An in-depth analysis of the impact of reforms on inequality – Latvia

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Abstract

Latvia faces significant challenges in terms of both income inequality (despite some recent progress) and inequality of opportunity. This paper examines to what extent these inequalities can be reduced by recent reforms, both those addressing the country-specific recommendations (CSR) by the EC and others, as well as those yet to be implemented. According to microsimulation results, differentiation of the non-taxable minimum is not well-targeted on low-income earners, while raising the size of the family state benefit paid for the second child and third child, although not directly related to CSR, appears better targeted. The solidarity tax on top earners, also not directly related to the CSR and criticized for competitiveness concerns, clearly reduces inequality. Recent increases in minimum wage are also likely to reduce income inequality, but earned income tax credit would be a more targeted policy. The paper concludes that the inequality-reducing effects of recent reforms implemented in according with CSR has been small. Some other reforms, however, did have a more substantial effect, and some recently launched reforms, as well as reforms yet to be implemented (such as improving accessibility, quality and cost-effectiveness of the healthcare system and increasing opportunities for work-based learning) have a much larger potential.

Keywords*:* income inequality, equal opportunities, public policy, targeting.

JEL: H24, I14, I38.

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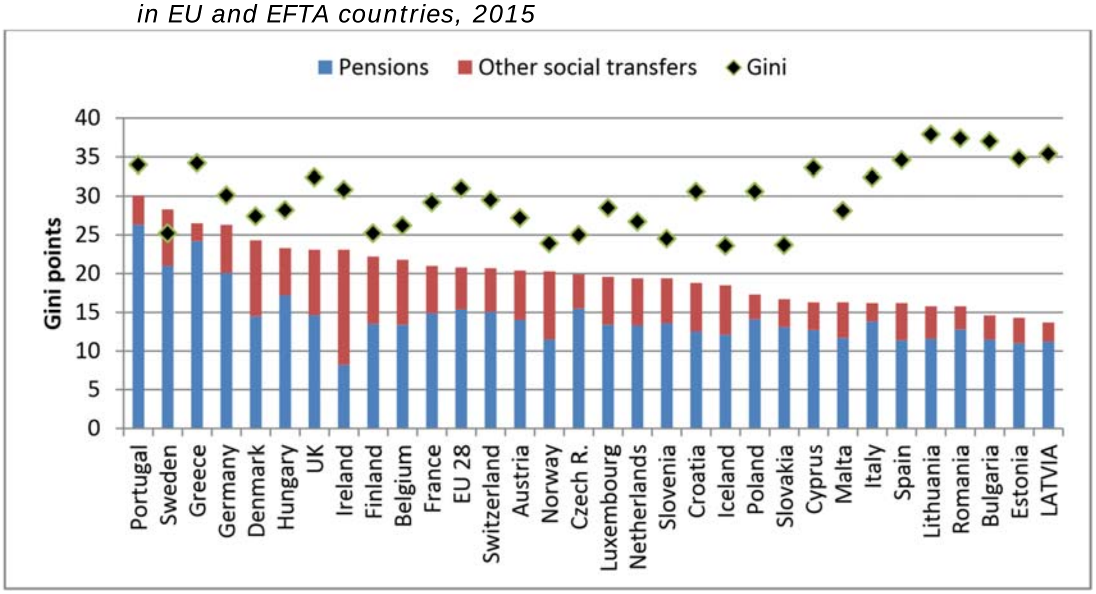
1. Introduction: Overview of inequality in Latvia

The level of income inequality in Latvia is high. For nine out of ten years between 2006 and 2015, the Gini coefficient of equivalised disposable income[3] in Latvia was either the highest or the second highest among the EU member states. In 2015, the income inequality was higher only in Lithuania (with 2.5 points ahead), Romania (with 2.0 points ahead) and Bulgaria (with 1.6 points ahead), see Figure 1. According to the OECD (2016a) and World Bank (2017) conclusions, one of the reasons of high inequality in Latvia is weak impact of pensions and other social transfers, as well as direct taxes, on reducing inequality (for social transfers, see Figure 1; for direct taxes, see Leventi & Vujackov, 2016: Table 4; and World Bank, 2017: Figure 10).

Figure 1. Gini of equivalised disposable income and its reduction due to social transfers in EU and EFTA countries, 2015



Notes: Ireland and Switzerland: data refer to 2014.
Sources: Eurostat (ilc_di12, ilc_di12b, ilc_di12c) and own calculation.

Among the factors behind high inequality is a very heterogeneous labour market "with sizeable regional disparities, a very large share of low-paid jobs, and large minority groups who can face specific labour market problems" (OECD, 2016a). Figure 2 presents large and growing (since 2011) regional disparities in employment, as well as ethnic and citizenship gaps which re-emerged during the crisis and persist since then. For various ethnic gaps in the Latvian labour market see Hazans (2007, 2008, 2010, 2011, 2015, 2016), Hazans et al. (2017), Lehmann et al. (2015), OECD (2016a), and World Bank (2015). Other factors contributing to inequality include low union and collective bargaining coverage (Eurofound, 2015b; OECD, 2016a), high returns to tertiary education and low returns to secondary education (Hazans, 2007 and 2008; OECD, 2016a; Hazans et al., 2017). Lehmann et al. (2015) identify low-educated males as a particularly vulnerable group, and World Bank (2015) points to the population aged 50+.

According to the OECD (2016a), Latvia's earnings inequality is the highest among European OECD countries. The gap between low and high-income earners in Latvia is large. In 2014, net earnings of full-year, full-time workers near the top of the income

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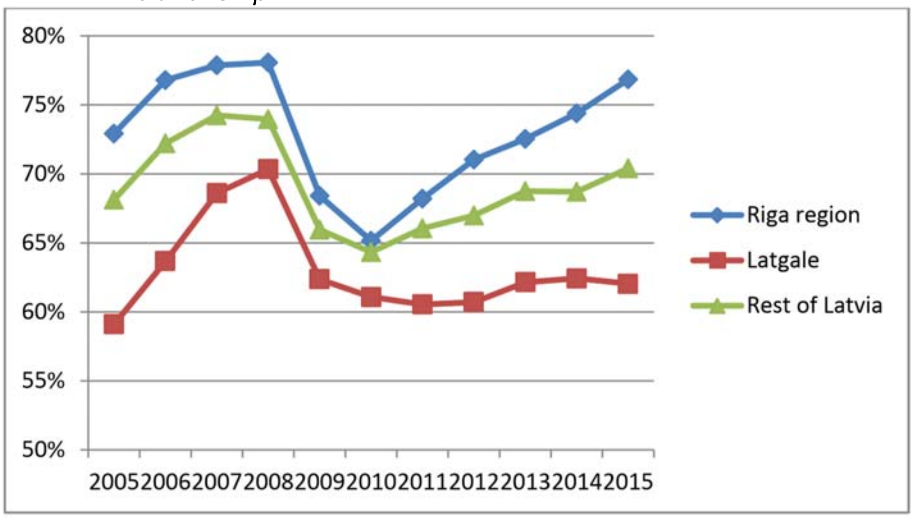
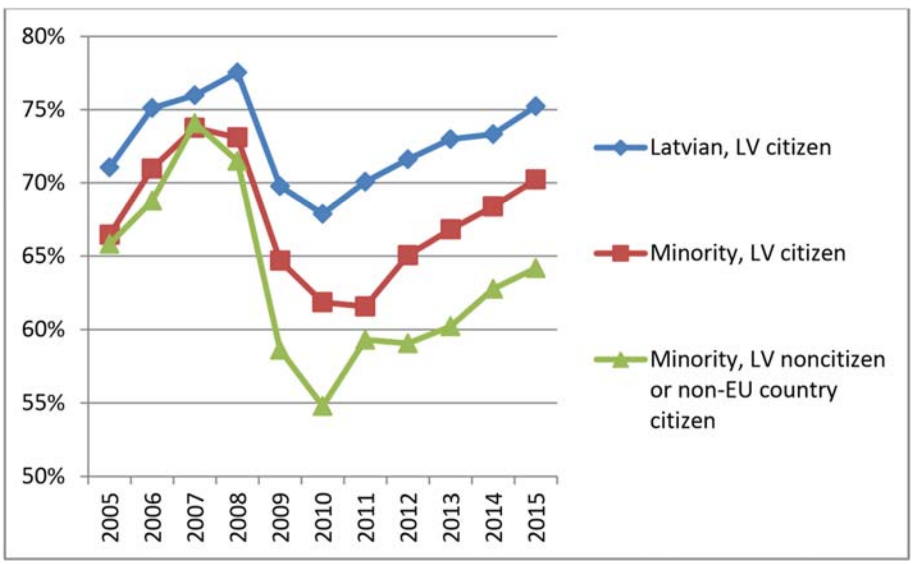
[3] *Eurostat* statistics based on the EU-SILC. Following Eurostat we refer to the survey year, although the income analysed is in fact that of the previous calendar year.

distribution (the 90th percentile) were 3.93 times as high as of those near the bottom (the 10th percentile) according to EU-SILC data, while a similar ratio for declared earnings was even higher (4.13) according to full-coverage administrative data. However, between 2008 and 2014, the declared earnings ratio P90/P10 decreased from 5.07 to 4.13 for net earnings and from 5.59 to 4.32 for gross earnings. These reductions in earnings inequality were driven both by faster gross earnings growth among low-income earners and by recent increases in non-taxable minimum.

Figure 2. Employment rate in Latvia, age 20-64, 2005-2015, by region, ethnicity and citizenship





Notes: Riga region includes Riga and its surroundings (Pieriga). Latgale region borders with Russia and Belarus. "Rest of Latvia" includes Vidzeme, Zemgale and Kurzeme regions. Ethnic minorities are mostly Russian speaking and account for 37% of population.
Sources: Calculation with LFS microdata.

The degree of redistribution generated by labour taxes (personal income tax – PIT - and social security contributions - SSCs) is extremely low: the difference between the Gini of gross and net declared earnings is around 1 Gini point during the period 2008–2014[4]. This is explained by the flat PIT rate combined with relatively low non-taxable minimum; SSC rate is essentially flat as well[5].

The OECD (2016a) describes Latvia's income taxation as "one of the least progressive in Europe and the OECD". The labour tax burden for low-income earners stays particularly high, raising concerns on incentives for labour supply (Strokova & Damerau, 2013; OECD, 2015; World Bank, 2017). Despite frequent changes of the Latvian tax and benefit system, the income inequality has not been significantly reduced. Last measures taken for making the current tax system more progressive and equitable were the differentiation of the non-taxable minimum while increasing its minimum amount and the introduction of the solidarity tax, both measures came in force in January 2016. The policy makers are examining the further options for reduction of income inequality.

This review identifies the key reforms and measures implemented by Latvia in response to the country-specific recommendations made in 2015 and 2016 with a particular focus on taxation (including direct and indirect taxes) and labour market policy, where there is evidence of proven or anticipated significant impact on inequalities. The review also covers other important reforms undertaken during the last two years if there is visible or expected impact on inequality.

2. Country-specific recommendations and their impact on inequalities

2.1 Country-specific recommendations

This section takes an in-depth look at the impact of three reforms recently implemented in Latvia on inequality. All reforms examined in this section were introduced during the last two years (2015-2016) and correspond to EC country-specific recommendations (CSRs) for Latvia from 2015 and 2016. The policy changes discussed had an impact on inequalities or they are expected to have such an impact in the future.

CSR (2015 and 2016): The reduction of the tax wedge for low-income earners by shifting the tax burden to other sources less detrimental to growth

In 2016, Latvia introduced two measures aimed at reduction of income inequality and making the tax system more progressive. One of them (differentiated non-taxable income) is related to the above recommendation as helps to reduce the tax wedge for low-income earners (although not by shifting the tax burden to other sources; this recommendation remains unaddressed and is discussed in Section 2.2). The second measure which reduces inequality, the solidarity tax, is not directly related to any of the CSRs and will be discussed in Section 3.

Differentiated non-taxable income

The non-taxable income has been increased and is set to be differentiated since January, 2016. This reform stipulates a maximum monthly allowance to be EUR 1 200 per year and to be applied to annual income that does not exceed EUR 4 560. For every additional euro earned, the allowance is reduced by EUR 0.0403 (withdrawal rate for differentiated

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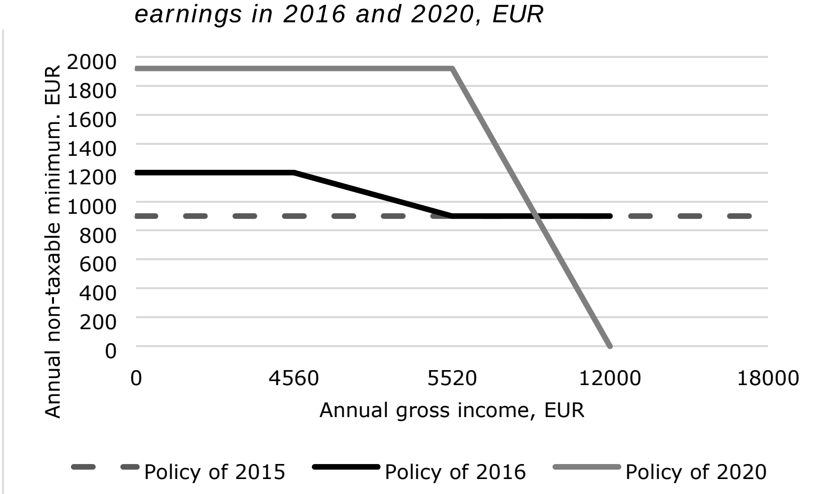
[4] This finding holds both for workers earning at least 12 monthly minimum wages (proxy for full year, fulltime employees) and for those with annual earnings of at least one monthly minimum wage; The Gini of net earnings is 34.3 in the former case and 46.1 in the latter. Source: Authors' calculation with administrative data for 2008–2014.

[5] Old-age pension recipients and some other small categories have somewhat lower SSC rates. In 2014–2015, SSC was slightly regressive because of a ceiling on the annual amount of SSC, but in 2016 earnings above the ceiling are subject to solidarity tax equal to SSC (see Section 3 below).

non-taxable allowance is 0.0403). For annual income above EUR 12 000 the non-taxable income is EUR 900 (Latvijas Vēstnesis, 2016a).

The differentiation of the non-taxable minimum is being introduced gradually starting with 2016: the maximum non-taxable allowance will be increased from EUR 1 200 (in 2016) to EUR 1 920 (in 2020), while the minimum tax allowance will reach zero (starting with 2020) when annual income exceeds EUR 18 000. The withdrawal rate for differentiated non-taxable allowance will increase from 0.0403 (in 2016) to 0.1538 (in 2020) in a gradual way (Figure 3).

Figure 3. Differentiated non-taxable minimum at different level of annual gross earnings in 2016 and 2020, EUR



Source: Authors' calculation with data from Latvijas Vēstnesis (2016a).

According to the microsimulation results prepared for the World Bank (2017), the income effect of the differentiation of the non-taxable minimum has an inverse U-shaped form and for both 2016 and 2020 is growing up to the fifth decile of equivalised disposable income. As seen in Figure 4 below, in 2016 all deciles benefit from the differentiated non-taxable minimum, while in 2020 the income of the top decile decreases in comparison to the baseline scenario. This way, this policy, especially in its final envisaged form, is going to reduce the gap between the rich and the poor, but the size of this effect is small (see Table 1).

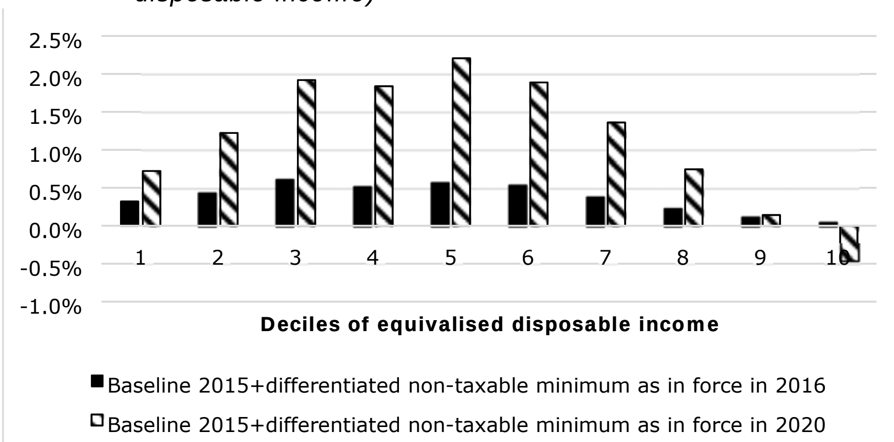
Table 1. The simulated effect of introduction of differentiated non-taxable minimum on the income inequality

	Baseline 2015	Baseline 2015 + differentiated non-taxable minimum as in force in 2016	Baseline 2015 + differentiated non-taxable minimum as in force in 2020
S80/S20	6.274	6.251	6.191
Decile dispersion ratio D10/D1	10.266	10.239	10.146
Gini	0.361	0.360	0.357

Notes: The baseline scenario corresponds to the actual tax system in force in 2015.
Sources: EU-SILC microdata and authors' calculation prepared for the World Bank (2017) using EUROMOD methodology.

Furthermore, despite the fact that the implemented reform was not well-targeted on low-income earners, and the beneficiary group is large, the differentiation of the non-taxable minimum has a potential for decreasing the overall income inequality (as measured by Gini coefficient) by 0.1 percentage point in 2016 and by 0.4 percentage points in 2020 (Table 1). Again, this is a small effect.

Figure 4. The simulated effect of differentiated non-taxable minimum on the equivalised disposable income (change vs baseline, by deciles of equivalised disposable income)



Notes: The baseline scenario corresponds to the actual tax system in force in 2015. *Sources:* EU-SILC microdata and authors' calculation prepared for the World Bank (2017) using EUROMOD methodology.

CSR (2016): Improve the adequacy of social assistance benefits and step up measures supporting recipients in finding and retaining work, including through increased coverage of activation measures

In line with these recommendations (as well as with the 2015 recommendation to take measures to increase employability), at the beginning of 2016 the Latvian Ministry of Welfare has launched the project "Support for long-term unemployed"[6] aimed to improve the labour market opportunities of long-term unemployed. Removing barriers for long-term unemployed can improve their earnings and reduce both income inequality and inequality of opportunities in the labour market.

According to information provided to the authors by the Ministry of Welfare in December, 2016, the project includes the following measures:

- individual and group consultations with specialists, including career advisors, psychologists, psychotherapists, which contribute to an increase of the self-confidence of unemployed and increase of motivation to integrate into the labour market;
- health checks determining the suitability of the proposed work;
- active employment measures provided in the individual job-seeking plan;
- identification of professional suitability, interests and motivation to learn, assessing health status, as well as skills adequate for a particular profession or training programme (to be launched in 2017);

[6] See The Latvian Ministry of Welfare (2015).

- job search motivation programmes and provision of mentor social services (planned to start in early 2017);
- support measures for the unemployed with addiction problems;
- project staff training;
- awareness-raising public events (seminars for employers, non-governmental organizations and social service employees).

In general, about 20 000 of the long-term unemployed planned to be involved in this activity up to January 2024. According to the State Employment Agency (SEA) data, at the end of August 2016, the long-term unemployed comprised 30.9% of the total number of registered unemployed, just 0.3 percentage points below the level in the previous year corresponding period. No significant changes compared to the situation a year ago are found also in the profile of long-term unemployed (Table 2).

Table 2. Profile of long-term registered unemployed: 30 Sept 2016 vs 30 Sept 2015

	Sept 30, 2015	Sept 30, 2016
Average unemployment duration, days	999	952
Share of unemployed 3 years and more,%	46.1	44.2
Share of youth,%	3.1	2.7
Share of persons age 50+,%	52.3	53.1
Share of persons with disabilities,%	18.2	20.3
Share of Latgale region,%	50.8	51.9
Share of Kurzeme region,%	13.8	14.2
Share of Riga region,%	14.8	14.2
Share of Vidzeme region,%	11.5	11.0
Share of Zemgale region,%	9.1	8.7
Share of low-educated,%	23.8	23.7
Share of tertiary-educated	8.9	9.4
Exit to employment in 9 months, number of persons	11018	11018
Of which after completing some ALMP measure	7369	6689

Sources: State Employment Agency data.

Nevertheless, it is too early to evaluate the efficiency of the integration measure, as a large number of events planned to be provided by the project have not even been started. Furthermore, such an evaluation should be based on sound econometric methodology.

CSR (2016): Speed up the curricula reform in vocational education, establish with the involvement of social partners a regulatory framework for apprenticeship-type schemes and increase the offer for work-based learning[7].

The curricula reform in vocational education is still in the start-up process as of 2016. However, to address the recommendation, a new form of education – the work environment based training was introduced by the Cabinet of Minister Regulation in July

[7] This CSR of 2016 reinforces the 2015 CSR to "Improve vocational education and training, speed up the curricula reform and increase the offer for work-based learning".

2016 (Latvijas Vēstnesis, 2016b). The regulation stipulates that the student obtains the practical skills and knowledge in a real working environment of an enterprise or organisation for at least half of the time of studies while the theoretical knowledge is acquired in an education institution responsible for implementation of the particular vocational education programme (which should be licensed).

The choice of enterprise or organisation can be individual-specific but should be approved by the education institution and supported by an individual plan of implementation of the programme, as well as a contract between the education institution, the student (or his legal representative) and the enterprise or organisation providing the training in the work environment. Both the education institution and the enterprise assign representatives responsible for implementation of the programme. The management of the ESF funding for the work environment based training has been delegated to the Employers' Confederation of Latvia (LDDK). This reform certainly has a potential to reduce the "inequality of opportunities" of young people without work experience in the labour market; see OECD (2010) and Eurofound (2015a) for evidence on the positive impact of such a system on youth labour market outcomes and labour market performance in general.

There is, however, one aspect of the reform which deviates substantially from the best practice: according to the regulation, the enterprise providing the work environment based training is not obliged to provide the student with an employment contract (as is the case e.g. in Germany, see Saniter & Deitmer, 2013). Instead, the enterprise can pay a scholarship as a remuneration for the work performed during the training. This means lack of social protection for the youth engaged in such training.

2.2 Unaddressed country-specific recommendations and their hypothetical impact on inequality

This section discusses three CSRs which have been given to Latvia both in 2015 and in 2016 but remain *de facto* unaddressed (although some preparatory activities have been completed in all cases):

- exploit a growth-friendly tax shift towards environmental and property taxes (the 2015 CSR refers, more generally, to "other sources less detrimental to growth")[8];
- improve the adequacy of social assistance benefits;
- improve the accessibility, quality and cost effectiveness of the healthcare system.

Shifting the tax burden from labour towards environmental and property taxes

From a growth perspective, the tax burden is recommended to shift away from labour to other sources less detrimental to growth. There are three categories of taxes that have been found and recognized as among those which are the least detrimental to growth: consumption taxes; environmental taxes; and property taxes - see Mankiw et al. (2009); Prammer (2011); Arnold et al. (2011). On the other hand, there is recent evidence that suitably designed reforms increasing direct taxation and reducing some of the indirect taxes can promote equity and efficiency (Martorano, 2014). Paetzold & Tiefenbacher (2016) simulate shifting the tax burden from SSC to property by replacing cadastral values with the market ones and find only a modest distributive effect and almost no change in Gini.

[8] Similar recommendations have been given also by the OECD (OECD, 2016a; Brys, 2016).

In Latvia, no measures have been taken concerning the shift of the tax wedge from labour to any of the above mentioned categories of taxes during the last two years.

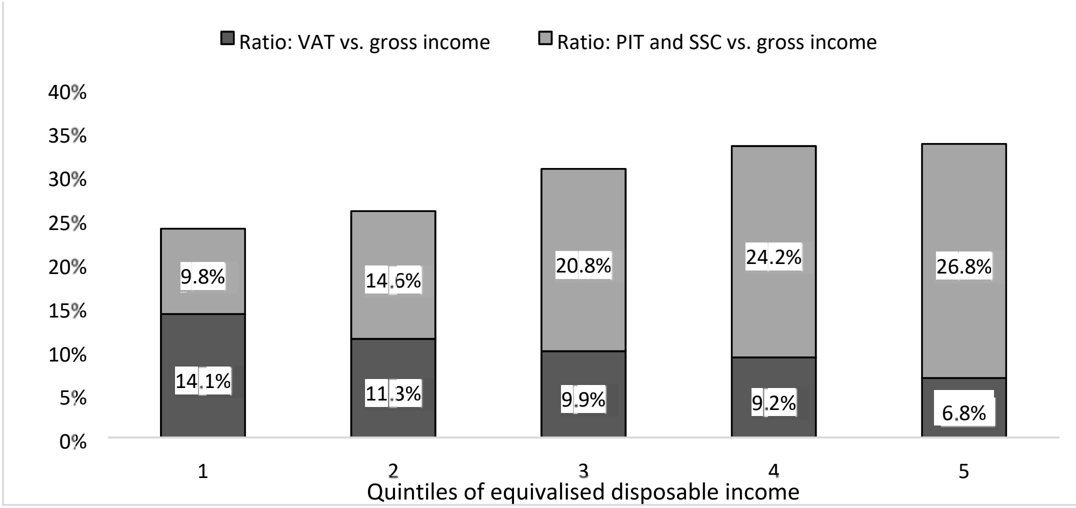
The legislative proposals for reform of immovable property tax (which is likely to include reassessment of cadastral values which are currently well below the market values) are in the preparation stage. Several factors complicate this process. First, there are institutional barriers: the cadastral values are set by the State Land Service which reports to the Ministry of Justice, while the tax system in general is of course responsibility of the Ministry of Finance; heads of these two ministries represent different parties of the ruling coalition, and these parties have different priorities. Second, 100% of the immovable property tax revenues and 80% PIT revenues currently go to the local governments, while 100% of SSC revenues go to the state special budget. Shifting the tax burden from SSC and/or PIT to the property tax will require changes in these arrangements and therefore difficult negotiations between the stakeholders. Finally, within the political and business elite there are strong vested interest groups lobbying against increasing the property tax. However, as argues the former Minister of economy Vjačeslavs Dombrovskis, the property tax reform in Latvia, if implemented properly, is likely to reduce inequality (see Dombrovskis, 2012).

The World Bank in its Latvia Tax Review (World Bank, 2017) provides the analysis of VAT contribution to inequality. The analysis is performed by combining the European Union Statistics on Income and Living Conditions (hereafter - EU-SILC) microdata for year 2015 (which includes incomes received in 2014) with the Latvian Household Budget Survey (HBS hereafter): VAT spending is assigned to each EU-SILC household using information imputed from HBS-2014[9].

The World Bank (2017) concludes that while effective total rate of PIT and SSC is, effectively, progressive (it grows from less than 10% for the first quintile to almost 27% for the fifth quintile, see Figure 5), it appears that VAT is, effectively, regressive: estimated share of VAT means that household gross income falls steadily from 14.1% in the first quintile to 6.8% in the top quintile (Figure 5).

[9] See World Bank (2017: Annex F) for the details of methodology of the imputation. 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

Figure 5. Estimated VAT, PIT and SSC as shares of household gross income, 2014, by quintiles of equivalised disposable income



Sources: Authors' calculation for World Bank (2017: Figure 7) with microdata of EU-SILC 2015 and HBS 2014 using EUROMOD methodology.

In quantitative terms, 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.

There are three VAT rates currently applied in Latvia, i.e., 21%, 12%, and 0%. Since the VAT is effectively regressive, the general increase of standard VAT rates will actually lead to the increase of the income inequality as the individuals from lower quintiles spend a larger share of their income for paying VAT than the individuals from the higher quintiles. Such a shifting of taxes from labour to consumption would have a negative effect especially on pensioners, who make a large part of the lower quintiles of equivalised disposable income: they do not significantly benefit from lower labour taxes but would be burdened with higher VAT rates. Shifting the tax burden to VAT should therefore be carefully considered before taking actions.

As far as differentiated VAT rates (and broadening the scope of application of reduced rates) are concerned, World Bank (2017) refers to the literature which suggests that the trade-off between equity and efficiency can be improved and differentiated VAT rates should be used for redistribution if, conditional on declared labour earnings, demand for goods and services still vary with earnings capacities of individuals (i.e. their wages per hour worked). While this condition likely holds in Latvia, the situation is complicated by substantial incidence of undeclared (or "envelope") earnings, especially in the lower half of wage distribution[10].

Another source for raising extra budget revenues to cover expenses from shifting a tax burden from labour using VAT is to continue to address the so-called "VAT gap" that is defined as the gap between the VAT theoretical tax liability (VTTL) and actual VAT revenues and provides an estimate of revenue loss due to tax fraud, tax evasion and

[10] See OECD (2016a: p. 26, 32, 39, 83, 144); Putniņš and Sauka (2016); World Bank (2017: p.35–40).

tax avoidance, but also due to bankruptcies, financial insolvencies or miscalculations (see European Commission, 2016).

CASE (2016) estimates the VAT gap for the EU countries during the period of 2010–2014 and report the VAT gap in Latvia amounted to 23% of VTTL in 2014 (the eighth highest in the EU-27). The VAT gap change since 2010 was equal to 11 percentage points (the VAT gap was the fourth highest in the EU-27 in 2010) and VAT revenues increased by 48.7% (Eurostat, CASE, 2016). For comparison, the VAT gap was estimated at 10% in Estonia and 37% in Lithuania in 2014, while the average gap across all EU countries was 14%.

During the time period 2010-2014, the decline in the VAT gap in Latvia was accompanied by the introduction of measures against tax fraud: as of 2014, a new register of "high risk" entities was created with an obligation for the tax authorities to provide information on such individuals to the commercial register (CASE, 2016).

Improving the adequacy of social assistance benefits.

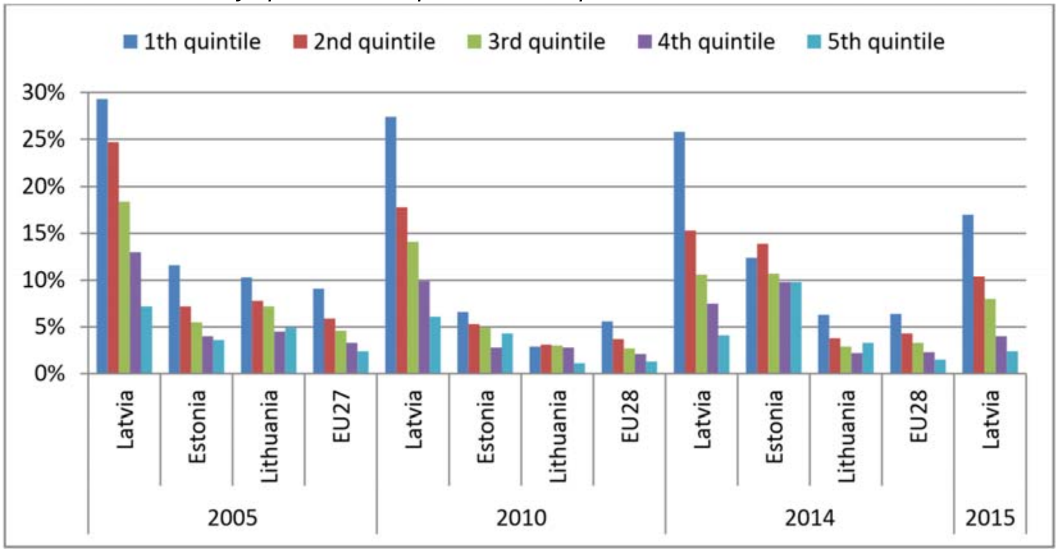
The problem of insufficient coverage and level of social assistance in Latvia has been identified also by the World Bank (2013) and OECD (2016a). An ambitious guaranteed minimum income (GMI) reform was developed and proposed by the Ministry of Welfare in 2014 (see Paparde, 2014). This reform, which would have a significant impact on reducing inequality, was praised by the OECD (2016a) and scheduled to be implemented in 2017, but the procedure of coordination with the local governments have not been completed because the central government could not guarantee cofinancing requested by the local governments, and the legislative process has been delayed. An updated version of the reform proposal is expected to be put on the Cabinet of Ministers agenda in the near future.

Improving the health care system

As far as the Latvian healthcare system is concerned, in each of the last three years (2014–2016) a CSR called for improving its accessibility, quality and cost-effectiveness, and in 2016 also for a "major structural reform in the health sector" (European Semester, 2016). Such a reform has a huge potential both in reducing inequality in opportunities and improving population health. Indeed, since 2009 Latvia features the highest in the EU incidence of self-reported unmet needs for medical examination because it is too expensive or too far to travel or due to long waiting lists[11]. Moreover (see Figure 6), this incidence in Latvia is much higher and has much steeper income gradient than in the two Baltic neighbours. Furthermore, there is also a significant ethnic gap (between non-Latvians and Latvians) in this indicator (Hazans et al., 2014: Table 5.9).

[11] Source: Eurostat, hlth_silc_08, based on EU-SILC data.

Figure 6. Incidence of self-reported unmet needs for medical examination because it is too expensive or too far to travel or due to waiting list, Baltic countries and EU28, by quintile of equivalised disposable income, 2005-2015



Sources: Elaboration on Eurostat data based on EU-SILC (hlth_silc_08); for 2015 – own calculation with the Latvian national *EU-SILC* microdata.

Although the reforms in the health care sector are yet to be implemented, the first steps have been taken at the end of 2016, based on recommendations of the World Bank study[12] (which focused on hospital volumes and quality of care in general, as well on four more specific fields: prevention and treatment of cardiovascular diseases and cancer; mental health; mother and child healthcare). The Ministry of Health has worked out a new document on location and development of high-intensity hospitals, as well as the general plan implementation of the health sector reforms in 2017, and the government has approved a new version of the requirements for quality of work of health care institutions (The Latvian Ministry of Health, 2016b, 2016c, 2016d).

3. Other important reforms and inequalities

Another measure to increase the progressivity of the labour taxation is the introduction of the **solidarity tax** on the high income employees that came into effect on January 1 2016. The solidarity tax is levied on the annual incomes above EUR 48 600. The solidarity tax rate is equal to the state social insurance contribution of 34.09% (23.59% paid by the employer and 10.5% by the employee). In essence, the new solidarity tax removes the cap on the social insurance contributions (which was, effectively, a regressive policy) but its proceeds will go to state general revenues and the contributors will not be entitled to increased social insurance benefits. The Latvian Ministry of Finance (2015) estimated that 4 700 individuals (or 0.6% of all employees) will be affected by the tax.

The introduction of the solidarity tax was extensively criticized by the business community and media (see e.g. Žukova, 2016) for competitiveness concerns (two other Baltic countries do not have such a tax) and the expedience of the imposition of new taxes when the tax evasion is high.

[12] See The Latvian Ministry of Health (2016a).

Mosberger (2017) analyses the introduction of the solidarity tax in 2016 in Latvia and estimates the extent to which taxpayers respond to marginal incentives. The analysis is based on full-coverage yearly administrative panel data for 2010-2014, as well as monthly panel data for 2015 and for the first six months of 2016 on employees with gross earnings of at least EUR 30 000 in 2015 or 2014. Based on this reform, the estimated elasticity ranges between 0.13 and 0.20 depending on the sample selection, showing that the high-income earners subject to solidarity tax on average generate less taxable income when facing a higher marginal tax rate. These estimates are around the average of the range of elasticity estimates in European countries; they should be seen, however as preliminary, as the data cover only first half of 2016. Nevertheless, according to the Latvian Ministry of Finance (see LETA, 2016; Reizniece-Ozola, 2017), tax revenues from the solidarity tax have been at the expected level, and this tax remains in force for 2017 (although is likely to be abandoned as soon as a more comprehensive approach to progressivity of the tax system will be adopted).

By reducing earnings of the top-income employees and (through social budget) increasing benefits paid to the rest of population, the solidarity tax clearly reduces earnings inequality.

An important but controversial reform is the **increase of the minimum wage level** - from EUR 320 in 2014 to EUR 360 in 2015 and EUR 370 in 2016. OECD (2016a) notes that Latvia has a unified statutory minimum wage without differentiation by region (despite the large regional wage disparities in Latvia) or group of workers. Since there is a large number of low-wage earners[13], the changes in a minimum wage affect a great number of workers and carry a substantial risk of negative employment effects, especially in lagging regions[14], while the effect of income inequality is theoretically ambiguous. Ferraro et al. (2016) analyse the effect of minimum wage increase on wage distribution in Estonia (where minimum wage is also not differentiated). They find substantial spill-over effects from the minimum wage to the lower percentiles of the wage distribution and conclude that minimum wage increases have reduced wage inequality in Estonia. This study, however does not account for possible employment effects.

One goal of minimum wage increases in Latvia is to reduce size of undeclared earnings in situations when the minimum wage is declared but the rest is paid "in the envelope". However, there is also a risk that unskilled workers can be priced out of the formal labour market. According to the World Bank (2017), "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".

As of 2015, **the size of the family state benefit** paid for the second child equals the standard amount multiplied by the coefficient of two, but the size of the benefit paid for

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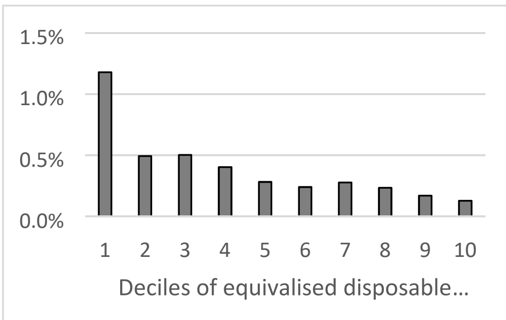
[13] OECD (2016a: Figure 1.10) shows that incidence of low pay (defined as the share of full time wage and salary workers earning less than two-thirds of median earnings) in Latvia is very high by international standards.

[14] Burkhauser (2014) discusses recent literature findings on negative employment effects from minimum wage increases, as well as on only weak (if any) effects on poverty reduction; he concludes that the earned income tax credit (EITC) is a much more targeted way to provide income to workers in poor families.

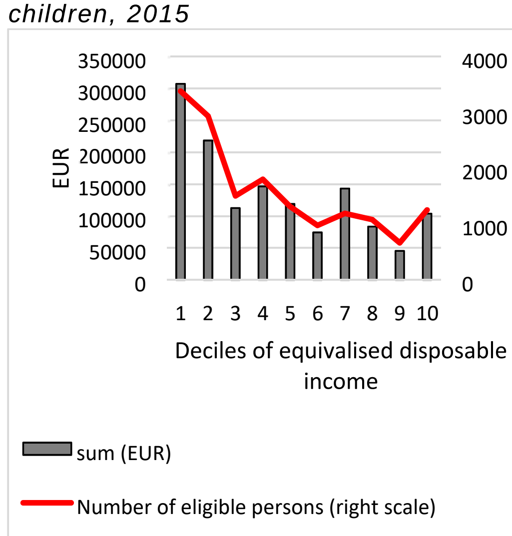
the third and each consequent child is multiplied by the coefficient of three. OECD (2016a) welcomes this decision as "these larger families are overrepresented among low-income groups". Indeed the lowest deciles are the main beneficiaries of the reform (see Figures 7 and 8). The increase in the size of the family state benefit leads to a slight decrease in Gini (by 0.1 point), in the decile dispersion ratio D10/D1 (from 10.279 to 10.172), and in the quintile share ratio S80/S20 (from 6.156 to 6.119).

Figure 7. The simulated effect of the state family benefit reform on the equivalised disposable income, by deciles of equivalised disposable income



Note: In the baseline scenario, the parameters of the tax-benefit system correspond to the actual policies as of 2015 while the family state benefit is granted by the old rules of 2014, i.e., the multiplier of the benefit amount is equal to one for all children. *Sources:* EU-SILC microdata and authors' calculation for the World Bank (2017) using EUROMOD methodology.

Figure 8. State family benefit of the parents of three and more dependent children, 2015



Note: The benefit is a lump sum granted to one of the parents of a dependent child. *Sources:* EU-SILC microdata and authors' calculation for the World Bank (2017) using EUROMOD methodology.

As of 2016, the **tax allowance for a dependant has been increased by EUR 10** (to EUR 175), while **a spouse or a parent can be considered a dependant of a tax payer only if they are disabled** in addition to the conditions that were previously in force (i.e., dependants do not work, do not receive unemployment benefit or unemployment stipend, old-age or disability pension and are not dependants of any other person, see Latvijas Vēstnesis, 2017).

As a whole, the reform of the allowance for dependants is found to increase the income inequality (see Table 3 for the changes in Gini coefficient, quintile share ratio and decile dispersion ratio).

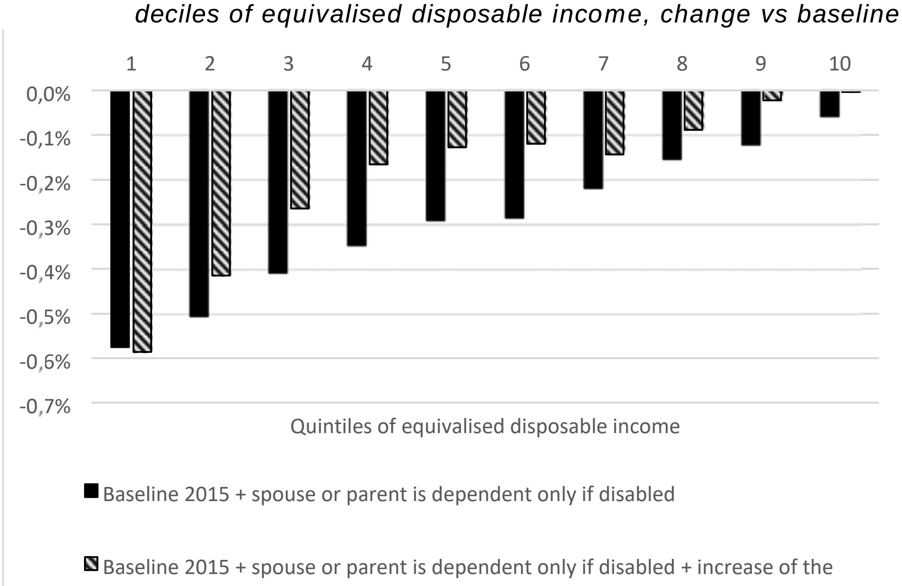
Table 3. The simulated effect of the changes in the policies of the granting the allowance for dependants and its amount

	Baseline 2015	Baseline 2015 + spouse or parent is dependant only if disabled	Baseline 2015 + spouse or parent is dependant only if disabled + increase of the allowance for dependant
Quintile ratio S80/S20	6.119	6.146	6.146
Decile dispersion ratio D10/D1	10.172	10.225	10.232
Gini	0.347	0.348	0.348

Notes: In the baseline scenario, the parameters of the tax-benefit system correspond to the actual policies that are in force in 2015. *Sources:* EU-SILC microdata and authors' calculation for the World Bank (2017) using EUROMOD methodology.

The changes in the conditions for granting the allowance for dependants slightly reduce the household incomes, while the effect is higher for the lower deciles of the income distribution (See Figure 9). The increase of allowance for dependants on average lowers the expected negative effect on incomes.

Figure 9. The simulated effect of changes in the conditions of granting the allowance for dependants and its amount on the equivalised disposable income by deciles of equivalised disposable income, change vs baseline



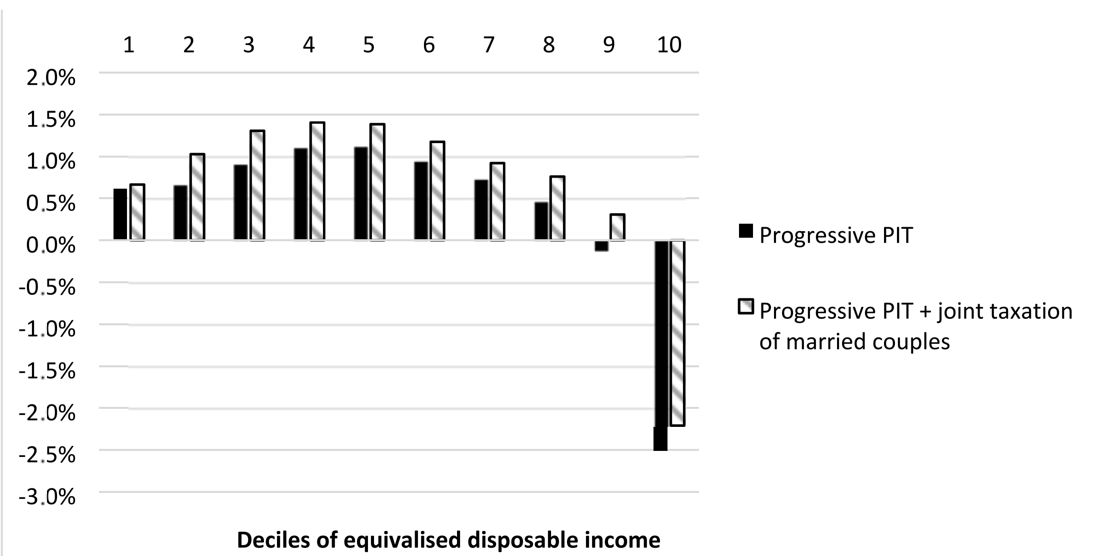
Notes: In the baseline scenario, the parameters of the tax-benefit system correspond to the actual policies as of 2015. *Sources:* EU-SILC microdata and authors' calculation for the World Bank (2017) using EUROMOD methodology.

By implementing the reform of changing conditions of granting the allowance for a dependent spouse, the policymakers have largely abolished the rights for a higher tax allowance in cases of non-working spouse. However, there are a number of economic arguments in favour of joint taxation of married couples, in the form of, e.g., doubling the basic tax allowance or doubling of the tax bands in case of progressive PIT rates.

World Bank (2017) summarizes the arguments for joint taxation as follows. *First*, married couples typically have a common budget and hence the couples rather than individual partners are the economic units. S*econd*, it is well documented in labour economics literature that labour 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 labour supply of the partner whose marginal productivity in the household production (e.g. in childcare) is higher than in the market, and this might be combined with increase in work hours and labour income of the other partner. *Fourth*, joint taxation is likely to reduce administrative burden on the SRS. *Last*, but not least: Politically, it is easier to introduce progressive PIT (that is under discussion of Latvian policy makers) 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.

The World Bank (2017: p.167-168) assessed the effect of introduction progressive PIT rates simultaneously with and without joint taxation of married couples on the income inequality. The findings (see Figure 10 and Table 4) shows that "introduction of joint taxation slightly (by less than 0.5%) improves household income across the income distribution) while … the effect on inequality is negligible".

Figure 10. Simulated effect of introduction of progressive PIT and joint taxation of married couples on the equivalised disposable income, change vs baseline



Notes: In the *Baseline* scenario, the parameters of the tax-benefit system correspond to the actual policies that are in force in 2015. No scenarios (including the baseline) include tax allowance for non-working spouse (EUR 165 per month). *Progressive PIT:* Tax system 2015, progressive PIT rates (19% up to income EUR 360, 23% up to EUR 1300, top rate=29%), progressive PIT system applied to the sum of income from employment and self-employment, tax allowance for non-working partners is abolished. *Joint taxation of married couples:* tax bands are doubled, opportunity to get unused partner's non-taxable minimum. *Sources:* EU-SILC microdata and authors' calculation for the World Bank (2017) using EUROMOD methodology.

Table 4 presents the main inequality indicators in the baseline case and after introducing progressive PIT with and without joint taxation of married couples.

Table 4. Progressive PIT with and without joint taxation of married couples: Impact on inequality

	Baseline 2015	***Progressive PIT rates***	
		Not joint taxation of married couples	Joint taxation of married couples
Quintile ratio S80/S20	6.139	5.998	6.008
Decile dispersion ratio D10/D1	10.222	9.905	9.93
Gini	0.348	0.342	0.342

Notes: In the *Baseline* scenario, the parameters of the tax-benefit system correspond to the actual policies as of 2015. No scenarios (including the baseline) include tax allowance for non-working spouse (EUR 165 per month). *Progressive PIT***:** Tax system 2015, progressive PIT rates (19% up to income EUR 360, 23% up to EUR 1300, top rate=29%), progressive PIT system applied to the sum of income from employment and self-employment, tax allowance for non-working partners is abolished. *Joint taxation of married couples:* tax bands are doubled, opportunity to get unused partner's non-taxable minimum. *Sources:* EU-SILC microdata and authors' calculation for the World Bank (2017) using EUROMOD methodology.

4. Conclusions

Latvia faces significant challenges in terms of both income inequality (despite some recent progress) and inequality of opportunity. According to recent surveys, 94% of the population perceive low salaries and social guarantees as the top threat to the Latvian society[15], and two-thirds do not perceive the tax system as fair[16].

Among the factors behind high inequality is the heterogeneous labour market with sizeable and growing regional disparities, low union and collective bargaining coverage, a very large share of low-paid jobs, and large minority groups (including ethnic minorities, mostly Russian speaking) facing specific labour market problems. High returns to tertiary education and low returns to secondary education also play a role. The population aged 50+, as well as low-educated males have been identified as particularly vulnerable groups.

For nine out of ten years between 2006 and 2015, the Gini coefficient of equivalised disposable income in Latvia was either the highest or the second highest among the EU member states. One of the reasons of high inequality in Latvia is weak impact of pensions and other social transfers, as well as direct taxes, on reducing inequality.

Latvia's earnings inequality is the highest among European OECD countries, but it has been somewhat reduced in recent years by faster growth of gross earnings among low-income earners and by increases in non-taxable minimum. The degree of redistribution generated by labour taxes (PIT and SSCs) is extremely low: the difference between the Gini of gross and net declared earnings is around 1 Gini point during the period 2008 – 2014. OECD (2016a) describes Latvia's income taxation as "one of the least progressive in Europe and the OECD".

[15] Factum (2015). Survey for the study "Current Security Problems in Latvia".
[16] SKDS (2017), p.19.

Responding to the CSR to reduce the tax wedge for low-income earners, Latvia has introduced in 2016 **differentiation of the non-taxable minimum**. According to microsimulation results, this reform is not well-targeted on low-income earners. The differentiation of the non-taxable minimum has a potential for decreasing the overall income inequality, although not by much. Another recent reform, raising **the size of the family state benefit** paid for the second child and third child, although not directly related to CSR, appears better targeted as its beneficiaries are overrepresented among low-income groups.

Another recent reform aimed at reducing inequality (although not directly related to CSR) is introduction of the **solidarity tax** on the high-income employees that came into effect on 1 January 2016. In essence, the solidarity tax removes the cap on the social insurance contributions (which was, effectively, a regressive policy) but its proceeds will go to state general revenues and the contributors will not be entitled to increased social insurance benefits. By reducing earnings of the top-income employees and (through social budget) increasing benefits paid to the rest of population, the solidarity tax clearly reduces earnings inequality. According to the Latvian Ministry of Finance, tax revenues from the solidarity tax have been at the expected level, and this tax remains in force for 2017 (although is likely to be abandoned as soon as a more comprehensive approach to progressivity of the tax system will be adopted. Recent **increases in minimum wage** are also likely to reduce income inequality, although concerns about negative employment effects remain; according to both OECD and the World Bank, differentiating minimum wage is an option worth trying, and earned income tax credit would be a more targeted policy than raising minimum wage.

Regarding the CSR **to improve the adequacy of social assistance benefits and step up measures supporting recipients in finding and retaining work,** a project "Support for long-term unemployed" was launched in 2016, but measurable effects are yet to be found (after the first nine months there have been no changes in the number and profile of long-term unemployed). On the other hand, the recent decision to increase the social insurance record required for receiving the unemployment benefit from 9 out of the last 12 months to 12 out of the last 16 months[17] does not, in our opinion, fit well with the CSR.

Regarding the CSR **to speed up the curricula reform in vocational education, and increase the offer for work-based learning**, a new form of education – the **work environment based training** has been introduced by the Cabinet of Minister Regulation in July 2016. This reform certainly has a potential to reduce the "inequality of opportunities" of young people without work experience in the labour market. There is, however, one aspect of the reform which deviates substantially from the best practice: the enterprise providing the training is not obliged to provide the student with an employment contract but can instead pay a scholarship (without SSC). This means lack of social protection for the youth engaged in such training.

Improving the adequacy of social assistance benefits is one of the unaddressed CSRs. An ambitious GMI reform has been developed and proposed by the Ministry of Welfare in 2014. This reform, which would have a significant impact on reducing inequality, was scheduled to be implemented in 2017, but the procedure of coordination with the local governments have not been completed due to budget constraints, and

[17] http://www.lvportals.lv/visi/skaidrojumi/284260-izmainas-socialaja-joma-2017gada/

the legislative process has been delayed. An updated version of the reform proposal is expected to be put on the Cabinet of Ministers agenda in the near future.

As far as **the Latvian healthcare system** is concerned, in each of the last three years a **CSR called for improving its accessibility, quality and costeffectiveness**. Such a reform has a huge potential both in reducing inequality in opportunities and improving population health. Indeed, since 2009 Latvia features the highest in the EU incidence of self-reported unmet needs for medical examination because it is too expensive or too far to travel or due to long waiting lists. Moreover, this incidence in Latvia is much higher and has a much steeper income gradient than in the two Baltic neighbours. Although the reforms in the health care sector are yet to be implemented, the first steps has been taken at the end of 2016, based on recommendations of a recent World Bank study. The Ministry of Health has worked out a new a document on location and development of high-intensity hospitals, as well as the general plan implementation of the health sector reforms in 2017, and the government has approved a new version of the requirements for quality of work of health care institutions.

To sum up, the inequality-reducing effects of recent reforms implemented in according with CSR has been small; some other reforms, however, did have a more substantial effect, and some recently launched reforms, as well as reforms yet to be implemented, have a much larger potential.

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Annex 1: Impact of Reforms on Inequalities: Summary

Short title of the reform	CSR–relevant (yes / no)	Policy area: labour taxation, consumption taxation, social protection, education, healthcare, etc.	Short description of the reform	Direction of impact on inequality: increasing / decreasing	The magnitude of impact on inequality: strong / moderate / limited	The reform has primarily impact on: income inequality or inequality of opportunity	Target groups: are reforms targeted at some particular groups?	Time aspect: impact on inequalities now / expected in the future
Differentiation of the non-taxable minimum	Yes	Labour taxation	Gradual introduction of the differentiated non-taxable minimum: the maximum non-taxable allowance will go up from EUR 1200 (in 2016) to EUR 1920 (in 2020), while the minimum tax allowance will reach zero (starting with 2020) when annual income exceeds EUR 18000. The withdrawal rate for differentiated non-taxable allowance will increase from 0.0403 (in 2016) to 0.1538 (in 2020) in a gradual way.	Decreasing	Limited	Income inequality	Low-income earners	Now and impact is expected to increase next few years
The solidarity tax	No	Labour taxation	The new solidarity tax removes the cap on the social insurance contributions, but its proceeds will go to state general revenues and the contributors will not be entitled to increased social insurance benefits	Decreasing	Moderate or limited	Income Inequality	High-income earners	Now
Project Support for long-term unemployed	Yes	Improving employability of disadvantaged groups	Project implements a wide range of measures that should contribute to improvement of the labour market opportunities of long-term unemployed and their integration into society	Decreasing	Moderate (if implemented efficiently)	Inequality of opportunity	Long-term unemployed	Expected in the future

Short title of the reform	CSR–relevant (yes / no)	Policy area: labour taxation, consumption taxation, social protection, education, healthcare, etc.	Short description of the reform	Direction of impact on inequality: increasing/ decreasing	The magnitude of impact on inequality: strong/ moderate/ limited	The reform has primarily impact on: income inequality or inequality of opportunity	Target groups: are reforms targeted at some particular groups?	Time aspect: impact on inequalities now / expected in the future
The work environment based training	Yes	Education and training	A new form of education is introduced: the student obtains the practical skills and knowledge in a real working environment of the company for at least half of the time of studies while the theoretical knowledge is acquired in an education institution.	Decreasing	Moderate	Inequality of opportunities	Students of vocational education institutions	Expected in the future
Hypothetical reform: shifting the tax burden to VAT	Yes	Consumption taxation	Extra proceeds from VAT can be obtained by (1) increasing the VAT rates; (2) differentiation of VAT rates; (3) reduction of VAT gap	Depends on the specification of the reform			All population (VAT payers)	Expected in the future
The increase of the minimum wage	No	The labour Law	The increase of the minimum wage level each year - from EUR 320 in 2014 to EUR 360 in 2015 and EUR 370 in 2016	Likely decreasing	Limited	Income inequality	The earners of minimum wage earners	Now
Change in the conditions of granting the allowance for dependant and its amount	No	Labour taxation	The tax allowance for a dependant has been increased by EUR 10 to EUR 175, while a spouse or a parent can be considered as dependant of a taxpayer only if they are disabled in addition to the conditions that were previously in force.	Increasing	Limited	Income inequality	Taxpayer having dependants	Now

Short title of the reform	CSR–relevant (yes / no)	Policy area: labour taxation, consumption taxation, social protection, education, healthcare, etc.	Short description of the reform	Direction of impact on inequality: increasing/ decreasing	The magnitude of impact on inequality: strong/ moderate/ limited	The reform has primarily impact on: income inequality or inequality of opportunity	Target groups: are reforms targeted at some particular groups?	Time aspect: impact on inequalities now / expected in the future
Hypothetical reform: Progressive PIT and joint taxation of married couples	Yes	Labour taxation	Introduction of progressive PIT rates: the reduced minimal rate for the low-income earners, a non-changed standard rate and increased top rate for high-income earners. Joint taxation of married couples includes doubled tax bands and opportunity to get unused partner`s non-taxable minimum.	Decreasing	Moderate	Income inequality	PIT payers and married couples	Expected in the future
The increase in the family state benefit for the second and each consequent child	Yes	Social benefits	The size of the family state benefit paid for the second child equals the standard amount multiplied by the coefficient of two, but the size of the benefit paid for the third and each consequent child is multiplied by the coefficient of three.	Decreasing	Limited	Income inequality	Parents of two and more dependant children	Now

Annex 2: Simulations of progressive PIT without and with joint taxation of married couples

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

1/ ***Progressive PIT rates***: Tax system 2015 + progressive PIT (19% up to income EUR 360, 23% for income above 360 and up to EUR 1 300, 29% for income above EUR 1 300 per month), applied to the sum of income from employment and self-employment.

We assume that tax allowance for non-working spouse (EUR 165 per month added to non-taxable income)[18] is not applied.

2/ ***Progressive PIT rates, joint***: Same as ***Progressive PIT rates*** for all taxpayers but married couples. For married couples:

(i) Tax allowance for non-working spouse (EUR 165 per month added to non-taxable income) does not apply[19]

(ii) Non-taxable income for the couple is EUR 150 per month

(iii) PIT rates 19%, 23%, and 29% apply, respectively, for joint labour income up to EUR 720, above EUR 720 up to EUR 2 600, and above EUR 2 600.

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

Source: WB (2017) *Latvia Tax Review*.

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

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

Annex 3: Proposed indicators to assess inequalities

Growth in real GDP per capita
Growth in real disposable income per capita
Growth rates of the median disposable income and of the disposable income of the first bottom decile of the income distribution, in real terms (compound annual, over 5 years) Gini index of households' income after tax and transfers (source: Eurostat)
Gini index of households' income after tax and before transfers (source: Eurostat)
Redistributive impact of taxes and transfers: difference between post-tax and transfer Gini index and market based Gini index (source: OECD, Eurostat)
Median/mean equivalised disposable income, before/after social transfers/pensions
Ratio S80/S20 of disposable income, after social expenditures (source: Eurostat)
Ratios S90/S50 and S50/S10 of disposable income, after social expenditures
At risk poverty rate before/after social transfers (pensions included in social transfers), for the total population and for the elderly
Severe material deprivation rate
At persistent risk of poverty after social transfers

Indices of wealth distribution
Note: the indicators also include other breakdowns (e.g. by age or type of households).