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# Personal Income Taxation in Austria: What do the Reform Measures Mean for the Budget, Labour Market Incentives and Income Distribution?

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# Personal Income Taxation in Austria

## What do the Reform Measures Mean for the Budget, Labour Market Incentives and Income Distribution?

By Viginta Ivaškaitė-Tamošiūnė, Alexander Leodolter and Marie-Luise Schmitz

### Summary

In Austria, a comprehensive tax reform came into force on 1 January 2016. The stated aim of the tax reform was to noticeably reduce personal income taxation. The reform package included an increase in the number of brackets in the personal income tax system from four to seven, an increase in the amounts of several allowances and tax credits, and an increased reimbursement of social security contributions for low-income earners.

A simulation with EUROMOD, a microsimulation model encoding the tax-benefit systems of all EU Member States in a harmonised way, estimates the impact of the changes in personal income taxation that were a major part of the reform and thereby covers almost the whole tax relief part of the reform package. It addresses the effect of the reform measures on the government budget, labour market incentives (implicit tax rate) and income distribution. It does not consider behavioural changes and therefore does not include second-round effects. Given all this, the simulations suggest a revenue loss of EUR 4.8 billion for the year 2015, which equals 15.8% of personal income tax revenue or 1.4% of GDP, due to the change in personal income tax. The impact on mean equivalised disposable income of households is positive for all income deciles. It is increasing across all deciles as an absolute value and increasing up to the eighth decile as a percentage of the baseline income. The reform significantly decreases the implicit tax rate in all income deciles, particularly in the first five deciles. It is only marginally less redistributive and the risk of poverty slightly decreases.

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## Austria's high tax burden on labour income

Austria has a relatively high tax burden on labour. In 2015, the revenue from labour taxation as a percentage of GDP was the second highest in the EU at 24.8% with the EU average at 19.3% and the euro area average at 21.0%.<sup>1</sup> Austria's implicit tax rate on labour<sup>2</sup> amounted to 43.1% in the same year, the 3<sup>rd</sup> highest in the EU and well above the EU average of 35.9% and the euro area average of 38.6%. It has been recommended for countries with high labour taxes to move the tax burden from labour to more growth-friendly sources of revenue e.g., consumption, recurrent property and environmental taxes (Arnold 2008; Johansson et al. 2008; Arnold et al. 2011; Roeger and In't Veld, 2010; European Commission 2015a, European Commission 2015b, OECD 2010; Wöhlbier, Astarita and Mourre 2016).

### Description of the tax reform 2016

Austria's comprehensive tax reform became effective as of 1 January 2016. The stated aim of the reform was to noticeably reduce the tax burden on wages and personal income. The changes are listed in Table 1 and described in the following:

**Personal income tax schedule:** The new personal income tax schedule is the centrepiece of the reform. The number of brackets was increased from four to seven resulting in a slower and more gradual progression. The top income tax rate is planned to be a temporary measure until 2020 (art. 33, sec. 1 Income Tax Law (ITL) for 2016).

**Integration of employees' tax credit into traffic tax credit and increased amount:** Before the reform, all employees subject to income tax received the employees' tax credit (*Arbeitnehmerabsetzbetrag*) as well as the traffic tax credit (*Verkehrsabsetzbetrag*). The latter is a lump-sum compensation for commuting expenses between work and home

that is provided to all employees independently of the length of their actual commute. Both were non-refundable tax credits. The reform integrated the employees' tax credit into the traffic tax credit and increased the respective amount to EUR 400/year (art. 33 sec. 5 number 1 ITL 2016).

**Increased refund of social security contributions (SSC) and extension to pensioners:** The reform increased the reimbursement of social security contributions (*Negativsteuer*) for employees with a negative tax liability. Before the reform, only 10% of certain work-related expenses (*Werbungskosten*) including in particular the social security contributions up to a limit of EUR 110/year were reimbursed, in case the employee's tax liability after the deduction of the traffic tax credit and the employees' tax credit was negative. Now, 50% of expenses paid by the employee up to a limit of EUR 400/year are reimbursed, if the tax liability of the employee is negative after the deduction of the traffic tax credit (art. 33 sec. 8, number 2 ITL 2016).

The reform also makes pensioners eligible for the reimbursement. If their tax liability is non-positive, and they are eligible for the tax credit for pensioners, 50% of SSC up to a limit of EUR 110/year are reimbursed (art. 33, sec. 8, number 3 ITL 2016).

**Child tax allowance:** The child tax allowance (*Kinderfreibetrag*) was also increased as part of the reform. It is granted to parents who are entitled to the child tax credit (*Kinderabsetzbetrag*) for more than six months in a year (art. 106, sec. 1 and art. 106a, sec. 1 ITL 2016).

**Maximum contribution base for the social security system:** The maximum contribution base for social insurance contributions is increased every year in the course of a statutory adjustment. For 2016, it was increased by another 90 € on top of the statutory annual adjustment as a financing measure for the tax reform (art. 108, sec. 3 of the General Law on Social Security).<sup>3</sup>

Table 1. Simulated measures of the tax reform 2016 for Austria

Baseline scenario		Reform scenario	
<b>Personal income tax schedule</b>			
Annual taxable income, €	Marginal tax rate, %	Annual taxable income, €	Marginal tax rate, %
0 – 11000	0	0 – 11000	0
11000 – 25000	36.5	11000 – 18000	25
25000 – 60000	43.2	18000 – 31000	35
> 60000	50	31000 – 60000	42
		60000 – 90000	48
		90000 – 1000000	50
		> 1000000	55
<b>Integration of employees' tax credit into traffic tax credit and increased amount</b>			
Employee tax credit	54 €p.a.	<i>abolished</i>	
Traffic tax credit	291 €p.a.	400 €p.a.	
<b>Increased reimbursement of social security contributions and extension to pensioners</b>			
Employees	10% of SSC up to 110 €p.a.	50% of SSC up to 400 €p.a.	
Pensioners	-	50% of SSC, up to 110 €p.a.	
<b>Child tax allowance</b>			
Claimed by one parent	220 €/per child	440 €/per child	
Claimed by both parents	132 €/per child per parent	300 €/per child per parent	
<b>Maximum contribution base for the social security system</b>			
	4650 €	4740 €	

All these measures were part of a simulation with the microsimulation model EUROMOD. Further measures that could not be addressed by the simulation due to data limitations concern special regulations regarding the traffic tax credit and the refund of SSC for commuters, i.e. for employees eligible to the so called traffic allowance (*Pendlerpauschale*, not to be confused with the traffic tax credit) as well as the extension of the SSC refund to farmers and self-employed.

Measures to finance the tax relief include among others measures to improve tax compliance, spending cuts in administration, and an increase of several other taxes (such as the reduced VAT rate for certain goods or the withholding tax on capital gains). Increased consumption tax revenue from an increase in the purchasing power of consumers is expected to finance 17% of the reform.<sup>4</sup>

### Budgetary and distributional impact: simulation results

To analyse the budgetary and distributional impact of the reform, the measures listed in Table 1 were encoded into the microsimulation model EUROMOD and a simulation was performed. More detailed information on the EUROMOD model and the EU-SILC data<sup>5</sup> used can be found in the adjacent box. The simulation does not take into account behavioural changes and therefore also no second-round effects. The offsetting measures are also beyond the scope of the model's set-up; hence no judgements can be made on the overall net budgetary effect of the whole tax reform.<sup>6</sup>

## EUROMOD and EU-SILC data

EUROMOD is a microsimulation model that encodes the tax-benefit systems of all EU countries in a harmonised way, allowing researchers to assess the effects of the most relevant income taxes, social contributions and cash benefits, as well as reforms thereof, on disposable income. An extensive introduction to EUROMOD is provided by Figari and Sutherland (2013), which can be accessed on the EUROMOD homepage (<https://www.euromod.ac.uk/>). EUROMOD calculates income taxes (including allowances, deductions, and tax credits), social contributions (of employees, self-employed, and employers), social benefits, and disposable income on the basis of individual and household characteristics in the underlying input data. Most contributory benefits (e.g., pensions as well as unemployment or disability benefits) are not simulated but taken directly from the data, given the lack of individual contribution histories that would be needed to simulate them. Importantly, in doing so EUROMOD captures the interactions inherent to many tax-benefit systems i.e., the fact that changes in one policy affect the eligibility for others, a feature that is particularly relevant for assessing the budgetary and equity impact of tax reforms. For instance, as shown in the analysis presented in this brief, a more favourable personal income tax affects the eligibility for means-tested benefits. EUROMOD outputs these results as well as the computed disposable income at the individual and household level, which are analysed with respect to the policy question of interest. The present analysis is static i.e., it does not address individual labour supply responses induced by the policy change. The baseline scenario of the present study uses the Austrian tax-benefit calculation rules in place in 2015. The baseline scenario is then made subject to the reform measures detailed in Table 1 and referred to as reform scenario. Input data are derived from the European Statistics on Income and Living Conditions (EU-SILC), the major survey data set for comparative research on income equality and social inclusion in the European Union. The survey collects information on socio-demographic characteristics, income sources, employment status, and gross income for all members of the private households selected into the sample as well as information on household composition. The 2012 sample used in the exercise covers 6,232 households composed of 13,861 individuals representative of 8,315,875 individuals living in 3.7 million households. The income reference period is 2011. In order to align 2011 monetary values with the policy year of interest 2015, uprating factors as the consumer price index and statutory adjustment rules (e.g., for pensions and social benefits) are applied to update income components.

The distributional impact of the simulated reform measures is assessed at the household level, i.e. taking account of the common situation of the members of a household with respect to the variables of interest, e.g., income or tax liability. The concept of equalised disposable income captures this idea. It is defined as the “total income of a household, after tax and other deductions, that is available for spending or saving, divided by the number of household members converted into equalised adults”. The equalisation assigns a weight of 1 to the household head, 0.5 to other adults (household members aged 14 years or more) and 0.3 to children (younger than 14), thereby taking into account

economies of scale resulting from the household size<sup>7</sup>.

Table 2 presents the **effects of the reform measures on the government budget** for the year 2015 as simulated with EUROMOD. It shows the aggregate revenue and expenditure for the baseline and the reform scenario as well as the difference between the two. Each category is disaggregated with regard to its most relevant components and all reported changes are statistically significant at the 5% level. As for the revenue from PIT, the above reform measures translate into a significant revenue loss in the order of magnitude of EUR 4.8 billion, an amount that equals 15.7% of PIT revenue or 1.4% of GDP. Revenue from SSC increases significantly by 127

million euro due to the increased maximum contribution base (limit up until which income is subject to SSC) for both employees' and employers. On the expenditure side, pensions and non-means-tested benefits are not affected by the simulated reform measures, while means-tested benefits decrease significantly by roughly 1% because of interactions between the tax and the benefits system.

The national statistical office of Austria Statistics Austria reports a decrease of EUR 2.7 billion in personal income tax revenue for 2016, from EUR 33.4 billion in 2015 (pre-reform) to EUR 30.7 billion in 2016 (post-

reform). Social security contributions (SSC) increased by EUR 2 billion, from EUR 52.1 billion in 2015 to EUR 54.1 billion in 2016.<sup>8</sup> The differences between the simulation results and the actual PIT and SSC revenues are also influenced by factors not captured by EUROMOD. In particular, the simulation assumes a static scenario, i.e. it does not take into account the increase in PIT revenues and SSC due to macroeconomic developments, including developments influenced by the reform (second-round effects). In addition, the simulation does not take into account any additional revenues possibly raised by the measures against tax and social security fraud.

Table 2. **Aggregate revenue and expenditure (mln EUR)**

	Baseline	Reform	Difference				
	Total	Total	Total	Standard error	95% confidence interval		% of baseline
					Lower bound	Upper bound	
PIT	30762	25938	-4824	59	-4939	-4709	-15.7
Capital income tax	604	604	0	0	0	0	0.0
<b>Total taxes</b>	<b>31366</b>	<b>26542</b>	<b>-4824</b>	<b>59</b>	<b>-4939</b>	<b>-4709</b>	<b>-15.4</b>
SIC employee	21337	21396	59	3	54	64	0.3
SIC employer	25779	25848	68	3	62	75	0.3
SIC self-employed	4440	4440	0	0	0	0	0.0
<b>Total SIC</b>	<b>51557</b>	<b>51684</b>	<b>127</b>	<b>6</b>	<b>116</b>	<b>139</b>	<b>0.2</b>
Pensions	44517	44517	0	0	0	0	0.0
Means tested benefits	4526	4486	-41	4	-49	-32	-0.9
Non-means tested benefits	9099	9099	0	0	0	0	0.0
<b>Total benefits</b>	<b>58142</b>	<b>58101</b>	<b>-41</b>	<b>4</b>	<b>-49</b>	<b>-32</b>	<b>-0.1</b>

Table 3 disentangles the **effect of the reform** measures as simulated on **different PIT components**, going from gross income to final tax liability. The significant decrease in the final tax liability and hence PIT revenue is mostly driven by the reduction of the gross tax liability (EUR 4.5 billion out of EUR 4.8 billion or 14.2% less revenue with respect to the pre-reform scenario), which is the result of both the decreased taxable base and, most importantly, the application of the more favourable tax schedule. The taxable base decreases by about 0.3% given the 1% increase in deductions and allowances, which are reported as negative values, for consistency. The increase in deductions and allowances is mostly the result of the

increased child tax allowance and, to a lesser extent, of higher deductions due to the increased maximum contribution base for the social security system. The difference between the gross and the net tax liability equals the sum of granted tax credits. The amount of deducted tax credits increases by about 18.2%, which is the result of both the increased traffic tax credit and an increase in the pensioners' tax credit. The pensioners' tax credit increases for those pensioners that also receive the child tax allowance. The reason is that the child allowance is deducted before granting the pensioners tax credit. As a result, the income from pension after deducting the child tax allowance and social security deductions decreases, so that more pensioners

become eligible for the pensioners' tax credit. Finally, revenues from the tax on special payments (e.g., 13<sup>th</sup> and 14<sup>th</sup> monthly payments for employees) decrease by about 0.1% or roughly one million euro. The reason for this is that the social security contributions

paid for special payments are deducted from the tax base. As the social security contributions are affected by the increased maximum contribution base, the taxable base for special payments and the corresponding tax liability decrease.

Table 3. PIT structure (mln EUR)

	Baseline	Reform	Difference				
			Total	Total	Standard error	95% confidence interval	
			Total	error	Lower bound	Upper bound	baseline
<b>Gross income</b>	<b>184092</b>	<b>184092</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>
Deductions and allowances	-48906	-49338	-432	12	-456	-408	0.9
<b>Taxable income</b>	<b>135186</b>	<b>134754</b>	<b>-432</b>	<b>12</b>	<b>-456</b>	<b>-408</b>	<b>-0.3</b>
<b>Gross tax liability</b>	<b>31550</b>	<b>27055</b>	<b>-4495</b>	<b>55</b>	<b>-4603</b>	<b>-4386</b>	<b>-14.2</b>
Tax credits	-1807	-2136	-329	10	-348	-310	18.2
<b>Net tax liability</b>	<b>29742</b>	<b>24919</b>	<b>-4823</b>	<b>59</b>	<b>-4939</b>	<b>-4708</b>	<b>-16.2</b>
Special payments	1019	1019	-1	0	-1	-1	-0.1
<b>Final tax liability</b>	<b>30762</b>	<b>25938</b>	<b>-4824</b>	<b>59</b>	<b>-4939</b>	<b>-4709</b>	<b>-15.7</b>

According to the results in Table 4, the reform measures should significantly decrease the **average annual final personal income tax liability** at the household level across deciles both in absolute and relative terms. In the first decile, the average tax liability changes from a slightly positive to a negative value, and given the low average tax liability before the

reform, the relative change is large, amounting to 362%. Overall, the reduction increases across deciles, amounting to 2,837 euro in the tenth decile. This is due to the cumulative reduction of tax liability of income earners who fall into higher tax brackets.

Table 4. Mean annual PIT final liability

Decile	Affected Proportion	Baseline Mean	Reform Mean	Mean	Difference			
					Standard error	95% confidence interval		% of baseline
					Lower bound	Upper bound		
1	25.5	93	-244	-338	19.6	-376	-299	-361.9
2	60.7	1201	616	-585	19.2	-622	-547	-48.7
3	88.6	2288	1490	-798	20.6	-838	-757	-34.9
4	92.9	3669	2614	-1055	26.3	-1106	-1003	-28.7
5	96.2	4842	3631	-1211	23.9	-1258	-1165	-25.0
6	98.9	6132	4783	-1349	23.9	-1396	-1302	-22.0
7	98.9	8307	6702	-1604	25.6	-1655	-1554	-19.3
8	99.5	10593	8671	-1922	33.3	-1987	-1857	-18.1
9	99.8	14909	12705	-2204	32.9	-2269	-2139	-14.8
10	99.2	33904	31067	-2837	43.7	-2923	-2752	-8.4
<b>All</b>	<b>84.9</b>	<b>9445</b>	<b>7964</b>	<b>-1481</b>	<b>14.1</b>	<b>-1509</b>	<b>-1454</b>	<b>-15.7</b>

Notes. Mean values are calculated for households in which the sum of final tax liabilities of all members is non-zero in the baseline and/or the reform scenarios.

Table 5 shows how the average tax relief per decile shown in Table 4 translates into an **average increase of mean equivalised disposable income**. As the average reduction

in tax liabilities increases across deciles, the average increase in equivalised disposable income exhibits the same pattern. The impact on equivalised disposable income is rather



small for the lowest decile, on average EUR 55 or 0.5%. The reason for this is that in the first decile only 14% of households have a positive final PIT liability before the reform.<sup>9</sup> The positive effect of the reform measures on household disposable income as percent of baseline income in the simulation increases, the higher the income in the baseline scenario is, reaching almost 4% in the 8th decile. Beyond the 8<sup>th</sup> decile, it decreases again. The reason for the decrease for deciles higher than the 8th is that, the maximum absolute tax

relief is reached as of the sixth tax bracket (50%), causing the relative effect for top income earners to decrease. The newly introduced, temporary top tax bracket of 55% plays no role for the simulation, because the data do not include households with an income above EUR 1,000,000, which means that the simulation might slightly underestimate tax revenue. Taking into account all households, the average increase in equivalised disposable income amounts to EUR 810 or 3.2%.

Table 5. Mean annual equivalised disposable income (EUR)

Decile	Baseline	Reform	Difference				
	Mean	Mean	Mean	Standard error	95% confidence interval		% of baseline
					Lower bound	Upper bound	
1	10637	10692	55	6.5	43	68	0.5
2	13968	14186	218	10.5	198	239	1.6
3	16536	16965	429	9.9	410	449	2.6
4	18822	19418	596	11.0	575	618	3.2
5	21144	21871	727	10.3	707	747	3.4
6	23672	24519	847	8.9	830	865	3.6
7	26471	27489	1017	10.3	997	1038	3.8
8	29883	31074	1190	11.0	1169	1212	4.0
9	35269	36669	1400	10.8	1379	1421	4.0
10	56117	57846	1729	17.2	1695	1763	3.1
<b>All</b>	<b>25083</b>	<b>25893</b>	<b>810</b>	<b>7.8</b>	<b>795</b>	<b>825</b>	<b>3.2</b>

Notes. Mean values are calculated for all households

Table 6 reports the **mean annual equivalised income for different household types** in addition to the breakdown into income deciles reported in Table 5. In general, the simulation suggests that the reform measures increase equivalised disposable income for all types of households in a significant way. However, in absolute terms households without children benefit more from the reform measures than households with children below the age of 18 years. Single parents benefit least, the increase is about EUR 426 on average. As far as the division by age is concerned, both single adults aged 65 or older and couples with at least one member older than 65 years benefit less than their younger counterparts. In addition to Tables 5 and 6, Table 7 shows mean annual equivalised disposable income for the subgroups of working aged individuals, elderly, employees, and

pensioners. The reform measures have a significant positive effect on all subgroups according to the simulation. In particular, employees gain on average EUR 970 per year.

Table 8 reports the **implicit tax rate (ITR) on labour**, a proxy for labour market incentives, computed for each decile and for the population as a whole. Given the progressive PIT schedule, the ITR increases across deciles, for both the baseline and the reform scenario. According to the simulation, the reform measures significantly decrease the ITR for all deciles, with the decrease being most pronounced between the first and the fifth decile. This result is mainly driven by the reduced PIT on labour (i.e., increased allowances, more favourable schedule, and increased tax credits). Overall, the ITR decreases by more than 2 pps.

Statistics Austria reports the overall ratio of taxes and social contributions to GDP, which amounts to 43.8% for 2015 and 42.7% for 2016 (excluding voluntary and imputed social contributions).<sup>10</sup> This reduction between 2015

and 2016 is the first decrease of the indicator since 2010 and therefore can be assumed to be the result of the personal income tax relief caused by the reform.<sup>11</sup>

Table 6. Mean annual equivalised disposable income for different household types

Household type	Baseline	Reform	Difference				% of baseline
	Mean	Mean	Mean	Standard error	95% confidence interval		
					Lower bound	Upper bound	
One adult <65, no children	23716	24501	785	18.4	749	821	3.3
One adult ≥65, no children	22133	22735	602	21.1	561	644	2.7
Single person with children	17615	18041	426	26.2	374	477	2.4
Two adults <65, no children	29497	30531	1034	20.2	994	1074	3.5
Two adults, at least one ≥65, no children	26277	27089	812	19.2	774	849	3.1
Two adults with children	23318	24087	769	14.3	741	797	3.3
Three or more adults, no children	28922	29902	980	24.6	932	1028	3.4
Three or more adults with children	23741	24469	728	25.4	679	778	3.1

Table 7. Mean annual equivalised income (EUR) for different subgroups

Household type	Baseline	Reform	Difference				% of baseline
	Mean	Mean	Mean	Standard error	95% confidence interval		
					Lower bound	Upper bound	
Working aged	26182	27059	877	9.7	858	896	3.3
65 or older	24343	25058	715	13.5	689	742	2.9
Employees	27667	28638	970	10.1	950	990	3.5
Pensioners	21883	22445	562	11.4	540	584	2.6

Notes. Mean values are calculated at individual level. Working aged are individuals between 18 and 65 years (8730 survey observations corresponding to 5.4 million in weighted population terms). Elderly are aged 65 or older (2400 survey observations corresponding to 1.4 million weighted observations). Employees are individuals with positive income from dependent employment (6408 survey observations corresponding to 4 million weighted observations). Pensioners are defined as individuals with positive pension income and receiving the pensioners' tax credit (2282 survey observations corresponding to 1.3 million weighted observations).

Table 8. Implicit tax rates on labour (%)

Decile	Baseline	Reform	Difference			
	Rate	Rate	Rate	Standard error	95% confidence interval	
					Lower bound	Upper bound
1	32.3	29.9	-2.4	0.1	-2.5	-2.3
2	37.5	35.1	-2.4	0.0	-2.5	-2.3
3	39.8	37.4	-2.4	0.0	-2.5	-2.4
4	41.8	39.3	-2.5	0.0	-2.5	-2.4
5	42.9	40.4	-2.4	0.0	-2.5	-2.4
6	43.1	40.7	-2.3	0.0	-2.4	-2.3
7	45.0	42.7	-2.3	0.0	-2.4	-2.3
8	45.2	42.9	-2.3	0.0	-2.4	-2.3
9	46.5	44.2	-2.2	0.0	-2.3	-2.2
10	47.9	46.2	-1.7	0.0	-1.8	-1.7
<b>All</b>	<b>44.9</b>	<b>42.7</b>	<b>-2.2</b>	<b>0.0</b>	<b>-2.2</b>	<b>-2.2</b>

Notes. ITRs are calculated for each decile taking into account the subgroup of individuals with positive labour income

The simulation results can also be used to analyse the effects of the reform measures in terms of **inequality reduction and income redistribution**.

The comparison of Gini coefficients, a standard measure of inequality, on equivalised original income (A) and equivalised disposable income (B, C) shows that the Austrian tax system both before and after the reform measures roughly halves

inequality from 0.5 to 0.26 (see Table 9, upper part). Comparing the Gini coefficients between the baseline and the reform scenario (see Table 9, lower part) reveals that the simulated reform measures only slightly decrease redistribution. As mentioned before, the data do not include any households to whom the newly temporary top tax bracket applies, i.e. households with an income above EUR 1,000,000.

Table 9. **Inequality and redistribution**

	Value	Standard error	95% confidence interval		
			Lower bound	Upper bound	
<b>Inequality</b>	Gini eq. original income (A)	0.4991	0.0058	0.4878	0.5104
	Gini eq. disposable income baseline (B)	0.2619	0.0039	0.2542	0.2695
	Gini eq. disposable income reform (C)	0.2641	0.0038	0.2566	0.2717
<b>Redistribution</b>	Redistribution baseline (A) - (B)	0.2372	0.0041	0.2292	0.2452
	Redistribution reform (A) - (C)	0.2350	0.0040	0.2271	0.2271
	Difference (C) - (B)	0.0023	0.0001	0.0020	0.0025

In addition to the previous results on income inequality, Table 10 shows the poverty rate for the 60% of median equivalised disposable income at the individual level. Before the

reform 13.3% of the individuals had an equivalised disposable income below the poverty line of EUR 1,117. The reform measures decrease the poverty rate by about 0.8 pp. to 12.5% according to the simulation.

Table 10. **At-risk-of-poverty rates (%)**

	Rate	Standard error	95% confidence interval		Frozen poverty line baseline
			Lower bound	Upper bound	
60% of the median	Baseline	13.3	0.6	12.1	14.5
	Reform	12.5	0.6	11.3	13.7
	Difference	-0.8	0.1	-1.0	-0.5

Notes. The poverty line (EUR) is based on median equivalised monthly disposable income.

Table 11 shows at-risk of poverty rates for different mutually exclusive household compositions. The poverty line is fixed in the baseline scenario and amounts to 1117€ per month. In both scenarios, the group of single parents has the highest at-risk of poverty rate with roughly 30%, followed by single persons aged below 65 with 24%. Households composed of three or more adults without household members below the age 18 have the lowest poverty rate, namely slightly more than 6%. The reform measures significantly

decrease the risk of being poor for all household types but single parents, but not all results are significant. The decrease is not significant for households composed of three or more adults (with or without children) and for single parents. No change occurs in single-person households with one elderly person.

A similar simulation (Rocha-Akis 2015) by the Austrian Institute of Economic Research (WIFO) also addressed the budgetary effects

of the reform measures in personal income taxation and its impact on disposable income at household level. The results where comparable are similar.<sup>12</sup> Differences between the two studies can be explained by

differences in the data used, the choice of year for which the comparison between the baseline and the reform scenario takes place and different amounts for the child allowance if claimed by both parents.<sup>13</sup>

Table 11. At-risk of poverty rates (%) for different groups

	Baseline	Reform	Difference			
	Mean	Mean	Mean	Standard error	95% confidence interval lower bound	95% confidence interval upper bound
<b>Household level</b>						
One adult <65, no children	24.2	23.7	-0.4	0.2	-0.9	0.0
One adult ≥65, no children	12.4	12.4	0.0	-	-	-
Single person with children	29.9	28.7	-1.1	0.9	-2.8	0.5
Two adults <65, no children	13.1	11.8	-1.2	0.4	-2.0	-0.5
Two adults, at least one ≥65, no children	9.1	8.1	-1.0	0.3	-1.6	-0.4
Two adults with children	13.5	12.4	-1.1	0.3	-1.7	-0.5
Three or more adults, no children	6.7	6.2	-0.4	0.3	-1.0	0.1
Three or more adults with children	13.3	12.9	-0.4	0.4	-1.1	0.3

Notes. The poverty line is 1117 euro (60% of median equivalised monthly disposable income).

## Concluding remarks

The simulation with EUROMOD estimates the changes in personal income taxation that where a major part of the Austrian tax reform of 2016 with respect to budget, labour market incentives and distribution of income. It thereby covers almost all the relief measures of the reform package. Other parts of the reform, namely almost all the financing measures, were not considered in the simulation. The simulation does not consider behavioural changes and therefore also no second-round effects.

The simulation results suggest that the reform in personal income taxation seems to have largely achieved its stated goal which was to reduce the tax burden on wages and personal income. Also, the latest aggregate data seem to confirm this. The change in personal income tax according to the simulation amounts to a revenue loss of 4.8 billion euro which equals 15.8% of PIT revenue or 1.4% of GDP. This is mostly due to a reduction of gross tax liability, resulting both from the

decreased taxable base and more importantly from the changes towards a more favourable tax schedule. The reduction in mean PIT final liability increases across deciles as an absolute value but decreases as a percentage of the final liability from the pre-reform scenario. The impact on equivalised disposable income of households is increasing among all deciles as an absolute value and increasing up to the eighth decile as a percentage of the baseline income.

As for labour market incentive effects, the simulated reform measures significantly decrease the implicit tax rate for all income deciles. The strongest decrease can be found in the lowest five deciles which would go towards relieving low and middle-income earners in line with recommendations addressed to Austria in the framework of the European Semester. The reform scenario is only marginally less redistributive than the pre-reform scenario. The at-risk of poverty rate decreases slightly.

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- <sup>1</sup> All figures for the EU and the euro area are GDP-weighted.
  - <sup>2</sup> The implicit tax rate measures the effective average tax rate on different types of economic activity e.g., labour. It is defined as the “sum of all direct and indirect taxes and employees’ and employers’ social contributions levied on employed labour income divided by the total compensation of employees working in the economic territory increased by taxes on wage bill and payroll” (<http://ec.europa.eu/eurostat/en/web/products-datasets/-/TEC00119>). Tax revenue and implicit tax rate data are from the European Commission (DG TAXUD).
  - <sup>3</sup> Income above this maximum contribution base is not subject to further social security contributions. For reasons of comparability of the pre-reform and the reform scenario only the one-off increase was simulated but not the annual statutory adjustment.
  - <sup>4</sup> Correspondences of Parliament No. 788 ([https://www.parlament.gv.at/PAKT/PR/JAHR\\_2015/PK0788/index.shtml](https://www.parlament.gv.at/PAKT/PR/JAHR_2015/PK0788/index.shtml), last access: 9.8.2016) and No. 852 ([https://www.parlament.gv.at/PAKT/PR/JAHR\\_2015/PK0852/index.shtml](https://www.parlament.gv.at/PAKT/PR/JAHR_2015/PK0852/index.shtml), last access: 9.8.2016). For more detailed information concerning the measures see the text of the tax reform law including explanatory notes ([https://www.parlament.gv.at/PAKT/VHG/XXV/I/I\\_00684/index.shtml#tab-Uebersicht](https://www.parlament.gv.at/PAKT/VHG/XXV/I/I_00684/index.shtml#tab-Uebersicht), last access: 9.8.2016) and also the Parliament’s impact assessments of the tax reform law ([https://www.parlament.gv.at/PAKT/VHG/XXV/ME/ME\\_00129/](https://www.parlament.gv.at/PAKT/VHG/XXV/ME/ME_00129/), last access: 9.8.2016). All documents are in German.
  - <sup>5</sup> <http://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions>.
  - <sup>6</sup> Measures to combat tax fraud as well as spending cuts in administration are not part of a microsimulation approach, while others as the real estate transfer tax are not simulatable due to data limitations. Indirect taxation (e.g., VAT and excise taxes) will be included in EUROMOD by an upcoming extension.
  - <sup>7</sup> [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Equivalised\\_disposable\\_income](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Equivalised_disposable_income).
  - <sup>8</sup> [http://www.statistik.at/web\\_de/statistiken/wirtschaft/oeffentliche\\_finanzen\\_und\\_steuern/oeffentliche\\_finanzen/steuereinnahmen/index.html](http://www.statistik.at/web_de/statistiken/wirtschaft/oeffentliche_finanzen_und_steuern/oeffentliche_finanzen/steuereinnahmen/index.html). PIT revenue was calculated from these data as the sum of income tax (*Veranlagte Einkommenssteuer*), wage tax (*Lohnsteuer*) and the contribution to chambers by employees (*Kammerbeiträge Anteil Arbeitnehmer*). The 2016 data for benefits have not been reported yet.
  - <sup>9</sup> In the reform scenario 12.6% of households in the first decile have a positive final PIT liability.
  - <sup>10</sup> [http://www.statistik.at/web\\_de/statistiken/wirtschaft/oeffentliche\\_finanzen\\_und\\_steuern/oeffentliche\\_finanzen/steuereinnahmen/index.html](http://www.statistik.at/web_de/statistiken/wirtschaft/oeffentliche_finanzen_und_steuern/oeffentliche_finanzen/steuereinnahmen/index.html). While EUROMOD reports an implicit tax rate on labour (see endnote 2 for an explanation), Statistics Austria reports the ratio of taxes and social contributions for the whole economy and therefore the two cannot be directly compared. Besides, as already mentioned for the estimated revenue loss, it should be considered that a static model like EUROMOD cannot account for changes due to macroeconomic developments.
  - <sup>11</sup> Also the last decrease of the ratio of taxes and social contributions to GDP coincided with a tax reform: The reform entered into force in 2009 for the most part and at the same time the ratio of taxes and social contributions to GDP dropped from 41.8% to 41.4% in 2009 and then a little further to 41.3% in 2010. The decrease of the ratio from 2015 to 2016 by 1.1 pps is however substantially larger than the 0.5 pps achieved in 2009.
  - <sup>12</sup> Similar results were also obtained by two other studies conducted by the Austrian Parliamentary Budget Office (2015) and the European Centre for Social Welfare Policy and Research (2015).
  - <sup>13</sup> The WIFO study uses EU SILC 2013 data, while the EUROMOD simulation relies on EU SILC 2012. Moreover, WIFO use the year 2016 for both the baseline and the reform scenario, while the EUROMOD simulation uses the year 2015 for both scenarios. Also, at the time when the WIFO study was published, the child allowance was planned to increase only from 132€ to 264€ per child per parent if both parents claimed it. In the end, this amount was raised to 300€ per child per parent if both parents claim it and our simulation incorporates the actual increase. Both the EUROMOD simulation and, the WIFO study do not take into account labour supply effects.





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