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TAX SYSTEMS AND TAX REFORMS IN EUROPE: GERMANY

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Abstract
This paper aims at discussing the main features of Germany's tax system, its recent reforms and those underway. It is part of a wider research on European taxation, carried on at this Department, under the direction of L. Bernardi and P. Profeta, and the supervision of V. Tanzi. Germany is a key country in the EU as in 2000 it generated the largest level of GDP, which amounted to € 2,040 billions and in 2001 implemented an income and business tax reform. In the first section we introduce the contents of the paper and in the second one the structure of the German fiscal system from the '70s up to now, by investigating the composition of different tax revenues. In the third section, we describe the features of the main German taxes, giving particular attention to the personal income tax, the corporate tax and the VAT. In the fourth section we illustrate the distribution of the fiscal burden using different indicators: implicit tax rates, taxation by economic functions and tax wedges on labour, corporations and consumption. A comparison of German fiscal burden is played out on the European stage. In the same chapter we investigate the relations between the different levels of government and taxation by attributing tax revenues to the central government, states and municipalities. In the last section, after a brief analysis of the economic and political environment, we describe the fiscal reforms implemented from 1990 until now and try to give some policy evaluations of the new provisions.

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1. Introduction, contents and main conclusions

This chapter is devoted to the analysis of the German fiscal system. The study has been completed by using data from different sources in order to develop a broad picture of the German fiscal system by analysing not only existing taxes but also their effective burden, their proceeds, the destination of their revenues and the impact of the transformation of the regime.

Various reasons lead us to investigate the situation in the Federal Republic of Germany. Firstly, it is a key country in the EU as in 2000 it generated the largest level of GDP, which amounted to € 2,040 billions. This means that to a certain extent Germany could be a benchmark for many other countries. For instance in May 2002 the Finance Commission of Italian Low Chamber approved a bill for a Fiscal Reform, which was in some elements inspired by the new German fiscal system.

Secondly, and this is the main reason for our investigation, in 2001 an income and business tax reform took place in Germany. The transformation of the German fiscal system was implemented during a period characterised by a complex economic and political environment. It is particularly interesting to investigate how the economy reacted, as we documented in section 5.1. On the one hand the Reform was necessary to improve the German political and economic framework: corporations and individuals suffered from a very high tax burden compared to other European countries, a great number of German banks and financial institutions held participations of domestic corporations merely because it would have been too costly to sell them and finally, the imputation system was not considered in line with the European tax law. On the other hand, the substantial loss of revenues implied by the tax reform occurred in a phase of strict budget constraints: in 2001 Germany showed the highest deficit ratio in the EU, as we illustrate in section 2.1 and 5.1.

The paper proceeds as follows. In the next section we analyse the structure of the German fiscal system from the '70s up to now, by investigating the composition of different tax revenues. Overall fiscal pressure (as a share of GDP) has been growing. It increased by almost 10 percent points from 1970 to 1997. This is mainly due to the rise of both social security contributions and the PIT. In relation to total fiscal proceeds, the income tax is the major source of revenue in 2000 and VAT follows in second position. In relation to GDP, in 2000 social security contributions represent the greatest share. At the end of the section, the German fiscal burden is compared to the European average. Since the 70s PIT and social security contributions as a share of GDP are higher than the EU average, while the opposite is true for indirect and corporate taxes.

In the third section, we describe the features of the main German taxes, giving particular attention to the personal income tax, the corporate tax and the VAT. The PIT is highly progressive, its base is characterised by high personal deductions, as we describe in section 3.1.2. Besides, weighty allowances are granted to taxpayers. Typical features of the German corporate tax before the reform were a split-rate system, high statutory rates and a narrow base due to high depreciation deductions. The VAT rate is low compared to other EU countries. We also consider the social security contributions, the business tax, the solidarity surcharge and other minor taxes. The business tax is the exemplification of the German federal fiscal system: its rate is fixed by municipalities and contributes to increase the corporate tax burden. This is also true for the solidarity surcharge whose rate is on the contrary established by Central Government.

In the fourth section we illustrate the distribution of the fiscal burden using different indicators: implicit tax rates, taxation by economic functions and tax wedges on labour, corporations and consumption. Implicit tax rates on labour have been quite high and displayed a growing long-term trend. The opposite is true for implicit tax rates on capital. The same conclusions can be drawn from the analysis of taxation by economic functions: a high share of fiscal pressure is born by labour, primarily by employed labour. The analysis of the tax wedge on corporation shows a strong distortion in favour of financing investment by debt. A comparison of German fiscal burden is played out on the European stage: even after the fiscal Reform the Federal Republic displays elevated tax burden. In the same chapter we investigate the relations between the different levels of government and taxation by attributing tax revenues to the central government, states and municipalities: intermediate levels of government (*Länder*) receive a great amount of total tax revenues as well as, to a minor extent, municipalities.

In the last section, after a brief analysis of the economic and political environment, we describe the fiscal reforms implemented from 1990 until now and try to give some policy evaluations of the new provisions. This is a key period for Germany: the latest fiscal reform rearranged the whole system by simultaneously broadening the base and lowering the rates.

Considering different tax pressure indicators, Germany was one of the countries with the highest fiscal pressure in the EU. It was characterised by high statutory rates together with narrow bases. Direct taxes were high while indirect taxes were lower than the EU average. The 2001 fiscal Reform did not much improve the ranking of the Federal Republic within the European Union.

2. The structure of the system and of its development from the '70s

2.1 The current structure of taxation and of social security contributions

In 2001 the general Government deficit reached 2.7 percent of GDP (according to an estimate by the Statistical Office of the European Commission).

This is a significant slippage from agreed budgetary targets towards levels that potentially risk breaching the 3 percent of GDP reference.[1] However, at the end of 2001 the debt was 57.8 percent of GDP, which means that it decreased from 2000 values.[2] The cyclically adjusted primary balance (CAPB) was 0.7 percent of GDP.

From 2000 the Government revenue ratio decreased by 1,5 percent points to 46.1 percent, above all owing to the tax reform which came into force at the beginning of the year. In the same year total expenditures came to 48.9 percent of GDP. As a result, the German fiscal balance moved considerably further away from the requirements of the European Stability and Growth Pact. Germany currently has the highest deficit ratio in the EU. Net borrowing was –1.5 percent of GDP and cyclically adjusted net borrowing was –1.4 percent.

In 2001[3] total public expenditures[4] can be divided into personnel expenditures (27.4 percent of total expenditure), other operating expenditure (10.7 percent), current grants (35.7 percent) interests paid (12.9 percent), capital formation (6.8 percent), financial aid[5] (6.4 percent). The 80.1 percent of total public revenues[6] come from taxation and other fiscal charges.

As we could not find any data on 2001 tax revenue composition, we may rely on data from the Federal Office for Statistics (*Statistisches Bundesamt*). They show that general taxes amount to 73.3 percent of total revenues. Among them the wages tax (*Lohnsteuer*) represents 33.2 percent of total tax revenues and together with income tax is the major source of revenue from taxation (35.7 percent of total revenues).

The second most important tax is VAT (*Umsatzsteuer)*: its revenues total 21.3 percent.

Among general taxes corporate tax corresponds to 4.9 percent of total tax proceeds.

Another significant tax is the business tax (*Gewerbesteuer)* whose returns amount to 5.4 percent.

Among excises the great part of revenues is due to the excise on mineral oils (7.5 percent) and to excise on tobacco (2.3 percent).

[1] In the German stability programme the target for 2004 was at –1 percent of GDP but in February at the ECOFIN Council the German Government committed itself to a budget close to balance by 2004.

[2] In 2000 the debt at the end of the period was 60 percent of GDP. In 2002 the debt ratio is expected to rise again to 60.8 percent as a consequence of high nominal deficit and weak nominal GDP growth.

[3] For further details see *Deutsche Bank Monthly Report*, January 2002.

[4] Including discrepancies in clearing transactions between central, regional and local authorities.

[5] Expenditure on investment grants, loans and acquisition of participating interests.

[6] We could not find a better description of 2001 public revenues. We only have data for 2000, which report that total revenues come from taxation and other fiscal charges (84.7 percent), benefit taxes (2.7 percent), economic activity (1.8 percent) capital revenues (7.7 percent) and other revenues (3.1 percent).

For 2001 we can only report[7] that the tax revenues fell by 4,5 percent mainly because of the tax reform. The turnover tax declined by 1.5 percent and performed even less favourably than the VAT tax base. Corporation taxes, receipts from which were depressed by the cut in tax rates plus the distribution of profits retained in earlier years, showed a negative balance for the first time (-€ 0.5 billion), although this was accompanied by additional revenue from non-assessed tax on earnings. The worsened profit situation and smaller payments than in earlier years likewise contributed to the disappointing corporation tax result as well as depressing trade tax receipts. However, revenues from wage tax and assessed income tax marginally exceeded expectations.

According to our elaboration of data of the *Statistisches Bundesamt*, in 2000 direct taxes[8] were 54.9 percent of total tax revenues while indirect taxes represented 37.6 percent of total income from taxation. Among the former, income taxes (35.7 percent), corporation tax (4.9 percent) and tax on industry and trade (5.4 percent) were the major source of revenues. Concerning indirect taxes, VAT dominated with 21.3 percent of total tax revenue. Total excises amounted to 12.6 percent of total tax income.

Concerning the share of different type of taxes on GDP, Table 1 shows that in 2000 social security contributions represented the main share of GDP (18.7 percent). In 2001 revenues from social security contributions increased by 1.5 percent according to the German Central Bank.

Direct taxes totalled 12.5 percent of GDP and indirect taxes 12 percent.

Table 1

Direct and indirect taxes, social contributions on GDP, 2000.

Type of revenues	% of GDP
Social security contributions	18.70%
Direct taxes	12.50%
Indirect taxes	12.00%

Source: Bank of Italy, 2001

The German fiscal system is characterised by a smooth tax schedule and is highly progressive thanks to a complex system of deductions from the tax base and the exemption of income which,

[7] For further details see *Deutsche Bundesbank Annual Report*, 2001.

[8] For a classification of direct and indirect taxes see P. Bosi and M.C. Guerra (2001).

after deductions, is lower than a certain level. This means that a great fraction of fiscal revenues comes from taxpayers who have a high marginal rate.

2.2 Developments of the system from 1970 to 2000.

The Federal Republic of Germany has long been a country characterised by a high fiscal burden both on individuals and corporations. This feature is linked to the German history: during the 90's the country had to cope with the reunification process[9] and the budget constraints established by the Maastricht Treaty. Until the last reform[10] the two main features of the system were high statutory tax rates and relatively narrow bases[11].

From 1970 to 1999 the total tax burden as a percentage of GDP increases almost regularly but quite slowly: in 1970 the percent of total tax revenue on GDP is the lowest (19.2 percent). The share of total tax income increases from 1970 to 1980 (22 percent), it remains almost constant until 1985 (21.6 percent) and then it exhibits a local minimum point in 1990 (19.9 percent). Afterwards, it rises and reaches a global maximum point in 1999 (24.4 percent).

Total direct tax burden on GDP rises almost regularly from 1970 to 1999: it stretches from a minimum of 9.9 percent in 1980 to a maximum of 12.2 percent in 1999.

Total indirect tax revenues linger around an average value of 9.8 percent with a minimum value of 9.2 percent in 1975 and in 1990 and a maximum value of 12.2 percent in 1999. The greater part of the indirect tax burden is composed of VAT revenues, which alone, in average, amount to 6.3 percent of GDP.

2.3 A comparative view with the European average.

As displayed in table 2 the German total tax revenues as a share of GDP are always lower than the European average. The gap between Germany and the European values seems to become wider and wider until 1995 when it recovers. In 1990 the European average is 6.3 percentage points greater than the German tax share on GDP while in 1995 it declines to 6.2 and in 1999 it reaches a value of 3.2 percent points.

The disparity is mainly due to the share of indirect taxes on GDP. From 1970 to 1999 they run below the European mean. This does not mean that for example VAT has been lower than the

[9] The reunification process lead to a huge financial effort, which ended up in redistributing to the eastern *Länder* almost 6 percent of GDP each year.

[10] The latest fiscal reform was realised during the Schröder Government. It started with the Tax Relief Act 1999/2000/2002 and ended with the Tax Reduction Act (*Steuersenkungsgesetzt*) approved by the German Parliament (*Bundesrat*) on July 14, 2000. It has been implemented over 2001 and 2002. See also session 5.

[11] It is important to note that, since the US tax reform in 1986, many countries reformed their fiscal system by broadening tax bases and reducing statutory tax rates. This means that until 2000 Germany moved along a different path in fiscal reforms.

European average since 1970. In fact it lingers around the European average but at the same time is counterbalanced by the course of excise duties. These latter also run close to the European average: the maximum gap between the two values is 1.7 percentage points in 1999. The share of their revenues on GDP from direct taxes is lower (one percentage point) than the European average in 1970. Afterwards the situation is turned upside down: from 1975 to 1999 the German values drop under the European mean. The gap is largest in 1990 and in 1995 by around two and a half percentage points.

On the other hand, personal income tax revenues on GDP are always higher than the European average (except for 1990 and 1995 when they are as high as or 0.3 percentage points lower). This is not true for the corporate income tax proceeds, which are, as a share of GDP, always lower than the European mean.

German total social contributions as a share of GDP are well above the European values. The gap between the two ratios ranges from a minimum value of 2.2 percentage points in 1975 to a maximum of 3.5 points in 1995. This is due primarily to the fact that employees' contributions are particularly high compared to the European mean. While employers' contributions run a little below, the self-employed contributions progress with higher values then those of the European average.

TAB. 2 Structure and development of fiscal revenues in Germany and European average as a percentage of GDP, 1970-1999

	1970		*1975*		*1980*		*1985*		*1990*		*1995*		*1999*	
	Ge	*Eu*	*Ge*	*Eu*	*Ge*	*Eu*	*Ge*	*Eu*	*Ge*	*Eu*	*Ge*	*Eu*	*Ge*	*Eu*
Direct Taxes (1)	*9,9*	*8,9*	*11,4*	*11,9*	*12,2*	*12,7*	*12,2*	*13,1*	*10,7*	*13,2*	*10,9*	*13,3*	*12,2*	*13,7*
Personal income	8,2	5,5	10,1	8,9	10,4	9,3	9,9	9	8,9	8,9	9,3	9,6		9,3
Corporation income	1,7	2,2	1,3	1,9	1,8	2,2	2,3	2,8	1,8	2,9	1,6	2,4		3,0
Indirect taxes (2)	*9,3*	*13,0*	*9,2*	*12,2*	*9,8*	*13,2*	*9,4*	*13*	*9,2*	*13*	*9,8*	*13,6*	*12,2*	*13,9*
VAT	5,9	5,1	5,6	5,7	6,6	6,6	6,4	6,1	6,4	6,6	6,8	6,9	7	7,0
Excise duties	3,4	3,5	3,6	3,5	3,2	3,2	3	3,2	2,8	3,1	3	3,4		3,5
TOTAL TAX REVENUES	19,2	21,9	20,6	24,1	22	25,9	21,6	26,1	19,9	26,2	20,7	26,9	24,4	27,6
Social contributions	*11,7*	*11,7*	*15,0*	*12,8*	*15,7*	*13,4*	*16,3*	*13,8*	*15,9*	*13,7*	*18,5*	*15*	*18*	*15,0*
Employers	5,4	7,2	6,9	7,7	7,3	7,8	7,5	7,9	7,3	7,8	8,2	8,0	7,7	8,2
Employees	4,9	3,5	5,7	3,8	6,2	4,3	6,4	4,5	6,3	4,5	7,1	5,1	7	5,0
Self Employed	1,4	1,0	2,4	1,3	2,2	1,3	2,40	1,5	2,3	1,4	3,2	1,8	3	1,9
TOTAL FISCAL REVENUES	30,9	33,6	35,6	36,9	37,7	39,3	37,9	39,9	35,8	39,9	39,2	41,9	42,4	42,6
Administrative level														
Central Government	21,5	19,7	21,3	21,1	21,8	22,3	21,2	22,1	19,8	22,2	20,8	22,5	20,4	22,9
Local Government	2,6	2,2	3	2,8	3,3	2,9	3,2	3,1	3	3,8	2,7	4,0	3,3	4,0

Sources: 1970-1995, Eurostat; 1999 Oecd (2001) (data equalized with Eurostat).
(1) For 1999 we could not find split data for personal and corporation income.

(2) For 1999 we could not find data for Excise duties.

3. Some quantitative and institutional features of main taxes

3.1 Income tax. *Einkommensteuer*.

Individuals domiciled or resident in Germany are subject to income tax on their worldwide income falling under one or several of the following categories:

1. *Income from agriculture and forestry;*
2. *Income from trade or business;*

To compute the taxable income in these two categories the *net worth comparison method* is used. However, the *net income method* can be applied if the annual profits do not go above € 24542 and the turnover does not exceed € 255,650.[12] Expenses incurred in producing the income are generally deductible. Some restrictions apply for personal expenses (gifts, guest houses, etc.). Dividends and other profit distribution from shares held as business assets are taxed applying the new half-income system (*Halbeinkünfteverfahren)*.

3. *Income from professional services;*[13]
4. *Income from employment;*[14]

Employment income is defined as any sum, in cash or in kind, received by an employee for her employment.[15] Expenses for generating and maintaining the employment income are deductible, although sometimes only up to a certain limit. If those expenses do not reach € 1,002, the taxpayer benefits from a lump-sum deduction of € 1,002. Other deductible expenses are: contributions to professional and trade associations; necessary expenses incurred for the maintenance of two households (limited to a 2-year period if the physical place of work does not change); expenses for working tools and working clothes and depreciation of income producing assets. Expenses related to tax-free income are not deductible. Benefits in kind received or enjoyed from an employment in addition to regular salary are categorised as income from employment and normally valued at market price, including VAT. A ruling, which fixes the value of certain benefits, e.g. housing and food, is issued annually.[16]

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[12] This method determines the taxable base as the gross income less related expenses in accordance with the cash receipts and disbursement method.

[13] The *net income method* is used for this category, unless the taxpayer elects to employ the *net worth comparison method*.

[14] In the German fiscal system there is a special method of collecting income tax chargeable on income from paid employment. It is the so-called wages tax (*Lohnsteuer*). It has the same characteristics as income tax but it is withheld by the employer on the basis of a wage-tax card and wages-tax tables for daily, weekly or monthly wage payments.

[15] The income tax plus the solidarity surcharge and the social security contributions must be withheld and transferred by the employer to the authorities.

[16] The benefit arising from non-marketable stock options is taxable only when the option is exercised. In this case the taxable benefit is equal to the fair market value of the shares at the time option is exercised, less any amount paid by the employee when the option was granted. If the stock option are freely marketable, the income is realised when the employee receives the option. The taxable income is the market price of the stock option on the stock exchange at the date the option was received, less any amount the employee actually paid for the option.

Pension income derived from the statutory pension scheme is considered as other income. Other types of pension income[17] paid in the form of an annuity (*Leibrente*) are taxable as employment income. A tax-free allowance of 40 percent is granted for an annual maximum of DEM 6,000 (€ 3,067).

5. *Income from capital investment (dividends and interests) and*
6. *Rental income from immovable property and certain tangible movable property and income from royalties;*

Normally, expenses sustained for producing income in these two categories (5 and 6) are deductible. For the first category, an allowance of up to € 1,533.9 per year (€ 3,067-for jointly assessed spouses) is granted. According to the *imputation credit scheme*, the corporate income tax paid on dividends or similar capital income is set off against the resident shareholder's tax liability. The credit is three sevenths of the dividends.

After the new fiscal reform the imputation method has been eliminated and the new *half-income method* (*Halbeinkünfteverfahren)* has been introduced. The shareholder is taxed only on 50 percent of the amount of the dividend or the profit distribution received. Consequentially, only half of the expenses connected with the production of the income are deductible. Dividend distributions of resident companies fall under the new rules if the underlying profits have been derived during 2002. Dividend distributions of non-resident companies fall under the new rules from 1 January 2001.

7. *Other income (gains from private transactions, alimony, annuities, etc.).*

Pension income derived from the statutory pension scheme is taxable. The taxable base is computed as the excess of each payment over a proportionate share of the invested capital spread over the life expectancy of the recipient. The excess is fixed as a percent of the payments, which depends on the age of the recipient when he first received pension payments. The same treatment is applied to pension payments derived from a direct insurance and pension funds. The payments made by the employer to insurance or to the pension fund are regarded as employee's income from employment and are therefore taxed as such.

In order to form the taxable base the income resulting from every category is gathered together and personal deductions are subtracted. Allowances and rates are then applied to create the fiscal liability. Negative income from one source of income can be set off against positive income from other sources only within certain limits.[18]

The German fiscal system recognises the following types of income as exempt: payments from health, accident, disability and old age insurance, some social distribution, lump-sum payments

[17] In Germany there are different pension schemes (in addition to the statutory pension scheme) funded on a contract between the employee and the employer. They can be paid in the form of a lump -sum (*Kapitalabfindung*) or in the form of an annuity (*Leibrente*).

under the statutory pension scheme, scholarship for research activities, scientific or artistic education and training, 50 percent of qualifying dividend and capital gains on alienation of shares.

3.1.1 Capital gains.

Capital gains arising in the course of a business are treated as ordinary business income. Gains from the disposal of assets withdrawn from a business are taxable under the rules on private transactions. Capital gains derived from private transactions are generally free of tax. However, they are taxable if they total more than € 511.3 and arise from the disposal of either immovable property within 10 years of the date of acquisition or movable property within one year of the date of acquisition and finally from the disposal of derivatives. The capital gains are than added to an individual's taxable income. Special rules apply to the taxation of capital gains from the sale of a significant interest in a company (10 percent of the company's share capital or more before 1 January 2002. From this date on the limit is lowered to 1 percent in resident companies).[19] They are not considered as deriving from a private transaction but they form business income. This means that they are entitled to the benefits of loss set-off and carry-over. The described discipline does not apply from 1st January 2002. As a matter of fact the new *half-income method* is used: only 50 percent of capital gains are subject to taxes.[20]

3.1.2 Personal deductions, allowances and credits.

Various properly documented expenses are deductible in the German fiscal system. They can be divided in special expenses (*Sonderausgaben*) and extraordinary expenses (*aussergewönliche Belastungen*). The former group includes social security contributions and insurance premium (deductible up to a total limit of € 1334 for a single tax-payer and € 2668 for jointly assessed couples). Mortgage interest is deductible only against income from property. Tax advisers' fees and the church tax are fully deductible. Contributions to German charities and certain international charities are deductible up to 5 percent of adjusted gross income. For contributions for scientific purposes, the percent is increased to 10 percent. Donations to political parties are deductible up to € 1,533 (€ 3,067- for married taxpayers filling jointly). From 2000 there are additional deductions available for donations to public law foundations and certain non-profit private law foundations. Extraordinary expenses[21] may be deducted if they are necessarily incurred and if they exceed

[18] In 1999 the set off of negative income was possible until € 51,130 or (€ 102,260) for jointly assessed married couples.
[19] For non-resident companies the new rules apply from 1st January 2001.
[20] This discipline does not discriminate between dividends and capital gains.
[21] They include expenses for the occupational training of children and expenses for domestic help for the elderly or the sick.

expenses borne by comparable taxpayers with a comparable income. These costs are deductible only in excess of a certain limit, depending on the applicable schedule.

A basic allowance (*Grundfreibetrag*) of € 7,205[22] is deducted from the taxable base.

Special allowances for children are granted whenever the monthly child benefit[23] is not sufficient to cover the minimum subsistence of a child. The allowance amount to € 147 per month for every child under 18 years who is maintained by the taxpayer. As from 1 January 2000 a new additional childcare allowance (*Betreuungsfreibetrag)* of € 773 per year is available for children under 16 years and for those who are handicapped.

3.1.4 Rates.

The German income tax is levied at progressive marginal rates using complex tables. Abbreviate tables are as follows:

Single tax payer		
Annual taxable income (Euro)	Rate (%)	Tax payable (Euro)
up to 7205.75	0	0
7205.75-9248.9	19.96-23.02	8.2-441.2
9248.9-54,999	23.02-48.50	447.4-16,658.1
over 54,999		16,813.60
Jointly assessed spouses		
Annual taxable income (Euro)	Rate (%)	Tax payable (Euro)
up to 14,412	0	0
14,412-18,498	19.96-23.02	16.4-882.5
18,498-109,998	23.02-48.50	894.8-33,600.6
over 109,998		33,627.20

The solidarity surcharge is imposed on the amount of tax computed according to the above tables.

3.2 Social security contributions.

The social contributions are computed on the basis of gross salary and up to certain limits. Normally, the employer contributes an equal amount and withholds the employee's part from the salary that it transfers to the health care institution, which then distributes the relevant amounts to the other social security institutions. In 2002 the following contributions are due[24]:

[22] The allowance is applicable from 1st January 2001 and is € 14,412 for jointly assessed spouses.

[23] The child benefit is a monthly payment of € 138 for the first and the second children, € 153 for the third child and € 179 for the fourth and any further children.

[24] The values are comprehensive of the employer's and employee's part.

Type of insurance	Rate (%)	Maximum salary (1) EUR/month	Maximum salary (1) EUR/month
Pension insurance (Rentenversicherung)	19,1	4500	859,5
Unemployment insurance (Arbeitslosenversicherung)	6,5	4500	292,5
Health insurance (Krankenversicherung)	13,5 (2)	3375	455,63
Insurance for disability and old age (Pflegeversicherung)	1,7	3375	57,38

(1) The maximum in parentheses applies if the employee is resident in one of the five new Laender.

(2) The average rate; the contributions depend on the insurance company.

Social security contributions and insurance premiums are deductible from adjusted gross income up to specified limits.

3.3 Inheritance and gift taxes. *Erbschaft-und Schenkungsteuer*.[25]

Each beneficiary or donee is assessed separately according to her share in the estate or the gift. For the tax levied on gifts, the donee and the donor are jointly liable. The taxable base is the fair market value.[26] The rates depend on both the category of the beneficiary or donee and on the amount of the taxable base. They vary from 7 to 50 percent. The first € 255,650 is exempt in case of a business property located in Germany, obtained by inheritances or gifts *mortis causa* and only 60 percent of any excess is taxable. The same applies to shares in a resident company if the deceased/ donor held a direct interest of more than 25 percent. Some allowances are granted for inheritance and gifts, varying according to the category of beneficiaries or donees. Up to € 51,130 the lower rates are applied, whereas higher rates apply to acquisition in excess of € 25,6 million.

3.4 Corporate income tax. *Körperschaftsteuer*.

The German Corporate Income Tax Law states that the taxable persons are imposed on their worldwide income (unlimited tax liability). The basis of assessment is the total income received by corporation during the fiscal year.[27] Profits are determined according to the *net worth comparison method*. For financial years ending December 2000, Germany applied a full imputation[28] system for the last time at the following rates:

[25] Inheritance and gift tax is imposed on acquisitions by way of inheritance or gift, on donations made for a particular purpose and once every 30-years on the property of a family foundation.

[26] Debts of the deceased, funeral and administrative expenses are deductible.

[27] All types of income realised by the company are deemed business income.

[28] This means that the corporate income levied at company level is fully credited against the income tax charge of a resident shareholder. If the imputation credit exceeds the shareholder's tax charge, the excess is refunded.

Companies incorporated under German law	
Profits distributed to stockholders	30%
Undistributed profits	40%
Branches of foreign corporations	
On total profits	40%

This is a split-rate system, which can result in a reduction in the corporate income tax if retained earnings that had been subjected to the full corporate income tax rate are distributed. On the other hand, distributions can lead to an increase in corporate income tax up to the distribution rate if income that has been subject to reduced rates or certain tax-free income is distributed. This guarantees that all profits are uniformly imposed at the same rate upon distribution.

After the abolition of the imputation system, corporate income tax is no longer included in the taxable base of the shareholder, and there is no imputation of the corporate income tax against the income tax payable by the shareholder. The resulting double taxation is softened by both the reduction of the corporate tax rate at 25 percent with no distinction between retained and distributed profits and the introduction of the *half-income system* (*Halbeinkünfteverfahren*). This means that only half of the distributed dividend is taxable.

Most company expenses (*Betriebsausgaben*) related to taxable income are deductible. Remunerations (e.g. salary, benefits in kind and social contributions) to employees are fully deductible. The same applies for fees paid to a member of the management board. Interest on loans and other debts are commonly deductible. Some limits apply to interest deductions. Limits on interest paid to affiliates are basically debt/equity ratios of 3:1 (9:1 for German holding companies) on fixed-interest loans and 1:2 on finance provided for a consideration based on profits or similar criteria. The following taxes are deductible: business tax (*Gewerbesteuer*) and real estate tax (*Grundsteuer*). Corporate income tax, real estate transfer tax and VAT on non-deductible items listed are not deductible.

Concerning depreciations the applicable methods are the straight-line, declining-balance and production method. Among immovable properties land is not depreciable, buildings are depreciable according to different rates. The latter depend on the date of the construction of the building and on the different use of it. For plant, machinery and equipment the straight-line and the declining balance methods apply if the plant does not constitute immovable property. The declining-balance method rate is limited to three times the allowable straight-line rate, with a maximum of 30 percent.[29] Intangible assets may only be depreciated using the straight-line method. Goodwill may only be capitalised if it was acquired.

Capital gains realised by a company are taxable as ordinary income for corporate income tax purposes. The normal tax rates apply both for the corporate income tax and the business tax. After 1 January 2002 the following capital gains are exempt: capital gains realised by companies from the sale of a qualifying investment in a foreign company and capital gains realised from the sale of shares in domestic and foreign companies.

Relating to losses, at the taxpayer's option, ordinary losses for corporation tax purposes may be carried back and offset up to the amount of EUR 511,500 against taxable income of the preceding year. Remaining losses are carried forward without time limit. Capital losses are considered as ordinary losses.

3.4 Withholding taxes.

The following table describes the two withholding taxes levied on interests (*Zinsabschlag*) and on capital yields (*Kapitalertragsteuer*).

	Before the reform	After the reform
Capital yield taxes	25%	20%
Withholding tax on interest	30%	30%

3.5 Business tax on income. *Gewerbesteuer.*

The business tax is a local tax due on any business carried on in Germany, whether by resident or non-resident. Business income tax rates depend on the municipality in which the business is located.[30] The business tax is deductible from its own base and for corporate income tax purposes. Taking into account the deductibility, the effective tax rates range from 10 percent and 15 percent. The business tax takes over the taxable base computed for corporate income tax purposes and adjusts it by a certain add-backs and deductions.[31]

3.6 Value-added tax.

The value-added tax in Germany is a standard European VAT. The following rates apply: 16 percent to every taxable supply of goods and services not subject to the reduced or zero rate; 7 percent which to the supply of essential goods and services, such as food and beverages (but 16

[29] The new rates, after the fiscal reform, are effective after 1st January 2001. They vary from 6 percent to 10 percent for machinery, 12,5 percent for office equipment, from 8 percent to 10 percent for office furniture, 33.3 percent for computers and from 11 percent to 16 percent for cars, trucks, etc.

[30] The beneficiaries of this tax are the municipalities (80 percent), the *Länder* Governments (about 15 percent) and federal Government (about 5 percent).

[31] See Sec.8 and 9 of *Gewerbesteuersgesetzt* (Law on business tax).

percent if consumed on the spot), pharmaceuticals, newspapers, books, the services of theatres, museums and concert halls; zero to exports and intra-Community supplies. The taxpayer is generally entitled to offset against the value-added tax payable the amount of such tax charged by suppliers or paid on imports.

3.7 Excises.

Excise duty on mineral oils[32] (*Mineralölsteuer*) is payable on certain goods, classified and described in a uniform way for the Community, provided that they are used as motor or heating fuels. Rates depend on the type of goods and on their use. Duty on tobacco (*Tabaksteuer)* is payable on cigarettes, cigars and cigarillos and smoking tobacco. Rates depend on the type of good. Duty on spirit (*Alkoholsteuer)* is payable on liquid having an alcoholic strength by volume exceeding 22 percent volume and on alcoholic products. Other excises are excise duty on sparkling wines (*Scahumweinsteuer*), duty on intermediate products (*Zwischenerzeugnissteuer*) excise duty on beer (*Biersteuer*), excise duty on coffee (*Kaffeesteuer)* and duty on beverages (*Getränkesteuer*).

3.8 Solidarity surcharge, church tax (*Kirchensteuer)* and taxes on capital.

Resident and non-resident companies, persons with unlimited and extended limited tax liability, associations and funds are subject to a solidarity surcharge of 5.5 percent. The basis of assessment is income tax, corporation tax, wage tax, capital yield tax, income or corporation tax prepayments.

Church members are required to pay a church tax at a rate of 8 percent or 9 percent of their income tax payable, depending on the *Land* in which the taxpayer is resident.

The net wealth tax (*Vermögensteuer*) was abolished effective 1 January 1997. Individuals are subject to real estate tax (*Grundsteuer*). For individuals, the real estate tax is only deductible for income tax purposes if the property is used in the course of a trade or business or if it constitutes a source of income, e.g. in the case of rental income.

4. The fiscal burden

4.1 The distribution of taxation charge

As a consequence of a relatively low VAT standard rate (16 percent) implicit tax rates on consumption stayed below the European average from 1970 to 1997 and they scarcely deviated from their average level of 16 percent. The implicit tax rate on employed labour maintained its rising long term trend and in 1997 achieved a level of 44.1 percent, which is approximately 15 percentage points more than in 1970. Implicit tax rates on labour in Germany have always been higher than in the European Union: the average gap between Germany and the EU is 1.8 percentage points. The implicit tax rate on factors of production other than employed labour[33] has progressively dropped since 1980 starting from 50 percent and reaching 30 percent in 1997.

TAB. 3 Implicit tax rate in Germany and European average, 1970-1997

	1970		1975		1980		1985		1990		1995		1997	
	Ge	*Eu*	Ge	*Eu*	Ge	*Eu*	Ge	*Eu*	Ge	*Eu*	Ge	*Eu*	Ge	*Eu*
Labour employed	30	*28.9*	34.9	*32.2*	36.5	*35.1*	39.5	*37.1*	38.5	*37.5*	43.9	*41.7*	44.1	*41.9*
Other factors	34.8	*26.2*	46.1	*34.7*	48.3	*36.6*	40.3	*32.3*	34.4	*31.5*	32.3	*29.4*	30	*31.1*
Consumption	16.6	*17.6*	15.7	*15.5*	15.8	*16*	14.7	*15.6*	15.6	*16.2*	16.4	*16.7*	15.8	*16.8*

Source: Eurostat, 2000.

With regards to the aggregate implicit tax rate on labour and other factors, Germany displays an upwards trend until to 1980. Afterwards, the total implicit tax rate declines in 1990, rises again five years later and then drops to 74.1 percent in 1997. The value of 1997 is approximately 10 percentage points higher than that of 1970. German values are significantly higher if compared to the European mean. Above all, this is due to elevated implicit tax rates on other factors (i.e. capital and self-employed labour) in comparison with the European average.
The same results can be derived from the analysis of the structure of taxation according to economic function as percent of GDP[34].

Table 4

	1970	1975	1980	1985	1990	1995	1997
Consumption	10,6	9,8	10,3	10	9,8	10,8	10,4
Labour	20	25,4	26,1	26,2	24,7	27,8	26,9
employed	16	20,1	21,4	22,1	20,9	24	23,2
paid by employers	5,6	7,2	7,4	7,5	7,3	8,2	8,2
paid by employees	10,4	12,9	14	14,6	13,6	15,9	15
self-employed	4	5,3	4,7	4,1	3,8	3,7	3,6
Capital	5,1	4,6	5,2	5,4	4,9	4,3	4,5
real estate	0,6	0,6	0,6	0,6	0,5	0,6	0,7
real capital	0,5	0,5	0,5	0,4	0,4	0,4	0,4
monetary capital	0,3	0,3	0,3	0,4	0,5	0,9	0,9
income	2,7	2,6	3,1	3,4	2,7	1,7	2,2
wealth	0,7	0,5	0,4	0,3	0,4	0,3	0,2
others	0,2	0,3	0,3	0,3	0,4	0,4	0,2
TOTAL	35,7	39,8	41,6	41,6	39,4	42,9	41,8

Source: OECD, 2000.

32 On April 1, 1999, the federal Government introduced the ecological tax reform. The aim of this reform was to gradually increase energy prices and to use the additional energy tax receipts to reduce pension insurance contributions.
33 I.e. capital and self-employed labour.
34 We derive our analysis from OECD, 2000.

From 1970 to 1997 the taxation on consumption as a percentage of GDP does not deviate much from its average value of 10.2 percent. On the contrary, taxation on labour displays a long-term upward trend, rising from 20 percent in 1970 to 27.8 percent in 1995. Only in 1997 it decreases to 26.9 percent. The share of tax on GDP paid by both employees and employers grow from 1970 to 1997. In contrast, taxation on the self-employed falls a bit, starting from 4 percent in 1970 to 3.6 percent in 1997. From 1970 to 1997 the taxation on capital does not diverge much from its average value of 4.8 percent, with the great share of tax on capital being levied on income.

As regards the redistributive effects of the German fiscal system, we can only rely on data for 1988.[35] These data can approximate the situation until 1999, since no change in the system was implemented until the general fiscal reform of 2000, implemented in 2001. In 1988 Germany displays a very low Gini index both for pre-tax income and post-tax income (0.2591 and 0.2312). It is the country with the most equal distribution of pre-tax and post-tax income according to Wagstaff et al. (1999). The average tax rate is 0.1108, one of the lowest among the countries analysed in the survey we refer to.

As regards the vertical distribution, Germany has a low vertical distribution in comparison with other countries. It is achieved through a combination of low average tax rate and relatively high level of progressivity (measured with the Kakwani index). The discrepancies between redistributive effect, RE, and vertical redistribution, caused by non-zero values of the measures of horizontal inequity and/or reranking, are minor in Germany. This means that the impact of differential tax treatment on the distribution of income is far less important than progressivity. The gap between redistributive effect and vertical redistribution is small.

The Kakwani index is quite high for Germany (0.2433), which means that the income tax levied is fairly progressive. Positive values of H (measures the extent of classical horizontal inequality) e R (measures the extent of reranking in the move from the pre-tax distribution to the post-tax distribution) reflect the presence of differential tax treatment which reduces the redistributive effect of the tax.

After the fiscal reform the tax schedule of the personal income tax may be less progressive than before: average rates will fall significantly throughout the income range but the cut will be larger at the two extremes of the distribution. At intermediate income levels, in which many taxpayers are likely to be located, the cut is less significant.

[35] See Wagstaff et al., (1999).

The fact that capital income both from dividends and capital gains is taxed according to the half-income method can have a negative effect on income distribution.[36] Moreover, ceilings on social security contributions are reflected in a slight decline in net tax rates when the income rises.

4.2 Tax wedges in corporate and labour taxation

The total average tax wedge on labour increased by 5 percent from 1991 to 2000. Only in the last two years has the tax burden on labour decreased. Since 1998 Germany has cut social security contribution to the pension system by 1 percentage point[37] in order to enhance the demand for labour. The cut in marginal rates on labour income had the same aim. These provisions reduced the tax wedge on labour and contributed, together with the lowering of depreciation allowances of equipment, to rebalancing the relative cost of capital and labour. According to OECD data[38], in 2000 the total[39] average tax wedge on labour was approximately 51 percent. It may be reduced into about 18 percent if considering only personal income tax and to around 32 percent if also taking into account employee's social security contributions. In 2000 the marginal tax wedge on labour was around 65 percent, according to calculations by OECD[40].

One of the purposes of this section is to investigate the effective tax burden borne by German companies. Table 5 presents German data on the cost of capital and the EMTR obtained considering only corporate taxation (i.e. statutory tax rates, the surcharges and local taxes).

Table 5

Cost of Capital and EMTR

Corporate tax rates (1)	52.35
Overall mean:	
Cost of capital	7.3
EMTR	31
Cost of Capital:	
Intangibles	5.4
Industrial buildings	7.2
Machinery	5.8
Financial assets	10
Inventories	7.9
Retained earnings	9.7
New equity	7.6
Debt	3.2
EMTR	
Retained earnings	48.4
New equity	35.5
Debt	-56.2

Source: EEC (2001)

[36] A taxpayer who earns 100 DM as capital gains has a lower tax burden than a taxpayer who only has wage income.
[37] This cut was financed by ecological taxes introduced in 1999. They will increase gradually until 2003.
[38] See Joumard, I., (2001).
[39] Total tax wedge includes personal income tax, employee's social security contributions and employer's social security contributions.
[40] See Joumard, I., (2001).

(1) Including surcharges and local taxes.

In Germany the average cost of capital is 7.3 percent and the most tax-efficient way of financing is debt. This is due to deductions of nominal interest payments from the corporation tax base. Normally, this effect is higher in countries where the corporation tax rates are higher. This is the case of Germany, as Table 5 displays: in 1999 the Federal Republic of Germany had the highest statutory tax rate on profit within the EU (52.35 percent).

Financing through new equity and retained earnings is unfavourable, since no deduction from the taxable base for the corresponding payments (dividend) is allowed. The German effective tax burden for both forms of financing approximately equals the tax rate on profit: the EMTR for retained earnings is higher since the associated statutory corporate tax rate was higher than that for distributed dividends (40 percent versus 30 percent) until the Fiscal reform in 2001. The EMTR is negative when the investment is debt financed. This is due to the relations between interest payments deductibility and tax allowances for depreciation in excess of economic depreciation. The higher the statutory tax rate and the more accelerated the depreciation, the greater the subsidy. Intangibles and machinery are taxed quite generously.

The German effective average tax rate (EATR) (39.1 percent) is higher than the effective marginal tax rate (EMTR, 31 percent) but is still lower than the overall nominal profit tax rate. The effective average tax rate for debt is positive. The gap with the EMTR for debt is particularly high due to the fact that Germany is a "narrow base country".

Table 6

Effective Average tax rate

Corporate tax rates(1)	52.35
Overall Mean	39.1
Intangibles	33.9
Industrial buildings	39
Machinery	34.9
Financial assets	46.8
Inventories	40.8
Retained earnings	46.1
New equity	40.1
Debt	27.7

Source: EEC (2001)
(1) Including surcharges and local taxes. Here the pre-tax real rate of return is 20 percent.

In order to have a clearer picture of the German effective fiscal burden, personal taxation is included in the analysis (see Table 7). If the personal taxation[41] is introduced in the case of marginal investment, the effective tax burden increases appreciably as displayed in Table 7. The personal taxation involves a reduction in the cost of capital and an extensive increase in the effective marginal tax rates. This is due to the investment backflows in the hand of the shareholder. Debt remains the most favoured form of finance and retained earnings remains the least favoured.

Table 7
Effective Average tax rate

	Average cost of capital
Cost of capital	5.4
EMTR	79.5
Intangibles	4
Industrial buildings	5.3
Machinery	4.3
Financial assets	7.7
Inventories	5.6
Retained earnings	6.8
New equity	4.1
Debt	3.5

Source: EEC (2001)

The investigation thus far has been based on the tax regimes, which were in place in 1999.

However, the German tax reform[42] changed the effective tax burden on corporation and it is thus important to investigate its effects on Cost of capital, EATR and EMTR. The following Table reviews the effects of the reform on the cost of capital, the EATR and the EATR for domestic investments in the case in which there are no personal taxes.

Table 8

Cost of capital EMTR EATR	Intangibles	Industrial buildings	Machinery	Financial assets	Inventories	Mean
	6.6	8.4	7.4	9.5	8.2	8
Retained	24.6	40.7	32.1	47.4	39.3	37.8
earnings	34.4	39.9	36.6	43.2	39.3	38.7
	6.6	8.4	7.4	9.5	8.2	8
	24.6	40.7	32.1	47.4	39.3	37.8
New equity	34.4	39.9	36.6	43.2	39.3	38.7
	3.2	4.7	3.9	5.7	4.5	4.4
	-58	-6.5	-28.6	12.9	-11.8	-13.8
Debt	23.9	28.6	26.1	31.7	27.9	27.6
	5.4	7.1	6.1	8.2	6.9	6.8
	7.8	29.8	18.6	38.9	27.7	26
Mean	30.8	35.9	32.9	39.2	35.3	34.8

Source: EEC (2001)

[41] Here a qualified shareholder taxed at the highest personal tax rate is considered.
[42] It came into effect on January 1, 2001.

The lower rate on retained earnings reduces the cost of capital for investment financed in that way. Moreover, as the split rate system is eliminated[43], and with no personal taxes, the cost of capital for retained earnings is the same as that of new equity. The cost of capital for new equity increases, due to a certain extent to the enlargement of the tax base, and in part due to the elimination of the effective subsidy in paying dividends.

The cost of capital for debt finance increases considerably as well. This is due to the decrease in the tax rate, which denotes that the value of interest deductibility will drop.

All types of investment benefit from the tax rate decline. Nevertheless, only investment in buildings and machinery suffers from the reduction in depreciation allowances. Generally, the average cost of capital across assets is cut; however, it grows for investment in machinery. The new provisions of the German fiscal reforms reduce EMTR. This is mainly due to the lower nominal tax rates. According to Table 8 debt is still the most convenient way of financing, even though it is far less favoured than before. EATR depends more directly on the statutory tax rather than does the cost of capital, EATR on retained earnings decreases significantly (on average from 46.1 percent to 38.7 percent). The EATR on investment financed by new equity also drops (contrasting with the evolution of the cost of capital) imitating the lower statutory corporation tax rate for distributions. To conclude, on average the EATR for investment financed by debt is roughly unchanged, even if there are discrepancies across assets.

4.3 Taxation by levels of government and fiscal federalism

The Federal Republic of Germany is a federation composed of five different levels of government[44]: the national government (*Bund*), the administrative departments (*Regierungbezirke*), the provinces (*Landkriese*), sixteen states (*Länder*) and the municipalities (*Gemeinde*). We will only analyse interactions among the *Bund*, the *Länder* and the *Gemeinden*, which share tax revenues according to a comparticipation regime.

Länder budgets predominantly depend on tax revenue from shared taxes. Normally more than 80 percent of the taxes of all levels is in shared taxes and more importantly, all of these shared taxes are federally determined taxes: all tax laws are federal.[45] With reference to the vertical allocation of

[43] This means that Germany progresses towards greater tax neutrality on investment financing.

[44] The German Constitution of 1949 leaves all functions to the *Länder* unless otherwise specified. This "unless" goes a very long way. Some largely restricted local functions are reserved. Local governments in general are poorly represented in the Constitution. Moreover, quite a lot of federal functions are openly cited like foreign affairs, currency, defence, etc. Finally, Art. 73 and 74 of the Constitution record several functions as the subject of the "current legislation". This means, "the *Länder* shall have the power to legislate as long as, and to the extent that, the Federation does not exercise its right to legislate".

[45] Recently there has been a great debate in Germany about the fact that *Länder* should be granted more autonomy in their tax law. However, recent studies by the ZEW (Centre for Economic Research) demonstrate that without a reform of the fiscal equalisation system the introduction of partial tax autonomy of the *Länder* would lead to undesirable

revenues, a great part of the tax proceeds is distributed to regions and communities according to the derivation principle; i.e. they follow the regional origin of the tax revenue. A region receives the percentage of the tax collected in its particular area. It is worth noting that regions have no entitlement to fix the rates for their own taxes. Local Governments (*Gemeinden)* can establish the rates on the real estate tax (*Grundsteuer A*[46] and *Grundsteuer B*[47]) and the business tax (*Gewerbesteuer)* and only have to devolve part of the proceeds base of the business tax to regional and central budgets. Their biggest tax revenue consists of an income tax share, for which they cannot fix rates (even if the Constitution clearly allows a law that could provide for it).The federal Constitution itself states that 42,5 percent of the income tax revenue must be retained by the national government, 42,5 percent by *Länder* and 15 percent by municipalities.[48] The horizontal allocation of tax revenues is made throughout a system of transfers among *Länder*. The horizontal apportionment of the income tax revenue strictly follows the residence principle. On the other hand, the horizontal sharing of other tax revenues (e.g. VAT) is also carried out both in proportion to population and to "financial weakness".[49] In the German fiscal system resources are also transferred from a *Land* to its *Gemeinden.* Every *Land* has its own particular system. Moreover, the state government assigns some federal transfers to municipalities, according to their "fiscal weakness". Table 9 displays the rate of each tax perceived by each level of government in 2000.

harmful incentives for fiscal policy. Regardless of the tax competition among *Länder* an increase in the tax burden may emerge.

[46] *Grundsteuer A* is levied on agricultural real estate. The base rate is 6‰ in the entire Federal Republic.

[47] *Grundsteuer B* is imposed on all other real estates and buildings (private and used for an economic activity). Base rates are 2.6‰ and 3.5‰ for West Germany and 5 percent and 10 percent in East Germany. The difference is due to the fact that the cadastral values in East Germany are those of 1934.

[48] It is worth noting that the municipalities only have a consultative role in the formation of fiscal law.

[49] Not only income tax revenue but also the VAT are split. At the first level, three quarters of it is apportioned to the states according to their population. Another quarter is reserved for those states considered "financially weak". They receive supplementary transfers from VAT in order to bring their fiscal potential up to at least 92 percent of the average of total regional taxes per capita. In real terms this means that Eastern states acquire roughly twice as much VAT revenue per capita than their Western counterparts. At a second level, there is a redistribution of resources among states in accordance to a special mechanism based on the differentials in tax capacities. The benchmark is compared with the effective financial situation of each state, and the gap is subsequently equalised according to a formula. States below the average receive a compensation that is to be financed, in progressive steps, by the states below the average. At a third level, there is a final corrective of the distribution of public resources in the form of asymmetrical vertical grants by the federal government: so-called supplementary federal grants.

Table 9

TAXES	AMOUNT	% on revenues
Customs	3394	15.5%
VAT	9496	43.5%
Revenues of Federal Government	198793	100%
of which: wage tax and income tax (42.5%)	62883	31.6%
corporation tax (50%)	18545	9.3%
withholding tax on interests (44%)	3227	1.6%
VAT (52%)	75990	38.2%
States revenues	189495	100%
of which: wage tax and income tax (42.5%)	62883	33.2%
corporation tax (50%)	18545	9.8%
withholding tax on interests (44%)	3227	1.7%
VAT	61958	32.7%
business tax on income (26/45)	1815	1.0%
Increased business tax on income	2378	1.3%
Municipalities revenues	57297	100%
of which: Municipal rate of income tax	23234	40.6%
Municipal rate of VAT	2927	5.1%
Business tax on income	5523	9.6%

Source: Statistisches Bundesamt, Stat. Jahrbuch, 2001, Million of Euro.

As shown by table 9 the federal government, *Länder* (42.5 percent) and the municipalities (15 percent) are the beneficiaries of the income and wages tax. In 2000 revenues from income tax correspond to the main tax revenue both for municipalities (40.5 percent of total municipal income) and for States (33.1 percent). It is the second largest source of tax revenues for the federal government (31,6 percent).

VAT revenues are the major income for central government (38 percent) and the second greatest income from taxation for the *Länder* (32.7 percent of their total revenues in 2000).

The same Table 9 also shows that in 2000 the federal government collected 46.8 percent of total tax revenues state governments (*Länder*) 43.9 percent and municipalities 9.3 percent.

Using OECD data we can observe the evolution (from 1975 to 1999) of the main central government taxes as percent of total tax revenues of Central Government.

The trend revealed in the data for 2000 is the same as that in the OECD data: the State governments receive the greater part of tax proceeds from taxes on individual income (an average of 36.1 percent of total tax revenues). The second largest source of income is general taxes and then tax on goods and services. Percents do not vary greatly from 1975 to 1999.

Data for the tax revenue of the main State and Local taxes as a percentage of GDP or as a percent of total tax revenues for these levels of government give a similar picture.

State and Local governments both receive the greatest part of resources from taxes on income and profits. The proceeds from these latter total the largest share of the fiscal revenues of the States, though their amount is lower for Local than for State government. Actually, income and profits taxes share on GDP is lower for Local than for State governments.

Two other types of taxes play an important role in the *Länder* and municipalities budget: the general taxes share on States budget increased from 1975 (21.8 percent) to 1999 (38.1 percent). The Municipalities budget is particularly influenced by taxes on property, even though the share decreased from 1975 (20.3 percent) to 1999 (15 percent).

According to OECD data (see Table 10) the share of tax revenues obtained by Central government has fallen from 1975 (33.9 percent) to 1999 (30.4 percent). The share of taxes on total fiscal proceeds collected by the State government has remained mainly constant (around 22 percent) while the share of local government has decreased from 9.3 percent in 1975 to 7.9 percent in 1999.

Table 10

Attribution of tax revenues to sub-sectors of general government as percent of total tax revenues

	1975	1985	1999
Federal or Central Gov.	33.9	32	30.4
State or Länder Gov.	22.5	22.2	22.1
Local Gov.	9.3	9	7.9
Social Security Funds	34.2	36.9	39.5

Source: OECD, 2000

German reunification was an opportunity to redefine compartecipation parameters. The automatic application of the horizontal system to the new *Länder* had implied a growth in transfers from rich to poor from approximately 1.8 billions Euro to nearly 10 billions Euro. This means that all old *Länder* (except Bremen and Saarland) would have become net payers.

The solution to this problem was found by transferring more than 2/3 of the equalising transfers to the federal government. Moreover, the size of *Länder* compaticipation to VAT proceeds was increased first to 37 percent, then to 44 percent and finally, at the end of 1996 to 49.5 percent.

The following Table shows how resources were divided between new and old *Länder.*

Table 11

TAXES	OLD LAENDER	NEW LAENDER	New/old Laender (%)
States revenues	**146560**	**42935**	29.3 %
Corporation tax	18157	388	2.1 %
Withholding tax on interests	3149	78	2.5 %
Business tax on income	1671	144	8.6 %
Increased business tax on income	2378	-	
Municipalities revenues	**52402**	**4895**	9.3 %
Municipal rate of income tax	21802	1432	6.6 %
Municipal rate of VAT	2480	447	18.0 %
Business tax on income	10339	264	4.5 %

Source: Statistisches Bundesamt, Stat. Jahrbuch, 2001, Million of Euro.

New *Länder* receive far fewer resources than the new ones. This is certainly due to the lower development level of the former East-German regions. However, it is worth noting that the new *Länder* are far less numerous than the old ones (5 versus 11).

4.4 A comparative view with the European average

The German fiscal burden on companies has always been very high compared to other European countries. Germany shows a very high average cost of capital (7.3 percent) and EMTR (31 percent): both indicators display the second highest values in Europe after France (7.5 percent and 33.2 percent).[50] This is related to the fact that in 1999 Germany had the highest statutory tax rate on profits.

All around Europe the most tax-efficient way of financing is debt. This is particularly true in Germany especially when considering the EMTR. The effective marginal tax rate in the case of debt financing is the lowest in Europe (-56.2 percent).

As regards infra-marginal investments, Germany displays the highest EATR[51] in 1999 with an overall mean of 39.1 percent. The German value for debt financing is the second highest in Europe, after France. The same can be observed if considering new equity. However, when taking into account EATR for retained earnings the German value is by far the highest in Europe (46.1 percent). Moreover, when profitability is set at 20 percent the German EATR for industrial buildings, intangibles and machinery is the second highest in Europe, while inventories and financial assets are the highest, with the latter being far more expensive than in other European countries.

Germany is also characterised by a high tax wedge on labour. In 2000 the German average tax wedge was above the European average and it displayed the second highest value in the EU. This value is influenced by three different elements: a personal income tax, which is lower only than in Nordic countries[52], employee's social security contributions which exhibit the top rate in the EU and finally employer's social security contributions.[53]

Furthermore, the German tax wedge on labour was the one, which increased the most in Europe from 1991 to 2000. According to the marginal tax wedge in 2000 Germany was above the European mean and displayed the second highest value after Belgium.

[50] For details see EECC, SEC (2001).
[51] Here a pre-tax real return of 20 percent is considered.
[52] Finland, Denmark, Norway.
[53] The share of the latter is low in comparison to many other European countries but they cannot compensate for the other two factors described above.

5. Tax reforms in the 90's and those currently planned

5.1 A quick glance at the budget and the general economic environment

In 2001 the general Government deficit reached 2.7 percent of GDP (according to an estimate by the Statistical Office of the European Commission): slowdown in growth[54], revenue shortfalls (amounting to 1 percent of GDP) caused by the tax reform, expenditure overruns in the health care sector and in some *Länder*[55] lead to the deterioration of the Government budget.[56]

In 2001, the previous year oil price hike resulted in the worst economic performance since 1993 for Germany: the GDP growth rate was only 0.6 percent. Only the first quarter recorded temporally positive growth thanks to the fiscal reform, which stimulated private consumption. However the effects of the reform were disappointing: a much more robust rise in demand had been expected from the tax relief provided. Finally, households' nominal disposable income rose by 3.5 percent in 2001, which was the fastest rate of growth for quite some time. Real consumer spending could not keep pace with the intense rise in income since important losses in purchasing power had to be taken into account and the household savings ratio grew for the first time since the early 1990s. In the second quarter growth stopped because of a huge fall in investment volumes. Construction, which had been falling from the middle of 90s, fell again by 5.8 percent in 2001. Equipment investment dropped by 5 percent. In the second part of the year the growth rate became negative and the events of September 11th intensified the economic slowdown, by lowering consumer and business confidence. Demand was progressively satisfied more through reducing inventories than by increasing production. The consequential stock depletation reduced GDP growth in 2001 by 0.9 percent.

5.2 Tax reforms in the 90's

Tax reforms in the 90s were not substantial in Germany: while others embarked on rate cutting and base-broadening reforms along the lines of the 1986 US reform, the Federal Republic became an

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[54] The slowdown in growth had two main effects on German Government budget. On the one hand the deficit increase was due to the working of the automatic stabilisers. On the other hand, when growth stops, enterprises and households pay less taxes.

[55] Most of the deterioration in the German deficit resulted from an increase in the deficit of the *Länder* , whereas the federal level (*Bund)* kept its deficit under control. The 2001 fiscal cut in corporate income tax mainly deprived the *Länder* of revenues. However they continued to spend as before and, since they spent as much as the *Bund*, they increased the deficit by about 1 percent of German GDP.

[56] In 2000 the general Government balance swung into a surplus of 1.5 percent of GDP. The result is sharply influenced by the revenues from the auctioning of UMTS mobile phone licenses, which amounted to 2.5 percent of GDP. Net of these receipts, the deficit recovered by 0.4 percent of GDP, less than in 1999. As a matter of fact the structural balance remained almost unaffected: cyclically-adjusted net borrowing reached 0.7 percent of GDP in 2000. In 2002, according to estimates by the European Commission, general Government deficit is projected to rise to 2.8 percent of GDP. This is due to both more benefits and rising payments for growing unemployment and slow growth, which is itself not tax-friendly. Government consumption is forecast to increase by 2 percent. This will be due to high spending on internal and external security, rising public sector salaries and health expenditures. In 2000 net Government interests payments amounted to 2.8 percent of GDP and the primary surplus to 3.99 percent of GDP.

outlaw in international tax comparisons. Its fiscal system was characterised by high statutory tax rates and narrow bases. The introduction of the tax on industry and trade in 1991 and the solidarity surcharge in 1993[57], in order to finance the reunification process, follows the same path.

Between 1998 and 2000 reductions of 1 percent of social security contributions to the pension system were implemented. The reductions were financed by the introduction of ecological taxes in 1999, which will gradually increase until 2003. However the fiscal system was not changed significantly until the Tax relief Act of 1999/2000/2002.

5.3 The fiscal reform

The Act on the Reduction of Tax Rates and on the Reform of Corporate Taxation (*SteuerSenkungsGesetzt*) obtained final parliamentary approval on 14 July 2000. The tax reform provisions were planned to enter into force on 1st January 2001 and were described by the Government as the “most far-reaching tax reduction programme in the history of the Federal Republic of Germany”. However, the Government presented a supplementary bill to reflect a compromise between the two Houses of Parliament calling for a further reduction of 1 percent in the top marginal rate of income tax for the year 2005 onwards and for further relief for middle-market business.

The primary goal of the Tax Reduction Act is to permanently lighten the tax burden by sinking the rates and by changing the corporation tax system. The basic tax rate fell from 25.9 percent in 1998 to 19.9 percent in 2001. The top rate was cut (step by step) from 53 percent in 1998 to 48.5 percent by as soon as 2001. Over the same period the basic allowances increased from approximately € 6,322 to € 7,206 (in 2002 it will be € 7,235).

From 2003 the basic personal allowance will be increased to € 7,426.[58] The basic tax rate will be cut to 17 percent while the top rate will be brought down to 47 percent. From January 2005, the basic personal allowance will be increased to € 7,664. The basic tax rate will be reduced to 15 percent while the top rate will fall to 42 percent. The top rate will be applied only to taxable income in excess of € 52,152. This will help to alleviate the progressive increase in the tax rate for middle-income earners and in addition there will again, as in 2001, be a general lowering of tax rates.

The rate cuts will reduce the tax charge on all payers of income tax, affording the greatest relief to employees and families with low and medium incomes as well as to small and medium-sized unincorporated business.

[57] See chapter 3.

[58] The increase in the basic allowances scarcely compensate the inflation: if the inflation is 2 percent, the real growth between 2000 and 2005 is less than 1 percent.

Corporation tax is levied at a uniform rate of 25 percent[59] for all business years beginning on or after 1st January 2001. As regards the taxation of dividends, the full imputation system is replaced by the so-called half-income system to make cross-border investment within Europe more attractive. Under this system, only half of the distributed profits of a corporation are included in the shareholder's personal income tax base. In return, it is no longer necessary to credit the corporation tax paid by the company against the shareholder's income tax.

Capital gains from the sale of cross-corporation shareholdings are generally exempt from tax. In order to prevent abuse, however, various restrictions are imposed. Furthermore, under certain conditions, this provision will not apply to credit institutions and financial services. The new rules entered into effect from the 2002 tax year.

Private shareholders can sell their stakes in corporations after a minimum holding period of one year without paying tax as before, unless they have a substantial interest. However, the threshold for what constitutes a substantial interest is reduced from 10 percent to 1 percent as from 2002. If the sale is subject to tax, i.e. when shares are sold within the one-year holding period or represent a substantial interest, the half-income method applies.

Unincorporated business benefits from the considerable cuts in income tax rates. Unincorporated companies deriving their income from trade or business and subject to local trade tax have an additional reduction of their tax burden as the trade tax is credited against their income tax liability in a standardised form. Their income tax is reduced by an amount corresponding to 1.8 times the assessment basis for trade tax. The trade tax is still deductible as operating expenditure. As a result of the mediation procedure, these provisions have been readjusted with respect to their precise objective in order to limit over-compensation. Below the line, however, the majority of companies are still granted full relief from trade tax.

The tax relief for the sale or closure of a business is raised from approximately € 30,680 to € 51,130 (from 2002 it is € 51,200).

Company transfers and corporations involving unincorporated SMEs are facilitated by reintroducing the co-partner tax remission. This provision allows for tax neutral transfers of assets with undisclosed reserves and it helps, in particular unincorporated SMEs to cope with intergenerational succession. Advance depreciation provisions for the new investment undertaken by SMEs, adjusted to the new depreciation conditions, are retained.

The tax relief is financed principally by restricting tax depreciation arrangements. The declining-balance tax depreciation rate for movable assets is reduced from 30 percent to 20 percent. The

[59] The situation is complex because there are two other taxes. The first is the solidarity surcharge of 5.5 percent and the second is the local trading tax. They bring the combined marginal rate to an average of around 39 percent, shifting

depreciation rate for company buildings falls from 4 percent to 3 percent. From 2001, the official depreciation rate tables are based on the more realistic "useful life" periods. The rules on shareholder debt financing are reinforced with the aim of limiting abuse.

According to the Government, the taxpayers are receiving lasting tax relief in an annual amount of about € 56 billions a year. This is due to the tax measures adopted by Germany's Social-Democratic Government since 1999, namely the Tax Reform 2000, the Tax Relief Act 1999/2000/2002, the Family Benefits Act (Stages 1 and 2) and other reform measures, including the Pension Reform Law. The Tax Reform in 2000 alone will provide tax relief of € 32 billion. Families, wage and-salary earners and small and medium-sized business will be the main beneficiaries of the reform. As a result, according to the Government, the tax reform will stimulate private consumption and ease new investment, two essential requirements for promoting growth and employment.

According to the Ministry of Finance, the revenue loss coming from the full implementation of the fiscal reform will be € 31.9 billion, equivalent to 1.5 percent of current GDP. The personal income tax will generate the greater part of revenue losses. The net cost of the business tax provision reproduces the balanced effects of huge gross changes from the reduction in rates and expansion of the base.

The following table displays the full revenue effects of the reform.

Table 12

Full revenue Effects of the Reform

DM billion	Euro billion	
Overall revenue effect		-31.9
Of which:		
Business tax		-5.4
Comprising		
Cuts in corporate tax rates	-10.4	
Cuts in rates on unincorporated enterpries	-3.1	
Tighter depreciatin rules	8.7	
Other measures	-0.51	
Personal taxes		-26.5

Source: Ministry of Finance, 2000

The new corporate income tax system seems to conform to EU law, because equal tax status is provided to dividends and gains on the disposal of both domestic and foreign shares. However, an imputation system is also compatible with EU law when the corporate tax credit is extended to foreign dividends. A full imputation system has the advantage of being closer to capital export neutrality when international differences in corporate tax rates exist.

between 36 percent and 42 percent. This contrasts to a combined rate on retained earnings under the pre-reform system of about 52 percent (M. Keen, 2001).

The imputation system was abolished on the grounds that it was not suitable for application within Europe, since it is open to abuse because its application may be obtained surreptitiously (dividend stripping) and, additionally, it is extremely complicated. It is questionable, however, whether these problems were actually solved by the implementation of the half-income system. In the absence of the German right to tax, the non-resident taxpayer does not benefit from the half-income system; conversely, the resident taxpayer has to include only half the dividends in his assessment basis, even in case of foreign dividends. Looking at Section 3, para.40 of EstG/2000 it would appear that it does not make any difference whether the dividend is derived from a domestic or a foreign source. This unequal treatment of resident and non-resident taxpayers results in a discrimination of the latter and, therefore, it is extremely questionable with regard to European law. However, domestic taxation is up to the respective national legislator.

Since the corporate tax rate remains at a persistently high level in Germany, the reform has only a minor impact on the ranking of Germany as an investment location.[60] However, the lower corporate and income tax rates and, the extension of the dividend income exemption from capital gains taxation on the sale of domestic as well as foreign investments are factors may lead foreign corporations to review their group structures and bring at least some of their German and foreign subsidiaries under the roof of a German holding company.

Moreover, since foreign dividends are no longer at a comparative disadvantage, the reform makes it easier for German investors to exploit international differences in corporate tax rates. The reduction of the German corporate income tax rate may attract additional foreign equity financed investment. However, other EU-investment locations still exhibit lower corporate tax rates. The tax reform sharpens restrictions on debt-financed inbound investment by tightening up thin-capitalisation rules; this higher taxed equity capital displaces lower tax debt capital. Moreover, the debt-financed acquisition of German corporations by foreign-controlled German holdings may be restrained by non-deductible interest payments. The tax reform discourages post-acquisition reorganisation of the share deals but facilitates restructuring of German investment.

The inbound investor will probably wish to consider seriously the use of a partnership. In contrast to a German corporation, a partnership suffers no thin-capitalisation restrictions, would repatriate its profits freely abroad without deduction of withholding tax, might offer possibilities of obtaining an interest deduction both in Germany and abroad and can in some circumstances increase the scope for loss utilisation.

[60] See 4.2

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