output (because reduced labor costs enabled firms to lower prices and thus boost demand).

The estimated employment effect, however, has varied. In Belgium, for example, the tax cut seems to have had a significant impact on registered employment, but not in the Netherlands (World Bank, 2009). However, increasing the progressivity of taxation may also have efficiency costs, notably in terms of tax avoidance and reduced incentives to improve skills and productivity for low-income earners.

Older workers are found to be more sensitive to financial incentives than younger workers. Lower labor tax rates for older workers can increase incentives for them to remain in the labor force—although this also raises equity issues, as high-income workers generally work longer. Australia, Denmark, the Netherlands, and Sweden, for example, have introduced specific earnings tax credits for older workers, aimed at stimulating labor-market participation (IMF, 2011).

Female labor supply is more responsive to taxes than male labor supply. Hence, a tax relief for women would likely elicit a positive net supply response, even when financed by higher taxes on men. Where legal constraints prevent a gender distinction in the tax burden, special tax relief can be targeted to single parents (single mothers generally have the highest elasticities) or to secondary earners in couples. Another way to reduce the tax burden for secondary earners is by replacing family taxation with individual taxation. Family taxation, or family-related tax elements, such as mandatory joint filing, dependent spouse allowances, or credits conditional on family income, is still widespread. However, many OECD countries have moved toward individual taxation over the past decades. Family tax systems result in high tax wedges for secondary earners in couples, especially when rates rise rapidly with family income (IMF, 2012).

Also, the negative employment effect of payroll taxes will be stronger if labor market regulations (such as minimum wage or unemployment benefits) or strong trade unions limit the downward wage adjustment and the tax cannot be absorbed by a commensurate fall in wages.

These reforms would need to be enforced in a budget neutral manner. While lowering the tax wedge might partly finance itself through increased revenues due to higher employment and output, these are likely to be insufficient to fully compensate for the lower contribution or tax rates. It also seems that some transition countries (e.g., Armenia, Bulgaria, Estonia, Kazakhstan, Slovakia, and Russia) have experienced increases in tax revenues when taxes have been cut. The larger is the share of informal business activity before reform, the higher is the revenue growth after.

Social contribution ceiling

Historically, the different countries have considered or utilized at least four approaches to the social contribution ceiling: (i) exclusion from the general social security system of all persons who earn above the ceiling; (ii) establishment of a maximum amount of earnings for contributions and hence a maximum base on which to calculate benefits (a feature of virtually all systems today); (iii) no ceiling at all; and (iv) use of some other limiting device (such as a maximum of the benefit amount but not on earnings subject to contributions) (Horlick and Lucas, 1971).

The most prevalent type of system—whereby a maximum amount of earnings for contributions and hence a maximum base on which to calculate benefits is established—represents a compromise between the interests of the highest paid segments of the labor force and the needs of the lowest paid. To tax the entire range of earnings is for most countries politically difficult. The contributions for the highest earnings brackets would be enormously more than the eventual benefits. There are also pressures from employer groups and from the highest earners to keep the ceiling from rising "too high". The approach with no ceiling for social contributions would theoretically achieve the greatest amount of redistribution, since all the earnings would be taxed. On the other hand, the benefits could be relatively small under a weighted benefit formula. If there were no weighted benefit formula and the benefits were a direct percentage of total earnings, benefits could be extremely large.

The decision to bring in a ceiling on social contributions along with the flat tax rate is debatable (see for instance OECD, 2008). It is true that most countries have such limits. Upper bounds on contributions limit cross-subsidization in social security and therefore make most sense when personal income taxation does a lot of work in redistribution. Given the introduction of the flat tax rate, the case for the ceiling is therefore weakened. Moreover, ceilings bring discontinuity in the effective marginal tax schedule which is at odds with the goal of flatter and smoother schedules that flat tax regimes aim for. Nevertheless, even with a flat tax there may be reasons for a contribution ceiling. Ceilings cut the incentives for tax avoidance among high earners. And, softer treatment of high-end earners may be an effective means of tax competition as these workers are more internationally mobile.

Social protection of the self-employed, and social contributions

Self-employment may be seen as either a survival strategy for those who cannot find any other means of earning an income, or as evidence of entrepreneurship and a desire to be one's own

boss.[45] The Europe 2020 strategy recognizes entrepreneurship and self-employment as key for achieving smart, sustainable and inclusive growth; however, at the same time, it urges countries not to promote involuntary or precarious self-employment. Self-employment makes a considerable contribution to the EU economy in terms of entrepreneurship and job creation. It accounted for 14.1 percent of total employment in the Union in 2015 (or 30.5 million self-employed). Moreover, European level data indicate that the self-employment sector has shown a degree of resilience to the economic crisis, as the relative employment decline has been more moderate in comparison with paid work. In Latvia, the number of self-employed has increased from 87,400 in 2008 to 100,500 in 2015 (11.6 percent of the total employment), of which 36,500 were self-employed persons with employees (employers), and 64,000 were self-employed persons without employees (own-account workers).

I**n certain countries, the self-employed seem to be more 'at risk', i.e. they do not have the same social protection as employees if they are short of work, ill, or disabled**. The self-employed also fare worse in terms of pensions and entitlements to paid holiday. Also, the self-employed are more vulnerable in the event of unemployment. In some countries, the self-employed opt to make lower contributions and, therefore, have lower levels of protection, which is the reason for the inequality they face in relation to employees.

Coverage. Most countries in the EU28 do not operate a separate social protection system for the self-employed. In Cyprus, Croatia, Denmark, Estonia, Finland, Hungary, Ireland, Malta, the Netherlands, Poland, Romania, Slovakia, Slovenia, Sweden, and the United Kingdom, self-employed are covered by the general compulsory social security system. On some occasions, for individual regulations, special requirements apply for the self-employed (Annex E, Table 66).

In some other countries, a special system covers self-employed persons against all traditional risks, with few exceptions (for example, Belgium, France, Germany, Greece, Italy). For example, in France, social protection for the self-employed is subject to separate regulations. Farmers come under the agricultural system *(MSA).* Craftsmen, retailers, and manufacturers fall within the scope of the Social Protection Scheme for the Self-employed *(RSI)*, while members of the liberal professions are covered by separate schemes *(CNAVPL)*. In Greece, there exists a contributory basic system for farmers, called Agricultural Insurance Organization. Self-employed persons (craftsmen, retailers, professional motorists, hotel owners and others) are insured with the Social Security Organization for the Self-Employed. Members of liberal professions (medical personnel, doctors, pharmacists, engineers, lawyers, notaries etc.) are insured with the Insurance Fund for Independent Professionals. In Germany there are, on the one hand, special provisions for certain groups of self-employed (notably craftsmen), who are compulsorily insured with statutory pension insurance and, on the other, independent social security systems for farmers (including assisting family members), self-employed

[45] Self-employment is defined as the employment of employers, workers who work for themselves, members of producers' co-operatives, and unpaid family workers. The latter are unpaid in the sense that they lack a formal contract to receive a fixed amount of income at regular intervals, but they share income generated by the enterprise. Some countries also make the distinction between self-employed status and 'dependent self-employed' (e.g. Spain, Italy), where the self-employed person works for only one client. Others distinguish self-employment which is carried out in addition to paid employment (e.g. Belgium).

artists and publicists, and special schemes for members of the professions, who have the right to form associations.

Financing of social protection for the self-employed. In Latvia, the Cabinet of Ministers sets the minimum contribution basis. The minimum amount of earnings subject to contributions was EUR 4,440 per year in 2016. Self-employed persons are insured if their income exceeds the minimum amount of the base for compulsory contributions defined by the Cabinet of Ministers. Social insurance contribution rates differ among categories of self-employed, and were the following in 2016: (i) self-employed persons (also those with disabilities of group I or II) insured for risks of old-age, death, sickness, parental leave, maternity, and disability: 30.58 percent; (ii) self-employed persons over retirement age and persons who receive old-age pension (including pre-retirement pension) insured for risks of old-age, death, parental leave, maternity, and sickness: 28.21 percent; (iii) individuals carrying out management of real estate and registered as tax payers for income gained from economic activity who are insured for risks of old-age and disability: 26.19 percent. In Latvia, self-employed persons do not make social insurance contribution payments concerning insurance against occupational accidents and insurance against unemployment, as they employ themselves and bear responsibility for their working conditions and safety.

EU countries use different benchmarks, floors, and ceilings to tax the self-employed. A few examples follow.

i. In Bulgaria, the minimum insurable income for self-employed persons who have started an economic activity in 2015 and in 2016, is a fixed amount of BGN 420 (EUR 215) established in the annual budget. The minimum insurance income for farmers and tobacco producers is BGN 300 (EUR 153).

ii. In the Czech Republic, the minimum premium base is 12 multiplied by 50 percent of the monthly average salary (since 1 January 2016 the minimum premium base is CZK 13,503 (EUR 500) monthly), so the minimum premium is CZK 1,823 (€ 67) per month). If such established minimum assessment base for "full time" self-employed is less than 50 percent of half of average wage, the minimum assessment base in 2016 is CZK 6,752 (EUR 250) monthly.

iii. In Austria, the rate of contribution is 15.5 percent of the insurable value of landed property that does not exceed the upper limit of assessment of monthly EUR 5,670.

iv. In Estonia, the Social Tax Act stipulates a minimum amount of social tax and a ceiling on social tax, which is to be paid by the self-employed (the same minimum also applies to social tax paid by employers on behalf of their employees, but there is no ceiling on social tax paid by employers). The amount of social tax to be paid by self-employed per working-able, insured person cannot be smaller than the amount of tax calculated from the rate established by the State in the annual State budget, and shall not be higher than the amount of tax calculated on the basis of 15 times this rate. In 2015, the monthly rate established in the State budget was EUR 390. Accordingly, the minimum amount of social tax to be paid by the self-employed was EUR 128.7 (0.33 x 390) per month, while the ceiling was EUR 1,930.5 (0.33 x 15 x 390) per month. In the case of being simultaneously employed and self-employed, the minimum amount is applied on the total of wage income and income from self-employment

v. In Hungary, minimum contributions are linked to the national minimum wage: in case of pension contribution on the basis of 100 percent of the minimum wage; in case of health insurance and labor market contribution on the basis of 150 percent of the minimum wage; and in case of social contribution tax on the basis of 112.5 percent of the minimum wage. For health, pension, and unemployment insurance, the self-employed pay both employer and employee contributions as follows: (i) as an employee, 4 percent for benefits in kind and 3 percent for cash benefits, 1.5 percent as labor market contribution, and 10 percent for pension insurance; (ii) as an employer: 27 percent for social contribution tax.

vi. In Ireland, self-employed Social Insurance Contribution provides coverage for survivors, maternity/adoptive and guardians, and old age. There are no specific contributions for unemployment and sickness. For old age, maternity, and survivors, the self-employed pay contributions at the rate of 4 percent of all income, subject to a minimum payment of EUR 500 per annum. There is no annual income ceiling.

vii. In Lithuania, the general contribution rate for self-employed persons is 26.3 percent. Owners of personal enterprises contribute from income declared as wages. In some cases, when they do not have state social insurance guarantees, they contribute from minimum monthly wage. Farmers pay contributions from 12 minimum monthly wages per year, but only in cases where their income is equal to or higher than 4 Economic Size Units.

viii. In Slovakia, there are upper and lower ceilings for the Assessment Base. The minimum monthly Assessment Base is 50 percent of the national average wage. Self-employed persons with a yearly income less than EUR 5,148 (50 percent of the national average wage in 2014) are exempted from compulsory sickness and maternity insurance (cash benefits); compulsory invalidity, old-age, and survivors; as well as unemployment insurance. The maximum monthly Assessment Base is 5 times the national average wage.

ix. Several other countries have established floors and ceilings for contributions. In particular, in Spain, the contribution basis varies between a minimum of EUR 893.10 and a maximum of EUR 3,642.00 (per month), chosen by the beneficiary within certain limits. In the Czech Republic, the maximum premium base is 48 multiplied by the monthly average wage (CZK 1,296,288 (EUR 47,959)) per annum. In Bulgaria, the maximum amount of insurable income for all categories of insured persons, including self-employed, is BGN 2,600 (EUR 1,329).

x. In the United Kingdom, National Insurance contributions are graduated for the self-employed (in contrast with those for employees) according to three income classes: self-employed persons with annual profits less than GBP 5,965 (EUR 8,419) can apply to be exempt from paying compulsory contributions. Those with annual profits GBP 5,965 (EUR 8,419) or more pay a flat-rate contribution of GBP 2.80 (EUR 3.95) per week. Finally, those self-employed with annual profits between GBP 8,060 (EUR 11,376) and GBP 42,385 (EUR 59,823) also pay an earnings related contribution of 9 percent, and 2 percent above GBP 42,385 (EUR 59,823).

Eligibility for benefits. Access to benefits for the self-employed differs compared to the wage-based employed population across EU countries. As far as cash benefits for sickness and maternity are

concerned, in Austria, Italy, and Germany, for farmers, no relevant statutory protection system has been set up. In Belgium, the right to benefits is applied after a qualifying period of six months. In addition, for sickness benefits, a 1-month waiting period exists. In Poland, sickness insurance is to be taken on a voluntary basis for self-employed persons. The same is true for maternity benefits. In Italy, in case of maternity, two months before the expected date of birth and until three months after delivery, insured persons receive maternity benefits of 80 percent of conventional earnings.

In the EU, for the self-employed, membership of statutory pension insurance is compulsory, and as a rule, old-age benefits are granted according to the provisions of the general rules. Often the qualifying period has been established. For example, in Germany it is five years for craftsmen and retailers having a home-based business. Membership in old-age insurance is also compulsory for farmers. Before the beneficiary is able to receive benefits, he/she should have reached the legal retirement age and the agricultural undertaking must be given up. The qualifying period for farmers is 15 years. In Greece, full pension for self-employed becomes available at 67 years of age and an insurance record of 15 years; or 62 years of age and an insurance record of 40 years. In Poland, self-employed persons generally do not have the right to early retirement pension. In Finland, a self-employed person is obliged to take out pension insurance when the activity concerned has lasted for at least four months and the estimated earned income is above a certain amount. Earnings-related pension insurance for self-employed persons in agriculture, i.e., farmers, fishermen, and reindeer herders, is compulsory when the farm contains more than 5 ha of arable land and income is above a certain amount.

As far as insurance against invalidity is concerned, it is compulsory for the self-employed person in Belgium, Spain, and Slovenia. For example, in Spain, after a minimum contribution period, which depends on the age of the beneficiary when invalidity occurred, the beneficiary is entitled to an invalidity pension under the same conditions as in the General Scheme. Insurance against accidents at work and occupational diseases is compulsory in Slovenia, but there is no special protection system against risk of accidents at work and occupational diseases in the Netherlands, Germany (for craftsmen and retailers in the statutory system), the Czech Republic, and Bulgaria. In Finland and Romania, self-employed persons may take out voluntary insurance against accidents at work and occupational diseases. For self-employed farmers, the insurance is compulsory.

In the EU28, family benefits are tax financed (universal non-contributory scheme) in most countries, except Austria, Belgium, France and Italy, and self-employed are entitled to the same benefits.

Practices differ with regard to protection against unemployment. In Slovenia, self-employed persons are also covered by compulsory unemployment insurance. They are therefore entitled to unemployment benefits, payment of social security contributions, and payment of contributions for pension and invalidity insurance one year prior to fulfilment of the minimum conditions for old-age pension. Unemployment insurance for self-employed is available also in Finland and Poland. In Estonia, the self-employed are not covered by the unemployment insurance scheme (neither on compulsory base nor voluntarily); the self-employed are, however, covered by the non-contributory State unemployment allowance scheme. On the other hand, there is no compulsory unemployment insurance for self-employed farmers in Germany. If there is no sufficient income and no disposable assets, self-employed farmers are in principle entitled to the standard allowance granted to

jobseekers, Arbeitslosengeld II, which is a universal allowance granted to the gainfully employed to secure their subsistence. There is no compulsory unemployment insurance for self-employed craftsmen and retailers. Also, in Greece, unemployment risk is not covered in the farmers' system. For all self-employed in the Netherlands, the corresponding law applies only to employees. In Romania, the self-employed can apply for voluntary insurance against unemployment.

In summary, the financing of social protection benefits for self-employed varies by country. Many countries have established the minimum level of income for which social contributions apply (minimum floor of taxation). However, if the "reference" wage (determining a minimum social contribution) is not adjusted for hours worked, social contributions become disproportionately high for part-time workers and self-employed with low incomes, making working part-time too costly. Some countries have also established a ceiling for taxable incomes, thus creating incentives for high productive employment. As far as benefits are concerned, depending on the country, a combination of mandatory insurance (especially for pensions), voluntary insurance, and lack of insurance for certain benefits applies.

Labor force participation: incentives for older workers and other vulnerable groups

European societies are aging and in order to limit the shrinking of the workforce due to demographic change, there is an urgent need to remove key barriers to employment for older workers, and to allow longer working life for everybody. Longer working lives result in more contribution years and fewer benefit years, thus contributing directly to the adequacy and sustainability of the pension system. One of the Europe 2020 strategy headline targets for smart, sustainable and inclusive growth includes 75 percent of the 20-64 year-olds to be employed by 2020. To achieve this objective, major reforms are needed to enhance employment of older workers as well. Reforms on the labor market and in the pension system should encourage both labor demand and supply for older workers. On the supply side, further reductions in benefits for early retirees and in unemployment benefits should increase work incentives for older workers. On the demand side, employment opportunities of older persons can be further enhanced by easing restrictions for the use of atypical forms of employment contracts. The pension system could also be reformed to include larger pension decrements for early retirees and larger benefit increments for later retirement, so as to ensure actuarial neutrality.

An aging workforce is commonly felt to be problematic because older workers are seen to be (OECD, 1998):

- less productive than younger workers, because of poorer health or fewer, or less up-to-date, qualifications;
- less willing/able to learn new skills; and/or
- having shorter expected stays with the company, since retirement is close, thus making it not worth investing in their skills.

As a consequence, older workers are considered both more vulnerable for dismissal, or to be targeted by companies wishing to make workforce reductions, and less able to find new jobs should they lose their current work.

Discrimination of older cohorts. From a legal perspective, discrimination can be understood as inequality before the law within either the formal legal system or customary law. It results from unequal treatment on the grounds of race, gender, age, religion, political opinion, national extraction, or social origin; or the unequal impact of policies, practices, or rules. Employment outcomes are affected by each of these layers of discrimination (World Bank, 2012c).The prohibition of discrimination on grounds of age had already been embodied in the employment legislation in all the countries in the region. However, the negative perceptions of older people in the workplace constitute a major obstacle to prolonging active lives and discourage employers from recruiting workers over 55. There are still considerable misconceptions of the productivity and performance of older employees. Employers often have negative perceptions about older workers, especially about their ability to adapt to technological and organizational change. Around 6 percent of the adult population in the European Union reported that in the past 12 months they have personally felt discriminated against or harassed as a result of their age (OECD, 2011).

Evidence does not necessarily point to older people being less productive. It is argued that cognitive and physical skills decrease at a steeper rate than working experience increases, leading to an overall decreasing working productivity (see discussion in Caliendo and Hogenacker 2012; SVR 2011). However, more recent studies provide evidence that working productivity does not decrease for older people (Malmberg et al. 2008; Göbel and Zwick 2009). According to a recent report from the European Commission, "there is no empirical evidence that older workers are more or less productive than other age groups" (EC, 2003). In fact, productivity at the workplace does not seem to be closely related to age but is rather related to the quality of working conditions and to the time over which an individual is employed to do the same tasks. In that respect, it is not age but rather the quality of work and monotony that makes workers less productive, even at a younger age. A recent study by Börsch-Supan and Weiss (2011) shows that the overall productivity of older people even increases slightly. Ensuring good and healthy working conditions as well as a variety of tasks is therefore critical for preventing declining productivity.

There is a strong negative relationship between employment protection, based on the OECD's index of the strictness of employment-protection legislation, and both the employment rates of older people and hiring rates for older workers. The correlations are statistically significant at 1 percent and 5 percent levels respectively. However, more rigorous empirical studies, controlling for other factors affecting employment rates of older workers, have mixed results, with some showing a much weaker relationship between employment protection and labor-market outcomes for older workers (see, *inter alia*, OECD, 2006). In particular, strict employment-protection legislation can make it costly to hire older workers.

Part-time employment. Making it easier and less costly to work part-time can be advantageous for both employers and workers and can help to bring more people into the workforce. In many countries a large proportion of workers seem to be willing to take on part-time work because it enables them to combining work with family responsibilities or education. On the demand side, part-time work gives employers more flexibility to adjust hours worked to the economic cycle, facilitating adjustment of production and labor costs. On the labor supply side, part-time work may increase the labor market choices open to individuals and may draw people into the labor market that were previously unwilling or unable to work.

Although young people make up a significant proportion of part-time workers in many countries, for older workers the scarcity of options in part-time and home-based employment prevents individuals from remaining active for longer and often result in an abrupt exit from the labor market once the retirement age is reached, or even before that. Indeed, qualitative work in Croatia and Poland found that half of those between ages 55 and 70 would have liked to delay retirement but that appropriate arrangements, such as part-time contracts, were not always available (World Bank, 2012a, 2012b). In the EU27 in 2015, 19.6 percent of workers were engaged in part-time, with rates as high as 50.0 percent in the Netherlands, 27.3 percent in Austria, and 26.8 percent in Germany. Women work part-time more often than men. At the other end of the spectrum, part-timers form only 2.2 percent of the total workforce in Bulgaria, 5.3 percent in the Czech Republic, and 5.7 percent in Hungary (Annex E, Table 67). Employees in emerging market economies often cannot afford to work part-time because of the low wages paid for these jobs and because the costs of taking these jobs (such as transport, meals, clothes, and childcare) are too high in relation to these earnings. Only those who already receive a basic income from either a pension or a social benefit can afford to work for such low wages.

Constraints to part-time work also arise from the tax and benefit systems. In some countries, the "reference" wage (determining a minimum social contribution) is not adjusted for hours worked, meaning that social contributions are disproportionately high for part-time workers making hiring of part-time workers at pre-retirement age too costly. (Arias et al, 2014).

From an economic policy perspective, the promotion of part-time work through incentives may be an important measure through which the labor market participation of older workers can be increased. As an example, in Austria, the part-time allowance for older workers can be paid for men aged 58 and over and women aged 53 and over, as a measure to safeguard and maintain employment of older workers until retirement. The part-time scheme gives older employees the opportunity to reduce their working hours with partial wage compensation, while preserving the basis for entitlements to pensions, unemployment and health insurance.

A number of countries have taken direct action to reduce the cost of employing older workers through wage subsidies or a reduction in social security contributions. Some of these schemes are simply targeted on age alone, while others also take account of additional characteristics of older workers. In Spain, since 2011 measures have targeted workers over 59 with four or more years' service in the same company, providing for a 40 percent reduction in the employer's social security contribution for a maximum of one year. A study of employment grants has shown that their impact on the labor market has been positive but limited and that they have often produced deadweight effects (OECD, 2012b).

Main conclusions:

- Consider policies to reduce the tax wedge on low-income workers (as outlined in more detail in the policy conclusions of Section 3.1).
- Continue with the removal of the ceiling on social contributions. Given the flat tax rate, the solidarity tax introduces a small element of redistribution in the system.

- Apart from tax-benefit policies, the policy agenda to support an increase in the number of higher productivity formal sector jobs is critical for reducing informality and increasing the adequacy of social protection contributions.

4. CORPORATE INCOME TAXATION

While Latvia's CIT regime can be said to contain many of the ingredients that are required for a well-functioning system of corporate income taxation, there are areas where the effectiveness of the regime could be enhanced and tax related distortions reduced. As with all taxes, the design and determination of appropriate policies for corporate income taxation needs to be considered in the context of the well-established principles of neutrality (as respects various forms of business activities), efficiency (in minimizing compliance costs), certainty and simplicity (with tax rules that are clear and easy to understand), effectiveness and fairness (in the imposition and collection of tax) and flexibility (in adapting to changes in technology and economic activity). At the same time, countries around the world are having to frame their corporate income tax policies against a background of ever-increasing globalization and competition for mobile investment and Latvia is no different in this regard. There is also widespread acceptance internationally of the need for effective measures to counter base erosion and profit shifting (BEPS) and a range of actions have been agreed at OECD and EU to deal with BEPS and limit the scope for international tax avoidance by multinational enterprises. Within this context, it is desirable that CIT policies are designed and developed to deliver a tax regime which:

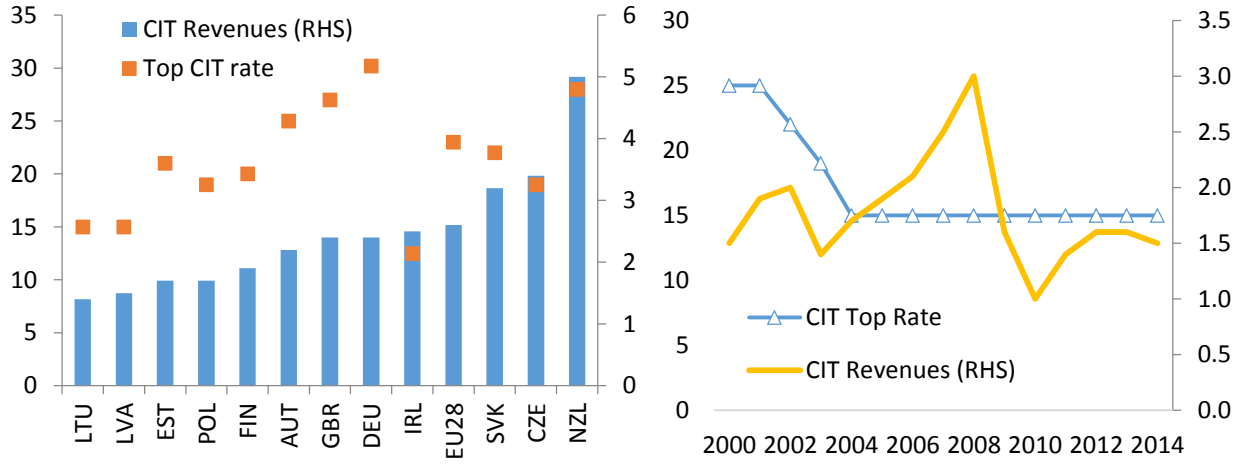
- facilitates enterprise and minimizes distortions in relation to location of economic activity, legal form of business entities, investment and investment financing,
- is stable and sustainable, with predictability and certainty for businesses making investment decisions—too many or too frequent changes in the regime does not provide confidence for investors,
- provides a broad tax base with targeted incentives, where appropriate, for investment in R&D and innovative enterprises,
- provides a sufficient revenue yield from the corporate sector on a year to year basis that contributes to equity and fairness of the overall tax system,
- is open and transparent in the operation and administration of the tax rules (e.g. in relation to eligibility for tax reliefs) – this also helps to enhance equity and fairness of the tax system, as well as public confidence and international acceptance,
- restricts, as far as possible, the opportunities for tax avoidance and aggressive tax planning (e.g. through measures to counter profit and manipulation of financial structures),
- promotes compliance and provides effective deterrents to counter evasion and limit the scope for operating in the shadow economy,
- is compliant with EU law and State Aid rules and aligned with tax policy principles agreed within EU (e.g. Code of Conduct on Business Taxation) and OECD (e.g. transfer pricing guidelines and policies to deal with BEPS), and
- is complemented by an efficient tax treaty network to eliminate double taxation while providing for effective taxation of corporate income.

Generally, it can be said of the Latvian CIT regime that while it exhibits many of these features in varying degrees (e.g. it has a relatively low headline rate that has remained in place since it was introduced in 2002), there are areas where the effectiveness of the regime could be enhanced (e.g. broadening the tax base by re-focusing tax allowances), where distortions in investment financing

could be removed or reduced (e.g. ensuring equal treatment of debt and equity costs) and where revenue leakage could be curtailed (e.g. through reform of micro-enterprise tax).

Corporate income tax revenue in Latvia is low by both EU and OECD standards, which may reflect both the low tax rate and also tax base erosion. In 2014, Latvia's CIT revenue as a percent of GDP was about 1.5 percent, compared to the EU average of 2.6 percent and the OECD average of 2.8 percent. One reason for Latvia's CIT shortfall is the low tax rates, both statutory and effective (Figure 48). The low effective rates are caused both by tax incentives for investments (the possibility to carry forward losses, accelerated depreciation of fixed assets, enhanced depreciation for new technological equipment for production, tax relief for R&D expenditure) and tax credits (for farmers), deductions and by loopholes. This is confirmed by the fact that the productivity of CIT[46] in Latvia is not only somewhat below the EU average but also lags behind Slovakia, the Czech Republic, and Ireland. Although the CIT revenue-to-GDP ratio in Latvia has averaged about the same since 2000, it has been quite volatile. A rise in revenues to 3 percent of GDP in 2008 (caused by a surge in profits and the lowering of the statutory rate, see Figure 48) was followed by a rapid drop during the crisis and a slow recovery thereafter, which was limited by the introduction of the micro-enterprise regime, see Figure 48, second panel).

Figure 48. CIT: Top Statutory Rates (Percent) and Revenue (Percent of GDP)



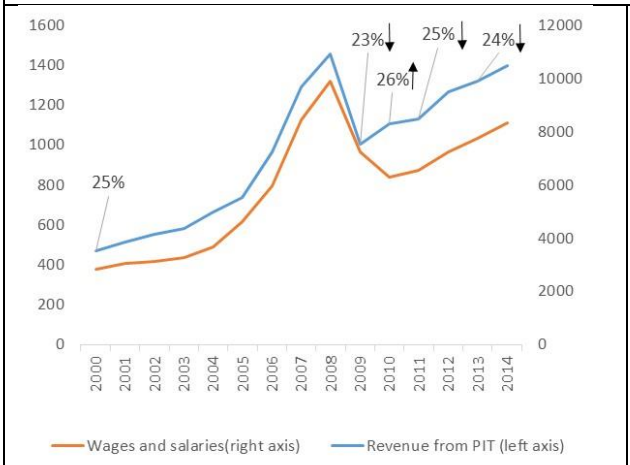
Sources: OECD, KPMG, Latvia MoF.

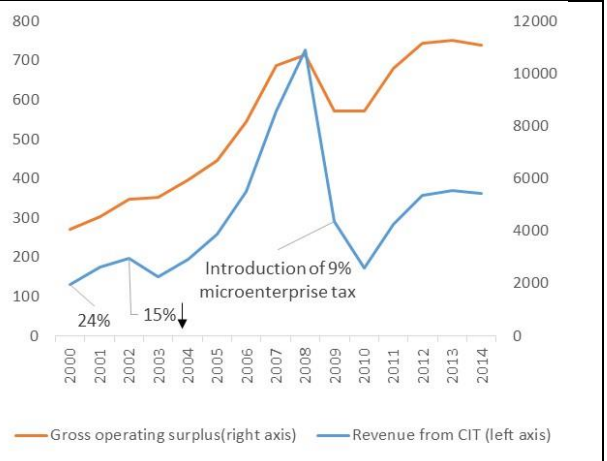
The crisis hit the income tax base for both corporations and households in Estonia, Latvia, and Slovakia as in many other EU countries, leading to lower income tax revenues, but after the crisis, income tax revenue followed the recovery pattern of wages and corporate profits in Estonia and Slovakia but not Latvia (see Figure 49). CIT revenues stayed below the level corporate profits developments would have suggested, partly as a result of the introduction of a micro enterprise tax among other policy changes that also increased tax avoidance. PIT revenues in Latvia were more than the recovery in the wage bill implied, probably with the assistance of a broadening of the tax base in 2010 to cover capital income from 2010.

[46] Productivity is measured by CIT revenue as a percent of GDP divided by the CIT rate.

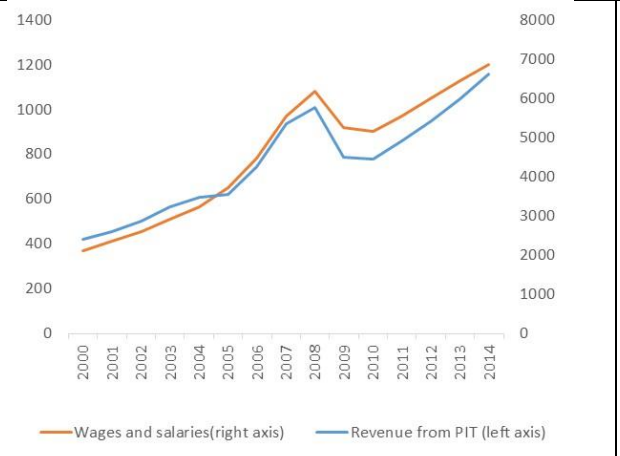
Figure 49. PIT and CIT and their Potential Tax Bases, Latvia, Estonia, and Slovakia 2000-2014, EUR Million

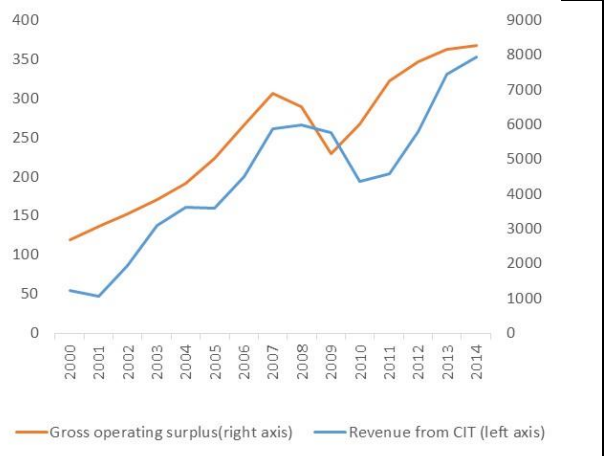
A. Latvia



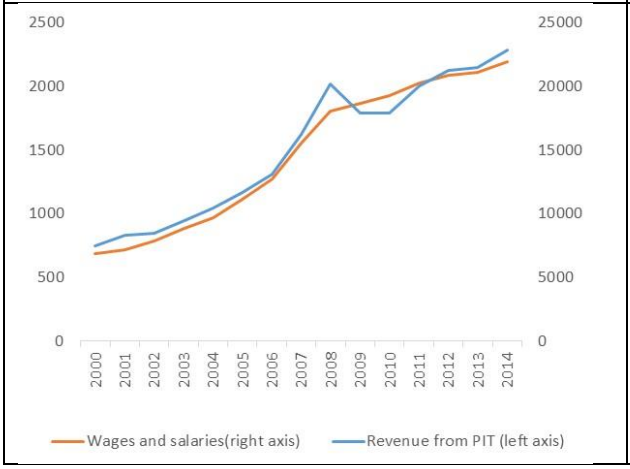


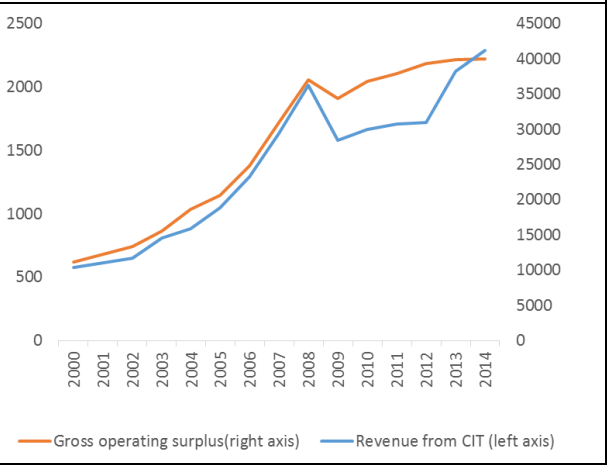
B. Estonia





C. Slovakia





Source: Eurostat national accounts data, OECD data on income from taxes.

Low CIT revenues are due to a narrow and eroded tax base. The Ministry of Finance Report on tax expenditures for 2014 reveals that the CIT revenue foregone (tax expenditures) in 2014 as reported by the State Revenue Service was about 1.5 percent of GDP, with the promotion of investment accounting for about 80 percent of the total amount. Most of the incentives relate to lowering the burden on investment by allowing generous depreciation and loss-carry-forward schemes (most of the tax expenditure)—which all conform to the rules set out in EU law on State Aid. The MOF report shows that accelerated depreciation of fixed assets were used by 51,583 commercial operators at a total cost of EUR 52.7m in 2014 while relief for losses incurred in current and previous taxation periods were used by 16,661 commercial operators at a total cost of EUR 122m in 2014. The Ministry of Finance Report notes that these two relief measures are related, which would suggest that claims for loss relief arise in part from losses created by expenditure qualifying for accelerated depreciation (i.e. as distinct from commercial losses). The less typical for the EU are incentives for selected sectors that are offered in Latvia (such as shipping, agriculture or financial sector). The main avoidance vehicles arise from the use of tax incentives by domestic firms e.g. via micro-enterprise tax.

There may be some scope for broadening the CIT base by reducing specific tax expenditures that may not be providing sufficient benefits relative to their cost in tax revenues foregone. At the same time, due account would need to be taken of the potential impact of any base broadening measures on economic activity and employment. The Ministry of Finance Report on tax expenditures for 2014 analyzed the effectiveness of various CIT reliefs and based on that a number of changes were made in 2014. The main changes included amendments to the relief for R&D (with effect from 1 July 2014), abolition of group relief for losses (from 1 January 2014) and abolition of the rebate for investment in fixed assets in territories of special support (for assets acquired after 2012). Still there may be further scope for broadening the CIT base by reducing specific tax expenditures that may not be providing the desired economic benefit. At the same time, it would be important to ensure that the Latvian CIT regime remains competitive and attractive for investment.

Depreciation

Section 13 of the Law on Enterprise Income Tax sets out the rules for depreciation. Assets are depreciated on a reducing balance basis (i.e. based on tax written down values) at specified rates depending on the category of asset. There are five asset categories and the rates of depreciation range from:

- 5 percent for buildings and structures,
- 10 percent for railway rolling stock and technological equipment, ships, power equipment,
- 35 percent for computer equipment and software
- 7.5 percent for oil exploration platforms and equipment
- 20 percent for other fixed assets.

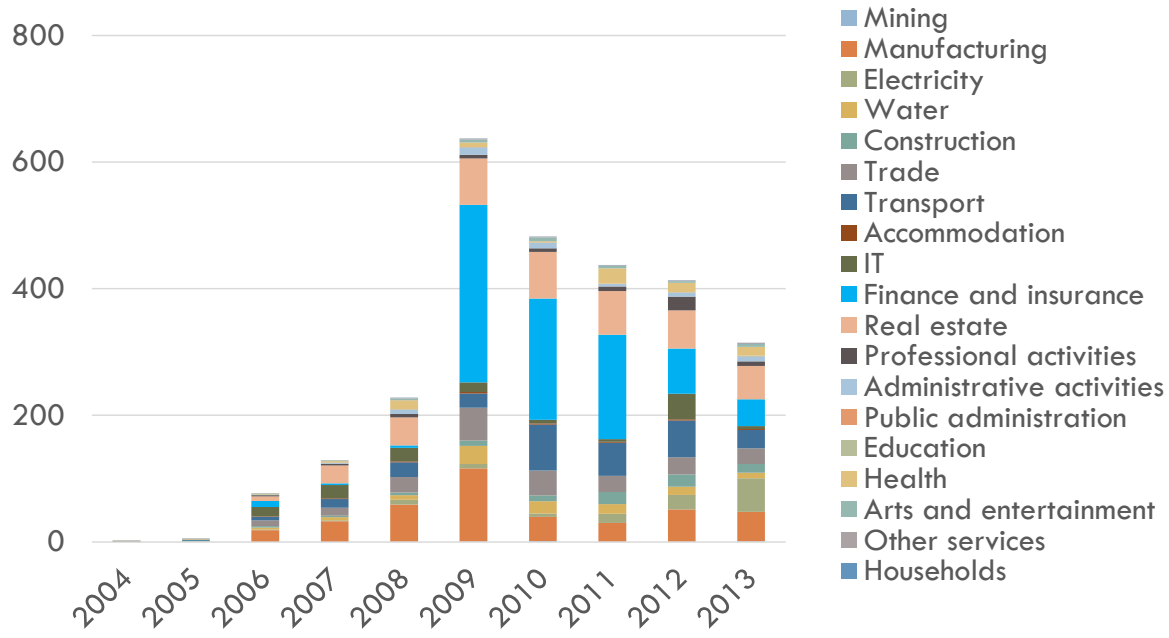
These rates are then doubled for the purposes of determining the amount of depreciation for tax purposes, so the effective rates of depreciation are twice those set out above (with the exception of certain vehicles, e.g. motor cars, where a multiple of 1.5 applies). Applying these effective rates on a reducing balance basis provides for relatively high levels of depreciation in the early years with depreciation levels gradually declining in later years.

Some adjustments to the depreciation regime may be appropriate with a view to limiting accelerated depreciation and aligning tax depreciation more closely with economic depreciation. Given the wide range of assets with differing economic lifespans, it would be very difficult to have a precise alignment with economic depreciation for every case without having very complex and detailed rules with lengthy lists of various asset categories and descriptions. Of course, tax depreciation could be allowed follow accounting depreciation, leaving it up to each company to determine the appropriate depreciation for assets in use based on the application of generally accepted accounting principles. However, this would give a lot of discretion to companies, leading perhaps to significant differences in the amount of tax depreciation claimed by companies for similar assets and it is not an approach that would generally be favored by tax authorities. For practical purposes, some simplification is required in setting depreciation rules and certainly this has been the approach taken by most countries in setting depreciation rates. For Latvia, there are various options that could be considered including a re-classification/ simplification of asset categories, a switch over to straight line depreciation for some or all assets (e.g. buildings and other long-life assets), a revision of rates for the different asset categories and removing or reducing the multiple by which rates are doubled/increased.

Loss Relief

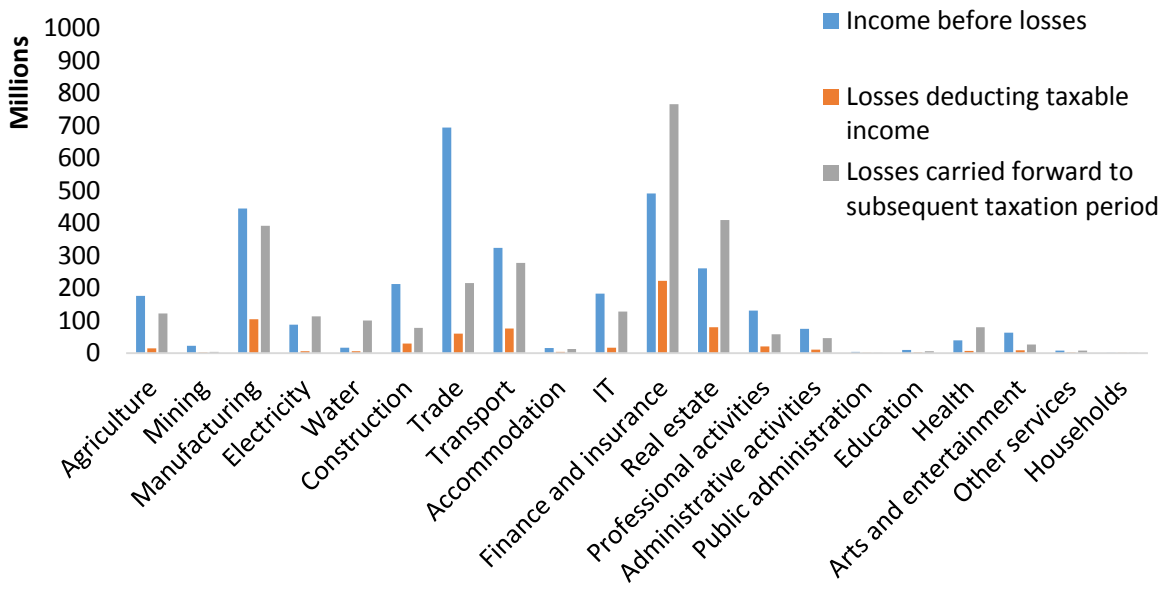
There is a relatively high tax expenditure associated loss relief due to an accumulation of losses during the recent economic crisis, as well as excess depreciation allowances carried forward from previous years. The sectors that report the highest losses are those the most affected by the crisis, see Figure 50. Given the size of losses it may not be a temporary phenomenon. The tax expenditure is likely to stay high in the years to come given the slow absorption of losses that form the size of losses as compared to companies' profitability, see Figure 51.

Figure 50. Losses carried forward to 2014 by year of generation and sector



Source: State Revenue Service.

Figure 51. Taxable profits before losses, losses deducted and losses transferred to the future, in EUR million, 2014



Source: State Revenue Service.

Loss relief is a standard feature of corporate tax systems in most countries, although the rules vary from country to country and such rules may include time limits and anti-avoidance provisions (e.g. to prevent loss buying). The provision of loss relief is in recognition of the fact that companies can make profits and incur losses in different tax periods over the business cycle and that to tax profits while not allowing relief for losses would be unbalanced and unfair. Latvia used to apply an eight-year time limit on the carry forward of losses but this has been removed for losses incurred from 2008 onwards which are not subject to any time limit. On the other hand, Latvia has recently abolished group relief for losses, which is a significant change (the measure was introduce to offset the cost of new provision for R&D). Some further restriction of loss relief could be considered with a view to limiting the impact of losses on CIT revenues. For example, a limiting provision, whereby the aggregate amount of deductions for losses carried forward may not exceed a specified percentage (e.g. 80 percent) of net taxable profits (before such deductions) in any taxation period thereby ensuring that a minimum percentage (e.g. 20 percent) of profits remain in charge in each taxation period. Lithuania and France are an example of the countries that has a similar provision. The other option would be re-introduction of a time limit on the carry forward losses. For example, in Poland, losses incurred by a taxpayer may be carried forward and set off against income over the five following tax years from the year the loss is incurred, but only up to 50 percent of the loss suffered in a given tax year may be deducted at once. The effect of a putting cap (e.g. 20%) on the amount of losses forward that are allowed in a taxation period would be to spread the offset of losses over a longer period of time, while a time limit on the carry-forward of losses could result in the forfeiture of some losses due, for example, to insufficient profits to absorb all losses within the relevant time period. The former option may be preferable from the perspective of providing a tax revenue cash-flow benefit while allowing for all losses to be relieved in the longer term.

Other areas of tax expenditure

Other measures which might be reviewed in relation to their overall effectiveness and value for tax expenditures include the following:

- **Enhanced deduction for the acquisition of new technological equipment**. This measure, which provides for the amount of depreciation to be enhanced by a multiple of 1.5, is currently available for new technological equipment acquired in the period 2009-2020; although withdrawing this relief now in the context of its intended application to 2020 might have the effect of undermining confidence in the tax regime for investment in the technology sector, a review of the effectiveness of the measure may be considered appropriate.

- **Tax rebates on investment**. The tax rebate for investments in supported investment projects is 25 percent for amounts up to EUR 50m and 15 percent for amounts from EUR 50m to EUR 100m. Projects are given this support based on an assessment by the Ministry of Economics and approval by the Cabinet. To apply a tax rebate for amounts exceeding EUR 100m (max tax rebate applied 11.9 percent), approval from the Cabinet and European Commission has to be received. Again the costs and benefits of this program is worth reviewing.

- **Holding company regime**. A holding company regime was introduced in 2013 and provides a tax exemption for dividend income and capital gains earned by a company in respect of shares held in subsidiaries and other companies. Many other countries provide such a regime and generally the objective is to encourage companies to locate their headquarter operations and related functions in the jurisdiction. There is no minimum shareholding requirement in the Latvian regime so that dividend income and capital gains from small portfolio shareholdings (e.g. quoted shares) are exempt; there may not be a significant tax cost associated with this measure, but some limitations in the relief might be worth considering, e.g. to exclude shareholdings below 10 per cent.

- **Triple deduction for R&D expenditure**. This measure, which provides an enhanced deduction for qualifying R&D expenditure, was introduced in 2014 and could be an important relief in the promotion of innovation and high-value enterprise with growth potential. There are good economic reasons to provide tax relief for investment in R&D given the considerable risks associated with such investment and the large externalities arising from R&D. At the same time, it is desirable to ensure that the measure is focused on genuine R&D activities and that provision is made for effective oversight of the relief, including assessment and validation of R&D expenditure in specific cases, where appropriate (see Box 5 for the experience from Ireland).

Box 5. Validation of claims for R&D Tax Relief: Approach taken in Ireland

Recognizing the importance of encouraging investment in research and development, many EU and OECD countries provide tax relief for companies engaged in R&D activities and Latvia's enhanced deduction for R&D expenditure is no exception in this regard. Given the substantial level of relief that can be claimed under R&D tax relief provisions, it is important to ensure that appropriate arrangements are in place to assess and determine the validity of claims for relief and that companies are required to maintain detailed documentary evidence in support of their claims for R&D relief.

In Ireland, a tax credit of 25 percent of allowable R&D expenditure is available to companies undertaking qualifying R&D activities within the EU. Claims for the R&D tax credit, which are made as part of a company's annual tax return, are subject to audit as part of the Revenue authorities' ongoing compliance and risk management program. To be eligible for the tax credit for R&D expenditure, a company must be able to demonstrate that it has a valid claim which satisfies two essential tests:

- **The science test**. The activity must be a qualifying R&D activity. Qualifying R&D activities are defined in the legislation and will involve systematic, investigative or experimental activities in the field of science or technology which (i) encompasses one or more of the main categories of R&D—i.e. basic research, applied research or experimental development—and (ii) aims to achieve scientific or technological advancement and to resolve scientific or technological uncertainty.
- **The accounting test**. Costs incurred in the carrying on of qualifying R&D activities must be properly tracked and accounted for and this should clearly indicate that the correct amount expenditure on qualifying R&D activities has been claimed.

Companies are required to maintain detailed records to facilitate the validation of claims for relief. Records must be kept on continuous and consistent basis and should include all linking papers to the company's accounts.

Records that are required to be maintained to satisfy the science test will include the following:

- A description of the R&D activities, the methods to be used and what the company seeks to achieve by undertaking the activities concerned;
- The field of science and technology in which the activities are undertaken;
- The scientific or technological advancement that the company is seeking to achieve in its R&D activities and the scientific or technological uncertainty that it is seeking to resolve;
- Evidence that the scientific or technological advance sought has not already been achieved and that the scientific or technological uncertainty that the company is seeking to overcome has not already been resolved; this could include evidence that a comprehensive literature review to determine the current status of scientific or technological knowledge in the area was conducted prior to commencing the project;
- Details of the systematic investigation, including the hypothesis advanced, the series of experiments or investigations undertaken to test the hypothesis, documentary evidence of the necessity for each major element and how it fits in to the project as a whole, documentation of

the original scientific or technological goals of the project as well as indicators or measures to determine if the goals are met, documented progress work and conclusions;
- Qualifications, skill and experience of the project manager; and
- Qualifications and skills levels of other personnel working on the project.

As the Revenue authorities may not have the relevant expertise in-house to determine whether the science test is met in particular cases, the legislation provides that Revenue may enlist the assistance of qualified experts with specialized knowledge in the relevant field of science or technology to determine whether a particular activity carried on by a company claiming relief is a qualifying R&D activity. Experts engaged by Revenue will advise whether, in their opinion, the activities examined constitute R&D activities, as defined in the relevant legislation. Experts are required to sign a confidentiality agreement with Revenue prior to engagement. Where the opinion of an expert is disputed by a claimant company the expert may be required to give evidence before an appeals board or, in the case of legal proceedings, before a court of law. Before disclosing information to experts, Revenue will notify the claimant company of the identity of the expert it proposes to engage and the information that it intends to disclose to that expert. A company may object to the use of a particular expert where it has reason to believe there would be a genuine conflict of interest. In any case of dispute, the company will have the right of appeal in relation to the use of a particular expert.

With regard to the accounting test, companies should be able to provide details of the allocation of resources and associated costs for each stage of a project. Details of the targets and deliverables specifically related to the resolution of scientific or technological uncertainties and the advances in scientific or technological knowledge sought should be directly associated with relevant accounting records. Records containing the following information, if relevant, are required:

- The dates of commencement and termination of the project. The date of resolution of the scientific or technological uncertainty is a determining factor when considering where an R&D activity ends and activity associated with commercial exploitation begins. Costs incurred after the R&D phase is completed do not qualify for the relief;
- A project plan with appropriate milestones and deliverables for management of the project;
- Details of progress made against the project plan;
- Details of the personnel involved in the project, their qualifications and the amounts of their time allocated to the project;
- The location where the R&D activities took place and a breakdown of costs associated with the location (e.g. apportionment of light, heat etc.);
- Details of any amounts paid to universities or institutes of higher education and the qualifying R&D activity carried out by them on behalf of the company;
- Details of any amounts paid to non-academic subcontractors and the qualifying R&D activity carried out by them on behalf of the company;
- Details of the methods and bases of apportionment of all expenditure associated with the R&D.

The demonstration of a systematic approach and the preparation of appropriate contemporaneous evidentiary materials is an essential element of any R&D claim. Such evidence does not necessarily have

to be available in traditional hard copies, but may be available electronically and, if so, the electronic record should clearly indicate the author / creator, and the date of creation.

The records required for Revenue purposes should generally be available within a company for its own internal purposes. Claimant companies should take care, whatever approach to record-keeping is used, that it will be sufficient to clearly identify the qualifying R&D activities undertaken and the associated costs. Companies may consult with their local tax office or case manager if they are uncertain as to the adequacy or suitability of their records.

The complexity of Latvia's taxation of business income creates distortions and inequalities. Like most countries, Latvia applies a single rate to all corporate income. However, with the introduction of microenterprise tax, Latvian rate varies by firm size and income, leading to a proliferation of differing rates (Table 18). The standard rate is 15 percent of net income but there are also reduced rates on annual turnover of 9 percent, 12, of 20 percent. The reduced rates apply to microenterprises, which must meet criteria related to employment, wages, and turnover (see the detailed discussion of microenterprise taxation below). There is also an option for a fixed tax (the "patent payment") for personal economic activity in particular professions (such as crafts, consumer services, floristry, photography, beauty services, private household services, home care services, and gathering of forest and meadow crops for trade). Both patent payments and the micro-enterprise tax comprise the mandatory social insurance payment and the PIT as well as the CIT. This also implies that the ME-owners and employees cannot apply for tax exemptions and deductions in respect of income earned under the micro-enterprise regime. Finally, in Latvia, business income from an unincorporated small business could be taxed as PIT at the 23 percent tax rate, topped up by the SSC. The self-employed total SSC-rate equals 30.58 percent of gross earnings. For the CIT or the micro-enterprise regime distributed profits paid to resident individual shareholders are taxed at a 10 percent dividend tax. For the owner of the small business there are no special rules related to wages and dividends received by the owner, leaving scope for arbitrage between labor and capital income.

Tax treatment of owners of closely-held corporations and workers requires a solid split between labor and capital incomes. Taking into account double taxation, the effective tax rates on dividends and capital gains for owners of closely-held firms are, respectively, 23.5 percent and 27.75 percent. These rates are slightly above the rates of the PIT, but much below the rates of the PIT and SSC together. Given that the PIT is lower than the effective tax rates on capital incomes earned by individual shareholders of closely held companies, it may not be beneficial for an individual to set up a firm to avoid paying PIT on capital incomes. However, depending on how much entitlements individuals get in return for their SSCs, it could be beneficial to start a closely-held company to avoid paying SSCs. Also, earnings can be accumulated and retained within a close company to avoid tax on dividend income. Such forms of tax arbitrage can be avoided by securing a good split between labor and capital incomes. Like in some Scandinavian countries, it may be useful to introduce a fictitious return of, say, 10 percent on invested corporate equity. These dividends are taxed, first, at the corporate level at a rate of 15 percent, and, second, in the PIT at a rate of 10 percent. Any remaining corporate profits, after interest is deducted, is then considered labor income for the entrepreneur and taxed at the rate of the PIT of 23 percent PIT-rate plus the SSC-rate of 30.5 percent or 34.1 percent (self-employed or employee SSC-rate) (see also Sørensen, 1999). In framing specific

measures to provide for an appropriate split between labor and capital income, it may be worth drawing from the experience with such measures in Scandinavian countries.

Table 18. Taxation of business income in Latvia, January 2016

Micro enterprise				Regular regime			Lump sum
Legal form	Small capital LTD	Individual merchant	Self employed	Small capital LTD	Self employed	Individual merchant	Purchase of a patent
Acronim	*sLTD*	*IM*	*SEP*	*sLTD*	*SEP*	*IM*	*PP*
Registration	Commercial Register and SRS	Commercial Register	SRS	Commercial Register	SRS	Commercial Register	SRS
Criteria				**Criteria**			
Income	Annual turnover < EUR 100,000	Annual turnover < EUR 100,000	Annual turnover < EUR 100,000	Turnover	Net income	Annual turnover > EUR 284,600	Certain economic activities
No of employees	< 5 (all are natural person)	-	-	-	1	>5 person	-
Monthly gross wage	< EUR 720 per month	< EUR 720 per month	< EUR 720 per month	-	-		-
Personal Income Tax							
Personal income tax rate	-	-	-	23%	23%	23%	Monthly patent fee EUR 43 to EUR 100
Untaxed minimum	-	-	-	yes	yes	no	no
Tax exemptions	-	-	-	yes	yes	no	no
Micro enetrprise tax	**9%*)**	**9%*)**	**9%*)**	-	-	-	-
Social Security Contributions							
Employer's SSC	-	-	-	23.59%	30.58% from min. annual taxable base	30.58% from min. annual taxable base	-
Employee's SSC	-	-	-	10.50%			-
Corporate income tax	-	-	-	15%	-	-	-
Dividents	**10%**	-	-	10%	-	-	-

*) Micro-enterprise tax rate applied to the turnover of a micro-enterprise from EUR 7,000.01 to EUR 100,000 is 12 percent, starting from the fourth year of economic activities after the status of a micro-enterprise tax payer , if turnover of a micro-enterprise is above EUR 100,000 the rate of 20 percent is being applied to the surplus. If a micro-enterprise has not had any turnover within the taxation period (calendar year) or the amount of the calculated micro-enterprise tax does not exceed EUR 50, the micro-enterprise tax of EUR 50 applies.

International comparisons of average and marginal effective tax rates suggest that Latvia's CIT system imposes relatively low marginal investment distortions. Average and marginal effective corporate tax rates (EATRs and EMTRs), which take into account both the rates and the tax base, are particularly useful in analyzing how corporate taxation affects capital formation.[47] EMTRs and EATRs in Latvia are relatively low by EU standards (see Figure 52) and much lower than high-income comparators except for Ireland. However, Latvia's EATR is not low compared to neighboring countries. Lower EMTRs in Estonia and Lithuania lower the burden for a (small) additional investment. In Estonia, which does not have a conventional CIT, the EMTR is extremely low (below 4 percent) because investments financed through retained earnings and debt are not taxed (costs of debt (interest) and the costs of equity via retained earnings are both de facto deductible from the CIT). Box 6 gives an overview of the Estonian CIT system.

Figure 52. Effective marginal and average corporate tax rate, 2014, in percent

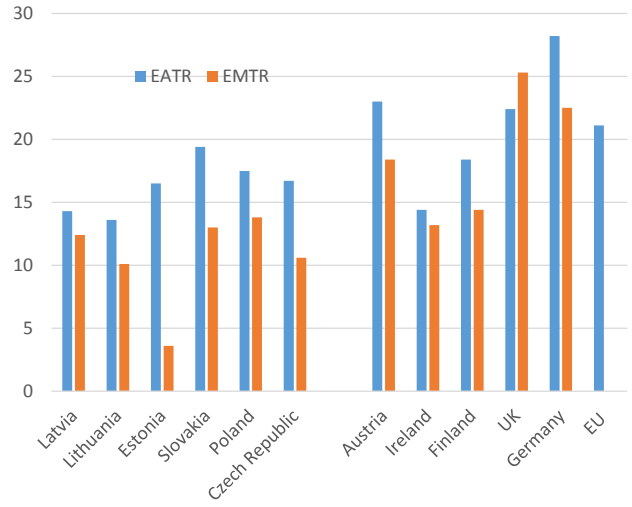


Figure 53. Cost of capital by financing method, 2014, in percent

Source: ZEW.

There are also differences in the effective CIT rates for certain types of assets in Latvia, as is also true for all comparator countries except Estonia. In Latvia the lowest ATRs apply to investments in intangible assets and machinery (Table 19), as is true in other EU countries; the highest apply to investment in industrial building assets, unlike the EU generally, where financial assets bear the highest tax burden. The differences mainly reflect variations in depreciation allowances: in Latvia the tax allowance for depreciation for machinery and intangibles overcompensates the actual economic depreciation rate. Since Latvia's relatively low CIT EATR for intangible assets may encourage overinvestment in intangibles at the expense of other types of assets, removing differential tax treatment of assets could improve the quality of investment by reducing tax-induced distortions. More generally, the current depreciation regime could be reviewed with the aim of enhancing CIT yield by restricting accelerated depreciation and the tax rebate for new technology

[47] The AETR affects a company's decisions about where to invest, since investors will—other things equal—prefer to invest where the proportion of profit taken in tax is lowest. Once the location decision is made, the METR determines how much will be invested, since investors will invest more the lower the pre-tax rate of return they need to earn to pay the taxes due and still achieve the required after-tax return.

equipment and better aligning tax depreciation with economic depreciation. Also, the adequacy of systems to validate claims for the enhanced R&D deduction should be examined.

Table 19. Effective tax rates, Latvia and other EU Countries

	CIT	Overall mean	EATR						New equity	Debt
			Industrial buildings	Intangibles	Machinery	Financial assets	Inventories	Retained earnings		
Latvia	15	14.3	18.6	12.2	12	14.6	13.9	16.1	16.1	10.9
Lithuania	15	13.6	17.4	10.9	12	14.6	13.2	15.5	15.5	10.2
Estonia	21	16.5	16.5	16.5	16.5	16.5	16.5	15.8	23.1	15.8
Slovakia	22	19.4	19	17.9	18.2	21.5	20.4	22.1	22.1	14.4
Poland	19	17.5	18.4	15.5	18.4	18.5	16.7	19.8	19.8	13.2
Czech Republic	19	16.7	16	16	15.1	18.5	17.6	19	19	12.4
Austria	25	23	23	23.4	22.3	24.4	22	26	26	17.3
Ireland	12.5	14.4	12.8	11.7	11.5	24.4	11.6	16.2	16.2	11
Finland	20	18.4	19.6	18.7	14.4	19.5	19.5	20.7	20.7	13.9
UK	21	22.4	31.6	19.6	19.9	20.5	20.5	25	25	17.7
Germany	31	28.2	29.1	25.6	28	30.7	27.6	31.5	31.5	22.1
EU average	23.1	21.1	22.5	19.2	19.5	23.2	21.0	23.6	23.9	16.4

Source: ZEW

The question whether the CIT system in Latvia can distort corporate financial decisions has been considered. The deductibility of interest payments against CIT but not, in general, on equity may offer an incentive for corporations to use debt rather than equity financing. This potential distortion is illustrated by the difference in the cost of equity capital versus debt (see Figure 53). For Latvia, the difference in the cost of capital financed with equity and debt is similar to other countries in the EU and in the region. In principle, this distortion at the corporate level can be offset by taxes at the personal level, e.g., if the PIT on interest is higher than on dividends and capital gains. This is not the case in Latvia, where interest and dividends are taxed at 10 percent and capital gains at 15 percent. In 2009, Latvia introduced a notional-interest deduction, which was intended to reduce the tax distinction between debt and equity financing, but it was abolished in 2014.

The asymmetric tax treatment of debt and equity should be reviewed to remove or reduce distortions in the financing of investment. In Latvia interest is taxed only once, since it is deductible at the corporate level. Hence, the effective tax rate on interest equals the 10 percent-rate of the PIT. However, dividends and capital gains are subject to higher effective marginal tax rates at, respectively, 23.5 percent and 27.75 percent. This asymmetric tax treatment of interest, dividends and capital gains implies that from a tax perspective debt financing is preferred over equity financing at the corporate level. It would be economically optimal to remove or mitigate the impact of any fiscal asymmetry between debt and equity. One possible approach in this regard would be to treat debt and equity in the same way at the corporate level by providing a deduction for an imputed cost of equity.

The distortion on the financing decisions of firms could be eliminated through an Allowance for Corporate Equity (ACE), a Comprehensive Business Income Tax (CBIT), or a combination of both where costs of equity and debt are both partially deductible for the CIT. See also De Mooij and Devereux (2011). In a pure ACE system, the costs of debt and equity are both deductible, where the costs of equity are based on an imputed rate of return. Under a CBIT neither the costs of debt nor the costs of equity are deductible. Both the ACE and CBIT systems eliminate the incentives for excessive leverage. The ACE removes all investment distortions as well. However, introducing an ACE requires a higher CIT-rate or an increase in other taxes, since the allowance reduces the corporate tax base. Hence, the marginal tax rate on the normal return becomes zero at the expense of a higher tax rate on above normal returns. The latter will strengthen the incentives for profit shifting and moving firms towards countries with lower taxes on above normal returns. The CBIT, on the contrary, raises the effective tax rate on the normal return on invested assets and thereby discourages investment. However, since the CIT-base is broadened it also allows for a lower tax rate. Hence, the tax rate on above normal returns is lowered at the expense of a higher tax on the normal return on invested assets. The latter will attract foreign firms and profits. Both distortions in location and profit allocation, as well as investment distortions are important empirically, see De Mooij (2005), Griffith et al. (2010) and Auerbach et al. (2010).

If a tax reform is required to be revenue-neutral, then the government could introduce a *partial deduction* for the costs of both debt and equity, which is a combined ACE/CBIT. The Latvian government abolished the ACE in 2014 for revenue reasons (i.e., to finance deductions for R&D). However, for example, both costs of debt and equity could be made deductible for, say, 50 percent of the total financing costs. The optimal fraction of costs of debt/equity that should be made deductible depends on the trade-off between investment distortions on the one hand (CBIT) and the profit shifting and location distortions (ACE) on the other hand. The partial deduction for the costs of equity is then financed by reducing the deduction for the costs of debt. Such a partial deduction for the costs of financing corporate investments would not remove the tax distortion on corporate investments.

One should be careful in implementing tax reforms where deductions for equity are introduced. For example, by implementing reforms that gradually reduce the deductibility of interest costs and phase in the deductibility of equity costs. Immediate introduction of an (partial) ACE could provide a free lunch to existing shareholders who receive a (partial) exemption of taxes on their invested equity. Accordingly, it is desirable to ensure that an ACE is limited to new capital issues only. In addition, measures should be taken to avoid that old shares are transformed into new shares so as to benefit from the new CIT-regime. The introduction of an ACE, whether on a full or partial basis, will require robust anti-avoidance provisions to counter aggressive tax planning using intra-group financing arrangements and other structures to derive a tax advantage. The need for anti-avoidance provisions is acknowledged in the latest proposal from the European Commission on a Common Consolidated Corporate Tax Base (CCCTB). The Commission's proposal on CCCTB provides for an allowance for corporate equity (referred in the proposal to as an 'allowance for growth and investment'), which aimed at mitigating the existing debt bias in EU member States corporate tax systems and which would be accompanied by various anti-avoidance measures to deal with intra-group loans, cash contributions, transfer of participation, re-categorization of old capital as new equity, creation of subsidiaries and double dipping structures. In considering specific measures to provide for a partial deduction for both equity and debt costs account would need to be taken of new interest limitation rules included in the EU Council Directive to counter corporate tax avoidance

(Council Directive (EU) 2016/1164 of 12 July 2016 – OJ L193/1 of 19 July 2016)48. These rules are designed to reduce the scope for corporate groups to obtain tax advantages using debt finance and will limit the deductibility of net interest expenses to a fixed ratio of gross operating profit (i.e. up to 30 per cent of earnings before interest, tax, depreciation and amortization) or by reference to the overall net interest/ earnings ratio of the consolidated group. The rules are, however, focused on debt shifting within multinational groups rather than on addressing the inherent debt bias in many CIT systems, including Latvia's, that can lead to excessive third party debt for corporate groups as a whole as well as for single (i.e. standalone) enterprises. Also, existing thin cap rules in Latvia, which restrict the deduction of certain interest payments made by a company to another entity, would also need to be modified or removed as appropriate in the context of a partial deduction for equity and debt costs.

Box 6. **Overview of the Estonian Model of CIT**

Estonia has a quite unique system of corporate income taxation under which company profits are not subject to CIT until they are distributed to shareholders. When profits are distributed, either by way of dividends or through other payments which are treated as implicit distributions (e.g. fringe benefits for shareholders, gifts, entertainment expenses and other expenses not related to business activities, share buybacks or transactions with related parties not at arm's length), they are subject to tax chargeable on the company at the flat income tax rate (currently 20 percent). The tax base is the net amount of profit distribution and payments/ benefits which are treated as a profit distribution. Corporate income tax is calculated by multiplying the tax base by 20 percent and dividing this by 80 percent (e.g. a dividend of EUR 100 would give rise to a tax charge of EUR 25).

In contrast, under traditional CIT systems profits are taxed at the company level as they are earned. Distributions out of company profits are generally subject to a reduced level of income tax in the hands of individual shareholders, taking account of corporate income tax already paid by the company, while provision is made for tax exemption or relief from double taxation in the case of profit distributions to corporate shareholders and shareholders resident in tax treaty counties.

It should be noted that, while CIT in Estonia arises on the payment of a dividend or other distribution, it is chargeable on the company rather than the shareholder and there is no further taxation of dividend income in the hands of the shareholder. Under the EU Parent Subsidiary Directive, Member States are required to exempt from withholding tax dividends and other profit distributions paid by a subsidiary in one Member State to its parent company in another Member State with a view to eliminating double taxation of such income in intra-group situations. However, as tax payable on profit distributions is treated as a tax on corporate income chargeable on the company rather a withholding tax on dividends, Estonia's CIT regime is considered to be compatible with the Directive. Similarly, CIT payable on the distribution of profits to a shareholder resident in a tax treaty country cannot be reduced by virtue of the relevant tax treaty. As profits are only taxed once in Estonia, i.e. upon distribution, there is no double taxation and hence no requirement for double taxation relief.

[48] See http://www.consilium.europa.eu/en/press/press-releases/2016/07/12-corporate-tax-avoidance/

The Estonian system of CIT deferral was introduced in 2000 to facilitate investment and the development of enterprise. The system was put in place at a time when it was difficult for companies to access external financing due to undeveloped capital markets. With retained profits not subject to CIT, the deferral of tax on profits effectively provides companies with State financing on relatively favorable terms.

Estonia's CIT system has a number of potential advantages:

- **It encourages investment and enterprise by allowing companies to retain their profits for re-investment in the business. Tax only applies where profits are taken out of the company. Profits can be accumulated and retained indefinitely without any charge to CIT arising. The system is helpful to start-up companies with growth potential which may have problems accessing finance at reasonable rates in their early years of development. The system is also attractive to FDI – while CIT is payable where a foreign-owned subsidiary in Estonia distributes profits to its non-resident parent company, payments of interest or royalties can be made without triggering a CIT charge as long as they are not regarded as actual or deemed dividends.**
- **The Estonian system is simple and easy to administer. Under traditional systems, to arrive at the amount of taxable profits, the company's profits are first calculated according to accounting rules and the accounting profit is then subject to various adjustments under tax law, e.g. certain expenses not related to the business are disallowed and tax depreciation rules apply instead of accounting depreciation. In Estonia, distributed profits reflect accounting profits and there is no need for tax depreciation (e.g. capital allowances) or other computational rules such as thin cap rules limiting interest deductions. Also, there is no need for special rules in regard to carry forward and offset of losses as under accounting rules profits can only be distributed net of any losses incurred in earlier years.**
- **Under the Estonian system, there is no double taxation of dividends since profits are only taxed once, i.e. upon distribution.**
- **The Estonia system appears to be compatible with EU law, including as mentioned above the Parent Subsidiary Directive, and it is not considered to be a harmful tax regime under the EU Code of Conduct on Business Taxation. All profits that are distributed are subject to CIT, whether the shareholders are resident or non-resident. There are no special 'ring-fencing' schemes to treat foreign investors more favorably than domestic investors.**
- **Estonia is not regarded as a zero tax jurisdiction since profits are chargeable to tax at the 20 percent rate of income tax, albeit on distribution only. Estonia does not appear to have a 'subject to tax' issue with tax treaties since profits are subject to the 20 percent statutory rate, although there may be an issue with the effective tax rate on company profits in particular cases.**

How successful the Estonian CIT system has been in practice is open to debate. In terms of international competitiveness, it is considered to be the most competitive corporate tax system in the OECD. The country appears to have a very good record in facilitating start-up enterprises in the

technology sector, although this has been due as much to non-taxation factors (e.g. education and skills development, regulatory framework) as it has been to the tax system.

On the other hand, the non-taxation of retained earnings does not necessarily mean that such earnings will be used productively and recent empirical studies (Hazak 2009) suggest that the impact of the change in the Estonian CIT regime in 2000 has been that retained earnings are held in large part as liquid assets and not invested in productive assets. In terms of revenue yield, it seems that the yield from CIT in Estonia, estimated at approximately 5.4 per cent of GDP, is below average and, while there was a dramatic fall in CIT revenues in the early years following the introduction of the system in 2000, CIT revenues recovered in subsequent years.

There are a number of potential disadvantages/risks in adopting a CIT regime similar to that in Estonia:

- **With CIT payments dependent not only on profitability but also on how much profits are distributed, the revenue yield is uncertain and unpredictable. The tax base would be narrower as companies do not normally distribute all of their profits. Also, under an Estonian type of regime, companies would be less inclined to distribute their profits than would otherwise be the case as it would result in a higher tax liability. The likelihood, therefore, is that there would be a significant drop in CIT revenues (at least in the short term) following a move from a traditional CIT system to one based on profit distributions.**
- **The non-taxation of retained earnings would provide an incentive for individuals to use a company structure to earn and accumulate income and avoid personal income tax on such accumulated earnings. Although, this could perhaps be countered by a presumptive provision deeming a closely held company to have distributed a specified percentage of its profits and applying PIT on the deemed distribution. Alternatively, a surcharge on a percentage of earnings not distributed within a specified period of time could be applied but this would seem to defeat the original purpose of the distribution-based taxation system.**
- **It is by no means clear that a tax exemption for retained earnings will result in productive investment or the most economically efficient use of such earnings. The relationship between company saving and growth is not a simple one. Companies which retain their profits and do not distribute will not necessarily be faster growing than those which distribute a portion of their profits (e.g. with a view to giving shareholders a return on their investment and enhancing the market price of their shares). A CIT system which discourages profit distribution may not lead to the most efficient investments and may reduce the proportion of investment decisions subject to allocation by the capital market. Retained profits may end up being invested in passive investments/ liquid assets rather than in productive assets that grow and develop the business of the company.**
- **A changeover to an Estonian type regime would attract international attention, not all of which would be favorable in the current environment. To date the Estonian CIT regime, with a 20 percent tax rate, does not appear to have attracted much adverse attention and It is not clear if there have been situations where counter measures (e.g. CFC measures) have been invoked by other countries. Nonetheless, by not taxing profits that are withheld in the company, the**

Estonian regime has been described as providing a conglomerate bank for company profits, with MNEs using Estonian companies to finance other companies. Similarly, some countries consider that the Estonian regime allows intra-group restructuring that enables profits to leave Estonia without taxes being paid as they are transferred in the form of loans with low or no interest.

- **The focus of recent EU and OECD debate on profit shifting and base erosion (BEPS) has been on aligning taxation with real economic activity and ensuring effective taxation of multinational enterprises carrying on activities across national borders. In this context, it is the effective tax rate on profits that counts (rather than the statutory rate) and a distribution-based CIT regime can result in low or no effective taxation of company profits.**
- **There may be more targeted cost-effective ways of facilitating start-up businesses and investment in SMEs without having to provide a blanket exemption for all retained earnings.**

In effect, the Estonian system of CIT is a hybrid system that lies somewhere between a classical CIT system and an ACE (Allowance for Corporate Equity) system of CIT. A classical CIT system provides only for deduction of debt costs while the cost of equity is not deductible. An ACE based system provides for both debt and equity costs to be deductible. A CBIT (Comprehensive Business Income Tax) system makes neither the costs of debt nor the costs of equity deductible. When company equity is solely internal finance, the Estonian system becomes equivalent to an ACE system, whereas it is a classical system when all equity is external finance. There are good economic reasons for adopting an ACE-based system – investment is less distorted placing debt and equity finance on a more equal footing – and moving to an Estonian system would go some way in that direction in terms of reducing the debt bias in the Latvian classical system and providing more favourable treatment of corporate equity derived from retained earnings.

However, this would narrow the tax base and reduce tax revenues in the absence of compensating measures, such as an increase in the CIT rate or an increase in other taxes (labour, consumption etc.). Higher CIT rates can potentially make up for the revenue shortfall, with the tax burden shifting from normal returns to above normal returns to corporate equity capital. This in turn may provoke firms to move location or profits (e.g. through manipulation of transfer pricing and debt/equity shifting in MNEs). On the other hand, higher taxes on labour or consumption would further distort labour and goods/ services markets, with potentially serious distributional consequences in terms of greater inequality. It also goes against the policy objective of raising the relative tax burden for capital income in Latvia rather than lowering it. Clearly, therefore, the policy trade-offs are quite severe and significant.

While the Estonian CIT regime based on profit distributions may have worked for Estonia, it is not clear that such a model would be a sustainable policy option for Latvia in the current circumstances. If the objective of the Latvian Government is to maintain and increase the yield from CIT, then the Estonian model, which allows for indefinite deferral of CIT payments, may not be the way to go as the risks in terms of vulnerability and uncertainty of tax yield could be significant. Latvia already has a low-rate CIT regime which can be fine-tuned to limit inefficient tax expenditures and enhanced to

provide more effective and targeted support for investment in innovative enterprises and new business start-ups.

With increased global economic integration and competition for resources, countries are seeking ways to compete for investment in regional and global markets. Countries may resort to granting tax incentives to boost rates of return on potential investment and address high risk premiums to alleviate internal market failures or minimal infrastructure, or to compensate for the lack of natural geographical or resource export potential. These incentives can exact significant costs in terms of revenue forgone; worse, as competitor countries issue their own increasingly generous incentives to remain competitive, the result may be a race to the bottom: by using the tax system to attract investment, countries make themselves worse off.

The United Nations estimates that about 60 percent of international trade happens within multinational enterprises (MNEs)—rather than between MNEs (UNCTAD)[49]. Within the last decade the number of parent firms has tripled and the number of foreign affiliates has increased six-fold. When an MNE group establishes itself in a new market by incorporating or acquiring a local subsidiary or establishing a branch, the local affiliate will generally engage in transactions with other members of the MNE group. *Transfer pricing* describes the process through which these affiliated companies set prices for intra-firm cross-border transactions, such as goods and services, capital, and intangibles. To avoid taxes and thus heighten profitability, it is common practice for MNEs to shift profits and losses between low- and high-tax jurisdictions. This can result in transfer *mis*-pricing, leading to large tax base losses for governments and large gains for companies. Although by nature, transfer pricing is not illegal or illicit, as evidenced in recent events[50] several MNE's use sophisticated transfer mispricing practices to avoid taxes. The revenue that may be lost can be high; adopting a transfer pricing framework that is transparent and viable can bring in more yield revenue.[51]

Both tax avoidance and CIT base erosion can be measured through tax expenditure analysis (incentives) and estimated through transfer pricing or audit adjustments as well as by monitoring the level of economic activity by related parties through tax returns to estimate possible mispricing.[52]

Main conclusions and directions for CIT reform:

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[49] http://www.africaneconomicoutlook.org/en/in-depth/public-resource-mobilisation-and-aid/challenges-for-african-policy-makers/tax-base-issues/

[50] A December 2012 article discussed the tax practices of Starbucks, Amazon, and Google, criticizing their policy of using lower-tax jurisdictions within Europe, like Ireland, Luxembourg and Switzerland, to record much of the revenue they generate in higher-tax countries like Britain, France, and Germany. http://www.nytimes.com/2012/12/04/business/global/british-lawmakers-accuse-mulitnationals-of-immorally-avoiding-taxes.html.

[51] For instance, (1) in 2010 China collected ¥10.272bn (about US$1.5bn) as a result of its approach toward transfer pricing issues(PwC); (2) unofficial reports indicate that India is estimated to have collected aout US$9,500m in additional taxes as a result of transfer pricing adjustments between 2002 and 2008 (Deloitte); and (3) the UK)has reported transfer pricing yields of £519m in 2007/8; £1,595m in 2008/9; £1,039 in 2009/10; and £436m in 2010/11.

[52] The usual suspects for related party tax avoidance are transfer mispricing especially of services, interest rate deductions, and deductions for use of intellectual property by parent companies.

In considering policy options and determining the appropriate way forward for corporate taxation in Latvia, a balance needs to be struck between providing a CIT regime which helps to promote enterprise and innovation and one which generates a steady and reasonable tax yield year-on-year that contributes to equity and public confidence of the overall tax system. At the same time, it is desirable to remove distortions to equity investment arising from the CIT regime and limit the scope for tax arbitrage.

Latvia has a low rate CIT regime which could be considered to be competitive in the wider international arena. However, its close proximity to what may be regarded as the most competitive CIT regime in the OECD provides additional challenges for Latvia in formulating a robust and sustainable policy for CIT. Moreover, when it comes to developing appropriate policy responses in the CIT area, these will need to be considered against the backdrop of globalization and increasing competition for foreign direct investment that is exerting downward pressure on CIT rates internationally. While there are various aspects to the existing CIT regime in Latvia that contribute to a balanced and well-functioning tax system, there are specific areas where the effectiveness of the regime could be enhanced and some policy options that could be considered in this regard are set out below.

- CIT revenue generated is relatively low by European standards, even controlling for the low statutory rates. Tax expenditure is about 1.5 a percent of GDP—not high relative to European averages, but given a low CIT rate and a narrowing of the tax base it has a bite. Some curtailment and re-focusing of tax allowances may be required to broaden the tax base, including removal or restriction of certain investment incentives and possibly a limitation of loss relief.

- While the tax relief for investment in R&D should continue to play an important role in assisting innovative enterprises, it is desirable to ensure that the measure is effective in encouraging real R&D and that there is an appropriate system in place for validating claims for the enhanced deduction for R&D expenditure.

- It is desirable to mitigate the bias in favor of debt finance in the Latvian tax system which distorts investment financing and results in sub-optimal economic outcomes. This could be done in a revenue-neutral way by providing a *partial deduction* for the costs of both debt and equity, which would be a combined ACE/CBIT system. Under such an approach, both costs of debt and equity could be made deductible for, say, 50 percent of the total financing costs. The optimal fraction of costs of debt/equity that should be made deductible depends on the trade-off between investment distortions on the one hand (CBIT) and the profit shifting and location distortions (ACE) on the other hand. The partial deduction for the costs of equity is financed by reducing the deduction for the costs of debt. The introduction of such a measure would need to be accompanied by robust provisions to prevent tax avoidance through intra-group financing arrangements and other contrived structures that result in double non-taxation. In addition, account would need to be taken of new interest limitation rules to be implemented under EU Council Directive 2016/1164 of 12 July 2016 (OJ L193/1 of 19 July 2016), which are aimed at limiting the scope for debt shifting within corporate groups.

- The current depreciation regime should be reviewed and modified in order to remove elements of accelerated depreciation and to ensure that tax depreciation is more closely aligned with economic depreciation. This could include updating and simplifying the range of asset categories and, if appropriate, introducing depreciation on a straight line basis for specific asset categories (e.g. buildings and other long-life assets); a critical look might also be taken at the enhanced depreciation for new technological equipment to determine if this merits continuation or withdrawal on a phased basis.

- It would be useful to consider the case for introducing an overall limit on the offset of losses carried forward and whether existing provisions to prevent avoidance/ abuse are effective; it might also be worth reviewing the effect of withdrawing group relief and seeing if there may be a case for a re-introduction of this on a modified basis – many countries provide group relief to a greater or lesser extent, e.g. group relief could be allowed for current year losses only, but not for losses brought forward.

- The special tax treatment of micro-enterprises is a recipe for large-scale tax arbitrage in CIT and PIT inviting avoidance of labor taxes, social-security contributions and capital taxes. In the context of the reform of micro-enterprise tax, consideration could be given to the introduction of targeted tax reliefs for business start-ups creating new jobs and for the provision of equity investment in small/ micro enterprises.

- It should be considered whether provisions are required to provide a clear split between labor and capital income for owner directors of closely-held corporations**.** For example, consider introducing a fictitious return on equity of 10 percent for proprietors of closely-held companies who work in their own firm and tax these at 10 percent. Consider their remaining income as labor income which is taxed under the PIT and SSC. The development of appropriate measures to provide for this should draw from relevant experience in Scandinavian countries.

- It will also be necessary to develop appropriate measures in relation to base erosion and profit shifting in the context of internationally agreed actions to counter BEPS and reduce the scope for international tax avoidance by multinational enterprises. This should include effective implementation of EU Council Directive on corporate tax avoidance and other anti-BEPS measures adopted by the EU and OECD.

5. MICROENTERPRISE TAXATION

Latvia's microenterprise tax (MET) regime was introduced in 2010 as part of the response to the economic recession and with the aim to assist the creation of new jobs. As a result of the economic crisis, unemployment had increased from 5.3 percent at the end of 2007 up to 19.7 percent at the end of 2009. Against this backdrop, the Latvian Government introduced the MET regime, which came into effect on September 1, 2010. With a simplified tax reporting regime and low rates, the intention of the law was to improve the conditions for the unemployed population to start a business. This was done through decreasing tax rates, particularly on labor, and reducing the burden of tax administration. In addition to helping out new small businesses and the expansion of small enterprises in general, over time the reform has been connected with providing greater incentives for formalization.

Micro enterprises are eligible to file under this simplified tax regime if they fulfill a set of criteria regarding sales volume, the number of employees, and income. In particular, the 2010 legislation entitles microenterprises—both legal and natural entities—to opt for payment of the MET at a rate of 9 percent of sales volume (turnover). Under this option the enterprise is no longer subject to (a) personal income tax (PIT) rate of 23 percent; (b) the mandatory state social insurance contributions (MSSIC) of 34.09 percent for employees (23.59 percent for the employer and 10.5 percent for the employee) or 30.58 percent for self-employed individuals; and (c) corporate income tax (CIT) of 15 percent. A share equal to 65 percent of microenterprise tax goes to mandatory state social insurance contributions (This is planned to be increased to 74.5 percent from 2017). The MET also aims at simplifying tax administration as the number of taxes payments were reduced to one every three months compared to seven payments a year for medium-size enterprises on average.[53] Rather than a range of different taxes and social contributions, the tax due calculation is simplified as it is based on turnover. To qualify for the MET regime, enterprises need to fulfill three criteria: (i) the sales volume (turnover) does not exceed EUR 100,000 in the calendar year; (ii) the number of employees (including the enterprise owner) with positive earnings does not exceed five in any month; and (iii) the monthly income of any employee or the owner of the microenterprise does not exceed EUR 720, excluding the dividends calculated from the profit of a microenterprise.

Firms and employees under the MET regime have increased substantially since its introduction, but MET tax revenues account for a small share of overall tax revenue in Latvia (Table 20 provides details, partly described below)**.** Since the introduction of the MET regime in 2010, the number of registered taxpayers using it has continuously increased, from 7,199 on January 1, 2011 reaching a number of 47,169 on January 1, 2016. Meanwhile the number of employees employed by microenterprises has risen from 14,129 in January 2011 to 85,386 in December 2015.[54] Annual average number of microenterprise workers in 2015 has exceeded 83,000 reaching 9.8 percent of all employees in the economy (up from 3.3 percent in 2011) and almost 14 percent of private sector employees (up from about 5 percent in 2011). In total, 103,787 workers had positive microenterprise earnings in [at least one month of] 2015.

[53] World Bank's *Doing Business 2016.*

[54] State Social Insurance Agency data prepared on request.

Table 20. Number of tax payers, employees and revenue by tax type, from 2009-2015

	2009	2010	2011	2012	2013	2014	2015
Number of microenterprise taxpayers, by type of business activity							
Individual entrepreneur	-	517	1,015	1,284	1,491	1,623	1,726
Individual enterprise, farming or fishing enterprise	-	186	247	254	254	273	265
Limited liability company	-	4,424	11,902	17,080	21,693	25,201	27,521
Performer of commercial activity registered at the SRS	-	2,067	4,656	6,546	8,540	12,910	17,657
Total	**-**	**7,194**	**17,820**	**25,164**	**31,978**	**40,007**	**47,169**
Number of taxpayers under general regime, by type of business activity [a]							
Natural entities	86,342	95,439	102,261	112,926	124,587	129,124	129,197
Limited liability company	155,430	161,895	177,663	191,935	205,808	216,131	221,727
Total	**241,772**	**257,334**	**279,924**	**304,861**	**330,395**	**345,255**	**350,924**
Annual average number of microenterprise employees (including self-employed [b])							
Total	-		**25,530**	**45,288**	**60,784**	**74,239**	**83,063**
Employed only in microenterprises [c]	-		16,328	28,833	38,750	48,016	54,841
Employed by a microenterprise and a general tax regime employer [c]	-		9,202	16,455	22,034	26,223	28,222
(Microenterprise employees)/(all employees)			*3.3%*	*5.6%*	*7.4%*	*8.8%*	*9.8%*
With positive microenterprise earnings		**548**	**22,164**	**37,647**	**50,892**	**62,246**	**70,372**
…in only 1 microenterprise	-	322	15,187	25,427	33,654	40,928	46,403
...in more than 1 microenterprise (but not in a general tax regime enterprise)	-	4	256	706	1,268	1,941	2,567
… in a microenterprise and a general tax regime enterprise [c]	-	222	6,721	11,514	15,970	19,377	21,402
(Microenterprise employees)/(all employees)		*0.08%*	*3.1%*	*5.0%*	*6.6%*	*7.9%*	*8.9%*
(Microenterprise employees)/(private sector employees)			*4.7%*	*7.5%*	*9.7%*	*11.5%*	*13.0%*
Total number of persons with positive microenterprise earnings in the given year							
						94,437	**103,787**
…in no more than 1 microenterprise in any month [d]						54,017	59,739
… in more than 1 microenterprise (but no general regime earnings) in at least 1 month						3,329	4,267
… with positive microenterprise earnings and general regime earnings [c] in at least 1 month						37,091	39,781
Microenterprise regime (millions of Euros)							
Turnover	-	6.26	218.58	355.25	489.34	603.28	663.36
Total microenterprise tax revenue	-	0.04	13.01	26.16	40.53	51.07	58.85
Total social security contributions for microenterprise regime	-	0.02	8.46	18.31	26.34	33.2	40.84

Note: [a] Number of taxpayers is for the first day of the calendar year. [b] "Self-employed" here refer to microenterprise owners. [c] Irrespective of number of employers. [d] in both 2014 and 2015, about 11 thousand of these workers had also general regime earnings, but not in the same months as microenterprise earnings.
Source: Latvia's State Revenue Service and State Social Insurance Agency data and staff calculation.

A distinctive feature of the MET regime is that every month a relatively large share of workers feature zero earnings (plausibly, apart from common reasons such as a long-term leave, this happens when the microenterprise' sales are close to zero). In 2015, annual average number of employees with positive microenterprise earnings (70,372) was by 15.3 percent below the total annual average number of microenterprise workers. By comparison, annual average incidence of zero earnings among general regime employees in 2015 was just 6 percent.[55] Together with low mandatory social security contributions, high incidence of zero earnings makes microenterprise workers without other income sources vulnerable to economic shocks.

A large share of microenterprise employees have also other sources of labor income and/or multiple microenterprise jobs at the same time. In 2015, over a third of microenterprise employees were at the same time employed by a general tax regime employer: annual average number of such employees (28,222) accounts for 34 percent of total annual average number of microenterprise employees (83,063). Moreover, 39,781 workers (38 percent of all workers with positive microenterprise earnings) had earnings under both regimes for at least one month in 2015, and a further 4,267 workers (4 percent) were employed by more than one microenterprise (for at least one month). A large share of MET employees took on an additional position in a microenterprise as well as continuing to work for previous employers.

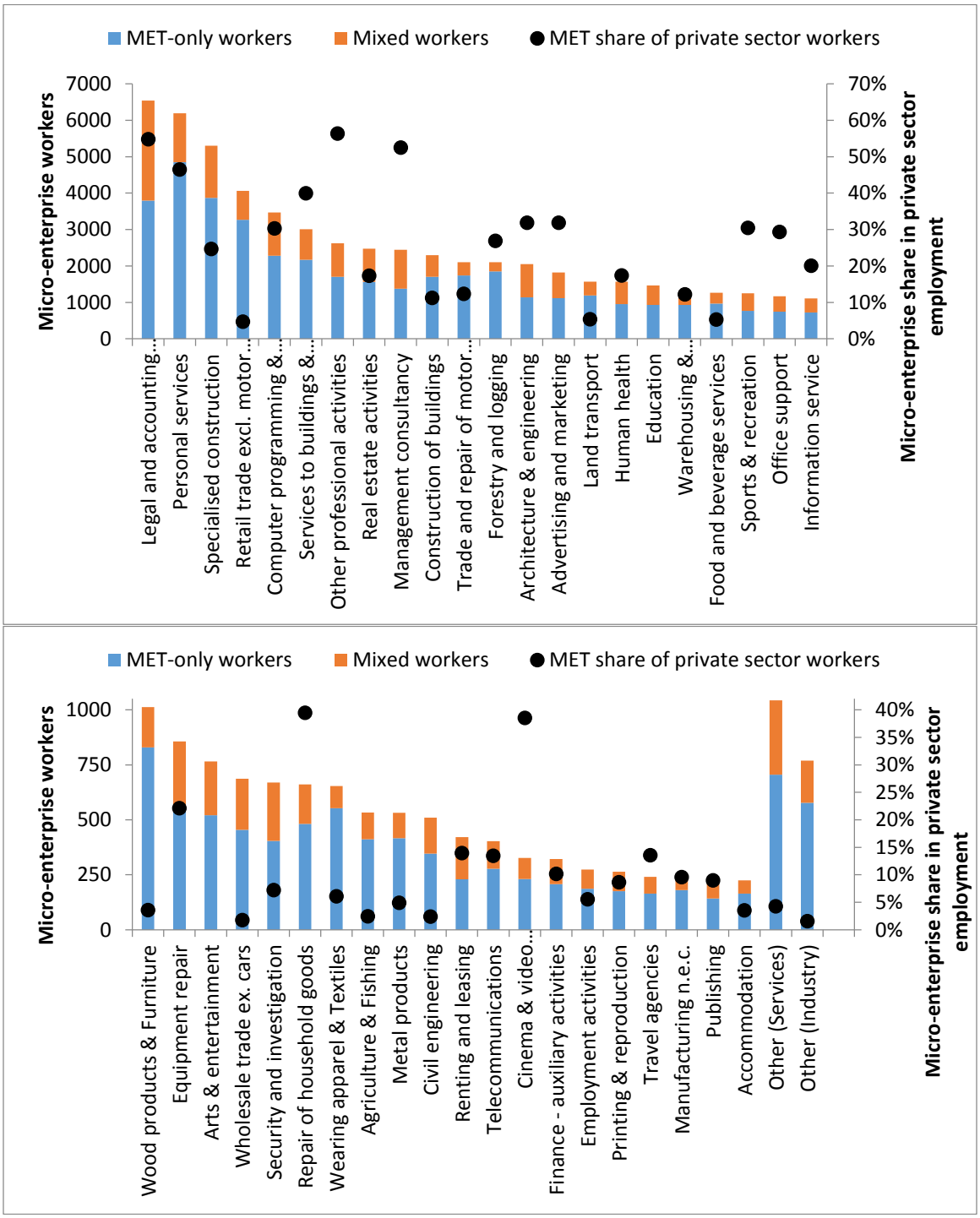
Employees with positive earnings under both MET and general regime (mixed workers) constitute a substantial share of all microenterprise employees in most sectors, especially in those with highly qualified workforce (Figure 54). The proportion of mixed workers is lower in forestry, trade, manufacturing, food and beverage services, and personal services (Figure 54).

Two-thirds of all microenterprise employees with positive earnings (47 thousand workers) are concentrated in 20 sectors which feature the highest MET shares in private employment (but account for just 27 percent of all private sector employees); on average, one-third of private sector workers in these economic activities work in microenterprises (Table 21). Most sectors with high proportion of microenterprise employment are service sectors with highly qualified workforce (forestry, specialized construction activities, and repair and installation of machinery and equipment are among the exceptions). Apart from sectors listed in Table 21, a large number of microenterprise workers (but not a large share in total employment) is found also in retail trade (4.1 thousand), trade and repair of motor vehicles (2.1 thousand), construction of buildings (2.3 thousand), as well as land transport, warehousing, food and beverage services (more than 1 thousand each); Figure 54 provides more details.

Sectoral variation of the MET share in employment appears to support the idea that firms use MET to reduce the tax burden. Given that microenterprise taxable income is based on the turnover of a microenterprise, and not the profit or labor costs as in other companies, the status of a MET payer is more profitable in sectors with higher shares of labor cost, such as the service sectors.

[55] State Revenue Service data.

Figure 54. Microenterprise (MET) workers by economic activities (2015, annual average)
Sectors with > 1000 (top panel) and up to 1000 (bottom panel) MET workers



Notes: The Figure reports annual average number of workers with positive microenterprise earnings. For Arts & entertainment, this number exceeds total number of employees with main job in the private sector, and MET share of private sector workers (144%) is not shown. *Source*: Latvia's State Revenue Service data, CSB data and staff calculation.

Table 21. Top 20 sectors with the largest shares of microenterprise workers in private employment, 2015

NACE code	Economic activity	Number of microenterprise (MET) workers	MET share in private sector employment, %
90	Arts and entertainment	766	144.4
85	Education	1,465	77.9
74	Other professional, scientific & technical activities	2,622	56.3
69	Legal and accounting activities	6,541	54.8
70	Head offices and management consultancy	2,445	52.5
96	Other personal service activities	6,196	46.5
81	Services to buildings and landscape	3,010	39.9
95	Repair of computers and household goods	661	39.5
59	Cinema & video programs & music publishing	327	38.5
73	Advertising and market research	1,824	31.9
71	Architecture and engineering	2,051	31.9
93	Sports, amusement and recreation	1,252	30.4
62	Computer programming, consultancy and related	3,471	30.3
82	Office administrative and support	1,172	29.4
02	Forestry and logging	2,100	26.9
43	Specialized construction activities	5,300	24.7
33	Repair & installation of machinery & equipment	856	22.1
63	Information service	1,106	20.1
86	Human health	1,567	17.4
68	Real estate activities	2,473	17.3
	All of the above	47,205	33.6

Notes: The Table reports annual average number of workers with positive microenterprise earnings. In *Arts and entertainment*, main jobs of most of employees are in public sector, hence number of MET workers exceeds private employment. Four sectors with high MET share in private employment but small (<200) number of MET workers in each are excluded. *Source:* Calculations based on State Revenue Service and CSB data.

By contrast, for sectors with higher shares of material and technical costs the general tax code would seem more attractive. Indeed, the share of microenterprise workers in private employment tends to be higher in sectors where, before the introduction of the MET regime, the taxes on labor (mandatory social security contributions and PIT paid from earnings) accounted for a larger share of turnover (Table 22). Likewise, one can expect a similar pattern with respect to profit taxes (CIT and self-employed PIT) which also can be avoided under the MET regime. Furthermore, MET can be used as a substitute for illegal ways to avoid taxes, such as envelope wages. Hence one can expect high shares of microenterprise workers in sectors which, prior to MET, featured high shares of general regime employees not receiving any earnings (thus signaling some wage manipulation). These expectations are supported in Table 23 by econometric models explaining 70 to 87 percent of variation of the MET share in private employment across 75 sectors of economic activity. It appears that, other things equal, the share of microenterprise workers increases with pre-

MET burden of labor taxes and profit taxes (each measured as a share of turnover in 2010), as well as with the share of zero-earnings employees in 2010.

Table 22. Proportion of microenterprise workers in sector's private employment (2015), by labor taxes - turnover ratio in 2010, Percent

	p25	p50	p75	mean	# sectors
(Labor taxes)/Turnover in 2010					
< 0.05	1.7	4.7	13.6	9.5	19
0.05 to < 0.075	2.4	5.6	17.3	13.1	23
0.075 to < 0.10	1.1	8.3	17.8	13.4	16
0.10 to < 0.15	6.2	11.3	31.9	18.5	7
0.15 to 0.25	14.2	20.3	67.4	40.3	10
Total	2.4	8.7	22.1	16.4	75

Notes: Non-weighted means and percentiles. The sample includes all two-digit NACE Rev. 2 divisions with at least 100 private sector wage earners in 2015, excl. "Gambling and betting".
Source: Calculations based on State Revenue Service data.

Table 23. Determinants of microenterprise share in sector's private employment, 2015

	Descriptives (non-weighted)		Estimated effects (robust s.e. in *italic*)					
			Weighted [a]				Non-weighted	
	mean	s.d.	[1]		[2]		[3]	
Taxes on labor, 2010 [b]	0.084	0.049	0.764	**	0.543	**	0.597	***
			0.291		*0.263*		*0.214*	
Taxes on profit, 2010 [b]	0.012	0.010	6.641	***	6.537	***	5.154	***
			1.082		*0.974*		*0.991*	
Share of zero-earnings employees, 2010	0.103	0.046	1.613	***	1.648	***	1.879	***
			0.288		*0.293*		*0.268*	
Sectoral dummies								
Education and social work (NACE 85 & 88)	0.026	0.159	X		0.514	***	0.497	***
					0.033		*0.048*	
Arts & entertainment (NACE 90)	0.013	0.113	X		1.240	***	1.236	***
					0.042		*0.032*	
Constant			-0.166	***	-0.157	***	-0.170	***
			0.029		*0.030*		*0.027*	
R-squared			0.699		0.805		0.872	
Root MSE [c]			0.083		0.068		0.084	
N obs.	75		75		75		75	

Notes: Linear regressions with robust standard errors (sample as described in Notes to Table 22). Explanatory variables refer to employers working under the general tax regime in 2010, thus characterizing the situation immediately before introduction of the MET (MET has been launched in September 2010, but the general tax regime accounted for 99.9% of annual average number of wage earners in 2010). [a] Models [1]-[2] weight sectors by the number of private sector wage earners. [b] Taxes are measured as a share of turnover in 2010. [c] Root MSE measures precision of the estimates. ****** (*******) - estimates significant at 5% (1%) level.
Source: Calculations based on State Revenue Service data.

While the above results provide evidence that firms use MET to reduce the tax burden, results presented in Table 24 suggest that **sectors with larger shares of MET-only workers in 2014 indeed have seen larger cuts (or smaller increases) in the burden of main taxes** (labor taxes, profit taxes, VAT, and MET) between 2010 and 2014. However, the share of mixed workers (those having earnings at both MET and the general tax regime) has an opposite effect (models [1] and [2]).

Table 24. Determinants of change in the burden of main taxes in sectors of Latvian economy between 2010 and 2014

	Descriptives		Estimated coefficients (robust s.e. below in *italic*)		
	mean [1]	mean [2]	[1]	[2] MET share[c]	[3] MET share[c]
	s.d. [1]	s.d. [2]	all sectors	≥ 0.01	< 0.01
Dependent variable:	0.007	0.005			
Change in tax burden [a]					
(2010-2014), as a share of 2010 turnover	0.031	0.029			
Explanatory variables					
Share of MET-only workers, 2014 [b]	0.058	0.071	-0.220 ***	-0.255 ***	X
	0.072	0.075	*0.072*	*0.073*	
Share of mixed workers, 2014 [c]	0.028	0.035	0.474 ***	0.468 ***	X
	0.040	0.042	*0.130*	*0.135*	
Share of all MET workers, 2014 [d]	0.086	0.106	X	X	-4.549 ***
	0.110	0.114			*1.428*
VAT returned, 2010 (as a share of turnover)	0.024	0.021	0.760 ***	0.622 **	0.773 ***
	0.021	0.017	*0.178*	*0.245*	*0.196*
Average firm size (# workers/1000), 2010	0.021	0.015	X	-0.388 ***	X
	0.029	0.019		*0.076*	
Sectoral dummies					
Manufacturing - electronic & optical	0.013	0.016	-0.009 ***	-0.012 ***	X
	0.113	0.126	*0.003*	*0.004*	
Arts & entertainment	0.013	0.016	-0.046 ***	-0.048 ***	X
	0.113	0.126	*0.003*	*0.004*	
Constant			-0.011 *	0.001	0.017
			0.006	*0.007*	*0.011*
R-squared			0.3550	0.3107	0.7219
Root MSE [e]			0.0255	0.0254	0.0207
N obs.	79	63	79	63	16

Notes: Non-weighted linear regressions with robust standard errors. The sample includes all two-digit NACE Rev. 2 divisions with annual average number of wage earners in 2014 was at least 50 (but excludes "Gambling and betting" which is subject to special regulation). [a] Tax burden is measured as a share of turnover in respective year. [b, c, d] Proportions of MET-only workers, workers with earnings in both MET and general regime, and all microenterprise workers among all workers with positive earnings in 2014, based on annual average of monthly data. [e] Root MSE measures precision of the model-based predictions. *,**, *** - estimates significant at 10%, 5%, 1% level, respectively.

Source: Calculations based on State Revenue Service data.

Furthermore, the tax burden tends to increase more (or to decrease less) in sectors which prior to introduction of the MET featured larger incidence of returned VAT (likely indicating a reduction in VAT fraud between 2010 and 2014). When only sectors where microenterprise workers account for at least 1

percent of all earners are considered (model [2]), average firm size has a negative effect on the change in tax burden[56]. Total share of MET workers has a negative impact on the tax burden only among sectors with the MET share below 1 percent (model [3]); in similar models (not shown here) estimated on all sectors or on sectors with the MET share ≥ 1 percent the effect of the MET share is not significant.

The expansion of MET had an economic impact beyond purely fiscal effects. Table 25 provides strong econometric evidence that sectors with higher shares of microenterprise workers in 2014 feature smaller growth (or larger decrease) of real labor productivity, as well as larger growth of nominal unit labor costs. More detailed analysis using panel data estimates suggest that these effects are causal. As expected, sectors with higher shares of microenterprise workers feature smaller growth (or larger decrease) of labor cost per full-time equivalent worker.[57]

Table 25. Microenterprise workers' impact on growth of labor cost and labor productivity in sectors of Latvian economy between 2010 and 2014

		Dependent variables: Growth between 2010 and 2014			
		Labor cost per		Labor productivity measured as	
		Full-time equivalent (FTE)	1 euro of output	Value added [a] per FTE	Value added [a] per employed
	mean	0.148	0.162	0.008	0.070
	s.d.	0.138	0.210	0.522	0.530
Explanatory variables		Estimated coefficients (robust s.e. in *italic* below)			
Share of all MET workers, 2014 [b]	0.098	-0.251 ***	1.092 ***	-0.804 ***	-0.579 **
	0.116	*0.081*	*0.244*	*0.247*	*0.233*
Labor cost per full-time worker, 2010 (1000 EUR), log	2.207	-0.229 ***	X	-0.149 **	X
	0.386	*0.037*		*0.063*	
Sectoral dummy					
Manufacturing of basic metals	0.018	-0.439 ***	X	-3.743 ***	-3.801 ***
	0.132	*0.017*		*0.041*	*0.041*
Constant		0.686 ***	0.055 **	0.402 ***	0.113 **
		0.079	*0.026*	*0.133*	*0.043*
R-squared		0.6581	0.3606	0.8650	0.8283
Root MSE [b]		0.0831	0.1698	0.2042	0.2324
N obs.		57	57	57	57

Notes: Non-weighted linear regressions with robust standard errors. The sample includes all two-digit NACE Rev. 2 divisions for which Entrepreneurship indicators of enterprises are available. [a] Value added measured in constant prices of 2010. [b] Root MSE measures precision of the model-based predictions. **, *** - estimates significant at 5%, 1% level, respectively.
Source: Calculations based on State Revenue Service data and CSB data.

Among individuals who worked in microenterprises in 2015, microenterprise earnings accounted, on average, for three quarters of total labor income, up from about one-fifth in 2011 (Table 26). In 2015, less than 1 percent of microenterprise employees had also [declared] self-

[56] When average firm size is added as a control variable to models [1] and [3], its effect is not significant, other effects are almost unchanged but model's quality becomes slightly worse.
[57] This holds also for labor cost per worker, both for 2010-2014 and 2010-2015, and for a larger number of sectors (78). These results are available on request.

employment income under general regime, while before introduction of the MET regime 2 to 3 percent of the same individuals had self-employment income (Table 26).

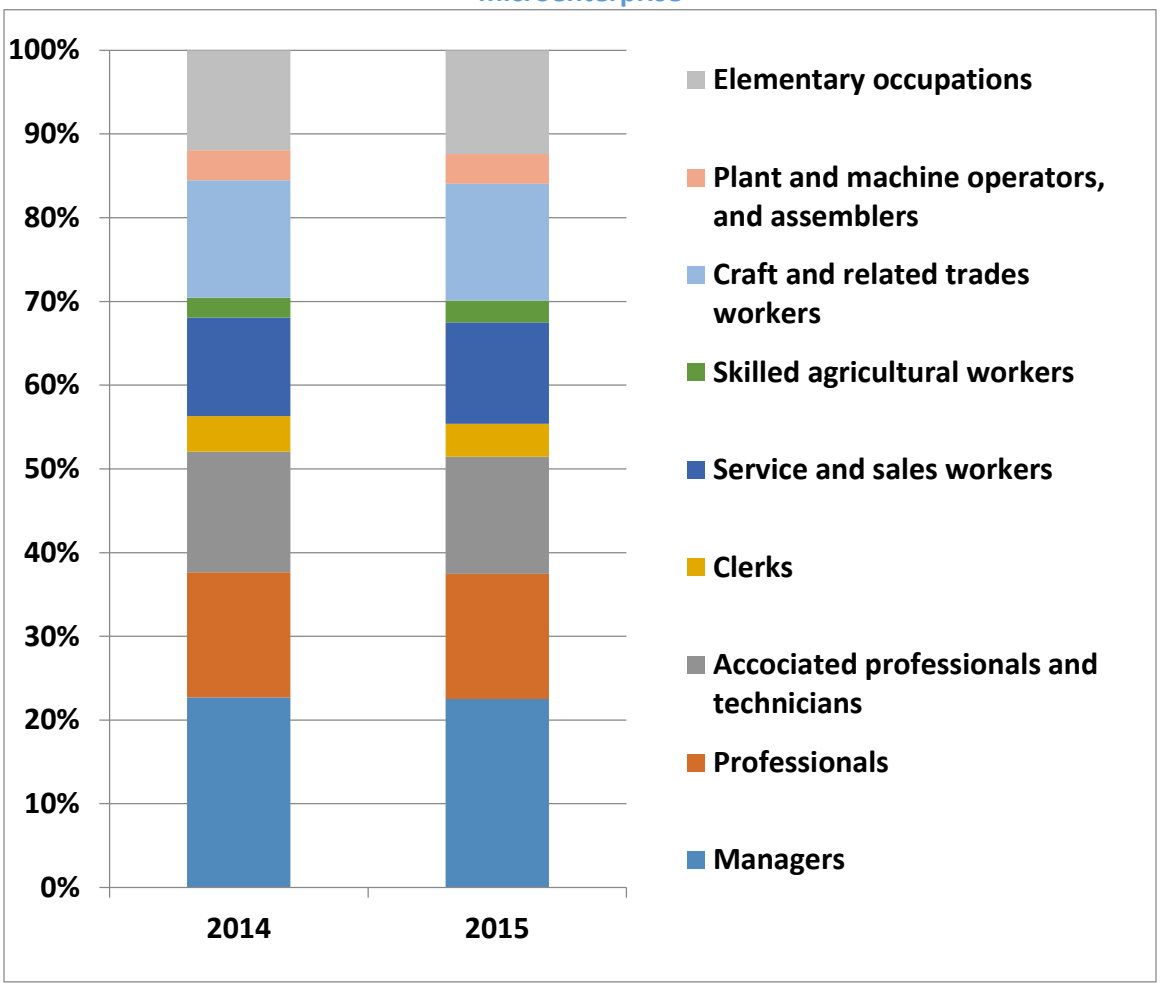
Table 26. Microenterprise share in labor income and incidence of self-employment (2008-2015) among individuals who worked in microenterprises in 2015

	2008	2009	2010	2011	2012	2013	2014	2015
Average microenterprise share in gross labor income, %	0.0	0.0	1.2	19.5	31.6	44.2	59.5	74.9
Average self-employment share in gross labor income, %	2.4	2.4	2.7	1.5	1.2	0.8	0.5	0.2
Proportion of persons with self-employment income:								
- among those with some labor income, %	3.9	3.7	3.9	2.3	2.0	1.5	1.2	0.6
- among all group members aged 15+, %	2.7	2.3	2.3	1.5	1.4	1.2	1.0	0.6
N obs with labor income, 1000	70.5	63.5	61.1	68.1	75.2	82.4	91.4	103.8

Notes: For 2008-2014, average microenterprise share in labor income (shown in the Table) differs very little from microenterprise share in aggregate labor income of the group; in 2015, however, the latter is substantially smaller (just 64 percent), indicating that MET share tends to be lower for high-income earners.
Source: Calculations based on State Revenue Service data.

More than 50 percent of microenterprise employees work in highly skilled non-manual occupations *(*Figure 55*)***, implying that many higher-paid individuals are covered by the MET regime** (this is in line with findings from Table 21 that high shares of microenterprise workers are mostly found in service sectors with highly qualified workforce).

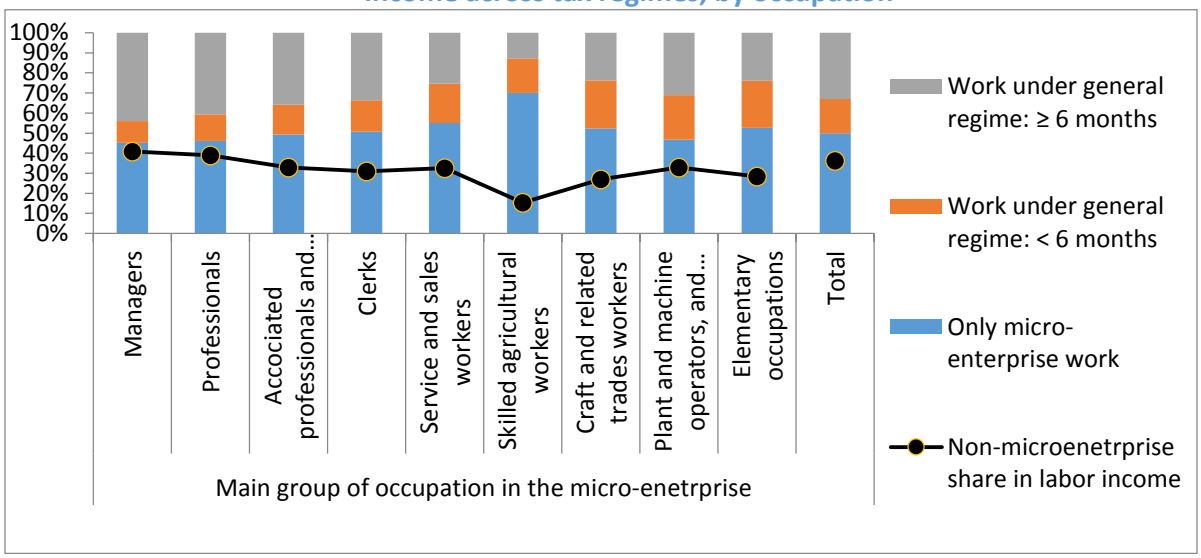
Figure 55. Individuals who worked in microenterprises in 2014-2015, by occupation in "main" microenterprise



Notes: The Figure covers only individuals with positive microenterprise earnings in respective year. The results should be treated with care, as Information on occupation was not available for 37% of observations in 2014 and for 30 percent of observations in 2015. These observations are excluded. N = 75,548 for 2014 and 86,469 for 2015.
Source: Calculations based on State Revenue Service data.

In each of the main groups of occupations (except for agricultural workers), about 40 percent of microenterprise employees do not have employee earnings under general regime (Figure 56). Individuals employed in microenterprises as managers or professionals compared to their less-skilled counterparts to a smaller extent depend on microenterprise jobs: 40 percent of their labor income comes from other sources (as opposed to about 30 percent for most other groups and 15 percent for agricultural workers, see Figure 56). Furthermore, more than two-fifths of microenterprise managers and professionals worked at least six months of 2015 also under general regime, while this proportion is slightly above one-third among associated professionals, clerks, and machine operators and about one-fourth among service and sales workers, skilled and low-skilled manual workers (Figure 56).

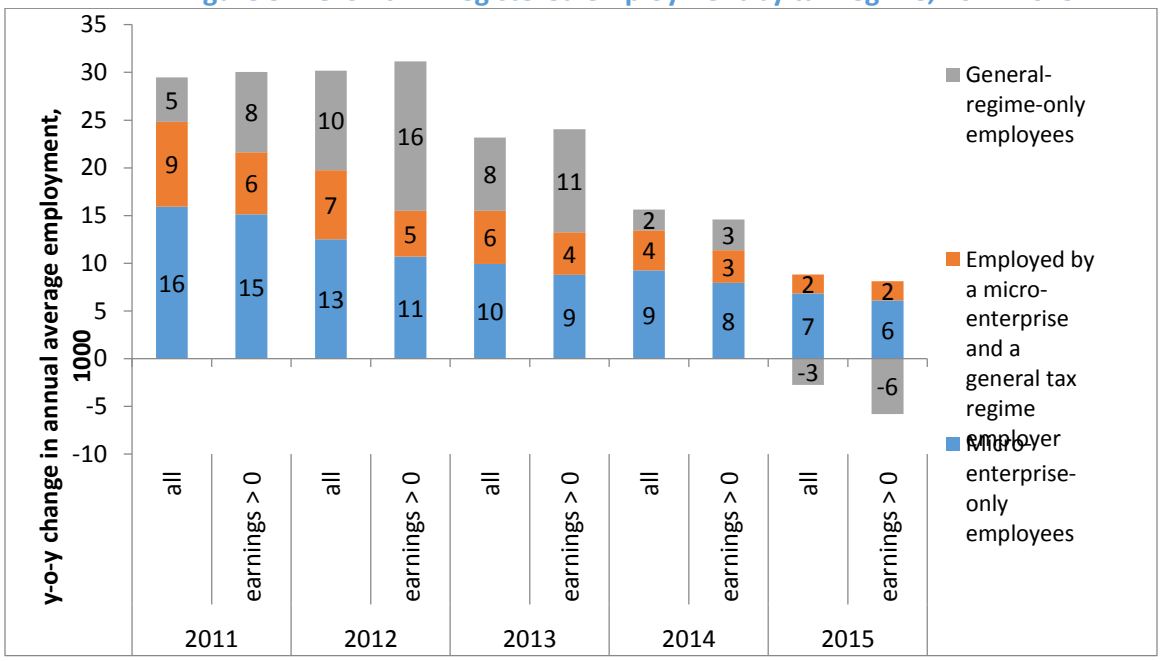
Figure 56. Individuals who worked in microenterprises in 2015: Distribution of work and labor income across tax regimes, by occupation



Notes: The Figure covers only individuals with positive microenterprise earnings in 2015. Non-microenterprise share has been calculated in the aggregated labor income of each group (rather than average across workers).
Source: Calculations based on State Revenue Service data.

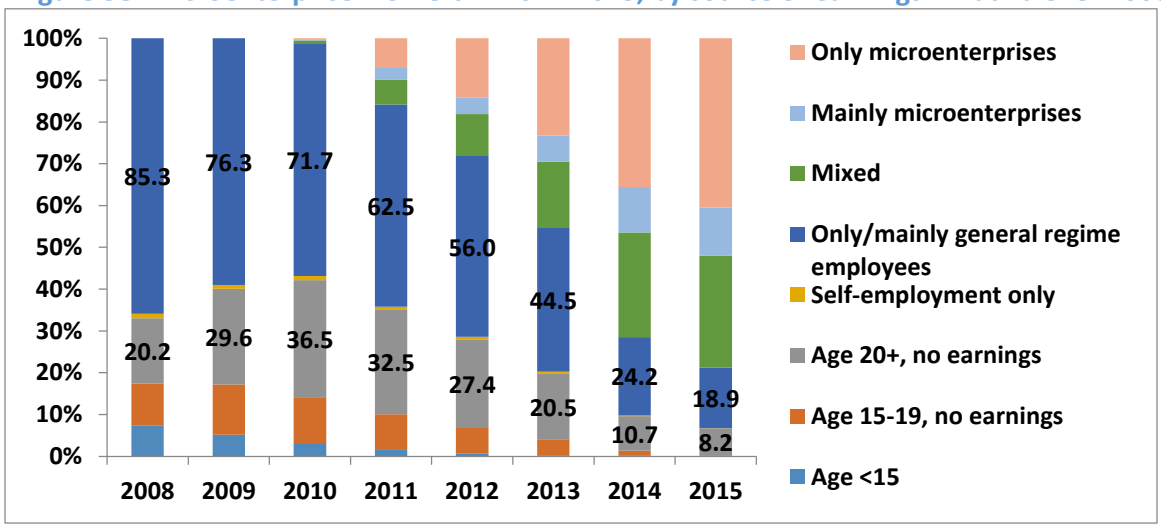
During 2011-2015, growth of the number of [registered] employees in Latvia was driven mostly by the MET regime. Figure 57 provides evidence based on two measures: total number of employees and number of employees with positive earnings. According to both measures, the increase in the number of employees employed only under the general tax regime accounts for much less than a half of total increase in 2011-2013, less than a quarter in 2014, and becomes negative in 2015. The question how big would be employment growth in absence of the microenterprise regime (or under a more restrictive version of this regime) remains of course open. Data in Figure 57 do not imply that most jobs have been *created* in the microenterprises; instead, job flows and worker flows from the general tax regime to the MET regime could be behind the employment growth figures.

Figure 57. Growth in registered employment by tax regime, 2011-2015



Source: Calculations based on State Revenue Service and State Social Insurance Agency data.

Figure 58. Microenterprise workers in 2014-2015, by source of earnings in Latvia over 2008-2015

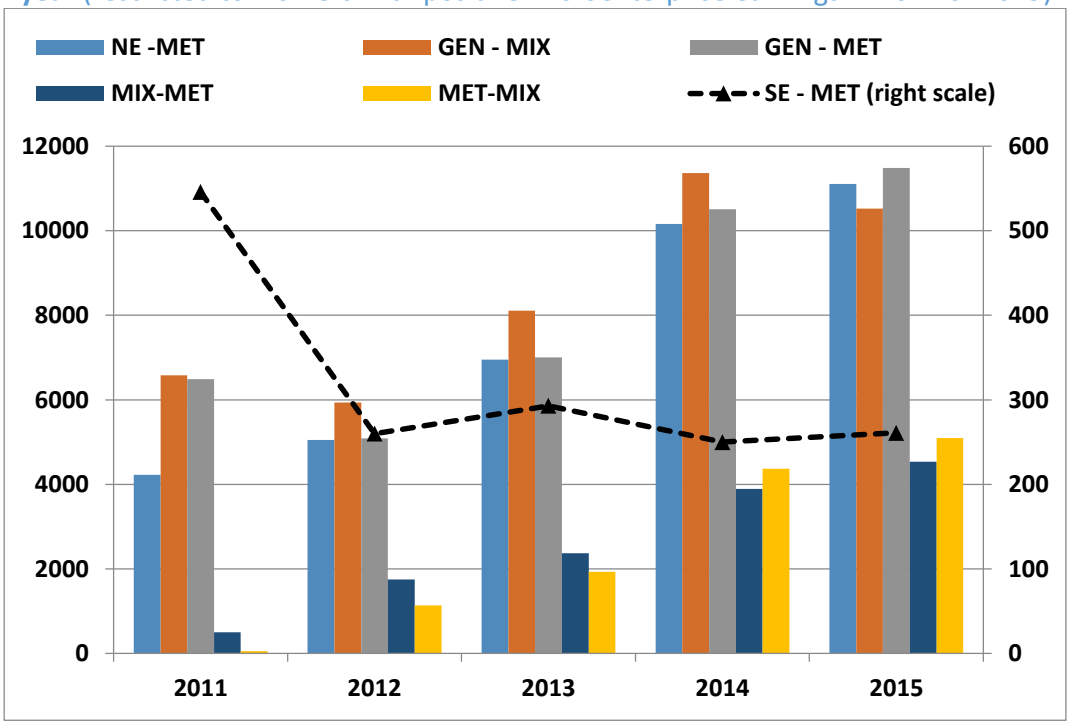


Notes: The Figure is based on individual records (rather than annual average data) and covers 129.4 thousand individuals with positive microenterprise earnings in 2014 or 2015 (or both). For each of the years, the Figure presents percent distribution of all these persons by source of earnings. The Figure does not cover persons who had positive earnings under the MET regime in 2010-2013 but did not have such earnings in 2014-2015. Labels show absolute numbers (in 1000).

Source: Calculations based on State Revenue Service data.

There have been large inflows to the MET regime from the general tax regime but also substantial inflows from non-employment or informal employment. Figure 58 presents the history of registered employment, over 2008-2015, for the 129 thousand individuals who earned some income from microenterprises during the two-year period of 2014-2015. Before the MET era (in 2010) out of these 129 thousand, more than 70 thousand had some earnings under general regime, and 36 thousand had no legal earnings in Latvia[58] (despite being of working age--aged 20+ years). Both these segments declined steadily over years and by 2015 accounted for just 19 and 8 thousand, respectively (Figure 58). This suggests that not only did people shift out of the general regime, but that many people moved into the MET regime from a situation of not being employed or being informally employed. These inflows are explicitly shown in Figure 59, based on the same group of 123 thousand persons (so that in 2011-2013, full inflows were even larger than shown in Figure 59[59]).

Figure 59. Main inflows into microenterprise regime in 2011-2015, by tax regime in the previous year (restricted to workers with positive microenterprise earnings in 2014 or 2015)



Notes: The Figure is based on individual records and covers 123.3 thousand individuals with positive microenterprise earnings in 2014 or 2015 (or both). Legend: NE - "No legal earnings in Latvia"; GEN - "Only or mainly general regime earnings" (excl. those with only self-employment income); MIX - "General regime earnings for at least 6 months of

[58] Those without legal earnings could belong to one of the following categories: (i) not employed (including students and those below working age); (ii) employed informally (i.e. no earnings in particular year have been declared to the tax authorities); (iii) formally employed but in the given year received no earnings (e.g. on child care leave); (iv) in the given year worked abroad (and did not have legal earnings in Latvia).

[59] Comparison of annual average number of microenterprise earners from Table 20 with those based on the group covered in Figure 59 suggests that in 2011 (respectively, 2012; 2013) full inflows could be by up to 65 (respectively, 42; 17) percent larger than those shown in Figure 59. See Figure 61 below for EU-SILC based estimates.

the year, as well as some microenterprise earnings"; MET - "Only or mainly microenterprise earnings"; SE - "Only self-employment income".
Source: Calculations based on State Revenue Service data.

Flows from the general regime to the mixed regime (i.e. adding a microenterprise job to your existing general regime job) were slightly larger than flows from general regime to only or mainly microenterprise jobs, while flows from non-employment to the MET regime were slightly smaller. Churning flows between mixed and MET regimes were of roughly equal size (thus having no lasting impact). Administrative data available at the time of writing allowed estimating outflows from the MET regime only between 2014 and 2015. From the perspective of potential phasing out of the MET regime, it is worth noting that these flows are substantial: 28 percent of employees working in mixed regime in 2014 and 32 percent of those who worked mainly in microenterprises (combining this with earnings under general regime for less than 6 months) switched to [only or mainly] general regime in 2015 (Table 27).

Table 27. Outflows from microenterprise regime between 2014 and 2015

Tax regime, 2014 \ Tax regime, 2015	No legal earnings	Only self-employment (general regime)	Only or mainly general regime as employee
Mixed (N = 32389)	790 (2.4%)	6 (0.02%)	9035 (28.2%)
Mainly microenterprise (N = 14046)	1264 (9.0%)	19 (0.14%)	4162 (31.7%)
Only microenterprise (N = 46067)	6193 (13.4%)	98 (0.24%)	3443 (8.3%)
MET regime total (N = 92691)	8247(8.9%)	123 (0.14%)	16640 (19.2%)

Source: Calculations based on State Revenue Service data.

The rate of outflow from MET-only to general regime was much smaller than the inflow into the MET regime, but also not negligible (8.5 percent), while in total 16763 persons switched from MET to the general regime between 2014 and 2015, and 8247 persons switched to non-employment or informal employment (Table 27).

There are four types of sectoral patterns for MET activity. The structure of job flows and worker flows between the tax regimes during the period of 2010-2015 differed across sectors of economic activity. Table 28 identifies four types of sectors: (i) 30 sectors where both MET and the general regime employment increased, and MET had big impact on employment growth; (ii) Nine sectors where MET employment increased at the expense of general regime employment, and MET-only workers account for more than a half (in some cases even more than 100%) of total change in employment (positive in each sector); (iii) Eight sectors where both MET and the general regime employment increased and the number of MET-only workers exceeds 100, but accounts for only a small part (3 to 20 percent) of the total change in employment; (iv) 41 sectors with the number of

MET-only workers being small both in absolute terms (≤50 in most cases) and in comparison to either sector's employment or its change over 2010-2015. See Table 28 for details.

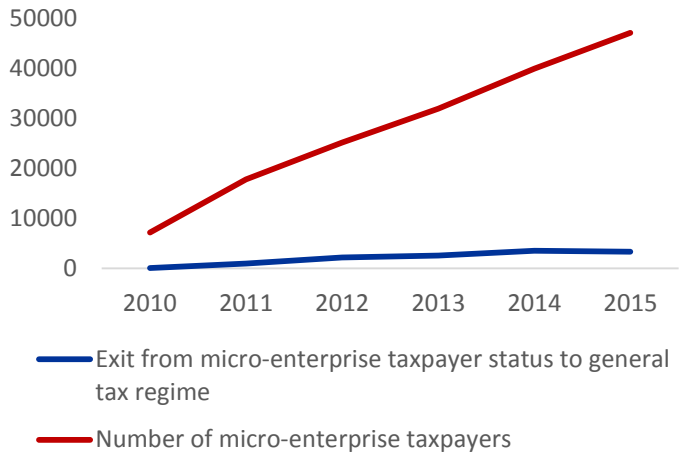
Table 28. Change in annual average registered employment over 2010-2015 by sector, firm size and tax regime

Type of sector		ΔE 2010-2014, by firm size (64 sectors)			ΔE 2010-2015, by tax regime (77 sectors)			
		<10	***10+***	***Total***	***MET-only workers***	***General (incl. mixed)***	***Total***	***MET: Net effect***
1	pattern	up	up	up	up	up	up	up
	in 1000	32.0	39.3	71.3	39.0	47.8	90.1	42.3
Description. 30 sectors where both MET and the general regime employment increased, and MET impact on employment growth was big: MET-only workers account for ≥ 30% of total ΔE (23 sectors) or for ≥ 134% of employment change in enterprises with less than 10 workers (4 sectors) or number of all MET workers in the sector exceeds 1000 (remaining 4 sectors, as well as 15 other sectors). *List of sectors:* Forestry and logging; Manufacturing of wood products; Manufacturing of furniture; Printing and reproduction; Repair & installation of machinery & equipment; Construction of buildings; Specialized construction activities; Wholesale and retail trade (incl. that of motor vehicles); Land transport; Warehousing and transport support; Food service activities; Computer programming; Information service; Head offices and management consultancy; Finance and insurance supporting activities; Legal and accounting activities; Architecture and engineering; Advertising and market research; Veterinary activities; Renting and leasing; Travel agencies; Security and investigation; Services to buildings and landscape; Office administrative and support; Human health; Arts and entertainment; Sports, amusement and recreation; Other personal service activities.								
2	pattern	up	down	up	up	down	up	up
	in 1000	5.3	-3.5	1.8	6.0	-4.0	2.0	5.9
Description: 9 sectors where MET employment increased at the expense of general regime employment; moreover, MET-only workers account for more than a half (in some cases even more than 100%) of total ΔE, and (in 7 out of nine cases) for most of employment growth in enterprises with less than 10 workers. *List of sectors:* Manufacturing of food products; Manufacturing of wearing apparel; Manufacturing n.e.c.; Cinema & video programs & music publishing; Telecommunications; Real estate activities; Other professional, scientific and technical activities; Education; Repair of computers and personal and household goods.								
3	pattern	up	up	up	up	up	up	up
	in 1000	2.2	7.3	9.5	1.9	22.2	23.3	1.2
Description: 8 sectors (not belonging to type 1) where both MET and the general regime employment increased and number of MET-only workers exceeds 100, but accounts for less than 21% of total change in employment. *List of sectors:* Agriculture; Manufacture of textiles; Manufacture of glass products; Manufacture of metal products; Civil engineering; Accommodation; Employment services; Social work.								
4	pattern	-			-			
	in 1000	1.1	-0.4	0.7	1.0	29.3	27.4	-1.9
Description: 41 sectors with number of MET-only workers in 2015 in each ≤50 (in 5 cases zero, in 9 cases <10, but in 2 cases ≤ 150) and is small compared to either employment or its over 2010-2015 in this sector.								

Source: Calculations based on State Revenue Service data and CSB data.

The MET revenue generated in 2015 made up a low share of overall tax revenues: MET revenues were equal to 58.85 million EUR or 0.8 percent of total tax revenues. There has been little exit occurring from the microenterprise tax regime that was in the first place intended to foster start-up activity (Figure 60); instead there has been a steady and large inflow over time of tax payers from the general regime into the microenterprise regime.

Figure 60. Number of taxpayers in the microenterprise regime and exiting the regime, 2010-2015



Source: Calculations based on State Revenue Service data.

The tax rate for microenterprises of 9 percent is substantially below the effective tax rate on labor incomes, whether SSCs are included or not (the PIT equals 23 percent excluding SSCs, 33.5 percent excluding employer SSCs, and 57 percent including all SSCs) (Table 29). Employees also accumulate fewer entitlements to social-security benefits. In addition, closely-held microenterprises do not pay corporate tax, but only pay a tax of 10 percent on paid-out dividends, which is equal to the dividend tax on the personal level. Hence, by setting up a MET individual firm owners avoid paying the CIT, while the same rate on dividends applies in the PIT. Finally, the MET-regime affects the decision to remain self-employed or start a microenterprise. A regular self-employed faces a PIT rate of 23 percent and needs to pay both employee and employer SSCs with a rate of 30.58 percent in total. A self-employed individual is entitled to deductions and allowances, whereas under the MET-regime he/she is not. Nevertheless, the MET tax rate of 9 percent in total is much below the average tax rate of a self-employed worker as Table 30 illustrates for a worker with the maximum gross income of EUR 720 per month to be eligible for the microenterprise tax regime. The example assumes that turnover equals wage payments and the only costs of are labor costs. This deliberately biases the example in favor of the MET. It demonstrates that probably not many employed workers with incomes below EUR 720 per month will get an incentive to file their taxes as regular self-employed. For instance, between 2014 and 2015, just 123 persons left the MET regime for self-employment (Table 27), while opposite flows from self-employment to the MET regime where about twice as large for four years between 2011 and 2015 and much larger in the first full year of MET (Figure 59).

Table 29. Tax rates MET-regime vs other legal forms, in percent

	MET self employed	MET company	Self-employed	Closely-held company	Worker
PIT	-	-	23	23	23
SSC (employee)	-	-	30.58	10.50	10.50
SSC (employer)	-	-		23.59	23.59
Allowances / untaxed minimum	No	No	Yes	Yes	Yes
CIT	-	-	-	15	-
MET	9	9	-	-	-
Dividend	-	10	10	10	10
Capital gains	-	-	15	15	15

Table 30. Comparison self-employed and micro enterprise

Gross income 720 euro per month, eligible for exemption for dependents

	Self employed	Micro enterprise
Gross earnings	8640	8640
Tax rate	23%	9%
SSC	30.58%	0%
General tax exemption	900	0
Exemption for dependents	1980	0
Total tax	3082	778
Net income	5558	7862
Average tax rate	36%	9%

The MET regime has raised concerns on its negative impact on the social security system. Workers who rely mainly on microenterprises for wages pay lower social security contributions, and hence, accrue lower entitlements for pensions as well as other social insurance benefits such as unemployment insurance. The risk is that this will undermine the sustainability of the social security system due to a lowering of benefit coverage and adequacy. Indeed, this aspect of the MET regime—the stark reduction in social security contributions—separates the Latvian regime from that from small business regimes across the OECD (OECD, 2015).

A further concern is that the MET regime has resulted in tax avoidance and violates the principle of neutrality whereby individual/firms earning similar wages/profits are treated equally by the tax system. Employees of similar wages or indeed firms with similar profits but varying turnovers are treated differently across the microenterprise and general tax regime. For individuals, having all or part of your wage income coming from microenterprises results in a lower tax burden. The same is true for regular owners of closely held companies who can use the MET to avoid the CIT. And the self-employed workers get incentives to work in a microenterprise to avoid both PIT and SSCs (Figure 55 and Figure 59 provide evidence of substantial outflow from self-employment to the MET

regime). Given that microenterprise taxable income is based on the turnover of a microenterprise, and not the profit or labor costs as in other companies, the status of a MET payer is not equally profitable in all sectors of the national economy. In particular, companies with higher shares of labor cost, in the case for example of companies in the service sectors, opting for MET can reduce the amount of taxes payable. In contrast, for sectors with higher shares of material and technical costs the general tax code would seem more attractive. The variation of the share of MET payers by sector appears to support the idea that firms use MET to reduce the tax burden: econometric models explaining two-thirds to three-quarters of this variation across 75 sectors (Table 31) suggest that **the share of MET payers increases with the pre-MET burden of labor taxes and profit taxes** (each measured as a share of turnover in 2010), **as well as with the share of zero-earnings employees in 2010.**[60] On the other hand, **high-tech sectors feature lower share of MET payers than would be predicted by the above-mentioned factors.**

Table 31. Determinants of the share of MET payers among employers by sector, 2015

	Descriptives (non-weighted)		Estimated effects (robust s.e. in *italic*)					
			Non-weighted				Weighted [a]	
	mean	s.d.	[1]		[2]		[3]	
Taxes on labor, 2010 [b]	0.084	0.049	1.574	***	1.347	***	1.264	**
			0.347		*0.348*		*0.520*	
Taxes on profit, 2010 [b]	0.012	0.010	6.550	***	7.041	***	6.444	***
			1.404		*1.425*		*1.652*	
Share of zero-earnings employees, 2010	0.103	0.046	1.676	***	2.049	***	2.064	***
			0.271		*0.322*		*0.431*	
Average firm size (# workers/1000), 2010	0.018	0.021	X		2.062	***	2.407	
					0.939		*1.579*	
Sectoral dummies								
High-tech	0.026	0.159	-0.167	***	-0.226	***	-0.166	**
(NACE 21 & 26)			*0.038*		*0.077*		*0.063*	
Arts & entertainment	0.013	0.113	0.106	**	0.149	***	0.163	**
(NACE 90)			*0.051*		*0.052*		*0.076*	
Membership organizations (NACE 94)	0.013	0.113	-0.537	***	-0.492	***	-0.476	***
			0.058		*0.060*		*0.088*	
Constant			-0.097	***	-0.159	***	-0.153	**
			0.037		*0.046*		*0.066*	
R-squared			0.6394		0.6765		0.7485	
Root MSE [c]			0.1128		0.1077		0.0944	
N obs.	75		75		75		75	

Notes: Linear regressions with robust standard errors (sample as described in Notes to Table 22). Explanatory variables refer to employers working under the general tax regime in 2010, thus characterizing the situation immediately before introduction of the MET. [a] Model [3] weights sectors by the number of general regime employers in 2015. [b] Taxes are measured as a share of turnover in 2010. [c] Root MSE measures precision of the model-based predictions. *,**, *** - estimates significant at 10%, 5%, 1% level, respectively.

Source: Calculations based on State Revenue Service data.

[60] Recall that high shares of general regime employees not receiving any earnings likely signal some wage manipulation, e.g. envelope wages.

The list of top 20 sectors with the largest shares of MET payers among employers is identical to the list of top sectors with the largest shares of MET workers in private sector employment (Table 21), except for the last two positions (Human health and Real estate activities are replaced by Telecommunications and Manufacturing of wearing apparel)[61]. The largest share of MET payers in 2015 is found in Other personal service activities (74 percent of all employers), followed by ten sectors with 46 to 61 percent of employers being MET payers and another ten sectors where this share varies from 34 to 45 percent. With few exceptions, these are service sectors with highly qualified workforce. In remaining service sectors (such as Human health, Veterinary, Broadcasting, Travel agencies, Renting and leasing, Real estate, Catering, Accommodation, Land transport, and Retail trade), as well as in most Manufacturing sectors, MET payers account for 12 to 30 percent of employers. The smallest shares of MET payers (10 percent or less) are found in Manufacturing of basic metals, motor vehicles, chemical, rubber, plastic, and pharmaceutical products, Mining, Fishing, Agriculture, Air and Water transport, Financial services, Wholesale trade, and Energy supply.

There are two ways to avoid tax arbitrage via the MET-regime. First, is to levy SSCs for workers in the MET regime, and this is currently proposed for 2017, which would be a desirable change. Second, is to bring the MET rate more in line with the CIT (15 percent) or to increase the MET-rate towards the rate of PIT (23 percent). Alternatively, one may abolish the regime for microenterprises. Then, the self-employed will face approximately the same tax treatment as standard employees. And, the owners of closely-held companies face at least the same PIT as regular workers. This would close down the most important routes for tax evasion.

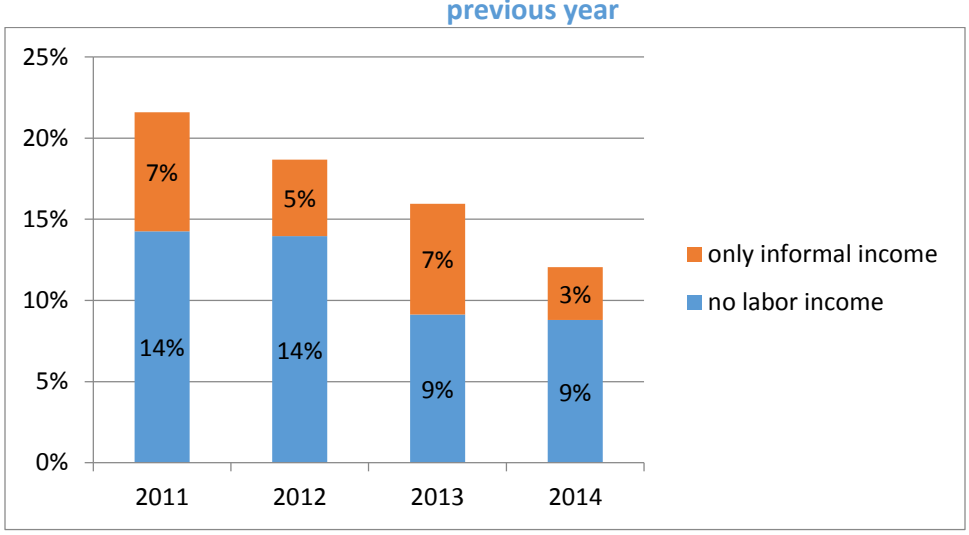
To address part of the concerns that government is amending the MET regime effective the first of January 2017.[62] In particular, on November 30, 2015 the Latvian Parliament approved the following main changes effective as of 2017: (i) microenterprises that have a sales volume of below EUR 7000 will be subject to a 5 percent tax rate; (ii) for companies with sales volume between EUR 7000 and 100000 the 5 percent rate applies for three years and afterwards a rate of 8 percent applies; (iii) employees of micro enterprises have to be insured paying MSSIC contributions; from at least 75% of minimum wage in 2017 and from full minimum wage starting from 2018; moreover, those employed by more than one microenterprises would have to pay such MSSIC from each microenterprise they work for (unlike for the general regime employees, these payments will not be cumulative); (iv) mainly services sectors as well as forestry and logging (the sectors with most microenterprises) are likely to be explicitly excluded from the regime;[63] (v) if any employee is employed for over three years the enterprise does not qualify anymore for the MET regime.

It will be essential to assess the impact of the MET on informality before the changes become effective. Given that the total number of tax payers has increased more than the number of MET taxpayers, it could well be that MET has made it affordable for individuals to enter into the formal labor market, while they chose to be informal before under the general tax code. Figure 61 provides evidence of **substantial inflows into the MET regime from non-employment and informal employment:** 14 percent of microenterprise workers in 2011 did not have any labor income in 2010, and 7 percent had only informal (undeclared) labor income. By 2014, these shares fell to 9 and 3 percent, respectively. In absolute numbers, however, inflows of non-employed and informally

[61] Recall that in both cases top 20 excludes sectors with less than 200 MET workers.
[62] See state revenue service (2016) for more details.
[63] For more detail see company taxes (2015).

employed individuals to the MET regime did not decrease over time: together, these inflows accounted for 7.2, 10.5, 12.2 and 11.4 thousand persons in 2011, 2012, 2013 and 2014, respectively.

Figure 61. Estimated shares of microenterprise workers without declared labor income during the previous year



Notes: Administrative (SRS) data do not allow to distinguish informal workers from non-employed. Estimates presented in the Figure are based on EU-SILC 2012-2015 panel microdata, which contain 1484 observations of microenterprise workers, including 1002 observations for which were observed also in the previous year. For 2014, estimated number of MET workers without declared labor income during the previous year differs from exact number available from SRS data by just 1.4 percent.
Source: Calculation based on microdata of EU-SILC and SRS data.

There is strong evidence of manipulation of wage reporting under the MET regime. In order to assess feasibility of different alternatives to MET for small enterprises, it is worthwhile to analyze the incidence of incomes under the MET regime. If there is a bunching just below EUR 720, this is would be an indication of possible manipulation to fall under the MET regime as opposed to the general tax code. Table 32 is based on monthly earnings records[64] of 123 thousand individuals with positive microenterprise earnings in 2014 or 2015, provides a very strong evidence for such manipulation. About one-quarter (respectively, one-third) of monthly earnings records of MET-only workers (respectively, mixed workers) refer to exactly EUR 720, while narrow band from EUR 700 to EUR 720 contains about 38 percent (respectively, 50 percent) of all records. Just 0.5 percent of records refer to microenterprise earnings above EUR 720. By contrast, general regime earnings of mixed workers fall in the interval from EUR 700 to EUR 720 (including) in about 2 percent of cases, while they exceed EUR 720 in more than 20 percent of cases; the same is true for general-only workers (which, in this context, refers to the months when individuals had general regime earnings before, after or between spells of MET-only earnings). On the other hand, MET and the general regime are not so dramatically different with respect to distribution of earnings below EUR 700: in 2015, 31 percent of MET-only earnings and 32 percent of general-only ones are below minimum wage; 6 percent of MET-only earnings and 9 percent of general-only ones fall into a €10-wide band at and above the minimum wage; 25 percent of MET-only earnings and 31 percent of general-only ones are between EUR 360 and EUR 700.

[64] For each of the two tax regimes, only the job with the largest pay packet in the given month is considered.

Table 32. Distribution of monthly earnings in the main microenterprise job and in the main general regime job for individuals with positive microenterprise earnings in 2014 or 2015

	Microenterprise earnings				General regime earnings			
	MET-only workers		Mixed workers		Mixed workers		General-only workers	
	2014	2015	2014	2015	2014	2015	2014	2015
Less than Min. wage	28.2	30.6	23.3	25.7	36.2	36.0	36.7	31.9
Min. wage	4.1	4.7	2.0	2.1	10.1	9.7	7.3	6.5
Min. wage + €0.01 to (Min. wage+ €10)	1.1	1.0	0.6	0.5	2.5	2.4	2.6	2.5
Min. wage + €10.01 to €699.99	28.8	24.5	23.9	20.0	29.1	27.1	33.0	31.3
€700 to €719.99	13.7	11.2	18.0	14.9	1.3	1.5	1.5	1.9
€720	23.6	27.5	31.7	36.3	0.2	0.2	0.1	0.2
€720.01 to €999.99	0.3	0.3	0.3	0.3	7.9	9.0	8.7	11.6
≥€1000	0.2	0.2	0.2	0.2	12.7	14.2	10.0	14.1
Total	100	100	100	100	100	100	100	100

Notes: Min. wage refers to minimum monthly wage (€320 in 2014 and €360 in 2015).
Source: Calculations based on State Revenue Service data (monthly records).

The current amendments do not address the topic of unequal taxation of natural and legal entities. It would therefore be worthwhile assessing the benefits of an alignment of rates regarding the income of the owners of a capital company and natural entities from microenterprises.

Neutrality has been identified as a major objective behind the analysis of the current microenterprise regime, but additionally it will be critical to assess the market failures that the microenterprise regime seeks to address and the best fitting policy response. If the market failure that the MET regime is seeking to address is to support business start-ups, then there it is worth considering a tapering out of support but also a targeting of the regime to certain sectors or types of businesses (for example first-time entrepreneurs). The final report will examine international practice in this regard and the experience with business creation in Latvia. On compliance costs, there are numerous examples of ways in which the tax administration burden may be reduced for small business, many of which are in place in Latvia. The final report will examine additional options that could be considered.

Main conclusions on the current regime:

Not well-targeted/facilitates tax arbitrage. As any small business meeting the criteria can qualify whether existing or new, the MET regime may involve significant deadweight costs, with the main effect being a switching of existing enterprises/ self-employed from CIT/ PIT to MET while the incremental impact in generating new business and employment appears to have been relatively insignificant. In terms of limiting tax leakage and obtaining value for money, it may be better to focus tax incentives for small enterprises on new start-up businesses creating new jobs. Tax losses due to the movement from the general regime are substantial: individuals in the microenterprise regime in

2015 pay EUR 37 million less in PIT and MSSIC, if what they paid in 2008 under the general regime is compared to that which they paid in 2015.

Not time limited. Although the rate of turnover tax increases after three years, an enterprise can continue applying MET on an indefinite basis without any time limit. It may be more efficient to focus the tax relief on the early years of a start-up business with provision, if appropriate, for a phasing out of the relief over one or two years.

Turnover tax rather than income tax. Setting turnover as the tax object, rather than income/ profits, may lead to anomalous outcomes. For example, the MET regime would appear to be more attractive for businesses whose costs are predominantly labor costs (e.g. professional/ services companies), rather than retail or manufacturing businesses with significant inputs/ materials costs. Companies with similar levels of profitability, e.g. a services business within the MET regime and a product sales business within the CIT regime, may be subject to different levels of taxation.

Insufficient safeguards to prevent abuses. There do not appear to be adequate measures to prevent avoidance of taxation through the MET regime. For example, it may be necessary to consider whether provisions are required to ensure that (i) multiple enterprises owned and controlled by connected persons do not avail of MET and (ii) that an employee cannot be employed by more than one microenterprise under the MET regime. A further issue which may need to be considered is whether the existing provisions allow for effective taxation of capital income and capital gains accruing to the owners/ directors of enterprises subject to MET.

Inadequate social protection for employees. While the exemption for employer/ employee SSC's reduces the labor tax wedge, this has been at the expense of lower social protection of employees. This issue may be addressed by proposed changes, taking effect from 2017, which will require employees to make social insurance contributions.

May inhibit some enterprises with growth potential to stay small. A 9 percent rate applies for turnover up to EUR 100,000 with a higher rate of applying for turnover in excess of EUR 100,000. While the higher rate only applies to the excess amount (over EUR 100,000), the higher rate for such excess may, in the longer term, act as an impediment to business expansion in the case of enterprises with growth potential. Similarly, the imposition of two additional percentage points for each additional employee in excess of five employees may inhibit employment growth. However, the data on taxpayers registered for MET would suggest that this is currently not a major issue as the vast majority of enterprises coming within the MET regime have a turnover not exceeding EUR 40,000 and employment of not more than [2/3] employees. Also, legislated in 2014 modifications to MET regime will take effect from 2017 allow for microenterprises not to apply the increased rates where (i) turnover growth is not 30 percent greater than turnover in the pre-taxation year or turnover in the year prior to that or (ii) the number of employees has increased by one or two compared with the pre-taxation year or year prior to that.

Given the issues with MET, one policy option which could be considered would be to provide for a gradual phasing out of MET combined with the introduction of a targeted tax relief for new business start-ups. Some parameters and policy options regarding tax relief for new business start-ups are set out below.

Possible parameters for tax relief for new business start-ups:

- **Target to new businesses**. Relief should only be available to companies/sole traders commencing a new business/ trade not previously carried on (i.e. by that person or any other person). Also, a new business/ trade carrying on activities which previously formed part of another business/ trade should also be excluded. Thus, a business comprising activities which were previously undertaken within the MET regime would not qualify. Only genuine new business start-ups would be covered and it is desirable to have a clear definition of what qualifies as a new business start-up.
- **Relief should only be available to a company/enterprise for a limited time period** (e.g. for first three years) following commencement of the new business. An argument for this is that new business start-ups should only require support in the early years of development.
- **Provision could be made for carry forward of unused relief** (beyond the three year initial start-up period), if appropriate; start-up firms may be loss making or not very profitable in the first few years and may have insufficient profits to benefit from a tax relief.
- **The relief should be focused on micro/small enterprises**, e.g. the amount of tax relief could be capped at specified levels of income or profits, with marginal relief on a tapering basis for enterprises that exceed the specified levels.
- **The measure should encourage additional employment**, e.g. tax relief could be directly linked to new jobs created by the start-up business (e.g. via tax credit for employment costs or SSC's).
- **A specified timeframe for commencing the new business could be set to enhance short/ medium term impact**, e.g. relief available for new business start-ups commenced within a three to five year period, with provision for review/extension if necessary.
- If appropriate, a tax relief to facilitate/encourage risk investment by individual investors in new start-up businesses could be included as an additional incentive, e.g. through PIT or capital gains tax relief for amounts invested.
- **Should contain appropriate restrictions or anti-avoidance provisions**, e.g. to ensure that relief is focused on genuine new business start-ups and does not apply to any existing business that may be restructured/ re-constituted as a qualifying new business. In the case of tax relief for equity investment in SMEs by individual investors, it would be desirable to ensure that relief is only available for the investment of risk capital (i.e. ordinary shares) which is used for the purposes of the business. Provision should be made for withdrawal of relief where moneys invested are subsequently repaid to the investor by way of a loan, debt repayment, transfer of asset or provision of any other benefit.
- **Relief should be generally available and be State Aid compliant**. There should be no preferential treatment or selective advantage provided to particular undertakings or sectors; it may be desirable to ensure that relief is provided within *de minimis* State Aid limits.
- **Terms and conditions should be clear, easy to understand and apply and should not leave any room for ambiguity** – same rules should apply for all enterprises and there shouldn't be any need to differentiate between sectors or business types (e.g. high tech/ high growth vis-à-vis life-style businesses).
- **Relief could be made subject to a claim/application being made to the tax authority**, with relevant information to be provided by the claimant/ applicant, such a claim could be included in the annual tax return.

- **Provide for collection of data to facilitate cost/ benefit analysis of the measure**. Any relief claimed should be specified in company's/ individual's annual tax return (i.e. tax return should include details of relief claimed).

Possible options for tax relief for new business start-ups

For companies:

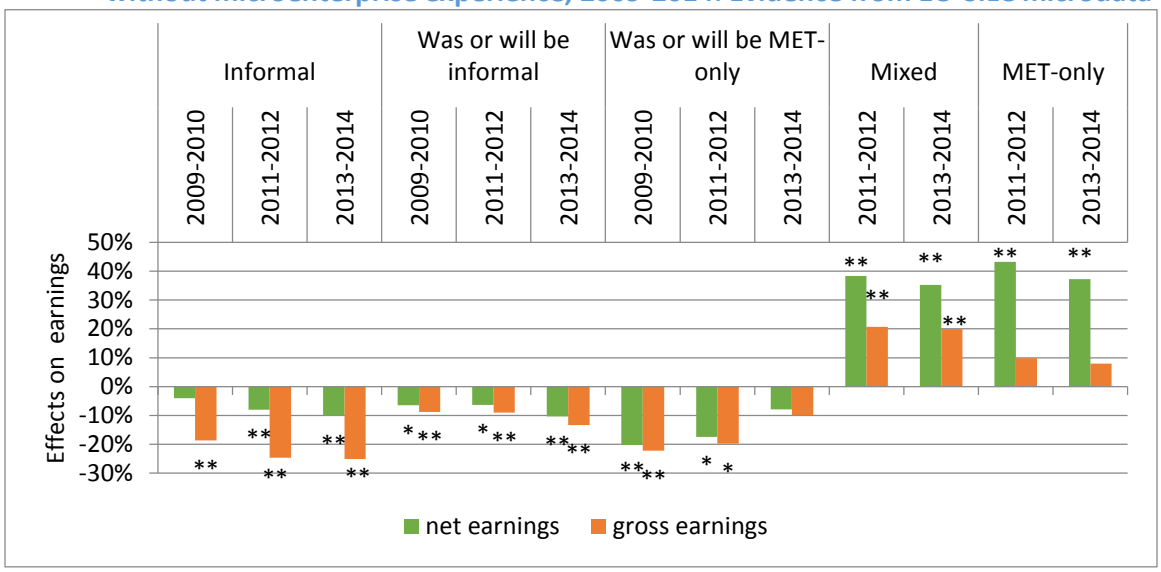
- Tax holiday/relief for first [e.g. three to five] years for new start-up companies -e.g. CIT exemption for first three years and phasing in of CIT over next two years for companies commencing a new trade/business not previously carried on (by that person or any other person)
- Tax credit for employment costs in first [three to five) years, e.g. a tax credit for employer/ employee SSC's offset against company's CIT liability or self-employed trader's PIT liability on earnings from business, subject to specified maximum amounts (e.g. limit per employee and overall limit for company/ enterprise); if appropriate, allowance could be made for carry forward of unused credit beyond the three to five year period.

For individual entrepreneurs:

- Tax relief for unemployed persons starting their own business, e.g. PIT relief on income up to a specified level on or first few years, available for persons who have been unemployed for a specified period (e.g. 1 year) who set up a new business (not previously carried on) and work on a full-time basis for the business; (a similar measure could be considered for returned emigrants).
- Tax rebate for new start-up entrepreneurs, e.g. amount of risk capital invested in new start-up business, subject to a specific limit, to qualify for PIT relief/refund in respect of employment/other income earned in specified number of years prior to setting up new business, available to employees who leave employment to set up a new business.
- Tax relief for equity investment in new start-up enterprises, e.g. PIT relief on amount of risk capital provided by individual investors to a company/enterprise starting a new business not previously carried on, subject to specified limits on amount of investment per individual investor and the overall amount invested in a particular company/enterprise.
- Capital gains tax exemption for full-time working entrepreneurs who start up a new business (not previously carried on) and who sell the business after a specified period following the start-up, e.g. three to five years after initial commencement of the new business, subject to an overall limit on the amount of capital gains exempted. A requirement could be added to reinvest proceeds of sale of business in another business.

Given the impressive number of MET workers and the need to gradually phase out the MET regime, it is desirable to categorize MET workers into a number of more or less homogeneous groups and to suggest the best way forward for each. Individual characteristics important from this perspective include, among other, (i) microenterprise share in labor income and (ii) potential earnings in absence of the MET regime. The distinction between employees working only for microenterprises (*MET-only* workers) and those with earnings under both MET and the general regime (*mixed* workers) is obviously a key regarding the former characteristic, but it appears from Figure 62 that it is related to the latter as well.

Figure 62. Annual earnings of MET-only and mixed workers vs. those of formal employees without microenterprise experience, 2009-2014: Evidence from EU-SILC microdata



Notes: The Figure reports the results from (log) annual earnings regressions controlling for the year; gender; education; total work experience; age; living with a partner; presence of children below age of 15; ethnicity and citizenship; limitations in daily activities; region and level of urbanization; number of months worked full-time and part-time; presence of self-employment income; tax regime as employee during the income reference year (only general, mixed, only MET or informal); being informal, MET-only or mixed employee in another year; size (7 categories) and economic activity (23 categories) of local unit the main job; contract type; occupation (2-digit ISCO code); supervisory responsibilities; job change since the previous year[65]. For each year, the sample consists of all individuals whose gross annuals earnings were no less than one monthly minimum wage, excluding those who received part of the income reference year earnings abroad. Number of observations for each of the 3 estimated models is between 12 and 13 thousand, while R-squared varies from 0.65 to 0.68. ** and *** refer to coefficients significant at 5% and 1% level, respectively. *Source:* Calculations with microdata of national rotating panel versions of cross-sectional EU-SILC 2008-2015 amended with a number of additional indicators (including microenterprise earnings if any); these data have been provided by CSB. Data for 2012-2015 include 1484 observations on microenterprise workers, while data for 2008-2015 include more than 1000 observations on persons who had microenterprise earnings in a year different from the survey year (but not in the survey year).

There is evidence that MET-only workers have lower productivity than other workers. Figure 62 compares, for three biannual periods between 2009 and 2014, gross and net annual earnings of MET-only and mixed workers with that of otherwise similar (see Notes to Figure 62 for the list of control variables[66]) formal employees without microenterprise experience, as well as with informal employees. The first finding is that before the MET era, in 2009-2010, individuals with MET-only experience in 2011-2014 were earning under the general regime about 20 percent less than otherwise similar employees without microenterprise (or informal employment) experience. This suggests that MET-only workers are, on average, significantly less productive than others (note that under the general regime gross earnings are proportional to labor costs and hence to productivity). This productivity gap (which persists also in 2011-2012) is larger than in the case of informal employees.

[65] Together with the panel structure, the job change indicator has been used to address time mismatch between earnings and job attributes data.

[66] Results from the models without occupation controls are very similar to those reported in Figure 62. Models without any job attributes give qualitatively similar results with smaller effects.

By contrast, there is no evidence that mixed workers (when working only under general regime) are less (or more) productive than employees without microenterprise experience: respective effects (not shown in Figure 62) in all periods are close to zero and not statistically significant. Under the MET regime (in 2011-2014) MET-only workers' net earnings exceeded that of otherwise similar general regime employees by about 40 percent, while labor costs were lower[67]. In other words, MET-only workers, despite objectively being less productive are paid more. Finally, mixed workers benefit from net (respectively, gross) earnings by 30 to 40 (respectively, 20) percent above that of otherwise similar general regime employees without microenterprise experience. Thus mixed workers are overpaid as well.[68] Table 33 describes an approach to profiling 129.4 thousand individuals with positive microenterprise earnings in 2014 or 2015. Taking into account findings from Figure 62 (which will be further reinforced by administrative data) this approach is based on the extent to which microenterprise work was combined with work under the general regime in each of the two years. Note that the terms MET-only workers and mixed workers, which were so far year-specific, from now on refer to earnings history over the two-year period 2014-2015, thus having a slightly different meaning.

Table 33. Profiling of individuals with positive microenterprise earnings in 2014 or 2015 by tax regime over 2014-2015

Group by tax regime	Description
Group MET (***MET-only***)	Group MET = MET1 + MET2 consists of 53.2 thousand individuals, each of whom as employee had only microenterprise earnings either in 2014 (33.8 thousand) or in 2015 (49.7 thousand) or in both years (30.3 thousand). Exact definition: Group MET1 (N=49,687): Had only microenterprise earnings in 2015, while in 2014 either had some microenterprise earnings or as employee under the general regime worked less than 6 months (or did not work at all). Group MET2 (N=3,560): Had only microenterprise earnings in 2014, while in 2015 had mainly microenterprise earnings, as well as for 1 to 5 months had earnings as employee under the general regime.
Group GEN (***Mainly General***)	Group GEN = GEN1 + GEN2 includes 19.8 thousand individuals. Group GEN1 (N = 8,634): Had positive general regime earnings for at least 6 months in both 2014 and 2015, and no microenterprise earnings in 2014. Group GEN2 (N = 11,153): Had positive general regime earnings for at least 1 month in 2014 and for at least 6 months in 2015, and no microenterprise earnings in 2015.
Group MIX (***Mixed***)	Group MIX consists of 28.1 thousand individuals which satisfy the following conditions: (i) do not belong to Group MET; (ii) do not belong to Group GEN;

[67] Figure 62 reports MET-only workers' gross earnings being by 10 percent above those of general regime employees, but labor costs under the general regime include also employer SSC of 23.59 percent.

[68] Plausibly, in the case of mixed workers part of this overpayment is due to working more hours. However, models similar to those presented in Figure 62 but controlling also for hours worked (the sample being restricted to full-year, full-time employees for which information on hours worked during the income reference year is available) suggest that mixed workers are still overpaid by 19 percent.

Group by tax regime	Description
	(iii) either in 2014 or in 2015 had positive microenterprise earnings for at least 1 month and positive general regime earnings for at least 6 months (iv) in 2015 had positive microenterprise earnings for at least 1 month or positive general regime earnings for at least 6 months
Group UNS (***Unstable***)	Group UNS = UNS1 + UNS2 + UNS3 + UNS4 + UNS5 + UNS6 + UNS7 consists of 28.2 thousand individuals which do not belong to any of groups MET, GEN, and MIX. UNS1 (N=10,207): in 2015, had only or mainly microenterprise employee earnings, but in 2014 had only or mainly general regime earnings or no earnings at all. UNS2 (N= 5,992): In 2015, had only or mainly general regime employee earnings, but in 2014 were either in the mixed regime, or had mainly or only microenterprise earnings, or did not have any earnings. UNS3 (N=1,776): Both in 2014 and in 2015, had 4 to 12 months of positive microenterprise earnings and 1 to 5 months of positive general regime earnings. UNS4 (N=282): Both in 2014 and in 2015, had 1 to 3 months of positive microenterprise earnings and 1 to 3 months of positive general regime earnings. UNS5 (N=279): In 2014, had 1 to 3 months of positive microenterprise earnings and 4 to 5 months of positive general regime earnings, and in 2015 had only 1 to 5 months of positive general regime earnings. UNS6 (N=1,054): in 2014 had only (or almost only) general regime earnings, and in 2015 had 1 to 3 months of positive microenterprise earnings and 4 to 5 months of positive general regime earnings. UNS7 (N=8,649) In 2014, had positive microenterprise earnings, and in 2015 had either no declared labor income (N=8,524) or had only self-employment income (N=125).

Source: Elaboration on State Revenue Service data.

For most of the remaining analysis, we focus on 103.8 thousand individuals with positive microenterprise earnings in 2015 (thus excluding groups GEN2 and UNS7). From the perspective of phasing-out, the most important group is *MET-only*, as for its members microenterprise earnings accounted for almost 100 percent of labor income in 2015 (Table 34); in groups Unstable, Mixed, and Mainly General, this share was, on average, about three quarters, one-half and one-third, respectively (Table 34), suggesting that these groups should not be neglected as well. However, given that just 5 percent of Mainly General and 16 percent of Unstable have more than one year of microenterprise work experience (Table 35), phasing out should be less painful for these groups. Finding stable employee jobs under the general regime might be problematic for individuals with recently stayed outside formal employment for extended periods of time. Substantial shares of such individuals are found among MET-only and Unstable workers (Figure 63 provides details). Members of these two groups also tend to work less months than Mixed and Mainly General workers during those years when they have positive employee income (Figure 64).

Table 34. Average microenterprise share in gross and net labor income among individuals with positive microenterprise earnings in 2015, by tax regime group

Percent

	MET-only		Mixed		Mainly General		Unstable		Total	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
2015	98.1	98.4	46.7	51.8	29.0	33.5	71.7	74.3	74.9	77.2
N obs.	53,247		28,107		8,634		13,799		103,787	

Source: Calculations with State Revenue Service data.

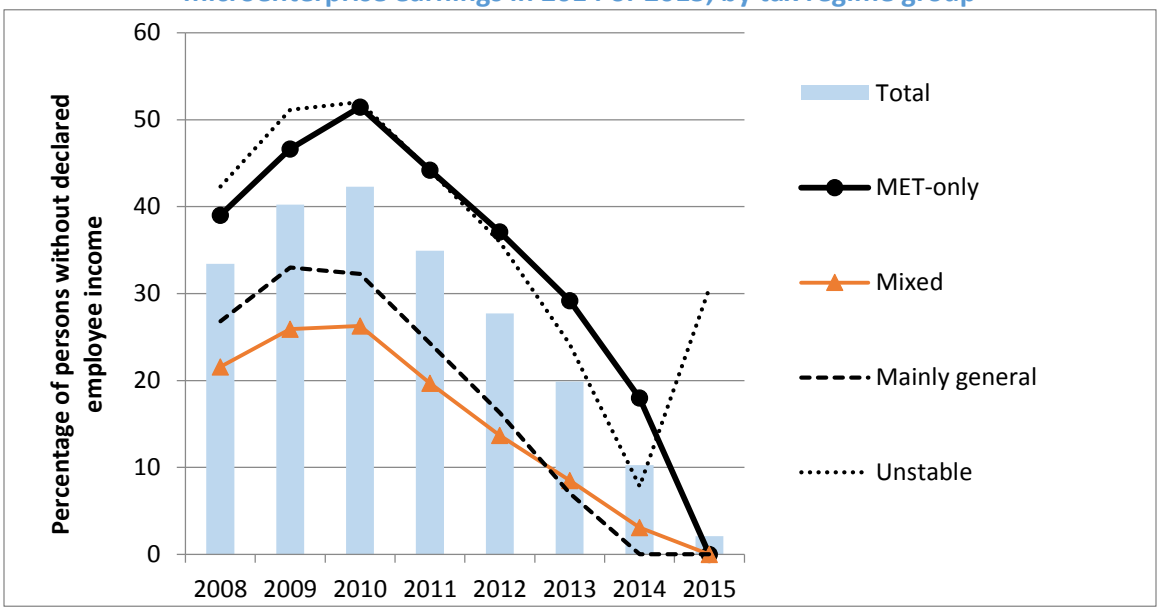
Table 35. Individuals with positive microenterprise earnings in 2015, by tax regime group and total microenterprise work experience

Percent

	MET-only	Mixed	Mainly General	Unstable	Total
1 -12	30.7	21.9	94.7	84.1	40.7
13-36 months	44.0	45.1	5.0	12.5	36.9
> 36 months	25.3	33.0	0.3	3.3	22.4
Total	100	100	100	100	100

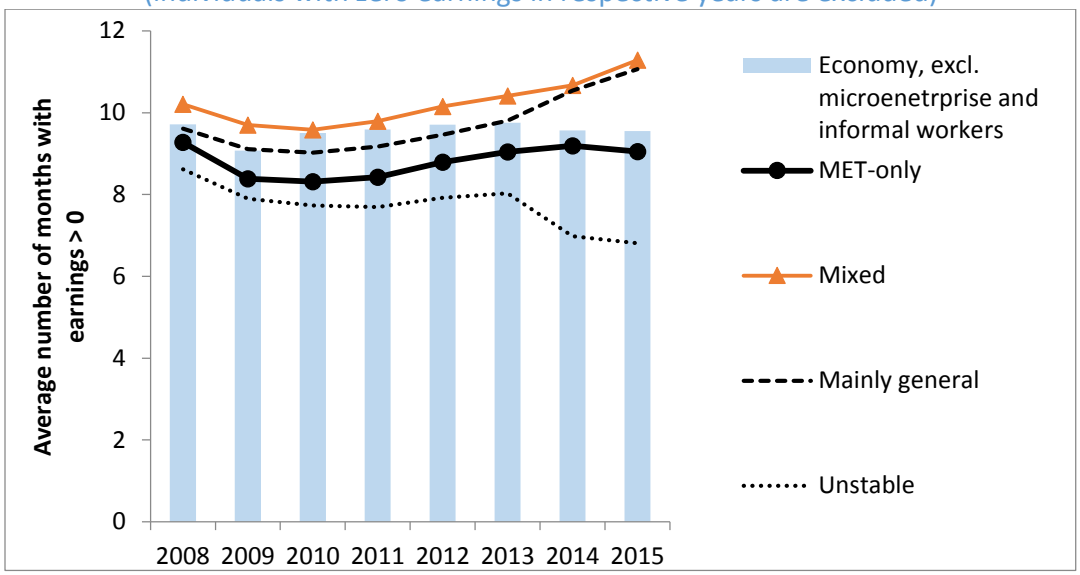
Notes: Experience as of the end of 2015. *Source:* Calculations with State Revenue Service data.

Figure 63. Absence of declared earnings in 2008-2015 among individuals with positive microenterprise earnings in 2014 or 2015, by tax regime group



Source: Calculations with State Revenue Service data.

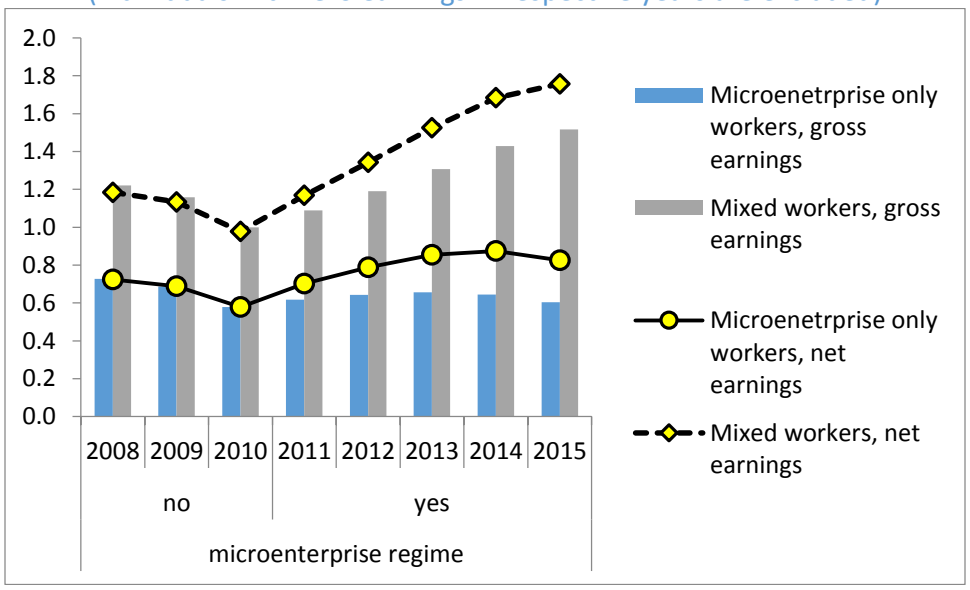
Figure 64. Average number of months with positive employee income, 2008-2015. Individuals with positive microenterprise earnings in 2014 or 2015, by tax regime group
(individuals with zero earnings in respective years are excluded)



Source: Calculations with State Revenue Service data

Figure 65 (based on full-coverage administrative data) compares gross and net annual earnings of two largest groups - *MET-only* and *Mixed* with economy-wide average annual earnings of general regime employees.

Figure 65. Average declared annual earnings of "MET-only" and "Mixed" workers as proportion of economy-wide average annual earnings of general regime employees, 2008-2015
(individuals with zero earnings in respective years are excluded)



Source: Calculations based on State Revenue Service data.

It appears that in 2008-2009, average productivity[69] of future *MET-only* (respectively, *Mixed*) workers was by about 30 percent below (respectively, 20 percent above) economy-wide productivity; in 2010, MET-only workers fell further to a level just below 60 percent of the economy average, but future Mixed workers were exactly at (rather than above) the economy average. Both groups thus suffered stronger than average decline in earnings during the crisis; the same is true for the other two groups (see Figure 66). This indicates substantial vulnerability of all microenterprise workers to macroeconomic shocks.

Productivity of MET-only workers was lower than average before the regime was introduced. Average true productivity of MET-only workers immediately before introduction of the MET regime was thus about 60 percent of the economy average, while under the MET regime (in 2011-2015), their net earnings varied from 70 (since 2012 - from 79) to 87 percent of the average earnings of general regime employees (Figure 65). We conclude that annual earnings of MET-only workers are, on average, higher that their true productivity (so that they are overpaid[70]) but lower than annual average earnings of general regime employees.

Mixed regime workers' productivity before introduction of the MET regime did not differ from the economy average, but under the MET regime their average net earnings were well above those of an average general regime employee, the pay gap growing steadily from 20 percent in 2011 to striking 80 percent in 2015. Only a small part of this gap (from 2 percentage points in 2011 to 18 points in 2015) is due to larger number of months worked per year by Mixed workers (see Figure 64). Remaining part has to be attributed tax advantage of the MET regime and, probably, to larger number of hours worked[71] (likely also related to lower labor costs under the MET regime).

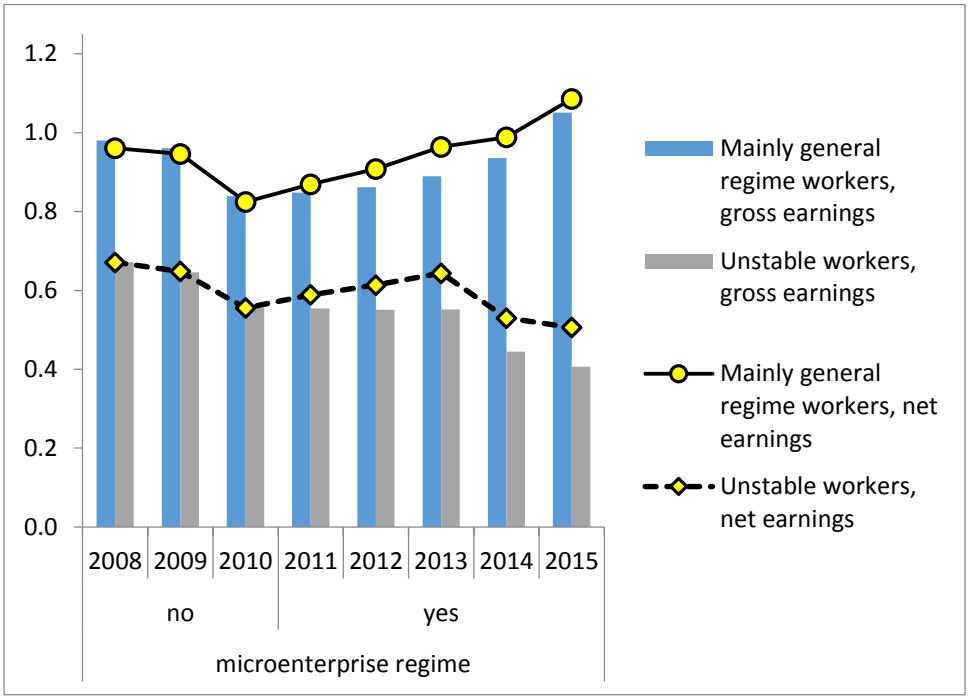
The Unstable and Mainly General regime workers do not seem to be over- or underpaid. Figure 66 replicates Figure 65 for the remaining two groups - Unstable and Mainly General. Based on general regime earnings in 2009-2010, he productivity of Unstable (respectively, Mainly General) workers is about 60 (respectively, 90) percent of the average general regime employee's level. During the first three years of the MET era (2011-2013), average net earnings of both groups were broadly consistent with productivity; in 2014-2015, however, relative net earnings went down for Unstable and up for Mainly General, reflecting similar changes in average number of months worked (see Figure 64). There is no evidence for either of these groups being significantly overpaid or underpaid.

[69] Productivity here is proxied by annual earnings, thus encompassing also employability.

[70] Overpayment is even stronger in terms of monthly rather than annual earnings, given that on average *MET-only* workers are paid for less months per year than general regime workers (Figure 64).

[71] Administrative data on hours worked by microenterprise workers are not available; see, however, footnote 49.

Figure 66. Average declared annual earnings of "Unstable" and "Mainly General" workers as proportion of economy-wide average annual earnings of general regime employees, 2008-2015
(individuals with zero earnings in respective years are excluded)



Source: Calculations based on State Revenue Service data

The above findings suggest that MET-only and Unstable workers are likely to suffer most from the closing of the MET regime, as they feature high dependence on MET-earnings and relatively low level of labor income. Table 36 presents sectoral distribution of microenterprise workers by group. It appears that in the two high-risk groups (MET-only and Unstable) most workers (55 and 65 percent, respectively) are concentrated in sectors dominated by manual work, while among Mixed workers this proportion is just 41 percent.

Table 36. Individuals with positive microenterprise earnings in 2014 or 2015, by tax regime group and economic activity of the microenterprise

Percent

Economic activities	With microenterprise earnings in 2015					No microenterprise earnings in 2015 [a]		
	MET-only	Mixed	Mainly General	Unstable	Total	Mainly General	Unstable	Total
Agriculture & Fishing	0.9	0.5	0.6	0.6	0.7	0.7	0.7	0.7
Forestry & Logging	4.5	1.3	1.9	3.5	3.3	1.5	3.3	2.2
Manufacturing & Other Industry	6.8	5.2	6.4	6.7	6.3	6.6	6.6	6.6
Construction	12.6	11.6	15.1	20.6	13.6	14.2	17.5	15.6
Trade & Repair of Motor Vehicles	3.2	1.8	2.8	3.8	2.9	2.3	2.7	2.5
Trade excl. motor vehicles	7.3	5.3	7.4	8.1	6.9	8.3	8.3	8.3
Transportation & Storage	4.2	4.1	5.3	4.7	4.3	4.8	4.2	4.5
Accommodation & Food service	2.2	2.1	3.7	3.8	2.5	3.6	3.7	3.6
Other Personal Service & Household activities	11.2	7.1	8.3	10.0	9.7	5.7	6.7	6.1
Mainly manual labor activities	*53.0*	*38.9*	*51.4*	*61.8*	*50.2*	*47.6*	*53.7*	*50.2*
Information & Communication	7.3	8.1	5.7	4.5	7.0	5.4	4.6	5.0
Finance, Insurance & Real Estate	3.7	4.3	3.5	2.4	3.7	2.8	2.7	2.8
Professional, Scientific & Technical	18.2	27.4	16.9	12.2	19.8	16.1	13.4	15.0
Administrative & Support Service	7.9	8.6	10.4	8.8	8.4	8.2	6.9	7.7
Education, Health & Social Work	4.1	5.0	4.7	3.0	4.2	3.2	2.9	3.1
Arts, Entertainment &Recreation	2.8	3.3	3.7	2.9	3.1	2.3	2.4	2.3
Mainly professional activities	*44.1*	*56.7*	*44.8*	*33.6*	*46.1*	*37.9*	*32.9*	*35.8*
NA	2.9	4.4	3.8	4.6	3.6	14.4	13.5	14.0
Total	100	100	100	100	100	100	100	100
After excluding NA:								
Mainly manual labor activities	*54.6*	*40.7*	*53.4*	*64.8*	*52.1*	*55.7*	*62.0*	*58.4*
Mainly professional activities	*45.4*	*59.3*	*46.6*	*35.2*	*47.9*	*44.3*	*38.0*	*41.6*
N obs., 1000	53.2	28.1	8.6	13.8	104	11.2	8.3	19.5

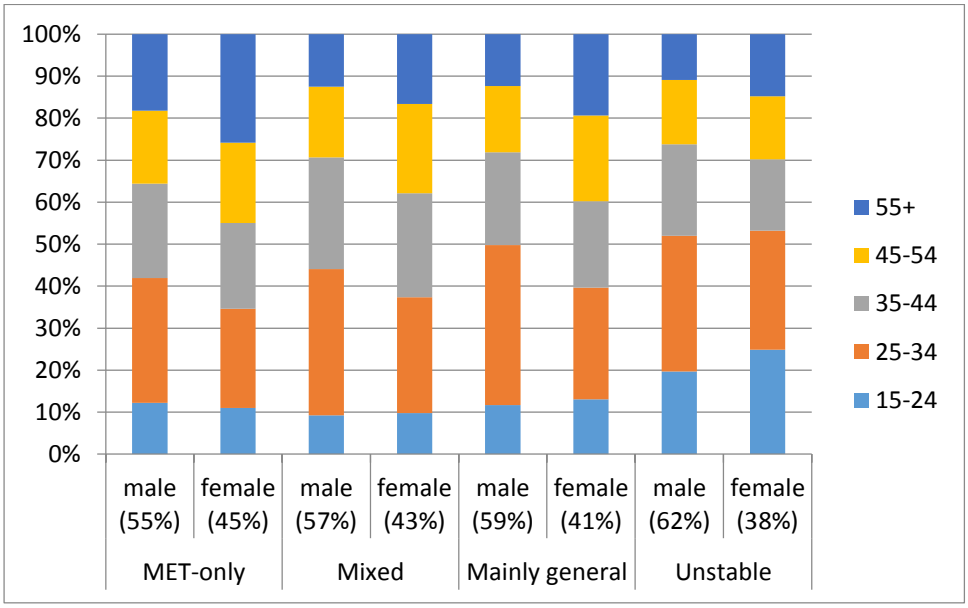
Notes: [a] Economic activities as of 2014. *Source:* Calculations based on State Revenue Service data.

Employees which worked in microenterprises in 2014 but not in 2015 do not differ significantly from other members of groups *Unstable* and *Mainly General* in terms of sectoral distribution (Table 36**).**

We now turn to a more detailed profiling of 103.8 individuals who had positive microenterprise earnings in 2015. Figure 67 presents distribution of each of the four groups of MET workers by gender and age. The proportion of females varies from 38 percent among Unstable workers to 45 percent among MET-only workers. The proportion of older (55+) persons is substantially higher in the MET-only group (26 percent among females and 18 percent among males) than in other groups (15-19 percent among females and 11-12 percent among males). On the other hand, the largest share of youth, expectedly, is found among Unstable workers: one out of four

females and one out of five males in this group is younger than 25, while in other groups youth accounts for 9-12 percent of workers.

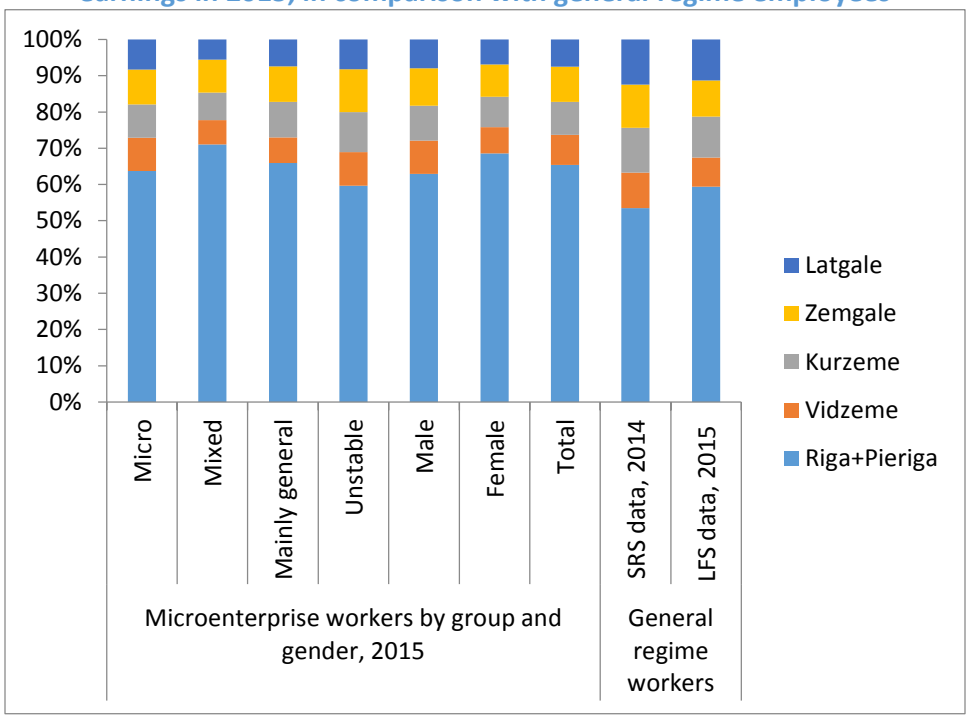
Figure 67. Individuals with positive microenterprise earnings in 2015, by tax regime group, gender and age group



Source: Calculations based on State Revenue Service data.

MET workers (especially mixed regime workers) are more concentrated in Riga and Pieriga than general regime employees. This concentration is even more pronounced among females (Figure 68).

Figure 68. Regional distribution of individuals with positive microenterprise earnings in 2015, in comparison with general regime employees

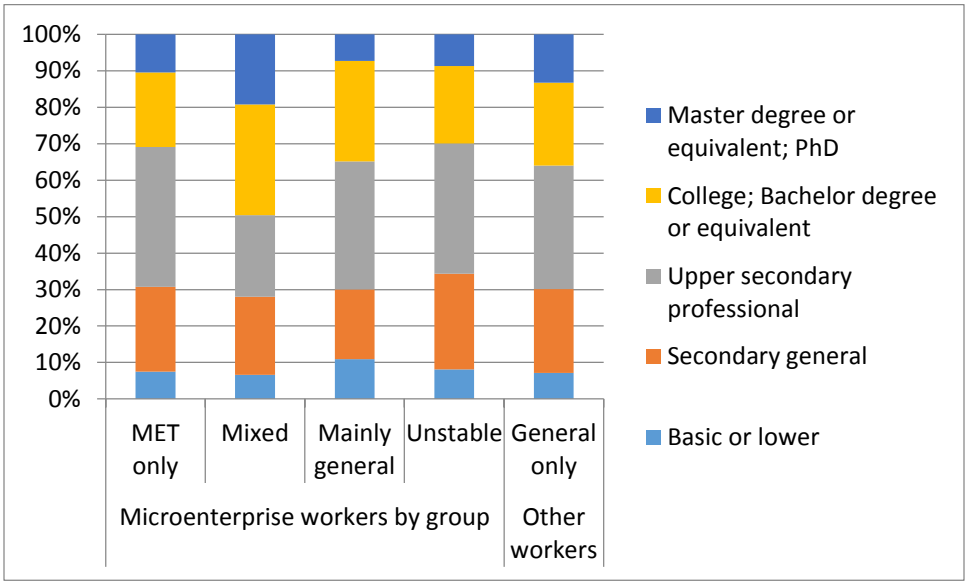


Notes: SRS data for 2014 cover all general regime employees with positive earnings. LFS data for 2015 (which have been merged with SRS data to identify microenterprise workers) cover employees with positive earnings under general regime and no microenterprise earnings.

Source: Calculations based on State Revenue Service data and LFS data.

The educational profile of microenterprise workers is an important consideration when projecting their prospects after abolishing the MET regime. Figure 69, based on Latvian LFS data 2014-2015 merged with SRS data (to allow identifying microenterprise workers), presents educational profiles of microenterprise workers by group and compares them with educational profile of general regime employees without microenterprise earnings. It appears that the proportion of college and university graduates among *MET-only* and *Unstable* workers (31 and 30 percent, respectively) is lower than among employees without microenterprise jobs (36 percent), while *Mixed* workers are much more educated: half of them are tertiary-educated (including 19 percent with Master degrees, as opposed to 10 percent among *MET-only*, 9 percent among *Unstable* and 13 percent among general-regime-only employees). This finding is consistent with evidence from Table 32 that *Mixed* workers feature the highest proportion employed in mainly professional activities. Educational profile of *Mainly general* microenterprise workers features more low-educated individuals and less those with Master degrees than that of general-regime-only employees, otherwise being broadly similar.

Figure 69. Educational profile of employees by tax regime, 2014-2015



Notes: Definition of groups is consistent with Table 29. LFS data contain 1984 observations on employees with positive microenterprise earnings in 2014 or 2015. To have enough observations in *Mainly general* group, workers without microenterprise earnings in 2015 are not excluded (this does not affect results for other groups).
Source: Calculations based on State Revenue Service and LFS microdata.

What is the income loss risk for microenterprise workers assuming the MET regime is abolished? We start by defining *MET workers with low risk of income loss* as those who satisfy *one of the following conditions*: (i) microenterprise share in net earnings in 2015 did not exceed 15 percent; (ii) annual gross labor income (AGLI) was above 12 minimum monthly wages and, in addition, microenterprise earnings accounted for no more than 30 percent of the difference between AGLI and 12 minimum monthly wages. Note that some individuals satisfying (i) might have average gross monthly general regime earnings (over months worked) below the minimum wage; they face the risk to be fired because of the minimum social contribution requirement. These persons are excluded from the low-risk category unless they had positive self-employment income in 2015. Table 37 presents the incidence of low income risk by group of MET workers. Overall, there are 7391 such workers, mostly in the *Mixed* and *Mainly General* groups. They are excluded from further profiling, leaving us with 96 thousand workers.

Table 37. Incidence of low risk of income loss among individuals with positive microenterprise earnings in 2015, by tax regime group

	MET-only	Mixed	Mainly General	Unstable	Total
Number of workers	93	5127	2964	581	8765
Percent	0.2	18.2	34.3	4.2	8.4

Notes: Experience as of the end of 2015. *Source:* Calculations with State Revenue Service data.

Out of the remaining 53 thousand *MET-only* workers, nearly 50 thousand have no general regime earnings in 2015, and the same is true for 3 thousand *Unstable* workers (out of 13.5 thousand), see Table 38. What will happen to these 53 thousand individuals after abolishing of the MET regime? For some of them (see estimates in Table 40 below) the new version of the small-scale business regime, the patent fee regime, or self-employment are feasible options. But others will have to find a general regime job to replace their microenterprise earnings. Given that these two groups are, on average, relatively low productive, this might be difficult because the new law on minimum social contribution and gradual increase in the minimum wage level will depress the demand for low productive workers.

Table 38. MET-*only* and *Unstable* workers (ex. those with low risk of income loss) by gross general regime earnings and MET share in net labor income, 2015

MET share in net labor income, percent	gross annual employee earnings, general regime			
	No income	>0 but < 12*minwage	>=12*minwage	Total
		MET-only		
Up to 15	0	35	0	35
15+ to 33	13	126	7	146
33+ to 50	19	199	17	241
50+ to 75	81	695	58	838
75+ to 99	222	2144	4	51929
99+ to 100	49338	221	0	49559
Total	49673	3420	86	53189
		Unstable		
Up to 15	0	258	0	258
15+ to 33	0	956	41	1000
33+ to 50	2	1100	52	1157
50+ to 75	5	2685	64	2755
75+ to 99	13	5287	3	8306
99+ to 100	2651	352	0	3003
Total	2671	10638	160	13476

Notes: Labor income includes microenterprise and general regime employee earnings, as well as self-employment income.

Source: Calculations with State Revenue Service data.

On the other hand, over 3 thousand *MET-only* workers and over 10 thousand of *Unstable* workers would need to supplement their general regime earnings (by increasing work hours or taking on a secondary job) to put their annual labor income above the 12 minimum wages threshold (Table 44). *Mixed* and *Mainly General* workers will most likely stick to their general regime jobs when the MET regime is abolished. However, 12 thousand of them can lose up to half of their labor income, and about 18 thousand—more than a half (see Table 39 for details) if their activities carried out under the MET regime are not continued in a different legal form.

Table 39. *Mixed* and *Mainly General* workers (ex. those with low risk of income loss) by gross general regime earnings and MET share in net labor income, 2015

MET share in net labor income, percent	gross annual employee earnings, general regime				
	>0 but < 12 min. wages	12+ to 18 min. wages	18+ to 30 min. wages	> 30 min. wages	Total
			Mixed		
Up to 15	650	0	0	0	650
15+ to 33	1364	715	490	150	2719
33+ to 50	1464	835	952	1589	4840
50+ to 75	3559	3050	2005	477	9091
75+ to 100	5853	364	95	18	6330
Total	12890	4964	3542	2234	23630
			Mainly General		
Up to 15	431	0	0	0	431
15+ to 33	853	482	294	51	1680
33+ to 50	868	388	323	173	1752
50+ to 75	1126	449	174	18	1767
75+ to 100	463	6	2	0	471
Total	3741	1325	793	242	6101

Notes: Labor income includes microenterprise and general regime employee earnings, as well as self-employment income.

Source: Calculations with State Revenue Service data.

How should the number of MET workers from each group which plausibly can switch to self-employment, the patent regime or the new scheme for small (subsistence) businesses be estimated? One approach is to assume that these options are realistic for microenterprises which either have turnover up to EUR 20 thousand or are not incorporated. Table 40 presents distribution of MET workers (ex. those with low risk of income loss) in each of the four groups by turnover and legal form of the microenterprise. Shaded cells in Table 40 refer to incorporated (e.g. operating as legal rather than natural persons) microenterprises with turnover above EUR 20 thousand, i.e. to workers for whom self-employment or patent regime do not appear as straightforward options and who will likely face a challenge to find a general regime job to replace their microenterprise earnings. As follows from Table 40, this is the case for 38 thousand *MET-only* workers, almost 19 thousand *Mixed* workers, about 5 thousand of *Mainly General* workers and nearly 10 thousand of *Unstable*

workers, which adds up to 71 thousand. It appears that the most realistic way out from this situation is to make sure that most of incorporated microenterprises switch to the general regime. Given that labor cost will raise as the result, decline in earnings for some employees and temporarily unemployment for others seem inevitable.

Table 40. Microenterprise workers (ex. those with low risk of income loss) by group, turnover and legal form of the main microenterprise, 2015

Annual turnover of the main microenterprise, EUR	Legal form of the main microeneterprise		
	Legal person	Natural person	Total
	MET-only		
Up to 4000	600	853	1453
>4000 but <=20000	3268	3707	6975
>20000 but <=70000	12186	3605	15791
> 70000	23223	2549	25772
NA	2441	757	3198
Total	41718	11471	53189
	MIxed		
Up to 4000	193	162	355
>4000 but <=20000	1329	913	2242
>20000 but <=70000	5719	1245	6964
> 70000	11763	835	12598
NA	1227	244	1471
Total	20231	3399	23630
	Mainly General		
Up to 4 000	57	45	102
>4 000 but <=20 000	319	325	644
>20 000 but <=70 000	1270	310	1580
> 70 000	3135	235	3370
NA	329	76	405
Total	5110	991	6101
	Unstable		
Up to 4 000	99	219	318
>4 000 but <=20 000	648	914	1,562
>20 000 but <=70 000	2,829	808	3,637
> 70 000	5,927	658	6,585
NA	1,047	327	1,374
Total	10550	2926	13476

Source: Calculations with State Revenue Service data.

Another approach for looking at the prospects of MET workers is based on the economic activity of the microenterprise. Activities classified as *Mainly professional* in Table 36, as well as *Other Personal Service and Household activities*, can be characterized as certainly suitable for self-

employment or small family businesses[72] (in other activities self-employment might or might not be suitable depending on circumstances). Combining this criterion with the one based on turnover and legal form, one arrives at the estimates presented in Table 41.

Table 41. Projected optimal outflows from MET by group, 1000 of workers

	MET-only	Mixed	Mainly General	Unstable	Total
(1) MET workers, 2015	53.2	28.1	8.6	13.8	103.8
(2) Low risk of income loss	0.06	4.5	2.5	0.3	7.4
	Self-employment or some "small business" scheme				
(3) Microenterprises - natural persons, ex. (2)	11.5	3.4	1.0	2.9	18.9
(4) Microenterprises - legal persons with turnover ≤ 20000 EUR, ex. (2)	3.9	1.5	0.4	0.7	6.5
(5) Activities suitable for self-employment or small family business, ex. (2), (3), (4)	19.5	11.4	2.2	3.8	36.9
(6) Total: (3) + (4) + (5)	34.8	16.3	3.6	7.5	62.2
	To avoid or reduce income loss, need to increase work hours or to find a second job as a general regime employee (ex. (2) and (6))				
(7)	0.01	1.3	0.5	0.02	1.8
	Likely need to find a fulltime job as a general regime employee				
(8) = (1) - (2) - (6) - (7)	18.3	6.0	2.0	6.0	32.4

Source: Calculated based on State Revenue Service data.

Estimates in Table 41 are optimistic as they assume maximal plausible outflow to self-employment. A range of policy measures would be necessary to make it happen (even on a smaller scale). Such measures might include decreasing PIT rate for self-employment income from 23 to 19 percent, providing mentoring and consulting services as public goods, as well as low cost marketing and accounting services for new self-employed. Smaller-than-projected outflows to self-employment on some "small business" scheme (especially from *MET-only* and *Unstable* groups) would mean a larger need for general regime employee vacancies, as well as some increase in unemployment and informal employment.

A profiling of the workers under the MET regime is given in Table 42. There are two high-risk groups (MET-only and Unstable), of which most workers (55 and 65 percent, respectively) are concentrated in sectors dominated by manual work, while among Mixed workers this proportion is just 41 percent.

[72] At least when activities in question are carried out in a microenterprise. For *Administrative and Support Service activities* (Section N of NACE Rev.2) this is not so straightforward due to a very diverse scope of activities; in this case we will assume suitability for self-employment or small family business for 50% of microenterprise workers.

Table 42. Profiling of MET workers by characteristics

Groups	Description	MET share of labor income, 2015 (percent)	Number of MET workers, 2015	Av. number of months worked in 2015	Likely to become self-employed or enter some "small business" scheme (e.g. patent fee)	Likely need a fulltime job as a general regime employee
MET-only	Below average wages and productivity. Gained pay under MET regime. Proportion of highly-educated slightly lower than among general regime employees. More than a half work in sectors employing mainly manual labor. Higher than in other groups (but similar to general regime employees) share of workers aged 55+ (22 percent).	98.1	53247	9.1	Up to 35 thousand	At least 18 thousand

Groups	Description	MET share of labor income, 2015 (percent)	Number of MET workers, 2015	Av. number of months worked in 2015	Likely to become self-employed or enter some "small business" scheme (e.g. patent fee)	Likely need a fulltime job as a general regime employee
Unstable (switching between regimes)	Low productivity and remain low paid/vulnerable under MET regime. Share of secondary-educated is larger but share of tertiary-educated - smaller than among general-regime-only employees. Almost two-thirds work in sectors employing mainly manual labor. Half of members in this group are younger than 35, and more than 20 percent - younger than 25.	71.7	13799	6.8	Up to 7.5 thousand	At least 6 thousand
Mainly general tax regime	Above average workload and earnings. Younger than other general regime employees (45 percent below age of 35). Feature more low-educated individuals and less those with Master degrees than general-regime-only employees.	29.0	8634	11.1	Up to 3.6 thousand	At least 2 thousand

Groups	Description	MET share of labor income, 2015 (percent)	Number of MET workers, 2015	Av. number of months worked in 2015	Likely to become self-employed or enter some "small business" scheme (e.g. patent fee)	Likely need a fulltime job as a general regime employee
Mixed	Works more than average worker, main winner of the MET regime in terms of earnings. Half of group members are tertiary-educated, and three-fifths work in sectors employing mainly professionals. 70% are concentrated in Riga and Pieriga	46.7	28107	11.3	Up to 16 thousand	At least 6 thousand

Source: Calculations based on SRS data.

Main conclusions:

Latvia should gradually phase out of the current microenterprise regime to shift firms/workers back to general tax regime given that:

- It provides opportunity for tax avoidance/tax arbitrage and violates the principle of neutrality whereby individual/firms earning similar wages/profits treated equally by the tax system: For example, firms can split their activities/employees across a number of entities creating unfair tax competition
- The microenterprise regime has had a negative impact on social security system due to inadequate social protection for employees (reduction in contributions) and adverse impact on PIT revenues.
- It is not a well-targeted regime and there is no time limit.
- It shifts economic activity away from larger companies to smaller businesses, and given the restrictions on number employees/turnover it may inhibit innovation/expansion (little exit).

Possibly combine the phasing out of the microenterprise regime with introduction of targeted tax relief for new business start-ups:

- Cost-benefit analysis of any new regime is critical: it is an expenditure decision
- Parameters and policy options regarding tax relief for new business start-ups include:
    - Relief should only be available to a new business, for a limited time period (e.g. for first three years) following commencement of the new business.
    - Measure should encourage additional employment.
    - Should contain appropriate restrictions or anti-avoidance provisions.
    - Inflow into regimes should be closely monitored by the State Revenue Service.

Below in Box 7 is a brief outline of tax incentives for SMEs in various EU member states.

Box 7. Direct Taxation Relief for SMEs in EU Member States

There are considerable differences in the tax regimes for SMEs across the EU, with some member states (e.g. Belgium, France, Poland, Spain) providing a wide range of incentives in the form of special tax rates, tax credits or tax deductions, while other member states (e.g. Austria, Italy, Sweden) do not provide any special incentives for SMEs. Some member states (e.g. Luxembourg, Netherlands, Portugal, and the U.K.) have general tax measures (e.g. progressive tax rate structure, reliefs for investment and R&D) that tend to favor SMEs more than larger companies.

Some member states (e.g. Finland, France, Ireland, Italy, and Sweden) provide incentives to encourage risk capital investment in SMEs through the provision of income tax and capital gains tax relief for investors. Special incentives for start-up businesses are provided in a number of member states, including Belgium, France, Ireland, Italy, Netherlands and Poland. Several member states (Austria, France, Italy, Poland, Portugal, Slovenia, and Spain) provide the option of a presumptive basis for calculating tax payable for microenterprises and sole proprietorships with low turnover levels.

Most SME tax incentives are targeted at small and micro enterprises, while medium-sized enterprises benefit only from R&D incentives. Under the EU definition, SMEs are categorized as follows:

- Medium: < 250 employees < EUR 50m turnover < EUR 43m balance sheet
- Small: < 50 employees < EUR 10m turnover < EUR 10m balance sheet
- Micro: < 10 employees < EUR 2m turnover < EUR 2m balance sheet

An EU Commission study in 2015 of SME taxation in the EU recommended that tax incentives should not be explicitly connected to the size of companies or inhibit their growth, but rather should be designed to encourage desirable outcomes such as innovation, investment and employment creation. In this regard it noted that member states generally place more emphasis on the provision of tax relief for R&D than relief specifically for SMEs and that R&D incentives tend to be relatively more advantageous for SMEs. The report recommends that all tax incentives for SMEs should fulfil the basic requirements of transparency, effectiveness and neutrality. It considers that special tax rates for SMEs have unfavorable features compared to other forms of relief and that tax credits based on a proportion of investment costs, subject to a maximum amount, is a more appropriate instrument to support SMEs.

A similar 2015 OECD report on SME taxation noted that: "While many of these special SME tax rules are designed to support the growth and profitability of SMEs, their design and introduction can have distortive impacts by giving businesses an incentive to remain small or to split up into different businesses to continue benefiting from the preferential tax treatment." The OECD report concluded that there may be a special case for providing support measures for new and younger SMEs which face particular difficulties in relation to finance and cash flow and are likely to have more potential for innovation and growth than older SMEs.

Below in **Table 43** is a brief outline of tax measures for SMEs in various EU member states.

Table 43. SME incentives and assistance measures, EU countries

Country	Incentives and other measures to assist SMEs
Austria	Austria has no special tax incentives for SMEs. All companies, including SMEs are subject to the standard 25% rate of CIT. There is, however, an adjusted minimum tax for newly established companies of EUR 1,092 that applies to low income companies. There is also capital gains tax relief on the disposal of SME assets on the closing down of a business, with gains reduced by EUR 7,300 or spread and taxed over 3 years. Small businesses with annual revenue less than EUR 220,000 can pay tax on a presumptive basis, with taxable income calculated as 88% of annual revenues and normal tax rates applying.
Belgium	Belgium has numerous incentives for SMEs. For Belgian tax purposes, SMEs must meet two of the following criteria: - not more than 50 employees, turnover not exceeding EUR 7.3m, balance sheet not exceeding EUR 3.65m.

	While the standard rate of CIT is 33.99% (inclusive of 3% austerity surcharge), SMEs can benefit from a progressive CIT rate structure as follows: - 24.9% on income up to EUR 25,000 - 31.9% on income between EUR 25,000 and EUR 90,000 - 35.5% on income between EUR 90,000 and EUR 322,500, and - 33.99% on income in excess of EUR 322,500 Certain conditions apply for an SME to qualify for the reduced rates. The company must not be a financial institution. 50% or more of the shares must not be held by one or more other companies. The company must not distribute dividends for an amount exceeding 13% of the issued share capital of the income year. The company pays a salary of at least EUR 36,000 to at least one of its managers. The company is not part of a group which owns a coordination center. SMEs employing not more than 20 employees can benefit from an investment deduction of 11.5% of asset depreciation, with unused amounts carried forward subject to a maximum carry-forward of EUR 933,350. There is also a temporary allowance of 4% for ordinary investments that do not benefit from the special investment deduction. The accelerated depreciation for SMEs, whereby companies could avail of twice the normal depreciation rate in the first three years, has been curtailed since 2011 and the standard depreciation rates now apply. The tax credit on R&D investments is adjusted for companies with taxable incomes below EUR 322,500 according to a progressive schedule. **Start-up innovative companies** can benefit from a 65% exemption for wage withholding tax on the remuneration of researchers and research managers. SMEs are entitled to an extra 0.5% deduction on top of the notional interest deduction of 3% of qualifying equity available to all resident companies in Belgium. There is also provision for SMEs to include income of up to 50% of retained earnings, or at most EUR 37,500, in a tax-exempt reserve which must be re-invested within three years.
Bulgaria	Bulgaria, which has a standard CIT rate of 10%, has no special tax incentives for SMEs. Small companies are subject to administrative concessions, whereby enterprises with net sales below BGR300,000 (c. EUR 150,000) in previous year do not have to make advance payments, while those with net sales between BGR300,000 and BGR3m (c EUR 1.5m) only have to make quarterly advance payments.
Croatia	Croatia, which has a standard CIT rate of 20%, provides significant incentives for new investments which reduce the CIT rate for income from investment which vary according to the size of the investment and new employment: - 100% reduction for investment of at least EUR 3m and 15 new employees,

	- 75% reduction for investment of EUR 1m-3m and 10 new employees, - 50% reduction for investment of less than EUR 1m and 5 new employees. For micro companies, there is a reduction of 50% (i.e. tax rate of 10%) for income from investments of at least EUR 50,000 which create at least 3 new jobs. Croatia also provides allowances for eligible costs of education and training which are enhanced for SMEs (defined according to EU guidelines).
Estonia	Estonia does not have special tax incentives for SMEs, having regard to its corporate tax system which only taxes profits on distribution.
Finland	Finland has a special incentive for SMEs in less developed regions which provides 150% of depreciation rates in the first 3 years for investment production facilities or tourism enterprises. SMEs are defined according to EU definition. Finland also provides a tax relief for business angels which provides for a deduction for income tax purposes of 50% of investment in SMEs with less than 50 employees and turnover less than EUR 10m. There are limits on the amount of investment – maximum of EUR 150,000 per person and overall limit of EUR 2.5m investments per company in any year.
France	France offers a wide range of incentives for SMEs, including special tax rates, tax credits and exemptions for certain kinds of income. For SMEs with a turnover below EUR 7.63m, income up to EUR 38,120 is taxed at 15% instead of the normal 33.33% rate. The surcharge of 3.33% does not apply for SMEs within this turnover threshold. Micro enterprises can elect for special tax rates of 13% on income up to EUR 81,500 from the sale of goods and 23% on income up to EUR 32,600 from services. To qualify as a micro enterprise, a company must meet two of the following conditions: - turnover not more than EUR 534,000, balance sheet total not more than EUR 267,000, not more than 10 employees. Various tax credits are available for SMEs: - A tax credit of 20% is granted on expenditure up to EUR 400,000 on innovative activities. - A formula based tax credit is also available for SMEs with at least 20 employees where the number of employees increased by at least 15% in each of the two previous years. The credit is calculated taking income tax payable in the current year multiplied by a percentage rate up to 100% (the rate is linked to employment increase - with 100% rate applying where employment increased by at least 15%) less income tax payable in the previous period.

	- A tax credit of 50% of qualifying expenses in hiring an additional employee to develop export business is available to SMEs, subject to a maximum credit of EUR 40,000 over two years. - For SMEs based in Corsica, there is a special tax credit of 20% of qualifying investment for SMEs based in Corsica with employment and turnover levels not exceeding 250 and EUR 40m respectively. France also provides certain exemptions assist **start-up SMEs** (defined according to EU definition). An exemption of 100% of income is provided for innovative SMEs in the first year of activity, with a 50% exemption in the second year (up to 2011 the relief was available over the first 5 years of the business activity, but this has since been reduced to two years). To qualify, R&D activities must account for at least 15% of expenses incurred. There is also a special tax exemption on profits of companies creating a new industrial or commercial business in a regional aid (AFR) area. 100% exemption for the first 2 years. The exemption is gradually reduced to 75%, 50%, 25% for the following 3 years. The tax-exempt amount may not exceed EUR 225,000 over 3 years. Exemption from local taxes for the first two years of a new business is provided at the decision of the relevant local authority. There is a capital gains tax exemption on the sale by a company of a branch activity, with 100% exemption applying where the value of the branch does not exceed EUR 300,000 and 50% exemption where the value is between EUR 300,000 and EUR 500,000. In addition to the above reliefs, SMEs benefit from the following provisions for investors in SMEs: - Small enterprises with turnover less than EUR 15m are not subject to any minimum tax. - Investments in SMEs are eligible for PIT relief and CGT relief, with 18% of amounts invested in a qualifying SME deductible from taxable income up to a maximum of EUR 50,000 and capital gains of SME directors selling their shares on retirement exempt from tax. - 50% of investments in qualifying SME are deductible for wealth tax purposes subject to a maximum of EUR 45,000. Finally, microenterprises, with annual revenue not exceeding EUR 82,200 for sales of goods and EUR 32,900 for provision of services, can avail of a presumptive basis for calculating tax payable. For micro enterprises selling goods, taxable income is set at 29% of annual revenue with normal tax rates applying. For micro enterprises providing services, taxable income is set at 50% of annual revenue with normal tax rates applying.
Germany	While Germany does not have a special tax rate for SMEs, it provides accelerated depreciation for SME business assets costing less than EUR 235,000. It also has two

	tax incentives that specifically target small companies. To qualify as a small company, net assets must be less than EUR 235,000 if the company applies the net worth method to determine taxable income and less than EUR 100,000 if the company applies the net income method. (The thresholds were reduced from EUR 335,000 and EUR 200,000 respectively in 2011). The relevant assets must be used in a domestic permanent establishment of the company for at least a year. The incentives are (i) an additional depreciation of 20% of acquisition or manufacturing costs of new movable assets over a 5-year period and (ii) recognition of an investment reserve up to 40% of future acquisition or production costs of depreciable assets, subject to a maximum EUR 200,000, with income in the reserve not subject to tax until respective assets start to be depreciated.
Greece	Greece does not provide any tax incentives specifically for SMEs. However, a scheme allowing for establishing a tax free reserve amounting to between 15-40% of investment in qualifying undertakings provides more favorable treatment for smaller enterprises which can qualify for a higher relief of 25-45% of the investment.
Hungary	A small business tax rate of 10% (instead of basic CIT rate of 19%) applies for income up to a threshold of EUR 1.6m. SMEs can avail of accelerated depreciation in the form of immediate expensing of payments for fixed tangible and intangible assets put into use for the business. Hungary also provides two simplified tax regimes for small businesses: - The first, KIVA, is a cash-flow based tax which replaces corporate income tax, social contribution taxes and vocational training contributions. This tax applies at a rate of 16% of the tax base, which is based on the taxpayer's cash-flow profit and is increased by staff costs. The tax is available to entities with less than 25 employees and where the revenue and balance sheet for the previous tax year were less than HUF 500 million (c. EUR 1.6m). - A second simplified regime, KATA, is a lump-sum tax for the self-employed. Under this regime, full-time entrepreneurs registered as small business taxpayers pay tax of HUF 50 000 per month. Taxpayers may elect to pay HUF 75 000 per month in return for higher social security service eligibility. Part-time entrepreneurs pay HUF 25 000. The lump sum tax is payable separately for each person registered as a small business taxpayer. This applies up to a revenue limit of HUF 6 million (c. EUR 19,350). Once revenues exceed this amount, tax is payable at 40% on the part of the revenue exceeding HUF 6 million. Payment of KATA releases the taxpayer from corporate income tax, personal income tax, social contributions tax, and healthcare, pension, employment and vocational contributions. It does not, however, provide an exemption from VAT obligations.
Ireland	Ireland provides specific incentives aimed at promoting investment in SMEs and new business start-ups. The Employment and Investment Incentive scheme allows an

	individual investor to obtain personal income tax relief on equity investments in unquoted trading companies of up to EUR 150,000 per annum in the period to 2020. The income tax relief available is up to 30% but a further 10% is available (11% for investments made before 2015) where it has been demonstrated that employment levels have increased within 3 years of the investment or where the investment was used for expenditure on R&D. The company in which the equity investment is made must be an SME (defined according to EU definition) and the sum invested must be used for the purposes of the trading activities carried on by the company. There are limits (EUR 10m in total and EUR 2.5m in any year) on the aggregate amount that may be invested in a company by all investors under the scheme. Ireland also provides a number of **reliefs to assist new business start-ups**. A corporate tax relief is available for start-up companies for the first 3 years of trading following the commencement of a new trade. The qualifying trade must not have been previously carried on by another person and the activities of the trade must not have been previously carried on as part of another person's trade. The relief provides a tax credit based on the amount of employers' social security contributions subject to a maximum of EUR 5,000 per employee in any year and an overall limit of EUR 40,000 per annum. Unused credits, which cannot be availed of in the first 3 years because of losses or insufficient profits, may be carried forward and offset against tax in subsequent years, subject to the EUR 5,000 and EUR 40,000 limits for any year. There is also a Start Your Own Business scheme which provides income tax relief for individuals who set up their own business having been unemployed for a period of at least 12 months prior to starting the business. The relief is capped at EUR 40,000 per annum for a period of two years. Finally, an income tax refund scheme is available for individuals starting their own company under which qualifying share investments in the company can be offset against taxable income at the marginal income tax rate (40/41%) over the previous six years prior to the investment, thereby generating a refund of tax. The company must be an SME (within EU definition) and be carrying on a new trade and the individual must be employed in the company as a full-time employee/ director for at least 1 year after the investment is made.
Italy	Italy does not provide corporate tax incentives specifically for SMEs. However, it does provide a **tax incentive to encourage investment in new start-up companies** that focus on research, development and innovation. Under this incentive, personal taxpayers can obtain a tax allowance of 19% of the amount invested in the start-up company up to a maximum of EUR 500,000, while corporate tax payers can obtain a tax allowance of 20% of the amount invested up to a limit of EUR 1.8m. The investor must maintain their investment in the company for at least 2 years. The relief has been extended to innovative SMEs (EU definition) subject to the following qualifying conditions: 3% of sales or costs must be attributable to R&D activities, one third of employees must have a degree and the company must own a patent.

	Italy also provides a presumptive method for calculating income tax payable by natural persons operating a business with annual revenue less than EUR 40,000 (threshold varies by sector). Taxable income is calculated by applying a ratio to annual revenue and a flat tax rate of 15% applies.
Latvia	The main incentive for small business in Latvia is the microenterprise tax (MET) which was introduced in 2010 to promote the development of new businesses, reduce the administrative burden for small/ micro enterprises and facilitate transition from the informal to formal economy. An enterprise can qualify for MET if its turnover does not exceed EUR 100,000 in a tax year, there are no more than 5 employees, the monthly income of any employee/ director does not exceed EUR 720 (excluding dividends) and, for limited liability companies, the owners/ members are natural persons and only employees can be board members. MET operates as a tax on turnover, with turnover up to EUR 100,000 taxable at a 9% rate for the first three years and 12% from the fourth year. A 20% rate applies for turnover in excess of EUR 100,000. MET is a single tax payment which replaces CIT, PIT and social security contributions. Proposed changes from 2017 will mean that employees of microenterprises will be subject to mandatory social insurance contributions, while the rate of turnover tax for turnover up to EUR 100,000 will reduce to 5% for the first 3 years and 8% for subsequent years.
Lithuania	Lithuania has a two main incentives for micro enterprises - (i) Companies with not more than 10 employees and taxable income not more than LTL1m (EUR 290,000) benefit from a reduced tax rate of 5% (instead of basic CIT rate of 15%). To qualify, the company must not be more than 50% owned by a person or group of persons who also own a sole proprietorship or have more than 50% ownership in other companies. (ii) A micro company meeting these criteria is also entitled to free depreciation of fixed assets other than buildings. In addition to these incentives, companies with taxable income of not more than LTL100,000 (EUR 29,000) are allowed to determine their income on the basis of cash-accounting.
Luxembourg	A reduced tax rate of 20% (instead of CIT rate 22.47%, inclusive of surtax) applies to all companies with an income below EUR 15,000, while the first EUR 17,500 of income is exempt from municipal business tax. Enterprises meeting two of the following criteria—their total balance sheet should not exceed than EUR 4.4m, and turnover not more than EUR 8.8m, and there should not be more than 50 employees—are not subject to compulsory audit controls. A tax credit on investments in qualifying depreciable tangible assets is more beneficial for SMEs to the extent that the credit is 7% for amounts up to EUR 150,000 and 2% for amounts in excess of this.

Netherlands	While the Netherlands does not have incentives specifically for SMEs, it has a progressive CIT rate structure which favors SMEs, under which income up to EUR 200,000 is taxed at 20% and income in excess of this is taxed at 25%. A progressive structure benefiting SMEs also applies to the general investment deduction for small scale investments in certain business assets, where a deduction of 28% applies for investments between EUR 2,300 and EUR 55,248, a flat deduction of EUR 15,470 applies for investments between EUR 55,248 and EUR 102,311 and a deduction of EUR 15,470 less 7.56% of amount in excess of EUR 102,311 applies for investments between 102,311 and EUR 306,931, while there is no deduction for amounts in excess of EUR 306,931. Netherlands also provides an **accelerated depreciation regime for start-up companies** which are able to depreciate all their assets without limitation in the first three years of the business operation. In addition, start-ups undertaking R&D activities can benefit from a wage tax credit that provides higher deduction rates for the first EUR 200,000 of the business' wages.
Poland	Poland provides several incentives for SMEs. Firstly, SMEs benefit from a higher rate allowance for investment in new technologies, with a deduction of 70% for small enterprises and 60% for medium sized enterprises, instead the general rate of 50%. In addition, SMEs can receive a credit of up to 70% of eligible costs, subject to a maximum credit of PLN4m (c. EUR 950,000), for investment in new and innovative technologies. The definition of SMEs corresponds to EU definition. For micro companies with a turnover of less than EUR 1.2m, immediate depreciation of expenditure on certain fixed assets up to EUR 50,000 is provided. Micro companies can also opt for quarterly advance tax payments, rather than monthly payments. **Small and micro start-up companies** are entitled to receive a credit of 100% of tax due in the first year of operation, which must be repaid within 5 years. Poland also allows a presumptive method for calculating tax payable for (i) natural persons or partnerships with business revenue in the previous year of less than EUR 150,000 - with a flat amount of tax payable as determined by the tax authority – and (ii) microenterprises employing less than five employees – with tax payable according to the activity, scope and number of employees.
Portugal	Portugal provides a progressive tax structure for federal and local business taxes which favors SMEs - 18.5% for income up to EUR 15,000, 24.5% up to EUR 1.5m, 27.5% up to EUR 7.5m, 29.5% up to EUR 35m and 31.5% thereafter. SMEs can also qualify for a higher tax credit for R&D expenditure with a deduction of 47.5% applying compared to 32.5% for companies generally. Portugal also allows for tax to be calculated on a presumptive basis for enterprises with an annual revenue of less than

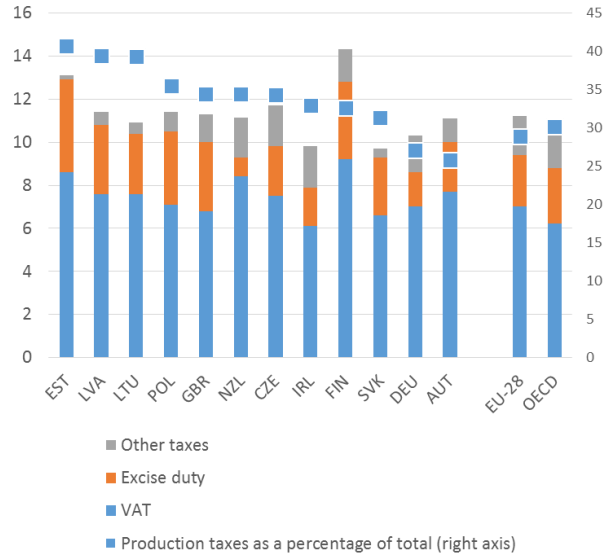
	EUR 200,000 or net assets less than EUR 500,000. Taxable income is calculated by applying coefficient for each type of income to annual revenue.
Romania	Romania provides a turnover tax regime for micro enterprises, under which privately owned companies with income below EUR 65,000 pay tax at 3% of turnover (instead of CIT of 16%). The regime does not apply to banking, gambling, consultancy or management sectors.
Slovenia	Slovenia does not provide tax incentives specifically for SMEs under the general tax regime. However, SMEs are granted favorable tax treatment in designated economic areas where the maximum aid in the form of tax concessions is 50% for small enterprises and 40% for medium sized enterprises. There are reduced penalties for micro, small and medium-sized enterprises in the case of late or insufficient payments. Slovenia also allows a presumptive basis for calculating income tax payable for businesses with annual revenue of not more than EUR 50,000 in the previous year (or less than EUR 100,000 where the taxpayer employs one full-time person for at least 5 months). Under this basis, taxable income is calculated at 80% of annual revenue.
Spain	Spain provides a wide range of incentives for SMEs. For small companies with net revenue of less than EUR 5m and less than 25 employees, a reduced tax rate of 20% applies on the first EUR 300,000 of income, with a rate of 25% on income in excess of EUR 300,000. SMEs with turnover below EUR 10m which do not meet these criteria are subject to a 25% rate on the first EUR 300,000 while the normal 30% rate applies to income above this amount. SMEs can avail of accelerated deprecation which provides for depreciation at twice the ordinary rate for all tangible assets and three times the rate if the assets were acquired as a reinvestment of a capital gain. Immediate expensing of tangible assets was allowed in 2013 and 2014 where employment levels were at least maintained. SMEs can also qualify for a tax credit of 10% of expenditure on new tangible assets for renewable energy. For SMEs employing less than 50, tax credits are available for hiring employees under 30 years of age (EUR 3,000 per employee) and for hiring persons who have been unemployed for at least three months (50% of outstanding unemployment payments). SMEs with turnover of less than EUR 10m can establish a special provision for bad debt amounting to 1% of debt balance at year end. A capital gains exemption of 99% is provided for venture capital investments in SMEs operating in the area of technological innovation.

	Spain also allows for income to be calculated on a presumptive basis for unincorporated enterprises engaged in certain business activities with annual revenue less than EUR 450,000. Taxable income is calculated on the basis of certain coefficients (based on employees, size of business premises etc.) applied to annual revenue with normal tax rates applying.
Sweden	While Sweden does not provide incentives specifically targeted at SMEs, a special deduction is available for investors in small companies (defined according to EU definition). A tax deduction is provided to individual investors of up to 50% of the investment cost of shares in eligible companies, subject to a maximum deduction of SEK650,000 (c. EUR 100,000) and a maximum level of investment of SEK20m per company.
UK	UK had a special reduced 20% CIT rate for SMEs, but this no longer applies now that the general CIT rate has been reduced to 20% for all companies. SMEs benefit from increased allowances for R&D investment – while large companies are allowed to deduct an additional 30% of their R&D expenditure, SMEs are entitled to a super deduction of 125% subject to maximum relief of £7.5m (EUR 8.78m). The relief is available to a wider range of SMEs – i.e. companies with up to 500 employees, £100m turnover and £86m balance sheet total. An annual investment allowance allows businesses to deduct the full value of capital expenditure on fixed assets (excluding motor vehicles) in the year of purchase up to £200,000.

6. VAT

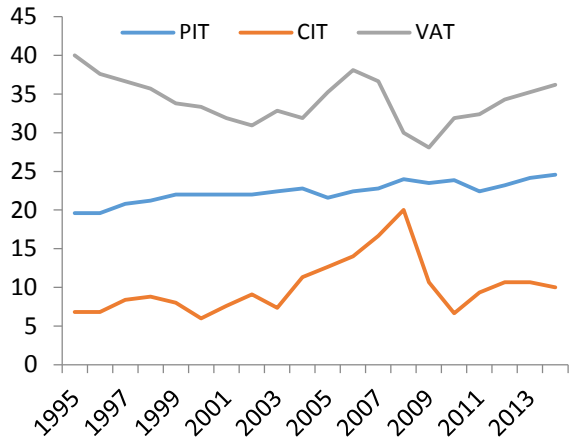
A large share—about 39 per cent—of total tax revenue in Latvia comes from taxes on goods and services, far above the OECD and EU15 average (see Figure 70). Of these, the value-added tax (VAT) brings in more than 60 percent: VAT is more efficient than some other taxes in Latvia (Figure 71) as it has a much broader base. During the global crisis EU countries on average experienced a decline in VAT efficiency of about 3 percentage points, but the drop was much steeper in Latvia, as it was in Ireland, the Netherlands, and the U.K. This is probably due mainly to a shift in consumption patterns, as often happens during recessions when not only incomes but also expectations worsen and tax compliance slackens. The efficiency of Latvia's VAT has recently returned to the pre-crisis level, though it is still below its peak of 0.45 in 1995. Although Latvia's VAT revenue efficiency is now close to the EU average (Figure 72), it is still far below its efficiency in Estonia or the Czech Republic, perhaps because Latvia has a higher VAT threshold that exempts SMEs from VAT payments and also due to tax compliance and enforcement issues.

Figure 70. Production taxes, in percent of total tax revenue



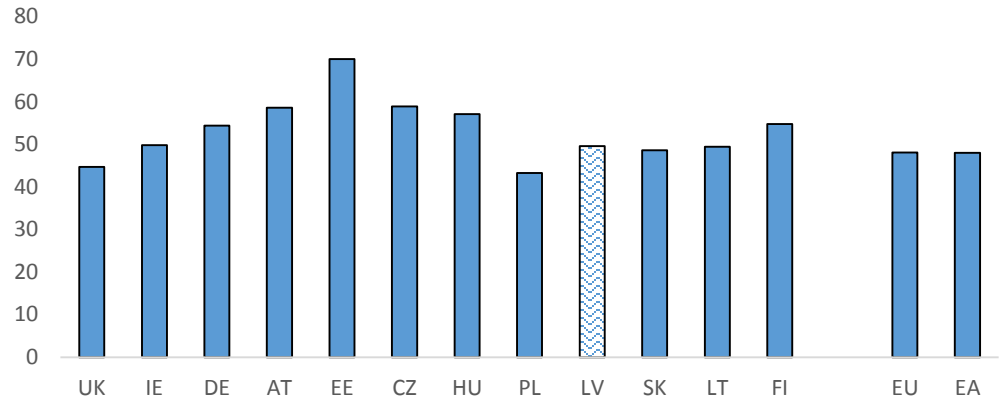
Source: Eurostat, OECD (for New Zealand)

Figure 71. VAT revenue efficiency, Latvia, in percent



Note: Efficiency is calculated for each tax as the ratio of tax revenue to the product of the standard rate and the tax base (consumption).
Source: World Bank staff calculations.

Figure 72. Ratio of VAT revenue to total tax revenue



Source: OECD.Stat database.

Latvia's VAT is fairly broad-based with a standard and reduced rate, though relatively few goods and services are taxed at the lower rate. The standard rate of 21 percent is close to the EU average (21.6 percent) and somewhat above the OECD average (19.1 percent). The relatively high reduced rate (12 percent; see Table 45) applies to medical supplies and equipment, books, newspapers and periodicals, baby food products, firewood, central heating, thermal energy, hotel accommodation, and public passenger transport. However, not all of these products are either essential or are considered socially desirable. Goods and services that are zero rated include items common for all EU countries, such as exports of goods and related services, intra-Community supply of goods, and international transport, but the category also includes tourism services provided outside Latvia (which is more difficult to defend). During the crisis, the government raised the top VAT rate from 18 to 22 percent and the reduced rate from 5 to 10 percent—at that point still one of the lowest rates in the EU. The reduction of the gap between the top and the reduced rate diminished the incentive for businesses to lobby for reclassification of their products and increased VAT efficiency, but it was regressive.

Some portion of consumption is excluded from the VAT, as is true for most EU and OECD economies. In Latvia the relatively short list of exemptions is limited to such basic items as health, education, social, cultural, postal, and financial services. Less standard exemptions are those that apply to gambling, sale of real estate, and rental housing, which are potential candidates for moving from the exempt to the standard VAT category. Reduced VAT rate regimes cost 0.65 percent of GDP in Latvia in 2014 in terms of revenue foregone (see Table 44 for a decomposition of cost by category of good and service). The standard VAT exemptions are often justified on practical grounds, e.g., output is hard to define and tax, such as financial and insurance services or gambling, or has distributional objectives, such as basic health and education. Postal services are public services, which are non-taxed or exempt in most EU countries.

Table 44. Revenue loss due to reduced VAT regime, 2014

Cost of reduced VAT rate	thsd. EUR	in percent of GDP
Total cost	152,638	0.65
of which:		
Pharmaceuticals	103,168	0.44
Medical devices	2,744	0.01
Specialized food for infants	719	0.00
Regular inland passenger transport and carriage of passenger luggage	10,422	0.04
Text books and original literature	3,164	0.01
Newspapers, magazines, bulletins and other periodicals*	3,745	0.02
Tourist accommodation services	9,642	0.04
Residential heat supply	18,985	0.08
Supply of firewood to residents	51	0.00

Source: Latvian Ministry of Finance.

Latvia offers a relatively generous VAT exemption for small firms: those grossing less than EUR 50,000 in the preceding 12 months are not required to charge and collect the tax. Such thresholds vary significantly in EU and OECD countries; Latvia's is higher than in all benchmark countries except the U.K. (Table 45). It is triple Estonia's. Though the objective of the high threshold is to help ease administration, it can also discourage firms from participating in the formal economy. It promotes tax avoidance among existing firms by creating an incentive for them to split up and start a new company to benefit from the 12-month VAT exemption. Moreover, it creates a very uneven playing field between new and existing firms: new firms can sell goods at much lower VAT-exempt prices.

Table 45. Selected OECD VAT indicators

	VAT Rates (in percent)								Threshold (EUR), 2015
	2005				2015				
	Standard	Other			Standard	Other			
Latvia	**18**	**5**	**0**		**21**	**12**	**0**		**50,000**
Lithuania	18	9	5	0	21	9	5	0	45,000
Estonia	18	5	0		20	9	0		16,000
Slovakia	19	0			20	10	0		49,790
Poland	22	7	3	0	23	8	5	0	ca 35,000
Czech Republic	19	5	0		21	15	10	0	ca 37,000
Austria	20	16	12	10	20	12	10	0	30,000
Ireland	21	13.5	4.8	0	23	13.5	9	4.8	75,000 (37,500 for services)
Finland	22	17	8	0	24	14	10	0	8,500
New Zealand	12.5	0			15	0			ca 36,000
UK	17.5	5	0		20	5	0		ca 104,000
Germany	16	7	-		19	7			None

Source: EC 2015, Ernst 2015.

From optimal tax theory follows that differentiated VAT rates should be used for two potential reasons: reducing labor-market distortions or income redistribution. Taxing goods and services at different VAT rates is useful if doing so raises labor supply, because labor supply is distorted downwards by the income tax (Jacobs and Boadway, 2014). By differentiating VAT rates labor supply could be boosted, which would raise social welfare. Goods that are relatively more complementary to leisure should then be taxed at higher rates. Examples could be travel, and tourism. Goods that are relatively more complementary to work should be taxed less. Examples could be work-related cost of travel, child-care facilities, or goods that are close substitutes for home production. When the demand for goods and services do not vary with labor supply, the famous Atkinson-Stiglitz (1976) theorem insists the VAT should be uniform. These welfare losses from differentiated VAT-rates in goods markets need to be traded off against the potential welfare gains in labor markets.

There is not much empirical evidence estimating the degree of complementarity of various commodities with labor supply. Available research does not provide particularly strong evidence in favor of differentiated VAT rates to reduce labor-market distortions, see also Crawford et al. (2010) and Pirttilä and Suoniemi (2010). Crawford et al. (2010) find that for the UK food, energy, tobacco and public transport are complementary to leisure, whereas restaurant dinners, alcohol, and fuel are complementary to work. Pirttilä and Suoniemi (2010) show that in Finland capital income and expenditures on housing are complementary to leisure, whereas child-care facilities are complementary to labor. Most expenditure categories in both studies, however, show no significant association with labor supply.

The question of whether VAT rates are desirable for income redistribution depends on whether a differentiated VAT-structure can redistribute more income over and above the income redistribution that that can be achieved with the non-linear tax on income alone. Thus, when all differences the demand for goods and services are perfectly predictable by labor incomes alone, then a differentiated VAT-structure cannot redistribute any more income than the government can achieve through the income tax, but it in addition distorts commodity demand. Consequently, differentiated VAT-rates are not desirable even if the poor spend a larger fraction of their income on certain commodities. Differentiated VAT-rates are only desirable for income redistribution when, conditional on observing (and taxing) labor earnings, demand for goods and services still vary with earnings capacities of individuals (i.e. their wages per hour worked) (Mirrlees, 1976; Saez, 2002). Hence, the trade-off between equity and efficiency can be improved and differentiated VAT-rates should be used for redistribution. For example, Gordon and Kopczuk (2010) present empirical evidence that home-ownership (and capital income) strongly correlates with earnings ability.

To determine whether differentiated VAT-rates in Latvia are desirable it is important to know whether it is possible to redistribute additional income with the VAT—over and above the income distribution that can be achieved with income tax. Empirical evidence is therefore needed, not only on the distribution of expenditures on different commodities, but also whether there are large differences in commodity demand conditional on labor earnings. It may very well prove desirable to move some of the 12 percent-commodities or 0 percent-commodities to the 21 percent-commodity group, while off-setting any distributional consequences via adjustments of the income tax. In that case, the income distribution remains unaffected, but there will be less distortions of goods markets and the government saves on administrative and compliance costs of the VAT. However, when the household consumption of goods and services is assessed using survey data for

Latvia, there is not a concentration of expenditures on reduced VAT commodities among lower income groups. Therefore, VAT is not an effective vehicle for poverty reduction or income redistribution.

All these arguments need to be analyzed in the specific context of the Latvian economy, such as the state of the labor market and how incomes are distributed. For instance, Latvia introduced the reduced VAT rate for hotel accommodation in 2010 to help the sector recover from the crisis. Since then, the economic situation of the hotel sector has improved and the argument for the reduced rate for this sector has weakened. In addition, lower VAT rate on hotel accommodation benefits visitors and richer local population (see Figure 73 and Figure 74) but does not necessarily drive competitiveness. Estonia with a lower VAT rate of 9 percent on hotels is less competitive to Latvia (12 percent) on hotel pricing, while Lithuania with a 21 percent VAT rate[73] on hotel accommodation in 2014 was more competitive (see Figure 75). Another example of the lack of convincing reasons to keep reduced rate is the variance in the VAT rate for central heating, thermal and wood fuel supply. The reduced rate lowers the cost of heating for the households that use them, but also introduces inequality between users of gas and electricity for heating (which are subject to standard VAT rate) and users of central and wood-fired heating. In general, goods or services that there are close substitutes (for instance all above commodities) should be uniformly taxed.

Figure 73. Share of household consumption (cash) by VAT rate category, 2014

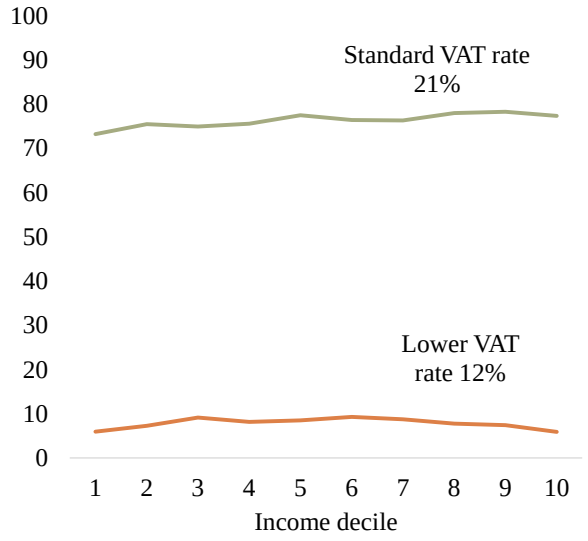
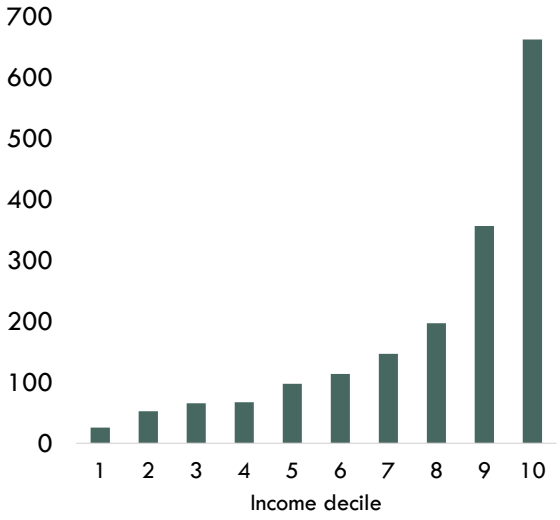


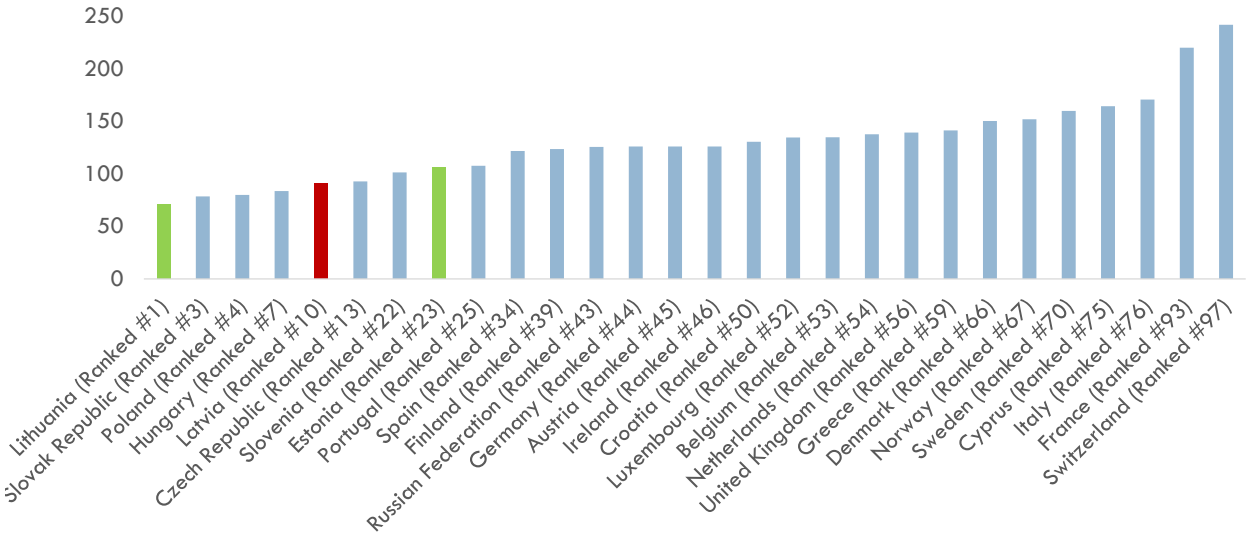
Figure 74. Hotel/Restaurant consumption per capita by income decile, in euros, 2014



Source: World Bank calculations based on Household Budget Survey, 2014.

[73] As of January 1, 2015, Lithuania has reduced the VAT rate of Hotel Accommodation Services to 9 percent. But the competitive calculations were done prior to that change—for the 2015 Travel & Tourism Competitiveness Report. Estonia plans from January 2017 to increase the VAT rate for hotel accommodation services from 9 percent to 14 percent.

Figure 75. Global hotel price index and country global ranking, 2014

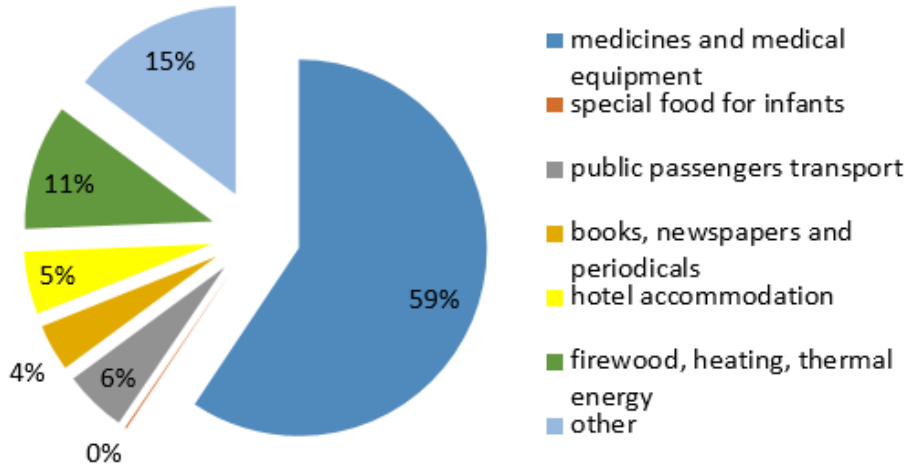


Source: The Travel and Tourism Competitiveness Index Dataset © 2015 World Economic Forum.

In general, current VAT rules that apply to Latvia's public sector, unlike in many other EU countries, do not undermine VAT neutrality. The VAT rules that exempt such public services as health, education, and cultural services also apply to the private sector. The only exception is specific postal services that can only be VAT-exempt for the public sector.

The reduced rates and exemptions in VAT are costly in terms of public revenue. The VAT exemptions in 2014 amounted to EUR 945 million, or 3.9 percent of GDP, which constituted 52 percent of VAT revenues. In Latvia, the VAT exemptions are responsible for the bulk of the VAT expenditures (about 3.2 percent of GDP). The budgetary cost of reduced tax rates is estimated at 0.65 percent of GDP, of which about 60 percent results from reduced VAT rate for medicines and medical equipment (see Figure 76). The cost of reduced VAT rates for heating, public transport and hotel accommodation is also non-negligible. These fiscal costs of VAT rates differentiation need to be assessed against their potential economic costs/benefits. The most important economic cost is, first, the dead-weight loss of distorting commodity demand. Second, the distributional gains/losses of the differentiated VAT. Third, the effects of the differentiated VAT in the labor market: how much does do distortions on labor supply increase compared to a uniform VAT-regime with equal revenue?

Figure 76. Distribution of cost of reduced VAT rates in 2014



Source: Ministry of Finance.

The bank levy Latvia introduced in 2011 is a first step to addressing the undertaxation of the financial sector caused by the VAT exemption. Exempting the financial sector from VAT in Latvia (as elsewhere) can distort both consumer and business decisions. The EU has for many years been debating the VAT on financial services, since applying it is difficult.[74] The main difficulty is to technically define the price for specific financial operations. As a result, in the EU most financial and insurance services are exempted. The exemption means that though the financial sector does not charge VAT on most of its output, it cannot deduct the VAT charged on its inputs (the "irrecoverable VAT" problem). This creates cascading tax effects since the irrecoverable VAT embedded in the charges that banks make to their business customers will be carried through to final prices for domestic consumption (OECD 2014). As result the price of financial services for business users is higher than what it would be with a deductible output VAT, while the price of financial services for final individual users is lower than if VAT were applied. The exemption also distorts competition between domestic services (exempt with no right of deduction/inputs taxed) and services imported from a VAT country (where export of such services is free of VAT) or from a non-VAT country (e.g., the USA). Given the problems of applying the VAT to financial services in the standard way, Latvia and several other countries have applied a tax that is economically equivalent to VAT to offset the undertaxation of the financial sector: In 2011 Latvia introduced a "stability fee" of 0.036 percent on the adjusted liabilities of banks, which is similar to the bank levy imposed by Sweden and the UK.

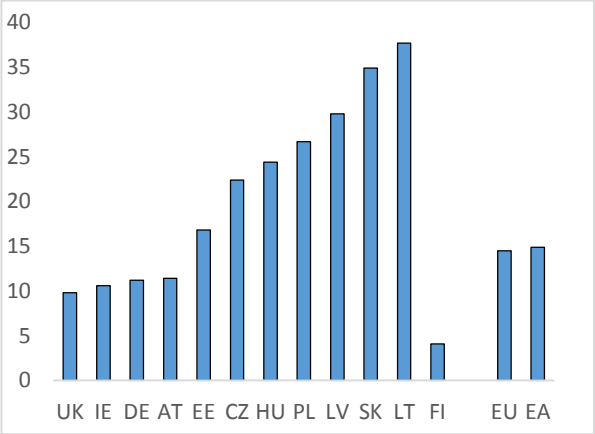
A significant amount of VAT revenue is lost due to tax evasion and avoidance. Evidence of entrenched tax evasion can also be found in the high VAT compliance gap. Latvia has close to EU average VAT revenue ratios (VRR) but a very high VAT gap (see Figure 77).[75] An independent study by the European Commission (2014b) found that the VAT gap in Latvia had grown from 15 percent of potential liabilities in 2005 to 30 percent in 2013. Failure to comply explains a major part of this gap. Although the State Revenue Service estimated a smaller gap than the EC (Figure 78) and found a

[74] Actually, the main difficulty in taxing financial services does not lie in the VAT per se but in the application of the invoice-credit system to services priced on the basis of margin spreads rather than explicit fees (Zee 2013).

[75] The VAT gap arises not only from fraud or tax evasion but also includes from errors, failure to take reasonable care, and nonpayment due to bankruptcy or insolvency.

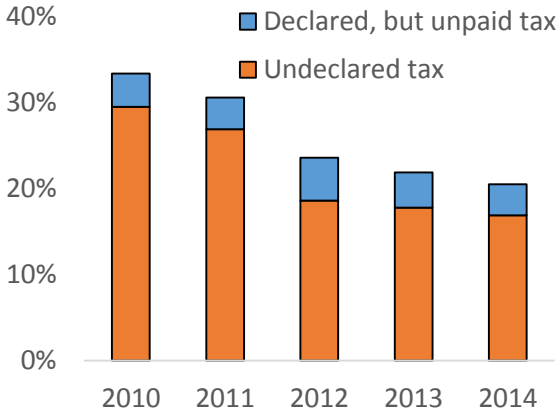
gradual but persistent decline of the gap since the crisis, closing the GAP could still push up VAT revenues—there is room to adopt more efficient tax administration methods to tackle tax fraud, evasion of VAT arrears, underreporting, and the shadow economy. Because the gap may have a variety of sources, knowledge of VAT gap structure could make it easier to design efficient methods to tackle it. For instance, analysis for Poland (Poniatowski 2016) found that the shadow economy, tax evasion, and VAT fraud (in particular missing trader intra community) are responsible for more of the 50 percent of the gap (see Table 46). The size of the gap in Latvia suggests that it would be advisable to adopt methods to tackle tax fraud, evasion of collection of past debts, underreporting, and the shadow economy.

Figure 77. VAT gap, in percent of VAT liability, 2013



Source: CASE 2015.

Figure 78. Compliance problems, percent of total liability, 2010-2014



Source: Latvia SRS.

Table 46. Sources of VAT GAP in Poland and the U.K., in percent

	UK (2013-14)	Poland (2013)
Missing trader intra community	3.8-7.6	10.8
Shadow economy	18	above 6.3
Tax evasion	14	above 35
Mistakes	8	7.7

Source: Poniatowski (2016)

Main conclusions:

i. Phasing out certain exemptions to have one unified rate could make the tax system more efficient, even if the list is relatively short compared to other EU member countries. The authorities could, for instance, consider the following options:

- **Broaden the VAT base to eliminate unnecessary exemptions or raise reduced rates that no longer achieve policy aims in the most efficient way** (taxation of energy or hotel accommodation). This decision needs to be based on a careful review of the efficiency

and distributional impact of preferential VAT rate on goods and services. It would involve analyzing whether the reduced VAT rate is the best instrument for stated objectives, including for improving income distribution, which in the case of Latvia would seem inappropriate given that the country a sound social security system.

- **Re-evaluate VAT thresholds**. Gains from reducing tax administration and compliance costs need to be carefully assessed against the competitive distortions stemming from the difference in treatment among taxpayers on both sides of the VAT threshold.

ii. Analyze the causes of the VAT gap and then target tax administration measures to major areas of noncompliance, to raise major revenues in the medium term.

7. EXCISE TAXATION

E**xcise duties make a significant and stable contribution to Latvia government revenues**. In 2013–2015, the duties levied on fuel, tobacco, soft drinks, coffee, and alcohol[76] raised 7.2 percent of total tax receipts—3.2 percent of GDP (Table 47). However, the revenue share in relation to GDP has been relatively stable for the last decade even though since EU accession (to reach at least the EU required minimum), excise rates have gone up steadily. The rate on alcoholic beverages has almost doubled since 2004, and the increase on cigarettes[77] has been even higher. The duty for petrol is now about 25–80 percent of its 2004 level and for diesel 60–130 percent, depending on its content. Diesel that is 100 percent bio is not taxed and the tax on that used in agriculture is very low.

Table 47. Excise Duties and Consumption Taxes, Representative EU Countries, Percent of GDP

GEO/TIME	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
EU28	**2.5**	**2.4**	**2.3**	**2.3**	**2.4**	**2.3**	**2.4**	**2.4**	**2.4**	**2.4**
Czech Republic	2.6	2.6	2.8	2.4	2.5	2.5	2.7	2.7	2.8	2.3
Germany	2.2	2.2	2	2	2	1.9	1.8	1.7	1.7	1.6
Ireland	0.8	0.7	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.4
Estonia	3.7	3.4	3.6	3.3	5	4.2	4.3	4.4	4.2	4.3
Latvia	**3.4**	**3.1**	**2.7**	**3**	**3.7**	**3.6**	**3.4**	**3.2**	**3.2**	**3.2**
Lithuania	2.9	2.9	2.8	3	3.4	3.1	2.9	2.8	2.8	2.8
Austria	2.6	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.3	2.3
Poland	3.9	3.8	3.9	4.2	3.5	3.9	3.8	3.7	3.6	3.4
Slovakia	3.6	2.8	3.4	2.6	2.8	2.9	2.8	2.7	2.7	2.7
Finland	3.6	3.5	3.2	3.2	3.3	3.4	3.7	3.8	3.7	3.6
United Kingdom	3.2	3.1	3.1	3.1	3.3	3.3	3.3	3.3	3.2	3.2

Source: Eurostat 2016.

Latvia has much higher excise rates than its regional peers, especially when corrected for purchasing power. In 2014, its alcohol duties, though still below the EU average, were among the highest in the region. In terms of purchasing power (PPP), it leads the EU ranking: it has the highest duty for spirits and wine, and in terms of the PPP-adjusted duty on beer, in 2014, only five EU countries (Malta, Croatia, Bulgaria, Portugal, and Slovenia) had higher rates. Latvia also had the second-highest PPP-adjusted duty on tobacco in the EU, though it was still below the EU average in euro terms.[78] Finally, Latvia has one of the lowest retail fuel prices in the EU but when adjusted for PPP is taken it has the fourth-highest duty on all types of fuel[79] (see Annex D).

Differences in prices, resulting from higher excise in Latvia than in neighbouring Lithuania, Belarus and Russia, encourage tax avoidance and evasion. One way consumers are likely to respond

[76] In accordance with the law, the excise tax is applied to alcoholic beverages, tobacco products, oil and natural gas, soft drinks, and coffee. The tax on oil is applied to transport fuel and heating oil (despite several reliefs and reduced rates such as the rate for diesel used in agriculture).

[77] The tax rate on cigarettes has gone up significantly, from EUR 11.95 per 1,000 cigarettes + ad valorem 19.2 percent on January 1, 2007, to EUR 39.84 + ad valorem 33.5 percent on January 1, 2014.

[78] In Latvia cigarette taxation has both a specific (€60 for 1,000 cigarettes in 2016) and an ad-valorem component (25 percent of the retail pack price).

[79] In 2014 the cost of 60 liters of petrol (average consumption per day for one Latvian) constituted 12.76 percent of a worker's average net salary (EU average: 7.88 percent), and expenditure on 60 liters of diesel 11.81 percent of the average net salary (EU average: 7.25 percent).

to higher prices as excise taxes rise is to buy goods abroad, where the price may be lower, or in an illegal segment of the market where tax is not levied. The higher the duties, the larger the incentive for consumers to avoid the tax by cross-border shopping or evade it by illegal purchases. Prices of spirits, wine, fuel of all types, and cigarettes are so much higher in Latvia than in Belarus and Russia (see Table 48), which cross-border shopping and smuggling despite exchange rate risk, border control and visa requirements to cross the border. The scale of tax avoidance in the tobacco and fuel markets appears to be a matter of high concern. Latvia is one of the countries with the highest consumption of smuggled cigarettes (more than 20 percent of total cigarette consumption are illegal) in the European Union (KPMG 2013). Legal and illegal import of fuel has a significant impact on fuel market in Latvia, too.

Table 48. Prices of Dutiable Products, Latvia, Russia, and Belarus, 2016

	Alcoholic Beverages, Eur/1 liter			Cigarettes, EUR /20 cig	Fuel, Eur/1 liter		
Geo	Beer	Wine	Spirits		Petrol	Diesel	LPG
Latvia	1.70	11.50	28.30	2.60	1.03	0.91	0.48
Russia	2.10	4.40	11.70	1.31	0.47	0.45	0.22
Belarus	1.20	3.20	9.60	0.64	0.51	0.53	0.26

Source: Euromonitor, Globalpetrolprices, 2016.

A relatively high excise tax in Latvia that burdens domestic consumers and attracts illegal trade makes it harder to increase taxes. There might be a case, however, for changing the application of excise duties to different products. When designing the excise tax system the government should seek to minimize the distorting effects of the tax on consumer behavior, use it to correct socially costly behavior, or both. Consumption of certain goods can impose costs on others ("externalities") or costs on consumers in the future ("internalities") that they may not fully take into account when making consumption decisions. In these circumstances, taxation can discourage the excessive consumption that would occur without it. There is some evidence that in Latvia the excise duties could better target the externalities and internalities associated with smoking, driving, and drinking.

The current structure of alcohol duties could be improved to better target potentially harmful consumption. Alcohol consumption not only imposes costs directly on people who drink but also on others, such as victims of accidents, property damage, and violence. Moreover, the social harm from alcohol consumption is likely to be nonlinear: consuming a bottle of wine in an evening is likely to cause much more harm than the first glass. Finally, for a given level of consumption, the magnitude of harm is likely to vary across people. This creates challenges in quantifying both the marginal external or internal costs of alcohol consumption and the appropriate tax level. Nevertheless, many countries design excise taxes on alcohol consumption by taxing the unit of alcohol regardless of the form of the drink. The Latvian excise tax burden on spirits is already significantly higher than on beer, even without taking into account the planned rate increases for the former[80]). Based on alcohol beverage's impact on a human health it is estimated that strong alcohol in Latvia is taxed 4-5 times more than the beer. Given that consumption of beer dominates in total

[80] EUR 1,450 as of January 3, 2017, EUR 1500 as of January 3, 2018.

consumption of alcoholic beverages in Latvia it might be a case for a suspension of planned increase in excise duty on strong alcohol and rising duties on beer and wine (see table in the Annex D).

Changing the balance between the specific and ad valorem components of the tax on cigarettes will better target public health and may lead to higher revenues. Latvia's excise tax increases in Latvia, I part related to changes in EU requirements (such as higher minimum duties) decreased the gap between the cheapest and most expensive cigarettes in Latvia. Still, each EU member state has flexibility in determining the balance between the specific and ad valorem excite components depending on the national cigarette market. Therefore, Latvia could modify its excise tax rate structure by changing the ratio of specific and ad valorem rates. Lowering the ad valorem rate and raising the specific rate, combined with an increase in the minimal excise tax (MET) could heighten increase revenue from tobacco excise by up to EUR 3 million). It would also help to improve public health: (1) It is likely to lead to relatively higher prices, causing price-sensitive consumers to reduce their consumption relatively more. (2) It will reduce incentives for consumers to substitute higher-priced for lower-priced o brands, especially when consumers find it difficult to reduce consumption after a tax increase. Given their budget constrains this will have more impact on smokers who are poor and young. The proposed change will need to be combined with CPI adjustments to keep pace with inflation but since inflation is low in Latvia, that will not be immediately necessary.

Changes to the excise taxation on fuel require much thought. Current fuel prices in Latvia already attract cross-border trade and smuggling from Russia and Belarus. When PPP is taken into account, the excise also constitutes a relatively high tax burden for Latvian consumers. Nevertheless, there is a case for reforming fuel excises to more effectively tax driving externalities (e.g., CO_2 emissions, congestion). For instance, the fuel excise can be redesigned to take into account the harmful impact of transport fuel on environment (Brizga, Juruss 2016). One way to do this would be to base a tax rate on the unit of CO_2 emission, because emissions are directly proportional to fuel use. For Latvia that would imply reducing the rate on gasoline but raising it on diesel and other products. Even this change, however, would need to be designed carefully so as not to harm competitiveness and the development of infrastructure. For instance, commercial use of diesel may need special treatment such as a rate reduction (through reimbursement of the tax difference) to encourage transport companies to purchase fuel legally in Latvia rather than in neighbouring countries. Revenues from a higher excise of diesel could be also earmarked to support the railway system, which is much more environmental friendly than road transport.[81] Finally, total or partial exemptions or tax reduction, relief on energy products used for the carriage of goods and passenger by rail can be considered. Several EU countries allow for partial or total excise tax exemption for diesel used in rail transport (see Table 49). In Latvia the excise tax on fuel used by railway transport is paid in full despite for the importance of the transit and logistics sector.[82]

[81] This is also in line with one of the EU transport policy priorities spelled out in *Europe 2020*– making make rail freight more competitive than road transport.

[82] Carriage of goods by rail is more developed in Latvia than in other countries. Transit and the logistic sector had a significant impact on economic development in Latvia, now generating about 12 percent of GDP. The railway industry pays at least EUR 100 million in taxes each year, and transport and logistics employ than 70,000 people.

Table 49. Tax on diesel used in rail transport

Country	EUR/1000
Belgium	0
Denmark	60.99
France	128.3
Estonia	110.95
Italy	185.22
Ireland	108.28
Luxemburg	0
Portugal	90.11
Slovenia	253.66
Finland	214
Spain	0
Hungary	0
Sweden	0

Source: TAXUD 2016.

Impact on Tax Revenue

The proposed changes in excise taxes (see Annex D for details) would raise EUR 400 million (or 1.8 percent of GDP) a year (see Table 50). The additional revenues will come from:

- *Alcoholic beverages*. The changes in the tax burden would raise taxes on beer and wine but not further tax spirits.
- *Cigarettes*. The proposal to increase the specific excise component of excise while reducing the ad valorem part will result in additional revenues if the government intensifies the fight against smuggling. However, without a more determined attack on smuggling, the revenue effect could be zero or even negative.
- Taking into account the rate changes in 2016 for almost all fuel, fuel tax revenue would grow by 4 to 5 percent. However, to maintain growth changes in excise tax policy could also reduce the tax on commercial diesel fuel and raise it correspondingly on diesel used for private purposes.

Table 50. Total excise tax revenue with rate changes, EUR million

	2017	2018	2019
Alcoholic beverages	87	90	94
Cigarettes	97	101	107
Fuel	235	245	258

Conclusions

1. The main economic justification for excise taxes is to correct behavior that has social costs that individuals do not taken into account when deciding what and how much to consume. These costs may be borne by others, the society at large, or the consumer in the future. There is considerable evidence that consumption of tobacco, fuel, and alcohol generates such costs, although their extent can vary in complex ways related to the amount consumed and the consumer. Such social costs are a rationale for levying excise duties on these goods. However, it is important that any tax is designed to target effectively externalities or internalities associated with consumption.
2. There is a clear case for reform in how driving and alcohol are taxed. Fuel and alcohol excise duties do not target the primary externality, CO_2 emissions, associated with driving. The government should consider basing the tax on fuel on CO_2 emissions. Of course taxation of fuel needs to be carefully redesigned so as not to harm the transport sector and Latvia's competitiveness. Reform of alcohol taxation should target alcohol products systematically, because society consumes disproportionately more of the low-tax products.
3. Given that the primary justification for levying excise duties is to correct socially costly behavior, the revenue generation potential of excise taxes should not be primary cause for concern. Indeed, reducing consumption of tobacco, fuel and alcohol could improve their net contribution to the public purse if it leads to sufficiently large falls in the health, environmental, and public safety costs associated with their consumption.
4. Future excise policy might consider levying taxes on other forms of consumption that generate externalities and internalities.

8. PROPERTY TAXATION

There have been frequent calls for property tax to be increased to generate additional revenues in Latvia. The Latvian Government is currently considering a reform in its property tax system. To look at the feasibility of increasing property taxes, this section of the report examines the property tax policies of four countries that rely relatively heavily on the property tax. It focuses, in particular, on their tax rate and exemption policies. On this basis, it concludes with a discussion of options for Latvia. It should be noted that there is likely to be large challenges in getting support for increasing property taxation. For example, making more uniform the system of residential tax assessment has met with considerable political resistance because it implies a large tax increase on certain categories of residential property.

Box 8. Local Government Finance in Latvia

Local governments account for about 27 percent of general government spending in Latvia, slightly above the average for the EU28.* The largest source of local government revenues is the personal income tax. Slightly over half (52 percent) of local government revenues were derived this source in 2015. One third of local revenues were derived from transfers. Property taxes accounted for only nine percent of total LG revenues. Of this amount, about half was generated from taxes on land and the remainder from taxes on buildings. The majority of taxes on buildings, in turn, were derived from industrial and commercial properties. As shown in the table below, taxes on residential buildings generated only EUR **24.2 million in 2015; twelve percent of total property taxes and only one percent of total local revenues. User charges and other non-tax revenues accounted for the remaining 6 percent of total revenue.**

Table 51. Local Government Revenues, 2015

	EUR million	In percent of total
Taxes	1362.8	60
PIT	1148.1	51
Property	197.1	9
Of which:		
- Land	100.4	4
- Buildings	96.6	4
-- Residential	24.2	1
Transfers	738.3	32
Fees, other	172.3	8
TOTAL	2273.4	100

*General government includes social security. Data is for 2015. EU 28 average is 24 percent. Source: Eurostat.

Background: the property tax in Latvia

The property tax is exclusively assigned to local governments in Latvia. The legal framework for property taxation is set out in the Law on Immovable Property (as amended through April 2014) and a series of cabinet resolutions. According to the current property tax law, the property tax is imposed on land and buildings (including residential buildings owned by local governments which are rented out, in which case tax is imposed on tenant.). The tax is assessed on the basis of the property's cadastral value on January 1 of each year. According to the law, that value is to be determined by the State Land Service in compliance with the requirements of the Immovable Property State Cadaster Law, using data from the Immovable Property State Cadaster Information System and other sources, as required.

Assessment Methodology. Cadastral values are, in most cases, determined through mass appraisal. Under this approach, data on recent property sales is analyzed to determine the contribution of various property characteristics (including the use, location, and size of the land parcel, and the square footage and other characteristics of the building) to the sales price of each property. This yields a formula assigning a value to each parameter (e.g., a value per square meter of floor area for residential buildings in a particular zone) which is then applied to all properties on the tax rolls.[83]

Table 52. Existing and proposed ratios of assessed value to market value adopted in 2015

	Existing tax rate, percent	Proposed tax rate, percent
New residential apartments	38	81
Old residential apartments	72	86
Single family homes	65	79

Table 53. Standard tax rate on residential buildings

Value of Building, EUR	**Property tax rate, percent**
Up to €56,915	0.20
€56,915 -106,715;	0.40
Over €106,715	0.60

Latvia's system of mass appraisal is quite sophisticated. In the case of multi-family residential properties, for example, separate calculations are made for the building and the land under it. (This is conventional practice.) The calculation of the land component takes into account not only the location and size of the parcel, but also its environmental status (whether it is considered polluted), cultural significance, and any liens or other encumbrances on title. If a parcel is located within the Baltic Sea and the Gulf of Riga coastal protection zone, for example, its value is reduced by 20 percent. The calculation of the building component takes into account the square footage of the structure and

[83] See Land Service website http://kadastralavertiba.lv/vienkarsi-par-kadastralo-vertibu/

its use (e.g., whether the building is used for residential, commercial or industrial purposes). In the case of residential property, further distinctions are made among types of buildings (e.g., single family homes, small multi-family buildings, large multi-family buildings, etc.) along with the condition of the structure and its access to utilities.[84]

As in many countries, the resulting estimate of market value is then reduced by a fixed percentage to yield an 'assessed value'; i.e., the value to which the tax rate will be applied. In Latvia, these vary among various types of residential property. As shown in Table 52, new apartments are currently assessed at only 38 percent of their market value. Old apartments are assessed at 72 percent of their market value. For single family homes, the ratio is 65 percent. [85] As discussed below, the Government and Parliament are considering an increase in the assessment ration. In August 2015, the Cabinet adopted a regulation[86] raising the assessment average ratio to 85 percent. (As shown in Table 2, the ratio would continue to distinguish among types of residential property, but with far less variation than at present.) This was to go into effect in 2017. In May, 2016, however, Parliament adopted amendments to the National Real Estate Cadaster Law postponing the change to 2018.

Rates. Prior to 2013, the central government fixed the rate of the property tax. Since that date, local governments have been permitted to set the rate within a range of 0.2 to 3.0 percent. However, the rate may only exceed 1.5 percent if the property is 'not maintained in accordance with the procedures laid down in laws and regulations'. If a local government declines to set its own rate, a standard rate schedule is applied. This standard rate is 1.5 per cent of the assessed value of the land and building, except in the case of residential buildings, where the rate is ranges from 0.2 percent to 0.6 percent. See Table 53.

Exemptions and Abatements. The property tax law sets out several exemptions and abatements that local government are required to observe. These include a 90 percent tax reduction for 'deprived and low income persons' as determined by state information system and a 50 percent reduction for residential property if the taxpayer has 3 or more children under 18 years of age or qualifies as politically repressed (and has owned the property for at least five years). The law also permits local governments to provide additional abatements of 25-90 percent at their own discretion, provided the abatements apply uniformly to objectively defined groups. At the same time, the law allows local government to provide abatements to support 'the competitiveness of local entrepreneurs' consistent with the principle of social responsibility, particularly take into account the impact of the tax on the groups of socially disadvantaged and poor inhabitants'.

The Cabinet's decision to increase average assessment ratios to 85 percent set off a political firestorm. As shown in Table 52, above, this reform would substantially increase the property tax burden on residential properties, particularly on new residential apartment buildings. In response, the government is examining ways to ameliorate the impact of these increases. The remainder of this note evaluates a variety of options, based on international experience. The analysis that follows

[84] Whether the system in fact succeeds in predicting the future sales price of properties is not known.

[85] D.Reizniece-Ozola, Ministry of Finance, *Information Report: On exempting the only property owned from immovable property tax (IPT)*. 2016.

[86] Resolution No 456, amending Cabinet Resolution No 305 of April 18, 2006 "Regulations regarding Cadastral Evaluation"

draws primarily on practices in the four countries that generate significant revenues from property taxes. Measured as a percent of GDP, these are: France (4.1 percent); Canada (3.7 percent), the UK (3.3 percent) and the US (2.8 percent). It is presumably in these countries that the pressure for targeted tax relief is most acute.

International Experience

Targeted property tax relief can take four basic forms:

- Reductions based on the value of the property. This includes so called progressive tax rates, which impose higher rates (as a percent of assessed value) on higher value properties. It also includes progressive assessment ratios, which impose higher ratios on properties with higher market values, and outright exemptions or lump-sum credits for properties below a certain assessed value.
- Reductions based on other property characteristics. This include higher (or lower) rates or assessment ratios for properties on the basis of their use. Industrial and commercial properties, for example, may be taxed at a higher rate than residential properties. Within the residential category, single family homes may be taxed at a lower rate than apartment buildings and owner-occupied properties may be taxed at a lower rate than properties that are rented out. Older buildings may be taxed at a lower rates than new buildings (or vice versa). Religious, educational or cultural properties as well as properties owned by central and local government are typically exempt altogether.
- Reductions based on characteristics of the taxpayer. These typically take the form of exemptions or reductions for households with incomes below a certain threshold, but they can take the form of reductions based on the age of the taxpayer or whether the taxpayer is disabled, a veteran, or eligible for welfare payments.
- Ceilings on year-to-year increases; e.g., limits on the percentage increase in tax liabilities from one year to the next.

In the countries reviewed for this note, these reductions are often imposed in combination; e.g., taxpayers over age 65 are eligible for a reduction only if the value of their property falls below a given threshold.

i. ***France*** has two main taxes on residential property.[87] The first, the *impot fonciere* (property tax) is paid by property owners. The second, the *taxe d'habitation* (residence tax) is imposed on the occupant of the property—i.e., in the case of rental property, the tenant. In both cases, assessments are intended to reflect the rent that the property would be expected to receive in the open market, having regard to the condition, size and location of the property. Assessments on older properties have not been updated in decades, however, and are therefore out of date.

[87] In addition, income derived from rental property of any kind is subject to the income tax. France also imposes a professional tax (*taxe professionelle*) payable on business premises based on a percent of the taxpayer's income, and a tax on wealth.

The *impot fonciere* is subject to a number of exemptions and abatements—the most important of which are means-tested. Persons residing in their own homes who are over 60 years of age or receiving welfare payments are entirely exempt from the tax, provided their income falls below a threshold level. [88] Other property owners are entitled to a tax reduction, depending on their income.[89] French law also mandates a reduction in the *taxe d'habitation* for owner occupied residential property (applicable only to the principal residence) based on the number of children residing there. For each child, the tax is reduced by 10-15 percent. In addition, local governments have the authority to grant additional rebates of up to 15 percent to households with incomes below a threshold amount, provided the assessed value of the property is not more than 30 percent higher than the average for the area in which the property is located.

ii. ***Canada***. Property taxation in Canada is governed by provincial legislation, which varies from one province to another. Specific regulations, as well as tax rates, also vary among local governments within a given province.

In Toronto (as elsewhere in Canada) property is assessed on the basis of its market (sales) value. Properties are re-assessed every four years. Between reassessments, increases are phased in. Thus one-quarter of the increase in assessments that occurred between 2012 and 2016 will be reflected in the tax bills for 2017; another 25 percent in the tax bills for 2018, and so on until the 2016 assessment are fully phased in in 2020. Increases are also capped at five percent per year.

The rate of the property tax (as a percent of assessed value) varies considerably depending on the use of the property. As of 2016, the rate on single family homes was 0.69 percent.[90] The rate on multi-family residential properties, in contrast, was 1.64[91] percent. Commercial properties were taxed at a rate of 2.64 percent and industrial properties at 2.7 percent.

In addition, the city of Toronto offers a range of exemptions reductions and deferrals of property tax liabilities. In the case of owner occupied residential properties, persons over age 65 are entirely exempt from the property tax provided their combined household income is less than C$38,571 *and* the assessed value of their residence is less than C$ 715,001. (Persons receiving disability benefits and persons receiving old-age welfare benefits are also eligible for this exemption.) Toronto also offers a tax-*deferral* program for persons over age 65, provided their combined household income is less than C$50,001. The deferral applies regardless of the value of the property. The deferred amount, however, must be repaid once

[88] For a one-person household, the threshold for 2016 was EUR 10, 697. For a household of three, it was EUR 22,121. Persons subject to the wealth tax are not eligible for this exemption regardless of their income.

[89] To qualify, a one-person household must have an income of less than EUR 25,155. The threshold is higher for larger households.

[90] This reflects the combined rates of the city tax (0.497 percent); the education tax (0.188 percent); and the transit tax (.003 percent).

[91] Except in the case of 'new' multi-family residential properties, which were taxed at the same rate as single family homes.

the property is sold. A forty percent reduction in tax liabilities is granted to properties that are used for charitable purposes.

iii. *United Kingdom* (to be completed)

iv. ***United States***. As in Canada, property taxation in the United States is governed by individual state legislation. Specific regulations, as well as tax rates, vary among local governments within a given state. In New York City, different rates and assessment ratios apply to different classes of property. The market value of 'class 1' properties--single family homes, condominiums, and multi-family residential buildings with three or fewer units-- is calculated on the basis of comparable sales. The assessment ratio on these properties is six percent. The tax rate is 19.5 percent. As a result, the tax on a single family home with a market value of US$ 500,000 is US$ 5,850, or 1.2 percent of its market value. The value of larger multi-family properties (as well as other forms of property) is calculated on the basis of actual rental income, net of allowable expenses. The assessment ratio is 45 percent. Tax rates range from 12.9 percent (for buildings with 4-10 units) down to 10.65 percent (for buildings with more than ten units.) Thus the tax rate on a twelve unit building generating US$ 500,000 in net revenue per year would be rate about US$ 24,000 or five percent of net revenue.

New York City offers a variety of exemptions and reductions on the property tax. Property belonging to persons age 65 or older is eligible for a tax reduction, provided the property is the taxpayer's primary residence and the taxpayer's income is less than US$ 37,399.[92] Condominiums and units in cooperatives in buildings with over three units are eligible for a separate reductions of 17.5 percent to 28.1 percent (regardless of the taxpayer's age) provided they are the occupant's primary residence. (Unlike a reduction for the elderly, the amount of the reduction is based on the assessed value of the property, not the income of the taxpayer.)[93]

Box 9. California: A Cautionary Tale

On the west coast of the US, the state of California grants an immense de facto tax reduction to long-time property owners. Under California's proposition 13 (enacted 1978) values on residential property were rolled back to 1976 levels. Increases in assessed value from that date are capped at two percent per year or the rate of inflation, whichever is less. The maximum tax rate is capped at one percent. Proposition 13 does allow properties to be reassessed when they are sold--the new assessment is based on the actual sales price. But thereafter, such properties are subject to the same restrictions on annual increases and tax rates as all other residential properties.

In fiscal terms, the results have been catastrophic. In 1977, property taxes accounted for X percent of local government revenues. By 2015, that proportion had shrunk to Y percent. Proposition 13 has also introduced gross inequities in the distribution of the property tax burden, as similar properties are taxed at very different levels, depending on when they were sold.

[92] The amount of the reduction varies according to the taxpayer's income. For incomes between US$ 36,500 and US$ 37,399, the reduction is only five percent. For incomes less than US$ 29,000, the reduction is 50 percent.
[93] Properties assess at US$ 50,000 or less are eligible for a 28 percent reduction. For properties valued at over US$ 60,000 the reduction is 17.5 percent.

Implications for Latvia

First principles. In evaluating the options for Latvia, it is useful to being with first principles. In theory, the burden of the property tax should be distributed on the basis of ability to pay. This is true of all taxes (except so-called sin taxes, whose objective is to discourage the behavior that is taxed). The problem, in the case of the property tax, is that property values do not reflect a taxpayer's ability to pay *out of current income.* At best, property values reflect a taxpayer's wealth, which may only be realized (i.e., turned into cash) when the property is sold.[94]

This fundamental disconnect between the value of a property and its owner's ability to pay out of current income is a common source of problems in developed countries with aging populations. There, older people on fixed incomes are confronted with rising tax bills arising from rapidly increasing property values. A similar problem exists in countries of the former Soviet realm, due to the manner in which the housing stock was privatized. Under the former regime, housing units were typically allocated by state enterprises--without regard to the occupants' income. At transition, these residential units were transferred to the persons occupying them at the time. As a result, low wage workers could find themselves the owners of high value units and vice versa. The economic disruption that accompanied the transition worsened the problem, as even formerly high income workers in high value properties could find themselves unemployed and unable to afford the taxes on their units. Rising property values have compounded the problem, as tax bills that might have been affordable at the time of transition became less so.

Nevertheless, the first-best option for Latvia would be to proceed with the adjustment in assessment ratios as planned, with no compensating changes in tax rates or exemption policies. Under the ability-to-pay principle, assessment ratios should be the same for all residential properties. This ensures that individual property tax liabilities are uniformly associated with the value of the property owned or occupied by the taxpayer.[95] Despite the caveats cited above, this, in turn, ensures at least some correspondence between a taxpayer's liability and his or her ability to pay. In this sense, the fact that, proposed assessment ratios would rise most rapidly on new apartment buildings represents a step forward, as it can be assumed that the people who purchase or rent units in new buildings are relatively well off.

[94] Even then, property value may be a poor indicator of ability to pay. There are two reasons. First, property assessments do not typically consider the value of mortgages or other liens against the property. If a property is heavily mortgaged, the wealth of its owner may be considerably less than the assessment would indicate. Second, and more broadly, property is not a primary source of income in modern economies. In the pre-industrial world, property values (particularly the value of agricultural land) were reasonably good indicators of ability to pay. This is no longer the case.

[95] Assuming, of course, that assumed that owners of multi-family residential buildings will pass any increase in property tax burden onto their tenants

Box 10. Is the Property Tax Progressive? Regressive? Or Neither?

Analysts disagree on the property tax's progressivity—or lack of it. The dispute centers on the question of where the ultimate incidence of the property tax falls. Some analysts believe that the incidence of taxes on residential property ultimately falls on occupants: owners, in the case of owner-occupied housing and tenants in the case of property that is rented out. On this basis they conclude that residential property taxes are inherently *regressive*, since housing usually constitutes a larger share of the spending of poor people. Others see the property tax as essentially a tax on capital and conclude that it is inherently *progressive*, since income from capital constitutes a relatively higher share of income for richer people. Then, there are those who view the property tax as essentially a charge for local public services. To them, the issue of incidence does not arise at all. They see no more sense in asking if the 'price' of local public services is regressive than in asking if the price charged for anything else is. See Enid Slack and Richard Bird, *The Political Economy of Property Tax Reform*. 2014.

Should Latvia provide additional relief to certain taxpayers? In principle, further reductions could be justified on social grounds; as a means of assisting the poor. But if that is the justification, then the best approach would be to base the reduction not on the value (or other characteristics) of the property, but rather on the income of the taxpayer. Latvia, of course, already has a mandatory 90% tax abatement for low income households. Eligibility could be extended to households with slightly higher incomes, perhaps with a reduced percentage of relief. If the problem is liquidity—e.g., retired couples living on modest means in substantial homes acquired when they were working--a tax *deferral* program would make more sense. Such taxpayers are poor only in a cash flow sense. As in Toronto, in such cases, property taxes could be deferred—but not forgiven—until the property is sold (at death, for example).

There are of, course, other ways of targeting the poor. All of them have serious drawbacks, however. One approach is to impose lower assessment ratios or lower tax rates on lower value property. In theory, this would lower the tax on people living in modest dwellings. Latvia already uses this approach in setting the rates on residential buildings. As noted earlier, that rate range from 0.2 to 0.6 percent. The Ministry of Finance is considering a proposal to increase the number of households benefitting from the lower rates by raising the thresholds: the 0.2 percent rate would apply to properties with values of up to EUR 150,000 (or EUR 100,000) rather than EUR 56,915 as at present. In principle, it might make sense to increase the threshold still further or lower the rate on the lowest bracket.

There are a number of drawbacks to this approach, however. To begin with, it would not necessarily benefit low income renters. At present, the progressive rate on buildings applies to entire structures, rather than the individual housing units within them. Thus a large structure would be considered high value (and therefore subject to the maximum tax rate) even if the units within it were very modest. As landlords can be assumed to pass the burden of property taxes onto their tenants in the form of higher rents, tenants would ultimately pay the higher rate. It should be noted that this is not as important an issue in Latvia as it would be in New York City, for example. The most recent published census data (from the 2011 census) shows that only that 14 percent of private households

in Latvia occupy rental units.[96] (Even in Riga, the proportion is only 15 percent.) But if no provision is made to reduce the tax rate on low value rental units, this 14 percent would be excluded from the benefit of progressive tax rates.

Another option—one that is much discussed in Latvia--would be to reduce the tax rate on housing units that are occupied by their owners. (Such abatements typically apply only to the owner's primary residence, ensuring that second homes are taxed at normal rates.) According to the Minister of Finance (see D.Reizniece-Ozola, op.cit.) there is presently a public initiative to either exempt owner occupied residential property entirely or reduce the rate on owner occupied housing to 0.1 percent. But again, owner occupancy is no indicator of ability to pay. If anything, there is a negative correlation between income and tenure: richer people are more likely to own; poorer people are more likely to rent. As a result, an exemption for owner occupied properties would be grossly inequitable: the owner of a mansion worth several million euros would qualify for the exemption while a low income renter would not. [97]

Given the difficulties of targeting property tax reductions on those less able to pay, one has to wonder if it is worth the effort. The fact is that the burden of residential property taxes in Latvia is not very great. As shown earlier in Table 1, the tax on residential buildings generated only EUR 24 million in 2015. The level of revenue generated by taxes on residential *land* cannot be determined from the sources at hand. But even assuming that it is twice the level of the tax on buildings, the average tax burden in Latvia works out to only EUR 84 per household, or 0.6 percent of median household income. Even the most carefully targeted property tax exemption would not have any impact on the distribution of income in Latvia.

Box 11. The Political Economy of Property Taxation

Throughout the world, the property tax—particularly the tax on residential property—arouses political opposition that is disproportionate to the revenues it generates. Much of the popular resistance to the property tax appears to arise from its visibility. Unlike the income tax, the property tax is not withheld at source. Unlike the VAT, it is not paid in small amounts with each daily purchase (or, in fact, hidden in the price of the good itself). Instead, the property tax generally is paid directly by taxpayers in lump sum payments (As a result, it tends to raise hackles among taxpayers, particularly those (such as owner occupants) who do not associate the tax with a flow of revenues. In consequence, the governments tend avoid it. Of the 75 major countries tracked by the IMF Government Finance Statistics data base, only four generate more than 2.6 percent of GDP from property taxes. The average yield of property taxes (including taxes on agricultural land and ta on the sale of property) among the 75 counties is only one percent of GDP.

[96] This may understate the number of household who rent. Although 67 percent of household are classified as 'owner-occupiers', the remaining 18 percent are classified, without further explanation, as 'other'.

[97] The MOF article also argues that confining the exemption to an owner's primary residence would generate insuperable administrative problems. Its author predicts that owners with several homes would evade the tax by transferring title of each one to other family members. This does not appear to have been a major problem in places reviewed for this report, perhaps because transferring title to family members has downside risks of its own.

Opposition to the proposed increase in assessment ratios presumably arises from the high visibility of the property tax. As discussed in Box 4, throughout the world, the residential property tax arouses political opposition that is disproportionate to the revenues it generates. It is reasonable to assume that most of the abatements and exemptions that accompany the property tax in the places reviewed for this note were not intended to achieve some desirable social result. Instead, they were intended to mollify certain constituencies who were incensed. Unless and until Latvia raises the level of residential property tax to (for example) French levels, the country would be better off confining the proposed reform to the adoption of uniform assessment ratios, and minimizing any expansion of exemptions and abatements.

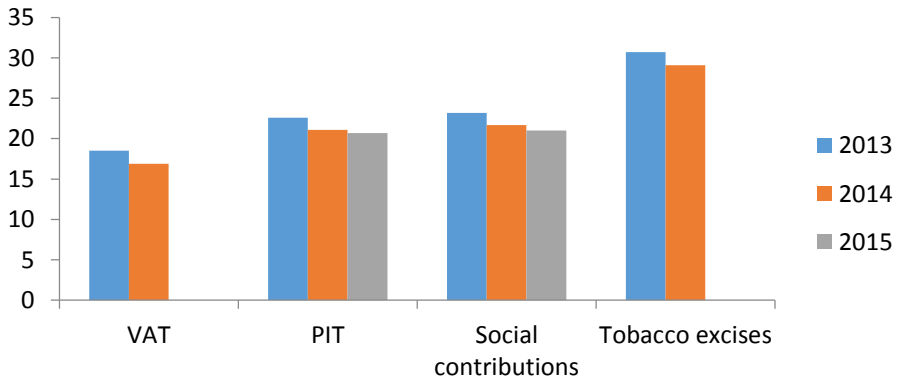
9. TAX COMPLIANCE

This section of the report provides a number of ideas and possible directions for strengthening compliance management. The State Revenue Service (SRS) has made considerable efforts in recent years to introduce a proactive compliance management program, to strengthen compliance enforcement in key risk areas, and to improve its analytical capacity to determine compliance gaps and trends. These efforts generally reflect modern compliance management trends and correspond with international good practice. The SRS should be commended for these initiatives. Despite these initiatives, however, a high level of underground economy activities remains a challenge for revenue management, and compliance remains below target in core areas such as VAT and correct declaration of salaries for income tax purposes.

Analyzing compliance levels

Reducing the tax compliance gap and counteracting tax evasion resulting from underground economy activities is a major focus of revenue mobilization in Latvia, but the capacity to deepen the analysis of compliance gaps and risk remains limited. The SRS has successfully started to build tax compliance gap analysis capacity. Now a regular monitoring process has been launched in particular for VAT, personal income tax, social contributions and excises on tobacco, petroleum products and alcohol (see, for example, Figure 79). In line with international practice, the VAT gap analysis is based on a macro-analysis approach, while for PIT and social contributions a combination of a micro- and a macro-analysis approach is adopted. Tax gap analysis still is in the process of development, and the lack of resources in SRS headquarters unfortunately slows down the analysis process. The SRS continues its efforts to recruit qualified analytical experts, but with limited success so far. Should the efforts to build additional analytical capacity in-house not succeed, consideration will have to be given to outsourcing part of the gap modelling work, as advancing and deepening the gap analysis work is of crucial importance for strategic planning and compliance management.

Figure 79. Trends in the tax gap development analyzed by the SRS



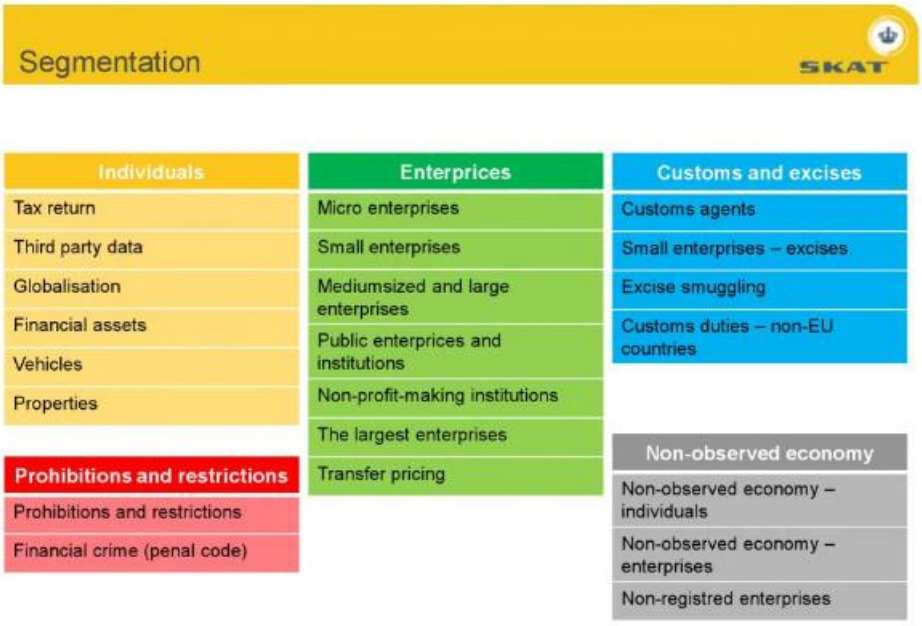
Source: SRS annual reports. VAT gap data for 2015 are not yet available.

A comprehensive compliance gap analysis has not been done yet, but there is evidence that the VAT gap is high and there are large tax evasion losses from underreporting of business activity and envelope wages. Latvia was part of the EU-wide comparative VAT gap analysis study carried out in 2013. The study found that as a percentage of GDP Latvia (similar to Lithuania) has one of the highest gaps in VAT revenue collection in the EU. Although VAT policy contributes a substantial part

to the shortfall in VAT revenue collection, the administrative gap (VAT gap) remains high in an EU-wide comparison and is, different from the situation in most EU countries, higher than the gap resulting from preferential treatment and exemptions in VAT policy. The analysis initiated by the EU Commission does not attempt to disaggregate the compliance gap, however. A more detailed analysis of the areas of the tax gap has been attempted by some studies. Putnins and Sauka (2015) estimate the level of underreporting of business income and salaries: their findings suggested that unreported business income (45.5 percent) comprises the largest share of unreported activity; envelope wages come second (36.1 percent), and unreported employees constitute the remaining share (18.4 percent). The SRS is aware of the situation and has put in place a number of measures to confront such tax evasion.

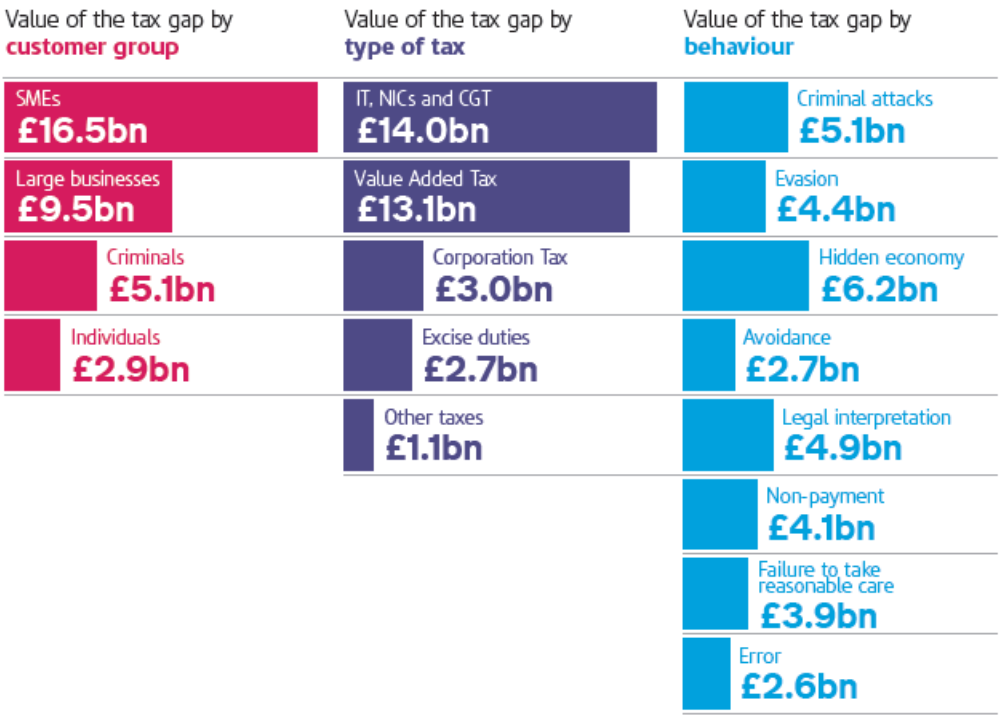
Building the capacity to regularly monitor the tax gap not only on an overall basis, but separately by tax type and by gap category should become a key priority for further developing the compliance management strategy. The overall gap monitoring process introduced by the SRS provides important initial information on general compliance trends and the overall soundness of the revenue management system. However the analysis is not detailed enough to provide a direct input into compliance management; in order to ensure the maximum benefits from the gap analysis process the development of a more detailed picture of compliance levels and trends will be needed. This requires an in-depth analysis of the level of the tax gap not only by tax-type, but by business / taxpayer segment as well as research on the drivers and reasons for low or non-compliance. Key questions are: which business types or taxpayer segments are less compliant than others? What are the main areas of non-compliance (fraud, evasion, avoidance, errors)? What are the reasons for a non-compliant behavior? What measures could increase the level of voluntary tax compliance? The overall benchmark of a well-developed gap analysis system is the ability to calculate the tax gap by tax regime, taxpayer segment, taxpayer group and behavioral approach. However, this is a long-term process, which requires significant resources and data availability. Countries such as Australia, Canada, the U.K., Denmark, Sweden and the U.S. are examples of a well-developed gap analysis process. Denmark is a typical example of such a gradual refinement of the gap analysis approach. Following the first step of an overall analysis of the tax gap by tax type, the tax administration has now embarked on a decomposition of the gap estimates into 22 more specific components (Figure 80). The tax administration has yet to determine the methods that will be used to measure each of these segments, but it is clear that a number of different methods will have to be developed to address the various analytical challenges. The gap analysis practiced in the UK by HMRC is an example of a more precise estimation of the extent of the tax gap by customer group and behavior in addition to a mere tax-type analysis (see Figure 81). This then becomes a basis for the development of targeted compliance improvement measures.

Figure 80. Twenty-two components of the tax gap analysis in Denmark



Source: IMF country report 16/59: Denmark: The Value-Added Tax Gap (2015).

Figure 81. Overall results of the tax gap analysis by customer group, tax type and behavior: the UK HMRC example



Introducing a limited random audit program and a regular taxpayer compliance perception survey could help deepen the understanding of the areas and drivers of non-compliance. Two additional data collection initiatives would be useful or even needed to complement the existing gap analysis work. First, a more systematic analysis of audit data to determine types of non-compliance. Ideally this would include introducing a random audit approach and conducting a certain (small) percentage of tax audits as random audits instead of risk-based targeted audits (see also below the section on risk analysis). Such random audits would be less thorough and in-depth than risk-based audits, but would have a wider scope and assess all kinds of errors and behavioral aspects. As a recent IMF research highlights "random audits can be costly, but provide direct intelligence on the nature of noncompliance" (IMF, 2015). The SRS tax gap analysis work currently is not even at a stage where findings from regular audits are used as an input into closer examination of the factors contributing to the tax gap. SRS management will have to elaborate an approach for strengthening both the capacity and the scope of tax gap analysis. Second, the data analysis should be supplemented by an analysis of the motives and reasons for non-compliance and the perception of taxpayers with regard to complying with tax obligations and the effectiveness of the tax administration to enforce compliance. Such additional perception analysis provides extremely useful information for the strengthening of the compliance management strategy. Input into tax gap analysis work through taxpayer perception surveys has first been introduced in Australia by the Australian Taxation Office (ATO) in the 1990s; it has now become standard practice in many OECD countries. Perception surveys include questions about the attitude towards tax cheating, things that might motivate or encourage taxpayers to pay their full share of taxes, and more general questions about the attitude of taxpayers towards risk-taking, law-abiding behavior, and importance or reputation (see, for example Box 12 on the U.S. experience and Box 13 on that of Canada).

Box 12. Examples of a taxpayer feedback survey: the U.S. IRS taxpayer attitude survey

Question 1: How much, if any, do you think it is an acceptable amount to cheat on your income taxes: (i) a little here and there; (ii) as much as possible; (iii) Not at all.

Question 2: Do you completely agree, mostly agree, mostly disagree, or completely disagree with the following statements: (i) it is every America's civic duty to pay their fair share of taxes; (ii) Everyone who cheats on their taxes should be held accountable; (iii) it is everyone's personal responsibility to report anyone who cheats on their taxes; (iv) taxpayers should just have to pay what they consider is a fair amount; (v) the more information and guidance the IRS provides, the more likely people are to correctly file their returns; (vi) I trust the IRS to help me understand my tax obligation; (vii) I trust the IRS to fairly enforce the tax laws.

Question 3: How important is it to you, as a taxpayer, that the IRS does each of the following to ensure that all taxpayers honestly pay what they owe: (i) ensure that low income taxpayers are reporting and paying their taxes honestly; (ii) ensure that small businesses are reporting and paying their taxes honestly; (iii) ensure that high income taxpayers are reporting and paying their taxes honestly; (iv) ensure that corporations are reporting and paying their taxes honestly.

Question 4: How much influence does each of the following factors have on whether you report and pay your taxes honestly: (i) fear of an audit; (ii) belief that your neighbors are reporting and paying

honestly; (iii) third party reporting to the IRS; (iv) your personal integrity; (v) belief that your friends and associates are reporting and paying their taxes correctly.

The SRS is already conducting taxpayer perception surveys in order to collect information on client satisfaction with the SRS services and performance. Such survey work should be supplemented by specific questions on tax compliance attitudes and views. However feedback surveys only provide reliable and objective results in case the anonymity of respondents is guaranteed. Therefore they are generally contracted out and carried out by a university or research institute or by a survey company. To a certain extent the data collected through the SSE Riga shadow economy index for the Baltic countries can also be used as input into the compliance attitude analysis. However the limited scope of the survey, only targeted at a small number of entrepreneurs, and the kind of questions asked in this survey, covering only few aspects of tax compliance, such as the perception about the probability of getting caught for underreporting of business profits, do not make this survey a substitute for a real compliance attitude analysis.

Box 13**. Compliance survey analysis in Canada**

The Canadian Revenue Agency (CRA) contracts private firms to conduct taxpayer attitudinal research. The CRA uses a representative survey to periodically investigate attitudes toward tax compliance (names the CROP 3SC Monitor Survey). The usefulness of the survey is that it gives information on how the attitudes of taxpayers to tax compliance vary against socio-economic characteristics, trends and underlying values. It helps the CRA to monitor shifts in expectations/attitudes and behavior, and allows a more detailed profiling of tax payers than simple division into those that evade and those who do not. For example, recent cluster analysis showed: 31 percent of taxpayer population are fully compliant (risk averse and opposed to tax evasion, 18 percent are altruistic compliers (strongly opposed to tax cheating), 15 percent are over-taxed opportunists (higher income taxpayer who view it acceptable to cheat, and state that they have done so when given the opportunity), 12 percent are rationalizers, 12 percent are underground economists, while 13 percent are outlaws (admit to tax evasion openly). The CRA uses research findings to help develop communications and marketing initiatives to improve voluntary compliance. It allows a strategy to be developed to target different subgroups.

Developing a segment-specific approach for compliance management

The grey economy generally is not equally distributed between business segments. Based on the analysis of tax audit results and economic data many OECD country tax administrations have developed a compliance heat map, prioritizing compliance management in business segments with a presumed high level of undeclared income and transactions. Studies on the composition of the shadow economy show that major sectoral differences also exist in Latvia.

The SRS has also embarked on a sector-specific approach to investigating tax evasion, commencing with an in-depth analysis of business compliance in the car maintenance and repair sector in 2014, followed by the dentistry industry and the beauty care sector. Such an approach is a

useful and welcome initiative in principle. The SRS initiative is well designed insofar as it combines targeted enforcement measures with steps to encourage a voluntary move to higher compliance levels. Also the active outreach to and cooperation with business associations practiced by SRS reflects best international practice. In 2015 a total of 2,135 new taxpayers could be registered in the three sectors and the declared income in the sectors increased by around EUR10.5 million. The overall impact of the initiative can only be evaluated once the longer-term compliance trend in the targeted sectors is known. Putting these sectors under constant closer supervision would consume considerable resources and probably not be cost-efficient. General practice in other countries therefore has been to focus on one specific sector for a limited period of time (generally one year) and use this time period to build better voluntary compliance and collect data and information in order to improve the risk management in the sector and develop specific risk analysis tools in order to permanently achieve a higher level of sector-specific compliance monitoring capacity (see Table 54 for examples of sectors of focus of selected OECD economies). This should also be the approach followed by SRS.

Table 54. Identification of high-risk industry segments in selected OECD countries

Australia	Belgium	Canada	Sweden	USA
Construction	Construction	Construction	Construction	Car sales
Transport	Gambling	Hospitality	Restaurants	Construction
Restaurants	Transport	Agriculture	Hairdressers	Healthcare
Hairdressing/beauty salons	Car sales	Real-estate agents	Taxi companies	Medical professions
Cleaning services	Diamond industry	Taxis	Scrap metals	Restaurants
Clothing and textiles	Dentists	Hair Stylists	E-commerce	Real-estate agents
Motor vehicle retailers	E-commerce		Labor agents	
Art and antique dealing	Heating-oil distributors			

In sectors with a high risk of informal activities and a widespread practice to delegate tasks to sub-contractors the introduction of withholding taxes on payments to such sub-contractors could be an effective instrument to reduce the opportunity of tax evasion. Such a sector generally and also in Latvia is in particular the construction industry, with more than 6,000 businesses registered in the country**.** Tax compliance of the small number of principal contractors is easier to monitor and enforce than managing tax compliance of a large number of sub-contractors, which generally are smaller businesses and may have a rather short activity period on a construction site. Requiring the principal contractor to withhold income tax on the payments to such sub-contractors reduces evasion possibilities and contributes to higher compliance levels in the industry. The level of tax withholding can even be influenced by the compliance level of the sub-contractor, as the example of the Irish Relevant Contract Tax shows (see Box 14).

While the construction industry is a typical example of such a withholding tax scheme, it can also be applied also to select other industry segments in which a high level of sub-contracting tax place. An alternative approach is to require principal contractors in all business segments to withhold income tax on all payments made to other businesses which do not present a valid tax registration number. An example of this type of withholding tax is s12-190 of the 1st Schedule to the Taxation Administration Act 1953 in Australia (see Box 15). The Australian approach has proven to be relatively successful. In its first year taxes withheld amounted to US$ 16.1 million, in the second year

US$ 32.2 million, and in the third year US$ 54.8 million. Ultimately more than 40 percent of the businesses that had tax withheld as a result of not presenting their registration number initiated business registration. The withholding tax approach on the income tax side can be combined with the operation of a reverse charge mechanism on the VAT side.

Box 14**. The relevant contract tax in Ireland**

All payments made by a principal contractor in the construction industry to a sub-contractor are subject to tax withholding (the Relevant Contract Tax or RCT). Principals must notify the tax administration of all payments made on relevant contracts through an online information system. The sub-contractor is also required to register for RCT, and sub-contractors which are not in the RCT database already will be registered automatically after the first contract notification by a principal contractor. The principal has to enter each payment to a sub-contractor in the online information system before the payment is made, and has to deduct withholding tax in accordance with the deduction authorization issued by the tax administration. There are three RCT rates (0 percent, 20 percent and 35 percent), and the applicable rate depends on the compliance records of the sub-contractor, with the zero rate applying to sub-contractors having been fully tax compliant for the last three years, the 20 percent rate applying to sub-contractors with a record of substantial tax compliance, and the 35 percent rate applying to all other sub-contractors. In addition, if the tax administration forms the opinion that deductions from relevant payments at the standard 20 percent rate of tax for the year of assessment will be insufficient to fully satisfy the income tax liability of the sub-contractor for that year, the 35 percent rate may be applied. This provision can be used, for example, where there is a risk of the enterprise going out of business before its tax debt has been cleared.

Box 15**. Tax withholding obligations in Australia**

A business dealing with another business that does not quote its identification number must withhold taxes from any payment made at the rate of 48.5 percent. The high rate means the revenue is not at risk in relation to those transactions, since the withholding rate equals the maximum amount of income tax and social levy payable by an individual. The paying business must also complete a payment summary at the time of the withholding giving full details of the payee and the transaction and send an annual withholding report to the Tax Office detailing the transactions. This information enables the Tax Office to conduct income-matching checks on businesses that have not quoted an identification number.

For businesses operating in cash transaction dominated sectors the obligation to use certified cash registers for recording their sales can be a useful support tool to support the correct reporting of turnover and income. **But a special cash register control program will have to be designed.** Latvia is currently strengthening its cash register system by introducing a direct electronic link between the register and the SRS database. The obligation to use cash registers is not respected automatically, however, as can be seen from the cases of cash register manipulation detected in many countries, including in Latvia. A close monitoring of the proper use and correct functioning of the registers is essential in particular in the initial phase of register introduction. Countries which

have made positive experience with the operation of cash registers, such as Sweden (Table 55), have invested considerable resources in such supervisory work.

Table 55. Sweden: Supervision, inspection visits and audits within the cash trading operation in the first three years of compulsory cash register use

	2010	2011	2012	Total
Supervisory visits	50,353	20,782	10,308	81,443
Inspection visits	3,100	7,198	11,900	22,198
Audits	319	257	306	882

Source: Skatteverket, Impact evaluation: Requirements of cash registers (2013)

Supervision of the proper use and functioning of cash registers needs to continue also after the introductory phase with a special cash register control program, which will also be essential to introduce in Latvia if a maximum impact of the registers on compliance shall be ensured. The Irish program of unannounced control visits to cash businesses is a model for such an initiative (see Box 16).

Box 16. Surprise visits to cash businesses in Ireland

Behavior in respect of trades under-declaring income can be more successfully be detected through real-time unannounced interventions or "cold calls" than retroactive reviews of books and records. Accordingly, a strategy was put in place involving unannounced visits to all cash businesses in a town, street, market or at an event (e.g. concerts, trade shows etc.) to check on the controls and procedures in effect for handling cash transactions. The methodology employed in conducting an enquiry or investigation on cash business can include some or all of the following:

- Surveillance (including covert) and use of intelligence;
- Test purchases;
- Examination of Cash Registers and Electronic Point of Sale systems;
- Ensuring all equipment is connected as appropriate;
- Examination of books and records;
- Interviews with proprietors, managers and employees;
- Ensuring all employees are on the books;
- Stock Checks; and
- Follow-up visits.

Streetscape operations have proven to very successful –not only have compliance issues in the cash business been identified and addressed but the profile of Revenue has been raised in the towns concerned. The majority of business who had issues with their books and records has corrected the situation as confirmed by follow-up actions.

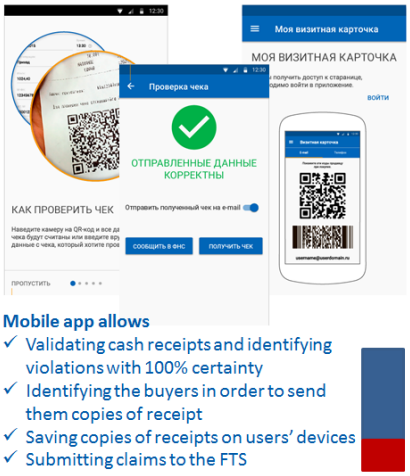
Source: OECD (2012).

Control of cash register use only is effective, however, if violations of the obligation to record a business transactions or—even more severe—systematic manipulations of a cash register result in severe penalties and fines. For not issuing a cash receipt for a transaction a sufficiently high monetary penalty is required; an example is the new legislation in Austria, where the obligation to

operate cash registers has been introduced from 2017, and which imposes a fine up to EUR 5,000 for not using the cash register. For cash register manipulation more severe penalties are required, including imprisonment of the offender in case of systematic installation of electronic sales suppression tools.

The usefulness of the tax lottery scheme to promote the issuance of tax invoices should be reviewed. While tax lotteries are becoming increasingly popular in the region (less so in OECD countries overall), this does not necessarily mean that they are an effective tool to support tax compliance in the cash economy sector. Indeed some countries, such as Georgia or Korea, have discontinued their lottery schemes. In Latvia the risk of the lottery scheme is reduced by the fact that there are no lottery prices to be awarded; so the costs of the scheme are limited. Nevertheless the administration of the scheme consumes SRS resources, which may be better invested in other compliance management activities. In any case the tax receipt control mechanism should be facilitated as much as possible. An app-based control mechanism, such as recently introduced in the Russian Federation (see Figure 82), is a typical example of a customer invoice checking mechanism based on modern technology and avoiding interaction with the tax administration by sending copies of paper invoices.

Figure 82. The cash receipt check app in Russia



Dealing with envelop wages

Counteracting cases of envelope wage tax declarations remains difficult. However, taxpayer surveys seem to indicate that the level of underreporting of salaries continues to decrease and is now not very different from the level in Estonia and Lithuania. This is not necessarily only a consequence of better compliance enforcement, as also the increase in the minimum wage level may have reduced the prevalence of envelop wages.[98] The SRS has made considerable efforts to collect information on the actual level of salary payments, including through an active cooperation with business associations. This allowed at least partially developing average salary levels in industry segments as benchmarks for selecting cases with major deviations from the averages for closer examination. The development of risk indicators for audit selection, typically being the difference between the salary

[98] European Commission, Country report Latvia 2015, COM(2015) 85 final

levels declared by the employer and the average salary level in the business segments, or the difference of the turnover/salary payment ratio from the industry average, generally is the main tool to identify cases which require an audit. In addition efforts could be increased to promote voluntary compliance in particular with social contribution payments by highlighting the reduction in social benefits resulting from the non-payment of MSSIC contributions. However expectations that a voluntary compliance campaign in this area will achieve visible results are limited, as taxpayers seem to prefer a reduction in their current tax burden to a higher level of future social benefits. So a major emphasis of an initiative to reduce the level of envelop wages will have to remain on the enforcement side. The question to consider in this respect is if, similar to the practice in a number of OECD countries, a special audit focus should be built on auditing wage withholding tax compliance. In addition, assuming that a substantial portion of envelop wage payments are made in cash, the current efforts of SRS to better monitor business income received in cash should facilitate the control of cash spending and the detection of regular cash payments to employees.

Managing VAT compliance

VAT compliance could be strengthened by improving the control of the VAT chain and taking measures to reduce the risk of fake companies entering the VAT net. Latvia is on the World Bank's Doing Business scale one of the best performers in the area of business registration. The entire business registration process takes only 5.5 days, compared to an average of 10 days in the Europe and Central Asia region and 8.3 days in high income OECD countries. This impressive result is not without risks for VAT compliance management, however. From a tax administration point of view the task to avoid a VAT registration of bogus companies has a high priority. This requires as a precondition for accepting a business to enter the VAT net an initial existence and sustainability check of the business. The fact that a business gets a business registration number should not automatically imply that it also has to be VAT registered without 'business reality scrutinizing' by SRS. This may include the need for a site visit to the business premises in order to check if the business actually exists and has installations, such as office space, employees, and machinery, which indicate a more permanent conduct of business activities and reduce the risk of VAT-registration of a fly-by-night company. Such initial existence checks could in practice be combined with advisory services to the newly registered businesses to inform the business manager of the services SRS can provide and check if the books and records are maintained in a satisfactory way and if the business operator is ware of the tax filing and payment obligations. Such routine visits to business start-ups are regularly provided by OECD country tax administrations and show a good impact, as business operators know that they are on the tax administration radar screen and the tax administration can proactively identify weaknesses in the organization of tax compliance work in the business ('Right-from-the-start'–approach).

The initial business reliability and sustainability check should include a cross-checking of names and addresses of business owners and managers. In particular cases where the owners or managers had already been involved in the operation of fake or non-compliant business in the past should be selected for further investigation. The current practice of preventing the enforcement of tax debt collection by setting up companies with managing directors resident in countries which do not provide administrative assistance in debt collection, such as Uzbekistan or Afghanistan, could at least partly be addressed by requiring by law the nomination of an EU-country resident company director. The Irish example can serve as a model for such an approach (see Box 17).

Box 17. Requirement for Irish incorporated companies to have a director resident in an EEA state

Under Irish company law, every company incorporated in Ireland is required to have at least one director who is resident in a member state of the European Economic Area (EEA) – i.e. resident in an EU member state or one of the three non-EU countries which are part of the EEA (Norway, Iceland and Liechtenstein). This requirement is subject to two exceptions as follows:

- It does not apply where the company provides a bond to the value of EUR 25,000 which may be called upon to discharge liability of the company in respect of any fine that may be imposed under the Companies Act 2014 as well as certain fines or penalties under specific provisions of the Taxes Consolidation Act 1997. A period of two years is prescribed as the minimum period of validity of the bond, commencing no earlier than the event giving rise to the requirement for the bond. For newly incorporated companies, the bond must be effective from the date of incorporation. The surety under the bond must be a bank, building society or credit institution.

- The requirement does not apply where a company applies for and is granted a certificate from the Registrar of Companies that the company has a real and continuous link with one or more economic activities carried on in Ireland. Such a link is considered to be established where one of more of the following conditions are satisfied:

(i) the affairs of the company are managed from a place of business in Ireland by a person or persons authorized by the company to act for the company,

(ii) the company carries on a trade in Ireland,

(iii) the company is related to a company which satisfies the conditions in subparagraphs i or ii.

Application for a certificate is made to the Registrar on a prescribed form and the Registrar shall not grant a certificate unless the company concerned provides proof that it has such a link. To ensure the necessary proof is provided, the Registrar generally requires any company applying for a certificate to obtain a statement from the Irish Revenue authorities, made within two months of the date of application, which Revenue has reasonable grounds to believe that the company has a real and continuous link with one or more activities in Ireland. A certificate issued to a company will be revoked where the Registrar forms the opinion that the company has ceased to have a real and continuous link with any economic activity carried on in Ireland or is advised of this by the Revenue authorities.

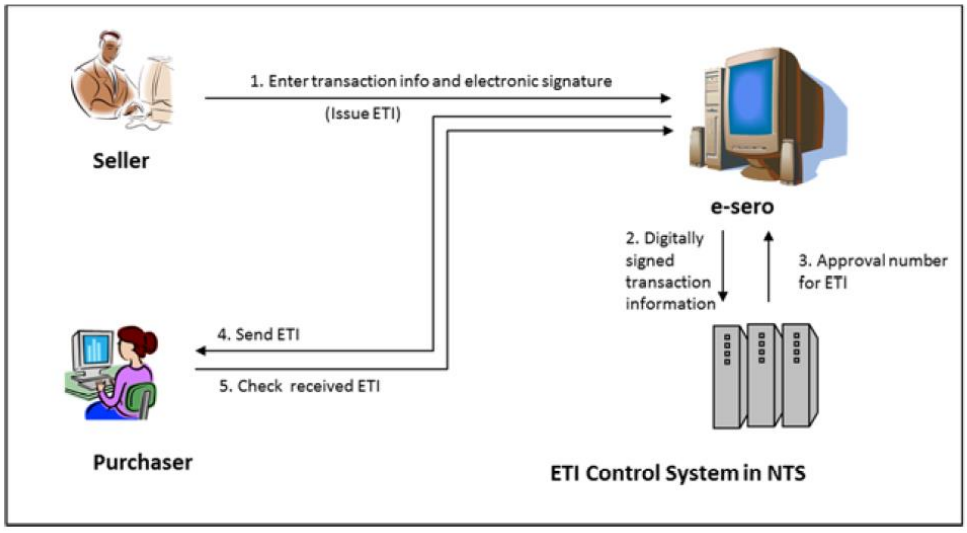
The relevant legislation also provides that, where a person who is resident in an EEA state ceases to be a director of a company and to the best of his or her knowledge no other director of the company is so resident at the time of such cessation, the person is required to notify the Registrar of Companies to that effect. A person who fails to provide such notification will be jointly and severally liable with the company for any fine imposed under company law following cessation as a director.

The above mentioned provisions are part of a range of measures under Irish company law aimed at ensuring that companies incorporating in Ireland have a real and demonstrable business presence in the country and an identifiable person authorized to act on the company's behalf.

The introduction of an e-invoicing system could facilitate the operation of a real-time VAT cross-checking mechanism. The SRS is currently requiring VAT-registered businesses to attach a list

of invoices issued to their monthly VAT return. This list is then used for cross-checking the seller and buyer data in the VAT returns. This is a useful approach to detect inconsistencies in VAT returns; however the cross-checking can only be launched after a VAT return has been filed and the approach implies both administrative and compliance costs for the preparation and processing of the VAT invoice list. In principle a more efficient approach, which allows a better, real-time monitoring of VAT-registered businesses would be to introduce an obligation for issuing e-invoices for B2B transactions. This approach is now used increasingly in OECD as well as in developing countries to detect irregularities in business behavior, such as businesses stopping transactions or businesses with major input invoices but not issuing any output invoices. An early warning system can be introduced, which initiates same-day follow-up actions in case the system detects irregularities. Technically the e-invoicing system requires the business to install required software and a data connection with the respective tax administration server. With the direct connection to the tax administration server the tax invoice of the seller is registered and gets an automated invoice number before it is even received by the buyer. The tax administration therefore has constant real-time access to the transaction level and behavior of all VAT registered businesses.

Figure 83. Issuing e-invoices: the Korean example



Source: Lee, Can electronic tax invoicing improve tax compliance, World Bank 2015.

The downside of an e-invoicing initiative is the expected resistance from the business community. This resistance is due to the potential costs of software and data connection and the extended control possibilities of the tax administration. A phased introduction of e-invoicing, starting with certain priority segments, might therefore be appropriate. Mandatory e-invoicing has in many countries started for specific business segments or transactions. A first area of mandatory e-invoicing has often been business to government (B2G) transactions, mandating suppliers to send invoices electronically to public sector clients (e.g. Denmark, Norway, Finland, Italy, Austria, Singapore), while some countries made e-invoicing compulsory for specific business sectors (e.g. financial institutions and exporters in Ecuador, the telecom sector in Turkey, large businesses in Chile and Uruguay). Comprehensive mandatory e-invoicing still is an exception; it is applied e.g. in Korea since 2011 (see Figure 83), in Guatemala since 2013, in Indonesia from 2016, and in Chile from 2017. In addition

certain incentives such as advantageous depreciation possibilities for investments in e-invoice installation could be offered to businesses. Also the reduction in overall VAT compliance costs through e-invoicing could be highlighted, as the monthly preparation of VAT returns gets facilitated substantially.

SRS in cooperation with the private sector has also started to implement an online documentation system for the transportation of goods. Several meetings have already taken place between the Revenue Service and the private sector discussing possibilities for developing a single electronic data standard for invoice and delivery documentation. This system is expected to allow a better control of the actual delivery of goods and an easier detection of fake transactions.

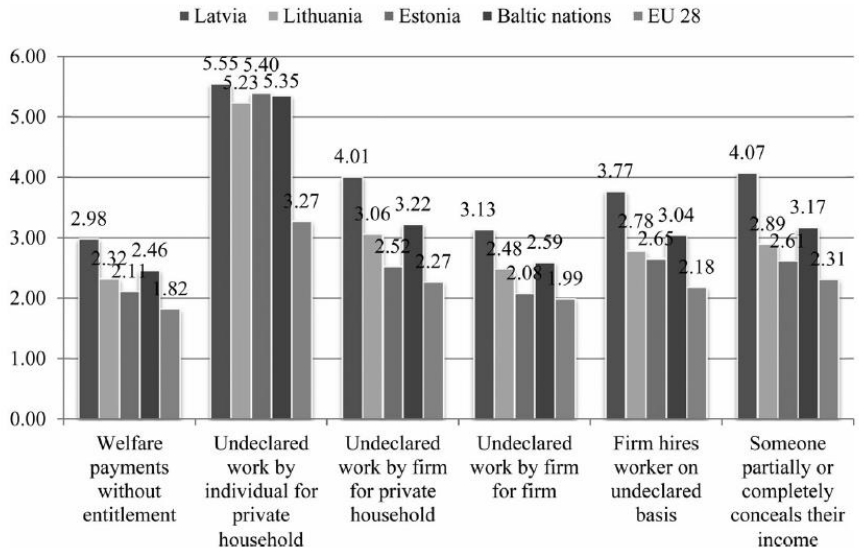
Providing access to financial sector data

Access to credit and debit card data could greatly facilitate the checking of income tax data. The SRS already has access to a large volume of data from various government and non-government sources. According to information received from SRS the matching of these data is managed without problems, as issues of attributing data to specific taxpayers do not occur, and the data matching capacity is adequate. The major gap in the scope of access to third-party information is in the area of financial data, in particular bank account data and information on credit or debit card use. SRS has information on the number of bank accounts held by incorporated businesses (and possibly in the future also on bank accounts held by non-incorporated businesses), but non information on the amount of funds deposited in such accounts or the transactions made is available, except for cases of a tax audit. While this is not a major deviation from standard international practice, as the access to banking data continues to be rather limited in many countries, some countries nevertheless have managed to oblige banks to provide financial data about their customers to the tax administration on a routine basis. In India, which is a prime example, annual information reports to be prepared by financial institutions include information on cash deposits, bank account numbers as well as credit card transactions. In Europe Norway has one of the most extensive reporting requirements for banks; The Tax Assessment Act S. 6-4 requires “all financial institutions, including banks, insurance companies and securities firms, to report, unsolicited, to the tax authorities details of their clients’ economic standing, for example the amount of debit and credit balances for each account, capital invested, debt incurred and interest accrued”. Similarly Denmark and the Netherlands require banks to report once per year to the tax administration the account balance for each account at the end of the year or at the date the account was closed. More frequent is the introduction of reporting requirements for credit and debit card issuing companies. A model example here is section 6050W of the US Internal Revenue Code. The provision requires issuing companies to file information returns to the tax administration and report payment card transactions, including debit, credit and gift cards. All such transactions have to be captured on a gross basis and accumulated monthly for each payee. Given that non-recorded cash income will be deposited and spent somehow and some time, the information on the volume of deposits and spending of a taxpayer allows the verification of his income declaration. At least the monitoring of credit and debit card spending therefore should also be introduced in Latvia.

Developing a proactive compliance management approach

For compliance management a key challenge is to address the high tolerance level for informal activities in society. Such a tolerance exists in Latvia in particular with regard to undeclared work for private households and partial concealment of income (see Figure 84 for an estimate of attitudes to different types of benefit fraud/tax evasion across the Baltics).

Figure 84. Acceptability of different types of shadow work, average scores, Baltic States and EU8



Source: Williams and Horodnic, Explaining and tackling the shadow economy in Estonia, Latvia and Lithuania: a tax morale approach (2015).

SRS has implemented a number of initiatives to promote voluntary tax compliance already, including lectures to school children on the importance of paying taxes. However tax morale remains a challenge and far below expectations. In such an environment efforts to convince taxpayers of the importance of tax compliance need to continue.

In particular for household services one possible approach for compliance improvement is the design of special and well targeted tax incentives. There are various ways countries have tried to improve voluntary compliance for this segment (see Table 56 and 57). A relatively widely used tax policy approach is to offer targeted tax incentives for business to consumer transactions in specific service segments which are known for a high level of cash transactions and tax evasion. This is generally done by allowing an expense deduction for at least part of the costs of such services in case the expenses are properly documented through a tax invoice.

Table 56. Incentive schemes, selected European Union member countries

Country	Incentive Scheme

Belgium	Tax reductions are linked to the use of vouchers used to hire household services. Two types of vouchers, the cheque L'Agence locale pour l'emploi (ALE) and the Titre-services, are eligible for tax deduction, the former program at 30 percent, the latter at 30 to 40 percent. The ceiling of tax deduction for vouchers is EUR 2,400 (the sum of both vouchers).
Denmark	In 1994 Denmark became was the first country to offer a subsidy, 50 percent of the cost, for such household services as garden work, snow clearance, shopping for daily goods, cooking, cleaning, laundry, and window cleaning in 1994. However, the benefit was reduced in 2004 and is now available only to people aged 65 or more. In 2011 a tax credit was allowed to all private persons. While briefly abolished in 2014 the scheme has been reintroduced with some modifications in 2015.
Finland	A tax deduction was introduced in 1997 for household services within the taxpayer's own home or the homes of elder relatives. If the deduction is larger than the amount of central government income tax, local government taxes can also be reduced. Since 2009 eligible services have been household work, caregiving and day-care work at home, repair work, a leisure house, and IT services. The deduction is 40 percent of the expenses paid to a company, small entrepreneur, or nonprofit organization (60 percent up to 2011) and 15 percent of the wages paid for hiring an employee. When an individual is employed, the employer is exempt from the social contribution.
France	France allows a tax deduction of 50 percent of expenses for cleaning, ironing, IT assistance, or private lessons. The deduction is given to households that either directly employ an individual service supplier at home or hire a service company. The deduction ceiling is EUR 12,000 a year, but it can be increased depending on the number of children, people 64 and older, and disabled persons. Since 2007, if the eligible tax deduction surpasses the income tax, the difference is reimbursed to help low-income households.
Germany	A tax credit is allowed up to 20 percent of the costs for household-related services, such as gardening, cleaning, laundry services, or childcare. Another 20 percent of the wage costs for craft services, such as repairs and refurbishing, can offset income tax.
Italy	Tax incentives are linked to the purchase of vouchers. However, the scope of work covered is very inclusive: maintenance of buildings, seasonal and agricultural activities, organization of sporting events, etc.
Luxembourg	Tax is reduced by the expense of housework services, care for dependent persons or childcare. The maximum tax rebate is EUR 3,600 a year or EUR 300 a month.
Portugal	Invoices issued in certain hard-to-tax sectors (restaurants, hotels, car repair, hairdressers) entitle the customer to a 15% refund of the VAT charged against his PIT tax liability. The refund amount is deducted from the PIT liability in the following year. A ceiling of 250 Euros applies.
Sweden	The tax reduction system in Sweden has two component; RUT (cleaning, maintenance, servicing) and ROT (home renovation services). A tax credit is allowed for 50 percent of the labor costs (including VAT) of household services. The sum of the tax credit for RUT and ROT must not exceed about EUR 5,500 per person per year.

However, while such incentives schemes may contribute to a higher degree of formalization of activities in the segments targeted, they come at high cost, as the additional tax revenue collected from the service provider has to be balanced with the tax reduction on the consumer side due to the incentive. The German Ministry of Finance, for example, estimated for 2014 reduced income tax collection on the consumer side of EUR 410 million (US$ 435 million). Practical experience

with the application of incentive schemes therefore has been mixed. In France the Ministry of employment has estimated the number of legally provided hours to have increased from 530 million hours in 1998 to 800 million in 2008; according to the National Institute of Statistics around two thirds of these hours legally paid on the market result from a "whitening" of previous undeclared activities.[99] Survey evidence in Sweden indicates a positive impact of housework deduction on tax formalization (see Box 18). In Germany, the incentive system caused considerable loss of revenue from personal income taxation, and the Federal Court of Auditors has analyzed that in only 30 percent of claims for tax credits for household services would the services have been cash-based and not declared for tax purposes without the incentive scheme; 70 percent of credits are claimed for payments made by bank transfer before the incentive scheme was introduced. The Court of Auditors therefore has recommended that the scheme be abolished. Experience in Italy[100] has shown that the majority of claims for bonus payments came from Northern Italy, which is expected to have a lower level of tax evasion than the southern regions of the country. This shows that the costs and benefits of such incentive schemes must be carefully monitored.

Table 57. Personal and household services (PHS) as related to public policy instruments

	BE	DE	DK	FI	FR	HU	IT	NL	SE	SP	UK
Main Public Scheme	**Services**	**Mini Jobs**	**Financial Incentive Service-**	**Tax Deduction**	**Tax Deduction**	**Act XC**	**Buoni Lavoro**	**Regulation on Home Services**	**Tax Dedication (RIT, ROT)**	**-**	**-**
Cleaning	X	X	X	X	X	X	X	X	X		
Gardening	X	X	X	X	X	X	X	X	X		
Cooking, meal preparation	X	X	X	X	X	X	X	X	X		
Domiciliary private tuition					X	X	X			No precise definition	
IT support				X	X						
Small repairs		X			X			X	X		
Renovation services				X	X				X		

Source: ORSEU, Developing Personal and Household Services in the EU, 2013.

Note: BE: Belgium; DE: Germany; DK: Denmark; FI: Finland; FR: France; HU: Hungary; IT: Italy; NL: Netherlands; SE: Sweden; SP: Spain; UK: United Kingdom.

[99] ORSEU (2013)

[100] Marchese, A Chinese Recipe for Curbing the Evasion of Commodity Taxes, in CESifo DICE Report 3/2007, p. 38, referring to a study by Di Lorenzo et al.

Box 18. Sweden: Impact of housework deduction on tax formalization

In an interview survey from 2011, the Swedish Tax Agency investigated how the housework deductions have affected undeclared work. The result is compared with an interview survey conducted in the previous mentioned report 'Purchasing and performing undeclared work in Sweden' from 2006 (data collected in 2005).The result shows that the occurrence of undeclared work has decreased by about 10 percent between 2005 and 2011, within the categories of jobs covered by the ROT and RUT deduction. Moreover, of the buyers of ROT 6 percent indicated that the work would not have been performed unless they had access to the deduction. This corresponds to 44,000 jobs, or 2.6 million working hours (Swedish Tax Agency, 2011). The general level of acceptance within the society of buying undeclared domestic services has according to the report also decreased. Nine out of 10 respondents indicated that it is wrong to buy repair, maintenance and cleaning services undeclared. This result is similar to a survey among the general public by the Employer and Trade Organization for the Swedish Service Sector (Almega) (2009) which shows that the legitimacy for undeclared household services has decreased (Swedish Tax Agency, 2011). In the autumn of 2011, the Swedish Federation of Business Owners (Företagarna) conducted a survey among 2,447 member companies in the construction sector. The result showed that nearly 90 percent of the surveyed companies felt that the ROT-deduction had a positive impact on reducing undeclared work in the sector, compared to 78 percent in 2009 (Swedish Federation of Business Owners, 2011).

Source: European Monitoring Center on Change (EMCC), 2013

The introduction of an incentive scheme for the voluntary declaration of personal service payments is no substitute for the implementation of a more general voluntary compliance promotion plan, which should also increase the awareness on the negative consequences of informal sector activities. Feedback the mission received from various private sector representatives demonstrates that in particular the perception that tax money is not well spent and risks being wasted drives non-compliant behavior. The SRS already operates a well-developed taxpayer information and outreach program. Taxpayers have the possibility to ask questions electronically, can access client service centers and contact the call center to get answers to questions and queries. The SRS also is actively using social media such as Facebook and Draugiem.lv. to communicate with taxpayers. Key areas for improving the outreach and communication strategy would be to carry out a deeper analysis of taxpayer service and information demands and the preferred channels for the delivery of such services, the design of a communications program to improve the public perception of the SRS, and the use of outreach and communication to promote voluntary compliance in high-risk areas. While SRS has done some initial work on collecting taxpayer feedback, and is monitoring the satisfaction of taxpayers with certain services offered, a broader and more systematic survey of service expectations and preferences would be useful as an input into increasing the efficiency and effectiveness of the taxpayer service function. Changing the perception of SRS in the general public and improving the trust of taxpayers in the fairness of revenue collection as well as promoting an image of SRS as a client- and service-oriented institution instead of a mere enforcement body will be crucial for improving voluntary tax compliance. This will require developing a special outreach

program, including exploring opportunities to improve the dialogue with special segments of the taxpayer community, such as tax consultants or large businesses. Also innovative approaches to promote both the SRS and voluntary compliance should be considered, such as, e.g., the design of web-based presentations distributed via YouTube, or tax-related TV spots. If designed well, such instruments can become highly popular. A particular focus on explaining the use of tax revenues and the completion of projects with taxpayer money would be another component of a refined outreach and communication program. There are many examples from OECD and other countries on the design of such approach, with a very successful and prominent example being the Cash Economy Task Force in Australia (see also the OECD Source Book on Taxpayer Education: Building Tax Culture, Compliance and Citizenship" (OECD 2014). Further analysis would be required to determine the appropriate approach and tools for such an initiative in Latvia.

Promoting compliant taxpayers and stigmatizing major evaders may be good incentives for increasing voluntary compliance. The SRS is already operating a program of honoring the most compliant and biggest taxpayers in the country. The program is limited to larger businesses with annual tax payments higher than EUR 100,000. Demand for participation in this white list program has also been expressed by medium and smaller businesses. There may be scope for broadening the program, although it is acknowledged that this would imply a burden on SRS to ensure that the taxpayers selected really are fully tax-compliant. Korea e.g. has successful introduced an exemplary taxpayer award. In addition to a three-year exemption from tax audits like in Latvia awarded taxpayers get a VIP status at financial institutions and at airports, and taxpayers who declare a remarkably higher tax liability than other taxpayers in a similar situation and environment are specially awarded. Such an approach might be considered as an additional support instrument to promote the declaration of correct wages instead of envelop wages.

But the threat of penalties in case of non-compliance must also exist. A positive impact on voluntary compliance can not only be derived from a public commendation of the best taxpayers in the country, but also from disseminating information on the penalties imposed on major tax evaders. This is particularly helpful in case penalties were imposed on publicly well know personalities. In Germany, e.g. public awareness of the risks of tax evasion was raised substantially when the father of tennis idol Steffi Graf was sent to jail for three years and nine month because of evading 6.5 million Euros tax, or when the former CEO of the 'Deutsche Post' was sentenced for tax evasion to a monetary penalty of one million Euros plus a two-year jail sentence on probation. Such court sentences spread the message that even rich and well connected people face a risk of being imprisoned in case they do not pay their taxes properly. This demonstrates the fairness of tax collection and risk-averse taxpayers are incentivized to better ensure tax compliance than trying to evade. But it requires cooperation of the Judiciary and the willingness of judges to consider tax evasion as a serious crime. This seems not fully being the case in Latvia, and there is indication that tax evasion is considered a rather harmless offence which does not really deserve severe punishment, in particular is not a reason for imprisonment of the offender. Such an attitude of the Judiciary makes compliance management more difficult for the SRS. Other countries with a similar problem have organized meetings and awareness building events for judges to explain why tax evasion in certain cases should be considered a serious crime. This has helped in some cases, while in others the interest of the Judiciary in such awareness building events was rather limited. Therefore for Latvia a recommendation cannot really be given; it would be worthwhile, however, to brainstorm further how an effective criminal prosecution of major tax evasion cases can be ensured.

Risk analysis

The SRS is steadily improving its risk analysis for audit selection. The system is IT-based and all taxpayers selected for an audit have been identified through the risk system. This allows SRS to reduce its field audit activities without reducing the level of additional taxes assessed through the audit process. However, regular desk audits complement the field audit process. With the use of the ESKORT system the SRS has selected a reliable and well-known software system to support the risk analysis process.

The most important initiative for assessing the reliability and the right targeting of the risk analysis is a cross-checking of results from system-selected audits with results from check audits. The risk analysis system is currently evaluated only by monitoring trends in the audit yield from field audit activities. Additional audit assessments are impressive and show an upward trend in recent years. In addition an indirect impact of the audit selection process, not even reflected in the audit yield statistics, is the possibility for taxpayers to voluntarily correct their tax declaration before the commencement of the audit, which was used by 61 taxpayers in 2015. However, as for example, the difference between the audit results in 2011 and the results from the subsequent years clearly demonstrates (see Table 58), these amounts of additional assessments per year can vary substantially if in a specific year a few major audit adjustments from big companies are achieved and balloon the annual total.

Table 58. Latvia: Tax audit results

Year	2011	2012	2013	2014	2015
Total number of audits	1,396	1,355	1,445	1,318	1,243
Total amount of additional tax (in millions of Euros)	293.07	183.25	189.93	190.36	232.43
Additional assessment per audit (in thousands of Euros)	209.9	135.2	131.4	144.4	187.0

Source: SRS annual reports.

Box 19. The use of random audits for improving risk analysis in Denmark

SKAT in Denmark operates a rather extensive random audit program. SKAT justifies the costs of this program by its extensive use not only as an input into tax gap analysis, but also to support tax administration and compliance decision making. Random audit data are used in particular to test risk profiles, as the random audit program provides very detailed risk profiles for taxpayer compliance behavior. SKAT has used the program to test the efficiency of about 200 risk profiles. Risk profiles are used to stratify random audit samples. The risk profiles are categorized into high and medium risks, and those taxpayers not meeting any of the risk profiles are classified as low risk. This has allowed SKAT to over-sample high and medium risk populations and under-sample low risk populations. This design has the benefit of (a) increasing the efficiency of the sample; (b) reducing opportunity costs of the survey; and (c) improving the motivation of auditors to undertake the random audits.

Source: IMF country report 16/59: Denmark: The Value-Added Tax Gap (2015).

The mere audit yield therefore does not permit a precise evaluation of the reliability of the risk analysis system, however. It does not fully indicate that the risk analysis system captures the full range of compliance risks and that it actually identifies the cases with the highest risk for revenue collection. Such an analysis would require the comparison of risk-based audit results with non-risk-based audit findings. This can be done by (i) comparing findings and results from risk-based audits with random audit findings, and (ii) selecting a small number of audits based on the risk evaluation by experienced tax auditors and comparing the results from both audit approaches. Box 19 gives the example of the use of random audits to test risk profiles in Denmark.

Tax audit and control capacity and approach

The SRS has a below average audit capacity, if measured as share of tax auditors in tax administration staff. General rule of thumb is a more than 30 percent share staff working on tax audits in a tax administration; the OECD average according to the latest OECD tax administration comparative information series (2015) is 36.2 percent (see Table 59). In the SRS the audit staff is 25.9 percent of total staff (although the fact that SRS is a combined tax and customs administration may somewhat reduce the value of benchmarking).

Table 59. Verification and audit staff as a percentage of total tax administration staff in selected countries

Country	Percentage
OECD average	*36.2*
Latvia	25.9
Estonia	67.0
Finland	38.9
Sweden	32.5
Norway	41.6
Denmark	40.7
Russia	47.1
UK	42.7

Source: OECD, Tax Administration 2015.

Nevertheless this translates into an already rather low audit coverage of 3.5 percent of the incorporated taxpayer population. Given the various challenges and additional tasks for improving compliance management, which require audit and verification resources in order to be implemented properly, the plan to reduce the staffing in this section by 90 positions seems questionable and not helpful for strengthening compliance management. While the overall SRS staff reduction plan is not questioned here, the current approach to have an equal percentage reduction across all SRS functions and units may not be really appropriate and may result in weakening functions which are urgently needed.

For increasing the quality and impact of the audit process a further specialization of auditors should be sought. In particular a taxpayer segment (separation between small and medium businesses on the one side, large businesses on the other side) and industry specialization of auditors responsible for the largest businesses in the country would allow a better detection of unusual behavior and evasion techniques. OECD country tax administrations have separated the audit teams in their large taxpayer units according to major business segments. Frequently such sectors are (i) the

financial sector; (ii) natural resource companies in case the country has a natural resource sector), (iii) the telecom sector; (iv) manufacturing businesses. Private sector consultants, such as former managers of an insurance company or a manufacturing business, are hired to train tax administration staff in understanding the particulars of the business sector. Although the SRS does not have a dedicated large taxpayer office, a similar specialization effort of the audit teams dealing with such industry sectors, should be launched.

As an additional specialization initiative a separate program to ensure compliance from high-net-wealth individuals (HNWI) could be developed. Experience shows that rich individuals with potentially high tax liability are using special tax avoidance and evasion techniques to reduce their tax liabilities. This often includes sophisticated and non-transparent tax reduction schemes. While some countries have set up dedicated HNWI units with highly skilled officers undertaking special risk analysis, audit and debt collection (e.g. Australia, Canada, France, Ireland, Japan, South Africa, the UK and the US), at least a program for HNWI compliance management should be developed in Latvia. This would have to go beyond just audits and risk reviews and could also include some measures encouraging voluntary compliance.

Human resource capacity challenges

Efforts to improve the efficiency of SRS also need to include measures to guarantee a sufficiently attractive compensation package and attractive working conditions. The problems mentioned earlier in this section with regard to building analytical and compliance analysis capacity are just a core example of the broader challenges of SRS to hire qualified expert staff. In particular in fields of specialization which are also in high demand in the private sector, such as experienced lawyers or tax accountants, SRS continues to face major problems to attract or retain staff. Initiatives by SRS to create a more attractive work environment and offer a more advantageous compensation package therefore are a needed move in the right direction. While few tax administrations worldwide have been able to offer salaries comparable to the private sector salary levels (but the Singapore Inland Revenue Service is an example showing that it is not totally impossible), working conditions such as flexibility in working hours or possibility for part-time work, job security, and in-kind benefits like kindergarten facilities may improve competitiveness with private sector agencies. In addition initiatives to build an esprit de corps, making staff proud of working for the Revenue Service, can compensate for differences in salary levels and should be developed further.

Salary costs as percentage of total tax administration expenditure in Latvia are comparable to neighboring countries with 68.6 percent (2013 data) compared to an OECD country average of 71.2 percent.[101] The SRS has developed precise plans to be able to increase the actual compensation package without increasing overall salary costs. The initiative therefore is based on savings achieved from staff cuts. While currently staff reductions are expected to be evenly distributed across all SRS functions, this plan may need to be reviewed with the objective to ensure that it does not negatively affect the efficiency of core analytical and operational functions. For selected key expert positions, it could also be considered to introduce special compensation levels or bonus systems. A typical area for such special schemes is the group of specialized large taxpayer auditors, which has built capacity to deal with the most complicated audit cases.

[101] OECD Tax administration comparative information series, 2015.

Conclusions:

i. A variety of options exist to reduce the current gaps in tax compliance and develop a higher level of voluntary compliance. These options are not only on the administrative side, but encompass important support measures that can be introduced on the tax policy side. Key elements on the tax policy side are the introduction of withholding taxes for payments to subcontractors in certain high risk areas, expanded access to financial data, in particular certain debit and credit card use information, and the introduction of additional requirements for VAT registration of a company.

ii. While the SRS efforts to measure the size of the tax gap have made substantial progress already, it is crucial now to prepare for the launch of a second level of analysis, which allows the decomposition of the overall tax gap by taxpayer segment and by compliance attitude and behavior. Only such a second level really provides valuable input into strategic management of SRS. But this requires a strengthening of the division responsible for gap analysis in SRS and the implementation of additional instruments and tools, such as the analysis of risk based as well as random audit data for gap analysis purposes and the identification of compliance attitudes through targeted surveys.

iii. While the overall approach to risk analysis in SRS seems sound, an ongoing monitoring of the RASA (RASA Natural Persons Risk Analysis System) efficiency and reliability is important. In addition to analyzing trends in audit yields and the review of the automated selection results by experienced auditors it could be considered to introduce an additional cross-checking mechanism through conducting a small number (not more than 5% of total audits) of random audits and comparing the results of the random audit program with results from audit cases selected by the RASA. Such an approach could also help to identify new risks which have not yet been incorporated into the RASA system

iv. On the VAT side a major improvement for compliance management would be the move to a real-time control system of the VAT chain and the introduction of an early warning system in case of irregularities. This could be achieved by moving to a (maybe gradual) introduction of an e-invoicing system for B2B transactions.

v. Effective early engagement with newly established businesses can have a long-term impact on compliance behavior. In addition to the existing practice of sending welcome letters and provide information for start-ups on the SRS website it is recommended that SRS further develops the ‘right from the start’ approach by developing a combined service and supervision approach for new businesses. This will also serve as an additional tool to combat VAT fraud.

vi. Efforts to further strengthen the cash register system are a step in the right direction. However this does not release SRS from developing and implementing a cash register use control system. The operation of a tax lottery may be a weak and unreliable tool to achieve a better level of invoice issuance.

vii. There is an obvious potential for further developing the voluntary compliance promotion program. In particular a move from a predominantly retroactive to a more proactive, outbound compliance management approach, with an increased use of social media should be envisaged. Increased emphasis in communication campaigns should be put on how tax

revenues are spent and on the various public services and social benefits that derive from taxation.

viii. The current plan to reduce the staffing of the tax audit function in SRS risks having a considerable negative effect on the chances of SRS to improve the effectiveness of compliance management. But the management of the audit resources could be improved by introducing a better industry and taxpayer segment specialization of auditors.

ix. Investing in critical staff expertise is crucial, for example for analytical functions and in areas such as large taxpayer audits.

10. CONCLUSIONS

Taxation changes inevitably involve trade-offs between equity and growth objectives, both in the short and the long term. Table 60 is from a recent review of the evidence and points out the different impacts that various expenditure and tax instruments could have on growth and equity. There is considerable debate around this topic given the complexity of the direct and indirect impacts of fiscal policy. Nevertheless, any increase in tax rates needs to be assessed in relation to the likely growth and equity impact of the spending that higher taxes are intended to finance. Judging the trade-offs also requires taking into account Latvia's economic challenges, such as above-average inequality and good prospects for short-term growth, but high historical growth volatility. In this situation, PIT (through higher marginal rates or taxes on capital) and CIT would be good candidates for raising revenue given the objective to reduce inequality. Bringing in more revenues from SSCs seems less suitable from either the equity or the growth perspective and certainly would need to be looked at in terms of the consequences for employment. However, in the case of Latvia the microenterprise regime has led to a reduction the social contributions of a large share of the workforce and ensuring that adequate provision is being made for further pension and other social protection needs is important. In terms of volatility, conventional wisdom has been that consumption taxes are more stable. However, recent evidence on the impact of the Great Recession on tax revenues across U.S. states points to volatility not being linked to a heavy dependence on one tax or other (Chernick, Reimers and Tennant 2014). Rather taking into account factors such as the sources of growth and the underlying income distribution, together with having a tax system balances across different tax instruments, is important in designing a tax systems that aims at increasing the resilience of revenues over the economic cycle.

Table 60. Trade-offs between instruments for raising revenue

	Growth		Equity	
	Short-term	**Long -term**	**Short-term**	**Long-term**
Expenditure increases				
Education	++	++	+	++
Health	++	+	+	+
Public investment	++	++		
Revenue increases				
Personal income taxes	-	--	+	+
Social security contributions	-	--	-	-
Corporate income taxes	-	--	+	+
Environmental-related taxes	-	+	-	
Consumption taxes (other than environment-related taxes)	-	-	-	
Recurrent taxes on immovable property	-			
Other property taxes (mainly inheritance, gift, and wealth taxes)	-		++	+
Sales of goods and services (mainly user charges)	-	+	-	-

Note: The + sign reflects positive welfare effects and the - side negative welfare effects. The longer term impact on output, when narrowly defined as GDP, may be ambiguous.
Source: Cournède et al. 2013, Table 2.

There is scope for Latvia to raise more tax revenues. If Latvia increases its tax revenues by about 4 percentage points of GDP, it could reach the average of its peers. A larger increase could bring Latvia to the maximum tax revenue level that countries with similar characteristics have achieved. However, the optimal tax-to-GDP ratio depends not only on a country's economic and institutional features but also on the choices and preferences of the society. Given the large under-reporting of business income and salaries, this is an important area to target to raise revenues. There is likely scope for increasing corporate income tax revenues through a review of tax expenditures and further analysis of possible profit shifting via related party/multinational enterprises through use of cost attribution. Addressing weaknesses in income taxation could also bring in more revenue. Finally, for VAT, the problem seems to be related more to compliance than the tax parameters.

The review gives detailed recommendations across the main tax areas covered in Stage 1 of the study. The following are seen as priority areas should be tackled:

- **Reduction in tax evasion/avoidance is priority**. It should be noted that the analysis in this report shows that more tax revenues are being lost in absolute terms from richer taxpayers. Hence, while a cause of concern is the high share of low-income workers that underdeclare incomes, from the point of view of lost revenues the challenge is to increase tax compliance across the income distribution, from underdeclaration of wages to misreporting of business profits.

  To what degree is it possible to increase revenues from tax compliance measures? While substantial gains are possible, it is hard to predict how these will emerge in the medium term, and hence, it is prudent to be pessimistic when planning tax strategy, and instead rely on tax design measures aimed at broadening the tax base or raising tax rates when tax revenue increases are needed, rather than counting on unpredictable revenue increases due to tax administration changes.

- **The current microenterprise regime raises concerns of misuse for tax avoidance and evasion, and due to its impact on the social insurance regime**. The current microenterprise regime should be gradually phased out with a view to smoothing the transition for the large number of taxpayers covered under the regime and with a strong focus on tax administration efforts to ensure that the risk of activity under the microenterprise regime becoming informal is diminished. Any replacement start-up regime needs to take into account the experience with the microenterprise regime: namely, large flows into the regime, including of higher-income professionals, little exit; widespread informality; and the ability of firms to quickly to adapt to take advantage of tax avoidance opportunities.

- **Broadening the tax base** can bring more revenues, particularly from CIT and VAT. The role of VAT zero and reduced rate regimes should be looked at for possibilities to raise revenues. While less costly than in many EU countries, the tax expenditures related to VAT are still substantial. In addition, there is room to reduce the VAT threshold.

- **Increase tax rates**. Tax revenues could be increased and equity improved by raising more revenues from capital income taxation (here through a uniform treatment of different

types of capital income). In addition, moving away from a flat tax, by introducing a progressive personal income tax, could yield further tax revenues. Over time, the role of property/wealth taxes and excises, including environment-related taxes, should grow (to be covered in Stage 2).

- From the perspective of **reducing the relatively high inequality** (in the EU context) of income after taxes and government transfers, Latvia would achieve large gains from spending more on means-tested benefits. There is some room to raise more revenues through a progressive PIT regime (with a small movement in this direction occurring through the imposition of the solidarity tax), but to have an impact on inequality, Latvia needs across the board tax-benefit changes. Here, the suggestion is that in-work benefits, such as earned income tax credits, offer advantages in terms of targeting assistance to low-income workers, increasing incentives for labor supply and supporting families. Generally strategy should seek to shift taxes away from labor, particularly to reduce the high participation tax for low-income workers.

- The **corporate sector faces low statutory and effective tax rates, and relative to EU economies, Latvia is a low-tax regime**. Given the low revenue base, the costs and benefits of tax allowances/exemptions should be assessed. There is some room to rebalance tax treatment across enterprises, which depending on their production mix face different possibilities for tax allowances/exemptions. Investing government resources to promote corporate sector activity whether done through tax allowances/exemptions or expenditure subsidies is a decision to spend scarce budgetary resources on the corporate sector, and as such, should be subject to the cost-benefit analysis. Reducing the labor tax wedge, particularly for low-income workers, given the low effective rate on capital in Latvia, should be a long-term aim of the tax system to support employment.

- Tax-benefit design and compliance measures are important instruments to target informality. However, more generally to reduce informality **the economy needs to direct measures at supporting the growth of highly productive formal sector jobs**. A high proportion of jobs are currently low-paid and low-skilled: in developing the economy further the strategy has to be to expand highly productive (and well-paid) jobs.

To increase tax revenue to GDP to the government target of 32 percent from the current 29 percent will involve making significant changes to multiple taxes across the tax system. With these substantial changes to tax rates and tax bases, as presented in the Table 61, tax revenues could be raised by about 3 percentage points of GDP (assuming no behavioral responses).

Table 61. Estimates of revenue impact of tax measures

Measures	Revenue impact (% of GDP)
1. Personal income tax (wages)	0.09-0.3
1.1. Non-linear tax schedule, lower tax for low-income workers	
3-rates PIT (19%/23%/33%)	0.31
3-rates PIT (19%/23%/29%)	0.1
3-rates PIT (19%/23%/29%) + EITC	0
1.2. 19% PIT rate for self-employed	-0.01
2. Personal income tax (capital)	0.11
2.1. Uniform tax rate (15%) on capital income	0.11
3. Corporate income tax	0.06-0.68
3.1. Changes to tax depreciation	
Remove accelerated depreciation of fixed assets	0.22
Remove enhanced depreciation for new tech. equipment	0.29
3.2. Limit on the offset of losses carried forward	
Limit loss relies to 80% of profit before taxation	0.06
Limit loss relies up to 5 years	0.17
4. Microenterprise tax regime	0.21
5. VAT	0.13
5.1 Eliminating reduced VAT rates	
Standard rate for accommodation services in tourism	0.04
Standard rate for district heat supply and firewood	0.08
5.2 Reduce VAT threshold	0.01
6. Excise tax	0.37-1.78
Alcoholic beverages	0.37
Cigarettes	0.41
Fuel	1.0
TOTAL MAX	3.0

Measures	Revenue impact (% of GDP)
1. Personal income tax (wages)	**0.09-0.3**
1.1. Non-linear tax schedule, lower tax for low-income workers	
3-rates PIT (19%/23%/33%)	0.31
3-rates PIT (19%/23%/29%)	0.1
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6. Excise tax	**0.37-1.78**
Alcoholic beverages	0.37
Cigarettes	0.41
Fuel	1.0
TOTAL MAX	**3.0**

Source: World Bank staff estimates.

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ANNEX A: OPTIMAL TAX THEORY AND MARGINAL INCOME TAX RATES

Both the flat rate structure in the PIT and the uniform allowances in the PIT are sub-optimal from an optimal-tax perspective. Optimal EMTRs should follow a U-shape with income as long as the social valuation of a euro declines with income: a euro is worth more to a poor than a rich person. This has been derived in the Nobel-prize-winning analysis on the optimal income tax of Mirrlees (1971), which has clarified and extended later by Diamond (1998) and Saez (2001).[102] For the same reason allowances should generally be income-dependent. An example of optimal EMTRs is drawn in Figure 85 panel (a). The other graphs in Figure 85 explain why the optimal EMTR's are U-shaped. It is important for policy makers to understand the economics behind the U-shape of EMTR's.

The function of the marginal tax rate at income level y is to raise revenue from all individuals above a certain income y, which can then be redistributed to incomes below y or to raise public revenue. Hence, the function of raising the marginal tax rate at income level y is to make the tax system more progressive, since individuals with incomes larger than y pay relatively more tax. However, not only the direct effects of tax progression on the public budget are important. There are (at least) two important welfare-relevant effects of raising the marginal tax rate.

All tax payers also suffer a direct welfare loss when they need to pay more tax. These welfare losses need to be subtracted from the revenue gains so as to obtain the total distributional effect of a higher tax rate.

More tax progression causes welfare losses due to distorting the economic behavior of workers at the income where the tax rate is levied. Workers with income y have weaker incentives to supply hours, invest in human capital or exert entrepreneurial efforts when the marginal tax increases. Moreover, incentives for tax avoidance and tax evasion are also stronger. Consequently, there are welfare losses when setting marginal taxes at income at income level y at higher rates.[103] The behavioral response can be summarized by the elasticity of taxable income (ETI). The ETI measures the reduction in taxable income y when the tax rate increases. For the moment we assume that the ETI is a sufficient statistic to summarize the welfare losses of the tax rate.[104] How should the government then optimize effective marginal tax rates? This ultimately depends on the behavior of both the distributional and the substitution effects with income.

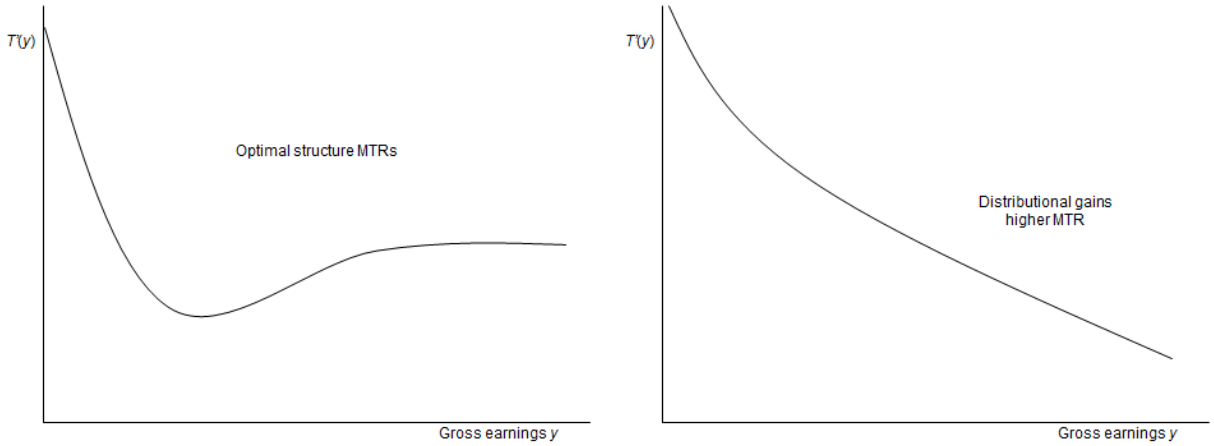
[102] The U-shape is preserved when the analysis is extended with extensive labor-supply responses in Jacquet et al. (2013) and Zoutman et al. (2015).

[103] This discussion ignores income and participation effects, since these are generally not very important for the design of optimal tax systems (Zoutman et al., 2015).

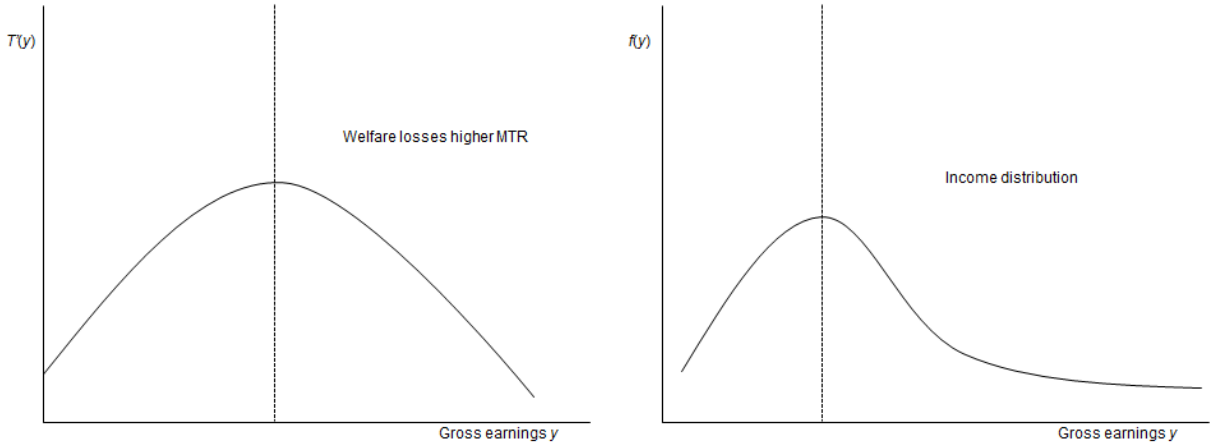
[104] Chetty (2009) shows that when marginal tax rates cause tax shifting to other people, other tax bases and other periods of taxation, then the ETI is no longer a sufficient statistic to measure the welfare losses of taxation. Intuitively, the revenue reduction on the taxed base is partially offset by larger revenues from taxing other people, other bases or other periods.

Figure 85. Optimal U-shape of EMTRs and the reasons for it

(a) Optimal marginal tax rates **(b) Distributional benefits**



c) Efficiency costs **d) Income distribution**



The distributional effect of a marginal tax rate is continuously declining with income. This is shown in Figure 85, panel (b). Intuitively, if the marginal tax rate is raised at a low income, the redistributional effects are large, since many people will pay more tax. However, when the marginal tax rate is raised at a higher income level, the distributional benefit is mechanically lower, since fewer people pay more tax. Consequently, the distributional benefit of setting a higher marginal tax rate is always declining with the income level at which the tax rate is increased. The valuation of the welfare losses imposed on tax payers also determines the total distributional benefits of the marginal tax, and this valuation is intrinsically political. For example, when the government cares more for the middle-class tax payers, the distributional benefits of raising marginal taxes at middle-class incomes are reduced; imposing taxes on them is then seen as socially costly. Similarly, when the government would care less for the top-income tax payers, the distributional gains will increase. Imposing higher taxes on top-income earners then generates smaller distributional losses.

The welfare losses of a marginal tax rate first increase and then decrease with income. Figure 85, panel (c) shows the behavior of the welfare losses with income. The welfare losses of

marginal taxes are primarily driven by the shape of the income distribution, see also Figure 85, panel (d). When incomes are low, raising the marginal tax rate gives relatively few distortions, since only few people are affected and incomes are relatively low. However, raising the marginal tax rates in the densely populated middle-income groups causes a lot of distortions; not only are there more people in the middle-income groups, also their incomes are higher. What happens after the mode of income is an empirical question. Typically, the welfare costs of taxes decline again. On the one hand, there are fewer people with a higher income. But on the other hand their incomes are higher. For most empirical income distributions the density of people declines faster than their income, hence the distortions of marginal tax rates fall after the mode.

An optimal tax-transfer system balances the distortions of EMTRs and distributional benefits, which results in a U-shaped pattern for optimal EMTRs. Intuitively, starting from the lowest income, up to the mode, distributional benefits of marginal taxes always decrease and welfare losses of marginal tax rates increase. This follows from Figure 85, panels (b) and (c). Hence, optimal marginal tax rates should decrease before the mode of the income distribution. After the mode, however, the distributional benefits of marginal taxes still decrease, but welfare losses of marginal tax rates typically decrease faster for most empirical income distributions, see again Figure 85 panels (b) and (c). Hence, optimal marginal tax rates increase somewhat after the mode. As a result, the optimal marginal tax schedule is U-shaped in income.

The U-shape is not determined by political judgements regarding the value of income redistribution. The U-shape in EMTRs is obtained both for very redistributive 'left-wing' and much less redistributive 'right-wing' social preferences for income distribution. The U-shape of optimal taxes is primarily determined by the shape of the earnings distribution. In the middle-income groups there are simply larger distortions of marginal taxes than at the lower or higher income levels. Consequently, marginal tax rates should be lowest in the middle. This remains true irrespective of the government's preferences for income redistribution.

The U-shape can be less pronounced if tax avoidance and evasion take place especially at the top and bottom of the income distribution. Tax avoidance and evasion increase the ETI. When the ETI is higher at the top, the optimal top rate should decline – see also below. The survey in Saez et al. (2011) suggests that ETI's are typically higher for the rich. Similarly, when the ETI is higher at the bottom due to avoidance and evasion, the optimal tax rates should decrease at the bottom. There might be more possibilities to avoid or evade taxes at the bottom of the earnings distribution due to the informal sector or the black economy. No robust evidence is available to verify whether this conjecture is correct. In any case, a higher ETI at the top or the bottom makes the U-shape of optimal EMTRs less pronounced.

An optimal tax-transfer system does not have flat rates. The reason is that neither the distributional benefits nor the efficiency costs can be expected to be constant in income as shown in Figure 85. A tax system with a flat tax rate and a uniform minimum-income tax exemption requires much higher marginal tax rates to reach the same level of net income for the working poor, because all tax payers – also the middle-income and high-income tax payers – benefit from the minimum-income tax exemption. The tax base erodes so much when the general tax exemption is provided to everyone that much higher marginal tax rates need to be used to balance the government budget. In an optimized non-linear system, the average marginal tax burden can be reduced – compared to an

optimal flat tax – by targeting the minimum-income exemption to the poor and phasing it out with income. By phasing out the minimum-income exemption with income, EMTR's become non-linear. The government then broadens the tax base so that – on average – much lower marginal tax rates can be used, while at the same time protecting the net incomes of the poor. Although on average marginal tax rates are lower, they typically increase at the bottom of the income scale, and then decrease quickly towards the middle-income groups. Consequently, a non-linear tax schedule can generate the same net income for the poor with much lower welfare losses. Equivalently, by setting a non-linear tax schedule, the government can make the tax system much more redistributive, while incurring the same welfare costs.

An optimal tax-transfer system does not have uniform exemptions. For the same reason as above, the an optimal tax-transfer system targets income support to those that are most in need of public income support, i.e. the non-working and working poor. Uniform allowances, that are independent from income, are a suboptimal tax policy. By targeting income support, much lower marginal tax rates can be used, and hence welfare losses of taxation can be reduced, while still protecting the poor. Or, equivalently, tax progression of the tax-transfer system can be strengthened, while welfare losses of the tax system can remain the same.

It is never optimal to have EMTRs at or above 100 percent. The function of the marginal tax rate at income y is to redistribute income from above people with income y to people below y or the government. When the EMTR is raised to 100 percent (or higher) at income y, no one will earn income y. Individuals can then enjoy a higher net income by working less, both of which raise their welfare. Consequently, EMTRs above 100 percent should be avoided as much as possible, as they will only reduce revenue, erode tax progression and result in severe economic losses.105

It can be optimal to subsidize labor participation of low-income workers. People do not only respond on the intensive (e.g. hours or effort) margin in their labor supply. They also decide whether or not to work at al. Similarly, people decide whether to work in the formal sector rather than in the informal sector (household production, care activities) or in the black labor market. The participation decision, or extensive-margin labor-supply decision, is determined by the participation tax rate. The participation tax equals total taxes paid T(y) when working (in the formal sector) and earning income y plus the non-employment benefits b that a worker foregoes when working. These non-employment benefits include for example social assistance (GMI) and housing assistance. The participation tax rate is the total participation tax as a fraction of gross earnings: (T(y) + b)/y. The higher is the participation tax, the fewer people will stop working (in the formal sector). Diamond (1980) and Saez (2002) have shown that it can be optimal to subsidize participation at the lowest end of the labor market when the government sufficiently values redistribution towards the working poor. When participation is subsidized the participation tax is negative: -T(y) > b. That is: workers receive larger tax rebates than non-workers get in benefits. Such a program can be interpreted as an earned-income tax credit (EITC). Policy makers often also have non-welfarist motives to promote labor participation, which is seen as something that is intrinsically good so as to raise inclusion and social cohesion in societies. Such concerns typically strengthen the case for EITC-like programs (Kanbur et al. 2006).

[105] Zoutman and Jacobs (2016) show that strict monitoring and conditionality of income transfers on work effort could result in optimal marginal tax rates that are above 100 percent, because monitoring acts as an implicit subsidy on work. Labor wedges, however, still remain below 100 percent in the presence of monitoring and conditionality of transfers.

The extensive labor-supply margin (participation decision) lowers marginal tax rates, especially at the bottom. Recall, the function of a higher marginal tax rates at income y is to redistribute income from individuals above y to individuals below y or to the government. As a result, the average tax burden for everyone above y increases. When individuals also make labor-supply decisions on the extensive margin, i.e., they decide whether to work or not (in the formal sector), a higher marginal tax burden induces some individuals to drop out from the labor market in response to higher levels of income taxation. Since participation is generally taxed on a net basis, lower participation rates reduce the distributional benefits of a higher marginal tax rate (Jacquet et al., 2013). In Figure X.3 panel (b), an endogenous participation choice shifts the line of distributional benefits of a higher marginal tax rate downwards. The participation elasticity is typically higher for the working poor and secondary earners (with and without children). Consequently, the distributional benefits of a higher marginal tax rate are reduced more at the bottom of the earnings distribution. Hence, the marginal tax rates should be lowered especially at low-income levels. The optimal marginal tax rate does not shift down so much at the higher income levels, since high-income earners typically respond less elastically on the participation margin (Zoutman et al., 2015).

ANNEX B: METHODOLOGY OF ESTIMATING REVENUE GENERATION POTENTIAL FOR LATVIA

To assess the tax revenue potential of the Latvian economy, we decide two apply two approaches, which gives complementary perspectives on the scope to raise more taxes. The first approach so called peer analysis is the most traditional approach that models tax revenue as a function of observable economic and institutional characteristics of a country (such as income per capita, with a very wide range of other variables explored in the literature, see Table 62 for the review). The "potential" for additional tax revenue is then the fitted residual, which, by construction, averages to zero over the sample. The second approach relies on "stochastic frontier analysis" that compares a country's tax ratio not with the average, but with the maximum that others with similar characteristics have achieved. Stochastic frontier analysis instead models revenue potential explicitly, taking revenue to be function maximum revenue, dependent on economic and institutional characteristics of a country, and "effort," which is to at least some degree, choice variable depending among others on wider social preferences. To simplify, peer analysis finds the best fit to the observations, whereas stochastic frontier analysis aims to put a frontier around them.

It should be emphasized that results of proposed empirical strategies needs to be treated cautiously. The main difficulty in empirical work is to capture "tax effort" or willingness to tax more. Even for countries with a high taxing potential there might be good reasons (political or social) to tax below potential that could be reflected in low tax effort. For instance, government may believe that high taxes are harmful for GDP growth, or the society as a whole may have a stronger preference of efficiency than for equity.

The selection of variables for our empirical work follows existing empirical literature. Explanatory variables try to capture level of development, structure and important characteristics of labor force, inequalities, structure of economy as well some institutional variables to reflect on efficiency of administration and business friendliness. We use several data sources. First of all, the data on tax revenue to GDP ratios were taken from IMF's Government Finance Statistics and Eurostat. Secondly, we use World bank WDI database for some general indicators such as labor force participation, age and old-age dependency ratios, population density or percentage of population living in urban areas, import and export to GDP ratios (indicating openness of the economy), GDP growth, and GDP per capita level (in PPS), Gini coefficient, natural resource rents (as a percentage of GDP), external debt to GDP, structure of the economy and other variables (such as life expectancy, infant mortality, spending on education or enrolment in tertiary education). Thirdly, *Doing Business* database by the World Bank was used to extract indicators on the ease of doing business. We tested a few sub indicators as some dimensions may be more important for tax collections that others. Fourthly, World Governance Indicators database was used to assess the quality of governance. Although, we tested some transformations of independent variables such as logs or summing export and import to GDP ratios to get indicator of openness, the simple indicators in most cases proved to be most efficient. Moreover, we decided to add two dummy variables: one for Scandinavian countries and the second for Baltic States. In total, in our sample consists of 148 countries between 2000 and 2015.

Table 62. Selected studies aimed at assessing tax effort

Publication	Method	Macroeconomic variables tested	Institutional variables tested
Torres (2013)	Cross-country regression	GNI per capita, Growth gap, Old-age dependency ratio, Annual population growth, Net oil and gas exports, Imports, Pop. density, gross debt, grants, gross min. annual wage.	Political participation (democracy index), Expected years of schooling, DB ranking, Dummy for countries.
Fenochietto, Pessino (2013)	Panel stochastic frontier analysis	GDP pc, squared GDP pc, trade (imports + exports as % of GDP), value added of agriculture as a % of GDP, % change of CPI	Public expenditure on education (% of GDP), Gini coefficient, Corruption perception index
Khwaja, Iyer (2014)	Panel regressions	GDP pc, share of services in GDP, share of services in GDP, share of trade in GDP, age dependency ratio, , post 2008 dummy	control of corruption, CIT, CIT square, VAT, VAT square
Baunsgaard and Keen (2010),	Panel regressions	GDP pc, openness (sum of the shares of imports and exports in GDP); inflation; aid in percent of gross national income, share of agriculture in GDP (AGR)	-
Davodi, Grigorian (2007)	Cross-country regression	GDP pc; rate of consumer price inflation; share of agriculture in GDP; ratio of exports plus imports to GDP; dummy variable for fuel exporters; share of the urban population in a country's total population; indicator of shadow economic activity	measure of institutional quality;
Castro, Camarillo (2014)	Cross-country regressions, panel regressions	GDP pc, openness (sum of exports and imports of goods and services as a % of GDP, FDI as a % of GFCF, industry value added as a % of GDP, gross tertiary school enrolment, life expectancy, child mortality rate.	political rights, civil liberties indicator (Freedom House)
Gupta (2007)	Panel regression	GDP pc, share of agriculture in GDP, share of manufacturing in GDP, share of imports in GDP, ratio of debt and aid to GDP, Trade Restrictiveness Index	Highest marginal tax rates (CIT, PIT), political stability, economic stability, corruption, law and order and government stability.

Two methods adopted for the estimations require different analytical strategies. For the peer analysis, we ran standard random-effect GLS regression with robust standard errors to choose independent variables and see how robust they are in explaining revenues tax revenues. This regression served as a starting point for the stochastic frontier analysis (SFA). The idea of the SFA is based on the notion that several inputs are used to "produce" one output. In contrary, to the firm-level approach, where error term clearly captures "inefficiency", in this case the apparent "inefficiency" may be deliberate policy choice.

Mathematically, stochastic frontier panel model may be written as follows:

$$y_{it} = \alpha + \beta' x_{it} + v_{it} - u_{it}$$

Where:

y_{it} – represents tax revenues for given tax in country *i* at time *t*,

x_{it} - is the matrix of independent variables, affecting tax revenues;

u_{it} – is the "inefficiency" term, capturing the gap between the actual tax collection and maximum revenue potential. It is a non-negative random variable associated with country-specific factors that affect the collection of given taxes at the time *t*.

v_{it} – is error term, reflecting measurement error that can be either positive or negative.

As the v_{it} and u_{it} terms are independent, and the first one can be positive, it is possible that the country that has very small inefficiency term may lay above stochastic frontier. In our models, we adopt the estimation method proposed in (Battese & Coelli, 1995) (maximum likelihood random-effects time-varying inefficiency effects model).

Table 63. Regression results for the general model (dep. variable: total tax to GDP ratio)

Variable	**Standard**	**Stochastic frontier**
log(GDP)	3.54** (1.80)	1.7*** (0.34)
Government effectiveness (WGI)	-1.5 (1.42)	1.59*** (0.36)
Share of agriculture in GDP	-0.27*** -0.08	-
Scandinavian dummy	13.3*** (2.80)	8.17*** (1.29)
Old-age dependency ratio	0.55*** (0.12)	1.02*** (0.03)
Life expectancy at birth	-0.27** (0.12)	-0.32*** (0.04)
Constant	5.06 (12.43)	15.38*** (2.92)
R-sq	51%	
Number of obs	1660	1660

Tax level potential depends on GDP growth, government effectiveness, demography but also geography (which may reflect cultural, historical values). The results of the regressions are presented in Table 63. Surprisingly government effectiveness (measured by WB government effectiveness indicator) is not statistically significant in the peer model, but it is in the stochastic frontier. This implies that countries that achieve maximum collection of tax revenues given their economic structures are characterized by more efficient process of tax collection. We found that if the GDP level (level of income) and institutional variables are included together, income losses its significance because the institutional quality variables can already capture the impact of income. Higher old-age dependency ratio requires more transfers and redistribution which translate into higher taxes. Scandinavian dummy is also statistically significant (that may reflect cultural, historical or societal similarities), although it comprises only 3 out of 148 countries. Only these variables explain 51 percent of the variability of tax-to-GDP ratio in our sample, so they are quite strong determinant of the tax level.

The tax revenue gap for Latvia is calculated based on both models. In the case of the first model it reflects what would be expected on the basis of the characteristics being controlled for, minus actual revenues (compare Latvia's tax receipts with the average of its peers). The second model allows compare Latvia's tax ratio with the maximum that others with similar characteristics have achieved.

ANNEX C: AN ECONOMIC ANALYSIS OF THE MICROENTERPRISE TAX

This appendix asks two questions: what is the nature of the tax advantages of the ME-regime compared to the standard CIT-regime? It is shown that - provided that firm debt is not too high - the current MET-regime allows firms to avoid both CIT and SSC by filing taxes under the ME-regime. Consequently, the MET-regime is likely to generate tax avoidance, especially for very firms using little debt finance, low intermediate-goods use and rely mainly on equity finance. When the MET-regime is adjusted, by raising the SSC and lowering the rate, the advantages of the MET to avoid SSCs are eliminated, but the advantages of the MET-regime to avoid CIT are strengthened. **And, what can be the welfare effects of the MET-regime? It is shown that firms get incentives to invest more, increase labor demand, use less debt financing and use less intermediate goods.** Higher investment and labor demand are socially desirable, since these are distorted downwards by the CIT and SSCs. Less debt financing is also desirable if the CIT promotes too much debt financing via the deductibility of interest. However, the MET distorts intermediate-goods use in production, which is not socially desirable.

To formalize these ideas, we develop a theoretical model of firm behavior. Let firm profits be Π. Firms have sales (turnover) equal to Y. Total firm assets equal $K = D + E$, where D is debt and E is equity. The cost debt is equal to r^d and the cost of equity is equal to r^e. Labor demand is denoted by L and the wage rate is w. Demand for intermediate goods equals X and the price of intermediate goods is denoted by p. We assume throughout that dividends and interest are taxed in the same way in the PIT under the standard CIT-regime and the MET-regime. We might under-estimate the advantages of the MET-regime because capital gains are not taxed in the MET-regime, while they are in the CIT-regime

Under the standard CIT-regime firms face the CIT-rate τ_{cit} and they have to pay employer SSCs at rate τ_{ssc}. Cost of debt is deductible from the CIT, whereas the cost of equity is not. Profits in the normal CIT-regime are thus equal to:

$$(1) \qquad \Pi_n \equiv (1-\tau_{cit})Y - (1-\tau_{cit})r^d D - (1-\tau_{cit})(1+\tau_{ssc})wL - (1-\tau_{cit})pX - r^e E.$$

When the firm is a MET, then the firm pays a tax rate τ_{me} on sales Y (turnover). It does neither pay CIT ($\tau_{cit} = 0$), nor SSC ($\tau_{ssc} = 0$). Hence, profits in for the MET-firm are equal to:

$$(2) \qquad \Pi_{me} \equiv (1-\tau_{me})Y - r^d D - wL - pX - r^e E.$$

Now, we gain insights into the drivers of tax evasion by subtracting profits in the MET-regime from the profits in the standard CIT-regime (and dividing by sales Y):

$$(3) \qquad \frac{\Pi_{me} - \Pi_n}{Y} = (\tau_{cit} - \tau_{me}) + (\tau_{ssc} - \tau_{cit}(1+\tau_{ssc}))\frac{wL}{Y} - \tau_{cit}\frac{pX}{Y} - \tau_{cit}\frac{r^d D}{Y}.$$

From the difference in profit levels, we can already derive the following conclusions:

- The MET-regime is more attractive the higher is τ_{cit} relative to τ_{me} (first term in (3))
- The MET-regime is more attractive the higher is τ_{ssc} relative to τ_{cit} (second term in (3)).
- The MET-regime is less attractive the higher is the use of intermediate goods *X* (third term in (3)).
- The MET-regime is less attractive the higher is debt *D* (fourth term in (3)).

In the Latvian case we can derive that τ_{cit} = 15 percent > τ_{me} = 9 percent. Moreover, we have τ_{ssc} = 23.6 percent > $\tau_{cit}(1 + \tau_{ssc})$ = 18.54 percent. Intuitively, in Latvia the MET-regime is attractive because the MET-rate is lower than the CIT-rate. Hence, by filing as a MET-firm one can avoid paying the CIT. Moreover, the MET-regime is attractive because MET-firms don't pay SSCs. This advantage more than compensates for the lack of deductibility of wage costs from the CIT if the SSC rate is roughly higher than the CIT rate. As a result, the MET-regime can be used to avoid paying SSCs. The advantage of not paying SSC increases when the SSC-rate is higher than the CIT-rate. Finally, the disadvantage of the MET-regime is that neither the costs of intermediate goods, nor the costs of debt are deductible, whereas they are under the standard regime. Hence, firms with substantial use of intermediate goods or high amounts of debt will not find it desirable opt for the MET-regime. However, when there are no cost of intermediate goods, and all investments are financed with equity, there is no advantage of the tax-deductibility of intermediate goods and debt under the standard CIT, and the MET-regime is then preferred over the standard regime.

What are the welfare consequences of the microenterprise tax regime? The CIT distorts the leverage of firms and too much debt finance is chosen because debt is deductible. In addition, investment is distorted downwards. Consequently, capital use is below the socially desirable level if not all investments can be financed with debt. SSCs reduce labor demand below socially optimal levels. Since all costs of intermediate goods are deductible, firms make efficient investments in terms of intermediate goods use. The standard CIT thus distorts investment of firms, gives excessive leverage and distorts labor demand. The MET-regime also distorts investments downwards, since none of the financing costs are deductible. However, the distortion on investment is typically smaller since the CIT-rate is higher than the MET-rate: τ_{cit} = 15 percent > τ_{me} = 9 percent. This lower distortion is associated with the first term in (4). Moreover, since the tax treatment of debt and equity is the same, there is no longer excessive incentive for debt finance anymore under the MET-regime. This lower distortion is associated with the last term in (4). The MET distorts labor demand, just as the CIT. However, distortions in labor demand are typically less under the MET, since the effective tax rate on labor demand is lower: τ_{ssc} = 23.6 percent > τ_{me} = 9 percent. This lower distortion is associated with the second term in (4). The MET regime introduces distortions in intermediate goods use, since their costs are not deductible under the MET, whereas they are under the CIT, see the third term in (4). The MET-regime thus reduces economic distortions in investment, financing and labor demand, while it increases distortions in intermediate-goods use. The net effect is not clear, but one may expect that the MET-regime reduces overall distortions from corporate taxes by lowering effective tax rates on business activities, especially if intermediate-goods use is small.

ANNEX D: EXCISE TAX RATES: CURRENT STATUS AND RECOMMENDATIONS

Alcoholic beverages

Product	Rate Basis	EU Minimum Rates	2016	Recommendations			
				2017	2018	2019	2020
Beer	€ per hectolitre per degree	1.87	4.2	4.5	4.8	**5.1**	**5.4**
Wine	€ per hectolitre	0	74	78	82	**86**	**90**
Spirits	€ per hectolitre of pure	550	1,400	**1,400**			

Cigarettes

Rate	Rate Basis	EU minimum rates	2016	Recommendations			
				2017	2018	2019	2020
Specific component	€ per 1,000 cigarettes	7.5 percent till 76.5 percent of the	56.2	**75.2**	**77.9**	**77.9**	**77.9**
Ad valorem component	Percent of the maximum	percent of the maximum retail	25	**15**	**15**	**15**	**15**
Minimum excise tax	€ per 1,000 cigarettes	90	93.7	**98.8**	**102.65**	**102.65**	**102.65**
Minimum excise tax	Percent of the weighted	60	61	**61**	**61**	**61**	**61**

Fuel

Product	Rate expressed per	EU minimum rates	2016	Recommendations			
				2017	2018	2019	2020
Leaded gasoline	€ per 1,000 litres	421	455.32	455.32	**455.32**		
Unleaded	€ per 1,000 litres	359	436.00	436.00	**411.00**		
Gas oil	€ per 1,000 litres	330	341.00	341.00	**381.71**		
Gas oil, commercial	€ per 1,000 liters	330	341.00	341.00	**330.00**		
LPG	€ per 1,000 kilograms	125	206.00	206.00	**230.60**		

ANNEX E: SOCIAL SECURITY CONTRIBUTION ARRANGEMENTS IN SOME OF THE EU28 AND EFTA COUNTRIES IN 2016

Table 64. Insured and employer contribution rates, by country and program type in selected EU28 countries, in percent, 2014

	Old-age, disability, and survivors	Sickness and maternity	Work injury	Unemploy-ment	Family benefits	Total, all programs
Estonia						
Insured person	2	0	0	2	0	4
Employer	20	13	a)	1	0	34
Total	22	13	0	3	0	38
Finland						
Insured person	5.55	2.16	0	0.7	0	8.41
Employer	17.75	2.14	0.1	2.2	0	22.19
Total	23.30	4.30	0.1	2.9	0	30.60
France						
Insured person	10.05	0.75	0	2.4	0	13.2
Employer	14.70	13.10	b)	4.3	5.4	37.5
Total	24.75	13.85	0	6.7	5.4	50.7
Germany						
Insured person	9.45	9.225	0	1.5	0	20.175
Employer	9.45	8.325	1.3	1.5	0	20.575
Total	18.90	17.550	1.3	3.0	0	40.750
Latvia						
Insured person	10.50	a)	0	a)	0	10.50
Employer	23.59	a)	a)	a)	0	23.59
Total	34.09	a)	0	a)	0	34.09
Lithuania						
Insured person	3.0	6.0	0	0	0	9.00
Employer	23.3	6.4	0.37	1.1	0	31.17
Total	26.3	12.4	0.37	1.1	0	40.17
Poland						
Insured person	11.26	11.45	0	0	0	22.71
Employer	16.26	0	0.67	2.45	0	19.38
Total	27.52	11.45	0.67	2.45	0	42.09
Sweden						
Insured person	7.00	0	0	0	0	7.00
Employer	15.73	12.48	0.3	2.91	0	31.42
Total	22.73	12.48	0.3	2.91	0	38.42
United Kingdom						
Insured person	9.05	2.05	a)	a)	0	11.1
Employer	11.90	1.90	a)	a)	0	13.8
Total	20.95	3.95	a)	a)	0	24.9

a) All or certain benefits are financed under another program.
Source: SSA and ISSA, 2014

Table 65. Social security contribution arrangements in some of the EU28 and EFTA countries in 2016

	Country, type of insurance	**Contribution levels**
Minimum contribution floor (including other than minimum wage)	Bulgaria, sickness and maternity: cash benefits and benefits in kind	Minimum amount of the contributory income per month varies according to occupation and industrial branch - between BGN 420 (EUR 215) and BGN 550 (EUR 281) per month; self-employed: 8% of the contributory income.
	Estonia, overall contributions	Employers and self-employed are both obliged to pay social tax not less than the amount calculated from the rate established by the State - EUR 390 per month.
	Latvia, overall contributions	Minimum annual amount for self-employed and voluntarily insured persons is twelve times the amount of minimum monthly wage – EUR 4,440 a year (12 x EUR 370)
	Czech R., sickness and maternity: benefits in kind	Employees: minimum assessment base - minimum monthly wage (CZK 9,900 (EUR 366)). Self-employed: 13.5% of the assessment base (which is 50% of the annual income from business and from other independent gainful activity minus costs incurred to achieve, secure and maintain such an income).
	Slovakia, sickness and maternity: cash benefits and benefits in kind	Minimum amount (for self-employed): 50% of the national average wage.
	Slovenia, old age benefit contributions	Minimum: for self-employed and farmers - minimum wage; for executives and business partners - minimum Pension Rating Basis
	Croatia, unemployment benefit contributions	Assessment base: minimum HRK 2,812.95 (EUR 368)
	Serbia, overall benefit contributions	Minimum base for contributions: indexed every three months and represents 35% of the national average gross wage over the previous quarter. Minimum base is 21,718 RSD (2015).
Ceiling on contributions on	Cyprus, overall contributions	Ceiling on insurable earnings: EUR 1,046 per week or EUR 4,533 per month.

	Country, type of insurance	**Contribution levels**
insurable earnings		
	Slovakia, sickness, maternity and old-age benefit contributions	Maximum EUR 4,290 per month (5 times the average monthly wage in 2014).
	Poland, invalidity and old-age insurance contributions	Ceiling: 30 times the projected national average wage as set out in the budget law; this ceiling applies to the combined contribution of the employer and insured person.
	Romania, sickness and maternity, and old age benefit contributions	Ceiling: benefits in kind: 5 times the average gross earnings; total gross earnings; ceiling: five times the Average Gross, i.e. RON13,405 (EUR 2,959); cash benefits: 12 times minimum gross wage for each employee.
	Austria, sickness and maternity, old-age and unemployment benefit contributions	Ceiling: principally EUR 4,860 monthly, for 13th and 14th salary in total EUR 9,720 per year.
	Latvia, overall contributions	The maximum taxable amount is EUR 48,600 a year.
	Bulgaria, sickness and maternity, old-age, and unemployment benefit contributions	Ceiling: BGN 2,600 (EUR 1,329) per month.
	Spain, overall contributions	Ceiling: EUR 3,642 per month.
	Czech R., sickness and maternity cash benefits, old-age and unemployment benefits contributions	Ceiling: 48 multiplied by monthly average wage (CZK 1,296,288 (EUR 47,959) per annum.

	Country, type of insurance	**Contribution levels**
	Lithuania, sickness and maternity: cash benefits	Ceiling: 48 average insured incomes per year.
	Croatia, sickness and maternity cash benefit, old-age and unemployment benefit contributions	Ceiling: HRK 48,222.00 (EUR 6,314).
	Poland, invalidity and old age benefit contributions	Ceiling: 30 times the projected national average wage as laid down in the budget law, this ceiling applies to the combined contribution of employer and insured person.
	Slovenia, old age contributions	Maximum: 3.5 times the average wage.
Reduction of contributions	France, contribution for family allowances	Employers pay 5.25%, or 3.45% on wages lower than 1.6 times the minimum wage
	Germany, sickness and maternity: benefits in kind, and old-age benefit contributions	For low-earners (up to EUR 450 per month) the employer pays a contribution of 13%, and for low-earners employed in the private household sector a contribution of 5%. These blanket contributions are only payable if the employee is already insured in the statutory sickness insurance.
Mandatory minimum contribution base	Bulgaria, sickness and maternity: benefits in kind	Persons, who are not covered by the health insurance system on any other ground, are obliged to pay contributions amounting to at least 8% of the minimum contributory income for the self-employed (BGN 420 (EUR 215) per month) at their own expense.
	Czech R., sickness and maternity: benefits in kind	Minimum assessment base: minimum monthly wage (CZK 9,900 (EUR 366)), applies also to those without taxable income.
	Switzerland, sickness, maternity, invalidity and old age benefits	Sickness and maternity cash benefits: people not engaged in paid employment pay a contribution between CHF21 (EUR 19) and CHF1,050 (EUR 971) per year, according to their social conditions.

	Country, type of insurance	**Contribution levels**
		Invalidity: people not engaged in paid employment pay a contribution between CHF65 (EUR 60) and CHF3,250 (EUR 3,005) per year, according to their social conditions. Old age: people not engaged in paid employment pay a contribution between CHF392 (EUR 362) and CHF19,600 (EUR 18,125) per year, according to their social conditions.
Contributions omitted	Slovakia, sickness and maternity benefit: benefits in kind	Low wages up to EUR 570 per month are exempted from tax.
	Austria, unemployment benefit contributions	No employers' or employees' contributions for women and men who have reached the age of 58 before 1 June 2011. Employees' contributions are omitted or reduced in case of low incomes. There is no employee contribution to be paid up to EUR 1,311. For an income above EUR 1,311 up to EUR 1,430 the contribution payable by the employee is 1% and for an income above EUR 1,430 up to EUR 1,609 it is 2%.
	Slovakia, unemployment benefit contribution	No employee and employer contributions if the employee receives old-age pension, early pension, or full invalidity pension or is a former long-term unemployed person on low wages.
Contributions vary with the level of earnings	UK, overall contributions	Employees pay 12% (10.6% if member of approved occupational pension scheme) on weekly earnings between GBP 155 (EUR 210) and GBP 815 (EUR 1,104) and 2% of earnings over GBP 815 (EUR 1,104). No contribution paid after State Pension age. Employer pays 13.8% on all weekly earnings above GBP 156 (EUR 211). Employers get 3.4% rebate for employees in approved salary-related schemes.
Discounts for youth, small firms, and low paid workers	Switzerland, sickness, maternity, invalidity and old age benefit contributions	Lower premiums for insured persons under the age of 18 (children). The insurer may set a lower premium for insured persons under the age of 25 (young adults).

	Country, type of insurance	**Contribution levels**
	Germany, sickness and maternity, and old age benefit contributions	For low-earners (up to EUR 450 per month) the employer pays a contribution of 15%, and for low-earners employed in the private household sector a contribution of 5%. If the employee cannot be exempted from mandatory pension contributions, he pays the difference between the general contribution percentage (18.7%) and the employer's contribution level (15% or 5%).
	France, sickness and maternity: benefits in kind, family allowances, and old-age benefit contributions	On overtime: flat-rate deduction of employers' contributions: EUR 1.50 per hour for companies with less than 20 employees.
Contribution rate varies with the working conditions	Accidents at work and occupational diseases	Belgium, Bulgaria, Czech R. (insurance contribution varies according to risk (between 0.2% and 1.2% of gross earnings) paid by the employer); Denmark, Finland, France, Germany, Italy, Lithuania (rate varies between 0.18% and 1.8%); Poland (rate varies between 0.67% - 3.86% of gross wage), Portugal, Romania, Spain, Switzerland.

Source: MISSOC, 2016
http://www.missoc.org/MISSOC/INFORMATIONBASE/COMPARATIVETABLES/MISSOCDATABASE/comparativeTablesSearchResultTree.jsp

Table 66. Financing arrangements of social protection benefits in the EU28 countries in 2016

Country	Financing arrangement for social protection benefits
Austria	Austria used to have a comprehensive special scheme both for farmers and for craftsmen and retailers until 31 December 2004. As of 1st January 2005 all pension systems were harmonized for those persons who had not yet completed the age of 50 by 1st January 2005. In agriculture, the protection scheme of the branches invalidity, old age and survivors is for nearly one third financed from contributions and for the rest predominantly from government funds. The rate of contribution is 15.5% of the insurable value of landed property which does not exceed the upper limit of assessment of monthly €5,670. In crafts and commerce, health care is financed predominantly by contributions. The contribution rate amounts to 9.1% of revenues liable to income tax up to the upper limit of assessment of €5,670.00 per month. Cash benefits in case of sickness (voluntary supplementary insurance): the amount is 4.25% of revenues liable to income tax up to the upper limit of assessment of €5,670.00 per month. 66.9% of the protection offered by the schemes invalidity, old age and survivors is financed from contributions, 32.1% from government funds, and 1% is derived from other sources. Contributions are 17.5% of revenues liable to income tax up to the upper limit of assessment of EUR 5,670.00 per month. Self-employed persons who employ no or less than 25 employees receive, from the 43rd day of work incapacity due to sickness, a daily support benefit of EUR 29.23 for up to 20 weeks. In case of sickness, self-employed persons covered for more than six months by voluntary supplementary insurance receive a cash benefit from the fourth day of sickness for a maximum of 26 weeks. Unemployment insurance is voluntary.
Belgium	A special system covers all self-employed persons against all traditional risks, with the exception of accidents at work, occupational diseases and unemployment, and also provides for national insurance in case of bankruptcy. This system is financed at 65.2% by contributions, at 34.7% by taxes and at 0.1% by other sources.
Bulgaria	As self-employed persons according to the Bulgarian legislation can be defined: (i) Persons, registered as free-lance professionals and/ or craftsmen; (ii) sole entrepreneurs, proprietors and co-proprietors of companies; (iii) registered farmers and tobacco planters. The minimum monthly amount of the insurable income for self-employed persons is differentiated according to the amount of their annual taxable income for 2013: (i) up to BGN 5,400 (EUR 2,761): BGN 420 (EUR 215); (ii) from BGN 5,401 (EUR 2,762) to BGN 6,500 (EUR 3,323): BGN 450 (EUR 230); (iii) from BGN 6,501 (EUR 3,324) to BGN 7,500 (EUR 3,835): BGN 500 (EUR 256); (iv) above BGN 7,500 (EUR 3,835): BGN 550 (EUR 281). The minimum insurable income for self-employed persons who did not carry out an economic activity in 2014 and for self-employed persons who have started an economic activity in 2015 and in 2016 is BGN 420 (EUR 215). The minimum insurance income for farmers and tobacco producers is BGN 300 (EUR 153). The maximum amount of the insurable income for all categories of insured persons, including self-employed, is BGN 2,600 (EUR 1,329). No difference to the standard schemes exists in relation to benefits, including the non-contributory provisions.
Croatia	Croatia does not operate a separate system for the self-employed. They are covered by the general compulsory social security system.

Country	Financing arrangement for social protection benefits
Cyprus	There is a General Social Insurance Scheme which covers every person gainfully occupied either as an employed or a self-employed person. Financing: the rate of contribution of self-employed is 19.2% of the insurable income of the person concerned from which 14.6% is paid by the self-employed and 4.6% by the state. For the determination of the insurable income, each self-employed is classified in the respective occupational category according to his/her occupation and for each category of self-employed persons a compulsory minimum insurable income is prescribed but the individual self-employed person has the right to opt for a higher income up to the maximum insurable earnings of EUR 1,046 per week. If a self-employed person proves that his actual income is lower than the minimum insurable income of his occupational category, he is allowed to claim in order to be able to pay contributions on his actual income.
Czech R.	The Czech social security system is in principle uniform for employees and the self-employed. The Basic Pension Insurance for old-age, survivor's and invalidity pensions is compulsory. The self-employed are also protected in case of unemployment. The contribution rates of the self-employed amount to: 13.5% for health care; 2.3% for sickness cash benefits (optional insurance); 28% for pensions (invalidity, old-age and survivors) and 1.2% for unemployment (State Employment Policy), of the applicable assessment base. For the health care insurance premium, the assessment base is 50% of their income from business and from other independent gainful activity minus costs incurred in order to achieve, secure and maintain such income. The minimum premium base is 12 multiplied by 50% of the monthly average salary (since 1 January 2016 the minimum premium base is CZK 13,503 (EUR 500) monthly, so the minimum premium is CZK 1,823 (EUR 67) per month). If such established minimum assessment base for "full time" self-employed is less than 50% of half of average wage, the minimum assessment base in 2016 is CZK 6,752 (EUR 250) monthly. The minimum assessment base for "part time" self-employed is 10% of the average wage (in 2016 CZK 2,701 (EUR 100) monthly). The maximum premium base is 48 multi-plied by the monthly average wage (CZK 1,296,288 (EUR 47,959)) per annum. Family benefits are tax financed.
Denmark	The social protection system is based on the principle of national insurance. Persons covered are not defined according to their social situation and the general system does not operate on the principle of distinction between the employed and the self-employed. Consequently, self-employed persons receive the social protection of the general system. Financing is carried out according to the regulations of the general system.
Estonia	Self-employed persons are covered by the general schemes of health insurance (benefits in kind and in cash in case of sickness and maternity) and pension insurance (invalidity, old-age, and survivors) on compulsory base, but they are not covered by the unemployment insurance scheme (neither on compulsory base nor may they join the scheme voluntarily). In respect of unemployment, the self-employed are however covered by the non-contributory State unemployment allowance scheme. The amount of social tax to be paid by the self-employed per working-able insured person cannot be smaller than the amount of tax calculated from the rate established by the State in the annual State budget, and shall not be higher than the amount of tax calculated on the basis of 15 times this rate. In 2015, the monthly rate established in the State budget is EUR 390. Accordingly, the minimum amount of social tax to be paid by the self-employed is EUR 128.7 (0.33 x 390) per month, while the ceiling is EUR 1,930.5 (0.33 x 15 x 390) per month. In the case of being simultaneously employed and self-employed, the

Country	Financing arrangement for social protection benefits
	minimum amount is applied on the total of wage income and income from the self-employment.
Finland	The self-employed are covered by the same social security schemes based on residence as employed persons and any other person residing permanently in Finland. The self-employed are insured by the basic unemployment insurance. The self-employed have the possibility to join voluntarily the earnings-related unemployment insurance scheme and qualify for the earnings-related unemployment allowance as members of special unemployment funds
Germany	There are, on the one hand, special provisions for certain groups of self-employed (notably craftsmen), who are compulsorily insured with the statutory pension insurance and, on the other, independent social security systems for farmers (including assisting family members), self-employed artists and publicists and the special schemes for the members of the professions, which have the right to form associations. ***Agriculture:*** The benefits granted to the pensioners or retired farmers are funded from tax revenues, if they are not covered by their contributions and solidarity supplement included in the contribution of the working farmers. Health insurance of working farmers is almost totally financed from contributions, with contributions assessed on the basis of surface values and laid down in 20 contribution categories. ***Crafts and commerce:*** The risks invalidity, old age and survivors are financed from contributions and from tax revenues (federal level). The protection scheme accidents at work and occupational diseases is financed by means of contributions, and the amount of contributions is determined in relation to the risk. Family benefits and basic security benefits for job-seekers are covered by tax revenues.
France	Social protection for the self-employed is subject to separate regulations. Farmers come under the agricultural system *(MSA).* Craftsmen, retailers and manufacturers fall within the scope of the Social Protection Scheme for the Self-employed *(RSI)* while members of the liberal professions are covered by separate schemes *(CNAVPL)*. Farmers: **Financing:** The farmer's contributions are calculated according to professional income. Rates applied: AMEXA (sickness, invalidity, maternity): 10.84%; flat-rate contribution for sickness (cash benefits): EUR 200; capped old-age insurance for farmers (AVA): 11.47% old-age insurance for farmers (AVA) without a ceiling: 2.04%, individual old-age insurance (AVI): 3.30% of the professional income within the limit of the ceiling, compulsory supplementary retirement (RCO): between 2.15% and 5.25% depending on professional income; family benefits: 5.25% on professional income (digressive reduction according to the income. Amount of the social security ceiling as of 1 January 2015: EUR 3,218 per month, EUR 38,616 per year. ***Crafts, Commerce and Manufacturing, Liberal Professions*** **Financing** *Sickness and maternity insurance:* Benefits in kind: 6.5% of the total professional income.

Country	Financing arrangement for social protection benefits
	Sickness benefits in cash (daily allowances) for craftsmen, retailers and manufacturers: 0.7% within the limit of EUR 193,080. *Old-age insurance:* Basic system for crafts, commerce and manufacturing: 17.65% of the professional income within the annual limit of the social security ceiling (EUR 38,616) and 0.50% for income exceeding this ceiling. Compulsory supplementary scheme: 7% of professional income within the limit of EUR 37,546 and 8% between EUR 37,546 and EUR 154.464 for craftsmen, retailers and manufacturers. Old-age pensions: **e**xcept for the liberal professions which are under a specific scheme, the rules applied in the systems of craftsmen, retailers and manufacturers are identical to those of the general system. No unemployment insurance system exists for craftsmen.
Greece	There exists a contributory basic system for farmers, called Agricultural Insurance Organization. Self-employed persons (craftsmen, retailers, professional motorists, hotel owners and others) are insured with the Social Security Organization for the Self-Employed. Members of the liberal professions (medical personnel, doctors, pharmacists, engineers, lawyers, notaries etc.) are insured with the Insurance Fund for Independent Professionals. Financing of the system is based on the insured persons' contributions and, for those affiliated to the system after 1 January 1993, on participation of the State as well. Conditions for old-age pensions for farmers: 67 years of age and insurance record of 15 years; 62 years of age and insurance record of 40 years. Sickness benefits are not part of the system for farmers. However, a maternity allowance of a flat-rate amount of EUR 436.98 is provided. Unemployment risk is not covered in the farmers' system.
Hungary	In principle all self-employed persons are covered for all the branches of social security in the general system, consisting of health and sickness schemes (covering health care, sickness, maternity and the specific treatment of work incapacity related to an accident at work or a professional disease), the social insurance pension scheme (covering old-age and survivorship), benefits prior to retirement age (social benefits), benefits for persons with changed working capacity and a mandatory unemployment insurance. The family support scheme is of a universal type, which covers every Hungarian citizen, regardless of their employment status. Consequently, every self-employed is covered by the family support scheme. The same principle is applied for the universal means tested social assistance schemes. **Financing** Contrary to the employee, the self-employed person pays the contribution him/herself on the basis of the self-employed income which she/he declares, but at least on the basis of the national minimum wage (in case of pension contribution on the basis of 100% of the minimum wage; in case of health insurance and labor market contribution*)* on the basis of 150% of the minimum wage; in case of social contribution tax on the basis of 112.5% of the minimum wage). Self-employed persons pay contributions on a monthly basis. For health, pension and unemployment insurance, the self-employed pay both employer and employee contributions as follows: (i) as an employee: 4% for benefits in kind and 3% for cash benefits, 1.5% as labor market contribution and 10% for pension insurance; (ii) as an employer: 27% for social contribution tax.

Country	Financing arrangement for social protection benefits
	Self-employed persons who perform activities in a complementary way ay a flat-rate contribution of HUF7,050 (EUR 23) per month for the entitlement to accidents at work, occupational disease scheme and for in-kind health.
Ireland	The protection of the self-employed is achieved within the general system through social insurance or social assistance payments. **Financing** The self-employed Social Insurance Contribution provides cover for survivors, maternity/adoptive and guardians and old age. There are no specific contributions for unemployment and sickness. For old age, maternity and survivors, the self-employed pay contributions at the rate of 4% of all income, subject to a minimum payment of EUR 500 per annum. There is no annual income ceiling. Family benefits are tax financed and available to all.
Italy	***Agriculture, Crafts and Commerce*** **Basic principles** The self-employed receive health and maternity care, as well as benefits for accidents at work and occupational diseases, according to the specific qualifying conditions provided for within their special scheme. The general system is also in force, but with special regulations, in relation to cash benefits for maternity. For the disability, old-age, survivors and family benefits branch, a special system exists comparable to the general system. **Financing** ***Farmers*** pay a percentage - based on four values - which varies according to the type of land cultivated, the age, the number of workdays and a reference income. The daily conventional income of EUR 55.05 is updated by Ministerial Decree in May every year. ***Craftsmen*** pay 23.10% on company income up to EUR 46,123 or 24.10% on company income between EUR 46,123 and EUR 76,872. ***Tradespeople*** pay 23.19% on company income up to EUR 46,123 or 24.19% on company income between EUR 46,123 and EUR 76,872. The minimum pensionable income for craftsmen and trades people is EUR 15,548. The maximum pensionable income is EUR 76,872 for craftsmen and tradespeople registered before 1 January 1996 and EUR 100,324 for those whose work insurance commenced as of January 1996.
Latvia	All socially insured self-employed persons are subject to the social security system. Self-employed persons are only considered as socially insured if their contributions have actually been made. Self-employed persons are subject to compulsory social insurance as provided by the law "On State Social Insurance" *(Likums "Par valsts sociālo apdrošināšanu")*. The Cabinet of Ministers sets the minimum amount of the contribution basis. The minimum amount of earnings subject to contributions is EUR 4,440 per year in 2016. The social insurance contribution rates differ amongst the categories of self-employed persons. They are the following in 2016: (i) self-employed persons (also those with disabilities of group I or II) insured for the risks of old-age, death, sickness, parental leave, maternity and disability: 30.58%; (ii) self-employed persons over retirement age and persons who receive old-age pension (including pre-retirement pension) insured for the risks of old-age, death, parental leave, maternity and sickness: 28.21%; (iii) individuals carrying out management of real estate and registered as tax payers for income gained from economic activity who are insured for the risks of old-age and disability: 26.19%. The self-employed persons do not make social insurance contribution payments concerning insurance against occupational accidents and insurance against

Country	Financing arrangement for social protection benefits
	unemployment as they employ themselves and bear responsibility for their working conditions and safety.
Lithuania	Self-employed persons, if they declare their income as wages, are covered by pension insurance. The general contribution rate for these persons is 26.3%: • Owners of personal enterprises contribute from income declared as wages, in some cases, when they do not have state social insurance guarantees, they contribute from minimum monthly wage; • Farmers and their partners pay contributions from 12 minimum monthly wages per year, only in case when their income is equal to or higher than 4 Economic Size Units and they do not pay income tax.
Luxembourg	Social protection of the self-employed is regulated under the general system, but with certain particular features which take account of the specific situation of the self-employed. Social protection covers all risks; this includes unemployment for the self-employed who had to cease their occupation and who are looking for a salaried job. For farmers, the premium method is set inclusively based on vegetable and animal productions of the farm during the year preceding the year of contributions.
Netherlands	The general protection system applies as a rule to all residents of the Netherlands; therefore, there are only a few special regulations for self-employed persons.
Malta	The Social protection system in Malta is a general scheme that covers both employed and self-employed persons. Self-employed contributions are paid by persons who are not gainfully occupied but have a net annual income that exceeds EUR 1,005. Persons who are gainfully occupied and whose annual net earnings exceed EUR 910, pay self-occupied Contributions. The Self-occupied contribution for a person born in 1961 or before is EUR 28.73 per week if the annual net earnings of the preceding year are less than EUR 9,060. For a person born in 1961 or before, if the annual net earnings exceed EUR 17,933, the contribution due is EUR 51.73 per week. For a person born in 1962 or after if the annual net earnings exceed EUR 22,139, the contribution due is EUR 63.86 per week. The Self-employed contribution for a person born in 1961 or before is EUR 24.52 per week if the annual net income exceeds EUR 1,005 but does not exceed EUR 8,500. If the annual net income exceeds EUR 8,500, the rates are the same as in the self-occupied category.
Poland	From 1 January 1999 onwards the self-employed persons who perform non-agricultural activities and their co-operating persons are part of the general social insurance system. They are insured in the pension scheme on a mandatory basis (covering old-age, survivorship and invalidity) and in the employment injuries and occupation-al diseases scheme. The sickness insurance of such persons is voluntary. The scheme on employment and prevention of unemployment is also applicable to self-employed persons (not to farmers). In the social security schemes there are in principle no specific rules for self-employed persons. Self-employed persons have the right to same benefits in the same amount as the employed persons.
Portugal	All self-employed persons (including, among others, helping spouses and farmers) are compulsorily covered by the social protection system (general system of social security for self-employed persons). However, membership is voluntary for

Country	Financing arrangement for social protection benefits
	persons whose annual reference income for self-employed work is equal to or less than six times the indexing reference of social support. The amount of the contributions is the result of applying the relevant rate to a flat-rate remuneration based on the actual total income (gross earnings) resulting from the self-employed activity and fixed according to one of the 11 levels indexed to the indexing reference of social support (IAS), the first corresponding to one time this reference and the last to 12 times this reference. If the annual reference income of the self-employed work is equal to or less than 12 times the IAS, the contribution base can be decreased for a maximum period of 36 months from the start of the activity, the limit being 50% of the said indexing reference. Benefits are granted according to the regulations of the general system for the employed. However, some exceptions exist.
Romania	Self-employed are the incorporated in the existing universal or general social protection schemes. Unemployment: Voluntary insurance.
Slovakia	The protection of the self-employed in the areas of benefits-in-kind for sickness and maternity, as well as benefits-in-cash for sickness, maternity, invalidity, old-age, survivors, unemployment and family benefits is achieved within the general system. **Financing** There are specific rates of contributions to the general system for self-employed persons. The Assessment Base of self-employed persons for health insurance and for other types of insurances is 1/1.486 (ca. 67.3%) of average monthly taxable income in 2014 (for voluntary insured the sum assigned by him/her). There are upper and lower ceilings for the Assessment Base. The maximum monthly Assessment Base is 5 times the national average wage. The minimum monthly Assessment Base is 50% of the national average wage. Rates of contributions of self-employed persons as a percent-age of the Assessment Base for: • Old-Age and Survivors is 18% (if appropriate, 14% for the 1st and 4% for the 2nd pillar), • Invalidity and Survivors is 6% (but no contribution if the person is entitled to old-age benefit or pre-retirement bene-fit), • Sickness and Maternity (Health care) is 14% (but only 7% if disabled), • Sickness and Maternity (Cash benefits) is 4.4%, • Unemployment is 2% (only voluntary insurance), • Reserve Solidarity Fund: 4.75%. Self-employed persons with a yearly income less than EUR 5,148 (50% of the national average wage in 2014) are exempted from compulsory sickness and maternity insurance (cash benefits) as well as from compulsory invalidity, old-age and survivors as well as from unemployment insurance.
Slovenia	Self-employed persons are covered by the compulsory insurance based system. The contribution rate for all health insurance rights (benefits in kind, cash benefits) for self-employed is 12.92% (+0,53% for accidents at work and occupational diseases) of basis for pension and invalidity insurance, but not less than 60% of the last known average of the annual salary of employees. Contribution rate for old-age, survivors and invalidity pensions for the self-employed is 24.35% of insurance basis (15.50% as employees and 8.85% as employers). Self-employed persons are also covered by compulsory unemployment insurance. Contribution rate for unemployment for the self-employed is 0.20% gross wage (0.14% as employees and 0.06% as employers).

Country	Financing arrangement for social protection benefits
Spain	Spain has a special scheme (R.E.T.A.) for the self-employed in crafts and commerce. The special scheme for maritime workers comprises also self-employed workers. ***Agriculture (Special System)*** **Financing** Benefits in the event of sickness and maternity, invalidity, old-age and survivorship are funded from contributions, with an overall rate of 18.75% of a certain contribution basis. Cover-age for permanent incapacity and survivors' pensions as a result of occupational contingencies is compulsory. The contribution basis varies between a minimum of EUR 893.10 and a maximum of EUR 3,642.00 (per month), with certain exceptions. For accidents at work and occupational diseases, rates are fixed by government decree according to the different risk levels of activities, industries and jobs. ***Crafts, Commerce and Others*** **Financing** An overall rate of 29.80% of a certain contribution basis is paid for benefits in the event of sickness and maternity, for invalidity insurance, old-age provision and provision of the survivors. The contribution basis varies between a minimum of EUR 893.10 and a maximum of EUR 3,642.00 (per month), chosen by the beneficiary within certain limits. Farmers: **Old-age** The compulsory old-age insurance of the Special System corresponds essentially to that of the General Scheme. **Unemployment** They are entitled to the out-of-work benefit if they opted for the coverage of occupational contingencies.
Sweden	The social protection system is fundamentally founded on the principle of national insurance. The group of people protected is thus not defined according to a certain social status, and no distinction is made between employees and the self-employed. Self-employed persons thus enjoy principally the social protection of the general system. The regulations of the general system apply for the financing.
United Kingdom	The general protection system basically includes the self-employed. For individual regulations, special requirements apply for the self-employed but there are no further distinctions made within the group of self-employed persons itself. **Financing** National Insurance contributions are graduated for the self-employed (in contrast with those for employees) according to three income classes: Self-employed persons with annual profits less than GBP 5,965 (EUR 8,419) can apply to be expected from paying compulsory contributions. Those with annual profits GBP 5,965 (EUR 8,419) or more pay a flat-rate contribution of GBP 2.80 (EUR 3.95) per week. In addition, those self-employed people with annual profits between GBP 8,060 (EUR 11,376) and GBP 42,385 (EUR 59,823) also pay an earnings related contribution of 9%, and 2% above GBP 42,385 (EUR 59,823).

Table 67. Part-time employment as percentage of the total employment, involuntary part-time employment as percentage of the total part-time employment, and temporary employees as percentage of the total number of employees in 2015 in the EU28 countries, in percent

	Part-time employment			Involuntary part-time employment			Temporary employees		
	Aged 15-64	Aged 15-24	Aged 55-64	Aged 15-64	Aged 15-24	Aged 55-64	Aged 15-64	Aged 15-24	Aged 55-64
EU28	19.6	32.2	22.1	29.1	28.0	22.3	14.1	43.3	6.5
Belgium	24.3	27.4	33.6	10.0	23.5	4.4	9.0	36.6	3.3
Bulgaria	2.2	5.7	2.8	60.6	50.8**	55.3	4.4	11.7	3.5
Czech R.	5.3	10.8	7.6	16.4	12.5	10.2	10.0	31.0	7.1
Denmark	24.7	67.0	20.0	15.7	8.2	16.4	8.7	22.7	3.2
Germany	26.8	23.6	30.2	13.8	10.1	15.4	13.2	53.6	3.6
Estonia	9.5	22.8	9.7	13.3	:	16.1	3.4	11.4	1.6
Ireland	22.2	44.5	25.9	37.8	30.4	34.1	8.7	32.7	5.2
Greece	9.4	23.1	8.0	72.6	63.9	54.6	11.9	33.3	9.3
Spain	15.6	37.9	12.4	63.2	54.3	53.4	25.2	70.4	10.3
France	18.4	24.8	22.4	43.7	55.8	37.0	16.0	58.0	8.4
Croatia	5.9	12.2	8.8	26.7	23.6	8.0	20.3	60.9	8.3
Italy	18.3	29.5	13.7	65.6	83.7	57.3	14.1	57.1	5.7
Cyprus	13.0	25.8	16.9	68.9	69.4	62.8	18.4	29.1	8.3
Latvia	7.2	12.3	9.3	32.7	19.8*	35.1	3.8	10.9	4.2
Lithuania	7.6	11.4	11.1	31.9	:	36.6	2.1	6.5	:
Luxembourg	18.5	29.1	25.7	14.8	13.2	11.9	10.2	47.1	4.7
Hungary	5.7	6.9	10.3	36.9	45.4	18.0	11.4	24.1	10.8
Malta	14.5	23.0	14.5	15.4	18.6	16.6	7.4	16.8	6.2
Netherlands	50.0	80.0	49.2	9.9	9.6	8.6	20.0	53.3	6.1
Austria	27.3	22.7	29.0	12.4	15.5	11.2	9.1	35.8	3.0
Poland	6.8	14.1	10.4	30.5	25.6	16.0	28.0	72.7	16.6
Portugal	9.8	22.6	16.5	50.1	49.3	31.7	22.0	67.5	10.9
Romania	8.8	19.2	15.1	59.0	74.1	26.8	1.4	5.4	:
Slovenia	10.1	41.3	13.4	13.0	7.4	5.8*	17.8	75.5	9.0
Slovakia	5.8	11.9	7.3	29.9	28.6	20.3	10.5	29.1	7.5
Finland	14.1	41.7	15.3	31.4	24.9	23.5	15.1	41.8	7.1
Sweden	24.3	49.1	24.6	29.4	41.8	19.1	16.6	55.7	7.1
U.K.	25.2	37.9	31.0	17.9	23.9	12.5	6.1	15.0	4.8

*-2014

**-2013

ANNEX F: HISTORY OF CHANGES IN LATVIAN TAX SYSTEM

1. Personal Income Tax and Social Security Contributions

		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Personal Income Tax																								
Wage	**Tax rate**																							
	low rate	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	23%	26%	25%	25%	24%	24%	23%	23%
	top rate	10%	10%	10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	income threshold for the second rate	5 691	5 122	85 372	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Self employed			25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	15%	15%	26%	25%	25%	24%	24%	23%	23%
Social Security Contributions																								
Wage		**38.0 %**	**38.0 %**	**38.0 %**	**37.0 %**	**37.09 %**	**37.09 %**	**36.09 %**	**35.09 %**	**35.09 %**	**33.09 %**	**33.09 %**	**33.09 %**	**33.09 %**	**33.09 %**	**33.09 %**	**33.09 %**	**33.09 %**	**35.09 %**	**35.09 %**	**35.09 %**	**34.09 %**	**34.09 %**	**34.09 %**
	Employer's	37.0%	37.0%	37.0% 33%	*28.0%*	*28.09 %*	*28.09 %*	*27.09 %*	*26.09 %*	*26.09 %*	*24.09 %*	*24.09 %*	*24.09 %*	*24.09 %*	*24.09 %*	*24.09 %*	*24.09 %*	*24.09 %*	*24.09 %*	*24.09 %*	*24.09 %*	*23.59 %*	***23.59 %***	***23.59 %***
	Employee's	1.0%	1.0%	1.0%	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*	*11.0%*	*11.0%*	*11.0%*	*10.50 %*	*10.50 %*	*10.50 %*
	Cap (maximum celling)	-	-	-	17 074	17 074	19 920	21 343	22 766	24 616	26 181	28 315	28 315	29 453	33 864	42 117	-	-	-	-	-	46 400	48 600	48 600

		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Self employed						**33.90 %**	**33.82 %**	**32.59 %**	**32.10 %**	**32.27 %**	**30.27 %**	**30.27 %**	**30.50 %**	**30.20 %**	**29.95 %**	**30.44 %**	**30.48 %**	**28.17 %**	**31.52 %**	**32.46 %**	**32.17 %**	**31.06 %**	**30.58 %**	**30.58 %**
	Minimum SSC income (annual)					717	768	768	683	683	768	1 878	1 878	1 878	2 561	2 561	3 073	3 073	3 415	3 415	3 415	3 840	4 320	4 440
	Minimum SSC income (monthly)					60	64	64	57	57	64	157	157	157	213	213	256	256	285	285	285	320	360	370

1. Non-taxable minimums, *euro per month*	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1.1. Non-taxable minimum	36/ 32	32	32/ 36	30	30	30	30	30	30	30	30	37	46	71	114	128/ 50	50	64	64	64	75	75	Min 75, Max 100
1.2. Non-taxable minimum for pensioners	-	-	-	142	142	142	142	142	142	142	142	142	157/ 235	235	235	235	235	235	235	235	235	235	235
2. PIT allowances, *euro per month*																							
2.1. Allowance for dependants	28/21	21	16/1 8	15	15	15	15	15	15	15	15	26	31	50	80	90	90	100	100	100/ 114	165	165	175
2.2. Tax relief for persons with disabilities:																							
- Group I and II	28/21	21	32/ 36	36	36	36	36	36	36	36	36	36	54	85	137	154	154	154	154	154	154	154	154
- Group III	19/14	14	21/ 24	28	28	28	28	28	28	28	28	28	43	67	107	120	120	120	120	120	120	120	120
2.3. Tax relief for politically repressed persons and participants of the national resistance movement																							
- if granted a pension	-	-	32/ 36	36	36	36	36	36	36	36	36	36	54	85	137	154	154	154	154	154	154	154	154
- if a pension not granted	-	-		65	65	65	65	65	65	65	65	65	100	157	250								
3.1. Eligible expenses																							

1. Non-taxable minimums, *euro per month*	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
3.1. For education, *euro per year*	128	128	128	128	128	128	128	213	213	213	213	213	213	213	213	427	213	213	213	213	213	213	215
For medical services, *euro per year*	85	85	85	85	85	85	85																
3.2. Donations and gifts, *% of the annual taxable income***	100%	100%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
3.3. Contributions made, *% of the annual taxable income*																							
- in private pension funds	-	-	-	100 %	100 %	100 %	10%	10%	10%	10%	10%	10%	10%	20%	20%	20%	10%	10%	10%	10%	10%	10%	10%
- insurance premium payments in conformity with life insurance agreement (with accumulation of funds)	-	-	-	-	-	-	-	-	10%	10%	10%	10%	10%	20%	20%	20%	10%	10%	10%	10%	10%	10%	10%
- costs for purchase of investment certificates of the investment funds, if these certificates have been in the ownership of the taxpayer for at least 60 months	-	-	-	-	-	-	-	-	-	-	-	-	-	20%	20%	20%	-	-	-	-	-	-	-

2. Value Added Tax

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Value added tax	**18%**	**18%**	**18%**	**18%**	**18%**	**18%**	**18%**	**21%**	**21%**	**22%**	**22%/21%**	**21%**	**21%**	**21%**	**21%**
Non-registered taxable persons VAT value (12 month)	**14 231**	**14 231**	**14 231**	**14 231**	**14 231**	**14 231**	**14 231**	**14 231**	**14 231**	**49 801**	**49 801**	**49 801**	**50 000**	**50 000**	**50 000**
Reduced rate, including:		9%	5%	5%	5%	5%	5%	10%	10%	12%	12%	12%	12%	12%	12%
1) Medical and pharmaceutical products			5%	5%	5%	5%	5%	10%	10%	12%	12%	12%	12%	12%	12%
2) Specialty products for infants		9%	5%	5%	5%	5%	5%	10%	10%	12%	12%	12%	12%	12%	12%
3) Educational and original literature								10%	10%	12%	12%	12%	12%	12%	12%
4) Periodical			5%	5%	5%	5%	5%	10%	10%	12%	12%	12%	12%	12%	12%
5) Transport of passengers				5%	5%	5%	5%	10%	10%	12%	12%	12%	12%	12%	12%
6) Heating for population					5%	5%	5%	10%	10%	12%	12%	12%	12%	12%	12%
7) Woodfuels for population						5%	5%	10%	10%	12%	12%	12%	12%	12%	12%
8) Hotel accommodation		9%	5%	5%	5%	5%	5%		10%	12%	12%	12%	12%	12%	12%
9) Books			5%	5%	5%	5%	5%								
10) veterinary medicines		9%	5%	5%	5%	5%	5%								
11) mass media		9%	5%	5%	5%	5%	5%								

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
12) water, sewage and waste disposal		9%	5%	5%	5%	5%	5%								
13) funeral services			5%	5%	5%	5%	5%								
14) film and sports event tickets			5%	5%	5%	5%	5%								
15) natural gas supply population					5%	5%	5%	10%	10%						
16) electricity supply population					5%	5%	5%	10%	10%						
17) renovation services for citizens						5%	5%								
18) hairdressing					5%	5%	5%								

3. Electricity tax and subsidized electricity tax

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Electricity tax, EUR for MWh	**0.50**	**0.64**	**0.78**	**1.01**	**1.01**	**1.01**	**1.01**	**1.01**	**1.01**	**1.01**
Subsidised Electricity tax										
Electricity in the production of which fossil energy resources were used	-	-	-	-	-	-	-	15%	15%	15%
Electricity in the production of which renewable energy resources were used	-	-	-	-	-	-	-	10%	10%	10%
Stations that provide a centralized heat system and the subsidized electricity tax rate has a direct impact on the final heat tariff users	-	-	-	-	-	-	-	5%	5%	5%

4. Real estate tax

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Immovable Property Tax	**1.5%**	**1.0%**	**1.0%**	**1.5%**	**1.5%**	**1.5%**	**0,2-3%**	**0,2-3%**	**0,2-3%**	**0,2-3%**
For land and buildings				1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Untidy property							>1,5%	>1,5%	>1,5%	>1,5%
Residential houses if cadastral value does not exceed EUR 56 915	-	-	-	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Residential houses with cadastral value between EUR 56 915and EUR 106 715	-	-	-	0.2%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Residential houses if cadastral value are above EUR 106 715	-	-	-	0.3%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%

5. Lottery and gambling tax

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Lottery and gambling state duty										
Roulette, per year for each year	13 660	13 660	13 660	13 660	15 026	17 279	17 279	17 279	17 279	18 000
Cards and dice games, per year for each year	13 660	13 660	13 660	13 660	15 025	17 279	17 279	17 279	17 279	18 000
Slot machines, per year for each games machine site	2 390,42 / 3 244,15	3 390,42 / 3 244,15	2 390	2 390	2 732	3 142	3 142	3 142	3 142	3 204
The success of the game on the phone,% of income from the organization	10%	10%	15%	15%	15%	15%	15%	15%	15%	15%
Totalizator and betting, % of income from the organization	42686,15 +10%	42,686 +10%	15%	15%	15%	15%	15%	15%	15%	15%
Bingo, % of income from the organization	17 074,46 – 51 233,39	17 074,46 - 51 223,39	10%	10%	10%	10%	10%	10%	10%	10%
Gambling using telecommunications, % of income from the organization	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Lotteries tax on lotteries and instant lotteries,% of ticket sales	**8%**	**8%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**

6. Company car tax and vehicle exploitation tax

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Company Car Tax															
until 2000 cm³	-	-	-	-	-	-	-	-	-	27.03	27.03	27.03	27.03	27.03	29.0
between 2001 cm³ and 2500 cm³	-	-	-	-	-	-	-	-	-	42.69	42.69	42.69	42.69	42.69	46.0
above 2500 cm³	-	-	-	-	-	-	-	-	-	56.91	56.91	56.91	56.91	56.91	62.0
Electric Vehicle	-	-	-	-	-	-	-	-	-	42.69	42.69	42.69	42.69	42.69	10.0
Other company car	-	-	-	-	-	-	-	-	-	42.69	42.69	42.69	42.69	42.69	46.0
Vehicle exploitation tax (of gross weight per year for each year)															
For passenger car, if the car is not in Table1															
until 1500 kg	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	34.15	35.57	35.57	35.57	35.57	35.57	35.57
1501-1800 kg	34.15	34.15	34.15	34.15	34.15	34.15	34.15	34.15	68.3	75.41	75.41	75.41	75.41	75.41	75.41
1801-2100 kg	64.03	64.03	64.03	64.03	64.03	64.03	64.03	64.03	106.72	128.06	128.06	128.06	128.06	128.06	128.06
2101-2600 kg	76.84	76.84	76.84	76.84	76.84	76.84	76.84	76.84	135.17	162.21	162.21	162.21	162.21	162.21	162.21
2601-3000 kg	102.45	102.45	102.45	102.45	102.45	102.45	102.45	102.45	163.63	196.36	196.36	196.36	196.36	196.36	196.36
3001-3500 kg	102.45	102.45	102.45	102.45	102.45	102.45	102.45	102.45	163.63	226.24	226.24	226.24	226.24	226.24	226.24
above 3500 kg	110.98	110.98	110.98	110.98	110.98	110.98	110.98	110.98	213.43	256.12	256.12	256.12	256.12	256.12	256.12
For heavy goods vehicles															

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
until 1500 kg	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	17.07	36
1501-1800 kg	34.15	34.15	34.15	34.15	34.15	34.15	34.15	34.15	34.15	34.15	34.15	34.15	34.15	34.15	72
1801-2100 kg	64.03	64.03	64.03	64.03	64.03	64.03	64.03	64.03	64.03	64.03	64.03	64.03	64.03	64.03	138
2101-2600 kg	76.84	76.84	76.84	76.84	76.84	76.84	76.84	76.84	76..84	76.84	76.84	76.84	76.84	76.84	165
2601-3500 kg	102.45	102.45	102.45	102.45	102.45	102.45	102.45	102.45	102.45	102.45	102.45	102.45	102.45	102.45	219
3501-12000 kg	110.98	110.98	110.98	110.98	110.98	110.98	110.98	110.98	110.98	145.13	145.13	145.13	145.13	145.13	156

7. Excise duty

1. *Energy products*

	Petrol, *EUR per 1000 litres*				Gas Oil, *EUR per 1000 litres*					Kerosene and light fuel oil[6], *EUR per 1000 litres*	Heavy fuel oil[7], *EUR per 1000 kilogram*	Liquefied petroleum gas (LPG)[8], *EUR per 1000 kilogram*	Labelled fuel[9], *EUR per 1000 litres*	
	Unleaded			Leaded petrol										
Year	without bio	+bio 5%[1]	+bio 85%[2]		without bio	+bio 5%-30%[3]	+bio at least 30%[4]	100% bio[5]	Used for agriculture				without bio	+bio 5[10]
2004 (From May-1)	247.58	234.77	-	362.83	210.59	200.62	147.98	0	-	210.59	12.81	108.14	18.5	-
2005	273.19	258.96	-	399.83	233.35	220.55	162.21	0	-	233.35	14.23	118.1	19.92	-
2006	273.19	258.96	-	399.83	233.35	220.55	162.21	0	-	233.35	14.23	118.1	19.92	-
2007	297.38	283.15	44.82 From Jul-1	418.32	253.27	241.89	177.86	0	-	253.27	15.65	123.79	21.34	-
2008	324.41	308.76	16,22-97,32	422.59	274.61	261.81	193.51	0	-	274.61	15.65	123.79	21.34	-
2009 (From Feb-1)	382.75	364.26	19,14-114,83	426.86	332.95	317.3	233.35	0	-	332.95	15.65	128.06	21.34	-
2010	382.75	364.26	114.83	426.86	332.95	317.3	233.35	0	-	332.95	15.65	128.06	56.91 From Jul-1	21.34 From Jul-1
2011	411.21	382.75	123.36	455.32	332.95	332.95	233.35	0	-	332.95	15.65	128.06	56.91	21.34

	From Jun-1	411.21 From Jun-1	From Jun-1	From Jun-1										
2012	411.21	411.21	123.36	455.32	332.95	332.95	233.35	0	-	332.95	15.65	128.06	56.91	21.34
2013	411.21	411.21	123.36	455.32	332.95	332.95	233.35	0	-	332.95	15.65	128.06	56.91	21.34
2014	411.21	411.21	123.36	455.32	332.95	332.95	233.35	0	-	332.95	15.65	161	56.91	21.34
2015	411.21	411.21	123.36	455.32	332.95	332.95	332.95	0	50 From Jul-1	332.95	15.65	161	56.91	21.34
2016	436	436	131	455.32	341	341	341	0	50	341	15.65	206	56.91	21.34

2. *Alcoholic beverages*

Date	Wine	Other still fermented beverages, >6% vol.	Other still fermented beverages, ≤ 6% vol.	Intermediate products, till 15 %	Intermediate products, > 15 till 22 % vol.	Other alcoholic beverages	Beer[1]
	EUR per 100 litres					*per hectolitre*	*EUR per hl/degree of alcohol*
From May-1, 2004	42.69	42.69		59.76	99.6	782.58	1.742
from Jan-1, 2006	42.69	43.69		59.76	99.6	896.41	1.852
From Feb-1, 2009	56.91	56.91		59.76	99.6	1173.87	2.063
From Jul-1, 2009	56.91	56.91		59.76	99.6	1266.36	3.1
From Feb-1, 2010	64.03	64.03		64.03	99.6	1266.36	3.1
From, Jun-1, 2011	64.03	64.03		64.03	99.6	1337.5	3.1
From Jan-1, 2014	64.03	64.03		64.03	99.6	1337.5	3.1
from Aug-1, 2015	70	70	64	70	110	1360	3.8
From Mar-1, 2016	74	74	64	74	120	1400	4.2
From Mar-1, 2017	78	78	64	78	130	1450	4.5
From Mar-1, 2018	82	82	64	82	135	1500	4.8

3. Tobacco

Year	Cigarettes		Cigars and Cigarillos, *EUR per 1000 pieces*	Fine Cut Smoking Tobacco, *EUR per 1000 grams*	
	Specific excise, ***EUR per 1000 cigarettes***	*Ad valorem* excise, ***as % of TIRSP***		Finely sliced	Other
2004	9.0	10.0%	15.7	23.6	16.2
				27 (From May-1)	18.5(From May-1)
				29.9(From Jul-1)	
2005	9.8	10.5%	15.7	29.9	18.5
2006	10.8	14.8%	15.7	29.9	19.9
2007	12	19.2%	15.7	32.7	19.9
	(From Jan-1)	(From Jan-1)			
	14.2	25.0%			
	(From Jul-1)	(From Jul-1)			
2008	25.3	32.2%	15.7	32.7	19.9
2009	32	34.5%	15.7	32.7	19.9
				32,7 (From Feb-1)	
2010	32	34.5%	15.7	32.7	
	but not less than 68.30 EUR per 1000 cigarettes				
2011	35.6	34%	34.1 (From Jan-1)	41.3 (From Jan-1)	
	but not less than 73.99 EUR per 1000 cigarettes		37 (From Jul-1)	48.4 (From Jul-1)	
2012	35.6	34%	37	48.4	

Year	Cigarettes		Cigars and Cigarillos, *EUR per 1000 pieces*	Fine Cut Smoking Tobacco, *EUR per 1000 grams*	
	Specific excise, ***EUR per 1000 cigarettes***	*Ad valorem* excise, ***as % of TIRSP***		Finely sliced	Other
2013	35.6	34%	37	48.4	
2014	39.8	33.5%	39.8	55.5	
	but not less than 79.68 EUR per 1000 cigarettes (From Jan-1)				
	51.8	25.0%			
	but not less than 85,6 EUR per 1000 cigarettes (From Jul-1)				
2015	54.2	25.0%	39.8	55.5 (*including tobacco leaves)*	
	but not less than 89.80 EUR per 1000 cigarettes (From Jul-1)				
2016	56.2	25.0%	42.7	58 (*including tobacco leaves)*	
	but not less than 93.7 EUR per 1000 cigarettes (From Jul-1)				
2017	58.2	25.0%	42.7	60 (*including tobacco leaves)*	
	but not less than 97 EUR per 1000 cigarettes (From Jul-1)				
2018	60	25.0%	45	62 (*including tobacco leaves)*	
	but not less than 100 EUR per 1000 cigarettes (From Jul-1)				

4. Natural gas

Usage	From Jul-1, 2010 till August 31, 2010	From Sep-1, 2010 till Jun-30, 2011	From Jul-1, 2011	From Jan-1, 2014
As a fuel, *EUR per 1000 m³*	99.6	-	99.6	99.6
As a heating fuel, *EUR per 1000 m³*	22.2	-	17.07	17.07
As a fuel for industrial production and processing of agricultural raw materials processes, *EUR per 1000 m³*	-	-	-	5.65

5. Coffee and sweet drinks

Products	From May-1, 2004 till Jan 31, 2009	From Feb-1, 2009 till Dec-31, 2010	From Jan-1, 2011
Coffee, *EUR per 100 kg*	71.14	142.29	142.29
Sweet soft drinks, *EUR per 100 litres*	2.85	5.69	7.4