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Redistribution by the State in Austria

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In Austria, the available potential of redistribution by the state is of a scale similar to that in the Scandinavian countries, Belgium, France and Italy. In 2010, the overall tax to GDP ratio stood at 40.8 percent, 4.2 percentage points above the EU 15 average. Redistribution primarily takes place through public expenditures. Due to the regressive structure of indirect taxes and social insurance contributions, and the comparatively low weight of taxes on income and wealth, the total redistributive effect of the tax system is only modest. The redistribution effect is much larger when it comes to public welfare and public services: apart from old-age pensions, monetary transfers and benefits in kind mostly relate to the areas of health care, education and families, and are enjoyed by all households irrespective of their income. Consequently, their relative importance is much greater for low-income than for high-income households. Being more highly exposed to risks such as unemployment and illness, benefits relating to unemployment, social assistance, housing subsidies, survivor's pensions, long-term care benefits, as well as some family benefits such as the child-care allowance and the public child care infrastructure are typically taken up more frequently by low-income households for whom they constitute a substantial part of their income. Between 2000 and 2010, the distribution of primary incomes (market incomes and old-age pensions) became substantially more unequal, especially in the second half of the decade – a development that was not offset by the state's redistribution efforts. Thus, the distribution of secondary household incomes (primary incomes plus monetary and in-kind public transfers, net of all direct and indirect taxes), which had remained relatively stable between 2000 and 2005, was found to be more unequal in 2010 than in the mid-2000s.

1. Introduction

Increasing inequality in the distribution of income and wealth is one of the most pressing social and economic problems in the industrialised countries. The consequences of this development threaten social cohesion and are reflected in weak consumer demand, stagnation tendencies and increased risk of poverty. This also applies to Austria, where the inequality of the distribution of primary incomes (market incomes and old-age pensions) increased in recent years, and was only partly offset by public redistribution. While the secondary income distribution, i.e. the distribution of primary income net of taxes and including public benefits, remained stable in the first half of the 2000s, it became less equal in the second half of the decade.

The present analysis of the vertical effects of the state's redistributive activities – that is, the distribution between households with high and low incomes through taxes and social contributions on the one hand and public expenditures on social and welfare state benefits on the other – is based on the income year 2010. The study is based on a comprehensive WIFO study on the subject (*Rocha-Akis et al., 2016*). It is

a methodological continuation of earlier WIFO studies on redistribution by the state (*Guger,* 1987, 1996, *Guger et al.,* 2009). Because the main data source, EU-SILC, has switched to extracting both the earned income and the greater part of transfer income data from administrative data rather than surveys starting with the income year 2011, in this study both the survey and administrative data were analysed separately for the year 2010 (exceptionally both data are available for this particular year). This establishes a basis of comparison for future analyses (mainly based on administrative data), while making the results comparable with those of *Guger et al.* (2009), which were based on survey data for the years 2000 and 2005.

1.1   Research concept, methods and data

Like the earlier WIFO studies and as is commonly done in international practice, the study was based on the concept of "formal tax incidence". This is the incidence assumption of national accounts, according to which the burden of indirect taxes is shifted to consumers through prices and the burden of direct taxation cannot be shifted and is therefore carried by those who pay these taxes and for whom they are intended.

As in most of the comparable empirical studies, "redistribution" only refers to the flow of revenues and benefits between private and public households. The terms "state", "public sector" or "public households" are treated synonymously, encompassing the different levels of government (federal, Länder, municipal) and social security institutions.

Redistribution is examined based on the public budgets in one year, on the one hand via public revenues through taxation and social security contributions, and on the other hand via welfare and public social expenditures. The study took into consideration public expenditures through old-age pensions, labour market, family, health, education and housing policies as well as social assistance or means-tested minimum income, but not the cost of the judiciary, domestic and external security, the diplomatic service and transport. Aggregate demand effects (multiplier effects) and incentive effects were disregarded.

The unit of investigation is the private household. Starting from the primary income of household members, the secondary income or final distribution of disposable resources of households is calculated by deducting taxes and employee social contributions and adding the most important monetary and in-kind transfers (that is, public goods and services). Here, public benefits are evaluated at running costs. To take into consideration the size and composition of households, the analysis is based on equivalised income. These "needs-adjusted per capita incomes" of households are obtained by dividing the household income by an equivalised scale, which gives the first adult household member a weight of 1, each further household member a weight of 0.5, and each child under 14 years a weight of 0.3.

Although pensions covered by social security are transfers in the stricter sense, in this study – as in earlier WIFO studies on redistribution, but diverging from comparable international studies[1] – own pensions are treated as primary income. The state pension has such a dominant importance in the total income of the elderly in Austria that many pensioners would have no income before the state redistribution process, as the second and third pillars of pension coverage play a relatively minor role. At the same time, pensions in Austria are liable to income taxes and health insurance contributions. The real extent of state redistribution is of course underestimated in this process.

This paper considers all households and incomes available in the data. The data used are wage and transfer incomes for 2010 found in EU-SILC 2011, which were predominantly recorded in administrative sources. Additionally, to evaluate capital income, data from the 2010 HFCS (Household Finance and Consumption Survey)
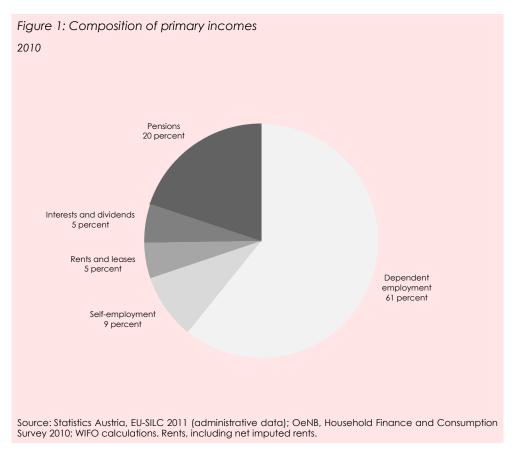
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[1] In OECD studies on distribution, households earning/not earning pensions are typically regarded separately (z. B. *Immervoll – Richardson,* 2011).

were integrated, while indirect tax payments were estimated based on data from the 2009-10 Consumer Survey. To ensure comparability with the previous WIFO redistribution studies (*Guger,* 1987, 1996, *Guger et al.,* 2009), an analysis based on the survey data of EU-SILC 2011 (European Union Survey on Income and Living Conditions) was carried out, and as in the previous WIFO studies all households without self-employed household members and without income from self-employment, entrepreneurial activity or capital income were considered.

2.   Distribution of market and primary income

The gross market incomes of private households in Austria form the basis for the redistribution analysis. These include earned income (from employment and/or self-employment) as well as income from rental of real property and leases, interest and dividends (capital income). Together with pensions (income earned through employment entitlements or deferred earnings) and the rental value that a household would pay if renting owner-occupied property (net imputed rent)[2], they form the primary income.

61 percent of all primary household incomes in Austria were earned through dependent employment in 2010 and 20 percent through pensions. Income from self-employment accounted for 9 percent, and wealth income, i.e. income from interest and dividends as well as rents and leases including net imputed rent accounted for 5 percent each (Figure 1).

Figure 1: Composition of primary incomes

2010

Source: Statistics Austria, EU-SILC 2011 (administrative data); OeNB, Household Finance and Consumption Survey 2010; WIFO calculations. Rents, including net imputed rents.

As expected, primary incomes were not distributed equally among the population: the third (tertile) of Austrian households with the lowest gross equivalised total income (primary income including monetary public benefits) accounted for only 12 percent, while the middle third accounted for 28 percent and households in the

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[2] Imputed rents net of housing loan repayments.

top third income bracket received the remaining 60 percent (Table 1)[3]. This distribution is primarily determined by the distribution of incomes from dependent employment. Pension incomes were more evenly distributed across the quantiles. Capital incomes were especially unevenly distributed: over 60 percent of income from rents and leases and over 70 percent of income from interest and dividends could be attributed to the 10 percent of households with the highest total income.

Table 1: Distribution of income components of the equivalised primary income

Quantiles based on gross equivalised total income of all households, 2010

	Overall[1]	Dependent employment	Self-employment	Rents and leases	Interests and dividends	Overall	Pensions	Net imputed rents
				Market income				
				Percentage shares				
1st decile	1.5	0.6	.	.	0.7	0.6	3.4	3.5
2nd decile	3.5	2.1	2.6	0.9	1.1	2.0	7.5	5.0
3rd decile	5.1	3.6	3.5	1.1	1.2	3.3	9.7	6.5
4th decile	6.3	4.9	6.3	2.1	2.0	4.8	10.5	8.6
5th decile	7.6	7.0	5.7	2.0	2.2	6.4	10.9	8.7
6th decile	9.0	9.1	8.0	4.9	3.2	8.5	10.3	10.5
7th decile	10.5	10.9	7.6	6.2	4.0	10.0	12.1	12.7
8th decile	12.6	14.9	9.5	5.8	5.5	13.4	10.0	13.1
9th decile	15.7	18.1	13.9	13.9	8.7	16.9	12.6	13.9
10th decile	28.3	28.8	42.5	62.5	71.4	34.0	13.1	17.6
1st tertile	12.1	7.7	8.3	3.3	3.5	7.4	24.3	17.8
2nd tertile	27.7	26.8	22.4	12.3	9.0	24.8	35.7	33.2
3rd tertile	60.2	65.5	69.4	84.3	87.5	67.8	40.0	48.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
				Billion €				
Overall[2]	189.8	114.5	17.0	2.7	10.1	144.3	37.5	6.6

Source: Statistics Austria, EU-SILC 2011 (administrative data); OeNB, Household Finance and Consumption Survey 2010; WIFO calculations. "." . . . low number of cases in the sample. – [1] Including inter-household transfers and alimony payments. – [2] Non-equivalised values.

3. The redistributive impact of public revenues

3.1 Taxes and social contributions in international comparison

In 2010, taxes and social contributions made up 40.8 percent of GDP (2014: 43.0 percent). This means that the overall tax ratio in Austria was below that of the Scandinavian countries (Denmark 45.3 percent, 2014: 50.9 percent, Sweden 43.2 percent, 2014: 42.7 percent), but above the EU average: in the average of the EU 15 it was 36.6 percent (2014: 39.6 percent).

However, its composition also deviates from the average. In Austria, labour is disproportionately burdened by payroll taxes and social security contributions (*Köppl – Schratzenstaller,* 2015). By contrast, capital is taxed at a significantly lower level than the EU and the OECD average (*Eurostat,* 2015, *OECD,* 2016). Only 1.3 percent (2014: 1.4 percent, 2013: 1.7 percent) of tax revenues originated from taxes on capital in Austria, compared to more than 5 percent in the average of the EU 15 (2013: 5.6 percent) and 5.5 percent in the OECD average (2013: 5.6 percent; Figure 2). Due to the high share of indirect taxes and social security contributions (with a maximum contribution basis) and the relatively low weight of taxes on income and capital gains, the Austrian tax system was only moderately redistributive.

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[3] From here onward, income is always understood as equivalised income.

Figure 2: Structure of taxes and transfers in international comparison

2010

Source: OECD, WIFO calculations. EU 15 and OECD: unweighted average.

3.2 Distribution of taxes by source of income

The tax burden incurred by households varies by type and level of income. The effective tax burden[4] on wages is particularly high, ranging from 37 percent in the bottom third of gross total income to 45 percent in the top income third in 2010 (Table 2). The progressive effect is confined to income taxation, arising through the basic allowance and marginal tax rates, which increase in higher income brackets. On the other hand, social security contributions (the employee's as well as the employer's share) have a regressive effect, as they decrease in proportion to income starting from a low income threshold (Geringfügigkeitsgrenze), but are capped at a ceiling (Höchstbeitragsgrundlage). As a result, social security contributions place a greater burden on income from employment in households in the bottom and middle income thirds than on income in the top third.

This also applies, in principle, to social contributions on income from self-employment[5] but in this case the ratio of social security contributions and income tax to gross income is significantly lower in all deciles than for income from dependent employment when employers' social contributions are taken into account. For households in the bottom and middle income third, this amounted to 22 percent in 2010, while in the top third it amounted to 33 percent. Pensions, like income from wages, are subject to income taxation i.e. the so-called wage tax. Here, taxes from pensions amounted to 3.4 percent in the lower income tertile, 11 percent in the middle tertile and 18.7 percent in the upper tertile. The comparatively lower social contribution burden is explained by the fact that these are limited to the social health care contribution. The share of paid income tax on income from rents and leases was 11 percent, 14 percent and 22 percent in the bottom, middle and top income thirds, respectively. The capital gains tax was 25 percent, independently of the amount of income from interest and dividends.

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[4] Like income, taxes are expressed in equivalised units.

[5] In the administrative data-set of EU-SILC, income from self-employment is based on questionnaire responses; in this case, the payment of income tax and social contributions is not calculated separately, but rather the result of gross minus net income informations.

Table 2: Equivalised tax and social contribution burden of the components of equivalised primary income

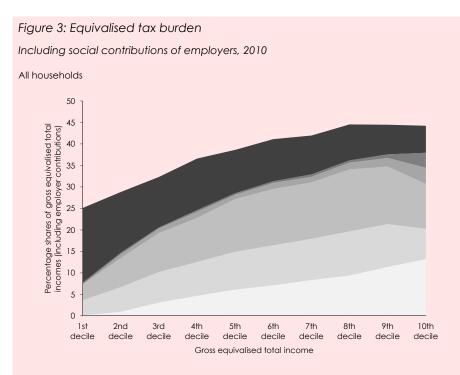*Quantiles based on gross equivalised total income of all households, 2010*

	Wages and salaries (including employers' social contributions)				Self-employment Income tax, social contribution	Rents and leases Income tax	Interests and dividends Capital gains tax	Pensions	
	Wage tax	Employee social contribution	Employer social contribution	Overall				Wage tax	Social contribution
				Percentage shares of equivalised taxes on corresponding equivalised income					
1st decile	0.2	10.8	19.9	30.9	.	.	25.0	0.4	4.6
2nd decile	1.6	12.3	21.5	35.4	20.1	.	25.0	1.3	5.0
3rd decile	3.5	12.8	22.2	38.5	23.9	.	25.0	4.8	5.1
4th decile	4.9	13.1	22.0	40.0	22.0	.	25.0	7.6	5.3
5th decile	6.2	13.2	22.3	41.7	20.1	.	25.0	10.0	5.4
6th decile	7.3	13.3	21.6	42.2	23.7	.	25.0	12.3	5.5
7th decile	8.4	13.4	21.1	42.9	26.5	.	25.0	14.1	5.6
8th decile	9.8	13.3	20.5	43.6	30.6	.	25.0	16.4	5.7
9th decile	12.2	13.1	19.3	44.6	32.9	.	25.0	18.5	5.6
10th decile	18.0	10.5	16.9	45.4	34.7	.	25.0	22.0	5.3
1st tertile	2.9	12.6	21.9	37.4	22.2	10.6	25.0	3.4	5.0
2nd tertile	6.9	13.3	21.7	41.9	22.9	13.7	25.0	11.0	5.4
3rd tertile	13.9	12.0	18.6	44.5	33.4	22.4	25.0	18.7	5.5
Total	11.1	12.4	19.7	43.2	30.1	20.9	25.0	12.2	5.4
					Billion €				
Overall[1]	15.5	17.5	28.0	61.0	5.2	0.4	1.5	4.6	2.0

Source: Statistics Austria, EU-SILC 2011 (administrative data); OeNB, Household Finance and Consumption Survey 2010; WIFO calculations. Due to low number of cases in the sample and their strong variation, individual decile values are not included for taxes on self-employed income and income from rents and leases. – [1] Non-equivalised values.
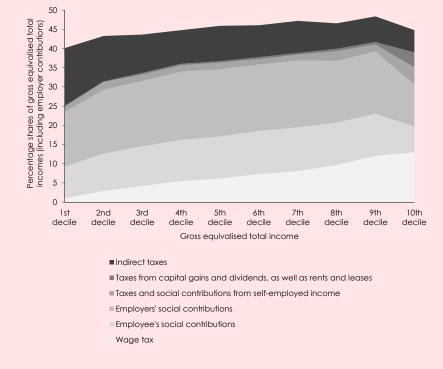
3.3 Overall distributive impact of taxes and social contributions

Based on the overall relation of taxes to gross total income (primary income including public cash benefits), the highly regressive effects of indirect taxes becomes apparent (Figure 3). Measured by total gross income, households in the lowest income decile contributed 17 percent of their income to value added tax, fuel tax, tobacco tax, etc. As a result, a significantly higher share of income went to indirect taxes than in the other income groups (median income: 10 percent, top decile: 6 percent). Overall, households in the bottom income decile paid 25 percent of their total gross income in taxes and social contributions. The share of taxes and social contributions rose significantly with income, amounting to 40 percent for households in the middle of the income distribution. From the 8th decile onward, the tax burden did not increase any further due to the regressive structure of social contributions and consumer taxes, and for the upper third of households the share of taxes and social contributions was around 44 percent. Between the third and ninth deciles, social contributions accounted for more than half of total revenues; and in the 1st and 2nd deciles over 48 percent of revenues originated from consumer taxes.

The structure of the tax and social contribution burden in the lower segment of the overall income distribution can be explained by the disproportionate share of pension and transfer income households. Because no pension insurance contributions are deducted from pension incomes and no direct taxes are levied from the transfer recipients, the tax burden measured in terms of total income is lower for these households. To get a (structurally) adjusted assessment of the tax system's degree of progression we exclusively take into account active households, i.e. only households with an employed or self-employed main earner (excluding households with recipients of pensions or other transfer income as main earners). The result is a much more uniformly distributed tax burden among income groups: the bottom third of the actively participating households contribute about 43 percent of their total gross income to the state in the form of taxes and social contributions, while the middle and upper thirds each contribute around 46 percent (Figure 3).

Figure 3: Equivalised tax burden

Including social contributions of employers, 2010

All households

Households with a self-employed or employed main earner

■ Indirect taxes

■ Taxes from capital gains and dividends, as well as rents and leases

■ Taxes and social contributions from self-employed income

■ Employers' social contributions

■ Employee's social contributions

□ Wage tax

Source: Statistics Austria, EU-SILC 2011 (administrative data), Consumer Survey 2009-10; OeNB, Household Finance and Consumption Survey 2010; WIFO calculations.

The weak redistributive impact of the Austrian tax system can also be observed when comparing the distribution of primary income to the allocation of taxes: households in the lower third of the primary income distribution generated 12 percent of all primary income and paid 10 percent of all taxes and social contributions[6], while households in the top income third generated 60 percent of all primary income and paid 63 percent of all taxes and social contributions. In the individual

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[6] Net of employer share of social contributions.

income groups the share of taxes and social contributions in Austria is therefore largely proportional to the share of primary incomes (Figure 4, Table 5).

4.   The redistributive impact of public welfare expenditures

In 2010, around 70 percent of public expenditures (including pensions) in Austria were assigned to social transfers, health care and education[7]. Over 90 percent of the social and public monetary and in-kind benefits were attributable to the areas of health, education and family[8] (Table 3). The greater part of the monetary social transfers in Austria is organised according to the insurance principle – that is, the amount of the transfer depends on previously earned income and contributions paid. Among the overall monetary and in-kind benefits, universal benefits make up the greater part, which apply to all income brackets without means testing. Needs-based or income-based benefits, such as the means-tested minimum income (Sozialhilfe, Bedarfsorientierte Mindestsicherung), are on the other hand less significant in Austria.

4.1   Health care expenditures

One of the most important items of public expenditure is the health care sector. Around 44 percent of all monetary and in-kind benefits to private households taken into consideration for 2010 pertain to the fields of health and care services.

Slightly more benefits (36 percent) went to households in the bottom third of the primary income distribution than to those in the upper third income bracket (Table 3). Measured by their total gross income, health care benefits accounted for more than a quarter among households in the lower income tertile (Table 4). The redistributive effect of the health system from the healthy to the sick increased the progressive, redistributive effect of these services, due to the higher concentration of people with poor health in the lowest income groups (pensioners). The same was true for the care allowance.

4.2   Education services

The second largest item of expenditure involves education benefits for school children and students. Based on the available data, a good 30 percent of students are situated in the bottom third of the distribution. These results should be interpreted with caution, however, as half of the students reside in their own households (*Unger et al.*, 2012) and have a very low income, yet students who live in their own homes often come from well-off parent households, to which they cannot be assigned to here. In 2010, expenditures on higher education corresponded to approximately 22 percent of the total gross income of households in which students resided. According to the available data, this share was over three quarters in the bottom tertile of the income hierarchy, one quarter in the middle tertile and one eighth of total income in the top tertile (Table 3).

School children are disproportionately represented in the middle tertile. On average, public expenditures for school children of households in which school children lived amounted to about one-fifth of total income, and for households in the bottom income third the amount even reached 44 percent (Table 4). Private financing of education at existing standards would therefore be difficult for households in the bottom and middle income groups.

4.3   Housing allowance and housing subsidies

In Austria, housing is publicly supported through housing and rental subsidies ("subject funding", which flows directly to low-income households) and through the housing allowance ("object funding", that is, funding for the development of own homes

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[7] The remaining 30 percent were, among others, expenditures on defence, public order and safety, economic affairs and environmental protection.

[8] Here, as previously mentioned, pensions are treated as primary income.

and non-commercial property). In 2010, around 6 percent of households received housing and rental subsidies; about 28 percent of households benefited from housing allowance loans or lived in subsidised housing. Because housing allowance loans involve lower interest payments than mortgage loans from banks, the households in question benefited from an interest rate advantage. By the same token, households renting municipal or cooperative apartments benefited from a rental advantage with respect to rents on the free market.

Table 3: Distribution of equivalised monetary transfers and benefits in kind

Quantiles based on gross equivalised total income of all households, 2010

	Passive, active labour market policies	Social welfare	Family benefits	Health services	Care benefits	Education services School children	Education services Students	Housing subsidies	Rent and interest advantage	Survivor pensions
					Percentage shares					
1st decile	36.8	52.5	7.6	9.7	2.6	6.7	15.5	34.5	14.0	.
2nd decile	21.7	.	12.6	11.0	16.7	9.2	10.7	38.9	12.3	.
3rd decile	10.1	.	12.9	11.5	17.3	11.7	10.7	14.2	9.9	.
4th decile	9.0	.	12.9	11.1	16.5	12.6	7.3	.	9.8	.
5th decile	6.2	.	12.1	10.1	13.5	10.3	8.0	.	9.3	.
6th decile	4.8	.	11.1	9.8	8.6	13.4	7.2	.	10.4	.
7th decile	3.3	.	10.0	9.7	9.6	10.0	9.7	.	9.4	.
8th decile	3.5	–	7.2	9.0	5.5	8.9	10.2	.	9.4	.
9th decile	3.6	–	7.0	9.3	4.0	8.1	9.5	.	8.8	.
10th decile	0.9	–	6.7	8.9	5.9	9.1	11.2	.	6.6	.
1st tertile	72.1	90.4	36.5	35.9	42.0	31.9	39.4	89.2	39.6	24.3
2nd tertile	18.9	.	39.8	33.5	39.7	39.3	26.3	9.5	33.0	40.2
3rd tertile	9.1	–	23.7	30.6	18.3	28.8	34.3	.	27.4	35.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
					Billion €					
Overall[1]	2.5	0.3	8.0	20.4	1.2	10.4	4.5	0.4	1.3	0.6

Source: Statistics Austria, EU-SILC 2011 (administrative data); OeNB, Household Finance and Consumption Survey 2010; WIFO calculations. "." . . . low number of cases in the sample. "–" . . . no cases in the sample. – [1] Non-equivalised values.

The distributive effects of benefits varied significantly. While 90 percent of housing subsidies went to households in the bottom third of the income distribution, the public support for object funding, which represented more than 80 percent of housing allowance expenditures, was distributed significantly more evenly: 40 percent were allocated to households in the bottom third income group and 27 percent to those in the top third income (Table 3). In total, more than half of all public housing benefits went to the bottom third income group. Measured by household income, the housing allowance and the rental and interest rate advantage amounted to 10 percent and 8 percent for the lower income third, respectively, and hence were of far greater importance than for households in the higher income brackets (Table 4).

4.4 Labour market policy, social assistance, family benefits

The strongest redistribution effects in 2010 could be found for public benefits related to unemployment and for social assistance or means-tested minimum income, but also the above-mentioned housing subsidies, as well as individual family benefits such as the childcare allowance and public childcare infrastructure. These services went disproportionately to low-income households, constituting a significant part of their total income. They therefore had a progressive or downward redistributive impact.

Poorly qualified and low-paid workers are particularly affected by unemployment. Accordingly, 72 percent of unemployment benefits and 90 percent of social assistance were allocated to the bottom third of the overall income distribution (Table 3). For households receiving unemployment benefits and/or social assistance (or

means-tested minimum incomes), these benefits were of critical importance: among households in the lowest income decile affected by unemployment, unemployment benefits accounted for over 90 percent of total income; for those receiving social assistance, the benefits made up nearly half of total income.

Table 4: Significance of equivalised monetary and in-kind benefits for affected households

Quantiles based on gross equivalised total income of all households, 2010

	Passive, active labour market policies	Social benefits	Family services	Health services	Care benefits	Education services		Housing subsidies	Rent and interest advantages	Survivor pensions
						School children	Students			
				In percent of gross equivalised income						
1st decile	92.0	47.6	59.7	45.1	16.8	80.8	159.0	14.7	17.0	.
2nd decile	61.6	.	38.0	27.8	17.8	50.6	72.3	9.9	7.8	.
3rd decile	40.8	.	24.0	22.1	15.4	36.8	53.8	6.8	5.2	.
4th decile	35.8	.	19.5	17.8	13.4	28.9	37.0	.	3.8	.
5th decile	25.7	.	16.9	13.8	13.7	25.2	28.6	.	3.3	.
6th decile	24.5	.	12.5	11.6	10.2	20.9	24.1	.	2.9	.
7th decile	21.2	.	11.1	9.9	10.3	16.9	19.2	.	2.4	.
8th decile	17.3	–	8.3	7.8	6.4	12.9	15.9	.	2.0	.
9th decile	17.0	–	7.6	6.5	5.9	12.5	13.9	.	1.5	.
10th decile	5.2	–	4.0	3.5	5.8	7.0	7.7	.	0.9	.
1st tertile	65.7	34.0	31.1	27.2	16.3	44.4	77.0	10.2	7.7	24.5
2nd tertile	27.1	.	14.7	12.7	12.1	22.2	25.7	3.9	3.1	25.6
3rd tertile	14.1	–	6.3	5.6	6.4	10.3	11.5	.	1.5	12.7
Total	41.1	28.7	13.1	10.6	11.5	18.9	22.2	8.5	2.9	18.7
				Percentage shares of affected households						
Overall	5.8	1.8	23.4	100.0	8.3	19.3	8.4	5.6	27.8	2.0

Source: Statistics Austria, EU-SILC 2011 (administrative data); OeNB, Household Finance and Consumption Survey 2010; WIFO calculations. "." . . . low number of cases in the sample. "–" . . . no cases in the sample.
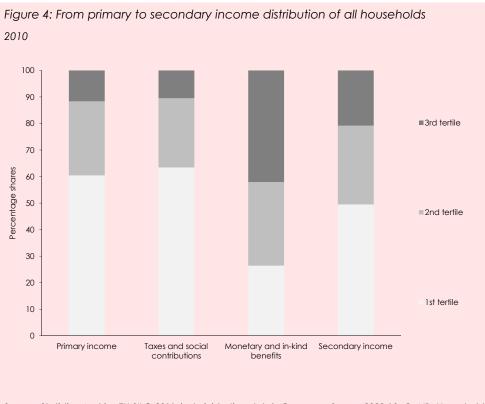
Also family benefits being paid or offered independently of income, had the greatest significance (in terms of overall household income) for low-income households. In households with children receiving family benefits, these benefits on average amounted to about 13 percent of the total income, and in the bottom tertile they even made up almost a third (Table 4). The most important benefits are the family allowance and the child tax credit. Although the lower income groups profit most from family benefits, these transfers cannot stave off the risk of poverty in families. If family policies are to meet the long-term challenges of preventing child poverty, fostering early-childhood development and increasing the labour market participation of both parents, they will have to focus more on a high-quality, affordable, generally accessible public childcare and educational offering. Improving educational opportunities is one of the measures shown to have the greatest success rate in increasing equal opportunity and preventing social exclusion and segregation.

4.5 Overall distribution impact of monetary transfers and benefits in kind

Overall, social and public expenditures (monetary and in-kind benefits) have a strong vertical redistributive effect, i.e. from high-income to low-income households. In 2010, the third of households with the highest primary income earned 60 percent of overall primary income, but only received 26 percent of social and public benefits. In contrast, households in the bottom income third earned only 12 percent of primary income, but obtained 42 percent of public monetary and in-kind benefits (Figure 4, Table 5).

5. The overall impact of public redistribution

Regarding the tax contributions of the individual income groups, they largely corresponded to their shares in the distribution of primary income. Insofar, the tax system

only has a moderate redistributive function. Monetary and in-kind benefits, however, flow disproportionately more to lower income households, and therefore have a strong redistributive effect.

Figure 4: From primary to secondary income distribution of all households

2010

Source: Statistics Austria, EU-SILC 2011 (administrative data), Consumer Survey 2009-10; OeNB, Household Finance and Consumption Survey 2010; WIFO calculations. Rounding differences.

Table 5: From equivalised primary to the secondary income distribution of all households

Quantiles based on equivalised primary income, 2010

	Primary incomes		Overall taxes			Monetary and in-kind transfers			Secondary income[1]		
	€ per month	Percent-age shares	€ per month	Percent-age shares	In percent of the equivalised primary income	€ per month	Percent-age shares	In percent of the equivalised primary income	€ per month	Percent-age shares	In percent of the equivalised primary income
1st decile	292	1.1	153	1.6	52.5	1,014	14.7	348.0	1,140	4.7	391.1
2nd decile	961	3.6	280	2.9	29.1	833	12.1	86.7	1,511	6.3	157.2
3rd decile	1,362	5.0	401	4.2	29.5	797	11.6	58.5	1,749	7.3	128.4
4th decile	1,706	6.3	546	5.7	32.0	744	10.8	43.6	1,891	7.8	110.8
5th decile	2,072	7.7	673	7.0	32.5	667	9.7	32.2	2,053	8.5	99.1
6th decile	2,444	9.0	814	8.5	33.3	629	9.1	25.7	2,236	9.3	91.5
7th decile	2,856	10.6	977	10.2	34.2	582	8.4	20.4	2,442	10.1	85.5
8th decile	3,407	12.6	1,235	12.9	36.3	561	8.1	16.5	2,703	11.2	79.3
9th decile	4,241	15.7	1,556	16.3	36.7	528	7.7	12.4	3,174	13.2	74.8
10th decile	7,676	28.4	2,931	30.6	38.2	535	7.8	7.0	5,185	21.5	67.5
1st tertile	944	11.7	301	10.5	31.9	870	42.1	92.2	1,505	20.8	159.3
2nd tertile	2,262	27.9	750	26.1	33.1	651	31.5	28.8	2,146	29.7	94.9
3rd tertile	4,899	60.4	1,820	63.4	37.1	545	26.4	11.1	3,574	49.5	73.0
Overall	2,702	100.0	957	100.0	35.4	689	100.0	25.5	2,408	100.0	89.1

Source: Statistics Austria, EU-SILC 2011 (administrative data), Consumer Survey 2009-10; OeNB, Household Finance and Consumption Survey 2010; WIFO calculations. – [1] Not including inter-household transfers and alimony payments.

In 2010, households in the bottom third income bracket earned approximately 12 percent of primary income, but around 20 percent of secondary income, while the middle tertile accounted for 28 percent of primary income and 30 percent of secondary income, and the households in the top third income group accounted

for 60 percent and 50 percent, respectively. Hence, for the middle-income segment, redistribution through public budgets had only a relatively small impact, while a significantly greater redistribution took place from the high to low income groups. After the redistribution process, the lower third of households had 60 percent more income than beforehand, while the middle third lost an average of 5 percent of their primary income and the top third lost a good quarter. Ultimately, the half of households with the lowest incomes benefited from the short-term annual state redistribution process, while the upper half lost part of their primary income (Figure 4, Table 5).

The public redistribution process changes the position of households in the income hierarchy. In general, it reduces the inequality in income and welfare distribution. To measure this effect, the distribution before public redistribution (primary income distribution) is compared with the distribution after redistribution and reordering of households (secondary income distribution; Table 6).

	Primary income		Secondary income[1]		
	€ per month	Percentage shares	€ per month	Percentage shares	In percent of the equivalised primary income[2]
1st decile	292	1.1	855	3.5	293.3
2nd decile	961	3.6	1,372	5.7	142.8
3rd decile	1,362	5.0	1,636	6.8	120.1
4th decile	1,706	6.3	1,853	7.7	108.6
5th decile	2,072	7.7	2,063	8.6	99.6
6th decile	2,444	9.0	2,283	9.5	93.4
7th decile	2,856	10.6	2,532	10.5	88.7
8th decile	3,407	12.6	2,834	11.8	83.2
9th decile	4,241	15.7	3,271	13.6	77.1
10th decile	7,676	28.4	5,384	22.4	70.1
1st tertile	944	11.7	1,337	18.5	141.6
2nd tertile	2,262	27.9	2,179	30.2	96.3
3rd tertile	4,899	60.4	3,709	51.3	75.7
Overall	2,702	100.0	2,408	100.0	89.1
	Gini coefficient		Gini coefficient	P_{MT} [3]	
Overall	0.383		0.259	1.201	

Table 6: Equivalised primary and secondary income distribution of all households
Quantiles based on respective income, 2010

Source: Statistics Austria, EU-SILC 2011 (administrative data), Consumer Survey 2009-10; OeNB, Household Finance and Consumption Survey 2010; WIFO calculations. – [1] Not including inter-household transfers and alimony payments. – [2] The households were re-categorised in ascending order after redistribution based on secondary income; relation between secondary income after redistribution and the primary income in each respective decile. – [3] The redistribution index by *Musgrave – Thin* (1948) places the Gini coefficient after taxes Gn in relation to that before taxes Gb: $P_{MT} = \frac{1 - Gn}{1 - Gb}$, $P_{MT} > 1$ . . . progressiveness of the tax system, $P_{MT} = 1$ . . . proportionality of the tax system, $P_{MT} < 1$ . . . regressiveness of the tax system.

After the redistribution process, the income share of the lower third of households was nearly 7 percentage points higher, and that of the middle tertile 2¼ percentage points higher than prior to redistribution; the share of the top third was more than 9 percentage points lower.

In the lower third, secondary income was 42 percent higher, and in the middle third 4 percent lower than primary income, compared to 24 percent lower in the upper third. For the average household, equivalised income was 11 percent below primary income after redistribution. The public redistribution process thereby significantly reduced the inequality in the distribution of resources: at 0.259, the Gini coefficient of the secondary income distribution was 32 percent lower than that of the primary income distribution (0.383).

6.   Increasing inequality of primary and secondary income distribution

Based on the survey data from EU-SILC, statements on the development of the distribution of resources prior to and after public redistribution are only possible for non-self-employed households (i.e. all households except those with self-employed household members), which are compared with the results of the previous, methodically completely comparable WIFO study (*Guger et al.,* 2009).

6.1   Polarisation of market income continues

Over the past two decades, inequality has increased significantly in the distribution of primary or gross market incomes of employees, both at the individual level and at the household level. Including households with recipients of pensions and other transfer incomes, since 2005 a noticeable polarisation of primary incomes has been observed. While the Gini coefficient of primary incomes rose by just under 2 percent in the first half of the 2000s, in the second half it increased by more than 7 percent (Table 7).

This development was mainly attributable to cyclical and structural factors. From a macroeconomic perspective, persistently high unemployment dampened wage growth and the wage share of national income. At the same time, high-wage industries lost ground in favour of service sectors with lower wage shares. At the individual level, part-time work and atypical forms of employment increased significantly. Generally, technological progress and globalisation had a dampening effect on income for the low-skilled, while tending to favour the highly-skilled. Also, to the share of single-person households grew steadily; at the same time, the increased alignment of education and employment standards in the composition of households led to a higher (potential) pairing of high-income or low-income partners (assortative mating), which increased the polarisation of market income at the household level.

6.2   Redistribution by the state reduces income inequality, but cannot offset the rise in inequality

The average equivalised primary income of non self-employed households was 2,450 € per month in 2010 and the average secondary income was 9 percent lower at 2,230 €. The 10 percent of households with the lowest income, in which many claimants of transfer incomes are represented, had an average equivalised monthly primary income of 270 € in 2010. After considering the public redistribution process – and after a reordering of households by income – the lowest decile had a three times as high needs-weighted (equivalised) secondary income (around 900 €). In the upper half of the income hierarchy, however, the received monetary and in-kind benefits lagged behind tax payments. In the top decile, the incomes in the secondary distribution were about 30 percent lower than those in the primary distribution (Table 7).

As a comparison of income distribution before and after redistribution shows, in 2010 the bottom third of households received over 12½ percent of equivalised primary incomes and after the state redistribution process about 20 percent of secondary income (a good +7 percentage points). After redistribution via taxes and public transfers, the middle third had 1.7 percentage points more resources (29.1 percent and 30.8 percent, respectively) and the top third had about 9 percentage points less (58½ percent and 49½ percent, respectively). This reduction of inequality of the income and welfare distribution is also very clearly reflected in the Gini coefficient. For equivalised primary incomes it was 0.359 in 2010 and for the secondary incomes it was 0.234.
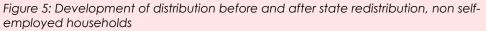
The redistributive impact of public budgets based on the redistribution index by *Musgrave – Thin* (1948) was slightly stronger in 2010 than in the years 2000 and 2005. The Gini coefficient of the equivalised secondary income, which remained unchanged at 0.217 in the first half of the 2000s, increased by 7.5 percent to 0.234 in 2010. In the bottom third of households, the share in secondary income decreased by 1 percentage point compared to 2005, while at the top it grew by 1.3 percentage points; in the middle tertile the proportion remained almost unchanged.
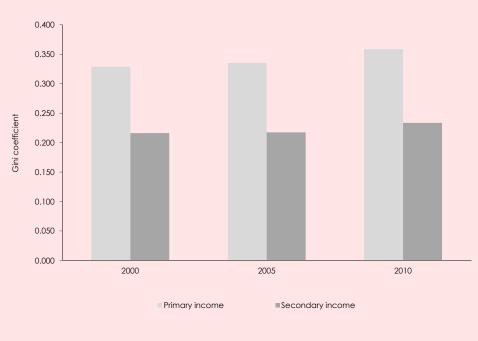
Table 7: Equivalised primary and secondary income distribution of non self-employed households

Quantiles based on respective income, 2010

| | Primary income | | Secondary income[1] | | |
	€ per month	Percentage shares	€ per month	Percentage shares	In percent of the equivalised primary income[2]
1st decile	269	1.1	892	4.0	331.1
2nd decile	950	3.9	1,341	6.0	141.2
3rd decile	1,312	5.4	1,581	7.1	120.4
4th decile	1,649	6.7	1,777	8.0	107.8
5th decile	1,964	8.0	1,971	8.8	100.3
6th decile	2,305	9.4	2,155	9.6	93.5
7th decile	2,681	10.9	2,367	10.6	88.3
8th decile	3,166	12.9	2,642	11.8	83.5
9th decile	3,885	15.8	3,044	13.6	78.3
10th decile	6,346	25.9	4,557	20.4	71.8
1st tertile	914	12.4	1,315	19.6	143.9
2nd tertile	2,143	29.1	2,064	30.8	96.3
3rd tertile	4,300	58.5	3,319	49.6	77.2
Overall	2,452	100.0	2,233	100.0	91.0
	Gini coefficient		Gini coefficient	P_{MT}[3]	
2010	0.359		0.234	1.195	
2005	0.335		0.217	1.177	
2000	0.329		0.216	1.168	

Source: *Guger et al.* (2009), EU-SILC 2011 (survey data), Consumer Survey 2009-10, WIFO calculations. – [1] Not including inter-household transfers and alimony payments. – [2] The households were re-categorised in ascending order after redistribution based on secondary income; relation between secondary income after redistribution and the primary income in each respective decile. – [3] The redistribution index by *Musgrave – Thin* (1948) places the Gini coefficient after taxes Gn in relation to that before taxes Gb:

$$P_{MT} = \frac{1 - Gn}{1 - Gb}, \quad P_{MT} > 1 \ldots \text{progressiveness of the tax system,} \quad P_{MT} = 1 \ldots \text{proportionality of the tax system,}$$

$P_{MT} < 1 \ldots$ regressiveness of the tax system.

Figure 5: Development of distribution before and after state redistribution, non self-employed households

Source: *Guger et al.* (2009); Statistics Austria, EU-SILC 2011 (administrative data), Consumer Survey 2009-10; OeNB, Household Finance and Consumption Survey 2010; WIFO calculations.

In 2010, the tax system had a slightly more progressive effect than in 2005[9]. On the one hand, the income tax rate reform and changes in value added tax (reduction of the VAT rate on medicines), and the reduction of unemployment insurance contributions for low incomes relieved the burden on lower income households slightly more, while at the same time in the lower income groups the propensity to consume decreased, so that the indirect tax burden declined. However, a major cause is also likely to be the expansion of atypical employment and the increase in the number of unemployed and pensioners. These groups pay fewer (direct) taxes and social contributions and are concentrated more in the lower segment of the distribution of total income. Redistribution through taxes and social contributions could not offset the growing inequality of market incomes. Consequently, the distribution of net incomes also grew less equal in the 2000s. The secondary income distribution – that is the distribution net of taxes and social contributions and plus public benefits and benefits in kind – remained stable in the first half of the decade, but was noticeably less equal in the second half.

7. Summary

Like the Scandinavian countries and Belgium, France and Italy, Austria exhibits a high redistributive potential of state activity. In 2010, the tax ratio was 40.8 percent or 4.2 percentage points higher than the average of the EU 15. However, redistribution mainly took place on the public expenditure side. Through the regressive structure of indirect taxes and social security contributions and the relatively low weight of taxes on earned and capital income as well as on investment income, the tax system was only moderately redistributive. In contrast, the public welfare benefit system has a clearly redistributive effect. In addition to pensions, the bulk of social monetary and in-kind benefits accrued to the health care, education and family, and all households benefited in approximately equal measure independently of income, so that the relative importance of benefits was higher for low-income households than for high-income households. Benefits related to unemployment, as well as social assistance, housing subsidies, survivor's pensions, the care allowance and individual family benefits such as the child care allowance and the public childcare infrastructure are, however, disproportionately claimed by low-income households due to greater eligibility, and therefore constitute a substantial part of their income.

The distribution of primary income (market income and pensions) became especially less equal in the second half of the 2000s, above all because the market incomes of the poorest households were greatly reduced compared to 2005, while those of higher-income households sharply increased. In addition, the share of persons without market or pension incomes increased.

The increase in inequality in the distribution of primary income could not be offset by state redistribution activities. Furthermore, the secondary incomes of households (primary income net of direct and indirect taxes and social contributions, plus monetary and in-kind public transfers), which had remained relatively stable between 2000 and 2005, were also distributed less equally in 2010 than in the mid-2000s.

As the present analysis shows, the social and welfare state system in Austria is facing new challenges. Given the increasingly unequal distribution of market incomes, the transfer system – with predominantly universal monetary and in-kind benefits, which depend on employment and are organised based on the insurance principle – does not reach households at the lower end of the income distribution to the same extent that it did in the early 2000s. Public benefits (in particular monetary transfers, public education and care benefits), which targetedly support poor households, are thus gaining importance. At the same time, due to the inclusion of new data sources and investment income, market incomes are much less equally distributed than they

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[9] For changes in the degree of progression of the Austrian tax and transfer system between 2007 and 2016, see *Rocha-Akis – Steiner – Zulehner* (2016).

were when based on the data and methodology used up to now (survey data, non-self-employed households). This casts into question the structure of the tax and contributions system with its heavy reliance on social contributions from wages. As this study has shown, the effective burden of individual taxes and contributions is very different for private households, depending on the type of income and income bracket. While the effective average tax and contribution rate on employee income was more than 43 percent in 2010 (effective average income tax rate of 11 percent, effective social contribution rate of 32 percent), the average effective tax and contribution rate on income from interest and dividends was 25 percent and that on income from rents and leases was 21 percent. Capital gains taxes therefore also contributed less to the tax revenue than in the EU or OECD average, because, on average, inheritance, land and property taxes played a greater role abroad.

Ultimately, the increase in inequality in the distribution of disposable income is primarily the result of a weak labour market development, partly due to an insufficient offering of jobs with full social insurance and high value creation and due to a rise in demand for low-wage labour. However, the concrete structure of education policy as well as that of tax and social contributions also play a role in that it has a significant impact on the current and future distribution of market incomes.

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