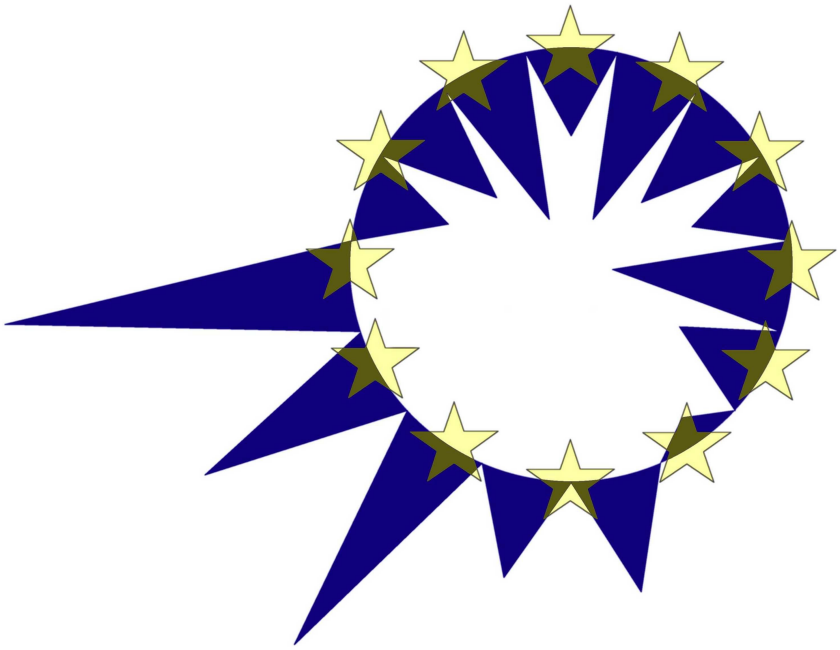
EUROMOD

COUNTRY REPORT



EUROMOD Country Report

AUSTRIA

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1. The Austrian tax-benefit system: an overview[1]

The size of the public sector in terms of revenues and expenditures is large in Austria. Despite this fact, there is evidence that its redistributive impact from high to low income classes is limited. On the revenue side, progressive income and property taxation is low but regressive social security contributions and indirect taxes are high. On the expenditure side, the principle of horizontal equity is prevalent and means testing is of hardly any importance.

In Austria, the level of taxation amounts to almost 45 per cent of GDP and is above the already high EU average; the OECD average is 36.8 percent. Tax levels are higher only in Belgium, France and the Nordic countries. While the high level of taxation in Austria indicates the high capacity of the public sector to affect the economy, the composition of public revenues implies a rather low degree of progressivity. Taxes on income and profits amount only to 29 per cent and taxes on property to 1.3 per cent of total tax revenues, that is, far below the EU and OECD average. On the other hand, social security contributions, taxes on goods and services and payroll taxes, with proportional or even regressive redistributive impact, make up more than two thirds of total revenue.

The level of total social (public and mandatory private) expenditure with regard to GDP is in Austria slightly above EU-average and largely above OECD average. It amounts to some 26 per cent of GDP. The lion's share of social expenditures goes to outlays related to old-age pensions, namely almost 40 per cent. This share is much higher than EU or OECD average where it is roughly one third. Also, expenditures on family policy are higher than on international average.

Table 1. Size and structure of public sector revenues and social expenditures in Austria, 1997

REVENUES		Direct taxation			Indirect taxation	
	Public sector revenues	Income and profit taxes	Social security contributions	Property taxes	Payroll taxes	Goods and services taxes
	% of GDP	% of total revenue				
Austria	44,2	28,9	34,2	1,3	6,2	28,2

[1] This section draws heavily on and updates Guger, A. (1997), „Redistribution by the State in Austria", paper presented to the European Economic Association Conference, Toulouse 1997. We gratefully acknowledge the help of Johannes Blaas, Alois Guger, Peter Kolacny, Rainer Pilz, Kurt Pratscher, Ursula Tentschert, Matthias Till, Karl Wörister and Gerhard Wohlfart.

OECD	36,8	35,5	24,9	5,4	0,9	32,0
EU	41,1	34,5	28,6	4,6	1,0	30,8

EXPENDITURES	Social expen-ditures	Old age	Disability, Injury, Sickness	Family	Unemploy -ment	Health
	% of GDP	% of total social expenditures				
Austria	26,3	38,5	10,0	10,0	5,2	22,2
OECD	21,9	31,6	12,5	8,7	6,4	26,6
EU	25,4	32,2	11,5	8,4	11,2	24,5

Source: OECD Revenue Statistics (2000), OECD Social Expenditure Data Base (2000)

1.1 The revenue side

1.1.1 Development

During the past three decades, property revenues have virtually exploded and the share of non-wage income in national income has increased (consequently, the wages share has declined). While the tax-income ratio of non-wage income components has decreased, the tax burden of wage and salary earners has significantly increased. Thus, non-wage income recipients have not only received an increasing share of national income, their tax burden has also declined. Therefore, wage earners have financed an ever increasing part of public sector activities. In 1970, the proportion of income tax paid by wage earners and pensioners amounted to 14.4 percent of direct taxation (including social security contributions) and the share of the income tax on non-wage income and corporate revenues amounted to 17.0 percent. However, by 1994, the , the proportion of income tax paid by wage earners and pensioners had increased to 24.9 percent of direct taxation while the share of income taxes paid out of non-wage incomes fell to 9.7 percent (Guger 1997).

There are several reasons for this declining tax burden on non-wage income: i) change in the 1970s from household to individual taxation, causing a sudden increase in the participation rate of spouses of businessmen in smaller businesses and professionals; ii) increase of possibilities of reducing taxable profits; iii) significant change in the composition of non-wage: between 1970 and 1993, profits increased by 270 percent, but revenues from financial assets by 1.044 percent. Taxation of interest revenues could be avoided because of anonymous bank and capital accounts and a negligible amount of capital revenues had been taxed, until 1978. Then, a so-called "source tax" on interest payments of 7.5 percent was introduced, which has been increased to 22 percent since 1993. However, in exchange, asset taxes and death duties on financial assets have been abolished altogether.

1.1.2 Social security contributions

The social security system is financed by both employers and employees. For almost 90 percent of employees, their contribution to social security is the highest tax payment. In the private sector, there is a low threshold and a ceiling for social insurance contributions which means that people who earn less than the threshold fall out of the social insurance system and people who earn more than the ceiling pay a constant amount which means in turn a ceiling to pensions and unemployment benefits. 8.5 percent of employees are above the ceiling.

From a distributive point of view, the ceiling means that the redistributive impact of these social security contributions is regressive. In addition, social security contributions are tax deductible, thus reducing the degree of progressivity. Therefore, while employees in the lower half of the income distribution earn about 30 percent of total income, they pay nearly 34 percent of all social security contributions. Since 1983, the degree of regressivity of social security contributions has actually increased (Guger 1997).

1.1.3 Personal income tax (income tax on wages and pensions)

Income tax amounts to about a quarter of all taxes and to about 60 percent of all direct taxes. Apart from profits and capital revenues tax, the income tax on wages, salaries and pensions is the most progressive public revenue in Austria (the asset tax was abolished in 1993).

As a result of expansion in tax concessions, the Austrian income tax system had until the late 1980s been characterized by high marginal tax rates and a low and ever decreasing degree of progression. Therefore, a new income tax bill in the late 1980s aimed at lower marginal tax rates but higher taxable income by limiting tax concessions. Consequently, the degree of progressivity increased despite a reduction of the highest marginal tax rate from 62 to 50 per cent.

Since 1989, the tax scale has had five brackets from 10 percent to 50 percent, with the highest marginal tax rate applicable for taxable annual incomes above 700,000 ATS. In addition, a special flat rate of 6 percent applies to bonuses or other remunerations limited to one sixth of current income. Consequently, in Austria, every employee receives 14 monthly payments of which two months' payments are called bonuses. This flat rate taxation of some parts of remuneration lowers

the highest marginal tax rate to 43.7 percent. On top of that, this flat rate also applies to severance payments[2] which can amount to up to 12 months' earnings.

The degree of progressivity is further substantially reduced by a number of tax concessions: i) social security contributions are a standard deduction; ii) there are a number of work-related tax concessions, such as expenses for further education; iii) there are tax concessions for special perennial expenses, such as premiums of life insurance or private health insurance, certain payments for residential housing, repayments of housing loans, or the acquisition of specific bonds, etc.

However, since the tax reform of 1993, the degree of progressivity has been significantly increased: first, tax credits have been extended, and second, a form of negative tax has been introduced, so that if tax credits are higher than tax liability the tax office pays the taxpayer the difference.

1.1.4 Indirect taxation: Taxes on goods and services

Indirect taxation has been a rather large component of the Austrian taxation system. About 30 per cent of all public revenues are taxes on goods and services, which is slightly below EU average, but, in addition, there are also payroll taxes of about 6 percent. The most important indirect tax is the value added tax. The normal VAT rate is 20 percent and there is a reduced rate of 10 percent for essentials like food, housing and printed matters like books and newspapers. VAT revenues amount to about two thirds of all indirect taxes. The rest are mainly other taxes on goods and services, duties, fees and user charges.

According to Guger (1997), the redistributive impact of indirect taxes in Austria is clearly regressive. In the lowest decile, indirect taxes amount to about a quarter of gross income, in the fifth decile, to 13.8 percent and in the top decile to 10.2 percent. Since indirect taxation is more or less proportional to expenditures in all income categories, the higher savings ratio in the higher income groups are the main reason for the regressive impact of indirect taxation.

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[2] Severance payments have to be paid when the employment contract is terminated by retirement or by the employers' notice. They amount to two months' earnings after three years employment, up to 12 months' earnings after 25 years with one employer.

1.2 The expenditure side

The expenditure side of the Austrian welfare state is dominated by the principle of horizontal equity. For most public benefits, entitlements are specified by categorical definitions, such as age, family status or economic status, independent of current income or assets. However, due to the social insurance system which is based on income-related contributions, pensions, unemployment benefits, unemployment assistance and sickness benefits are related to past income levels and social status (white- or blue-collar worker or public servant). Only social assistance, unemployment assistance, parental leave benefits, special assistance for single mothers, and housing support are means tested. With the exception of pensions, all transfer payments are tax free.

1.2.1 Family support

Family support is rather generous in Austria. Tax credits and family allowances for two children amount to 18.6 percent of the gross income of an average production worker in the mid-1990s (Guger 1997). Only in Iceland, Luxembourg and Belgium are tax credits and family allowances higher than in Austria.

The most important single transfer payment to families is the age-related family allowance. In addition, there are tax credits related to the number of children. Furthermore, these child-related tax credits are constructed as negative tax and, thus, also granted when the allowee has little or no tax liability.

In addition to the regular maternity benefits and leave for 16 weeks for mothers, waged or salaried mothers or fathers of new-born children are entitled to parental leave for two years (recently extended to three years). During this leave a flat rate parental leave benefit is paid. There is also special assistance for single mothers and extended parental leave if the mother can prove that she cannot find appropriate day care that would enable her to accept a job. Besides these birth-related benefits there are also schooling-related benefits such as free text books in primary and secondary education and free transport for pupils and students who are entitled to family allowances.

These family-related benefits are mainly financed through the Family Allowance Fund which is funded by an earmarked payroll tax of 4.5 percent and by income tax revenues. In addition, the Unemployment Insurance Fund contributes about half of parental leave benefits. This payroll tax has to be considered as the employees' contribution to finance family benefits since it was taken into account in wage negotiations when it was introduced.

Guger (1997), confining the analysis to families with children, finds that family support is more or less evenly distributed; while in the lower deciles support per child is higher, in the upper deciles the number of children per family is higher. There are, however, important differences in the distributive impact of the various measures: birth-related benefits are more likely to assist middle- and low-income groups, where more young families are represented.

1.2.3 Unemployment insurance

The Austrian unemployment insurance system is not as generous as family support. In general, unemployment benefits are granted for 30 weeks and up to one year for employees over 50 years of age. When the benefit period runs out, and no job has been found, unemployment assistance is available. This unemployment assistance ("Notstandshilfe") is means tested.

For the 90 percent of employees who earn less than the ceiling of the social security system, the replacement ratio of unemployment benefits (which are not taxed) is about 58 percent of the last net income. In addition, there is a family supplement for each dependent family member. Unemployment assistance is paid at 95 percent of the rate for unemployment benefit and at 100 percent for persons with dependent family members.

According to Guger (1997), unemployment benefits and unemployment assistance are the most progressive public expenditures. This is linked to the fact that the probability of becoming unemployed is much higher in lower income classes than in the higher.

1.2.4 Education and health

Despite the fact that a larger proportion of outlays for primary and secondary education is distributed to the upper half of the population, this expenditure is still moderately progressive. However, expenditure at the university level has a regressive impact on the redistributive process. As for health expenditures – increasing as in the OECD area in general -- although higher income classes receive a larger part of those expenditures due to the higher household size, health expenditures are clearly progressive (Guger 1997).

1.3 The net incidence of the public sector

In Austria, income and property taxes are low and only moderately progressive; this feature is due to a number of tax concessions which substantially lower the tax rate for high incomes. Indirect taxes and social security contributions, which have a regressive effect on the distribution, make up some 70 percent of all public revenues. Thus, the degree of progression of public revenues is very moderate. In turn, public expenditures seem to have more of a redistributive impact, although eligibility, and hence the distribution of public expenditures, are dominated by the principle of horizontal equity and means testing is of little importance. Consequently, in absolute money terms, higher income classes in which incidentally the household size is larger receive most public benefits. Only unemployment benefits, unemployment assistance and special assistance for single mothers are, in absolute terms, distributed to a greater extent to low-income groups. In spite of this, in relation to income, low-income classes receive more public benefits than high-income groups. Thus, the expenditure side seems progressive. In sum, if there is redistribution by the state in Austria, it is by public expenditures rather than by public revenues (Guger 1997).

2. Description of the modelled tax-benefit instruments

2.1 The scope of the simulation

The Austrian tax-benefit system is a rather complex one. This is mainly due to the complexity of the social insurance legislation, the number of different transfers and the "mix" of relevant administrative responsibility (federal, provincial, local). Due to the limitations of available micro-data, not all instruments lend themselves to simulation. In order to correctly interpret model results, it is therefore essential to clarify the scope of the simulations. In the following table, we will outline what parts are and are not included in the current version of EUROMOD. Of course, the amounts of non-simulated instruments may still play an important role in determining people's income situations (e.g., pensions). In general, therefore, amounts, which cannot be simulated are taken directly from the data (entry "Data" in the third column). However, in a few cases, information on instruments is neither simulated nor available from the micro-data ("None").

Instrument	Comments	Simulated / Data / None	% of GDP, 1998

1. TAXES			
Income tax (“Einkommensteuer”)	Federal Income Tax.	Simulated	9.01
Capital Income Tax ("Kapitalertragsteuer")		Simulated	1.03
Church Tax (“Kirchenbeitrag”)	Not actually a tax: paid to and collected by the church.	None	0.19[2]
Property Tax (“Grundsteuer”)	Municipal tax on real estate. Based on official values (“Einheitswert”) of real estate.	None	0.21
Value Added Tax (“Umsatzsteuer”)	See separate report on indirect taxes.	Simulated	8.28
Other indirect taxes (“Verbrauchsteuern”)	See separate report on indirect taxes.	Simulated	2.08
Estate and Gift Tax (“Erbschafts- und Schenkungssteuer”)		None	0.06
2. SOCIAL INSURANCE CONTRIBUTIONS			
Non-Civil Servant Employees	Health Insurance Pension Insurance Unemployment Insurance Compulsory Union Contributions ("Kammerumlage") Housing Subsidy ("Wohnbauförderungsbeitrag")	Simulated	3.78[5] 5.71[5] 1.83[5] 0.10[2] 0.29[5]
Civil Servants	Health Insurance Pension Insurance Housing Subsidy ("Wohnbauförderungsbeitrag")	Simulated	0.93[2, 5] 1.15[2] 0.07[2, 5]
Employers	Health Insurance Pension Insurance Unemployment Insurance Accident Insurance Bankruptcy Fund ("Insolvenzentgeltsicherung" Family Benefits Fund ("Familienlastenausgleichsfonds") Housing Subsidy ("Wohnbauförderungsbeitrag")	Simulated	 0.44[7] 0.16[2] 1.55
Self-Employed	Health Insurance Pension Insurance Accident Insurance	Simulated	0.21 0.55 0.44[7]
3. TRANSFER PAYMENTS (FAMILY)			
Family Benefit (“Familienbeihilfe”)	Universal benefit for children	Simulated	1.22

Short Term Pregnancy Benefit ("Wochengeld")		Data (partly; aggregated with other benefits)	0.16
Maternity Benefit ("Karenzgeld"; "Teilzeitbeihilfe"; "Betriebshilfe")		Data (aggregated with other benefits)	0.37
Maternity Allowance Supplement ("Zuschuss zum Karenzgeld oder zur Teilzeitbeihilfe")	Supplement maternity benefit for single Parents (universial) and low income couples (means tested).	Simulated	?
Small Children Benefit ("Kleinkindbeihlife")	Income tested benefit for small children who are cared for by the parent(s).	Simulated	0.00…
Newborn health check bonus ("Mutter-Kind-Pass-Bonus")	Benefit paid as an incentive to have follow-up health checks done after birth of a child.	Simulated	0.00…
Family Hardship Compensation ("Familienhärteausgleich")	One-time benefit for cases where all other sources of assistance have been exhausted.	None	0.00…
Child Care Benefit for Unemployed ("Kinderbetreuungsbeihilfe")	Short-term benefit paid to enable unemployed people with children to partcipate in the labour market and/or training courses.	None	0.00…
Provincial Family Bonus ("Familienzuschuss der Bundesländer")	Province specific income tested benefit for low income families with small children.	Simulated	0.02[4]
SUBSIDISED KINDERGARTEN *("ÖFFENTL. KINDERGÄRTEN")*		None	0.35
4. TRANSFER PAYMENTS (EDUCATION)			
Free use of public transport for students and apprentices ("Schüler- und Lehrlingsffreifahrt")	In-kind benefit	None	0.15
Student grants ("Schülerbeihilfe"; "Heimbeihilfe")	Means tested benefit for students who continue school beyond compulsory schooling.	Data (aggregated with other benefits)	0.02
Provision of school books ("Schulbuchaktion")	In-kind benefit	None	0.05
Student grants (Higher Ed.) ("Studienbeihilfe")	Means tested benefit for students in higher education.	Data (aggregated with other benefits)	0.07
Free accident insurance for students		None	0.00…

("Beitragsfreie Unfallversicherung für SchülerInnen und StudentInnen")			
5. TRANSFER PAYMENTS (UNEMPLOYMENT)			
Unemployment Benefit ("Arbeitslosengeld")		Data (will be simulated in future versions of EUROMOD)	0.74
Unemployment Assistance ("Notstandshilfe"; "Sondernotstandshilfe")		Data (will be simulated in future versions of EUROMOD)	0.50
6. TRANSFER PAYMENTS (SICKNESS, DISABILITY)			
Free Health Insurance for relatives ("Beitragsfreie Krankenmitversicherung für Angehörige")		None	0.82[3]
Sickness Benefit ("Krankengeld")		Data	0.19
Prescription fee waiver ("Rezeptgebührenbefreiung")	Income tested	None	0.03
Health service cheque fee waiver ("Krankenscheingebührenbefreiung")	Income tested	None	0.04
Accident pension ("Versehrtenrente")		Data	0.16
Federal Disability Benefit ("Bundespflegegeld")		Data (aggregated with other benefits)	0.60
Provincial Disability Benefit ("Landespflegegeld")		Data (aggregated with other benefits)	0.13
7. TRANSFER PAYMENTS (OLD AGE, SURVIVORS)			
Old Age Pension ("Alterspension"; "Ruhegenuss")		Data (aggregated with other benefits)	4.67[4]
Early Retirement Pension ("Vorzeitige Alterspension")		Data (aggregated	1.47

		with other benefits)	
Part-time Retirement Pension ("Gleitpension")		Data (aggregated with other benefits)	0.01
Disability Pension ("Invaliditäts- oder Berufsunfähigkeitspension")		Data	1.61
Survivor Pension ("Witwen- und Waisenpension")		Data	1.49
Minimum Pension Non-Civil Servants ("Ausgleichszulage")		Simulated	0.25
Minimum Pension Civil Servants ("Ergänzungszulage")		Simulated	?
Extra Child Benefit for Pensioner Parents. Non-Civil Servants. ("Kinderzuschuss")		Simulated	0.01
Extra Child Benefit for Pensioner Parents. Civil Servants. ("Kinderzulage")		Simulated	0.00…
8. TRANSFER PAYMENTS (HOUSING)			
Social Housing ("Gemeindewohnungen")	Municipal in-kind transfer.	None	?
Subsidised Housing ("Objektförderung: Geförderte Miet,- Genossenschafts- und Eigentumswohnungen")	Responsibility of the provinces.	None	?
Housing Benefit ("Wohnbeihilfe")	Responsibility of the Provinces. Means tested. Only available if living in subsidised Housing.	Data	0.06[2]
Rent Subsidy ("Mietzinsbeihilfe")	Very low income limits - no longer important.	Data	0.00…
9. TRANSFER PAYMENTS (MINIMUM STANDARDS)			
Social Assistance (1) – Cost of Living ("Sozialhilfe – Hilfe zur Sicherung des Lebensunterhaltes")	Province specific. Means tested.	Simulated	0.18[8]
Social Assistance (2) – Exceptional Circumstances ("Sozialhilfe – Hilfe in besonderen Lebenslagen")	Province specific.	None	?
Exemption from telephone and		None	?

public broadcasting fees ("Befreiung von Telephon-, Radio- und Fernsehgebühr")			

Note 1: Sources: Statistik Austria (2000), Hauptverband der Österreichischen Sozialversicherung (1999), Kammer für Arbeiter und Angestellte (2000), Kammer für Arbeiter und Angestellte (1999).
Note 2: Own estimate
Note 3: 1997
Note 4: Sum of components from different years
Note 5: Employer contributions plus employee contributions
Note 6: Excluding civil servants and voluntary contributions
Note 7: Employer contributions plus self-employed contributions
Note 8: Sum of Social Assistance (1) and Social Assistance (2)

In the table below, we show those instruments that are simulated by EUROMOD. The order in the table (from top to bottom) represents the order in which the instruments ("policies") are computed in the model (e.g., employee contributions need to be computed before income taxes because they are tax-deductible). This is the so-called "policy spine" as represented by the EUROMOD parameter file "spine.xls". Note, that in the detailed description of instruments further below we do not follow entirely thissequence. Instead, we arrange the different instruments into three main groups (taxes, contributions and benefits) in order to provide a more intuitive overview of the Austrian system.

POLICY NAME	POLICY DESCRIPTION
SBEN_CB_AT	Child benefit
SBEN_CBdis_AT	Addition to child benefit for disabled children
IBEN_MaterYadd_AT	Maternity Allowance Supplement ("Zuschuss zum Karenzgeld oder zur Teilzeitbeihilfe")
IBEN_PenChBon_AT	Child Bonus for Pensioners ("Kinderzuschuss (ASVG)")
IBEN_PenChBonCS_AT	Child Bonus for Civil Service Pensioners ("Kinderzulage (PG)")
EESICpi_temp_AT	Temporary employees' contributions to pensions insurance (excluding any min. pension from the base)
EESIChi_temp_AT	Temporary employees' contributions to health insurance (excluding any min. pension from the base)
EESICui_AT	Employees' contributions to unemployment insurance
EESIChousing_AT	Employees' Contribution to Housing Subsidy ("Wohnbaufoerderungsbeitrag")
EESICunion_AT	Employees' Compulsory Union Contributions ("Kammerumlage")
SESIChi_AT	Self-employed contributions to health insurance
SESICpi_AT	Self-employed contributions to pensions insurance
SESICdi_AT	Self-employed contributions to disability (accident) insurance
IT1_temp_AT	Temporary Income Tax (excluding any min. pension from the base)
IBEN_MinPen_AT	Minimum (top-up) Pension ("Ausgleichszulage"): based on 'temporary' net income.
IBEN_MinPenCS_AT	Minimum (top-up) Pension for Civil Servants ("Ergaenzungszulage"): based on 'temporary' net income.
EESICpi_AT	Employees' contributions to pensions insurance
EESIChi_AT	Employees' contributions to health insurance
ERSICui_AT	Employers' contributions to unemployment insurance
ERSICpi_AT	Employers' contributions to pensions insurance
ERSIChi_AT	Employers' contributions to health insurance
ERSICdi_AT	Employers' contributions to accident insurance
ERSIChousing_AT	Employers' Contribution to Housing Subsidy ("Wohnbaufoerderungsbeitrag")
ERSICfamben_AT	Employers' Contribution to Family Benefits Fund ("Beitrag zum Familienlastenausgleichsfonds")
ERSICbank_AT	Employers' Contribution to Bankruptcy Fund ("Insolvenzentgeltsicherung", IESG)
ITreset_AT	Ensure that income tax variables are zero to start with by subtracting any tax that has already been computed (in IT1_temp)
IT1_AT	Income Tax
SBEN_SCB_AT	Small children benefit
SBEN_CBB_AT	Newborn health check bonus ("Mutter-Kind-Pass-Bonus")
SBEN_saB_AT	Social Assistance Burgenland ("Sozialhilfe Burgenland: Hilfe zur Sicherung des Lebensunterhaltes")

SBEN_saK_AT	Social Assistance Kaernten ("Sozialhilfe Kaernten: Hilfe zur Sicherung des Lebensunterhaltes")
SBEN_saN_AT	Social Assistance Niederoesterreich ("Sozialhilfe Niederoesterr.: Hilfe zur Sicherung des Lebensunterhaltes")
SBEN_saO_AT	Social Assistance Oberoesterreich ("Sozialhilfe Oberoesterreich: Hilfe zur Sicherung des Lebensunterhaltes")
SBEN_saS_AT	Social Assistance Salzburg ("Sozialhilfe Salzburg: Hilfe zur Sicherung des Lebensunterhaltes")
SBEN_saST_AT	Social Assistance Steiermark ("Sozialhilfe Steiermark: Hilfe zur Sicherung des Lebensunterhaltes")
SBEN_saT_AT	Social Assistance Tirol ("Sozialhilfe Tirol: Hilfe zur Sicherung des Lebensunterhaltes")
SBEN_saV_AT	Social Assistance Vorarlberg ("Sozialhilfe Vorarlberg: Hilfe zur Sicherung des Lebensunterhaltes")
SBEN_saW_AT	Social Assistance Vienna ("Sozialhilfe Wien: Hilfe zur Sicherung des Lebensunterhaltes")
SBEN_FamBonB_AT	Family bonus Burgenland ("Familienzuschuss des Landes Burgenland")
SBEN_FamBonK_AT	Family bonus Kaernten ("Kaerntner Familienzuschuss")
SBEN_FamBonN_AT	Family bonus Niederoesterreich ("Niederoesterr. Familienzuschuss")
SBEN_FamBonO_AT	Family bonus Oberoesterreich ("Familienzuschuss des Landes Oberoesterreich")
SBEN_FamBonS_AT	Family bonus Salzburg ("Salzburger Familienfoerderung")
SBEN_FamBonST_AT	Family Bonus Steiermark ("Familienbeihilfe des Landes Steiermark")
SBEN_FamBonT_AT	Family bonus Tirol ("Erziehungszuschuss I u. II des Landes Tirol"; "Familienschilling des Landes Tirol")
SBEN_FamBonV_AT	Family bonus Vorarlberg ("Familienzuschuss des Landes Vorarlberg"
SBEN_FamBonW_AT	Family bonus Vienna ("Wiener Familienzuschuss")

2.2 Income tax (*IT1_AT*)

2.2.1 Cost of earnings deduction ("Werbungskostenabzug", at_it_EarnCost_ded*)*

When calculating income tax, the first deduction used is the "cost of earnings" deduction. The amount of deduction from employment income (*empY_IL=empY*) is 1,800 ATS annually.

2.2.2 Deduction for single earners ("Alleinverdiener", at_it_singearn*)*

If the annual earnings of the partner does not exceed 30,000 ATS (60,000 ATS if the couple has child) the person is treated as single earner, and 1/6 of the regular taxable earnings is deductible (*annual_fraction=1/6, SingEarner_IL=taxable_earnings*). From other earnings (*OthEarn_IL=spec_pen&empY*), such as 13th and 14th monthly salaries the amount below the annual threshold of 23,000 ATS is deductible (*threshold=23,000*).

2.2.3 Limited expenditure deduction ("eingeschraenkt abzugsfaehige Sonderausgaben", at_it_exp_ded*)*

Expenditures (*expenditure_IL=LimitedExp*) are deductible from earnings (*earnings_IL=earnings*) at a rate of 0.25 up to an annual ceiling of 40,000 ATS. An additional ceiling of 40,000 ATS/year comes to the regular ceiling if the person is single earner (see above), and 20,000 ATS/year is added for persons with more than 3 children. For incomes between 500,000 and 700,000 ATS/year the deduction is tapered (at 700,000 it is tapered to 0).

2.2.4 Church tax deduction ("Kirchensteuerabzug", at_it_ChurchTax_ded*)*

A maximum amount of 1,000 ATS/year (ceiling=1,000) is deductible for church tax.

2.2.5 Charitable donations deduction ("Abzug von Spenden an beguenstigte Institutionen", at_it_donations_ded*)*

Charitable donations are deductible from earnings up to the limit of 0.1% of the earnings. This module is deactivated, because this possibility is available only for businesses.

2.2.6 Exceptional costs deduction ("Aussergewoehnliche Belastungen", at_it_ExceptCost_ded*)*

Exceptional costs (*ExceptCost_IL=ExceptCost,* e.g. child care costs) are deductible from taxable income (excluding tax credits, *income_IL=taxableY_ex_tfa*). The income proportions up to which exceptional costs are deductible are shown in Table 2.

Table 2.

Income limit (annual)	Proportion of income deductible
-10,000	6%
10,001-20,000	8%
20,001-50,000	10%
50,001-	12%

Deduction rates are higher by 1% point for each child and if or if taxpayer is entitled to single earners or lone parent tax credit.

Currently there are no entries in exceptional costs income concept, since we don't have required variables in the data, consequently the effects of this deduction do not show up in the model.

2.2.7 Disability tax-free allowance ("Behindertenfreibetrag, at_it_disab_tfa*)*

Table 3 presents the annual amounts of tax-free allowance depending on the degree of disability.

Table 3.

Degree of disability	Annual tax-free allowance
25%>	0
35%	996
45%	1,332
55%	3,324
65%	4,020
75%	4,992
85%	5,964
95%	6,960
95%<	9,984

Tax-free allowance is only available if person is not receiving disability benefits. The tax unit in this case is the family (*TAX_UNIT=CB_Family*).

2.2.8 Self assessment income tax-free allowance ("Freibetrag fuer zu veranlagende Einkommensarten", at_it_selfass_tfa*)*

The amount of tax-free allowance is 10,000 ATS/year. The income concepts for this allowance are *selfassY,* and *taxableY_ex_anyded*.

2.2.9 Tax-free allowance for agricultural workers ("Landarbeiterfreibetrag", at_it_AgriWorker_tfa*)*

The tax-free allowance amount is 2,340 ATS/year for agricultural workers.

*2.2.10 Deduction of part of "Other Earnings" (*at_it_OthEarn_ded*)*

"Other Earnings" ("Sonstige Bezuege") include e.g. 13/14 monthly payments, which are exempt from taxation at the normal rate structure. On other earnings below 8,500 ATS/year no tax is paid, the upper limit of preferential tax rate (*fixed_rate=0.06*) is 1/6 of annual income excluding other earnings (*annual_fraction=1/6*). The income concept for other earnings is *OthEarn_IL,* for overall earnings (including other earnings) is *empY+Pen.*

*2.2.11 Common Tax Schedule (*co_it_schedule*)*

Table 4 below, includes income brackets and rates for Austria.

Table 4.

Income brackets (ATS/year)	Tax rates
- 50,000	10%
50,001-150,000	22%
150,001-300,000	32%
300,001-700,000	42%
700,001-	50%

Taxable income is rounded to full 100s (*round_base=100*). Temporary income tax (as if unemployment incomes were also taxable) is computed on the base of taxable income and unemployment income (*TaxableY_il=taxableY+unempY*), which is necessary for the progression adjustment (see module *at_it_progr_adj* below). The tax unit here is the individual.

2.2.12 General tax credit ("Allgemeiner Absetzbetrag", at_it_gen_tcred*)*

The general tax credit amount is 8,840 ATS/year (*tcred_amt=8,840*). For incomes between 200,000 and 500,000 ATS/year the tax credit is tapered (at 500,000 it is tapered to 0). The income concept used here is *taxableY+unempY.*

2.2.13 Single earners' tax credit ("Alleinverdienerabsetzbetrag", at_it_SingEarn_tcred*)*

Single earners have a tax credit of 5,000 ATS/year. The tax unit is individual.

2.2.14 Lone parent tax credit ("Alleinerzieherabsetzbetrag", at_it_lp_tcred*)*

Lone parents (*TAX_UNIT=lp*) have a tax credit of 5,000 ATS/year.

2.2.15 Wage earners' tax credit ("Arbeitnehmerabsetzbetrag", at_it_WageEarn_tcred*)*

Wage earners tax credit is 1,500 ATS/year, up to 22% of taxable employment income (*taxableEmpY*). The tax unit is the individual.

2.2.16 Commuters' tax credit ("Verkehrsabsetzbetrag", at_it_commut_tcred*)*

Commuters have tax credit of 4,000 ATS/year up to 22% of taxable employment income (*taxableEmpY*). The tax unit is the individual.

2.2.17 Pensioners' tax credit ("Pensionistenabsetzbetrag", at_it_pen_tcred*)*

Pensioners have tax credit of 5,500 ATS/year up to 22% of taxable employment income (*taxableEmpY*). The tax unit is the individual.

*2.2.18 Income tax reduction (*at_it_red*)*

If income tax is below 9,400 ATS/year (*inctax_lt=9,400*), then income tax is reduced by the difference of 9,400 and the actual income tax amount.

2.2.19 Preferential tax of other earnings ("Sonstige Bezuege", at_it_*OthEarn_tax)*

On other earnings below 8,500 ATS/year (*OthEarn_tfa=8,500*) no tax is paid, the upper limit of preferential tax rate (*fixed_rate=0.06*) is 1/6 of annual income excluding other earnings (*annual_fraction=1/6*). Other earnings above this limit are taxed under regular scheme. If other

earnings (before deduction of contributions) are below 23,000 ATS/year (*threshold*) then they are not taxable ("Freigrenze"). Tax on other earnings cannot be greater than *0.3*other earnings threshold* (23,000). The income concept used here is *empY+Pen*.

2.2.20 Progression adjustment ('Progressionsvorbehalt', at_it_progr_adj*)*

Tax progression is adjusted for recipients of unemployment income. The module computes the average tax rate resulting from all preceding modules (taking as the basis taxable income that includes unemployment benefits) and then applies this average tax rate to the actual taxable income (which excludes unemployment benefits). In reality, the rule for computing the average rate is a bit more complicated: a rate that would prevail if taxable income (*taxableY*) had been received all year. But the result may not exceed tax which would result if actual *taxableY* and *replacmentY* were taxed together. The approach here produces the same result unless *empY+selfempY* is less than replacement income.

2.2.21 Child tax credit ("Kinderabsetzbetrag"; "Unterhaltsabsetzbetrag", at_it_ch_tcred*)*

Child tax credit also includes credit for children for whom maintenance payments are made. The amount of credit is 350 ATS/month for the first child, 525 ATS for the second and 700 ATS/month for each further child. If there are maintenance payments (made to other children) then it is assumed that they are made for one child (but this child doesn't increase the number of children in the household for the purpose of computing the child tax credit). The relevant tax unit here is the family (*TAX_UNIT=CB_Family*).

*2.2.22 Withholding Tax on Investment Income (*co_schedule*)*

The withholding tax rate on investment income (*Base_IL=invY*) is 25% (*rate1=0.25*).

2.3 Social insurance contributions

*2.3.1 Employers' contribution to disability (accident) insurance (*ERSICdi_AT*)*

As in most cases of benefits and contributions, different systems exist for civil servants and non-civil servants. The employer of civil servants (*IsCivSrv=1*) pays 0.47% (*rate1*) of the contribution base (*B-KUVG_base*).

If non-civil servants have special payments such as 13th and 14th monthly wages) their employers pay 1.4% (*rate1*) of the employees' wages (indifferent whether regular or special payments). The point of difference is that the upper threshold (*up_base_limit*) of the contribution base is 42,000 ATS/month for the regular payment and 84,000 ATS/year for the special payment. If non-civil servants do not have special payment, then their employers pay the same 1.4% on the wages, with an upper limit of 49,000 ATS/month for the contribution base. Table 5 below, gives a summary of the contribution rules.

Table 5. Employers' contribution to disability (accident) insurance

	Lower base threshold	**Upper base threshold**	**Contribution (%)**
Civil servants	-	-	0.47
Non-civil servants			
Special payments exist			
Regular payment*	0**	42,000	1.4
Special payment***	0	84,000	1.4
*Special payments do not exist**	0	49,000	1.4

* monthly amount.
** if below threshold (3,830 per month in 1998), employers still have to pay if the sum of all "minor" wages paid exceeds 1.5 times this threshold. Here it is assumed that it exceeds, so the threshold is in effect 0.
*** annual amount.

*2.3.2 Self-employed contribution to disability insurance (*SESICdi_AT*)*

Self-employed pay a fixed annual amount of 1,007 ATS for the disability insurance.

*2.3.3 Employees' and Pensioners' contributions to health insurance (*EESIChi_AT*)*

Again, we have to distinguish public- and non-public sector employees. Public sector employees and pensioners pay a basic rate of 3.7% (*rate*) of the contribution base (*B-KUVG_base*) and an additional 0.25% surcharge rate (*surcharge_rt*). For public sector employees and pensioners there is

no lower income threshold, for regular payments the upper limit of the contribution base is 42,000 ATS/month (*up_base_lt*), for special payments the base limit is 84,000 ATS/year (*up_spec_pay_lt*).

To non-public sector blue-collar workers two different rates apply: those covered by the Continuation of Payment Law (Entgeltfortzahlungsgesetz, EFZG) pay a basic rate of 3.7% (*EFZGBluCol_rt*) of the contribution base; those not covered by EFZG pay a higher contribution, 4.3% (*BluCol_rt*). Since in the ECHP database there is no possibility to identify EFZG-covered and not covered workers, we assume that all blue-collar workers are covered by EFZG (this assumption is close to reality). Agricultural blue-collar workers' (Landarbeiter) contribution is again 3.7% (*AgriBluCol_rt*), while white-collar workers pay a lower health insurance contribution: 3.15% (*WhitCol_rt*). Similarly to public servants, all non-public sector employees face a surcharge rate of 0.25% of their wages. The lower income threshold is 3,830 ATS/month (*threshold*), on wages under this amount no contribution is paid. The ceiling on base for contributions paid on income excluding special payments – if there are special payments – is 42,000 ATS/month (*up_base_lt)*, which is 30 times the daily ceiling. The ceiling on the contribution base if there are no special payments is 49,000 ATS/month (*no_spec_up_base_lt*) that is 35 times the daily ceiling, while the upper limit of the contribution base for the special payment is 84,000 ATS/year (*up_spec_pay_lt*). For special payments there is no lower income threshold.

The health-insurance contribution for non-civil servant pensioners is 3.75% (*rate1*) of their income (*penSIChi_base*), without any base-limits.

*2.3.4 Employer contributions to health insurance (*ERSIChi_AT*)*

Employers of public sector employees and pensioners pay a basic rate of 2.9% (*rate*) on the contribution base (*B-KUVG_base*) that also includes pensions. (Under the term "employer of pensioners" we understand the social insurance authorities that pays out the pensions. Note, that for different occupations there are different institutions.) In addition to the basic rate, a surcharge rate of 0.65% applies (*surcharge_rt*). The contribution base includes the regular payments and special payments, as well. The upper limit of the contribution base for public sector wages and pensions is 42,000 ATS/month for regular payments (*up_base_lt*) and 84,000 ATS/year for special payments (*up_spec_pay_lt*).

Again, different rates apply to employers of non-civil servant blue-collar workers accordingly whether the employees are covered by EFZG or not. Those covered pay a basic rate of 6% (*EFZGBluCol_rt*), while non-covered face a 4.3% contribution rate (*BluCol_rt*). As by the

employees' contributions, we assume that all the employees are covered by EFZG. The employers of agricultural blue-collar workers have to pay the same 3.7% (*AgriBluCol_rt*) as their employees. The employers of white-collar workers contribute to the health-insurance budget with 3.25% (*WhitCol_rt*) of the wages. The lower threshold and the ceilings are the same as for the employees' contribution bases. While employees don't pay health insurance contribution on "minor wages" (wages under threshold) employers have to pay 3.85% (*rate1*).

For "employers" of non-civil servant pensioners, i.e. the social insurance authorities the law specifies different health-insurance contributions, which have to be paid to into the fund of Central Association of Austrian Social Insurance Authorities (Hauptverband der österreichischen Sozialversicherungsträger). The pension insurance institutions for blue-collar workers, for salaried employees and the institution for business people pay a contribution of 7.6125% (*rate1*) of the contribution base (*penSIChi_base*). The Insurance Institution for Austrian Railway has to pay 18.1875%, while the Insurance Institution for Austrian Miners contributes 14.0625% of the pensions paid out. Since we don't have sufficient data to distinguish between the above occupation categories, we assume that all people belong to the first three institutions. For non-civil servant pensioners no threshold and upper limits exist.

*2.3.5 Self-employed contributions to health insurance (*SESIChi_AT*)*

When describing the health insurance contributions for self-employed, we distinguish between farmers and other self-employed. Farmers pay 5.9% basic rate (*rate*) and a surcharge rate of 0.5% (*surcharge_rt*). They have to contribute on income between 6,039 ATS/month (*threshold*) and 49,000 ATS/month (*up_base_lt*).

Non-farmer self-employed people have a basic contribution rate of 8.6% (*rate*) and a surcharge rate of 0.55% (*surcharge_rt*) that includes a special contribution for a birth-related benefit (Betriebsbeihilfe). The upper limit of the contribution base (*GSVG_base*) for self-employed who don't have other income from work or pensions (*GSVG_otherY=0*) is 49,000 ATS/month (*up_base _lt*), while the threshold for the same group depends on whether they are members of the Austrian Economic Chamber or not. For members the threshold is 13,761 ATS/month (*threshold_wk*), while non-members pay the contribution above 7,400 ATS/month (*threshold_se*). For the time being we don't have information about the chamber-membership, so we assume that nobody is a member of chamber; in other words we don't use *threshold_wk*. Again, a different threshold applies for partly

self-employed (*GSVG_otherY>0*), the lower limit of the contribution base is 3,830 ATS/month (*threshold_part_se*).

*2.3.6 Employee contributions to pension insurance (*EESICpi_AT*)*

Similarly to other contributions, the law makes a distinction between civil servants and non-civil servants. Employees in the public sector pay 11.75% (*rate1*) of their wages (*empY*) as pension insurance contribution, regardless of the amount of income. Former civil servants, i.e. civil service pensioners also pay pension insurance contribution: 1.5% (*rate1*) of their pensions (*pubpen*).

The contribution of employees outside the public sector is 9.25% (regardless of the occupation) to which a 1% surcharge rate comes. The threshold for regular payments is 3,830 ATS/month (*threshold*), the ceiling for contribution base excluding special payments – in case the employee has special payments – is 42,000 ATS/month (*up_base_lt*), the limit of the special payments under which contribution has to be paid is 84,000 ATS/year (*up_base_spec_lt*). Employees without special payments contribute under the monthly amount of 49,000 ATS (*no_spec_up_base_lt*).

*2.3.7 Employer contributions to pension insurance (*ERSICpi_AT*)*

Employers pay a pension contribution of 9.25% (*EFZGBluCol_rt, BluCol_rt, AgriBluCol_rt, WhitCol_rt*) and a surcharge of 3.3% (*surcharge_rt*), irrespective of the occupation (blue-collar, white collar and agricultural blue-collar workers). The lower income threshold for the contribution base is 3,830 ATS/month (*threshold*), ceiling for contribution base excluding special payments – in case the employee has special payments – is 42,000 ATS/month (*up_base_lt*), the limit of the special payments under which contribution has to be paid is 84,000 ATS/year (*up_base_spec_lt*). Employees without special payments contribute under the monthly amount of 49,000 ATS (*no_spec_up_base_lt*).

If the contribution base is fewer than 3,830 ATS/month (*le_incl_lt*), employers contribute to the pension insurance budget with 12.55% (*rate1*) of the base.s

*2.3.8 Self-Employed contributions to pension insurance (*SESICpi_AT*)*

Farmers pay pension insurance contribution of 14% (*rate*) on income between 6.039 ATS/month (*threshold*) and 49,000 ATS/month (*up_base_lt*).

Professionals (lawyers, doctors, journalists, etc.) have a different contribution rate (20%) and the limits for the contribution base are also different. Only incomes between 13,761 ATS/month and 49,000 ATS/month are to be considered as contribution base. Since there is no information about professions in ECHP, we cannot use this module.

As in the case of other contributions, the law makes differences between members and non-members of the Austrian Economic Chamber. For members the income threshold, under which no contribution is paid, is 13,761 ATS/month (*threshold_wk*), full time non-members pay the contribution above 7,400 ATS/month (*threshold_se*), while partly self-employed face a threshold of 3,830 ATS/month (*threshold_part_se)*. The contribution rate is 14.5% for members of the Economic Chamber, non-members and part-time self-employed pay 15% of their contribution base. The ceiling on the base for contributions is 49,000 ATS/month (*up_base_lt)*. For the calculations we use the contribution base *GSVG_base*, and a person is to be considered as a partly self-employed if *GSVG_otherY* > 0.

*2.3.9 Employee contributions to unemployment insurance (*EESICui_at*)*

Employees pay a contribution of 3% on wages between 3,830 ATS/month (*threshold*) and 42,000 ATS/month (*up_base_lt*), if the employee receives extra payments related to employment income. In this case the contribution has to be paid on special payments under the annual amount of 84,000 ATS (*up_base_spec_lt*). The ceiling on the contribution base if the person has special payments, is 84,000 ATS/year (*up_base_spec_lt*). Pensioners pay no contributions to unemployment insurance.

*2.3.10 Employer contributions to unemployment insurance (*ERSICui_at*)*

Employers pay the contributions to unemployment insurance exactly according to the same algorithm as employees.

2.3.11 Employees' contributions to housing benefit ('Wohnbauförderungsbeitrag', EESIChousing_at*)*

In order to improve the position of lower income people on the housing market, *Bundesländer* have a special housing benefit, to which every employees – except agricultural workers (*IsAgriSec* = -2) – contribute with 0.5% (*rate1*) of their wages between 3,830 ATS/month (*threshold*) and 42,000

ATS/month (*up_base_lt*). On special payments no contribution is paid (*Base_IL=empY_exspec_Pay'*).

2.3.12 Employers contributions to housing benefit („Wohnbauförderungsbeitrag", ERSIChousing_at*)*

Employers pay the same amount of contribution, according to the same algorithm as employees do.

2.3.13 Employees' Compulsory Union Contributions („Kammerumlage", EESICunion_AT*)*

In Austria employees contribute to trade unions' budget on a compulsory base. Agricultural and non-agricultural sector employees pay according to different rules, while civil servants do not pay union contributions at all.

Non-agricultural sector employees pay 0.5% (*rate1*) of their wages between 3,830 ATS/month (*threshold*) and 42,000 ATS/month (*up_base_lt*) to Federal Employees' Chamber. Contrary to other types of contributions, special payments do not constitute part of the contribution base *(Base_IL=empY_ex_specPay)*.

Agricultural blue-collar employees contribute to Agricultural Workers' Chamber, paying 0.75% (*rate1*) of the contribution base (3,830-42,000 ATS/month). Farmers in Burgenland province pay their contributions to the Federal Chamber instead of the Agricultural Workers' Chamber, but we currently do not take it into consideration. Except Kaernten province, special payments are exempted from contribution payments. This exception (the case of Kaernten) is currently disregarded in the model.

2.3.14 Employers' Contribution to Family Benefits Fund („Beitrag zum Familienlastenausgleichsfonds", ERSICfamben_AT*)*

The contribution is paid by all employers (except for employers of civil servants, *iscivsrv=-1*) on the sum of all wages paid in the business. If this sum is lower than 20,000 ATS/per month then it is reduced by 15,000 ATS. This detail is not taken into account in the model, because we don't know the sum of all wages. The contribution is 4.5% of the wages without upper limit. The income concept used to calculate this contribution is *empY*.

2.3.15 Employers' Contribution to Insolvency Fund ("Insolvenzentgeltsicherung", ERSICbank_at*)*

Insolvency Compensation Fund was established in 1978 to protect employees of insolvent companies. The fund takes over the payment of wages and social security contributions for 3 months as soon as insolvency proceedings are instituted. If staff members are dismissed during that time, the fund takes over payments during the period of notice and is also responsible for compensation payments. Contributions to the fund are made by the employers, who pay 0.7% of the total payroll with regard to the contribution base. The contribution base limits are the same, as in the case of other contributions. When the employee does not receives any special payments the contribution is payable on wages between 3,830 and 49,000 ATS/month; when special payments are received, the threshold is 3,830 ATS for the regular payments, while the ceiling is 42,000 ATS monthly. Employers also have to contribute on special payments below 84,000 ATS annually.

2.4 Benefits

2.4.1 Minimum pension (top-up) ("Ausgleichszulage", IBEN_MinPen_AT*)*

Minimum pension is paid in order to provide pensioners a minimum level of income, so people are eligible to this top-up benefit only if they are already entitled to pensions. This minimum level was 7,992 ATS/month in 1998 for single persons (*SingPay*). The considered income (*MinPen_means*) contains all pensions, maternity allowance supplement, child bonus for pensioners, pregnancy benefit, investment income, other irregular lump-sum benefits, maintenance income, maternity payment, other regular primary income, private transfers and other regular cash payments. 13th and 14th monthly payments are disregarded when computing the means. For married persons, the minimum pension level was set to 11,403 ATS/month, for each own child in the household, an additional amount of 851 ATS is added to the minimum pension level. The child must be under 17, if he/she is older than 17 but under 26, then the child is treated a "child" from the benefit point of view only if he/she is in full time education or disabled. So, in practice a pensioner gets *Ausgleichzulage* (the exact English translation might be "supplementary allowance") if his/her pension is less, than the minimum pension level relevant for the family; the amount he/she receives is the difference of the minimum pension level and his/her actual social security pension. Minimum pension top-up is paid 14 times a year (*rate1=2/12*). The relevant benefit unit is the family (*TAX_UNIT=CB_family*).

2.4.2 Minimum pension for civil servants (top-up) ("Ausgleichszulage", IBEN_MinPenCS_AT*)*

All civil servant pensioners under the minimum pension level are eligible for this means tested benefit (*ge_inc=2, IsCivSrv=2*). The means (*MinPenCS_means*) is slightly different from non-civil servant pensioners and contains all pensions, child bonus for pensioners, company shares, unemployment benefits, employment and self-employment income and property income. 13th and 14th monthly payments are disregarded when computing the means. All other rules are the same as for non-civil servants.

2.4.3 Child Bonus for Pensioners ("Kinderzuschuss (ASVG)", IBEN_PenChBon_AT*)*

All pensioners with children (*ge_inc=2, ge_nch=2, ge_nch_lt=1*), who receive public pension (excluding minimum pension, *ge_inc_lt=1, ge_inc_IL=pubpen_ex_minpen_ex_ChBon*) are eligible for this benefit. The child must be under 17, if he/she is older than 17 but under 26, then the child is treated a "child" from the benefit point of view only if he/she is in full time education or disabled. The monthly amount of the benefit is 300 ATS, which is paid 14 times a year, so the actual monthly amount is 350 ATS (300*14/12, *SingPay=350*). The relevant benefit unit is the family (*TAX_UNIT=CB_family*).

2.4.4 Child Bonus for Civil Servant Pensioners ("Kinderzulage (PG)", IBEN_PenChBonCS_AT*)*

All persons who receive public pension and have children (according to *CB_family* definition) are eligible for the benefit. (*ge_inc_lt=1, ge_inc_IL=pubpen_ex_minpen_ex_ChBon, ge_nch_lt=1).* The monthly amount of the benefit is 200 ATS, which is paid 14 times a year, so the actual monthly amount is 233.33 ATS (200*14/12, *SingPay=233.33*). The relevant benefit unit is the family (*TAX_UNIT=CB_family*).

2.4.5 Maternity Allowance Supplement ("Zuschuss zum Karenzgeld oder zur Teilzeitbeihilfe", IBEN_MaterYadd_AT*)*

a) No spouse in the household and spouse is not maintaining child

Persons are eligible for this benefit if

- No spouse lives in the same household (*NotIsPartnerInHH1=2*), and

- The other parent does not maintain the child (*le_inc=2, le_inc_IL=maintY*).

Persons are not eligible if they do not receive maternity benefit (*le_inc1=-1, le_inc1_IL= maternity_ben*). The relevant benefit unit is the individual (*TAX_UNIT=individual*). The daily rate of the benefit is 82.8 ATS (*SingPay=82.8*). If the person is working more than 0 hour, the daily rate is reduced by 25% (*es_ge_hrs=-0.25, es_ge_hrs_lt=1*). Another 25% is deducted if the working time is between 25 and 50% (*es_ge_hrs1=-0.25, es_ge_hrs1_lt=10*), and another ¼ is lost if the recipient is working more than 19 hours a week (*es_ge_hrs2=-0.25, es_ge_hrs2_lt=19*).

b) Living with spouse

Persons are eligible for the benefit if they receive maternity benefit (*ge_inc=1, ge_inc_IL=1*), but eligibility is lost if addition to maternity income is already greater than zero in this unit (*Tubenelig=-1, TUbenelig_name= cosim_polout*). Persons are also not eligible if spouse is living in the same household (*NotIsPartnerInHH1=-1*). The income concept used for calculating means is *UnempY_means* that includes employment and self-employment income, company shares and sickness benefit. A monthly amount of 5,621 ATS is disregarded for the spouse's income, and an additional 2,832 ATS/month for each dependent person in the family (*disreg_amt=5,621; depend_disreg_amt=2,832*). The amount of the benefit is 82.8 ATS daily (*SingPay=82.8*), which is reduced according to the same algorithm as in the case of single mothers (see above) if mother is working.

2.4.6 Social Assistance Vienna ("Sozialhilfe Wien: Hilfe zur Sicherung des Lebensunterhaltes" SBEN_saW_AT*)*

Social assistance rules are different in all provinces, but the (formal!) differences in the systems are mainly in the amount of means and disregard-values, that is why we describe here only the system of Vienna province (for details of other provinces see Parameter Sheet). Another point that has to be mentioned is that local authorities can exercise significant degrees of discretion in determining eligibility and amounts of social assistance. In the model we do not attempt to take into account these 'discretionary' dimensions.

Children, persons in education and recipients of minimum pension (also civil servants) are not eligible for social assistance (*IsChild1=-1, InEd=-1, TUbenelig1=-1, TUbenelig2=-1, TUbenelig1_name= at_iben_minpen, TUbenelig2_name= at_iben_minpenCS*). The income concept used for calculating means is *sben_meansW* (see details in the Income List) for which a weekly amount of 10 ATS is disregarded (*disregard_amt=10*). The means is summed up with capital

income (*capital_il= SBEN_capital*) for which 24,724 ATS is disregarded (this is 5 times the social assistance amount for people living alone). Social assistance is 4,945 ATS per month (*SingPay=4,945*) for couples and 4,822 ATS for singles. Single recipients get an additional 600 ATS in January and 300 ATS in June, while couples receive 900 ATS instead of 600 in January. If there are dependent adults in the family, the benefit is higher by 2,495 ATS per dependent adult monthly. The benefit unit is the family (*CB_family*, including dependent adults).

As we mentioned above, discretion rules apply to determine needs for additional benefits. Male family heads above the age of 65, and female family heads above 60 receive a monthly flat amount of 2,748 ATS if the benefit unit contains one person; the amount of the supplement is 3,678 ATS/month in case of more-person benefit unit. Families that "need" rental support, receive different additional amounts, depending on the number of family members. Table 6 below, contains the amount of supplement with regard of family size.

Table 6.

Family size	Supplement amount, ATS/month
1-2 persons	3,070
3-4 persons	3,251
5-6 persons	3,547
6- persons	3,842

Another kind of recognised "need" is the need for heating-cost supplement. This supplement is available only during 8 months of the year, and the maximum is 807 ATS/month.

Since we did not have the actual (1998) amounts of supplements for "special needs", all figures above are calculated by dividing 1999 amounts by 1.015.

Recipients above 65 (for females the age limit is 60) and disabled persons receive social assistance 14 times a year instead of 12 times. Only recipients of social assistance are eligible for this additional 2 monthly benefit.

2.4.7 Newborn health check bonus ("Mutter-Kind-Pass-Bonus", SBEN_CBB_AT*)*

For mothers undertaking (free) health check after birth, a lump sum of 2,000 ATS is paid if total taxable income of the couple (*TAX_UNIT=couple*) does not exceed 539,000 ATS/year (*ge_inc_lt=539,000; ge_inc_IL=taxableY*). Since we cannot identify mothers who do this check,

we assume, that everybody does. Another eligibility criterion is that one parent needs to be Austrian citizen. We modelled this requirement that head of unit has to be Austrian citizen.

2.4.8 Small children benefit ("Kleinkindbeihilfe" SBEN_SCB_AT*)*

Austrian citizens or persons living more than 3 years in Austria receive small children benefit, if they do not get any kind of maternity benefit (*ge_inc=-1, ge_inc_IL=maternity_ben*). The unit must be eligible as a whole; with other words benefit unit is the couple (*TAX_UNIT=couple*). In addition the unit's taxable income (*earnings_IL=taxableY*) must not exceed a monthly limit of 10,710 ATS plus 864 ATS per child. If the unit is eligible, then receives 1,000 ATS/month.

2.4.9 Family Bonus - Vienna ("Wiener Familienzuschuss", SBEN_fambonW_AT*)*

In this section we describe family bonus rules in Vienna province, which (in its logic) is similar to the rules of other provinces, so we do not provide detailed description of other provinces here (for details see Parameter Sheet).

Austrian citizens (*le_Var1=2, le_Var1_name=atCITIZ*) living in Vienna for at least one year (*Eq_Var1=1, Eq_Var1_name=atPROVNC, Eq_Var1_lt=1*), receive family bonus after children between the age of 1 and 2 (*ge_chage=1, le_chage=2*).

Recipients get different amount depending on the per capita equivalised net income of the family (the income concept *fambonW_netY* is used, for details see Income List). The equivalence scale is the following: 1 for the first adult, 0.8 for other adults, 0.5 for each child, an additional weight of 0.35 is used if the head of unit (*CB_Family*) is a lone parent. Table 7 below, gives the per capita upper limits for the net income and the amount of family bonus received.

Table 7.

Per capita upper limit for net income (ATS/month)	Amount of family bonus
4,600	2,100
4,700	1,960
4,900	1,820
5,100	1,680
5,300	1,540
5,500	1,400
5,700	1,260
5,900	1,120

6,100	980
6,300	840
6,500	700

2.4.10 Child benefit ("Familienbeihilfe", SBEN_CB_AT*)*

Families receive child benefit for each child in the family (child must be under 17, if he/she is older than 17 but under 26, then must be in full time education or disabled, *TAX_UNIT= CB_Family*). The amount of child benefit is 1,300 ATS/month until children's age of 9; from 10 to 18 the benefit is 1,550 ATS, and families with children between 19 and 26 receive a monthly amount of 1,850 ATS. If the children is disabled, an additional 1,650 ATS/month is added to the benefit.

3. Data

3.1 General description

The dataset used for EUROMOD is the Austrian version of the European Community Household Panel (Production Version), provided by the Interdisciplinary Centre for Comparative Research in the Social Sciences (IFS/ICCR), Vienna.

The Austrian panel was started in 1995 after the country entered the European Union (it is the only household panel in the country). The sample was designed by the Austrian Statistical Office, ÖSTAT (Giorgi 1996), while the fieldwork was done by two public opinion research institutes, IFES and FESSEL.

For the first version of EUROMOD, we use the second Austrian wave (1996) containing income information pertaining to 1995. All monetary amount are uprated to 1998 levels using appropriate uprating factors (see section 3.4). The dataset contains comprehensive information about labour market situation, living- and income condition of Austrian households. The panel follows about 3-4.000 households with 8-9.000 individuals. The questions regarding to labour market information and income situation are asked from the household members aged 16 or over.

3.2 Sample selection, weighting

As mentioned above, the sampling was designed and drawn by ÖSTAT: it is a multistage stratified random sample. The data were collected between October 1996 and February 1997 and contain information about 9,585 individuals in 3,382 households. The detailed description of EUROMOD variables and their source variables from ECHP can be found in the Data Requirements Document (DRD) and the Database Robustness Assessment Report (DRAE).

The weighting was done by EUROSTAT following the Iterative Proportional Fitting Method of Demming (Giorgi 1996) in four stages. First the design weights were computed to correct the differences in selection probabilities, then non-response weights were added. During the third stage the households weights were calculated, using the following classification variables: household type and size, type of community, tenure, number of economically active persons, distribution of economically active population aged 16 or more. Finally the individual correctional weights were associated with the previous weights to adjust the distribution of the population at the individual level according to age, gender, education and occupational level.

3.3 Net to gross conversion

For calculating gross values from net income data, we followed different approaches for different income components. A description of the 'grossing-up' methods can be found in the DRD.

3.4 Updating factors

In Table 8 we present the updating factors we used for computing 1998 incomes from 1995 income values.

Table 8. Updating indices

Index	Value 1995-1998
Earnings index *(E_ind)***	1.066
Pensions index *(Pen_ind)****	1.057
Consumer price index *(P_ind)**	1.041
Rent index *(R_ind)**	1.128
Mortgage interest rate *(MI_ind)****	1.197
Rate of return on investments[3] *(I_ind)*****	1.176
Unemploynemt insurance benefit (Arbeitslosengeld) index for males[4] *(UI1m_ind)**	1.009

[3] Yields of ten years government bonds.

Unemploynemt insurance benefit (Arbeitslosengeld) index for females *(UIf_ind)*[*]	0.991
Unemploynemt assistance benefit (Notstandhilfe) index for males *(UAm_ind)*[*]	1.003
Unemploynemt assistance benefit (Notstandhilfe) index for females *(UAf_ind)*[*]	1.020
Sick pay (Krankengeld) index[5] *(Kr_ind)*[**]	1.058
Child benefit (Familienbeihilfe) index[6] *(CB_ind)*[*]	0.967
Social assistance (Sozialhilfe) index *(Soc_ind)*[*****]	1.106
Nursing allowance (Pflegegeld) index[7] *(Pfl_ind)*[*****]	1.038
Maternity payment (Karenzgelg) index[8] *(Kar_ind)*[*]	0.750
Means tested welfare scheme for old age (Ausgleichzulage) *(Ag_ind)*[*]	1.037

[*] Source: Kammer für Arbeiter und Angestellte, 2000
** Source: Hauptverband der Österreichischen Sozialversicherungsträger, 1999
*** Source: http://www.oenb.at/stat-monatsheft/englisch/tabellen/311_p.htm
**** Source: http://www.oenb.at/stat-monatsheft/englisch/tabellen/811_1p.htm
***** Source: Statistik Austria, 2001

4. Validation

4.1 Aggregate validation

4.1.1 Distribution of employment income

Since employment income is a main source for the simulation we present here two tables (9 and 10) that allow us to make comparisons with official income statistics[9]. In the EUROMOD database mean of gross employment income (updated to 1988) is 28,022 ATS/month for males, 17,462 ATS for females and 23,627 ATS for both genders. The reference values are 31,844 ATS for males, 19,061 ATS for females and 27,564 for the whole population (Statistik Austria 2001, p. 198), implying that we underestimate aggregate employment income[10]. We get a more detailed picture if

[4] Change in average amount received.

[5] Average increase in per diem amount of sick pay (Krankengeld).

[6] Change in average amount received.

[7] Average increase in the nursing allowance received from the Länder.

[8] The duration of payout decreased from 2 years to 1.5, meanwhile the amount of payment remained the same. Source: Kammer für Arbeiter und Angestellte, 2000

[9] In the Data Requirement Document we present the descriptive statistics of variables used in EUROMOD database. For the income variables, the figures in the tables are the "original" (before updating) values from the ECHP, to make them easily comparable with external sources, but in Tables 9 and 10 we use updated employment income figures, because we do not have reference figures with equivalent contents for 1995.

[10] We use the same definition for monthly income as in Statistik Austria (2001), namely 1/12 of the annual employment income.

we compare decile information for EUROMOD data with external sources. Table 10 shows that we overestimate employment income at the bottom deciles and underestimate the top deciles. The mismatch of ECHP based earnings for lower deciles is known and documented in Till and Tentschert (2000). Our serious underestimation for the mean might be a result that for some income components (holiday payments, profit sharing, company shares and other lump sum payments for employment) the questionnaire does not give a clear picture, whether the values are in gross or net terms. In our calculations we assumed that the figures are gross amounts, but if they are net, average gross income from employment would be higher. In addition, some of the discrepancies documented in Table 10 might be a result of our methodology for converting income information from net to gross (see section 3.3). We are currently working together with the data providers to find the reasons for the distributional misrepresentation of earnings.

4.1.2 Validation of simulated tax/benefit components

Since for Austria, EUROMOD is the first microsimulation model we can compare our simulated components only to reference sources, namely to available official statistics. In most cases the reference statistics are accessible, but for some components we could not find any official sources. The results of our simulation and the number of tax-payers/benefit receivers are shown in Tables 11 and 12.

For *unemployment insurance contribution* we estimate 77% of the real sum of contribution paid. Only non-civil servants and their employers pay this contribution, so the number of civil servants in the EUROMOD database might play an initial role in how simulated contributions fit to the real figures. To explain the differences in the number of civil servants between our database and the reality, we have to clarify what we mean under the term ‘civil servant’. In the EUROMOD dataset we use the following definition of civil servants: all persons who were employed in the public sector in the base year (1995) and all other persons (including unemployed, inactive and pensioners population), who ever had been civil servants. This definition is necessary in order to simulate benefits and some contributions paid by for former civil servants. Table 13 shows the distribution of civil servants in the EUROMOD database according to employment status. We can see that approximately 700,000 persons are employed as civil servants; the remaining almost 400,000 people belong to other employment statuses. But even the number of currently employed civil servants seems to be too high in comparison to the official statistics, where the reference figure is

536,000[11]. This over-estimation of the number of civil servants means that we underestimate non-civil servant employees, and as a result we underestimate unemployment insurance contributions. The same line of argumentation applies to all contributions where civil- and non-civil servants pay according to different rules. Another reason why we underestimate unemployment insurance contributions is that we underestimate employment income itself.

The simulated *pension insurance contributions* are much closer to reality: in EUROMOD we could simulate 93% of the contributions paid in. This ratio is based on the sum of employees' and employers' contributions since the reference figures are only available as an aggregate of the two. The reason why simulated pension insurance contributions "fit" better might be that we over-estimate employers' contribution for people on "minor" wages (there is no such contribution for unemployment insurance, see the system description for details). In 1998 163,000 persons received less than 3,830 ATS/month, while in the EUROMOD database this figure is much higher (213,000). In the simulations, we will tend to overestimate the contributions paid for these people because in reality the business only has to pay contributions if the sum of wages for all people on "minor" wages in this business is at least 1.5 times the minor wage limit. In EUROMOD, however, we assume that this is always the case since we cannot identify the sum of wages paid in a business.

For *health insurance contribution* the ratio of simulated and actual sum of contributions is 80%, which is in between the unemployment insurance and pension insurance results. We can explain this with the difference in the contributions on minor wages. While employers pay 12.55% pension insurance on wages below 3,830 ATS/month, the health insurance contribution is only 3.85%, and (as mentioned above) there is no contribution to be paid on minor wages for unemployment insurance. As a consequence, the effect of the over-estimated number of people on minor wages and the overestimation of contributions paid for them is more significant in the case of pension insurance.

The simulated results of *self-employed contributions to pension insurance* are surprisingly good, given the usual under-reporting problem of self-employment. This may to a small part be due to the fact that we cannot identify whether someone is a member of the Austrian Economic Chamber (a higher threshold would apply for members, see for details the system description). Another explanation might be that, currently, we cannot identify farmers in EUROMOD data, and as a consequence all farmers are treated as "regular" self-employed, who pay higher pension insurance-contributions (by one percentage point) than farmers would.

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[11] Source: Statistik Austria (2001), pp. 171-172.

The *contributions of self-employed to health insurance* are over-estimated by 19%, in spite of the fact that we underestimate the number of contribution payers. This is again (partly) a result of non-identification of farmers in the EUROMOD data. Since farmers pay a lower rate of contribution, EUROMOD over-estimates the self-employed health insurance contribution.

Simulated *housing subsidy contributions* (including employers and employees) are about 92% of the actual budgetary revenues. The over-estimated number of civil servants does not effect this contribution, since every employee is paying at the same rate.

The validation of *employees' compulsory union contributions* and *employers' contribution to bankruptcy fund* are currently not possible, since we do not currently have access to appropriate reference statistics.

Contributions to disability insurance (paid by employers and self-employed) are underestimated by less than 9%.

The *employers' contribution to family benefit funds* is underestimated in EUROMOD by a substantial 27%. The explanation of the significant underestimation might be that this contribution is only paid by employers of non-civil servants. Clearly, the above-described bias in the number of civil servants contributes to this underestimation.

EUROMOD simulates 87% of actual *income tax* revenues (excluding withholding tax on investment income), which is surprisingly good, keeping in mind the underestimation of employment income and the usual under-reporting of self-employment income. However, the

The results for *tax on investments* are much worse. The model simulates less than 20% of real revenues. We believe that there are several important reasons for this and are pessimistic as to the scope of distinctly improving this ratio in the short term as long as household survey data are used as the basis for modelling. On one hand, we suspect a serious under-reporting problem due the fact that people may (a) not be aware of all incomes which would fall under investment income and are taxed as such; (b) be reluctant to give an indication of their financial wealth by revealing their investment income. The latter reason may be particularly relevant in Austria where there is a long tradition of "anonymous" savings accounts. We also suspect anonymity to be the cause for another major reason for the underestimation of investment tax revenues. By and large, investment taxes in Austria are deducted at source. Taxpayers (both Austrian and foreign) could only have investment income assessed together with other income if they officially registered their bank accounts under their name – thus foregoing any advantages of anonymity. Anonymous saving accounts are likely to have attracted major inflows of money from abroad – money which is, of course, not visible in any domestic household survey even if there was no under-reporting problem. Since anonymity has

been largely outlawed in recent years, we would expect the actual revenues under this category to decline in the future (and, thus, the shortfall of simulated EUROMOD results to become smaller as well).

By way of introduction to the validation of benefits, we can say that all means-tested benefits are over-estimated in EUROMOD, partly due to the fact that income from work is underestimated. Another reason of the model's over-estimation is the relatively low take-up ratio in reality for some benefits (in the model, *all* eligible persons receive the benefits. Take-up problems or issues of the degree of discretion exercised by the authorities are not currently taken into account in the simulations).

The model results for *child benefit* ("Familienbeihilfe") are satisfactory: the over-estimation is less than 8%. This result, together with the number of recipients suggests that the number of children is close to reality in the EUROMOD data.

The outcome of the *small children benefit* ("Kleinkindbeihilfe") simulation is much worse: EUROMOD gives more than 13 times higher expenditure, compared to the real figures (the overestimation of the number of recipients is much less serious). This implies that per capita benefits are higher in EUROMOD. According to the law, small children benefit is paid for a maximum of 12 months, but only until receiving "Wochengeld" (*short-term pregnancy benefit*). However, in the EUROMOD data, we cannot clearly identify "Wochengeld" (see Data Requirement Document). As a result, we simulate almost everybody to receive this benefit for twelve months while in reality, people only get it for an average of 1 month. This explains almost the entire overestimation by a factor of 13.

Newborn health-check bonus ("Mutter Kind Pass Bonus") is over-estimated by 1.5 times in EUROMOD. In reality, people only receive this benefit if they do a post-maternity health-check for themselves and their child. In EUROMOD, we assume that everybody has this health check done. Obviously, this assumption is not entirely accurate.

For *child bonus for non-civil servant pensioners* ("Kinderzuschuss" ASVG), EUROMOD over-estimates expenditure by 41%. This benefit is not income dependent so there must also be a major non-take-up issue (benefit is paid together with pension but must be applied for). Dimmel (2000) also suggests that non-take-up rate is very high in Austria. As we mentioned, this benefit is tied to receipt of pension. But for people who retire during the year, the benefit amount will be overestimated since we give them the benefit for the entire year (because we do not know the exact date of retirement). We plan to improve these results by using detailed (from month to month) labour market status information from ECHP. Due to the high number of civil servants, the over-

estimation is much higher in the case of *child bonus for civil servant pensioners* (“Kinderzuschuss” BSVG).

For *maternity allowance supplement* ("Zuschuss zum Karenzgeld oder zur Teilzeitbeihilfe") and *minimum pension for civil servants* (“Ausgleichzulage”), reference statistics were not accessible, so the validation is to be done at a later stage.

EUROMOD simulates 22% more expenditure on *family bonus* ("Familienzuschuss"), than paid in 1998. This result has to be interpreted with some caution, because reference figures are sums of the provincial figures, and some of them are from different (earlier) years than 1998. Reference recipients’ numbers (excluding the Tirol Province) for some provinces only include successful *new* applications. Another important explanation of the different result is that, in reality, all provinces use different regimes for family bonus. However, we do not have a "province" variable in the underlying data (because of data protection issues). So the province has been imputed randomly (ensuring that the number of persons in each province matches external aggregates, but without trying to reproduce the correct distribution household characteristics).

Expenditure on *minimum pension top-up for non-civil servants* (“Ausgleichzulage”) is over-estimated in EUROMOD by 20%, but the number of recipients is 70% more, than reality. This may suggest, that in EUROMOD data there are more pensioners with pensions around the minimum pension level. Since the minimum pension must be applied for, the issue of non-take-up plays a role, as well. However, take-up is much less important than for other benefits. The over-estimated number of civil-servants influences again our results, because if the number of civil servants were correct, the number of non-civil servants and the minimum pension expenditure on them would be greater.

The simulated sum of *minimum pension top-up for civil servants* is 361 million ATS, but this result has to be treated very carefully, since in EUROMOD data we have only two civil servants (unweighted) eligible for minimum pension.

For *social assistance* ("Sozialhilfe"), EUROMOD simulates about three times the reference value. This disappointing result is, we believe, mainly due to non-take-up issues. Conservative estimates speak of about 56% non-take-up (Dimmel, 2000), but for the time being there are no comprehensive studies on take-up in Austria. The simulation of social assistance is especially difficult, because local authorities have broad discretion rights to determine the amount of social assistance (taking into consideration heating costs, rental costs, clothes, etc.). In addition, social assistance has to be paid back by the recipients once they achieve a "sufficient" level of income and even relatives, which are not members of the "benefit unit" can be held liable for social assistance paid out to their

family members. These strict and often confusing rules make take-up a particularly important problem in Austria. We also see that the number of recipients produced by EUROMOD is subject to a much larger overestimation than the aggregate amount. We would take this as suggesting that many people who would only be entitled to very low amounts of social assistance do not 'bother' to apply. The poor results are also a related to the province-specific nature of social assistance. (see above family bonus).

These problems are exacerbated by the fact that, in the case of social assistance, we did not have access to all province specific rules. In these cases, we have used the rules for Vienna which are often more generous than those for other provinces. "Long-term" recipients of Social Assistance receive Social Assistance 14 times a year. In EUROMOD, everybody above the retirement age is assumed to be a "long-term" recipient and the *entire* monthly social assistance is given for another two months. However, this may not reflect the actual practice. In particular, we are not certain whether amounts given for "needs" such as rent, heating and clothing are also available 14 times a year. Another problematic point is that there are complex rules with regard to eligibility of non-Austrians. We do not attempt to model these rules, but instead do not distinguish between Austrians and foreigners.

Another reason for a mismatch of simulated and reference figures (although in the opposite direction than we observe) is the fact that, depending on the circumstances, social assistance can sometimes be paid as a one-off lump sum amount (in situations of exceptional hardship, etc.). These amounts are included in the reference figures but in EUROMOD, we are only able to simulate regular (recurring) payments of social assistance. Finally, the "time-period" problem (we only have annual income information but people may be receiving income only during some months of the year) would tend to produce simulation results that are too *low*. If someone had, e.g., a relatively high income during 7 months then it would theoretically be possible to get social assistance for the remaining 5 months. But since we use annual data, the income of these 7 months would mean that no social assistance would be computed at all because our monthly income is annual divided by 12. Given the very large over-estimation, further investigation is essential. This would include experimenting with eligibility based on receipt of the benefit in the data, improving the modeling of province-specific rules and clarifying the treatment of citizenship and "long-term" recipients. However, it should be noted that the focus in EUROMOD on formal rules can also be a very valuable contribution to establishing the extent of non-take-up in Austria.

Table 9. Summary statistics of employment income in EUROMOD database[*]

	Males	Females	All
Mean	28,022	17,462	23,627
Median	25,051	15,457	21,320
Std. Deviation	18,826	15,893	18,416
Minimum	266	132	132
Maximum	513,385	311,139	513,385
Skewness	6.8	9.2	6.8
Kurtosis	145.1	156.2	129.3

[*] Updated values to 1998

Table 10. Deciles values of gross employment income in EUROMOD database[*] and reference statistics[**] for 1998

Decile points	EUROMOD - males	Reference - males	EUROMOD – females	Reference – females	EUROMOD - all	Reference - all
1st	9,878	5,458	4,371	2,042	5,945	3,166
2nd	16,949	14,874	7,675	5,606	10,158	9,028
3rd	19,899	20,167	10,251	9,823	14,380	14,574
4th	22,386	24,256	12,881	13,475	17,333	19,201
5th	25,051	27,416	15,457	16,834	20,000	22,980
6th	28,013	30,951	18,122	20,173	22,717	26,640
7th	31,980	35,578	20,787	23,893	26,000	30,871
8th	37,310	42,784	24,567	28,984	30,453	36,978
9th	46,904	56,974	31,667	37,417	38,500	48,838

[*] Updated values to 1998
[**] Statistik Austria, 2001. We adjusted original figures to 1/12 of annual income.

Table 11. Comparison of simulated taxes/contributions with external sources

Taxes and contributions simulated (ATS million/year)	EUROMOD (a)	External source* (b)	Ratio (a)/(b)	EUROMOD N (1,000) (d)	External source N (e)	Ratio (d)/(e)
Unemployment insurance contributions**	36,698	47,674	0.770	2,177	2,523	0.863
Pension insurance** (employees excluding civil servants and voluntary contributions)	139,093	149,109	0.933	2,170	2,617	0.829
Pension insurance (self-employed)	11,466	14,339	0.800	286	442	0.646
Health insurance** (employees excluding civil servants and voluntary contributions)	79,778	98,804	0.807	3,471	4,848	0.716
Health insurance (self-employed)	6,444	5,437	1.185	235	287	0.818
Housing subsidy contributions**	7,023	7,676	0.915	2,892	n.a.	
Employees' compulsory union contributions	2,587	n.a.		2,177	n.a.	
Contribution to disability (accident) insurance***	10,612	11,571	0.917	3,698	3,820	0.968
Employers' contribution to family benefits fund	29,516	40,520	0.728	3,388	n.a.	
Employers' contribution to bankruptcy fund	5,863	n.a.		2,918	n.a.	
Income tax	205,588	235,123	0.874	3,405	n.a.	
Tax on investments	5,260	26,685	0.197	268	n.a.	

[*] Sources: Kammer für Arbeiter und Angestellte (2000), Statistik Austria (2001), Kammer für Arbeiter und Angestellte (1999)
[**] Employees and employers
[***] Employers and self-employed

Table 11. Comparison of simulated benefits with external sources

Benefits simulated (ATS million/year)	EUROMOD (a)	External source* (b)	Ratio (a)/(b)	EUROMOD N (1,000) (d)	External source N (e)	Ratio (d)/(e)
Child benefit	34,211	31,726	1.08	1,166	1,090	1.07
Small children benefit	207	16	13.38	17	12	1.45
Newborn health check bonus	125	81	1.55	62	41	1.53
Child bonus for pensioners (non-civil servants)	337	300	1.12	59	50	1.17
Child bonus for pensioners (civil servants)	88	23	3.80	15	10	1.56
Maternity allowance supplement	402	n.a.		35	9	3.84
Family bonus	983	650	1.51	50	37	1.34
Minimum pension top-up (non-civil servants)	7,911	6,589	1.20	286	168	1.71
Minimum pension top-up (civil servants)	361	n.a.		7	n.a.	
Social assistance	12,772	4,821	2.94	213	36	5.91

* Sources: Kammer für Arbeiter und Angestellte (2000), Statistik Austria (2001), Kammer für Arbeiter und Angestellte (1999)

Table 13. Distribution of civil servants in EUROMOD database according to employment status

	Non-civil servant	Civil servant	Total
Pre-school	552,542	0	552,542
Employer or self-employed	338,757	9,743	348,500
Employee	1,951,154	695,773	2,646,927
Pensioner	1,164,550	224,238	1,388,788
Unemployed	173,575	20,276	193,851
Student	1,654,356	54,894	1,709,250
Inactive	921,045	76,851	997,896
Sick/Disable	17,137	0	17,137
Other	64,584	0	64,584
Total	6,837,700	1,081,775	7,919,475

4.2 Income distribution and poverty estimates

In EUROMOD estimates, Gini-coefficient for equivalised disposable (EDI) income is very similar, to other calculations based on ECHP (although it would be desirable to compare EUROMOD results to a database different from the one that is used as an input into the model[12], the comparison does have some value because we *simulate* a significant part of disposable income).

The decile values are almost the same, in the two estimates, as well as the poverty lines and poverty rates. The poverty rate is not lower (in spite of the significant over-estimation of social assistance expenditures) in EUROMOD, because social assistance composes only an insignificant part of disposable income in Austria (Förster et al. 2001). As a result, incomes of households receiving social assistance will often still remain below the poverty line. The lower poverty gaps in EUROMOD are consistent with the overestimation of social assistance.

[12] We plan this comparison with other sources at further stages of the EUROMOD project.

Table 14. Income distribution and poverty comparisons

	EUROMOD[13]	ECHP (1997)[14]
Gini-coefficients of EDI	0.25	0.26*
Decile points (equivalised ATS/month)		
1st	9,703	9,682
2nd	11,733	
3rd	13,416	
4th	14,944	
5th	16,546	16,691
6th	18,260	
7th	20,590	
8th	23,224	
9th	28,179	28,835
Poverty line (60% of the median[15])	9,927	10,010
Below 60% of median	11.3%	11.1%
Poverty gap[16] (ATS)	2,134	1,802
Poverty gap[17] (%)	21.5%	18%
Poverty line (50% of the mean)	9,286	
Below 50% of mean	6.7%	

Source: EUROSTAT, 2001

[13] EUROMOD simulations are based on 1995 income data from ECHP, updated to 1998. Household disposable income is equivalised using modified OECD scale (1-0.5-0.3). Poverty rates refer to individuals. Poverty gap is the mean difference of disposable income of poor from the poverty line.

[14] Source: Förster et al. (2001) and Till and Tentschert (2000). The estimates are based on ECHP data, containing income data from 1997. The disposable income is equivalised by modified OECD scale, as well.

[15] Equivalised household disposable income

[16] Mean difference of EDI of poor households from the poverty line.

[17] Mean difference in % of EDI of poor households from the poverty line.

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